

HOLISTIC RANGELAND MANAGEMENT(HRM) IMPACT ASSESSMENT REPORT LAIKIPIA



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1 INTRODUCTION

The Knowledge and Results (K&R) Team at Kenya Markets Trust (KMT) in conjunction with Laikipia Wildlife Forum (LWF) conducted an impact evaluation of Holistic Rangeland Management (HRM), one of Livestock's interventions within MAP in Laikipia. This also forms a baseline for any activities between LWF and KMT going forward.. This report presents finding from this evaluation. Research design and development of tools was done in July 2015. Data collection and analysis conducted between Aug and Oct 2015

1.1 Background /context.

MAP while acknowledging that dryland rainfall is irregular and the losses incurred in periods of drought are huge and they continuously push the pastoralists into a vicious cycle of poverty. They therefore need a product that will buffer them against the losses that come along with the lack of pasture and water for the livestock. Pastoralists live in arid and semi-arid zones that are broadly characterized by low productivity, management at large scales and great climate variability. Risks include unpredictable climate, disease, competition for water and forage, and predation. The largest of those risks is climate, where low and varying rainfall affects access to forage and water. In these dry environments, mobility is critical, allowing herders and wildlife to access forage and water that is unevenly distributed in space and varies over

The key disruptive factors in pastoralist rangeland management include the increasing number of settlement and unplanned water points: the increasing population growth, pastoral dropouts as a result of drought and poor political decision have led to an increasing number of settlement and water points that have resulted in loss of productive pastures and reduced mobility for livestock keepers; land degradation and reduced carrying capacity; increased encroachment of non- palatable, exotic weeds; and shortening drought cycles leading to successive rain failures and unpredictable rainfall that can cause flash floods.

The two main constraints MAP is geared to address in the rangelands intervention is fractured land governance weak rangeland management practices. MAP recognizes the fact that improving rangeland management will require intervention at the land governance level in order to improve land use to increase livestock productivity. The appropriate stakeholders will have to be engaged and it is necessary to build the level of awareness and voice of pastoralists. This will need to be integrated with scientific knowledge on land potential so appropriate choices can be made on land that is most appropriate for grazing, agriculture and infrastructure.

MAPs intervention in the drylands is aimed at ensuring pastoralist access to quality rangeland. This has been done through support to county governments so as to engage a broad base of local and influential leaders in land use planning and conflict-sensitive governance. This will in turn inform national policy on sustainable land management based on best practice. It will also promote investment decisions that are based on land potential so that land can be used appropriately for grazing, agriculture, tourism, infrastructure development. Based on land potential, rangeland rehabilitation and fodder production will be achieved such that forage and fodder is available, even during droughts.

MAP leverages partnerships with actors with incentives for positive change to achieve sustainability and scale. It has offered support to Rangeland extension providers (Natural Capital East Africa) who have succeeded in improving rangelands in other parts of Kenya to extend their work through sustainable business plans. These providers have then provided technical support to decision-makers on best practices in rangeland management and land regeneration as well as support communities to come up with appropriate land management practices

MAP has engaged a number of ranches in the ASALs that can serve as aggregation points for pastoralist's livestock as well as offer finishing services to these livestock. Livestock that comes from the pastoralists regions has often been considered low quality due to lack of proper finishing services in the area as well as quality control centers for livestock leaving the regions. Ranches have been identified as bearing the potential to offer these services to the pastoralists alongside other bundled services including access to animal health care and supplementary feed

1.2 Livestock and livestock population in Laikipia

	Cattle	Sheep	Goat	Camel	Donkey
Laikipia. East	55695	105048	46454	22	2374
Laikipia .North	39417	86452	120416	2064	3990
Laikipia. West	94573	149414	115864	717	7111
Total	189685	340914	282734	2803	13475

Census Vol II Q 11: Livestock population by type and district - 2009

1.3 Purpose of the impact evaluation

The Knowledge and Results (K&R) Team at Kenya Markets Trust (KMT) in conjunction with Laikipia Wildlife Forum (LWF) team conducted an impact evaluation of the Holistic Rangeland Management intervention in Laikipia County where LWF has been working through Natural Capital East Africa (NCEA).

This evaluation is two pronged:

- Baseline assessment of the Holistic rangeland management interventions areas among beneficiaries of Natural capital/LWF operations, the purpose of the evaluation was to establish the situation in these pastoral areas before the intervention kicks off. This study acts as a baseline for KMT to form a basis for comparison in the end line evaluation.
- Impact assessment (longitudinal) on the work and training NCEA/LWF has done in the past so as to understand the impact created and generate learning that would enrich their MAP work, and build evidence that would be used for marketing as they take a more commercial approach.

2 METHODOLOGY

The Holistic Rangeland Management (HRM) Impact/baseline assessment was conducted between July and Aug 2015 in Laikipia County. It was aimed at assessing impact achieved in the programme area before and after the implementation of the HRM project to enable the team to measure the emerging change attributable to the programme at the end of the intervention.

The evaluation of the impact was conducted to find out the level of understanding awareness of HRM, adoption and the implementation of the same and the community's perception on the whole concept of HRM. How willing they are in taking up and even paying the training. The entire evaluation was to be done in three phases,

- Phase 1- Household survey
- Phase 2- Focused Group Discussions (FGDs)
- Phase3- Bio-monitoring

This report presents results for the HH survey only. The evaluation team covered training areas in Laikipia where NCEA/LWF team has already conducted a baseline assessment two years ago.

Assessment focused on the issues at the pastoralist level described below.

At pastoralist/herder level, we conducted a quantitative and qualitative survey; administered semi-structured questionnaires at household level. The same Questionnaire was used for both Impact and baseline household surveys. The evaluation focused on getting information on (most of which is reflecting our Indicators in the measurement plan):

1. Basic respondent demographics
2. Awareness on emerging Holistic rangeland management practices
3. The will and readiness of pastoralist in the adoption of HRM
4. Level of understanding and depth of practice of HRM on Land and water resource management.
5. Sources of Information for potential pastoralist
6. The current prices of their livestock in relation to the quality(Weight) of the livestock
7. pastoralists' current relationship with ranch owners in the area
8. The level of knowledge among pastoralist on the conventional and HRM practices,
9. To understand the level of readiness and willingness of the pastoralists to pay for the training and certification of HRM training and the willingness for them to pay for finishing services offered by the ranches .
10. To know how many are actually paying for the services
11. To understand the impact of this training on rangeland management,
12. the impact on Livestock quality and quantity
13. To understand the differences in prices between before and after training and use of good rangeland management practices.

The assessment used quantitative method; structured survey administered to a sample of 206 (from group ranches which are part of LWF) selected randomly across clusters of households of pastoralists/herders.

The additional respondents especially from Kalama and Westgate conservancies in the survey were selected through random sampling below:

2.1 Sampling

The respondents were derived from 9 group ranches and 2 conservancies making a total of 137 and 69 respondents respectively. This sample size is statistically accepted and would give us results that we have some level of confidence in: a confidence interval of 6.76 and at 95% confidence level,

Group Ranch	Number of respondents
KIJAPE	12
KOIIJA	9
KURUKURI	29
LEKURUKI	18
MORUPUSI	25
MUNISHOI	6
MUSUL	8
NKILORIT	24
TIMAMUT	6
Conservancy	Number of respondents
Kalama	45
Westgate	24
Total	206

3: ANALYSIS AND FINDINGS

GROUP RANCHES

Findings from the 9 group ranches.

3.1 BASIC DEMOGRAPHICS

3.1.1 Age

Age Categories (Years)	Group Ranches									Overall (%)
	Kijape (%)	Koija (%)	Lekuruki (%)	Munishoi (%)	Morupusi (%)	Musul(%)	Nkilorit(%)	Kurukuri (%)	Timamut (%)	
18-25	0	11	0	17	8	0	4	4	0	5
26-35	17	22	28	17	28	37	21	23	17	23
36-45	50	33	39	50	24	13	42	23	33	40
46-59	33	23	17	16	16	37	25	23	33	25
Above 60	0	11	16	0	24	13	8	11	17	7

As shown in Table above, majority of respondents (40%) are in the age category 36-45 years.

3.1.2 Education Levels

Respondents were asked their level of education, only 30% have attained primary school level. 57% of respondents have no education.

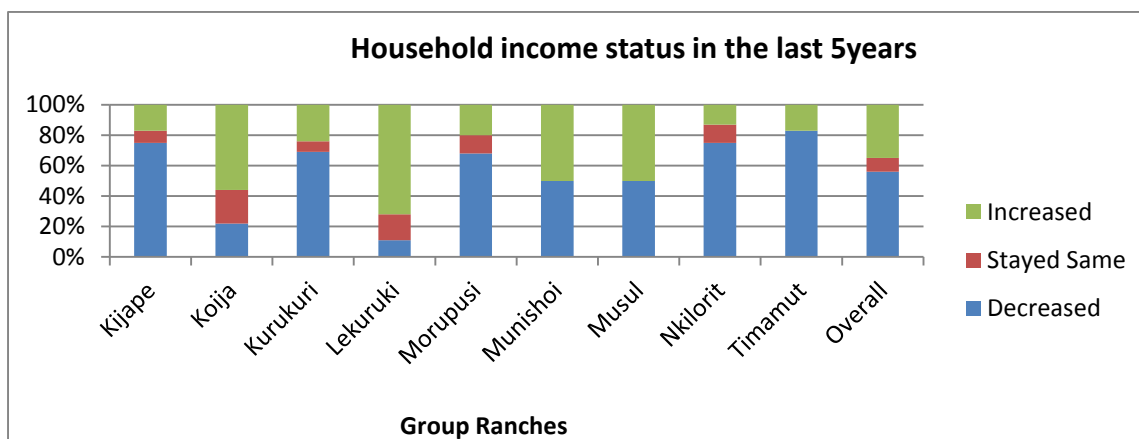
3.1.3 Household Composition

Majority (62%) of Households have five to nine family members.

Less than five	22%
Five-Nine	62%
Ten-Fifteen	10%
Above 15	6%

3.1.4 Income Status

In figure below, respondents were asked to describe their household income status in the last 5 years. An aggregate decreased income status of 56% was observed.



Will be interesting to know why this decrease in income through FGDs

3.1.5 Key Community Challenges and their main causes

Community Challenges	Main causes
1.Drought	1.Lack of rainfall
2.Insecurity	2.Boundary conflicts
3.Land degradation	3.Poor land management
Others enlisted	
Wildlife getting into settlement area	Population increase
Poverty	Drought
Poor leadership	Poor governance
Illiteracy	Poor infrastructure
Diseases	Poverty
Lack of market	Poor infrastructure

The top 3 are the key challenges faced by the communities

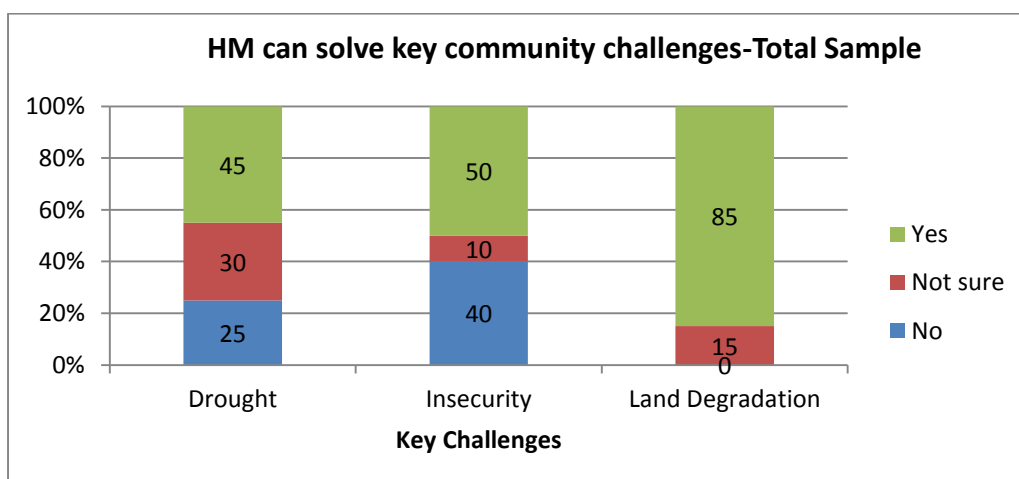
3.1.5.2 Key Land Challenges and main causes

Land Challenges	Main causes
1. Land Degradation	1.Poor land management
2.Population Increase	2.Lack of family planning
3.Drought	3.Lack of rainfall
Others enlisted	
Over-stocking	Culture
Invasive Species(Opuntia)	Loss of soil fertility
Wildlife(Elephants)	Population Growth

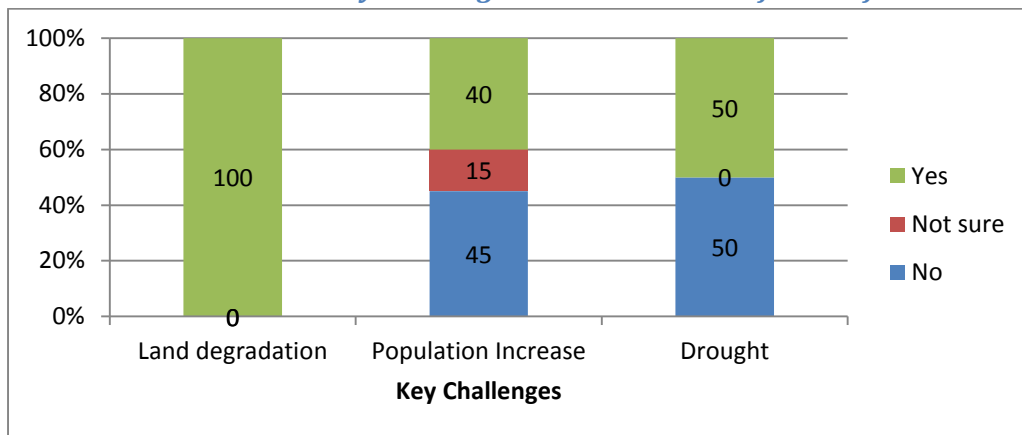
These land challenges are in the order of importance. The top ones being key

3.1.5.3 Can HM solve 3 key challenges that threaten the future of the community?

85% of respondents believe HM can solve land degradation, 50% believe HM can solve insecurity and 45% think HM can solve drought. It will be interesting to understand this further through focus group discussions



3.1.5.4 Can HM solve the key challenges that threaten the future of the Land



100% respondents believe HM can solve Land Degradation, which is more in their control. 40% are not sure HM can help solve problems associated with population increase. And 50% believe HM may solve drought related challenges.

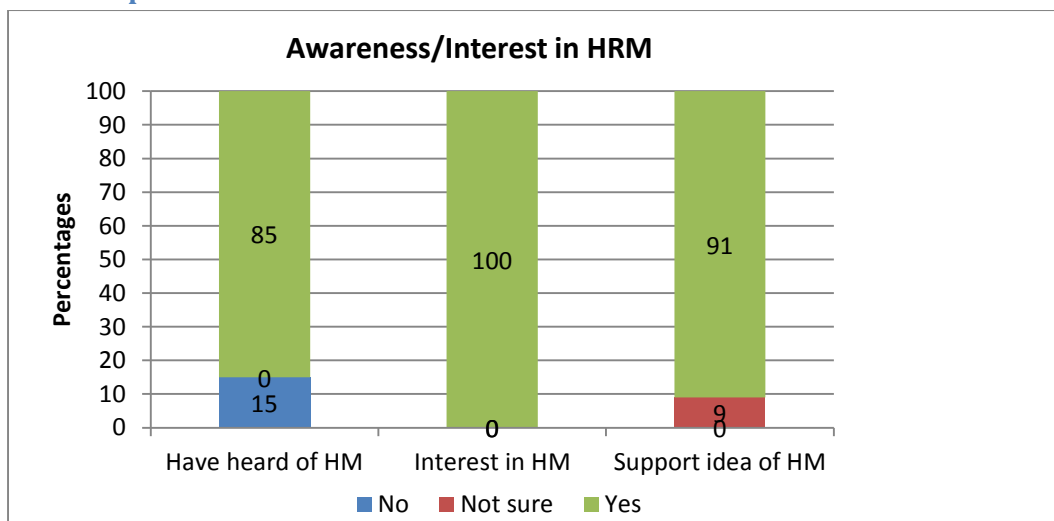
3.1.6 External Threats to Group Ranch/Rangeland Management

External Threats to Management of Group Ranch	External Threats to Management of Rangelands
Boundary Conflicts	Poor Land Management
Cattle Rustling	Population Growth
Migration	Insecurity
Politics	Climate Change
Poor Land use	Politics

These are issues to gain deeper understanding of in the focus group discussions and together think through mitigation strategies.

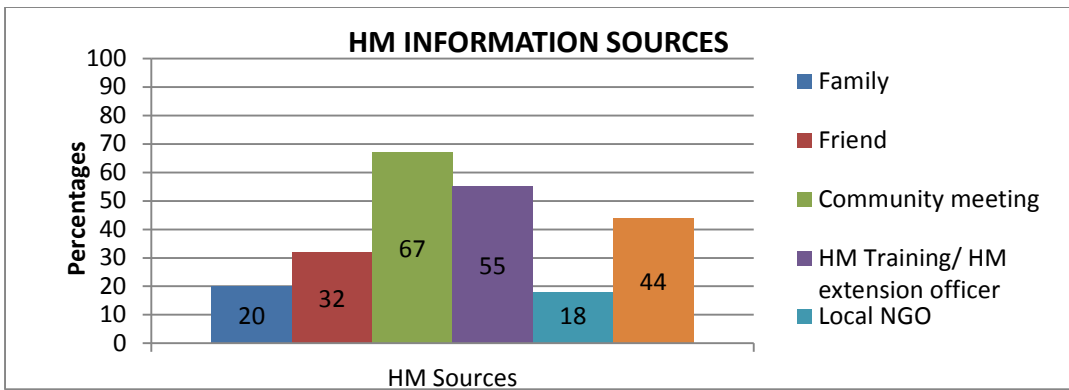
3.2 AWARENESS OF HRM PRACTICES

3.2.1 Proportion that are aware and interested in HM



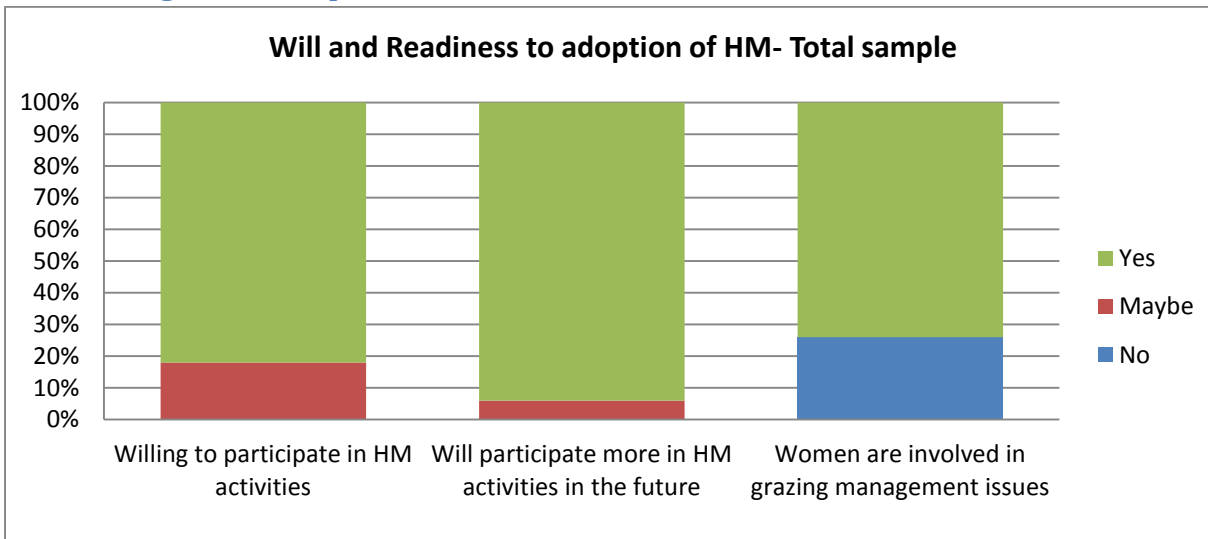
3.2.2 Sources of information

HM Information Sources



The biggest source of information on HM is community meetings at 67%. Trainers on HM are the second biggest source of information. This is expected. Looks like there is little of NGO activity in this area or that they are invisible.

3.2.3 Willingness to Adopt HRM

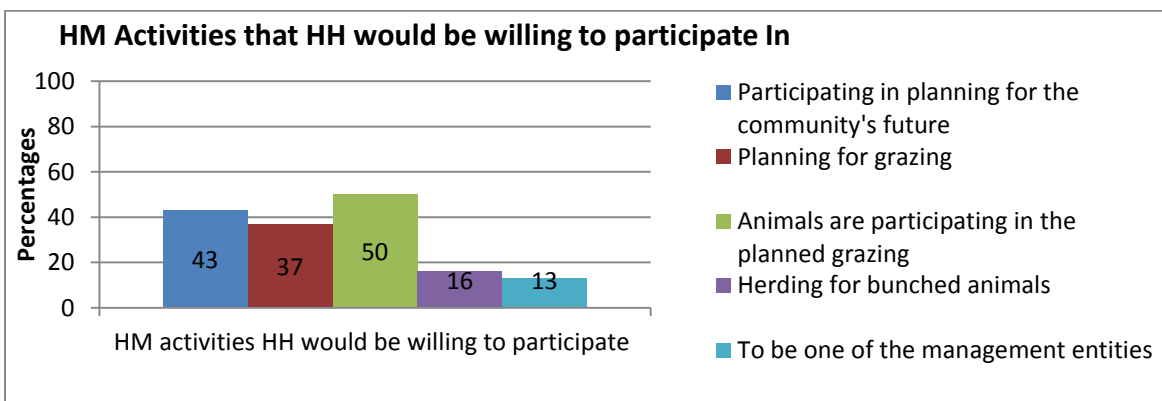


In the figure above 74% of respondents feel that women are involved in HM activities. 82% are willing to participate in HM activities whereas 94% saying they will participate more in future.

3.2.4 Level of Understanding of HM

This was tested by asking what HM activities would interest respondents. The enumerator did not read out the options.

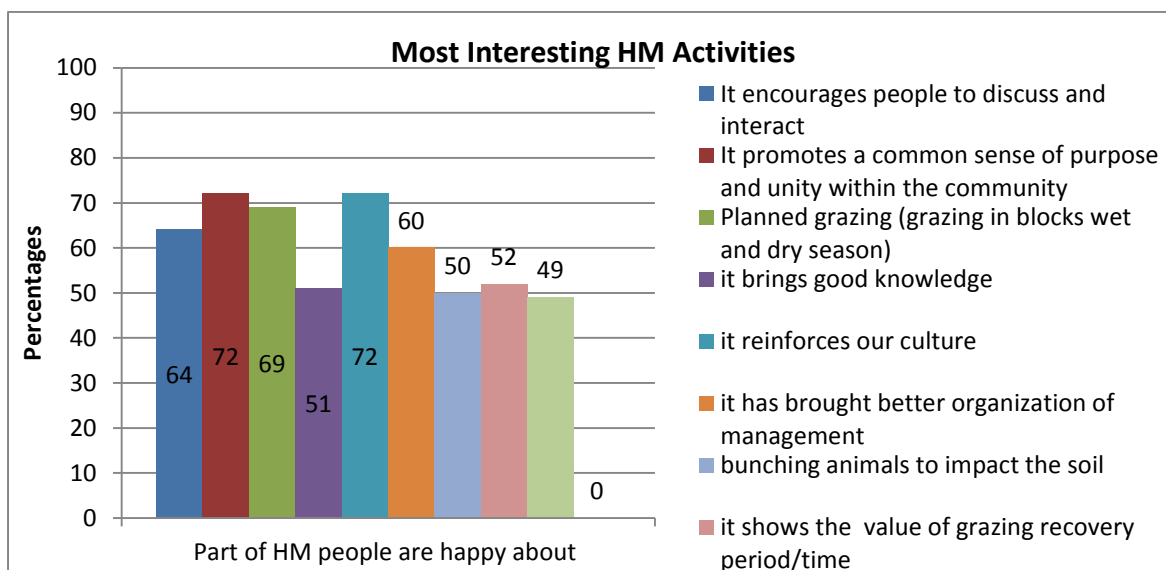
HM Activities that HH would be willing to participate in



From the above graph, the level of understanding of HM activities is average. More work needs to be done so as to increase understanding so that there is more willingness and actual participation. For those who

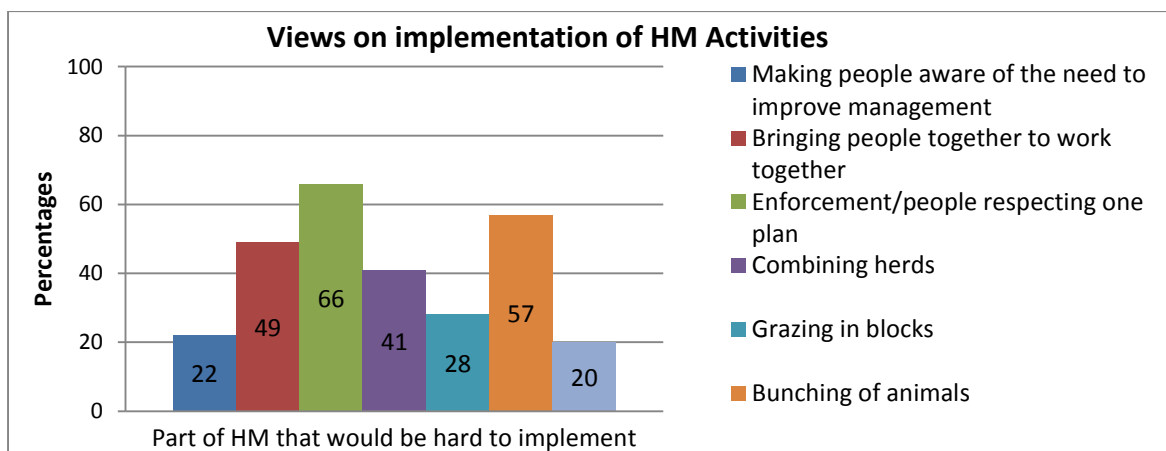
understand, they are willing to have their livestock participate in planned grazing as well as planning for the community's future.

Part of HM considered most interesting



Those who have participated in HM activities are very positive and interested in the things has done to their communities with scores above 50% in all entries

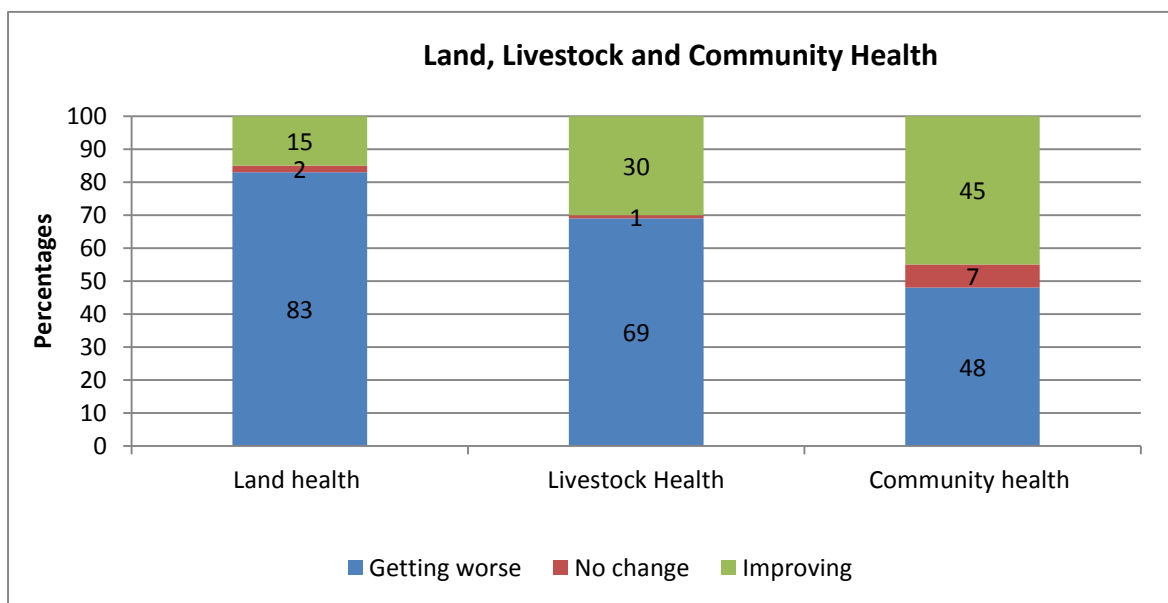
Which part of HM would be hard to implement?



A majority of the respondents, 66% feel enforcing/people respecting the HM plan is the most difficult to implement. 57% feel bringing people together to work together is also not an easy task. This will be an area to discuss further with the community to see how to ensure the whole community is committed to HM

3.3 CURRENT LAND, LIVESTOCK AND COMMUNITY HEALTH STATUS

3.3.1 Current Land, Livestock and Community Health Status

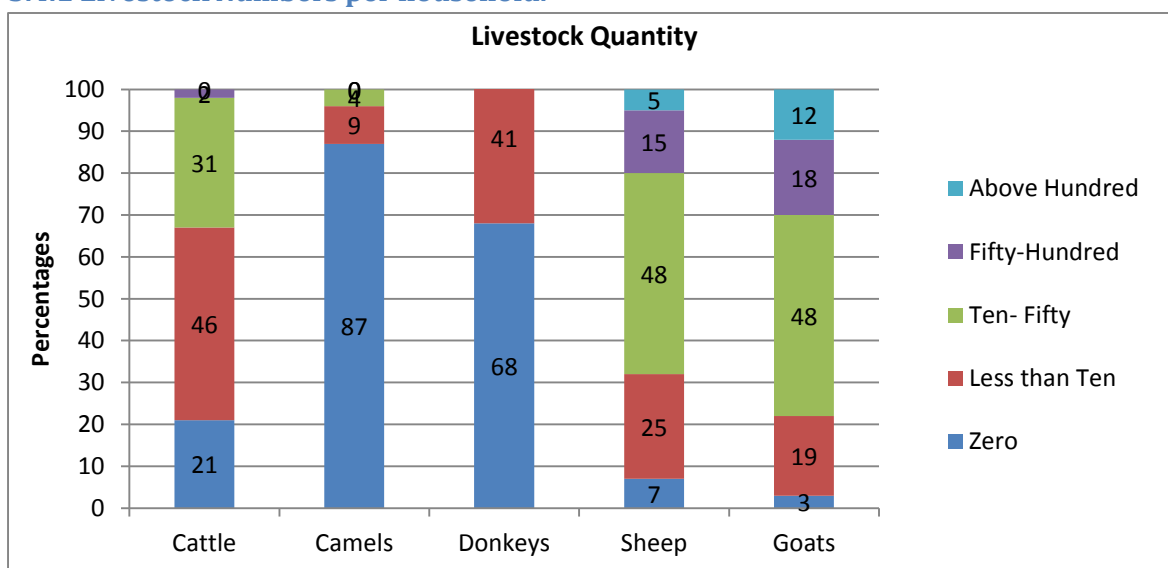


3.3.2 Attributes to Land, Livestock and Community Health Deterioration

Attributes to Health Deterioration		
Land Health	Livestock Health	Community Health
Prolonged drought	Over-Stocking	Lack of unity
Poor land management	Poor livestock health	Poor land management
Invasive species(Opuntia)	Insufficient Pastures	Poverty

3.4 Livestock Quality and Quantity

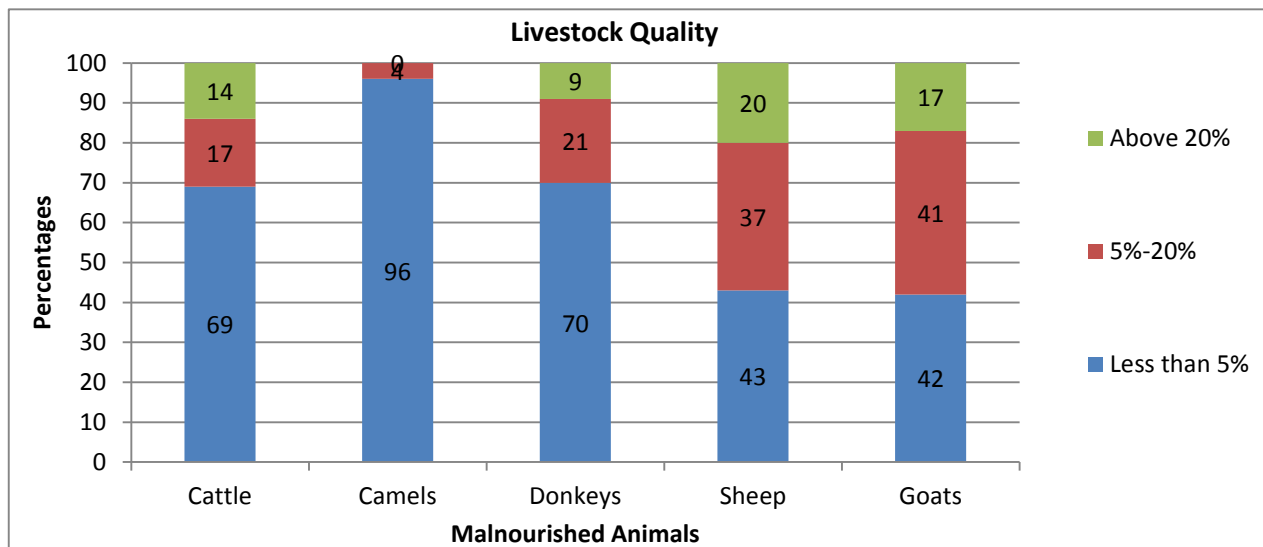
3.4.1 Livestock Numbers per household.



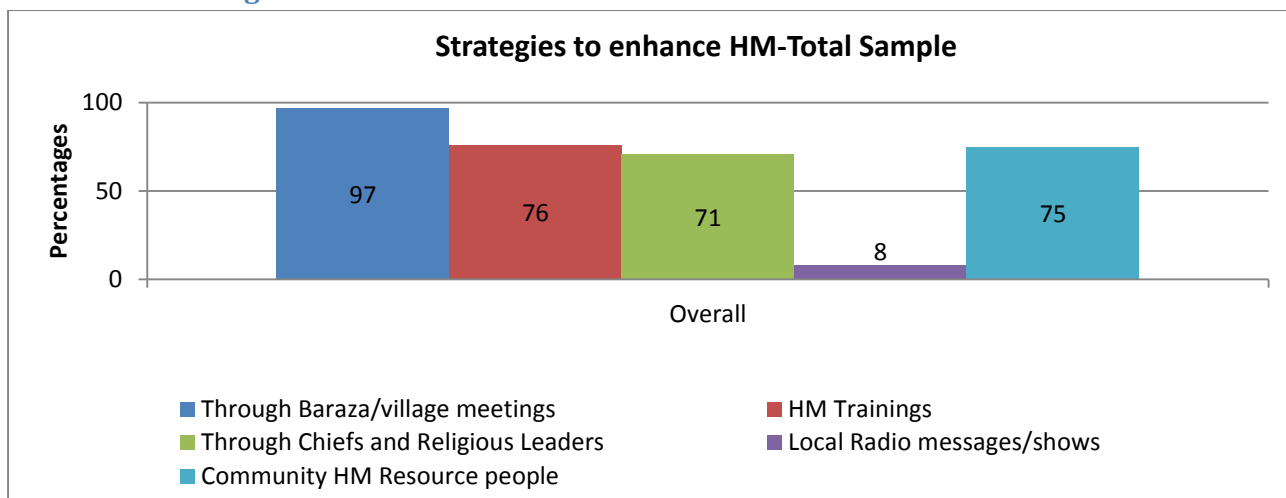
In this community majority own cattle, sheep and goats and a few camels and donkeys as shown in the figure above. It will be interesting to see these changes in these numbers as we see more adoption of HM. We would also be keen to see reduction in proportion of malnourished animals. Shoats are the most malnourished-most vulnerable yet they form the biggest livestock population.

Malnourished animal is one that is either unwell or is not well fed.

3.4.2 Proportion of malnourished animals



3.4.3 Table Strategies to enhance HM



3.5 Market prices for livestock

38% feel they do not get worth of their livestock, 32% feel they rarely get worth, 23% sometimes get worth and only 7% always get worth of their livestock. The level of satisfaction is measured by the value they placed on the animal and whether they feel that the buying prices compensated for this value.

3.6 Paying for HM Services

From the study, none is paying for HM services currently. 29% are not willing to pay for HM training. We may want to find out how much value is placed on this training. But from the findings 20% are willing to pay money, 6% are willing to give a cow, 28% are willing to give out a goat, 2% are willing to give a bull, whereas 15% are willing to part with a sheep in exchange for entire HM training. From this the trainers are able to understand the value the people of this community place on thinking, working and planning as a community,

and therefore think through strategies including marketing that would be accepted at community level. The trainers together with LWF and the community may want to explore options of sustaining HM training and practices in the community. This might include involving the county government

3.7 Other findings

- 61% graze in the group ranch (blocks) whereas 39% in the forest. 41% take 1-2 months before moving livestock to new site whereas 59% not specific with grazing duration in any given site. Movement to another grazing site is influenced by decrease in pastures and water availability.
- 40% place planning and managing of the grazing activities with grazing committee. 35% feel the responsibility lies with village elders whereas the remaining 25% feel the responsibility lies with everyone/community, herders or livestock owners.
- 88% of the respondents are interested in HM networking
- Who should access HM training? 25% feel village elders should access the training, 44% feel all should be trained, the rest feel it should be them, their spouses or their children.
- The reason they would want to learn is so that they can teach/share meaning that in this communities people are interested in the common good of all.

4: COMPARISON BETWEEN THE CURRENT SITUATION AND THE BASELINE FINDINGS FOR 4 GROUP RANCHES (IL NGWESI, MAKURIAN, IL POLEI AND IL MOTIOK)

4.1 Impact Assessment Results in Laikipia

Introduction

This was a longitudinal survey interviewing the same respondents who participated in the baseline survey to assess impact thus far. The baseline study was conducted in Q1 2013. Some HM activities had already commenced by then. And this impact was conducted in Q2 2015.

4.2 Findings

4.2.1 Characteristics of the Sample

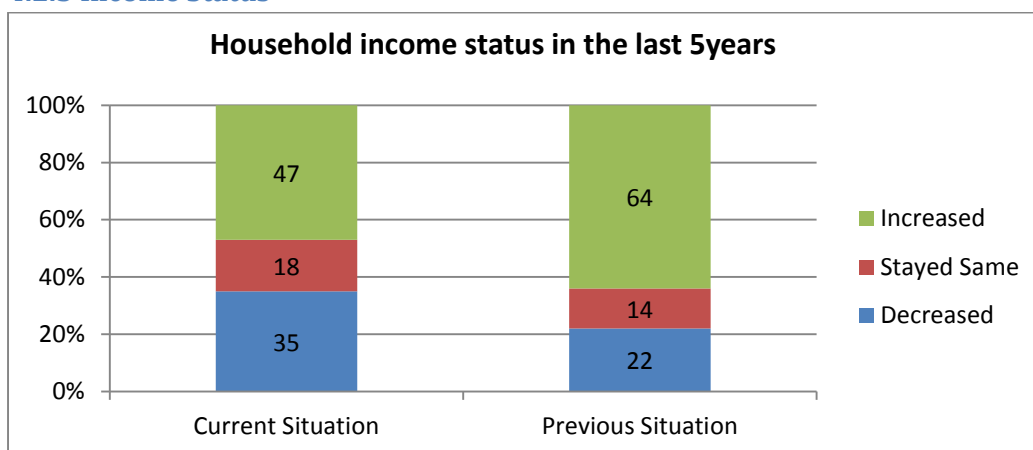
Respondents were derived from 4 Group Ranches (Il Ngwesi, Makurian, Il Motiok and Il Polei), a total of 110 respondents participated in the survey representing a population of approximately 800 HH. This sample is considered reasonable for the purpose of this study and can be used to generalize..

Group Ranch	Number of respondents
Il Ngwesi	40
Makurian	55
Il Motiok	6
Il Polei	9
Total	110

4.2.2 Education Levels

Respondents were asked their level of education, 60% of the total sample fall under No Education category, whereas only 30 % have gone through primary school and 1% attained Tertiary level.

4.2.3 Income Status



In figure above, 47% of respondents reported increased income in their households compared to 64% of respondents who noted increased income during the previous situation. This is a situation worthy investigating through the FGD

4.2.4 Key community challenges and the main causes

4.2.4.1 Community Challenges/Causes

Current Key Community Challenges	Main Causes	Previous Key Community Challenges

Drought-58%	Lack of Rainfall-55%	Drought-95%
Diseases-47%	Poor livestock health services-35%	Poor Leadership-74%
Poverty-44%	Population Increase-42%	Illiteracy-63%
Poor Leadership-29%	Poor governance-29%	Poverty-90%
Illiteracy -36%	Poor infrastructure-30%	Insecurity-58%
Insecurity-26%	Neighboring Communities-26	
Human-Wildlife conflicts-16%	Human/Wildlife population increase-15%	
Unemployment-10%	Illiteracy10%	

Drought remain key for both situations and low percentages are noted for current situation. Interesting to note that lack of rainfall is still perceived the greatest cause of drought.

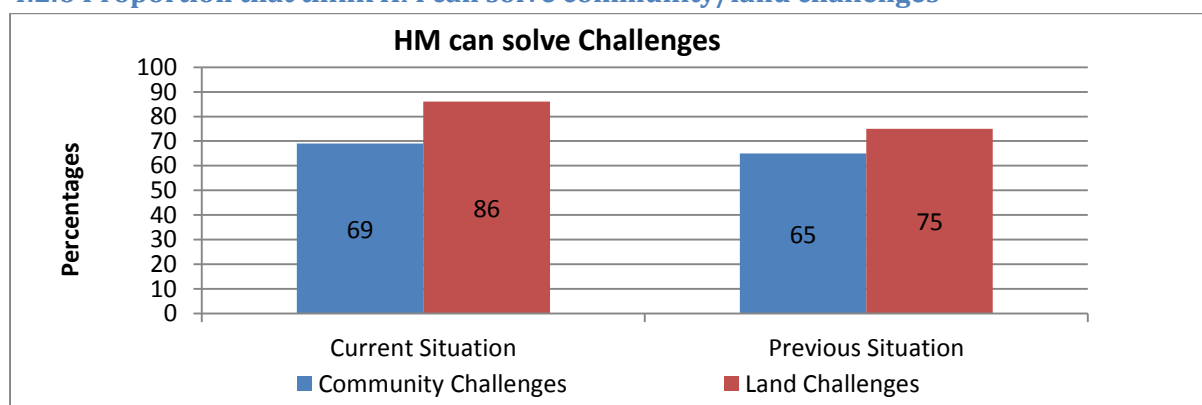
4.2.5 Key land challenges and the main causes

4.2.5.1 Land challenges/Causes

Current Key Land Challenges	Main Causes	Previous Key Land Challenges
Deforestation-66%	Poverty-45%	Deforestation-86%
Drought-49%	Lack of Rainfall-42%	Invasive Species-55%
Population Increase-28%	Migration-25%	Population Increase-49%
Over- Stocking-49%	Culture-40%	Over-stocking-72%
Soil Erosion-38%	Over-Grazing-35%	Charcoal Burning-62%
Desertification-60%	Poor land management-40%	
Invasive Species-20%	Loss of soil fertility-20%	

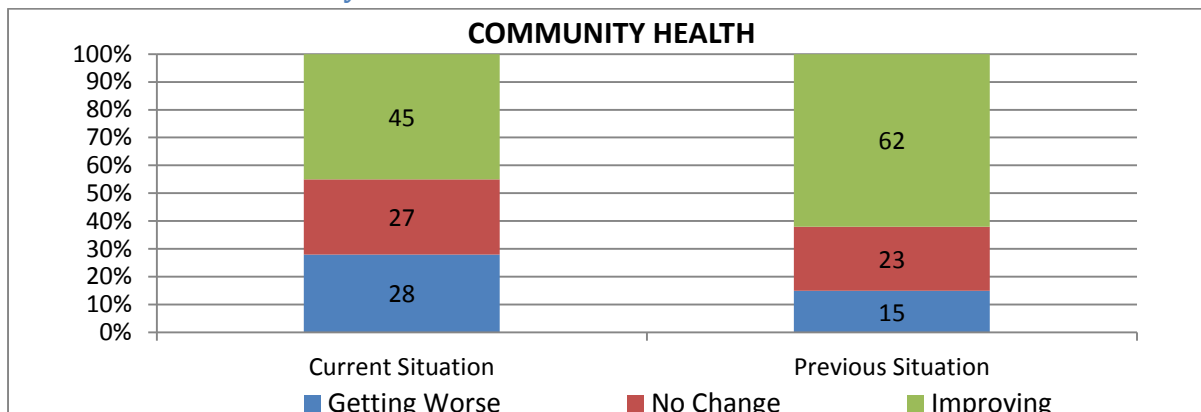
Most of the challenges remain the same, a decrease in percentages is noted for current situation compared with the previous scores

4.2.6 Proportion that think HM can solve community/land challenges



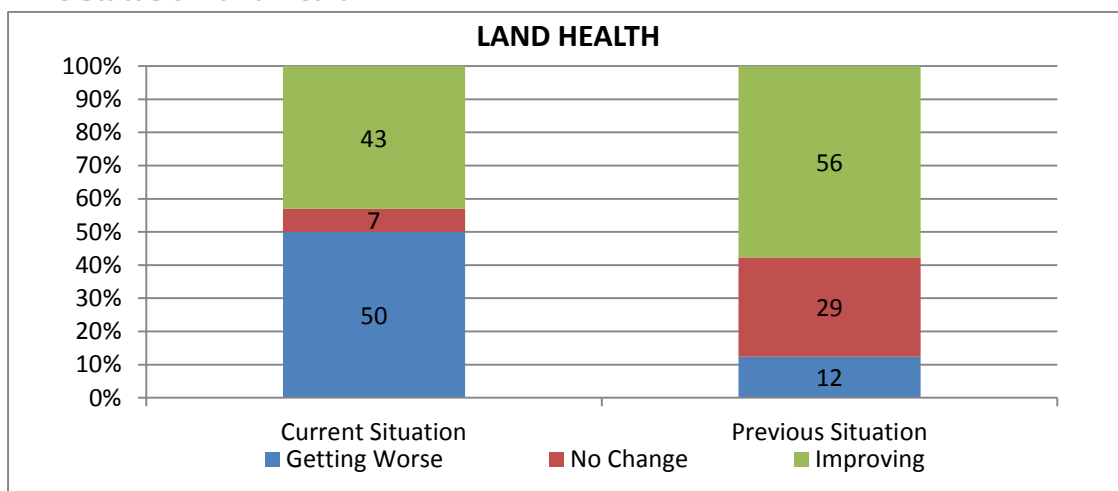
Majority of respondents believe HM is the solution to most of their community and land challenges. Their faith in HM has grown over time as they have realised change in the health of their grazingland, livestock and community when they started applying HM strategies. The percentages between baseline to impact however have not changed much. Again we may want to explore reasons why and use those to develop intervention strategies going forward.

4.2.7 Status of Community Health



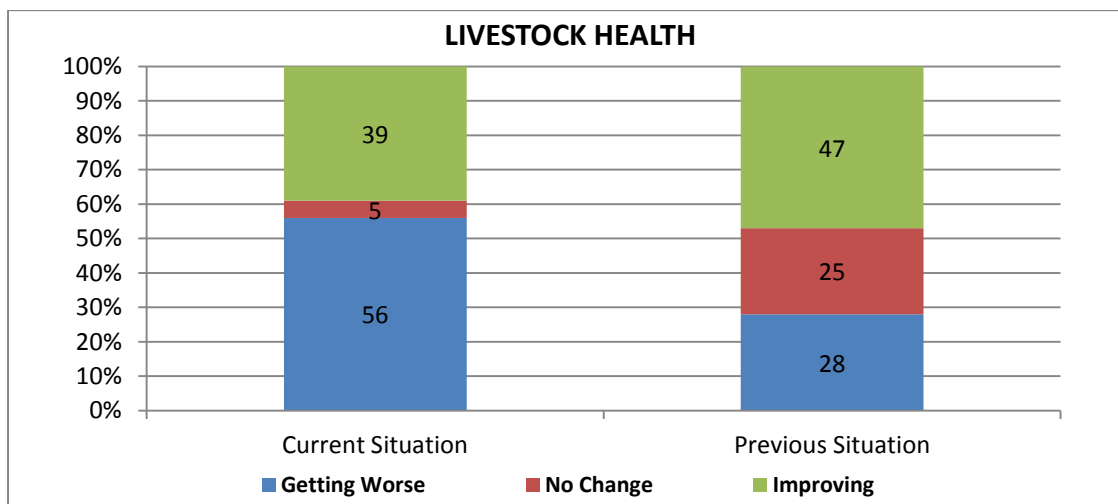
When talking about health here we mean the social wellbeing of the community. This includes physical health, mental health and relational health. The community felt they are feeling less confident that the health of the community is improving with the coming of HM. We must be cautious though when we say this because it is based on community perception and not scientifically proven. We also just need to explore further why we have this kind of finding.

4.2.8 Status of Land Health



Participants were asked to assess the health of their land and as shown in figure 3.19:in the current situation analysis 43% of respondents are confident that the health of their land is improving compared to the 56% from the previous study. This is definitely attributed to prolonged drought and lack of proper HM enforcement. But just as above discussion with the community can bring out more insight into this finding and how to take it forward.

4.2.9 Status of Livestock Health

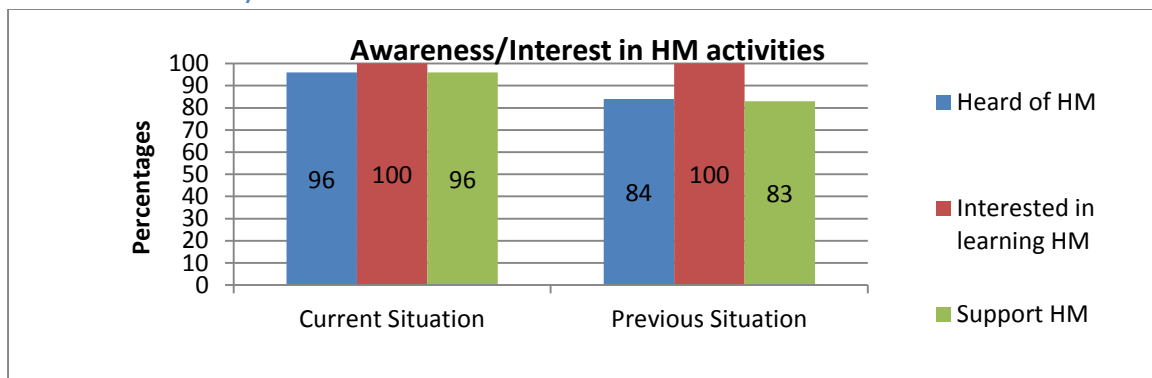


There is also deterioration in the health of livestock 56% up from 28% in the baseline. The percentage increase is derived from increase of livestock diseases and invasion of livestock from neighbouring communities.

4.2.10 External Threats to Group Ranch/Rangeland Management

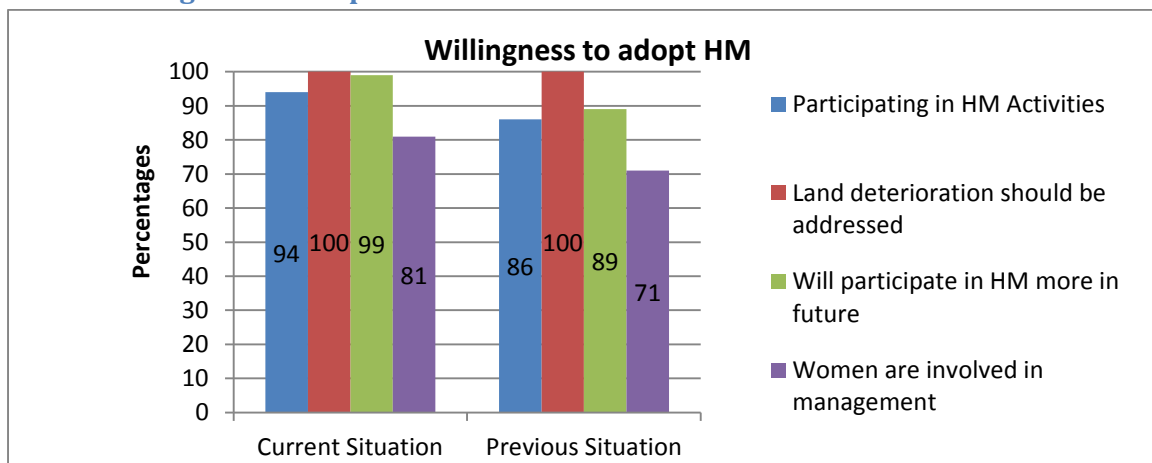
External Threats to Group Ranch	External Threats to Rangeland
Drought	Poor Governance
Neighbouring Communities	Population Growth
Ignorance	Insecurity
Politics	Drought
	Politics

4.2.11 Awareness/Interest in HM



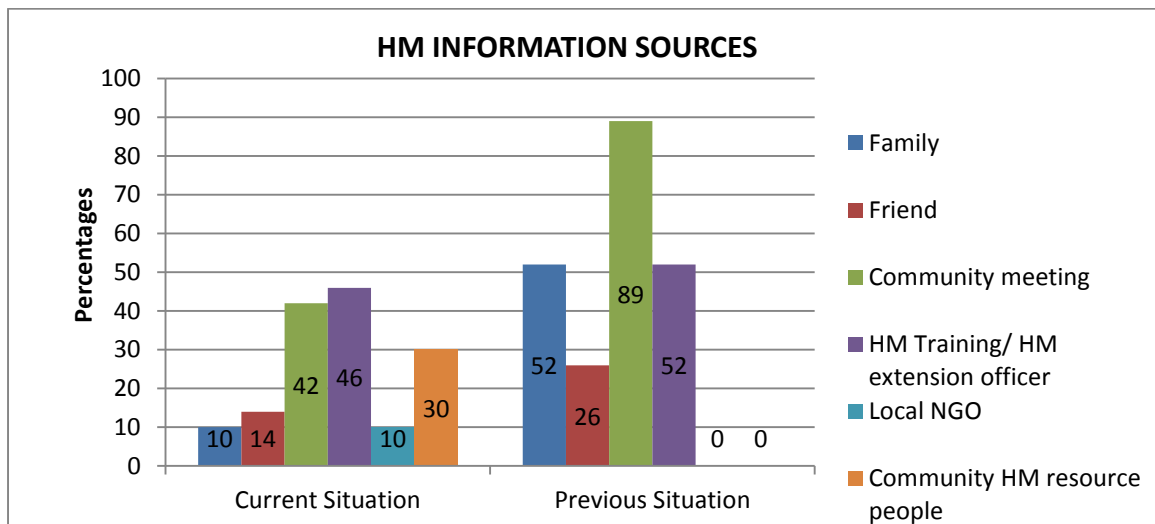
The number of respondents aware of, and in support of HM activities continues to grow. All respondents (100%) who did not have HM information are interested in learning.

4.2.12 Willingness to Adopt HM



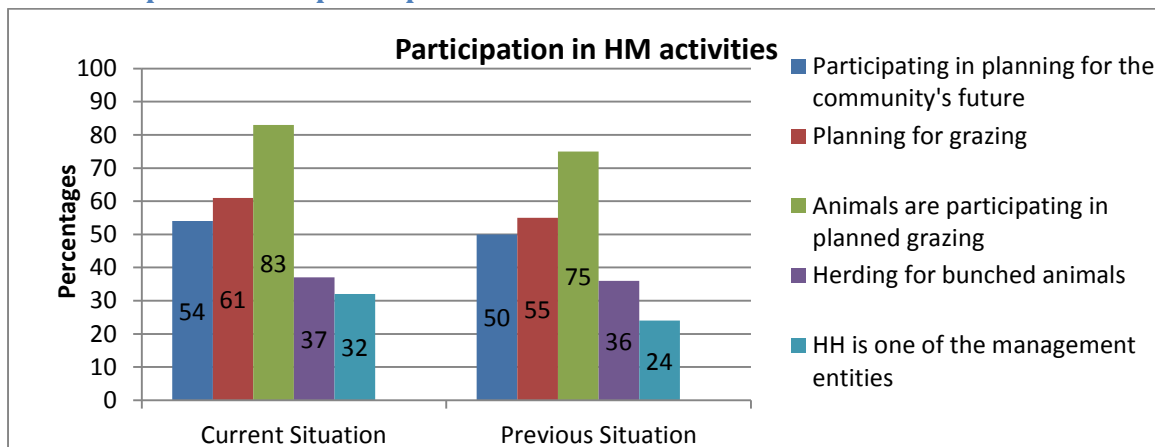
As majority of pastoralists understand more about HM, the number of those willing to participate in HM activities in future has risen to 99%.

4.2.13 HM Information Sources



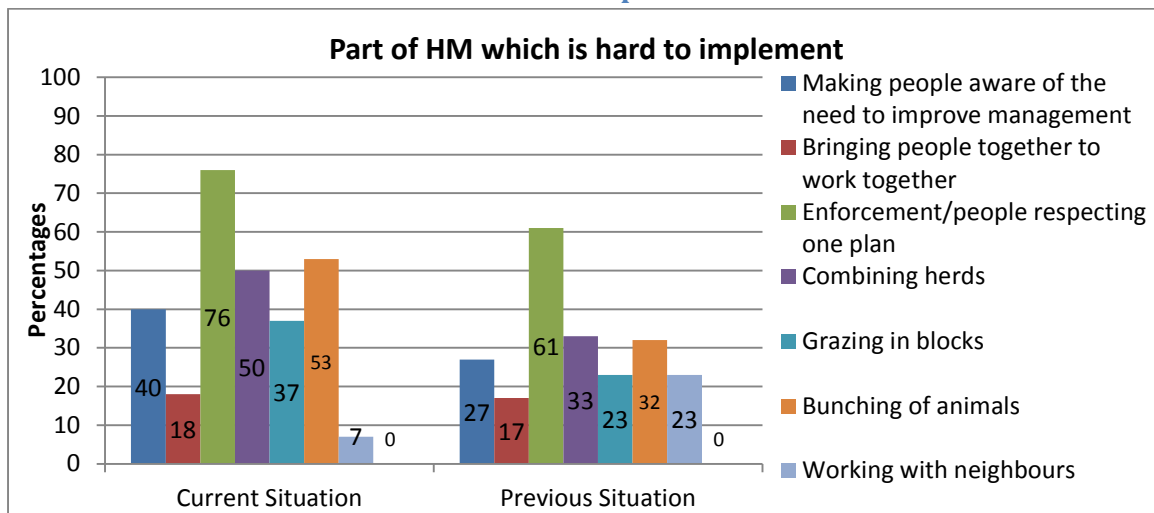
As seen above, currently HM information is increasingly coming from community meetings and HM training/HM extension officer 42% and 46% respectively, there is less information from family (10%) and local NGO (10%). The ideal situation is to see the entire community, family and friends knowledgeable about HM and being able to pass the information to the rest. From the graph community meetings on Hm have gone down, HM training has gone down, friends are not talking about HM like they used to. There is generally deteriorating trend in as far as passing on of information on HM is concerned.

4.2.14 Proportion that participate in HM Activities



In the figure above, respondents report increased participation in HM activities with the highest percentage of respondents reporting animal participation in planned grazing followed by planning for grazing. The changes in percentage are however very small and so we might want to know why there is little growth in the uptake of HM practices

4.2.15 Part of HM which is most difficult to Implementation



Enforcement of HM plan appears to be the most difficult thing to implement having been cited by 76% of the respondents in the current study up from 61% in the previous study. Bunching animals and Combining herds seem to be the next most difficult areas of implementation. Generally there is increased difficulty in implementing HM except for working with neighbours.

It is interesting to see more respondents identifying many areas that are hard to implement. This could be attributed to the fact that now the respondents have had an opportunity to implement and therefore cite these challenges based on experience. In the earlier study the challenges identified were based on assumption because the community did not know what it practically meant to implement HM strategies. But again this is an area to explore through the FGD

4.2.16 Paying for HRM services

None of the respondents was paying for HM services. 28% were not willing to pay for HM training, 5% are willing to part with a cow, 3% a bull, 10% a sheep, 40% a goat and 14% contribute money in future. The community, LWF and the trainers should find a way to sustain the HM training. Probably include the local government citing the benefits of HM to the community.

4.2.17 Other findings

- 72% of respondents graze in Group Ranch blocks, 28% in the forest
- 29% are not specific with grazing duration, 53% move after 1 month and 18% move to a new rangeland after grazing for over 2 months.
- Reasons for moving: Decrease in pasture 50%, committee announcement less than 30%, and water shortage 20%
- Who is responsible to ensure no under-grazing/overgrazing, 20% feel village elders should, 35% feel it is the grazing committees responsibility, 45% think it is everybody's responsibility.
- Water Resource Management: 25% are part of the WRUA members, 75% are not
- Evidence of Community Health Deterioration: Increase of diseases, Lack of unity
- Evidence of Land Health Deterioration: Insufficient pastures, Bare land, Prolonged Drought
- Evidence of Livestock Health Deterioration: Reduced production, Diseases
- 93% are interested in being part of the HRM network.
- 78% feel all (everybody) should access HM training, 13% feel village elders should access this training, 9% feel their children or they themselves should attend the training
- 27% walk for less than 5km to access the nearest livestock market, 56% walk 5km-20km to access the nearest market, 17% walk for over 20km

5: BASELINE EVALUATION RESULTS (NRT ZONE)

5.1 BASIC DEMOGRAPHICS

5.1.1 Sample size

Respondents were derived from 2 conservancies. A total of 69 respondents participated in the survey.

5.1.3 Key highlights of the survey findings are as follows:

CONSERVANCY	GENDER		TOTAL
	MALE	FEMALE	
KALAMA	28	17	45
WESTGATE	11	13	24
TOTAL	39 (54%)	30 (46%)	69

Table 3.13: No. of Respondents/Gender

5.1.3 Age of respondents

Age Categories (Years)	Conservancies		Overall (%)
	Kalama (%)	Westgate (%)	
18-25	7	8	8
26-35	27	25	26
36-45	22	50	36
46-59	31	13	22
Above 60	13	4	8

As shown in Table above, majority of respondents (36%) age category is 36-45 years.

5.1.4 Education Levels

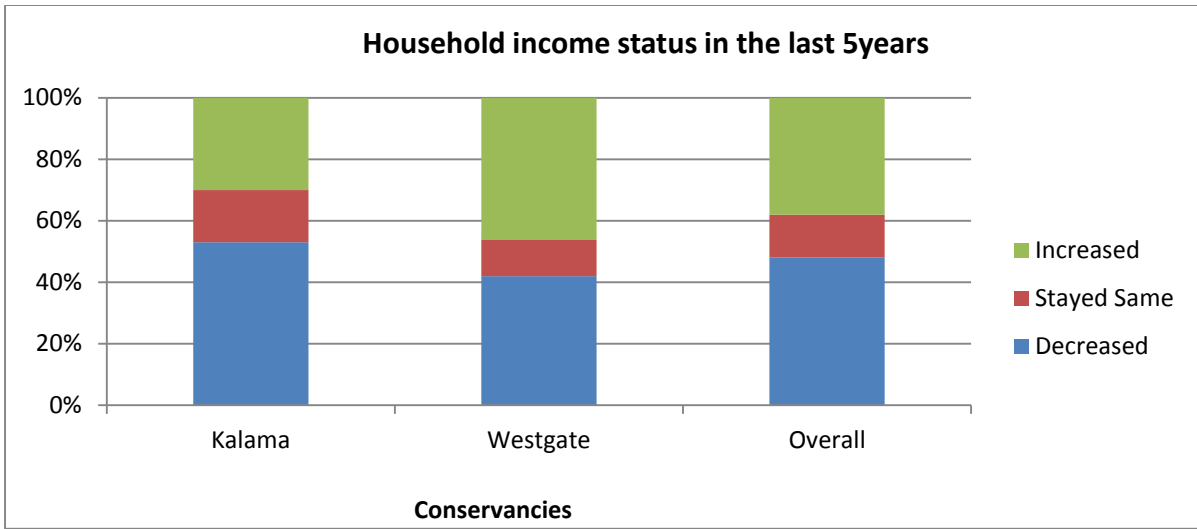
Respondents were asked their level of education, 61% of respondents have no education whereas only 33% have attained primary school level.

5.1.5 Household Composition

Less than five	23%
Five-Nine	60%
Ten-Fifteen	16%
Above 15	1

5.1.6 Income Status

In figure below, respondents were asked to describe their household income status in the last 5 years. An aggregate decreased income status of 48% was observed.



5.2 Key Community Challenges and their main causes

5.2.1 Key Community Challenges and main cause

Community Challenges	Main causes
1.Insecurity	1. Lack of unity
2.Poverty	2. Lack of market
3.Drought	3. Lack of rainfall
Others enlisted	
Diseases	Contaminated water
Land Degradation	Poor land management
Politics	Corruption
Illiteracy	Poor infrastructure
Poor Infrastructure	Poor governance
Lack of market	Poor infrastructure

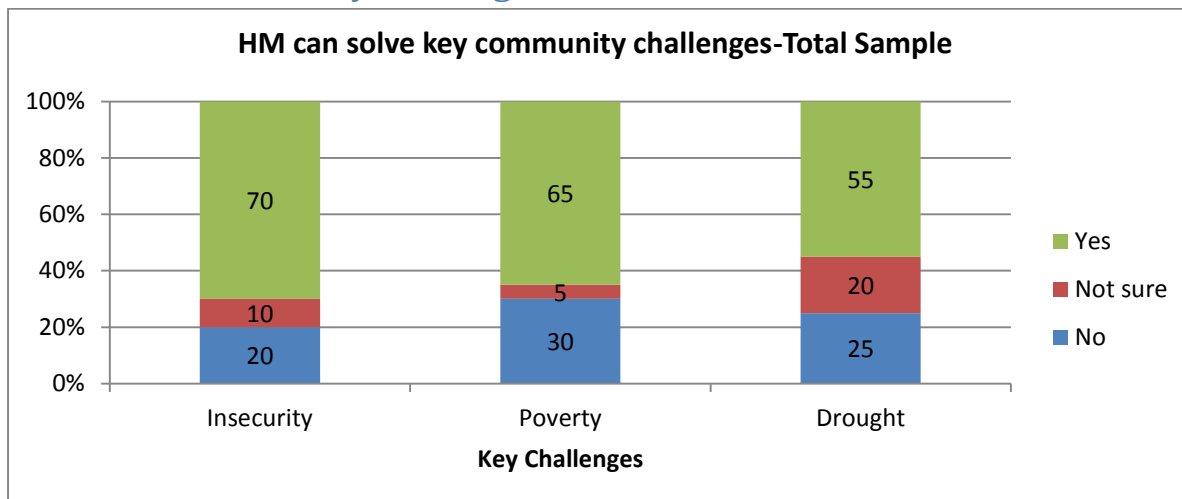
The top 3 are the key challenges faced by the communities

5.2.2 Key Land Challenges and main causes

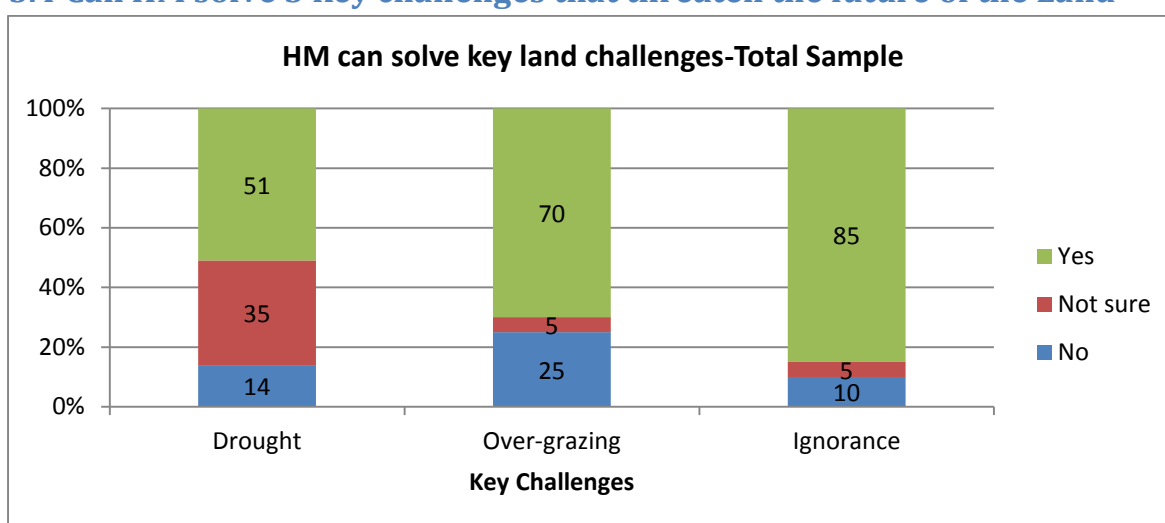
Land Challenges	Main causes
1. Drought	1.Lack of Rainfall
2. Over-Grazing	2.Over- Stocking
3. Ignorance	3. Lack of training
Others enlisted	
Population Increase	Lack of family planning
Deforestation	Settlements
Soil Erosion	Bare Land

These land challenges are in the order of importance. The top ones being key

5.3 Can HM solve 3 key challenges that threaten the future of the community?



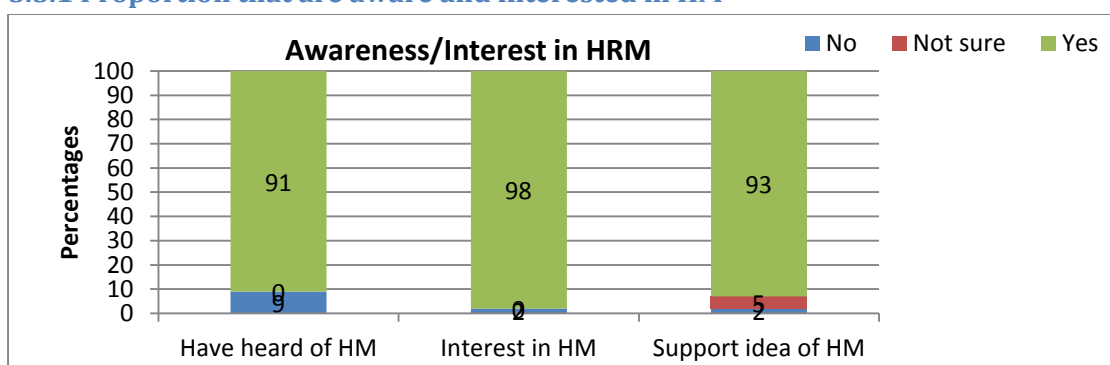
5.4 Can HM solve 3 key challenges that threaten the future of the Land



Majority of respondents believe HM can solve over-grazing and get them more knowledgeable, which is more in their control. 35% are not sure HM can solve help reduce incidences of drought which is more dependent on rain than anything they could do.

5.5 AWARENESS ON HRM PRACTICES

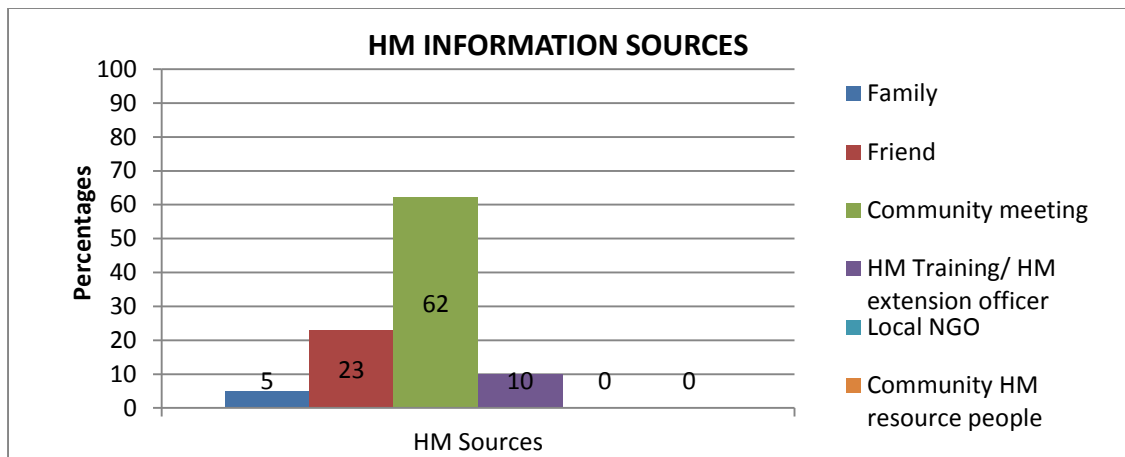
5.5.1 Proportion that are aware and interested in HM



Interesting is to see that 91% have heard about HM and 93% support the idea.

5.6 Sources of information

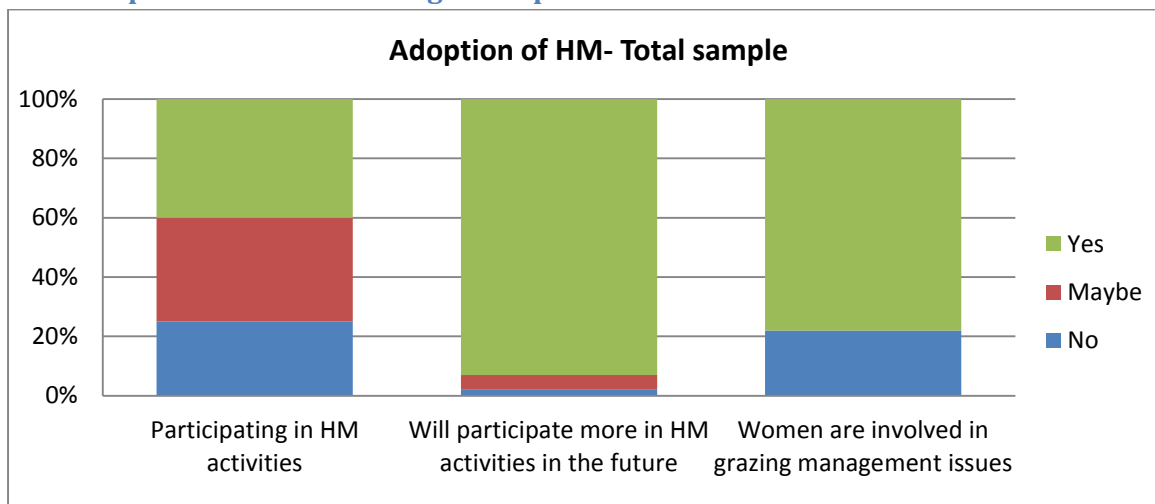
5.6.1 HM Information Sources



Majority of responses 62% got information on HM from community meetings.

5.7 Willingness to Adopt HM

5.7.1 Proportion that are willing to adopt HRM

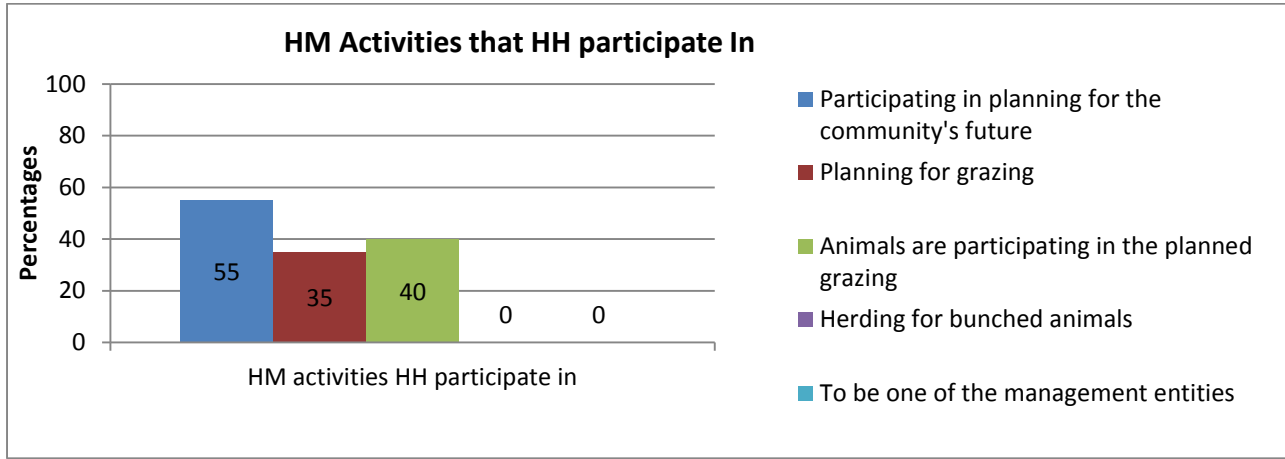


In the figure above 78% of respondents feel that women are involved in HM activities. 40% participate in HM activities whereas 93% say they will participate more in future.

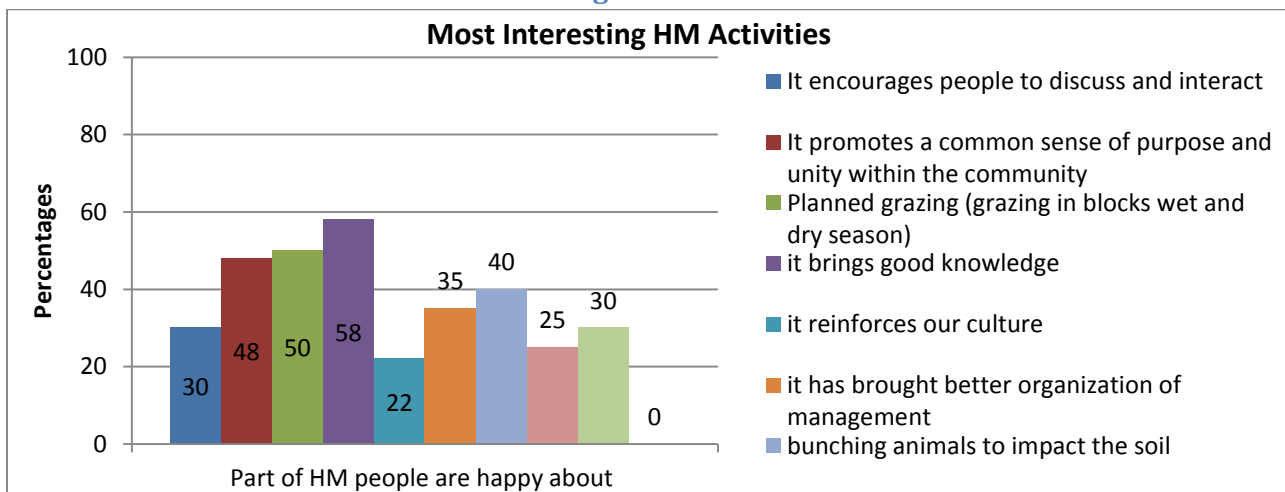
5.8 Level of Understanding of HM

This was tested by asking what HM activities would interest respondents. The enumerator did not read out the options.

5.8.1 HM Activities that HH would be willing to participate in

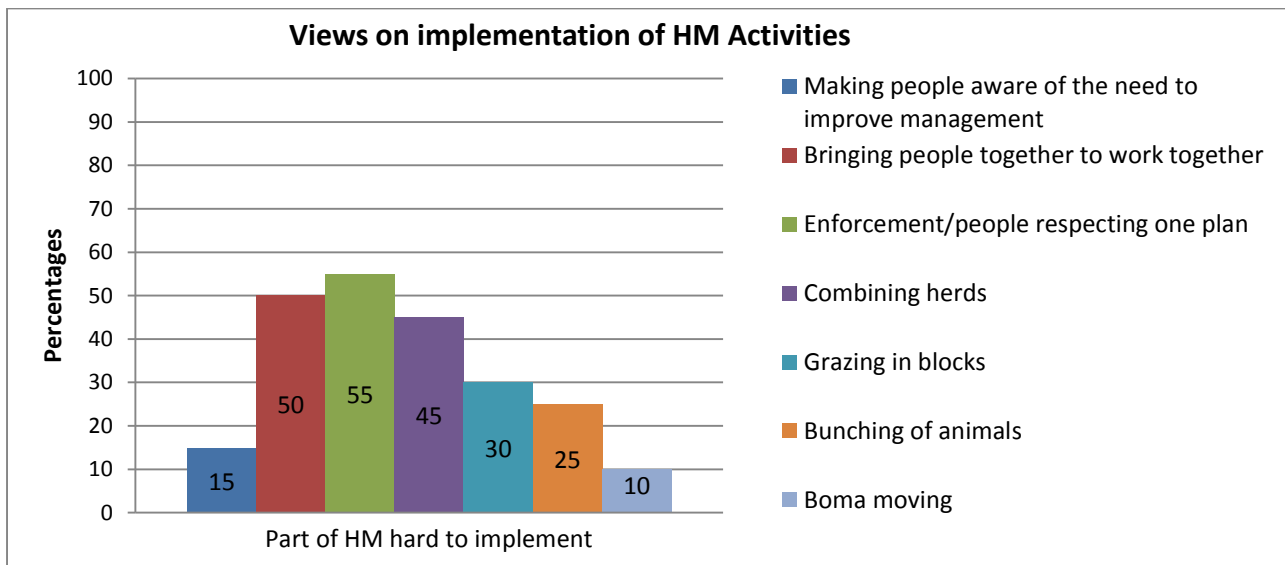


5.8.2 Part of HM considered most interesting



From figure above, majority of respondents (50% plus) are happy with planned grazing and the fact that HM brings good knowledge.

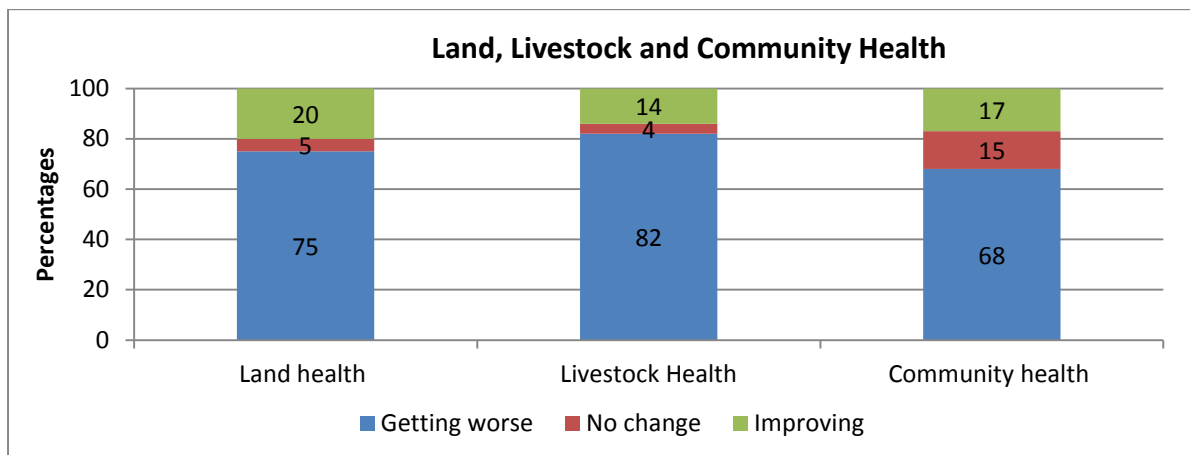
5.8.3 Views on HM Activities



5.9 Current land, livestock and community health status

5.9.1 Current Land, Livestock and Community Health Status

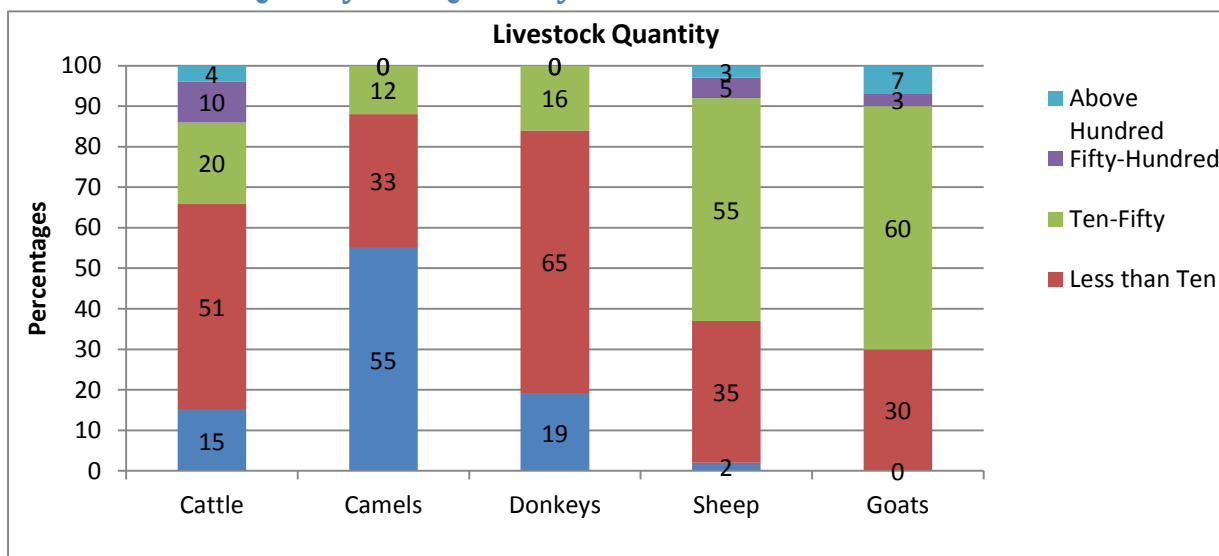
The figure below portrays results on current land, livestock and community health. Majority of respondents (60%plus) think that land, livestock and community health is getting worse.



5.9.2 Attributes to Land, Livestock and Community Health Deterioration

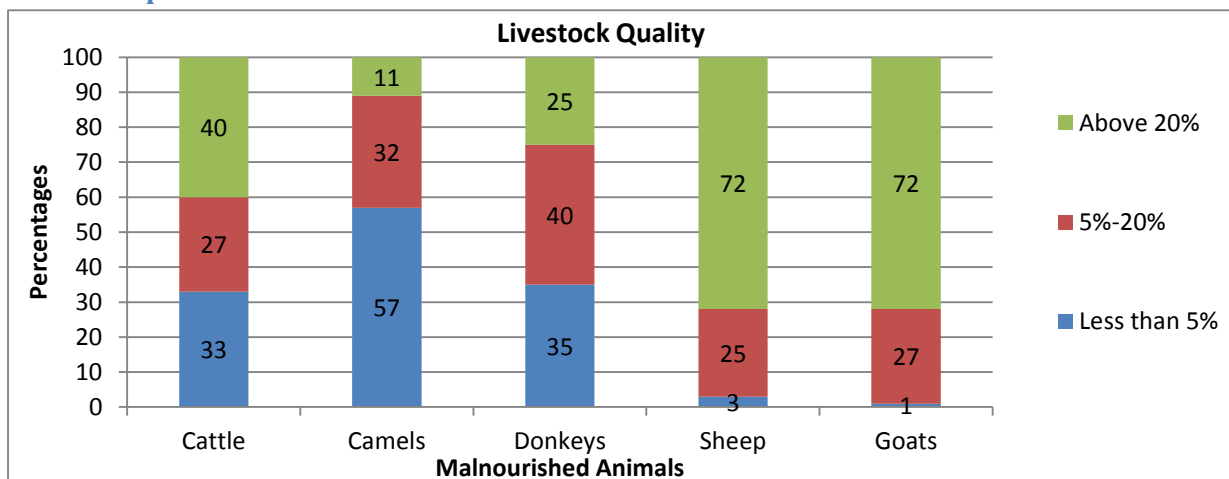
Attributes to Health Deterioration		
Land Health	Livestock Health	Community Health
Prolonged drought	Increase of diseases	Insecurity
Poor land management	Prolonged drought	Poor land management
Poor governance	Insufficient Pastures	Poor health care

5.10 Livestock Quality and Quantity Livestock Numbers

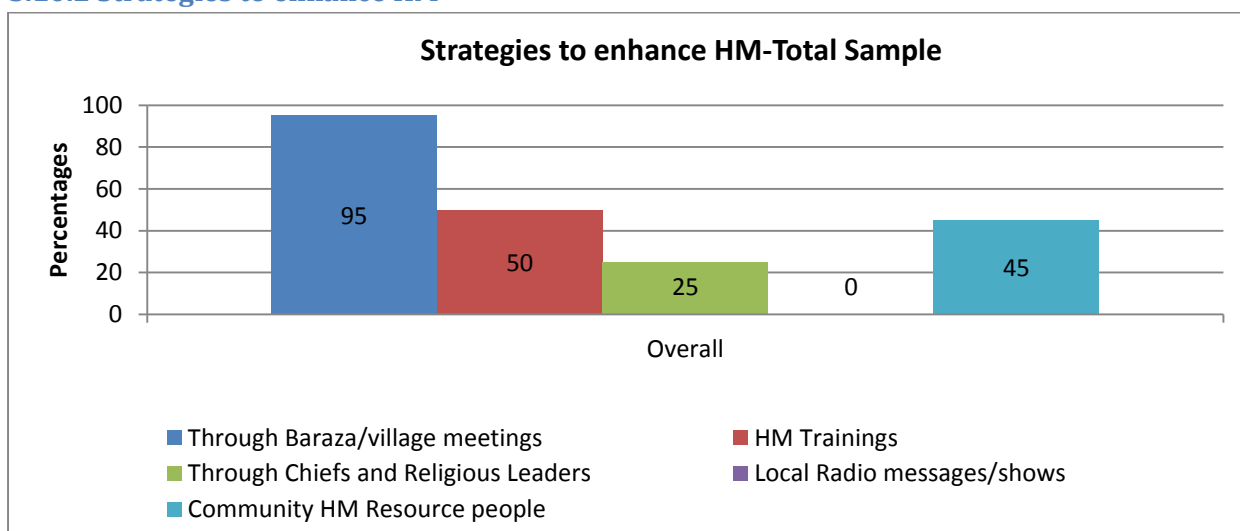


Fig

5.10.1 Proportion of malnourished animals



5.10.2 Strategies to enhance HM



5.11 Market prices for livestock

17% do not get worth of their livestock, 30% rarely get worth, 48% sometimes get worth and only 5% always get worth of their livestock. The level of satisfaction is measured by the value they placed on the animal and whether they feel that the buying prices compensated for this value.

5.12 Paying for HM Services

From the study, none is paying for HM services currently. 35% are not willing to pay for HM training. We may want to find out how much value is placed on this training. But from the findings 24% are willing to pay money, 12% are willing to give a cow, 23% are willing to give out a goat, 1% are willing to give a bull, whereas 5% are willing to part with a sheep in exchange for entire HM training. From this the trainers are able to understand the value the people of this community place on thinking, working and planning as a community, and therefore think through strategies including marketing that would be accepted at community level

5.13 Other findings

- 45% graze in the group ranch (blocks) whereas 30% in the forest. 50% take 2-3 months before moving livestock to new site whereas 20% not specific with grazing duration in any given site. Movement to another grazing site is influenced by decrease in pastures and water availability.
- 35% place planning and managing of the grazing activities with grazing committee. 45% feel the responsibility lies with community leaders whereas the remaining 20% feel the responsibility lies with everyone/community, herders or livestock owners.

- 95% of the respondents are interested in HM networking
- Who should access HM training? 22% feel village elders should access the training, 52% feel all should be trained, the rest feel it should be them, their spouses or their children.
- The reason they would want to learn is so that they can teach/share meaning that in this communities people are interested in the common good of all.
- 47% walk 20KM-40KM to get to the nearest market.

Please note

Most of the recommendation in the Laikipia findings would apply in westgate as well.

Annex 1:

Questionnaire



IMPACT ASSESSMENT FOR HOLISTIC RANGELAND MANAGEMENT IN LAIKIPIA

Introductory statement to household visit

Greet the people present and introduce yourself. Explain the purpose of the visit that you are conducting an impact assessment survey for the training on HRM conducted by Natural Capital East Africa (NCEA) on behalf of Laikipia Wildlife Forum (LWF). LWF has been supporting NCEA and the group ranches of the North/central Laikipia for more than 5 years. The study will help LWF learn more about the impact and what should be considered for improvement in the future. Explain that Kenya Markets Trust (KMT) has been involved in other livelihood interventions since 2011 and is now involved in the implementation of Market assistance Programme (MAP) program. Explain that the information given will be treated confidentially (information will only be used to prepare a report of general findings with no names). Ask the person if they are willing to be interviewed. If yes, start the interview. If no, terminate the interview and move to the next household. (20-30mins)

Date:		Q. No		County		Village	
Livelihood group (1 = Pastoralist, 2 = Agro-pastoralist, 3 = Informal business+ pastoralist) 4=Other (specify):				Interviewer name:			
A: HOUSEHOLD HEAD INFORMATION							
Name				Age			Sex (Male, Female) (M,F)

1. Household Composition

Male Female Total

2. Relation of respondent to HH?.....

3. How many animals do you have? a).Cattle.....b). Camel.....c)Donkeys.....
d) Sheep.....e)Goat.....

4. Proportion of the animals in the herd visibly suffering from insufficient food or are weak. Above (3) a) %..... b) %..... c) %.....d)%.....e)%.....

5. Are the livestock prices at the moment high or low? Are you getting the worth of the livestock when you sell?...a) **No b) rarely c) sometime d) always**

6. Distance of boma to the nearest market (foot):

7. How many years has the household been settled on this location? (How many generations)?

8. In the last 5 years, has your household's income (number of livestock owned): a) Increased b) Decreased c) Stayed same

9. Respondent's level of education? 10.

What are the 3 greatest challenges faced by people in your area which threaten the future of your community?	Main causes
1	1
2	2
3	3

11.

What are the 3 greatest challenges faced by people in your area which threaten the future of your land ?	Main causes
1	1
2	2
3	3

Suggest inserting a question cluster here for external threats to the rangelands and group ranch system

11a. What are the three biggest external threats to your management of rangelands?

11 b. What the three biggest external threats to your management of the group ranch?

12. Do you think the health of your land is improving or getting worse?

Improving %..... / No change %...../ Getting worse %.....

Why?.....
.....
.....
.....

13. Do you think the health of your livestock is improving or getting worse?

Improving..... / No change..... / getting worse.....

why?.....
.....
.....

14. Do you think the health of your community (social health, physical health) is improving or getting worse?

Improving..... / No change..... / getting worse.....

why?.....
.....
.....

15. Do you think that deterioration of the land needs to be addressed? Yes/ No?

If yes

How?.....
.....
.....

16. Are women involved in grazing management issues in your village? **Yes / No**

If **No**, how does this affect either positively or negatively?

16 a. Do you think that group ranch land is still productive enough to support your herd size of cattle? Of shoats?

B) Knowledge, awareness on Holistic Rangeland Management(HRM) training

17. Have you ever heard of the HM (Holistic Management) / Ramat Epuaan / Remessen/ Maamul wadhajir idea? **Yes / No**

If **'NO'** to 18, would you be interested in learning about HM? 1=YES, 2=NO

If **Yes to 18** where did you get the information about HM / Ramat Epuaan / Remessen from? (a) Your family (b) a friend (c) a community meeting (d) an HM training/HM extension officer (e) Local community HM resource people (f) Local NGO (g) community HM resource people

18. Overall, do you support the idea of HM? **Yes / Not sure / No**

19. Do you think HM (OL / OE) can help solve the 3 challenges with the **community** you mentioned above in question9?

Challenge (a) **Yes / No** Challenge (b) **Yes / No** Challenge (c) **Yes / No**

20. Do you think HM (OL / OE) can help solve the 3 challenges with the **land** you mentioned above in Question 11?

Challenge (a) **Yes / No** Challenge (b) **Yes / No** Challenge (c) **Yes / No**

21. What strategies do you think should be used to enhance your community's understanding on HM? (Multiple answers applicable)

1=Sensitization through Baraza, Village meetings 2= HM Training 3=Through chiefs and religious leaders
4= Local Radio messages/ shows 5= community HM resource people

22. In your own view, what do you think is the major challenge in introducing HM concept in your area?

23. Which part of HM / Ramat Epuaan / Remessen/ Maamul wadhajir are you happy about? (*Circle the ones which apply*)

- a) It encourages people to discuss and interact more
- b) It brings good knowledge
- c) It promotes a common sense of purpose and unity within the community
- d) it reinforces our culture
- e) Planned Grazing (grazing in blocks wet and dry season)
- f) Combining herds (people graze together)
- g) It has brought better organisation of management
- h) Bunching animals to impact the soil
- i) It shows the value of grazing recovery period / time
- j) Other.....

24. In your view, what is the most significant thing you learned /heard from that? (tick the various topics handled and tick against what the respondent cites)

.....
.....
.....
.....
.....

25. Are you and/or your household participating in any of the HM activities? **Yes / No If Yes, which ones? If No go to Q27**

- a) Participating in planning for the community's future
- b) Planning for grazing
- c) Your animals are participating in the planned grazing
- d) Herding for bunched animals
- e) You are part of one of the management entities
- f) other.....

27. Where do you graze your livestock?

28. How long does it take before you have moved them to a different block?

29. What influences your decision to move your livestock to a difference block?.....

30. How do you ensure your livestock grazing site is not over grazed/under grazed? (Enforced movement, do you understand?).....
.....

30. Whose responsibility is it, see Q30?

31. Is there a water body around your community?

32. How is it managed?

33. Are you a member of the management?

34. How is it (management) benefiting you/your community? **Pre-code options**.....

35. Which part of the HM idea is hard to implement according to you? (**Circle all the ones which apply**)

- a) **Making people aware of the need to improve management**
- b) **Bringing people together to work together**
- c) **Enforcement / people respecting one plan**
- d) **Combining of herds**
- e) **Grazing in blocks**
- f) **Working with neighbours**
- g) **Boma moving**
- h) **Other-specify.....**

36. Do you want to participate more in HM activities in the future? (**Circle one**) **Yes / Maybe / No**

37. What would you be willing to part with in exchange for the entire training (cow, bull, sheep, goat, money, nothing) 42. Would you be interested in being part of a network where after successful training you may be called upon to meet other pastoralists and give testimonials on your success? **a) YES,** **b) NO**

38. Who do you think should be able to get access to HM training? **a)=me, b)=my spouse, c)=my children, d)=village elders, e)=local teachers f)=All g)=other**

Why?.....
.....

39. What might be the differences between the training for a livestock owner and a herder?.....
.....
.....

Any additional information.
