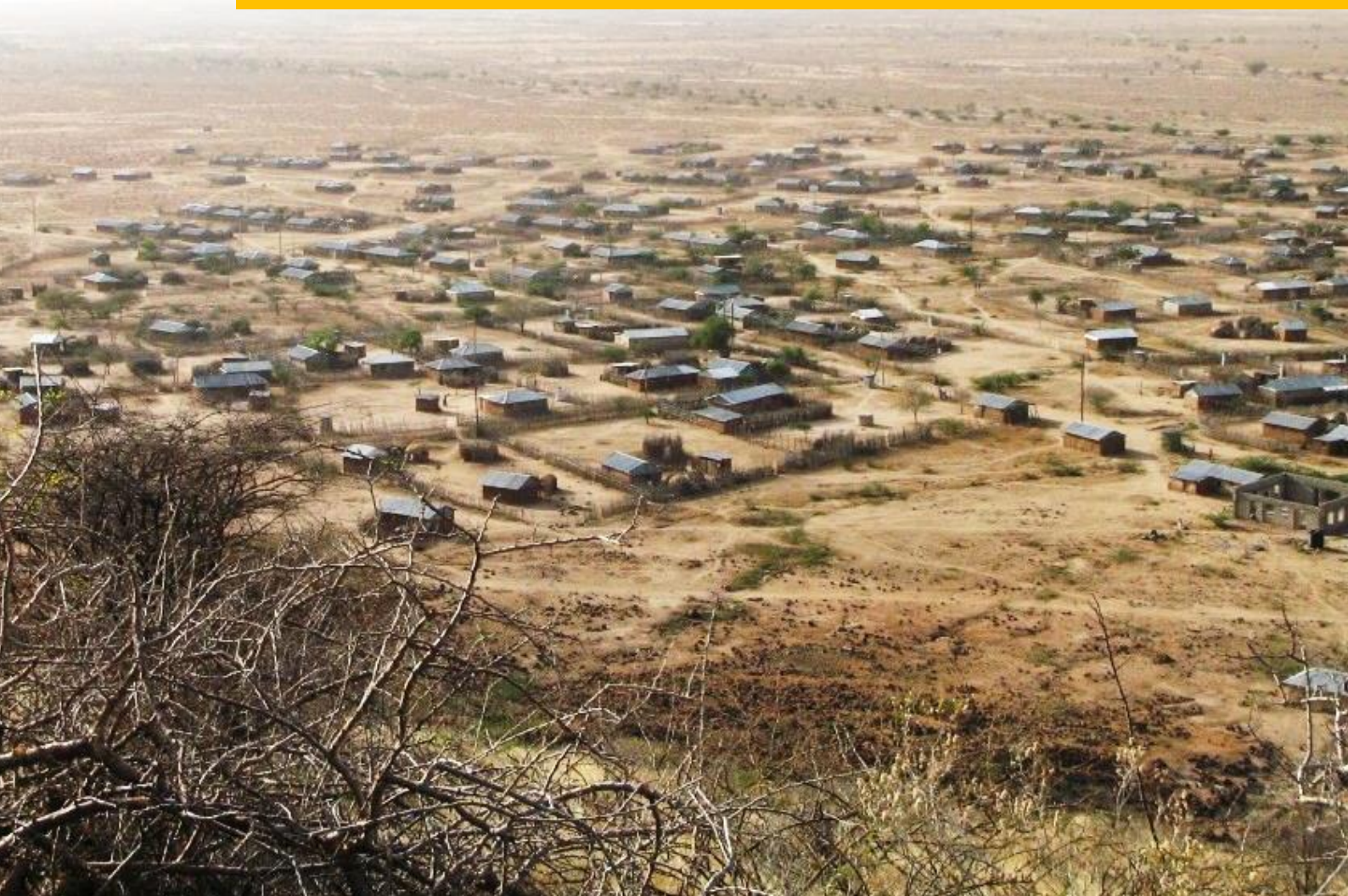




# MERTI RESILIENCE ASSESSMENT REPORT



**Ministry of State for the Development of Northern Kenya  
and Other Arid Lands**

Kenyan Meteorological Department  
Resource Advocacy Programme

International Institute of Environment and Development

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*DISCLAIMER: This research was funded by UKaid from the Department of International Development and Cordaid. However, the views expressed in the report do not necessarily reflect those of DFID or Cordaid.*

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## **i. List of Acronyms**

ALRMP	Arid Lands Resource Management Project
ASAL	Arid and Semi-Arid Lands
CAF	Climate Adaptation Fund
CBO	Community Based Organisation
DC	District Commissioner
DDO	District Development Officer
DO	District Officer
DSG	District Steering Group
GoK	Government of Kenya
KCPE	Kenyan Certificate of Primary Education
KMC	Kenya Meat Commission
KMD	Kenya Meteorological Department
LAPSSET Corridor	The Lamu Port- South Sudan- Ethiopia Transport Corridor
LMD	Livestock Marketing Division
MPNDV2030	Ministry of State for Planning, National Development and Vision 2030
MSDNKOAL	Ministry of State for Development of Northern Kenya and Other Arid Lands
NEMA	National Environment Management Authority
NGO	Non-Governmental Organisation
RA	Resilience Assessment
RAP	The Resource Advocacy Programme
RUA	Rangeland Users Association

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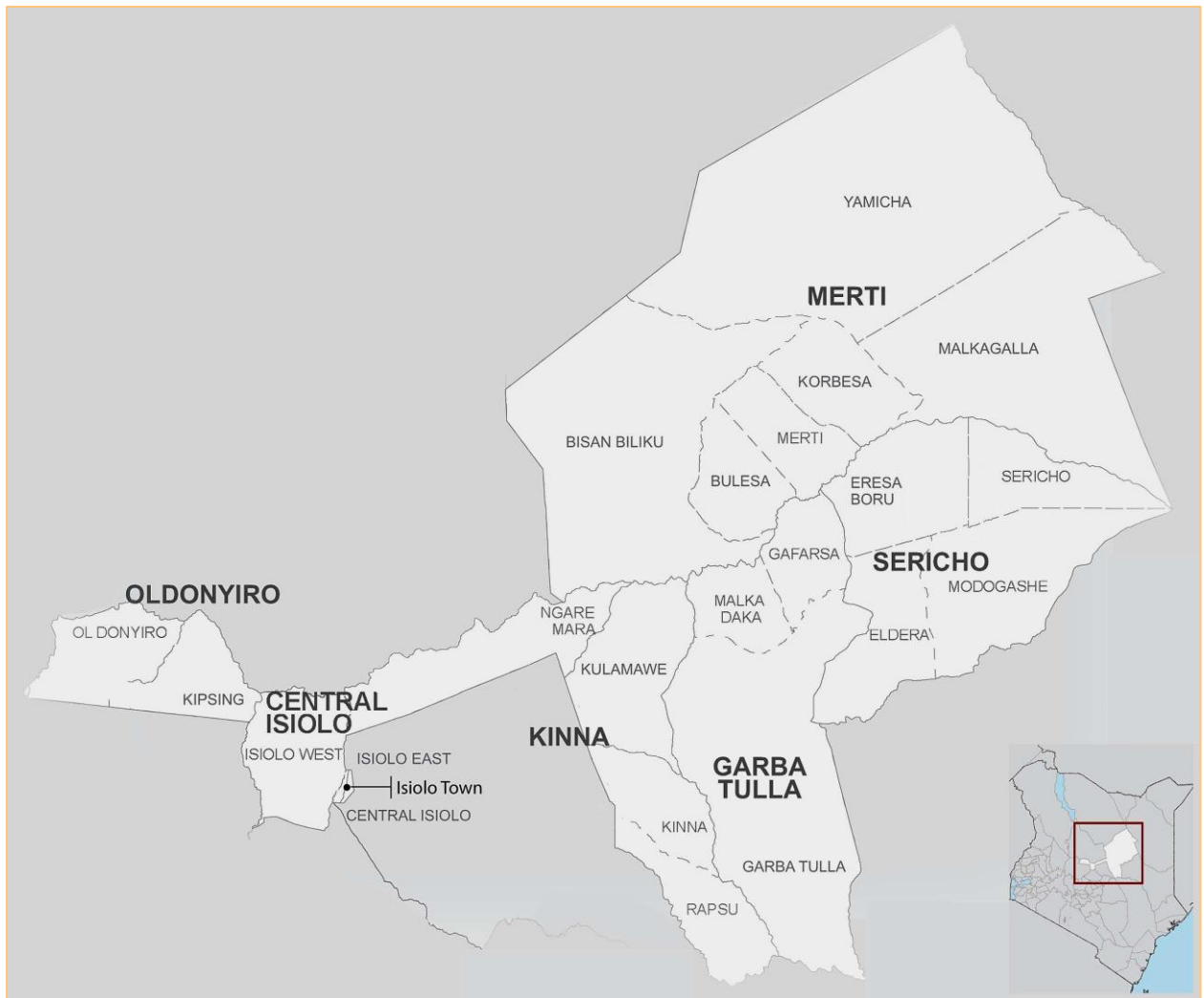
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# Introduction to the RA Process

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After blessings had been conferred upon the meeting by the local Imam, the meeting was opened by Diba Golecha who introduced delegations from different parts of Isiolo County (Merti, Yamicha, Malkagala, Korbasa, Gafarsa and Sericho) who had travelled to take part in the first day of the resilience assessment in order to receive the latest seasonal forecast (short rains forecast<sup>1</sup>) to be presented by Ayub Shaka (Assistant Director of the Kenyan Meteorological Department). Participants from Merti District would remain for the subsequent two days to take part in the full resilience assessment process.



Daoud Tari of RAP (Resource Advocacy Programme) welcomed participants (see annex 1 for the full participants list) and recapped the process that had brought all the partners and the participants together. Describing a process that had been on-going for three years, Daoud outlined the six workshops that had taken place in order to design a collaborative approach to addressing climate resilience in Isiolo County. Several participants acknowledged that they had taken part in some of these events themselves. Daoud asked that once the current status and direction of the project has been outlined, those participants should make it clear if the decisions that they took have been honoured or if the project has strayed far from the initial objectives. The draft agenda for the Resilience Assessment (RA) process was

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<sup>1</sup>The April rains are known locally as the 'short rains' while for much of Kenya (and KMD) they are referred to as the 'long rains'- this reflects the different duration and intensity of the two rainy seasons in different parts of the country.



then outlined to participants (see annex 2) and some of the logistical considerations were agreed.

There was then a short discussion on the importance of mainstreaming climate change and the opportunities afforded by the process of government devolution for affecting real change in the way 'development is done'. It was explained that the partnership between the Ministry of State for Development of Northern Kenya and Other Arid Lands (MSDNKOAL), the Ministry of Planning, National Development and Vision 2030 (MPNDV2030), the Kenya Meteorological Department (KMD), and the International Institute for Environment and Development (IIED) is focused on bringing together local and formal processes of planning to strengthen communities' climate resilience.

Joseph Ng'ang'a (District Development Officer- MPNDV2030) emphasised that under the new constitution there is a clear mandate for greater participation of communities in directing their own development and that the Ministry was very supportive of this pilot project to develop innovative climate change planning structures. Greater coordination of development activities (across organisations/ departments) will also be possible under the new county structure whereby MPNDV2030 will have a County Planning Unit that should help avoid duplication and lack of harmonisation in development activities.

Victor Orindi (MSDNKOAL) introduced the Climate Adaptation Fund (CAF) and its overall structure (see appendix 3). It was made clear that there was still room to modify the structure based on community suggestions. Victor also confirmed that construction of the community radio station would commence once land had been allocated by the county council. The decision to site the radio in Garbatula for technical reasons was agreed on by participants<sup>2</sup>. Victor explained that CAF had been chosen during the early stakeholder workshops as the mechanism through which community adaptation priorities would be supported because it would create and test a structure for 'bottom-up' adaptation planning. The focus on *public good type*<sup>3</sup> support is viewed as a promising approach to build longer-term

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<sup>2</sup>Garbatula's central location and slightly elevated position within the county makes it the most efficient broadcast site.

<sup>3</sup> A 'public good type' form of support would incorporate the principles of a public good in the sense that its utilisation should not create rivalry nor should it only benefit a specific group within the wider

resilience and is more likely to support local institutions and community cohesion than individual or small group support. Setting out the agenda for the rest of the meeting Victor proposed that the remainder of the first day should focus on the short rains seasonal forecast and that the second and third days should address issues of livelihood types, poverty and resilience and to identify specific challenges and priorities for actions in support of resilience. The next steps in terms of constituting ward level CAF representation for Merti would also be examined over the course of the meeting. There was agreement from participants on the agenda and Victor invited Ayub Shaka (KMD) to take the floor after a short tea break.

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community. A good example of a 'public good type' intervention is the creation of the community radio station. Although not all activities and actions supported by CAF will be strictly a 'public good', they should adhere as closely as possible to those principles.

# Day One: Short rains seasonal forecast

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## 1. Introduction

District Officer One, John Kiporia (representing the District Commissioner who had been delayed) was invited to address the meeting. The DO welcomed everyone and declared his support for the process and the 'bottom-up' approach to planning. The DO commented that he had attended the last seasonal forecast workshop that Ayub Shaka had given and that his predictions had been accurate in most respects which gave him confidence to use this information for planning. After urging KMD to continue their visits to disseminate climate information specific to Isiolo communities he handed the floor to Ayub Shaka.



After thanking the participants for receiving him Ayub asked participants who had been present at the previous seasonal forecast workshop in September if the forecast he had given them had been accurate. Participants responded by saying that he had told them they would receive average to below average rains in Merti and that they would start on the 15<sup>th</sup> and 16<sup>th</sup> of October. He had also told them that rains in the Aberdares (the source of the Ewaso Nyiro) were forecast to be above average so the Ewaso Nyiro river

would be strong and start flowing before the rains are received. He advised people to avoid settling by the river with their herds. In reality the rains started on the 13<sup>th</sup> of October in the morning and many people heeded Ayub's warning despite the fact that the best pasture at that time was by the river. The few who didn't heed the warning lost some livestock in the flooding which eventually reached up to Merti town.

Participants stated that the climate information they currently received through the radio was not specific to their area and was not easy to understand. Others highlighted the variable quality of climate information by recounting the example of an NGO that had told them to plan for an El Niño event which did not materialise, so they requested that Ayub continue to visit them with good quality information. One participant expressed the importance he placed on good quality climate information:

*"You must keep coming and communicating directly with us. This is not idle talk- these are things that affect real life"*

Ayub reassured participants that until the community radio was operational and delivering local climate information he would continue to conduct seasonal forecast workshops. He also added that, based on feedback at earlier meetings, the climate information would be delivered in a form that was easily understandable without the use of technical terms or foreign concepts.

### **1.1 March-April-May (Short Rains) Forecast**

The forecast detailed rainfall patterns both across the county and also across the neighbouring counties to the North and East. Due to the mobility of livestock herds, the seasonal forecast for neighbouring counties is as important in determining the likely scarcity of resources in Isiolo; as is the forecast for conditions inside Isiolo County itself. From Central Province eastwards the rains were expected to be below average and sporadic with unevenly distributed heavy bursts of rain followed by a dry period. The rains in Isiolo were forecast to commence at the same time as those in Central Province, around the 3<sup>rd</sup>/4<sup>th</sup> week of March. The majority of the rain was forecast to fall in April and cease by the end of the first week of May, although in Central Province rains would continue until the 3<sup>rd</sup> week of May. This implied that the Ewaso Nyiro would start flowing around the same time as

the rains would start falling but would continue flowing for a few weeks after the rains ceased. Rains were forecast to start later in Wajir and Mandera Districts and finish at the same time, meaning that grazing was likely to be better in Isiolo. This may have had implications for migration of livestock into the district<sup>4</sup>.

Participants confirmed that information on 'cross-border' rainfall was vital to their planning process as it would help them manage negotiations in advance before people were already "on their doorstep". He urged his colleagues in the Ministries of Livestock and Agriculture to form contingency

plans based on this forecast as there would be significant negative impacts on both sectors that could be minimised by proper planning. Participants also presented their seasonal forecast based on traditional techniques and natural signs- most of the signs pointed towards there being rain although they could not tell how much nor when it would start and finish (see box 1).

### **Box 1 - Traditional Forecast for March-April-May Long Rains**

- Uchus (traditional forecasters) say that even if rains are small animals will remain healthy
- We have seen a particular white bird in good numbers which normally means rains are coming. These birds follow the herd to eat the Qorra (grasshoppers) which are abundant just before rains
- We have seen a lot of frogs who are shouting. This never happens if drought is coming
- Those that view stars say the rains will be heavy

## **1.1 Climate Change Trends and Discussion**

Participants were asked whether they had seen any changes in the climate or their environment during their lifetimes. Participants responded that they had seen a number of changes or *Jijiram Qilensa* (literally- changes of environment/climate). The main changes identified were shorter intervals between droughts, higher temperatures, more intense/sporadic rainfall, earlier drying of the river and changes in the pattern of dry and wet seasons. It was explained that in order to produce the seasonal forecasts and to understand how the climate changes over time, measurements are taken of air and sea temperature all over the world every day. Most participants said that they had heard of El Niño and associated it with heavy and prolonged

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<sup>4</sup> See appendix 4 for realised rainfall in March, April, May as a percentage of the long-term mean. As predicted Wajir received between 0-50percent of its long term mean for the long rains which triggered significant migration into Isiolo County.

rainfall. The opposite part of the cycle (La Niña) was explained to be associated with a cooling of the Pacific Ocean which leads to drying in East Africa. Conditions are in a constant cycle between these two states and currently the status is moving from La Niña conditions observed in January towards a neutral status which is then believed to move towards El Niño conditions by the time of the long rains in October. Participants expressed their hope that this information was accurate and that they would experience an El Niño event later in the year. Ayub responded that when it came closer to the time of the rains he would be able to give them a more definite answer but currently he was moderately confident.

Daoud Tari interjected to emphasise the scientific nature of seasonal forecasts which, despite what some had been told at the mosque, did not contravene Islamic teachings, in fact some of the earliest scientific discoveries were made by Muslim scholars. There was some confusion concerning the basis for forecasts and some suspicion around the use of 'western magic' to predict the future but participants were reminded that in reality forecasts were based on temperature readings and the use of science. The same science was used in a number of industries such as aviation, shipping and agriculture to better prepare for extreme weather. The accuracy of forecasts in Northern Kenya is not as good as in other areas of the country because there is a lack of weather stations, but KMD is addressing this and will be constructing a fully functioning weather station next to the community radio in Garbatula to address this issue.

*Participants then asked for some clarification on the concept of 'average' (see box 2).*

Although the strongest and earlier effects of climate change were being experienced in countries around the equator due to ocean and wind patterns, the global nature of the phenomena was emphasised to participants by highlighting the unseasonably cold weather in Europe which had caused an unusual numbers of deaths and had been widely reported in the international news.

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#### **Box 2- The Concept of 'Average'**

*Ayub explained that certain areas get 250-300mm of rain if you look at annual rainfall over a long period of time- so it cancels the very high rainfall and the very dry periods. This means 'average rainfall' can be a misleading figure for arid areas which experience highly variable rainfall across years. However, in order to describe predicted rainfall it is still a useful concept which gives users an idea of broadly whether to expect a 'good' or 'bad' year.*

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Participants who engaged in agriculture requested that KMD provide them with a forecast for rainfall during June, July and August in the Aberdares as it was vital for them to know how long the Ewaso Nyiro River would keep flowing so they could know what crops to plant. Ayub welcomed the feedback and said that through that kind of feedback that they could start to improve the climate information that they provided them with.

A local councillor stressed the need to empower local institutions to oversee the planning process if climate information was to be used effectively. It was agreed that the broader issue of weak institutions would be addressed the following day and that in the afternoon the participants would break into two groups to discuss the seasonal forecast and what actions could be taken based on the information. Diba Golecha closed the session for lunch by thanking Ayub for travelling all the way from Nairobi to bring them this important information.

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### **Box 3- Using Climate Information for Planning**

#### **Group One:**

- Attendees at the meeting will spread information on the seasonal forecast to as many people as possible
- Sensitize the community on how to manage the human and livestock diseases that come with rains
- Due to the likelihood of 'influx' (immigration) of livestock from neighbouring districts, they will move towards the border and graze their animals there first, thus protecting grazing resources
- Alert communities living along the river where the bank is weak, about the flow of the Ewaso

#### **Group Two:**

- The forecast of poor rains tells them that they may want to sell their livestock early to get better prices rather than waiting until the last moment
  - For those that engage in agriculture, the forecast is good as the Ewaso will flow well so they should be encouraged and supported
  - Information must be spread among the community and they will plan together
  - Grazing patterns must be controlled to use resources effectively in light of poor rains forecast
- 

## **1.2 Using Climate information for planning**

The afternoon session began with a discussion on how the communities represented at the meeting could best utilise the seasonal forecast. Discussions were held in two groups and a summary of the results that were presented back to the plenary are presented in box 3. Despite some useful suggestions on how climate information should be utilised, participants felt

that planning was only effective if managed at the community level and that traditional institutions for natural resource management such as *dedha* needed to be empowered to manage resources as they used to- only then could climate information be utilised fully. It was resolved to return to the issue of institutions and their role in local planning processes over the course of the subsequent two days.



# Day Two: Community Meeting

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The second day of the meeting was opened by Victor Orindi (MSDNKOAL) who welcomed participants and set out the agenda for the day's meeting. Issues covered included: establishing the range of livelihood types in Merti ward and the relative numbers of households in different wealth groups, discussing the history of recent droughts and floods in the area, exploring local conceptions of poverty and identifying the key challenges to different key elements of the pastoral system. Participants endorsed the agenda and Daoud Tari opened the discussion on the various livelihood types within the ward.

## 2 Livelihood Types

Daoud explained that every livelihood within the ward should be included in the discussion. He gave the example of the previous resilience assessment in Sericho Ward whereby charcoal burning was acknowledged as a common livelihood type that had its own specific climate vulnerabilities. Even if the project could not directly support charcoal burning they still needed to understand it otherwise they could not support transition to more sustainable and resilient livelihoods. Participants began listing the common livelihood types in Merti Ward. Daoud encouraged them to

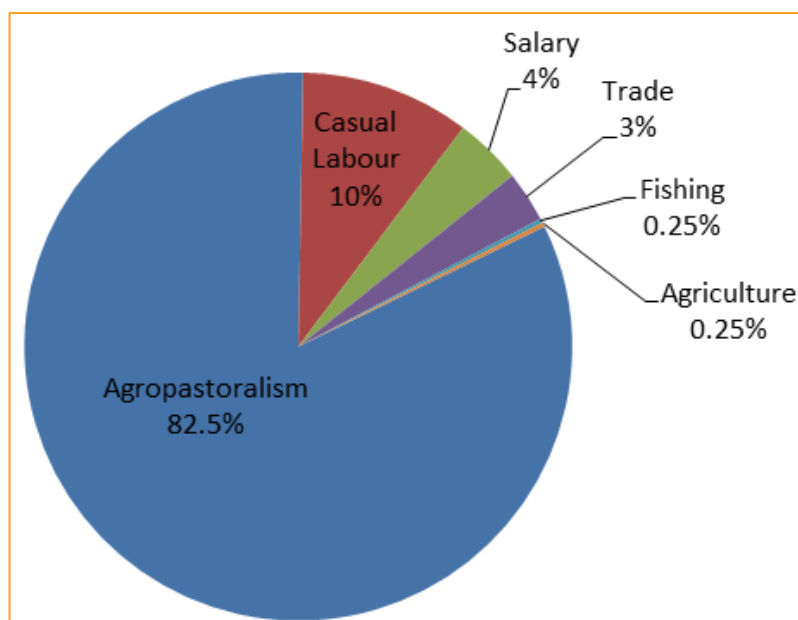


consider a 'livelihood type' as the activity which produces the most food or generates the most income for a household. For example, collecting and selling *Gum arabica* may be a common activity but if it was not something that households engaged in as their main activity then it should not be considered a livelihood type but a 'supplementary activity'. The process of completing the list of livelihood types involved discussion around specific

activities such as receiving relief food and remittances and if these could really be considered livelihood types. Once consensus had been reached participants took part in a proportionate piling exercise (see *photograph 3*) in order to establish the relative numbers of households engaging in the various livelihoods. *Table 1* presents the range of livelihood types listed and *figure 1* shows the proportion of households pursuing them.

*Table 1- The dominant livelihood types in Merti District*

Livelihood Types (Kiboran)	Livelihood Type (English)
Horsisa Bulla	Livestock keeping
Horsisa Qote	Agriculture
No Kiboran word	Agropastoralism
Qurtumi	Fishing
Nagadh	Trade
Humna	Casual labour
Mushara	Salary
No Kiboran word	Charcoal burning
No Kiboran word	Remittances



*Figure 1- Proportion of households in Merti District pursuing each livelihood type*

There was a lot of discussion around whether 'agropastoralism' was an appropriate term considering that cultivation formed a small part of overall

production. Some participants suggested that pastoralism was the livelihood type and that cultivation was a 'supplementary activity'<sup>5</sup>. However, the consensus was that the community was best described as agropastoralists because the majority of families attempted to cultivate almost every year. It proved difficult for participants to estimate how many salaried employees there were compared to agropastoralists but since the majority of the salaried employees were teachers or police, they were able to establish rough numbers (with the help of the DO). Households who focussed mainly on either cultivation or fishing were considered very rare- initially this was represented by 1 kernel of maize as this was the smallest unit available but participants explained that they would like to cut this into four and place one piece, so the farming and fishing livelihood types were recorded as 0.25 % each. Having established the rough proportions of each livelihood type the discussion turned to the issue of poverty.

## 2.1 Local Conceptions of Poverty

The discussion on poverty began with the identification of the Kiboran word for 'poverty' and different categories of 'poor' and 'well-off'. Poverty was translated as either *Hiyyum* or *Qollum* and both *Degg* and *Qolle* were identified as words for 'poor' although they had slightly different meanings. Several other categories of wealth were identified, these are summarised in *table 2* which also details the amount of livestock associated with each wealth category. Livestock assets were the primary determinant of a family's wealth status although it was acknowledged that other factors were increasingly important (e.g. if a family has a salaried member and receives remittances). Participants emphasised that the size of the family also needs to be taken into consideration when placing a family within a wealth category. For this reason, the livestock assets associated with each wealth category in *table 2* refer to a family of 10 people<sup>6</sup>.

**Table 2- Local wealth categories and associated livestock assets for a family of ten people**

Wealth Status (Kiboran)	Wealth Status (English)	Livestock Assets
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<sup>5</sup> Based on household interviews carried out subsequently, cultivation is only successful once every two and a half years (40% successful) on average (based on 13 interviews)

<sup>6</sup> Some participants also pointed out that family size is not the only co-determinant of a family's wealth status. Family structure was also considered important as this can have a big influence on family consumption requirements e.g. young men often herd for wealthier pastoralists and feed from their herd so don't require any input from the family herd.

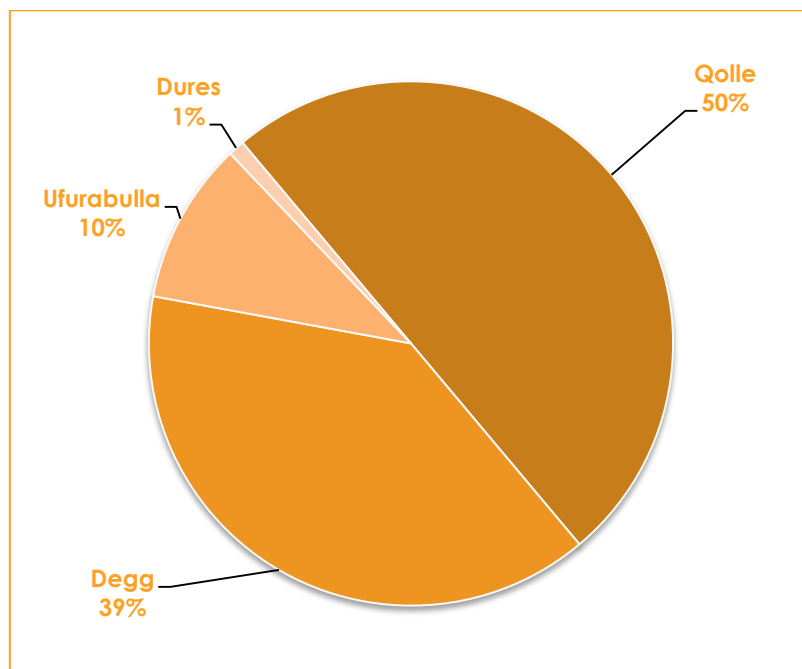
<b>Qolle</b>	Very poor	<5 cattle
<b>Degg</b>	Poor	<30 cattle
<b>Ufurabulla</b>	Able to satisfy one's needs	>60 cattle
<b>Dures</b>	Rich (able to help others)	>200 cattle

One of the central points of disagreement among participants was whether the wealth categories that they were documenting should reflect current livestock holdings or more traditional categories (such that wealth categories were fixed over time). Although a consensus was not reached, the wealth categories represented in *table 2* seemed to reflect a more fixed categorisation which harks back to more prosperous times for the Boran. For example, concerning the category of *Dures*, there were a number of participants advocating for a reduction in the number of cattle associated with this category because almost nobody in Merti Ward had more than 200 cattle (see *figure 2*).



Other participants were of the opinion that the Boran could not say someone was rich when they only had 100 cattle. It seemed that maintaining traditional categories of wealth was linked for some with a sense of pride and status, whereas others were ready to adapt wealth categories to prevailing conditions. To some extent certain wealth categories were linked with specific capacities which were associated with livestock asset thresholds. For example, *Dures* was defined as being 'rich enough to help others' and *Ufurabulla* was defined as 'able to sustain one's needs' so these categories are inflexible because of their link with livestock asset thresholds which define

specific social assistance and subsistence capabilities respectively. Therefore, participants were essentially in disagreement over whether wealth categories should be delinked from these specific capabilities in light of their decreasing relevance to people's lives. Those advocating for a modification of wealth categories argued that although livestock holdings have traditionally fluctuated, the effects of more frequent droughts combined with other factors mean that the decreasing per capita livestock holdings was a more permanent shift. After some intense debate the categories in *table 2* were accepted and all involved in the discussion had a greater understanding of local concepts of wealth and poverty. The meeting then broke for lunch.



**Figure 2- Proportion of Merti Community in Each Wealth Category**

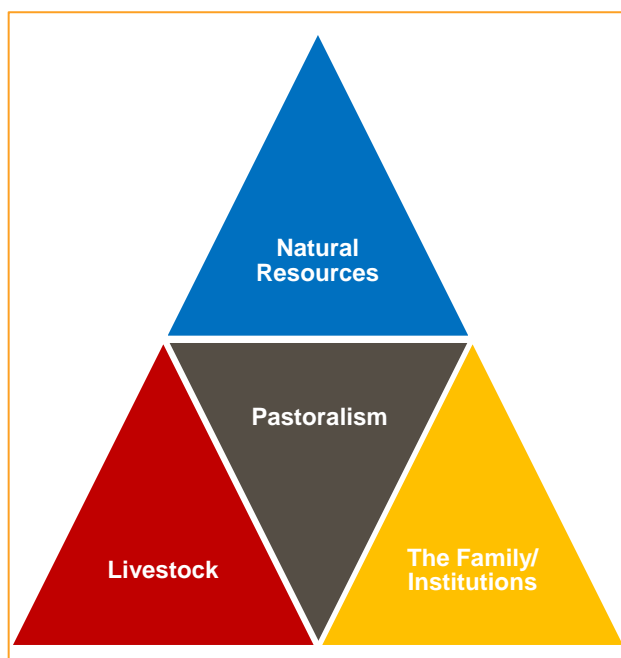
### 3 Constructing the System

Before establishing the history of climate hazards in Merti District and starting to explore the concept of resilience, Daoud Tari asked participants to describe the key components of pastoralism- the dominant production system in their area. Box 4 summarises the participants' list of key components required for successful pastoralism. After the list had been agreed on, Daoud asked participants whether some components could be grouped together. Health was felt to go with both 'livestock' and 'labour'. 'Management' and 'planning' were linked with both 'labour' and 'institutions'. 'Peace/security' was linked with 'institutions', while 'mobility' was felt to be linked to both 'natural resources' and 'institutions'. Based on the linkages between key components of the livelihood system Daoud consolidated the list under three main themes which were represented in a triangle (see figure 3).

#### Box 4- Key Components for Successful Pastoralism

- Planning
- Livestock
- Pasture/water (natural resources)
- Peace/security
- Health
- Herders/clan (labour)
- Management
- Institutions
- Mobility

Figure 3- Structuring the Key Components of Successful Pastoralism



**Natural Resources-** comprise pasture, trees, water etc., which must be adequate (quality, quantity, distribution) and accessible (mobility/institutions).

**Livestock-** Well-adapted breeds, healthy, and diversified species.

**The Family and Institutions-** Institutions should facilitate effective planning and natural resource management as well as providing security and other key services. The family must have adequate skills and knowledge and health.

### 3.1 Using the 3 Pillars Approach to Resilience

**Livestock (The Herd)** -Lower mobility and less intensive management (lack of household labour) leads to poor quality diet and lower fertility and production. Increased disease burden due to lack of adequate pasture and water, poor disease control, increased prevalence of existing diseases and introduction of new diseases due to climate change. Uncontrolled influx of livestock from neighbouring districts also introduces new diseases (lack of proper institutions to govern migration/ quarantine). Sufficient livestock drugs cannot be purchased due to lack of capital (due to drought losses). Inadequate veterinary care compromises animal health and production.

**The Family/Institutions**-Frequency of droughts is reducing per capita asset holdings, which is compromising the food security of the family. Inadequate management (legitimization & enforcement) of key resources exacerbates the effects of drought. The family is not producing enough labour as the youth are not interested in pastoralism after education (even uneducated youth have become more tied to town). School is reducing mobility. Insecurity is undermining efficient resource use and reciprocal agreements. Poor quality infrastructure and insecurity compromises livestock markets. Poor access to climate information (downscaled) reduces effective planning. Lack of adequate domestic water means that women in particular do not have time to care for small stock and engage in alternative income generating activities. Inadequate health services compromise resilience during droughts and floods (labour). Lack of credit facilities reduces the ability of families to restock or invest in drugs etc. Relief food combines with education and advantages of 'town life', to reduce motivation for mobility. Less livestock need to be sold to buy food during drought due to relief food (asset protection).

**Natural Resources**-The increasing frequency of droughts is reducing biomass production. Heavier rainfall events are causing more flooding and threatening livestock health and safety (grazing by rivers). High concentrations of livestock around water points cause degradation. Drought reserve gets depleted by neighbouring ethnic groups during non-drought periods, which compromises the resilience of Merti community during drought.

### 3.2 Discussing the weaknesses and links between system components

Participants were asked how the various components were inter-related and how they could be strengthened to make the system more resilient. The 'labour' component became the focus of the initial discussion as this was felt to represent a 'crisis' for pastoralism in their area. The disengagement of the youth from pastoral livelihoods meant that currently most of the main pastoralists in the area were over 60 years old.

*"The youth see the livestock as belonging to their fathers. They may herd for many years without pay and then the herd may get lost before they can inherit so it is very hard for them to invest themselves in it"*

Schooling is believed to have 'de-skilled' the youth for a pastoral livelihood and lack of job opportunities has left them idle in town getting accustomed to relief food. This impacts negatively on the livestock and family as adequately skilled labour is a key component of the system. The pressure to enrol children in school and the increasing belief that education may offer the best chance of a sustainable livelihood for their children impacts negatively on the livestock (and therefore the family) through constraint of mobility and a drain on resources. Participants regarded the school system to be inflexible and adapted badly to the pastoral way of life. The term timetable and daily schedule were not adapted to allow children to participate in livestock keeping, and pastoralism was represented very negatively in the school curriculum. Daoud asked participants how many of them still moved their household with the herds. From a total of 34 community participants only 4 still moved their house. Several participants commented that a combination of drought and the promise of education and relief food had led many to settle and just move their livestock. The break-down of traditional institutions for natural resource management was also highlighted as a weak component that had knock-on effects on the other components of the system. Both natural resources and livestock are negatively affected when institutions are unable to effectively manage resources. The session was brought to a close because the discussion had begun to broaden to incorporate themes to be discussed in more depth the following day.



### 3.3 Climate Hazard Timeline

Participants were asked to cast their mind back over the previous 10 years to describe the major climatic events that had affected their livelihoods. Droughts were dealt with first before moving on to floods. See *tables 3 and 4* for a description of previous droughts and floods respectively. Participants commented that despite the severity of the 2011 drought for the Horn of Africa more widely, this was not a severe drought in their area and they only suffered moderate livestock losses. In part, this was due to a concerted effort by the Merti Rangeland Users Association (RUA) to coordinate migration to Yamicha and Duma boreholes early in the onset of the drought. Similar attempts had been made during *Olla Stag* but late migration and the advent of an unknown disease meant that livestock losses were severe.

*Table 3- History of significant drought events in Merti District*

Year	Name	Description
1992	Olla Kinna	Merti livestock moved to Kinna
1996	Olla Bisan Dimo	The river flooded with red water but there was no rain and little pasture
2000	Olla Kauro	Merti livestock moved to Kauro (Samburu)
2004-2006	Olla Stag	The animals stopped walking and then died (unknown disease). <i>Stag</i> is a Somali word for 'stop'. Very severe livestock mortality.
2009	Olla Dogogicha	Merti livestock moved to Dogogicha
2011	Olla Kilisa	Merti livestock moved to Kilisa

*Table 4- History of significant flooding events in Merti District*

Year	Name	Description
1993	(No Name)	The flood that relieved Olla Kinna
1997	El Niño	Rains day and night for more than a month
2001	Gan Marti Chaps	Literally 'the rains that broke Merti'
2007	Hagaya Mara	Literally 'short rains with a lot of pasture'
2011	BokaAyub	Literally 'the rains of Ayub (Ayub Shaka of KMD)'

### 3.4 Vulnerability to Floods

Merti town is prone to flooding and participants from the town commented that they had been seeking funds since *Boka Ayub* to divert the river in such a way that the town would not get flooded when the river broke its banks. However, participants in the community meeting and household/group interviews expressed broad consensus that flooding had more positive effects than negative ones. Although destruction of crops, equipment, and irrigation channels, and an increase in the prevalence of disease (human and livestock) were cited as significant negative effects; the value of floods in regenerating pasture was regarded as more important. This was particularly the case when no rain is received in the wider area and flooding stimulates vital pasture re-growth. As cultivation is a marginal activity for the vast majority of those interviewed, flooding was not seen as a key threat to community resilience and was consequently not prioritised for resilience building activities by any group. Groups most concerned with flooding were those engaged in casual labour in Merti Town and participants at the community meeting who invested most resources in flood plain cultivation.

As time was getting late, participants agreed to continue the discussion the following morning by looking at which groups are most affected by these droughts and floods and what makes some households more resilient than others. After some closing comments and a summary of the day's events, participants were thanked for their active engagement and the meeting was closed by a prayer from the local Imam.

# Day Three: RA community meeting

## 4 Resilience

Daoud Tari opened the discussion on resilience by asking participants the equivalent Kiboran word. After a brief discussion about the concept (see appendix 5 for some of the key components of resilience in a pastoral context) it was unanimously decided that *jajaben* described the ability to 'come back' after a hazard and this was felt to encapsulate the concept of resilience. Participants identified the word *lalafin* as the opposite of resilience, which literally means 'weaknesses or 'vulnerability'. A discussion ensued about some of the key themes which needed to be covered in order to build resilience through planning, this is summarised in box 5. The meeting then split into two groups to use a method called 'Resilience Spectrum Analysis' in order to explore the basis of climate vulnerabilities and potential actions to build resilience.

### Box 5- Key Themes for Addressing Vulnerability

- Pasture and water management institutions
- Veterinary services
- Address cross-border issues
- Insecurity
- Youth unemployment
- Unfavourable policy

### 4.1 Resilience Spectrum Analysis

Each of the groups were asked to place their community on a scale between *lalafin* 'vulnerability' and *jajaben* 'resilience', and to list the specific vulnerabilities that were preventing them moving higher up the scale towards resilience. The groups first identified their vulnerabilities to different climate hazards and then what actions they could identify to address the vulnerabilities- this process is referred to as the 'Resilience Spectrum Analysis'. The results of the groups' discussions are presented in tables 5 and 6 (rather than presenting vulnerabilities and actions separately, the vulnerability and the action to address it are presented together). The groups were then asked to rank the vulnerabilities/actions (see tables 7 and 8) in order of importance before presenting back to the plenary.

**Table 5- Group one's discussion of climate vulnerabilities and resilience building actions**

Issue	Vulnerabilities & Actions	
<b>Pasture depletion</b>	Vulnerability	Pasture depletion around the boreholes during drought
	Actions	Water trucking to surrounding areas with abundant pasture but no water (currently out of range for cattle). A County water tanker with mobile troughs is required  Construct new boreholes in areas where there is always unused pasture
<b>Resource Management</b>	Vulnerability	Poor management of grazing resources and influx from other areas
	Actions	Local natural resource management institutions should be strengthened through capacity building and legitimisation  Set up a conservancy near the border to reduce influx of livestock from neighbouring districts
<b>Veterinary Services</b>	Vulnerability	Inadequate veterinary services
	Action	Request a County veterinary laboratory for diagnosis of diseases, and an expanded vaccination programme and improved dispensaries (drug quality, availability and staff training)
<b>Disease Control</b>	Vulnerability	Livestock diseases spread easily due to poor management and cross-border coordination
	Action	Agree guidelines for quarantine of infectious animals, with local institutions capacitated to enforce regulations in partnership with Ministry of Livestock
<b>Drought Reserve</b>	Vulnerability	Cross-border communities cannot be effectively excluded from drought reserves during the wet and dry seasons
	Action	Destroy water pans in the drought reserve and empower local resource management institutions (RUA) to enforce regulations in partnership with County authorities
<b>Borehole Funding</b>	Vulnerability	Subsidised borehole user fees discourage payment of fees after subsidy is finished which compromises self-funding mechanism of the local resource management institution (RUA)
	Action	Donors and government should support the borehole and the local institution in other ways
<b>Insecurity</b>	Vulnerability	Competition over grazing resources with groups from neighbouring Districts can result in conflict
	Actions	Anti-stock theft unit is ineffective and should be over-hauled Support for cross-border negotiation and peace meetings Either partner with county authorities to enforce regulations

		of local resource management institutions or create a conservancy at the drought reserve to better control access
<b>Domestic Water</b>	Vulnerability	Women spend a lot of time collecting water so they have less time to engage in alternative income generating activities and looking after small stock and young stock
	Action	Drill new boreholes at key sites to provide domestic water or install pipeline from Merti Town
<b>Bush Fire</b>	Vulnerability	Uncontrolled burning of dry pasture
	Action	Sensitize community and introduce penalties for those found guilty

**Table 6- Group two's discussion of climate vulnerabilities and resilience building actions**

<b>Issue</b>	<b>Vulnerabilities &amp; Actions</b>	
<b>Under Utilised Pasture</b>	Vulnerability	There is always pasture left in certain places during drought. They are too far from the boreholes
	Action	Drill additional boreholes at Machalo and Delbek and place them under the management of RUA
<b>Seasonal Forecast</b>	Vulnerability	Climate information is underutilised because currently it is not provided in an appropriate format
	Action	Attend seasonal forecast workshops with KMD and spread information widely, then receive appropriate climate information through the new community radio
<b>Positive Policies</b>	Vulnerability	Everything is biased against extensive livestock production which affects veterinary services, investment in roads and schools
	Action	Lobby county government for positive policies to pastoralism and positive representations in the school curriculum in recognition of contribution to Isiolo's economy
<b>Resource Management Institutions</b>	Vulnerability	Grazing resource are not managed very well
	Action	Increase the capacity of local resource management institutions to manage resource effectively, and enforce regulations with support from County authorities
<b>Insecurity</b>	Vulnerability	Conflict over grazing resources and water with communities from neighbouring districts
	Action	Strengthen traditional conflict resolution mechanisms Create conservancy to reduce security risks and protect

		drought reserve More Kenya Police Reservists (KPR) and establish a police post at Urura
<b>Borehole Maintenance</b>	Vulnerability	Lack of skills to maintain and service generators and pumps to keep them going during drought
	Action	Train members of resource management institution (RUA) in maintenance of key assets
<b>Veterinary Health</b>	Vulnerability	Inadequate veterinary services leading to unnecessary livestock death
	Action	Improve veterinary services and diagnostic facilities

*Table 7- Group one's ranking of resilience building actions*

Rank	Action
1	Improved management of grazing and water resources through strengthened and empowered resource management institutions and the creation of by-laws
2	New boreholes to access unused pasture and access to a water tanker to reduce pressure on borehole sites and broaden range of pasture utilisation
3	Improved veterinary services and access to drugs/equipment
4	Create of a community conservancy to control influx
5	Bush fire awareness raising

*Table 8- Group two's ranking of resilience building activities*

Rank	Action
1	Construct new boreholes at Machalo and Delbek
2	Request county water tanker, mobile troughs, and tanks for areas surrounding boreholes
3	Livestock disease control (quarantine laws) and improved veterinary services
4	Strengthen traditional conflict resolution mechanisms (Modogashe declaration)
5	Create community conservancy to safeguard grazing resources

After the groups presented their discussions and rankings back to the plenary there was a brief discussion in order to establish if the two rankings could be consolidated into one list. Consensus could not be reached as to whether institutional strengthening or new boreholes were the highest priority. The participants agreed to break for tea and to resume the discussion on resilience by looking in more depth at the key factors undermining resilience and some of the practical constraints to addressing them.

## 4.2 Constraints to Addressing Vulnerabilities

Having reconvened the meeting, participants identified the following themes for further discussion: the role of open access dams in the drought reserves; coordination of *dedhas* and county wide resource use; cross-border and internal quarantine problems; and insecurity as a result of 'influx'.



The issue of dams in the drought reserve was particularly emotive. The areas of Yamicha, Urura and Kom are drought grazing reserves (although Kom is in the border area of Samburu East District). Kom has not been grazed regularly for the last 6-7 years due to insecurity. There has been on-going conflict over usage of the area with the neighbouring Samburu community. In 2011, during *Ola Kilisa* (Kilisa is in Kom area) was the last time the community used this area for grazing. Participants described a range of problems that limit their ability to safeguard Yamicha and Urura grazing reserves against unrestricted access by neighbouring communities. A local CBO- the Rangeland Users Association (RUA) controls 4 functioning boreholes (Duma, Yamicha, Ururu, and Boji) in Merti District. They decide on when to open the boreholes; collect user fees; maintain the generators and pumps; store the generators when boreholes are closed; and look for funding from donors to supplement user fees. There

are dams next to Yamicha and Urura boreholes which were built during the colonial period by the Livestock Marketing Division (LMD) to facilitate transport of livestock from Wajir and Mandera to Isiolo. These dams have since been abandoned and compromise management of drought grazing reserves by RUA and the community. If it were not for the dams, the drought reserve area could not be grazed during the dry season, when the boreholes are closed.

*"The dams at Yamicha and Urura are the disaster- they attract people from outside – it's a big problem"*

Both RUA and the community had made various requests that the dams be destroyed but thus far no action has been taken. Requests have been made to the District Commissioner (DC) but he referred them to the National Environment Management Authority (NEMA) but it is not clear to the community how to approach NEMA.

*"In every meeting they discuss closure of those dams but nothing is done – those dams are of no use to this community"*

It was at this stage in the discussion that the DC, Chedotum Komunyan, arrived and was welcomed and thanked for taking time to attend. He was then invited to address the meeting and give his views on some of the issues under discussion.

#### ***Merti District Commissioner***

After thanking the organisers and endorsing the process and approach of the mainstreaming climate change initiative, the DC acknowledged the problems caused by unmanaged migration from Wajir, Garissa and Moyale. The DC emphasised the role of the District Peace Committee along with RUA and other CBOs in managing conflict- he gave the example of recent clashes in Kom between Boran and Samburu communities. Participants were also challenged over the complicity of their chiefs in granting cross-border communities uncontrolled access to Merti grazing resources. Regarding the issue of unwanted dams in the drought reserves, the DC assured participants that he was aware of the problem but he would have to follow proper protocol, which first requires agreement at the District Steering Group (DSG) level and then must be passed on to NEMA. His preferred course of action would be to lobby the DSG and then NEMA to approve their proposal but in the meantime set up a settlement or some kind of 'post' at Urura to establish some control over use of the dams during non-drought periods.



The value of the seasonal forecasts in managing reciprocal grazing agreements was acknowledged by the DC who said that his superior (the Provincial Commissioner) had been sceptical when he had told him about the previous seasonal forecast, but due to the accuracy he felt that KMD forecasts would be taken more seriously and were getting to the stage when they could be used to strategically plan investment of resources. The DC then handed the floor back to Daoud Tari who returned the discussion to focus on constraints to addressing vulnerabilities.

Participants acknowledged the DC's comments and collectively decided to request the issue of dam closure be addressed at the next DSG meeting. There was then some debate about the possibility of creating a drought reserve in South Merti around a place called Hawaye although after some discussion the consensus was that Hawaye did not lend itself to being a reserve and instead the people of Merti should manage resources collectively such that resources in both the north and the south are used efficiently. Currently resource use patterns were purely for convenience and not with overall resource use efficiency in mind. For this they needed an institution with overall control of resource use. It was felt that currently RUA does not have the authority or the resources (or the legitimacy/mandate) to serve this purpose but if supported by the county government it could start to fulfil this function.

Participants specifically stressed the need for management of resources at larger scales than is currently possible. The current system of *dedhas* which are based on administrative location boundaries is not effective and despite the consolidation of *dedhas* under the RUA structure, there is still very limited capacity to enforce decisions or convene community meetings to provide a mandate for enforcement. It was pointed out by some participants that currently they could not control internal resource-use as there were people



currentl moving towards Yamicha. There was also no control of riverine areas during the wet seasons, which was not efficient when there were other transient sources of water available.

The discussion then turned to the recent clashes (Feb-March) between the Boran and Somali communities in Abasweni, which were caused by the perception on the part of the Boran that some Somali livestock which had been brought into the District were diseased and infectious. After one fatality and many injuries on both sides there was broad support from participants for the need for peace talks and a mechanism for dialogue around some regulations for quarantine of sick livestock. These regulations should be mutually agreed and then enforced in partnership with the county authorities. There was concern expressed by some participants concerning the planned borehole and dam that is being constructed by the Northern Water Service Board (NWSB) on the border with Wajir. It was felt that this could exacerbate tensions and upset the delicate balance that is currently in place. The DC echoed their concerns and said that he was actively trying to block the project from getting to the implementation stage- he is currently requesting further consultation. The discussion was brought to a close by Daoud Tari who thanked participants for their active engagement with the issues. Participants were asked to reconvene after lunch.

### **4.3 The Climate Adaptation Fund**

Victor Orindi (MSDNKOAL) reminded participants that Isiolo is the first county to try out the new approach to development planning. The research team and communities must therefore learn together how best to structure the CAF as a model for a more 'bottom-up' development planning process. Referring to the CAF structure which had been outlined to participants at the start of the meeting (appendix 3), Victor highlighted the need for participants to think about the proper form of community representation at the ward level. Participants were urged to bear in mind the need for all sections of the wider community to be represented and for decision-making to be transparent and representatives held accountable. There will be training for ward level committees on proposal preparation (for submission to the county level CAF committee) and once a proposal is selected for funding by the county CAF committee it will be up to the ward committee to assist in the selection of a contractor and to report back to the county CAF committee on

implementation. In this way the community is not only directing what kind of adaptation building activities are put forward for funding but is also able to monitor and evaluate the performance of contractors based on the agreed budget and timescale for implementation.

Victor emphasised the shared responsibility between the project partners and the communities of Isiolo in testing a new approach to adaptation planning. He also suggested that the approach to engaging with the effects of climate change on the ground (through community priorities) is something relatively new, so we are looking to the people of Isiolo to lead the way. Looking forward to the coming months, participants were informed that they will receive training and support from the Resource Advocacy Programme (RAP). RAP will organise a public information campaign and workshop in July/August to catalyse the formation of a representative ward committee. There will also be training events (committee procedures and proposal writing etc.) for the committee once members have been selected.

As the meeting came to a close, there was not sufficient time to request input from participants about plans for establishing and operationalizing the community radio, but participants agreed that this would be covered as part of the feedback meeting in three days' time. The feedback meeting is intended to provide a forum for discussing the results of the household and group interviews to be conducted over the subsequent days. It was explained to participants that the purpose of seeking out the views of marginalised groups and individuals is that sometimes in a community meeting setting, it is difficult for everyone to have an equal voice. This approach was endorsed by the participants and a time was set for the feedback meeting in the same venue. Not all participants were able to attend the feedback meeting but alternative representatives from their areas were identified. After thanking all the participants the meeting was brought to a close.

## Day Four and Five: Interviews and analysis

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Over the subsequent 2 days the RA team worked with two research assistants- Adan Turo and Habiba Haro. To arrange and carry out 14 household interviews and 4 group interviews. The household interviews were dispersed across Merti Ward and respondents were chosen in order to reflect the proportions described in figures 1 and 2. The result was a broad representative sample of the wider Merti community based on clan, wealth status and livelihood type. Two of the 4 group interviews were with groups of women while the other two were with youth groups. The information that was provided during this process forms the basis for the analysis of resilience below and also helped to structure some of the preceding information from the community meetings.

### 5. Understanding the Resilience Profiles of Different Groups

#### 5.1 Women

As well as prioritising many of the same challenges and actions as men, women placed a greater importance on domestic water (fetching water was the most time-consuming task except childcare for most of the women interviewed). The women explained the importance of time spent fetching water in terms of opportunity cost. They felt that if they had easy access to clean water they could invest their time improving the resilience of the family through taking better care of small stock/calves and through being able to engage in petty trade and other alternative income generating activities. Women's workload went up just as food availability and purchasing power (terms of trade: livestock vs. agricultural produce) went down- this could lead to ill health especially if pregnant or breastfeeding. Given that they grew up in mobile households and did not attend school, women also felt that they lacked education and some of the skills that they needed in a sedentary context to successfully engage in business. Respondents felt that this was a key factor in reducing their resilience as it limited their ability to diversify their livelihoods.

Suggestions for improvement in domestic water supply included finding a way of storing the flood waters, and construction of a pipeline from Merti Town. A strategy for adapting to current water availability which would

improve the survival of small stock/young stock during drought was to alleviate pasture shortages and reduce the time spent grazing by harvesting and storing pasture. Several women independently mentioned that this could be an effective strategy if they received adequate training. This is already practised on a small scale and some women reported being able to sell stored pasture and firewood to richer families during drought. Women reported that in the absence of stored pasture, sometimes roofing material or relief food was fed to livestock at the end of the drought in a desperate attempt to keep their livestock alive.

Another challenge that women face is that they were not consulted in community decision-making forums because they did not own livestock. They therefore lacked information about what was happening hence could be excluded from participating in meetings and development workshops where they may shift the agenda away from men's priorities. This made women less resilient as their priorities were not given proper recognition.

Women also highlighted the differentiated food security within the household during drought. Pregnant mothers, small children and the elderly were highlighted as requiring special nutritional support during times of drought.

## 5.2 Youth

Similar to claims made by women interviewees concerning their marginalisation in community decision-making fora, youth representatives suggested that their voices are absent from all the key community/development meetings. Even within CBOs who have a high profile among donors (and therefore requiring some youth representation), the representation was regarded as tokenistic:

*“There are token youth representatives that they can point to but they don't really represent us”*

Several local youths suggested that the only way to include youth issues in the CAF is to have youth representatives on both the ward and county committees. It was emphasised that youth representatives should be elected by the “real youth” and not appointed by the “local power brokers”.

*“We want a certain amount of the fund set aside for youth activities as public goods will not include youth unless it is specifically targeted [...] -we have different needs than our parents”*

The second major challenge faced by the youth is that when they finished their primary education they were left in ‘no-man’s land’. Most of their grades were not good because of the poor standard of teaching; long teacher absences; lack of books and equipment; and attendance interrupted by droughts and floods. Few of their parents could afford to fund their enrolment at secondary school and there were very few jobs for holders of the KCPE. Having attended school for 8 years and becoming accustomed to town life (as well as their education instilling in them that pastoralism should be consigned to the history books), young adults are then faced with a lack of jobs or opportunities. They also lack the skills, training and motivation to engage in pastoralism. Several of the youth representatives stressed that their idleness was not laziness as some elders would say; it was about lack of opportunities for a stable livelihood.

*“When you have seen your father lose 70% of his herd in the drought with another one around the corner- you don’t want to give your life to these struggles. Even my father doesn’t want this for me”*

Youth who remain in town after completing their education can become addicted to drugs (*miraa*) through boredom and frustration and many youth representatives who we spoke to expressed disappointment that older members of their community were not recognising the severity of this problem and its implications for the future. The two priorities that came from the youth, which were absent from the community meeting, was the need for information on job opportunities; funded training courses; development workshops (which are seen as an opportunity to earn some income); the need for some kind of youth investment fund that would provide a start-up grant; and then development loans for groups of young people to start a business of their own. The most popular business ideas were: livestock trading, agro-vet dispensaries, and small-scale irrigated agriculture. Several youth groups from other areas had started such a business with support from World Vision or Cordaid and were relatively successful. Word of these programmes had clearly spread across the county via youth networks (Facebook on mobile phones). There was some reluctance to request loans as opposed to grants because all of the business ideas were dependent on the patronage of pastoralists whose disposable income is highly variable (in parallel with rainfall) which does not lend itself to regular repayments with default

penalties. This is especially true for livestock trading where 'vulnerability to asset loss' and 'profit margins' are positively correlated.

Support for further education was also requested for students with the highest marks from primary. A key point is that even with a 'stepping-out' strategy; all the business ideas are dependent on pastoralism, which links the resilience of different groups through the dominance of the livestock economy. If the youth couldn't appropriate a share of that economy through herding, with adequate support they could forge a successful livelihood through livestock related business ventures or tourism. The following section will reflect on the differentiated resilience of the youth and their parents and the need to support diversification in parallel with support for the dominant livelihood.

### *A Longer-Term Perspective on Resilience*

To talk about the resilience of the youth as disconnected from the resilience of their parents is misleading. In order to properly differentiate the resilience of the youth from that of their parents a clearly defined time frame was required. Many of the youth who have completed primary school are unable to find a salaried position and their parents are unable or reluctant to fund further education. As a result, many young people are reliant on their parents and therefore depend on their parents' livelihood with its vulnerabilities to climate hazards and variability. However, in terms of resilience building activities in the short-term, actions that increase the resilience of their parents' livelihood (predominantly pastoralism with opportunistic agriculture) would improve the food security and resilience of the youth. In the longer term, because the youth are permanently disengaged from herding, resilience building activities for the youth diverge significantly from 'public good type' activities that would support their parents' generation. This permanent disengagement has many facets: firstly, per capita herd sizes are dropping, so the youth are being discouraged by the perception that pastoralism is a precarious livelihood. Secondly, town life and modern comforts are making pastoralism seem like a comparatively unattractive option. Thirdly, pastoralism is presented as 'anti-modern' in school curricula and mainstream media, which serves to exacerbate the previous two processes.

So to return to the relevance of time-scale in conceptualising the resilience of the youth- it can be argued that public good type interventions which support the dominant livelihood are the most effective way to build the

resilience of communities in Isiolo County. In the short-term, based on the results of the Resilience Assessment process, it is safe to say that this is an approach supported by communities themselves and that (unlike more privately appropriable forms of adaptation support) this approach is unlikely to exacerbate tensions or conflict. However, in the longer-term, because of the process of youth disengagement from pastoralism through education and other processes, it seems that this approach will miss a key demographic. Young adults will not benefit from public good type investments that focus on livestock keeping in the absence of other forms of support and training.

The designation of Isiolo as a resort city and the apparent approval for the LAPSET<sup>7</sup> corridor project may provide the stimulus to the local economy that results in job opportunities required by the youth. It may be that the rapid economic growth that is expected to accompany Isiolo's central role in GoK's Vision 2030 will both accelerate the improvement in educational standards that is required while also providing a surge in employment opportunities. However, due to Isiolo's economic and political marginalisation for more than four decades, overlooking Isiolo's youth based this assumption is potentially disastrous. In order for the predicted economic growth within the county to benefit Isiolo's youth, investment in education needs to pre-empt the emergence of job opportunities by a decade or more. Otherwise, there is a danger that better qualified young people from neighbouring areas will be first in line for the new employment opportunities<sup>8</sup> leaving Isiolo's young people 'out in the cold'.

Of all the demographic groups, lacks of proper focus on the youth when attempting to address long-term climate, resiliencies a significant omission. The results of the RA process suggest that careful consideration must be given to the medium and longer-term livelihood opportunities of young people and their capacity to adapt to predicted changes in climate. The current trend of youth disengagement from pastoralism shows no sign of slowing despite the meagre returns to investment in education- for this reason the argument can

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<sup>7</sup> LAPSET refers to the Lamu Port – South Sudan – Ethiopia Transport Corridor Project which initially seeks to construct an oil pipeline, road and rail links between South Sudan and a new oil refinery and port at Lamu. The corridor runs straight through Isiolo County.

<sup>8</sup> There is an example of this process in the neighbouring district of Tana River where the Pokomo have monopolised government posts and employment with NGOs at the expense of less well educated Orma pastoralists. The Pokomo are more qualified for jobs due to superior education services in this missionary educated farming community.



be made for a significant investment to avoid a growing disaffected youth population.

### *Wealth and Resilience*

#### **5.2.1 Differentiated Resilience**

The ability of wealthier households to employ a wider range of herd management strategies and to diversify through investment generally results in significantly higher levels of resilience to climate hazards such as droughts and floods. Herd splitting minimises the effects of spatially dispersed rainfall and reduces the chances of a specific disease outbreak or the occurrence of insecurity affecting the whole herd. This therefore represents a resilience building management strategy which cannot be employed by the majority of pastoralists. There are several other management strategies that can increase livestock survival (therefore improving resilience) which are dependent on access to sufficient labour and capital. Moving livestock to the boreholes during drought requires significant labour and food stocks as well as borehole user fees (charged per head of livestock).

In addition to the utilisation of resource intensive management strategies to enhance their resilience, more wealthy families also have more ready access to capital with which to diversify into capital intensive enterprises such as livestock trading, building shops and transporting goods long distances from large urban centres (shops often also operate as sources of credit for less wealthy pastoralists willing to accept high rates of interest). Another strategy available to wealthier pastoralists is strategic destocking and saving money in banks until restocking is possible (when prices are low at the end of drought). Less wealthy pastoralists have too many demands on cash, such that 'locking' it away in livestock safeguards it against demands for loans or requests of help from family members etc.

#### **5.2.2 Actions to Build Resilience**

During interviews with families across the wealth spectrum, many of the same challenges and priorities for action emerged. In Merti there was relatively little diversity of livelihood types with 82.5% of the community practising pastoralism (supplemented with some opportunistic agriculture). This and the fact that even those not engaged directly in pastoralism recognised the value of a successful pastoral economy, meant that there was broad consensus on the major priorities for resilience building activities (see tables 7

& 8). However, that is not to say that there weren't any differences in priorities based on the wealth of the family being interviewed or the livelihood type.

Interviewees that relied on casual labour prioritised many of the public good type actions prioritised by pastoralists but in addition had more of a focus on avoiding flooding of Merti Town (apart from casual labourers, an action only prioritised by richer town dwellers or those with shops). There was also more of a focus on improving educational standards on the part of those engaged with casual labour and poorer pastoralist families, which would be expected of households pursuing a 'stepping out' strategy<sup>9</sup>.

Some of the more wealthy interviewees suggested that a milk processing and distribution centre would stimulate the market for milk, which was based on local demand and supply. If milk could be pasteurised and transported to Nairobi then this would give producers the incentive to focus more on milk marketing as an additional source of income. Currently prices are very low when supply is highest as the Isiolo market is separated from the national milk market. Clearly, in order to benefit from a milk processing centre, a family would have to have a large herd and be producing significantly more than the family's consumption requirements. Another resilience building activity which would predominantly benefit the more wealthy families was promotion and training on camel keeping. Several wealthy interviewees suggested that with adequate support, people would switch to camel keeping as they had seen from watching Somali herders that they were more resilient in the drought. Camels can endure longer periods without water and can therefore reach pastures that are out of the range of cattle (they are also browsers which extends their dietary range). Despite the high prices of camels which place them out of reach for less wealthy pastoralists, there was an argument to be made for supporting camel husbandry training. Over time it could enhance the resilience of Isiolo's pastoral economy which would support the activities of less wealthy pastoralists.

Based on the household interviews, the prioritised activities of the least wealthy pastoralists' also supported some of the actions prioritised by women. The least wealthy prioritised village water supply- this seemed to

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<sup>9</sup> A 'stepping out' strategy refers to those families that aspire to change their livelihood type. This is in contrast to families pursuing a 'stepping up' or 'hanging in' strategy whereby families strive to improve productivity or maintain their current level respectively.

reflect a heightened concern for the health of 'village herds' (poor families often keep their small stock around the village) and a higher value placed on the opportunity cost of women's time spent fetching water. The least wealthy interviewees also prioritised actions to improve education and job opportunities. They were of the opinion that having struggled to fund the education for their children, the lack of jobs was something of a betrayal on the part of government officials who promoted education so heavily and threatened them with fines or even imprisonment if their children were not enrolled. For the least wealthy, investing in education was a high risk strategy compared to enrolment by wealthier families who could hire skilled herders. Least wealthy and medium wealth families also mentioned restocking as a priority action more frequently than other families. Another theme which came through strongly from least wealthy families was that more transparent and inclusive decision-making processes around natural resource management and development activities (with international and government partners) would improve their capacity to adapt. They felt that their lack of participation was limiting the degree to which they could benefit from these processes.

# Day Six: Feedback meeting

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## 6 Introduction

Having travelled widely across the ward completing the household and group interviews, the RA team compiled a summary of the findings to present back to the community. This was considered important, firstly in terms of giving the community a chance to verify and contest information and any assumptions on the part of the RA team. Secondly, the RA team did not want to 'extract information' and then disappear to analyse it in isolation from the community. Some of the RA team's initial analysis of how resilience to climate hazards varied across different groups within the community was presented and discussed in the feedback meeting which proved very useful and led to a clear hypothesis on how 'public good type' investments could build climate resilience in Isiolo County.

The feedback meeting was opened by Daoud Tari (RAP), who welcomed participants and gave some background to the RA process for the benefit of participants who had not taken part in the first community meetings. Participants immediately sought clarification concerning the county structure which underpins the CAF:

*"You are talking a lot about the county structure but it is not really there yet- will the project wait for 2013 to really start moving?"*

Victor Orindi (MSDNKOAL) addressed the question by assuring participants that although county assemblies will not be in place until sometime next year, the project will be moving ahead before that. He emphasised that drought preparedness could not wait for politics and that in partnership with the Ministry of Planning and the National Drought Management Authority (formerly ALRMP) an interim CAF structure would be put in place. When the Governor is elected it is important that he or she supports and engages with the process.

The project needed to move ahead because one could not produce a new planning system spontaneously after the election, and they could not afford to have a long period without plans for development or managing drought. For this reason we have been working with all our partners to get a structure in place which can be tested and modified as the new county system

emerges. The aim is to have a successful planning system up and running which can be used as a model for development planning more widely.

## **6.1 Community Radio**

Ayub Shaka reminded participants that delivering climate information on community radio started in West Africa with pastoralists. The idea was then borrowed by Kenya and the first community radio was constructed in the Maasai area of Suswa. When MSDNKOAL came to KMD with the idea of launching a community radio in Isiolo KMD acknowledged the value such a station would add in terms of spreading downscaled climate information and agreed to manage the construction, purchasing of equipment, and training of community staff members. Ayub expressed optimism that the county council would allocate an adequate plot of land in Garbatula from where the broadcast would be able to cover the whole county. The community would be able to decide on content and it would broadcast in Afun Borana and other local languages. This meant that information would be available to everybody. The only restrictions were that there was to be no politics or religion on the radio station. KMD's experience of community radio in other areas had shown that this kind of content could be divisive. The radio could be used for any other purpose- like calling meetings at the village level or even to inform people in a certain area when a family had lost some livestock. For those without radios (based on household and group interviews women have comparatively lower access/ ownership than men), KMD had set aside a number of solar and hand powered radios for distribution at the launch of the radio.

Following Ayub's introduction, participants were reminded that due to lack of time at the previous meeting they had not been given the opportunity to give their opinion on what should be broadcasted on the radio. Participants began discussing among themselves the most important types of content for their radio. The results of this discussion and some of the potential implications for resilience are documented in table 9 below.

**Table 9- Community prioritised radio content and resilience implications**

<b>Content</b>	<b>Potential Impact on Resilience</b>
<b>Security reports</b>	Information on insecurity hotspots could be used by the community and by county authorities to minimise the negative impact on livelihoods
<b>Climate information</b>	Downscaled seasonal forecast could be used by the community to plan their management strategy and minimise damage and asset loss during drought and floods
<b>Water availability</b>	Accurate and timely information on water availability during drought could lead to more efficient resource use
<b>Market information</b>	Up to date information on market prices could help pastoralists achieve the best price when they sell livestock to buy food during the drought
<b>Announce community/ development meetings</b>	Making everyone aware of meetings and workshops should make decision-making more inclusive and transparent which should give the marginalised and vulnerable a greater stake in influencing key decisions
<b>Information on health</b>	Ill health could undermine the capacity of the family to safeguard assets during drought and engage in alternative income generating activities
<b>Odess- local news</b>	A forum for local news can enhance community coordination and cohesion and is not exclusive
<b>Job opportunities</b>	Advertising job opportunities county-wide should help address the longer term resilience of the educated youth- subject to adequate vacancies.
<b>Music and cultural content</b>	Another form of content that builds community cohesion and could contribute to restoring pride in traditional lifestyles on the part of the youth.

Some participants expressed concern because it was not easy to draw a line between development and politics. It was agreed after some discussion that the radio should be used for information and not for influencing opinion and there needed to be some sort of constitution for the radio station to formalise all these principles. There was also some concern that the County Government would take the radio station away from the community. Ayub Shaka reassured the community that the ownership and purpose of the radio would be very clearly spelled out from the start, and KMD would support the community in asserting their rights.

Participants were then presented with some additional content types that were requested during the household and group interviews in addition to those already mentioned (see table 10). The additional content was approved by participants who also specified that important content such as the seasonal forecast and issues of security should be broadcast between 7-9pm. This was the same time-slot identified during the household and group interviews and did not vary between men and women who both had most spare time in the evening.

**Table 10- Additional radio content prioritised during household and group interviews and implications for community resilience**

<b>Content</b>	<b>Potential Impact on Resilience</b>
<b>Information on veterinary health</b>	Better diagnosis and treatment of new diseases brought into the area by climate change will help the community to protect key livelihood assets
<b>The new constitution</b>	Understanding constitutional rights and processes will better enable the community to hold the County Government to account and demand their rights
<b>Information on disease outbreaks</b>	Timely information on areas affected by disease will allow households to better protect their livestock from infection which can compromise their survival
<b>Salam groups</b>	Sending greetings from youth of one area to another facilitates a sense of unity and enables youth mobilisation to request support for youth training etc.
<b>Information on money collected at each borehole by RUA and external support</b>	Making RUA more transparent will allow the community to better hold them to account and will reduce problems of collecting user fees so they can better support the community during drought

## **6.2 Resilience Building Actions**

The prioritised resilience building actions that were identified during the community meeting were presented (see table 7 and 8) to remind participants of the final rankings. Most of the resilience building actions prioritised during the household and group interviews had already been identified during the community meeting. One exception was a suggestion which came from the youth and women which was to link ranchers with the community for a prearranged mass purchase of livestock. There had recently



been a precedent for this arrangement whereby Lewa Downs Reserve and Biliqo Bulesa Conservancy had arranged for ranchers to come to Biliqo in January when they purchased KSh 8.5 million (269 animals) worth of livestock in one day. The turnover was the most ever experienced for one day's trade and the prices were the highest ever paid in their area. A suggestion from a women's group was that these kinds of events could be linked with the seasonal forecast and maybe supported by the county in terms of security provision which was the only potential stumbling block. There were other similar suggestions from members of a youth group who suggested that any livestock marketing initiative that removed middlemen and connected them with the final market could help build resilience. The example of the Kenya Meat Commission (KMC) was given as a potential vehicle for such a scheme although KMC was regarded as unreliable and did not pay good prices. Participants supported the idea and said that, subject to security, this could offer a way to utilise the market to reduce drought losses (under drought conditions the local market price collapses).

In addition to improving job prospects for the youth (which was identified during the community meeting but not ranked as a priority), the youth prioritised support for business opportunities which required start-up grants and then business expansion loans (loans must comply to Islamic codes). Although supporting many of the resilience building priorities identified in the community meeting, youth representatives felt that youth issues had been wrongfully omitted from the priority ranking exercise. They also felt that the youth needed representation directly on the ward and county level CAF committees if there was to be any chance of youth issues being given proper consideration. Some youth representatives also suggested that a percentage of the CAF should be used specifically for youth focused activities. There was some acceptance on the part of non-youth participants at the feedback meeting that the issue of youth unemployment was a critical issue for the future of their community.

Participants then began to discuss the criteria that should be used by the county committee to decide which proposals should be funded. The key criteria suggested were- the number of beneficiaries; a focus on the dominant economy (livestock); the poverty level of the beneficiaries; and activities that focus on youth, were also prioritised (although participants did not want to revisit the ranking of priorities for resilience building).

### 6.3 Next Steps

In addition to the facilitation work by RAP over July and August in publicising the process of forming ward level committees to interact with CAF, and the subsequent training of committee members and formation of the county level committee, the process of resource mapping was also outlined to participants. It was explained that a new methodology for community resource mapping had been developed in Tanzania and that at some point in July representatives from around Merti would be invited to take part in this process. The methodology utilised Google Earth (this was briefly explained to participants) to identify key community resources (water points, livestock migration routes, grazing zones, areas of insecurity etc.) which are easily identifiable to community participants. This method has been found to be much quicker and cheaper than traditional geo-referencing techniques that are used to map community resources. The aim of the resource mapping process is to produce various maps which will continue to evolve as conditions change and which can be used by local people to advocate for land use policies or resource management by-laws, and for county planners to plan strategic and timely support.

The participants were quick to consent to take part in the resource mapping and agreed to send their most knowledgeable representatives. Daoud Tari (RAP) thanked participants for their active involvement in the RA process and assured them that he would return in July to carry out the resource mapping and start to facilitate the formation of the Merti CAF ward committee. The meeting was brought to a close with a word of prayer by the local Imam.

# APPENDICES

## v. Appendix 1- Participants List

	NAME	ORGANISATION	TELEPHONE NO.
1	Abdi Tene Dabaso	RUA	713336627
2	Abdikadir Abdullahi	SELIMA- Asst. Chief Mogadishu	722179535
3	Abdishakur Abduba	RUA-Member	710318850
4	Abdullahi Huba	ActionAid	729895180
5	Abdullahi Stanely	MID.P	721109191
6	Adan Dida	OOP- Chief	726988457
7	Adan Turo	SELIMA	725535015
8	Ali Kalla	RUA-Member	700560938
9	Ayub Shaka	KMD	722747438
10	Bonaya Racha	RUA-Member	714943970
11	Boru Kampicha	RUA-Member	
12	Bosone Bidu	Iscal Worker	
13	Charles Korid	DC's Office-	715043389
14	CLLR Fayo	County Council of Isiolo	723211486
15	Dabaso Tene	Kobesa	711894937
16	Daoud Tari	IIED/RAP	702851565
17	Diba Golicha	RUA	728950433
18	Dickson Chauro	WIYESFOCK	714655522
19	Dida Jaldisa	RURAP/ SELIMA. P	722295443
20	Elema Boru	OOP- Chief	727015223
21	Fatuma Duba	RUA-Member	725939116
22	Gideon Nura	MID.P	727762899
23	Golicha Huka	Elder	
24	Gollo Bulle	RUA-Member	
25	Gollo Guracho	APHIAPIUS	724898926
26	Gwacha K.Sasite	Health	72670165
27	Habiba Haro	Iscal Worker	713057111
28	Haj Adan Bonaya	RUA-Member	728955517
29	Hajj Osman Guyo Koyile	RUA-Member	728809193
30	Halake Molu		
31	Halima Bidu	RUA	712177193
32	Hassan Galgalo	SELIIMA- Chief Iresaboru	727153739
33	Hassan Tene	RUA-Member	
34	HassanD. Kumpa	County Council of Isiolo	728259212
35	Hussein Binisa	RUA-Member	

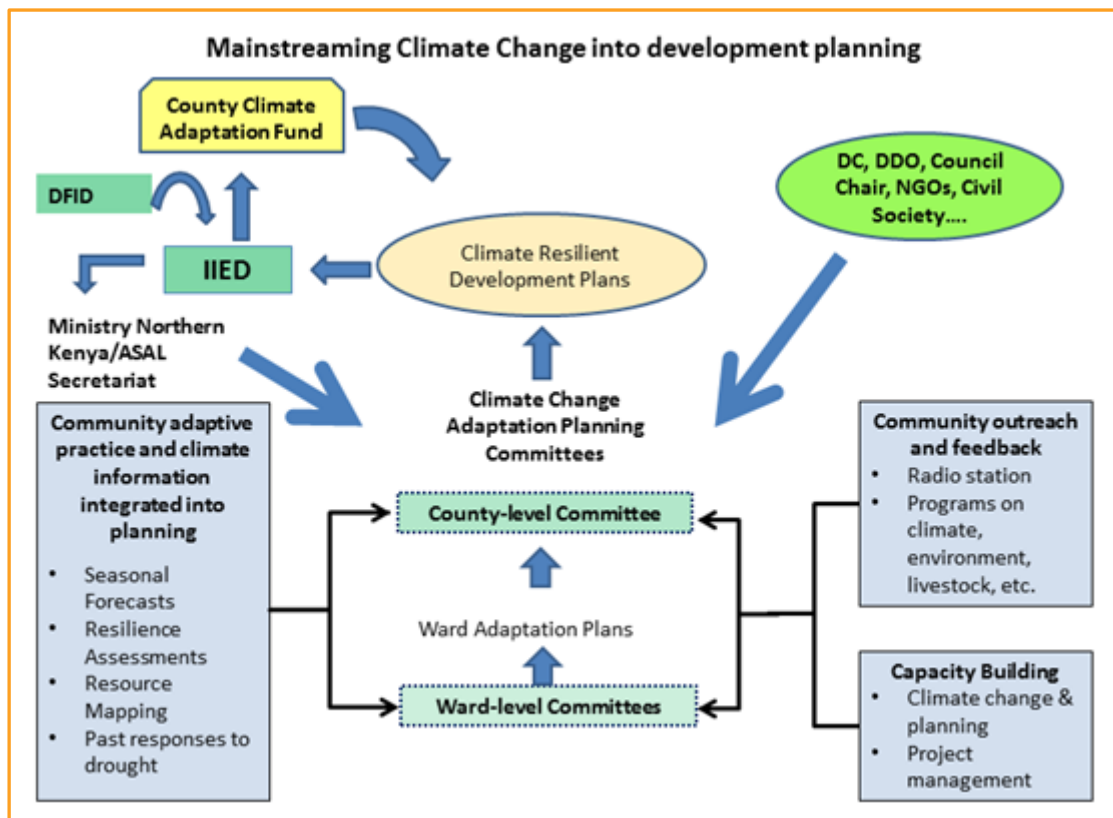
36	Hussein Boru	RAP	716565958
37	Hussein Jirma	RUA-Member	714992717
38	Hussein Tuli	RUA-Member	715580759
39	Ibrahim Koricha	RUA-Member	
40	Isaak Bakacha	RUA-Member	
41	Isako Huka	RUA-Member	
42	James Pattison	IIED	
43	John Kiporia	OOP-DOI	722578635
44	Kassin Lubu		724283316
45	Kosar Guyp Jaldeba	RUA-Member	
46	Malicha Guyo	RUA-Member	
47	Mohamed Ibrahim	RUA-Member	700372735
48	Mohamed Wako	RUA-Member	712910406
49	Mumina Ali	RUA-Member	723606749
50	Nuro Sime	P/A (OOP)- Chief	723318502
51	Raro Bakasa	Elder	
52	Salad Godana	MID.P	724396696
53	Shaua K. Ali	OOP- Chief	721877404
54	Victor Orindi	MDNKOAL	720689909
55	Wago Golicha		
56	Wambugi Charles	Agriculture	710334930

## vi. Appendix 2- Schedule of Activities

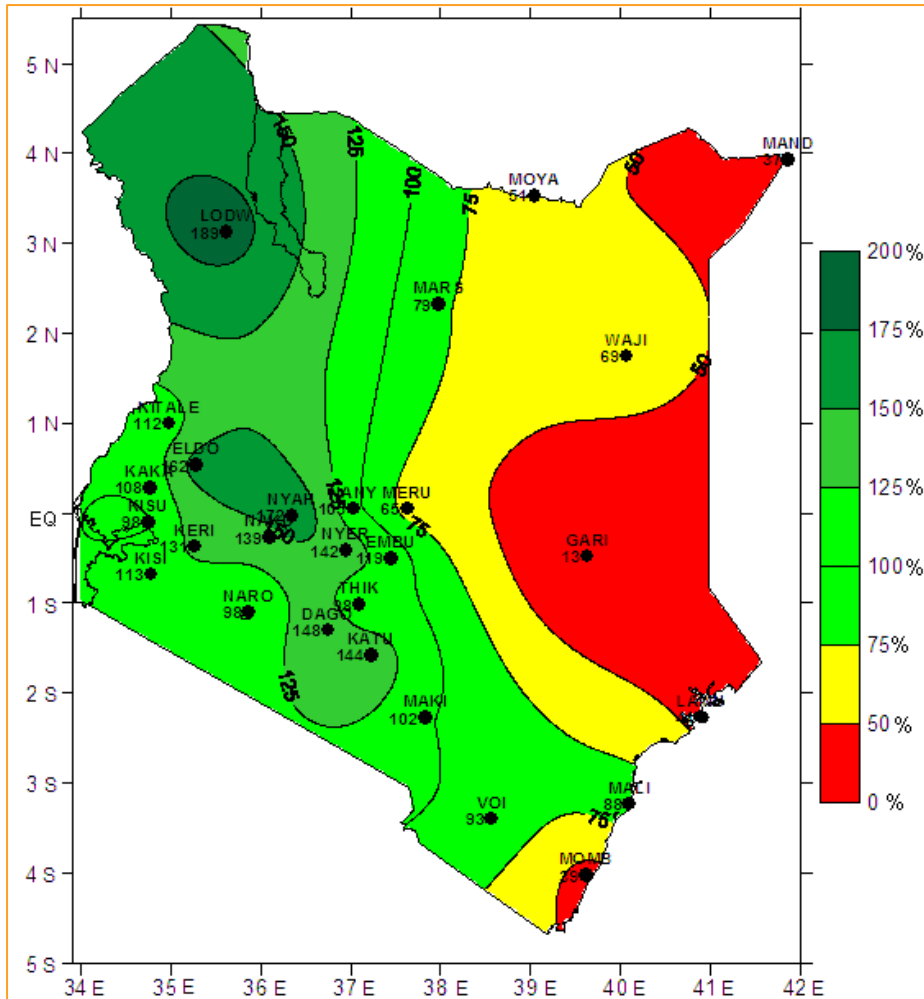
Timing	Planned Activity
Preparation 05-03-12 06-03-12	RA team arrives from Isiolo
	Meeting research assistants/ interpreters – agreeing on contract and logistics
	Methods training and discussion of key concepts with research assistants/ interpreters
Day 1 07-03-12	Commence two day community meeting (circa 40 participants) to discuss seasonal forecast (KMD) and then issues around climate change resilience and CAF
	Request interviews with families in villages around the ward utilising research assistants' and community meeting participants' networks
Day 2 08-03-12	Second day of community meeting. Priorities for resilience strengthening activities reviewed and next steps discussed
	Research assistants begin to plan small group meetings (women, youth etc.) and household interviews
	Afternoon/early evening- first visits to surrounding villages on foot and by vehicle, conduct interviews and arrange additional interviews for the following day
Day 3 09-03-12	Travel to surrounding villages to conduct further interviews
	RA team to review initial findings, methodology and approach in the evening
	Arranging small group sessions for the following day
Day 4 10-03-12	Conduct small group sessions with youth and women groups
	Review of sample demographics and characteristics (wealth, livelihood type) in order to target remaining interviews and ensure a representative sample
	Travel to surrounding villages to conduct further interviews
Day 5	Wealth ranking exercise with research assistants and key informants. Confirming the asset holdings of each respondent in order to contextualise responses

11-03-12	Community meeting to validate findings. Opportunity for community and research team to seek clarification, address inconsistencies, identify priority activities, and plan next steps
Day 6 12-03-12	RA team departs for Isiolo

**vii. Appendix 3- Proposed Structure of the Climate Adaptation Fund**



viii. Appendix 4- Kenya Rainfall % MAM Long Term Mean



**ix. Appendix 5- What defines a family's resilience in a pastoral context?**

<b>Key Factors</b>	<b>Key Characteristics/ Examples</b>
<b>Asset holdings</b>	Quantity, diversity, and dispersal
<b>Income and food sources</b>	Diversity and reliability
<b>Social capital</b>	Wealth of extended family/ friends/ neighbours, level of community integration
<b>Access to key resources</b>	Dry season grazing reserves, water points etc.
<b>Adequate human capital (skilled and healthy)</b>	The skill and knowledge of the livestock keeper influences resilience
<b>Access to external support and services</b>	Relief food and affordable/ accessible medical and veterinary care
<b>Reliance on the market</b>	Food price volatility, livestock price crashes correlated with climatic events
<b>Insecurity</b>	Impedes mobility and compromises asset holdings



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