

# ***ANNEX G***

***SUB PROJECT  
- LIVELIHOOD DIVERSIFICATION***

## FINAL REPORT

### THE PROJECT FOR ENHANCING COMMUNITY RESILIENCE AGAINST DROUGHT IN NORTHERN KENYA

#### ANNEX G SUB PROJECTS – LIVELIHOOD DIVERSIFICATION

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## CHAPTER G1. INTRODUCTION

### G1.1 General

This Annex shows the detailed records of the sub projects implemented for the livelihood diversification program in “the Project for Enhancing Community Resilience against Drought in Northern Kenya (ECoRAD)”.

### G1.2 Objectives of the Project

The project target and expected outputs are summarized below:

(1) Project Target

Improvement of the resilience of pastoralists’ communities against drought in Turkana County and Marsabit County.

(2) Expected Outputs

Output-1: Community-based management capacity is improved against drought in the target communities.

Output-2: The natural resource management is sustainably performed in the target communities.

Output-3: The value-chain of livestock is improved in the target communities.

Output-4: The diversification of livelihood improvement is accelerated in the target communities.

Output-5: Governmental officials’ capacities are strengthened in terms of the community-based resilience improvement against drought.

Output-6: A guideline is formulated for the community-based resilience improvement against drought.

To achieve Output-4 concerning livelihood diversification program, the sub projects were implemented in both Marsabit and Turkana County.

### G1.3 Structure of the Annex

Structure of this Annex consists of 11 chapters. The first chapter states introduction of the Project and the activities of livelihood diversification.

Part I shows the activities in Marsabit County, starting with current condition and selected sub projects of livelihood diversification. Then, detailed information of the activities implemented through four sub projects is shown. In Part II, the activities in Turkana County are mentioned following the same structure of the report as for Marsabit activities.

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## **CHAPTER G2. PRESENT SITUATION OF LIVELIHOOD MEASURES AND SELECTED SUB PROJECTS FOR LIVELIHOOD DIVERSIFICATION IN MARSABIT**

### **G2.1 General**

Recent frequent droughts have caused the changes in the pastoralists' migration patterns in this area. Pastoralists who used to migrate with the whole family nowadays migrate with only few family members; men and boys. Other family members, such as the elderly, ladies and children, settle in town because the decreased number of livestock cannot support the entire family during migration. Those who drop-out of livestock keeping are also included in those who are settled in town in search for alternative ways of life. There is therefore a need for alternative livelihood other than livestock for income generation especially for such people. Alternative livelihood projects refer to specific ventures that target vulnerable people living in settlements / centres and who are not dependent entirely on livestock as a source of livelihood. Women, especially the widows, in pastoralist traditions are more vulnerable because they are not the owners of the livestock and livelihood diversification can be an economic boost for them. This can also be applied for school drop-outs who are faced with less formal job opportunities.

Livelihood diversification can also be one of the key activities for drought resilience, especially as drought preparedness, because even if pastoralists totally lose their livestock because of drought, they can restock from the income of alternative livelihood.

### **G2.2 Expected Interventions**

Through the above three criteria, the following three activities had been identified as a potential alternative livelihood in the Project in Marsabit County; Poultry, Gums and Resins, and Aloe.

#### **G2.2.1 Chicken**

##### **(1) Present Conditions**

###### **1) Poultry Production**

Agriculture contributes about 25% of GDP in Kenya with poultry playing a major role, representing 30% of the agricultural contribution to GDP. All the high concentrations of commercial layer and broiler farmers are located near large urban centres and in the peri-urban areas of the city of Nairobi where access to markets is guaranteed. On the other hand, in the arid and semi-arid lands area, smallholders such as village or backyard production of indigenous breeds are the highest concentration. (Poultry sector country review, 2007). In fact, there are only a few commercial poultry producers with exotic breed in Marsabit.

It is estimated that 75% of the households in Kenya keep indigenous chicken but this is not the case in Marsabit County. Although there is no available data, through interview it is estimated that the percentage of households keeping chicken around Marsabit town which is known as the highest chicken production area in Marsabit is less than 75% and the percentage of households is estimated to be much lower in remote villages. Although the number of poultry keepers is still low compared to the national average, the number of poultry smallholders is increasing in Marsabit County. It is observed that there are patches of small scale poultry all over the County even in remote pastoralist communities, which were hardly observed before.

In general, a small scale individual poultry keeper has less than 10 indigenous chickens for dual purpose (both egg and meat production) in free range condition with local housing. The birds search for food around the homestead and at times they are given home food left-overs or supplementary feed like maize or sorghum grain.

## 2) Poultry Market

It is said that there is a big demand for poultry products in Marsabit. As there is no available data to back up this, a small market study was conducted by the Project to ascertain the levels of existing demand and supply of chicken and eggs. The results are shown in the table below. It was noted that an estimated 322 chicken and 4,290 eggs are consumed per month by the seven restaurants. Most of restaurants agreed that customers prefer local chicken but because of the difficulty in getting stable supply, more than half of them use broilers. The demand for eggs is also big but the supply is unstable.

**Table AG2.2.1 Chicken and Eggs consumption and their prices in the targeted restaurants in Marsabit Town**

Restaurant	Nos. of Chicken / Month	Type of breed	Price/kg. (Ksh.)	Nos. of eggs (trays*)/Month	Price/tray (Ksh.)	Difficulty and Constraints
A	120	Broilers	430	20	350	1 & 2 & 3
B	80	Broilers	700	80	360	1 & 2
C	40	Local	500	-	-	3
D	30	Local	500	8	450	3
E	30	Broilers	500	28	360	1 & 2
F	12	Broilers	700	5	360	1 & 2
G	10	Local	600	2	450	3
<b>Total</b>	<b>322</b>		<b>586</b>	<b>143</b>	<b>388</b>	

Note: 30 eggs/trey

1: They prefer the local breed but because of unreliable supply, they buy broilers

2: There are only a few places to buy chicken and eggs

3: Supply of chicken and eggs are very low and not reliable

Source: JICA Project Team

### (2) Project Identification

Based on the results of the market survey, it is clear that limited and unreliable supply is the biggest problem in poultry in Marsabit. In addition, it is remarkable that there are no restaurants which complain about price although the prices of chicken and eggs are higher in Marsabit than in Nairobi (Ksh.580 and Ksh.500 of broiler chicken/kg, Ksh.388 and Ksh.300 of egg tray in Marsabit and Nairobi respectively) (mfarm.co.ke).

This fact shows that, unlike other large cities such as Nairobi where there are many large scale poultry producers, selling at a lower price, small scale producers can be competitive in Marsabit as long as they produce sustainably.

Although poultry is not an area- specific activity, the huge need of poultry products and the special usage of drought mentioned in the above sub-section 6.2 (3) can be enough motivation to be targeted as a pilot project.

### (3) Constraints and Lessons Learnt

Through the field survey and the interview of line ministry, organization and NGOs, and the groups and individuals who are keeping or who had kept poultry, the following constraints and lessons learnt have been identified.

#### 1) Large Scale Production with improved Breed

Large scale production with improved breed has many constraints as follows, and the number of groups who keep exotic breed in Marsabit town is decreasing.

## a) Lack of Self-Reproduction

Exotic layers are kept without cock so that their eggs are infertile. Broilers can produce fertile egg but they do not have ability to incubate by themselves. It means for sustainable rearing, chicks should be regularly supplied from outside. This is very difficult for people who have very limited information and funds.

## b) Expensive Price of Feed

Improved breeds generally need a large amount of commercial feed. But such feed can be found only in big cities and is expensive.

## c) Diseases

Chicken are reared in high density and are susceptible to diseases. Despite the challenge it is difficult to find adequate vaccinations in Marsabit.

For example, there is a group supported by a local NGO which keeps improved breed Kenbryo since 2010. Two hundred chicks were initially brought but the actual number remaining are less than 20. About 30 cockerels died because of difficulty in accessing drugs. Most of the others were sold out due to lack of capital to buy feed. Kenbryo is an improved breed for dual purpose and is also known to have self feeding ability the same as indigenous breeds. Although Kenbryo is a suitable breed for individual small scale poultry keepers to rear and mix with their local breed, if they are kept in a modern poultry house in large numbers, regular feeding is necessary and the feed cost can be a concern for the producers. Nowadays the group members are trying to increase the number of chicken, but they have difficulty because of lack of self-reproduction of that breed.

## 2) Small Scale Production with Indigenous Breed

## a) Low productivity

Indigenous hens produce an average of only 60 eggs/year and they are mostly kept for home consumption. Many individual poultry keepers are interested in keeping improved free-range breeds which have a bigger body and lay eggs more often than indigenous breeds. But the access to improved breeds is very limited in Marsabit.

## b) Predators

For small scale poultry rearing, predators are a more serious problem than diseases. Generally chicken are kept in the main living house together with their owners and are released out every morning. Alternatively they have poorly made wooden/stick houses. During the day, as they feed by themselves, cats and eagles can attack, especially their small chicks. At night, mongoose is the most dangerous predator which can break their wooden house and attack them.

## 3) Potential Poultry Keepers

There are also many people who have not yet started poultry keeping but are interested in it. For such people, the followings are the main constraints:

- a) Lack of access to indigenous chicks
- b) Lack of capital for starting poultry keeping
- c) Inadequate knowledge

## (4) Approach

Based on the lesson learnt as mentioned above, large scale modern poultry keeping seems to be too- high level compared to the capacity of community. Introduction of improved breed not in central modern condition but in the free range system would be appropriate.

It is evident that introduction of improved breed is one of the key factors to increase chicken and egg production. It is important to choose an appropriate breed to introduce in Marsabit. Sasso is a new breed introduced by Kenchic and known to have the following characteristics; having self-feeding ability, needs less food than other improved breed, large body size, laying eggs often than local breed, incubation ability, etc.



Note: Two and a half months old Sasso (Left: 2.5 months) cock is much bigger than 4 months old local cocks and slightly smaller than 18 months old Kenbryo (Right: 18months)

Source: JICA Project Team

### **Figure AG2.2.1 Comparison of body size of Kenbryo and Sasso**

As predators are the major challenge for individual poultry keeping, housing is still very vital for better rearing. It is necessary to prepare an improved local poultry house within a clean and safe environment. The house will be constructed by using only affordable local materials. Such small scale keeping has also positive effect of minimizing outbreak of disease epidemics..

The expected target is a group in which some members have some experience in poultry keeping. After the project implementation, those members are expected to be model individual poultry keepers so that others who want to start poultry can learn from them. Linkage to veterinary officers is very important for extension services, prevention of diseases and technical support.

## **G2.2.2 Gums and Resins**

### (1) Present Conditions

#### 1) Gum and Resin Production

Gums and resins are natural exudates obtained from the bark of certain trees. Gums are used in various industries not only for food, beverages, medicine but also for protective colloid and safeguarding agent for inks, coatings for special papers, manufacture of matches and ceramic pottery, etc. On the other hand, resins are mainly used for incense. The trees which produce gums and resins are naturally found in large numbers in the ASAL areas in Northern Kenya, especially at the southern part of Marsabit County.

Pastoralists in the southern part of Marsabit have traditional knowledge about gums and resins but most of them have only been produced for domestic use so commercial values of Gums and Resins are not yet well known. Gum Arabic from *Acacia Senegal* var. *kerensis* is major gum and Commiphora from *Commiphora myrrha* and frankincense from *Boswellia Hildebrandtii* are major resins produced in the southern part of Marsabit County.





Source: JICA Project Team

**Figure AG2.2.2 Gum Arabic (left) and Frankincense (right) found in wild**

## 2) Gum and Resin Market

There is a big potential market for Gums and Resins both in Kenya and abroad. Kenya exports about 100 tons of gums a year at an average of US\$1,850/t. (Kenya Forest Research Institute (KEFRI), 2009). Members of Gum and Resins Association (GARA) unanimously affirm that the demand for Gums and Resins is quite high but the production volume is too small to meet it. For example, an Indian trading company needed 4,000 tons of Gum Arabic to export to Germany but they got only 15 tons in 18 months. There is also a high demand for frankincense in the Somali community in Nairobi. Despite the big needs, the challenge is the difficulty to get gum and resins in bulk. Pastoralists in southern parts of Marsabit have traditional knowledge about gum and resins but they collect very limited amount for only domestic use while they herd their livestock. Some traders stated that 5 tons is the minimum quantity that is required for a truck to go to buy gum and resins in production site, which amount is not realistic for pastoralists to be expected to collect.

On the contrary, in Marsabit town, myrrh and frankincense can be seen and the black frankincense is the most commonly sold in small scale. Investigations done indicate that most of it is from the Northern parts of the County and especially from Southern Ethiopia. However, to the South of Marsabit in places such as Ngurunit, a few business people sell frankincense. Interviews with a few traders in Marsabit town indicated that they are aware that Frankincense from the South, i.e. Ngurunit, is of a higher quality than what they have on the market from Ethiopia. Their main concern was how to access this product in reasonable quantities for this area. It therefore seems that the main reason for lack of trade between Marsabit town and the interior is transport as those in Ngurunit indicated that transport is their major concern in any trade.

## (2) Project Identification

First of all, there is actual need for Gum and Resin production as mentioned above. Gum and resins production is also a highly area- specific activity. Among traders in Nairobi, Turkana and Isiolo are the major production areas. Marsabit is known as a potential area but because of lack of producers, it is not yet a very attractive area for traders.

In areas targeted for Gum and Resins production, there is a high dependency on charcoal burning and selling of firewood to earn income. Charcoal burning involves cutting of dry trees and sometimes wet ones and making of a furnace to burn the logs into small portions of charcoal. When the charcoal cools down, it is packed in sacks of approximately 60 kg which is sold at Ksh.300. It takes about three days. It is therefore not only inefficient but also environmentally destructive. On the other hand, firewood collection and selling entails walking for hours to collect dead wood and piling of the wood in bundles of 50 kg which is sold at Ksh.350. It takes about 12 hours to walk to and from the firewood collection point. At times it takes more hours where vegetation is scarce. This venture, too, is not efficient and does not earn enough money. Both charcoal burning and firewood collection involve a lot of labour and earn less income. Gums and resins therefore seem to be a more attractive and viable alternative because gums sell at Ksh.80/kg, Commiphora at Ksh.350/kg and Halale at Ksh.30/kg. In a day, the producers can collect enough amounts to surpass the income earned from both charcoal and firewood. Gums and resins collection is environmentally sound, when done in a sustainable way.

These facts show that Gums and Resins production has a high potential for development and is worth targeting as a pilot project.

### (3) Constraint and Lessons Learnt

Despite the high potential, Gums and Resins production has rarely been supported by organizations. In the 1980s, United Nations Educational, Scientific and Cultural Organization (UNESCO) undertook a project for gum Arabic production in Ngurunit location. They targeted 3 groups in Ngurunit, Ilaut and Korr-tiboran and trained community people on how to identify adequate species and how to tap the trees to collect Gum Arabic in a sustainable way. After the UNESCO project ended, due to lack of a market, those trained producers stopped producing Gum Arabic.

Food for the Hungry International (FHI) also had a project for gum production in Laisamis and Merille almost 10 years ago. They trained existing producers in better techniques and constructed collection centres in both locations. After FHI project ended, they have not received any other assistance since then. They are still producing Gum Arabic but the production volume is only 150 kg/season. They only have one trader who comes to buy from them.

Unlike Gum production, training for resins production has never been conducted. In addition, economic value and market potential of resins is still not yet known by the producers in the production area.

### (4) Approach

The main intervention proposed in the case of resins is business training. This is based on the assumption that with proper training the local people can harvest and transport their resins to far off markets for sale. Making linkage between producers and market dealers is also a key component.

## G2.2.3 Aloe

### (1) Present conditions

Aloes are xerophytes well adapted to bare degraded areas that are common in dry lands. About 450 species and subspecies of the succulent plant genus Aloe are distributed in Africa, the Arabian Peninsula and certain islands of the Indian Ocean. About 60 aloe species have been identified in Kenya.

The Aloe species has various uses traditionally and is also a multibillion pharmaceutical industry internationally. In Kenya, many locals have traditionally used the sap and leaves for cure of various ailments including malaria, fungal and bacterial diseases. Nearly all the aloe species identified were exploited by local communities for livestock and human healthcare.

On the other hand, only 5 species such as *Aloe secundiflora*, *A. scabrifolia*, *A. Turkanensis*, *A. calidophila* and *A. rivae* are observed to be commercially exploited mainly for aloe bitter gum production. *A. secundiflora* is the most commonly observed and widely distributed. Other species were of limited distribution. In Marsabit, *A. secundiflora*, *A. calidophila* and *A. rivae* are the major species (Status and Distribution of commercial aloes in Kenya, 2008).



Source: JICA Project Team

**Figure AG2.2.3** *Indigenous aloe species (Left; A. Turkanensis in Baringo, Center: A. secundiflora in Baringo, Right: indigenous aloe in Hurri Hills in Marsabit)*

Worldwide, most aloes are exploited from the wild and unsustainable harvesting of wild aloe poses many threats, ranging from over-exploitation to ecological imbalance and possible loss of species. All species of aloe, except *Aloe Vera* are listed under Appendices I and II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Artificial propagation and cultivation is encouraged for commercial exploitation.

In Kenya, same as worldwide, most commercial exploitation of aloe bitter gum has been promoted by harvesting from the wild. Although unsustainable harvesting of wild aloe populations is prohibited since 1986 by a presidential decree, most of aloe bitter gum is still produced illegally from wild aloe and smuggled out from Mombasa port. In Marsabit, too, it has been observed that strangers come to harvest wild aloe.

According to the results of a survey on aloe resource status from 2005 to 2006, about 131 million individual plants of commercial aloe species were counted in 19 districts where commercial and potential aloe utilization activities take place. About 129 million aloe plants were estimated to be in Northern Kenya. Although aloe cultivation and domestication is recommended, populations of wild aloe are still much higher than the domesticated one. Most of aloe plants under cultivation found only in Baringo and Koibatek Districts with an estimated number of 140,000 plants (Status and Distribution of commercial aloes in Kenya, 2008).

## (2) Project identification

Although the demand for products containing aloe is increasing globally, there is not yet an established aloe market in Kenya. In Marsabit, the commercial value of aloe is not at all known and wild aloe is slightly used in traditional way. Although well established market channels for aloe trade will have significant beneficial impact to the livelihood of the dry-land communities, it is too early to take into consideration commercial value of aloe at the moment.

On the other hand, Aloe is a dry-land species as mentioned above which means aloe plantation is highly an area- specific activity. Especially *A. riva*, one of commercial species, is the specific species only found in Hurri hills. As aloe in Hurri hills was also targeted for illegal exploitation and in habitants are aware of the importance of protecting such indigenous aloe, aloe plantation can contribute to biodiversity and environmental conservation.

Furthermore, as aloe is highly tolerant to dry condition, aloe can be cut and used as emergency livestock fodder during drought. In addition, aloe can also be used in combination with bee forage for honey production. Herbal tea can also be made from aloe flower. The facts can justify that aloe plantation is worth to be targeted by the project.

## (3) Constraint and Lessons Learnt

Baringo is one of the areas where cultivation of aloe is actively done. In Baringo, same as other areas where indigenous aloe is widely distributed, wild aloe has been largely exploited for bitter gum production. Domestication and cultivation of indigenous aloe started as a community initiative in 2005 when people realized the number of aloe has decreased because of over exploitation.

In 2005, a community based group for aloe protection conducted an aloe resource mapping and Environmental Impact Assessment (EIA) study, established aloe nursery, and built a factory for aloe processing through financial support from European Union (EU). Although the group had fabricated more than 5,000 soaps and 600 kg of bitter gum in their factory, the activities have stopped since 2010, when the finance of EU dried up.

Most of the farmers who had started aloe cultivation because of the establishment of the aloe factory actually have difficulty to find aloe market since the factory stopped working. Although there is small scale local market for aloe sap, producers are complaining that the selling price of aloe sap is too low compared to the cost of labour for collection.

According to the observations and tentative cost- benefit analysis of the survey of aloe resource status, 1 L of aloe sap is sold at Ksh.20/kg to middlemen, which then processes it into crude aloe gum and then sells to the dealers at Ksh.70/kg. The dealers export the crude aloe gum to countries such as China at

Ksh.185/kg. The dealer posts a higher profit margin compared to the middlemen and the primary producers (Status and Distribution of commercial aloes in Kenya, 2008).

These facts show that commercial aloe production still has many difficulties because of the lack of a well established market.

In Marsabit, despite the large distribution of aloe plants, there was only one project which targeted protection of wild aloe in Hurri Hills and Ilaut. The project was financed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in early 2000, to formulate aloe protection group and trained them to chase off the illegal aloe exploiters. Since then groups realized the value of aloe, they have started small scale aloe plantations by their own effort, but because of some difficulty such as lack of market or insecurity, their activities have never succeeded.

#### (4) Approach

Based on the lesson learnt, it is clear that commercial aloe bitter gum production has so many difficulties because of lack of market. It seems that the development of other market is more attractive for this project.

There is a report of the beneficial effect of aloe for chickens (The organic Farmer Nr. 81, February 2012). Chicken have remained free of diseases, by adding aloe sap regularly to their drinking water. There is another finding that when chicken were provided regularly with the sap of *A. secundiflora*, they grew faster and added more weight compared to the chicken whose water was not enriched with aloe sap. Even in Marsabit, a poultry keeper proved that by giving aloe sap regularly, his chickens never get diseases. He mentioned that his idea to use aloe sap based on traditional knowledge that chickens can grow healthy when they are given hot pepper. This fact shows that there is potential market of aloe sap for poultry keepers.

In addition, the development of new products such as aloe tea or aloe honey may be able to have market competitive power because of their area specificity.

### **G2.2.4 Small Scale Agriculture**

#### (1) Present Condition

In Marsabit, the consumption of vegetables is increasing because of increase of settlement and change of dietary habits. There is low vegetable production in Marsabit and most of vegetables sold in markets are brought mainly from Meru.

Although there is a high demand, small scale agriculture is getting more difficult with recurrent drought. Most of agricultural activities conducted in Marsabit are rain fed, which makes agriculture a rainy season income generation activity. In some cases even in rainy season, because of lack of precipitation farmers fail to get any products. Rainfall has declined over the last ten years and many abandoned farmlands can be seen.

Many NGOs and other organizations have been targeting to enhance small scale agriculture to increase vegetable production in the County. Some organizations distributed green house or nets with drip irrigation system for water- saving agriculture, while another constructed water pan for agricultural use.

#### (2) Lesson Learnt and Constraint

Although many people proclaim that vegetable production increases by introducing greenhouse or nets, it is not easy for other farmers to introduce them on their own effort. Such facilities generally come from Nairobi and the price is very high. To increase the number of farmers that use greenhouses or nets, introduction of innovative facilities by using only local materials with low cost is necessary.

In addition, even if the introduction of locally made facilities succeeds, the problem of lack of water source would still not be solved. Construction of pans for only agricultural use is one of the solutions, but training people to keep away their livestock is necessary, and another problem is competition of land use for agriculture or pasture which can also occur.

Development of new irrigation system or rehabilitation of existing irrigation systems can be a better solution for water deficit, but it is very expensive and it is not easy to get enough funds.

In addition, there is another difficulty to encourage small scale agriculture especially in the hillside of Mt. Marsabit. The reason is the increasing production of khat. Khat farms are found all over the hillsides, which is highly drought tolerant and sold at a higher price than vegetables.

From the survey, it was deduced that from a physical and strategic point of view small scale agriculture is not viable in this project.

### **G2.2.5 Milk Production**

#### **(1) Present Condition**

Dairy production, which is a dynamic sub-sector in Kenya, is a major source of livelihood for the families of about 600,000 - 800,000 small scale farmers for whom dairy farming is a primary activity. Dairy sub-sector also offers employment along the milk marketing chain (365,000 jobs). It constitutes the largest share of livestock contribution to the country's GDP, i.e. 3.5% of total GDP. Smallholder dairy production accounts for over 70% of total milk production.

However, the contribution of milk sales to the household income is relatively low in Marsabit, despite the increasing demand for milk because of increase of settlements.

One of the reasons for low milk sales seems to be the seasonality of milk production. Pastoralism is the major system of milk production in the low land. However, because of the rainfall pattern and related reasons shortage of feed result in low production of milk hence milk production is highly season dependent.

The distance between producers and consumers is another reason. Most pastoral producers are found in the very remote rural areas while consumers or profitable market is found in urban areas. For example, on average, it took five hours to walk to the nearest town to sell milk from the household in Chalbi and eight hours in Dukana. In addition, the allocation and selection of herd site and size is the responsibility of men, and they may keep the livestock away from the town or household to maximize herd productivity without considering its impact on milk sales.

The other reason is that in pastoralist' communities, milk need not to be sold to gain a profit, it can also be given away for labour or to build goodwill and reputation with a woman's friends and relatives. This implies that milk marketing is still at an infant stage.

#### **(2) Lesson Learnt and Constraint**

There are some women groups supported by NGOs for milk sales in Marsabit. Cow milk is the main milk marketed by groups at Karare and Loglogo, while some camel milk is also sold by Salato women's group at Ngurunit. The main problem with cows' milk is its unavailability in dry seasons. Thus, neither Karare nor Loglogo groups were operational when visited towards the end of the dry season. Loglogo group had two refrigerators, but they could not justify purchasing kerosene needed to operate them for a very small quantity of milk. Their solution appears to lie in diversifying into camels' milk in dry seasons and using solar powered refrigeration

Despite the support from NGOs and other organizations, there are several difficulties for milk production and marketing in Marsabit as follows;

- Unsustainable milk supply

The amount of milk production is highly dependent on the season as mentioned above. Milk is abundant following rains but the production is low in dry season. In addition, a more critical factor is the effect of drought on milk availability.

- Low productivity of milk

Poor management of animal nutrition, affliction of diseases such as trypanosomiasis and mastitis, and difficulty of introducing high milk production breed is the reason of low milk production.

- Poor infrastructure

Poor transportation, poor road condition, and absence of milk processing and cooling infrastructures lead to milk spoilage. A lot of funds are required to solve these problems.

- Milk processing

Although milk processing is efficient to avoid spoilage of milk and to store surpluses until times of drought, there are some difficulties for milk processing. Condensed milk is one of products to be made easily, but requires sugar and wood fuel for evaporation, which are difficult to be found in enough amounts in remote area. Cheese and sweets require very hygienic conditions, which is also a constraint in remote production areas.

- Traditional culture

As mentioned above, milk marketing for household income is still not the priority for both men and women. It may take a long time to change their way of thinking.

## G2.2.6 Natural Salts

### (1) Present Conditions

Natural salts are found in large amounts in Chalbi Dessert in Marsabit County. Various researchers, notably researchers from Kenya Agricultural Research Institute (KARI) in Marsabit have conducted a number of investigations on the use of natural salts as mineral supplements for livestock. Research by KARI has shown the positive effect of use of salt as livestock feed by mixing with ground animal bone. By feeding on natural salt, not only does the milk production improve, but also the body condition improves, over 30% increase in growth in calves in camels, females conceive easily and camel require water less frequently. Despite the above mentioned positive effect, salt exploitation for feed production was regrettably stopped because the government prohibited the use of animal bone for the feed.

Investigations done in areas surrounding the Chalbi area indicate that salt trade has been done by various people before. There is evidence that there was an established group that carried out this trade but the activities fizzled out after the group leader passed on. There are also issues of concern as far as marketing is concerned. Seasonality of the availability of the salt and buyers is one area of concern. Buyers may need large amounts to justify their use of lorries to collect the salt though there is also evidence that small scale users exist who may need the salt as a livestock supplement when grazing in Hurri Hills. Also the salt is known to damage metallic parts of the lorries and thus it's a challenge to trade in salt. Presently there are indications that despite the setbacks, there are people who are interested in getting a livelihood from the salt trade if given some assistance.

### (2) Lesson Learnt and Point to be Improved

Although the salt exploitation for livestock feed production has been stopped, there are other possibilities for the use of the salt. For example, as natural salts are tasty with high mineral contents, there is possibility of salt production for human use. Cosmetics use such as bath salt is also another possibility. Value addition can also be done by labeling the product as a brand from Chalbi incorporating information about local life, though these must be carefully examined from sustainability point of view considered with their capacity.

Further to the above, organizing people into groups and helping in building group capacity may be one way in which the locals can be empowered to ensure that they take up utilization of this resource as a source of income. Far markets could be exploited if the local people can collect large amounts to justify the use of trucks to transport the salt. It may also be necessary to consider transport using donkeys as a means of delivering salt to consumers. However this may be laborious and needs to be considered alongside other alternatives.

### G2.2.7 Honey

#### (1) Present Conditions

Small scale honey production is found in areas where there are relatively high trees concentrations such as the hillside of Mt. Marsabit or forested areas in Marsabit South. Of all areas, Ngurunit is well known for its honey production potential. In Ngurunit town, some women groups and individuals deal in the honey business. They buy honey combs from producers, process and bottle it for sale in Ngurunit, Laisamis, Loglogo and Marsabit town.

#### (2) Lesson Learnt and Point to be Improved

Although honey production by itself is not lucrative because of the limitation of the duration when flowers are available, it can be more viable if it is introduced alongside other activities such as gum and resin business.

### G2.2.8 Merry Go Round

In all the communities visited recently, it has been established that there has been trade in the recent past to the present. In areas where this has not been present, there has been an element of barter trade. However, there is a new thinking that apart from money trade and barter trade, new concepts can be introduced that will bring about group cohesion and new ways of thinking in approaching issues of concern especially drought impacts in these areas. Merry Go Round is one of the systems that have been used by many communities to cushion members against certain calamities.

The project intends to look at Merry Go Round from different angles. One, the use of livestock especially goats and chicken in a merry go round system. In this case there will be a first recipient and other recipients in a group using stock that is provided to the first recipient.

The other activity that can be incorporated with the Merry Go Round is the Village Community Banking also known as VICOBA. This will help the unbanked people have some sort of banking systems and in it they can incorporate certain activities that are purely Merry Go round. Together with this, in areas where trade is a little advanced such as Ngurunit, and based on the people's willingness to partake, loan systems can be introduced on a rotational basis. It is thus hoped that such a system can help members learn, save and share in various aspects of life and hence hedge against negative impacts of drought.

### G2.3 Selection of Sub Projects for Livelihood Diversification

In the selected 9 communities, CMDRR workshops have been implemented and CAPs were prepared. Referring to these CAPs together with consideration and consultation with the communities, the following sub projects were selected for Livelihood Diversification. Detailed explanation for this is contained in ANNEX B.

**Table AG2.3.1 Selected Pilot Projects of Livelihood Diversification**

Community	Livelihood Diversification
<u>Region-1</u>	
Kalacha	- Salt Production Program - Goat Program
<u>Region-2</u>	
Dakabaricha /Jirime	- Poultry Program
Gar-Qarsa	- Goat Program
<u>Region-3</u>	
Arapal	- Goat Program
Ngurunit	- Gum & Resin Program

Source: JICA Project Team

## CHAPTER G3. CHICKEN MERRY-GO-ROUND SUB-PROJECT

### G3.1 Outline of the Sub-project

#### G3.1.1 General Outline of the Sub-project

(1) Outline of the sub-project

*Table AG3.1.1 Outline of Chicken Merry-Go-Round Sub-project*

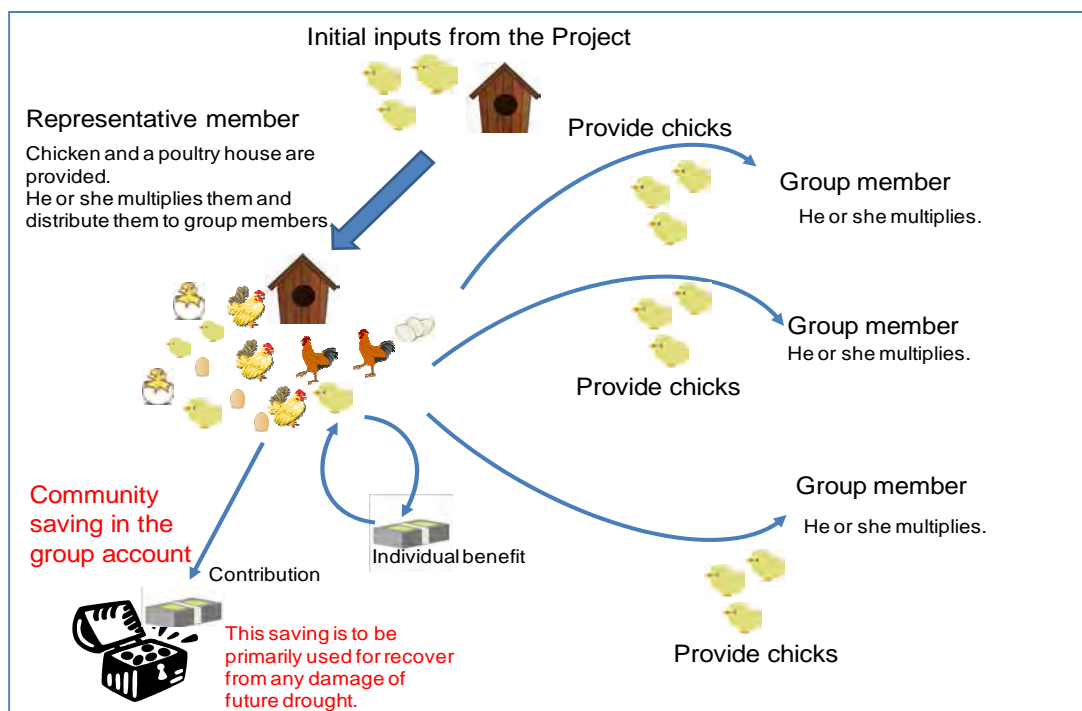
Item	Contents	Remarks										
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities especially closer to the town using chicken and giving technical training, VICOBA training, and mentoring including PFS to enhance community resilience against drought.											
2. Number of Beneficiaries	8 groups in both locations, approximately 160 group members in Jirime and Dakabaricha.											
3. Implementation Organization	JICA ECoRAD Project, and the community groups											
4. Project Contents												
1) Project Outline	1) Construction of improved poultry houses 2) Distribution of improved/indigenous chicken breed 3) Technical training for chicken rearing 4) Mentoring activities including group strengthening and PFS 5) VICOBA Training											
2) Facility / Activity	<table border="1"> <thead> <tr> <th><i>Facilities/Activities</i></th> <th><i>Implementer</i></th> </tr> </thead> <tbody> <tr> <td>1) Construction of Poultry houses</td> <td>1) Project Team</td> </tr> <tr> <td>2) Procurement of chicken</td> <td>2) Project Team</td> </tr> <tr> <td>3) Implementation of training</td> <td>3) NGO</td> </tr> <tr> <td>4) Monitoring and mentoring</td> <td>4) Project Team &amp; NGO</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementer</i>	1) Construction of Poultry houses	1) Project Team	2) Procurement of chicken	2) Project Team	3) Implementation of training	3) NGO	4) Monitoring and mentoring	4) Project Team & NGO	
<i>Facilities/Activities</i>	<i>Implementer</i>											
1) Construction of Poultry houses	1) Project Team											
2) Procurement of chicken	2) Project Team											
3) Implementation of training	3) NGO											
4) Monitoring and mentoring	4) Project Team & NGO											
3) Organization for O&M	Target community groups, their chief and elders											
4) Construction Period	23 months(starting Feb 2013 up to Dec 2014)	For the case of this sub-project, construction period means implementation period.										

Source: JICA Project Team

(2) Basic principle of the merry go-round

The sub-project provides four sets (one set means one male and two females) of chicken to a group which consists of two sub-groups of ten (10) members/sub-group. These are the first recipients or beneficiaries in each sub-group. The first persons keep the chicken and hatch some to increase the numbers. Then one set out of the hatched chicken is given to another member at around two months old. The chicken must be reared and increased and distributed until all members of the group get one set each. When they sell products from chicken (eggs, chick and chicken), they must save some amount of money to the group's saving account/box (called Drought Fund) to prepare for hardship by future drought. The figure below illustrates this concept.





Source: JICA Project Team

**Figure AG3.1.1 Image of Chicken Merry-Go-Round System**

The breeds used are improved breed Sasso and local chicken (indigenous breed), depending on the request from group members. Keeping Sasso is said to require more advanced care but with more benefits (eggs and more meat) compared with local one. Detailed explanation of the program is shown in Attachment G3-1.

### G3.1.2 Selection of Target Groups

#### (1) Participatory planning

In selection of the target groups, participatory planning approach was taken. The process taken in Jirime and Dakabaricha locations was the same and is summarized as below:

Firstly, the team of the livelihood diversification which consists of the consultant and NGO visited the chiefs in both locations, and explained our planned idea on the activities in Jirime, and Dakabaricha, and the chiefs basically accepted the idea. The team then requested the chiefs to arrange meetings with the community to explain the detailed activities including the purpose of the project and sub-project. The meetings were held on 9<sup>th</sup> in Dakabaricha and 11<sup>th</sup> in Jirime, both in January 2013 respectively, and full information was provided to the community. In the meetings, it was explained that groups which agree and want to participate in the sub-project must submit applications to the team, and they were given one week to apply.. Eventually two groups in Jirime, and eight groups in Dakabaricha submitted their applications, and the team selected two in Jirime, and six in Dakabaricha considering the activeness/capacity and willingness of the candidate groups (this was done by an NGO that knows the groups well).



Source: JICA Project Team

**Figure AG3.1.2 Participatory Planning for Chicken Merry-Go-Round Sub-project**  
(Left: Meeting with Community in Dakabaricha, Right: Submitted Applications)

After selection, all the groups were asked to prepare group regulations that show the understanding of the sub-project and their commitment with signatures of all members. In this process, the team explained the basic principle of the sub-project and gave them time to discuss and decide detailed rules among themselves. Finally all the groups submitted their regulations, to the team.

## (2) Target community groups

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG3.1.2 Information for Target Group**

	Group name	Location	Type of breed
1	TUMEAMUA SELF HELP GROUP	Jirime	Sasso
2	MOTI SELF HELP GROUP	Jirime	Indigenous
3	ALLAHAYO SELF HELP GROUP	Dakabaricha	Sasso
4	GORO KORKORE WOMEN GROUP	Dakabaricha	Sasso
5	KIWANJA NDEGE	Dakabaricha	Sasso
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Dakabaricha	Sasso
7	TUSHIKAMANE SELF HELP GROUP	Dakabaricha	Sasso
8	TAKUMA WOMEN GROUP	Dakabaricha	Sasso

Source: JICA Project Team

Out of selected eight groups for the chicken merry go-round system, only one group decided to have indigenous breed (local chicken) as the initial input from the project. The rest of the groups chose the improved breed.

### G3.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

#### (1) Indicators

##### 1) Operational indicators

Operational indicators were set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. They were monitored throughout the monitoring period.

**Table AG3.1.3 Operational Indicators**

<b>Operational Indicators</b>	
1	Number of chicken multiplied based on the chicken introduced to the first member
2	Number of chicken distributed to subsequent members (chicken/member)
3	Number of subsequent group members who received increased chicken
4	Records of any transaction on the above (how many eggs / chick/ chicken sold, when, at what price, how much money is earned, how much money is contributed and deposited to the group account)
4-1	Individual Benefit (how many eggs / chicken eaten, if sold how much money is earned for individual benefit)
4-2	Group Benefit (how much money is contributed and deposited to the group account)
5	The group saving in the account as Drought Fund
5-1	Amount of money as the group saving in the account as Drought Fund
5-2	Any record with reason when Drought Fund is used
6	Other fund for the group (and any information about VICOBA implementation)

Source: JICA Project Team

## 2) Effect indicators

Effect indicators are set as shown in the table below. Through these indicators, the effect and impact of the sub-project is intended to be documented. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG3.1.4 Effect Indicators**

<b>Effect Indicators</b>	
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Number of assets by member and group (especially livestock-chicken)
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, a baseline survey was implemented as below:

### 1) Methodology

The same method was used in Jirime and Dakabaricha. Two kinds of questionnaires were used; one for an individual and the other for a group to obtain the baseline conditions.

A Sample of 10% of total target group was randomly selected and surveyed. The total number was sixteen(16), stratified two from each group. For groups, all the selected groups were surveyed through a focus group discussion. The survey was implemented by the NGO from the end of January to February 2013.

### 2) Brief summary of socio economic condition of the target areas.

**Table AG3.1.5 Summary of Socio Economic Condition of the Target Areas**

	<b>Socio Economic Condition</b>
Jirime Location	Area: 79.5 sq km Sub location: Two, namely Milimatatu and Jirime sub locations Population: 1,794 (342 households) Community: Gabra, Turkana, and Borana
Dakabaricha Location	Area: 14.0 sq km Sub location: Two, namely Mata Arba and Dakabaricha sub locations Population: 4,240 (856 households) Community: Burji, and Borana
Common condition for both locations	Proximity to the market, fertile arable land, and social amenities because Marsabit town is close; and relatively reliable rainfall Both areas are generally in the coverage area of mobile network, and electricity is also available.

Source: 2009 Kenya Population and Housing Census and JICA Project Team

### (3) Baseline information of Operational indicators

baseline figures for the indicators are based on the information from the baseline survey and the activities by the project team.

#### 1) Number of chicken multiplied based on the chicken introduced to the first member

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG3.1.6 Number of Chicken Multiplied**

	<b>Group name</b>	<b>Indicator as of Jan~Mar 2013</b>
Jirime		
1	TUMEAMUA SELF HELP GROUP	0
2	MOTI SELF HELP GROUP	0
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	0
4	GORO KORKORE WOMEN GROUP	0
5	KIWANJA NDEGE	0
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	0
7	TUSHIKAMANE SELF HELP GROUP	0
8	TAKUMA WOMEN GROUP	0

Source: JICA Project Team

#### 2) Number of chicken distributed to subsequent members (chicken/member)

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG3.1.7 Number of Chicken Distributed**

	<b>Group name</b>	<b>Indicator as of Jan~Mar 2013</b>
Jirime		
1	TUMEAMUA SELF HELP GROUP	0
2	MOTI SELF HELP GROUP	0
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	0
4	GORO KORKORE WOMEN GROUP	0
5	KIWANJA NDEGE	0
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	0
7	TUSHIKAMANE SELF HELP GROUP	0
8	TAKUMA WOMEN GROUP	0

Source: JICA Project Team

### 3) Number of subsequent group members who received increased chicken

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG3.1.8 Number of Subsequent Group Members Who Received Increased Chicken**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	0
2	MOTI SELF HELP GROUP	0
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	0
4	GORO KORKORE WOMEN GROUP	0
5	KIWANJA NDEGE	0
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	0
7	TUSHIKAMANE SELF HELP GROUP	0
8	TAKUMA WOMEN GROUP	0

Source: JICA Project Team

### 4) Records of any transaction on the above (how many eggs / chick/ chicken sold, when, at what price, how much money is earned, how much money is contributed and deposited to the group account)

#### 1. Individual benefit

Since the sub-project had not yet started, all the records of the groups for this indicator are none.

**Table AG3.1.9 Records of Any Transaction (Individual)**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	None
2	MOTI SELF HELP GROUP	None
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	None
4	GORO KORKORE WOMEN GROUP	None
5	KIWANJA NDEGE	None
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	None
7	TUSHIKAMANE SELF HELP GROUP	None
8	TAKUMA WOMEN GROUP	None

Source: JICA Project Team

#### 2. Group benefit

Since the sub-project had not yet started, all the records of the groups for this indicator are none.

**Table AG3.1.10 Records of Any Transaction (Group)**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	None
2	MOTI SELF HELP GROUP	None
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	None
4	GORO KORKORE WOMEN GROUP	None
5	KIWANJA NDEGE	None
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	None
7	TUSHIKAMANE SELF HELP GROUP	None
8	TAKUMA WOMEN GROUP	None

Source: JICA Project Team

5) The group saving in the account as Drought Fund

## 1. Amount of money as group saving in the account as Drought Fund

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG3.1.11 Amount of the Money as Drought Fund**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	0
2	MOTI SELF HELP GROUP	0
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	0
4	GORO KORKORE WOMEN GROUP	0
5	KIWANJA NDEGE	0
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	0
7	TUSHIKAMANE SELF HELP GROUP	0
8	TAKUMA WOMEN GROUP	0

Source: JICA Project Team

## 2. Any record with reason when Drought Fund is used

Since the sub-project had not yet started, all the records of the groups for this indicator are none.

**Table AG3.1.12 Any Record with Reason When Drought Fund Is Used**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	None
2	MOTI SELF HELP GROUP	None
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	None
4	GORO KORKORE WOMEN GROUP	None
5	KIWANJA NDEGE	None
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	None
7	TUSHIKAMANE SELF HELP GROUP	None
8	TAKUMA WOMEN GROUP	None

Source: JICA Project Team

**6) Other funds for the group**

Total money in the group account before the sub-project started is shown in the following table:

**Table AG3.1.13 Other Funds for The Group**

	Group name	Indicator as of Jan-Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	Ksh. 250,000 VICOBA had already been implemented.
2	MOTI SELF HELP GROUP	Ksh. 50,000 VICOBA had already been implemented.
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	Ksh. 24,000 VICOBA had not been implemented
4	GORO KORKORE WOMEN GROUP	Ksh. 48,000 VICOBA had not been implemented.
5	KIWANJA NDEGE	Ksh. 21,600 VICOBA had not been implemented
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Ksh. 140,000 VICOBA had not been implemented
7	TUSHIKAMANE SELF HELP GROUP	Ksh. 19,000 VICOBA had already been implemented
8	TAKUMA WOMEN GROUP	Ksh. 25,000 VICOBA had not been implemented.

Source: Baseline survey and JICA Project Team

Three groups had already implemented VICOBA.

**(4) Baseline Information of Effect indicators****1) Group members' livelihood****1. Jirime**

Based on the baseline survey, agriculture (crop production) and some small scale businesses are the major livelihood for most of the sampled group members, followed by casual labour and livestock rearing.

**2. Dakabaricha**

Based on the baseline survey, most of the sampled group members do agriculture and work as casual labour the most. Employment and livestock rearing follow in that order.

**3. Observation**

These areas are close to Marsabit town; therefore livestock (especially pastoralist) seems not to be the main measure of livelihood among our target groups. These areas have relatively reliable rainfall and fertile land, therefore agriculture (crop production) is one of the major livelihoods. Opportunities for casual work and business are also available as means of livelihoods due to proximity to populated areas. These are the major livelihoods in these areas. In terms of the size of our chicken sub-project, it may not change their current livelihood substantially but supplement their livelihoods in terms of diversification. This will be studied when the sub-project is over.

## 2) Current measures in terms of livelihood to cope with drought

### 1. By member

Sample target members tend to have mitigation measures against drought impact securing their livelihood. In Jirime, the coping measures are continuing their business activities and agriculture, or relying on salary that they receive. If their livelihood type is normally affected by drought like agriculture for instance, unlike salary or casual work, they may suffer from drought unless they have some mechanism to cope with that.

In Dakabaricha, some indicated dependency on salary and business in drought conditions. Most of the others argued that good storage of farm products and proper use of the limited resources is the best strategy to cope with drought. It should be noted that some of the respondents replied that they do not have any mitigation measures.

At the end of the project period, future measures to cope with drought will be studied again to see how our introduced system impacts on the above.

### 2. By group

The current measures by group are summarized in the table below:

**Table AG3.1.14 Current Measures To Cope with Drought by Group**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	Harvesting grass and making hay
2	MOTI SELF HELP GROUP	No
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	No
4	GORO KORKORE WOMEN GROUP	No
5	KIWANJA NDEGE	No
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Purchase of water tank using the money contributed by the members
7	TUSHIKAMANE SELF HELP GROUP	No
8	TAKUMA WOMEN GROUP	No

Source: Baseline Survey and JICA Project Team

Only two out of eight groups had coping measures against drought as a group. Therefore, as groups, it is expected that they would adopt our system as a mitigation measure for future drought. This will be surveyed at the end of the project period.

## 3) Number of assets by member and group (including group profile)

### 1. By member

The main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below.

<sup>1</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (100~200 shoats/family). The following are possible considerations; 1) polygamy affects the number (information of one wife' unit); and 2) these households live closer to the town so smaller figures are not far from the true figures. For the reference, average household size of the samples is 6.3 in Jirime, and 6.8 in Dakabaricha.



**Table AG3.1.15 Number of Assets by Member**

		Jirime		Dakabaricha	
		Average/sample HH	% of having/sample HH	Average/sample HH	% of having/sample HH
Physical	TV	0.5	50	0.42	42
	Car	0	0	0.18	8
	Mobile phone	1.75	100	0.83	75
	Bicycle	0.25	25	0.75	58
	Motorcycle	0.5	50	0.33	33
Livestock	Goat	1.25 (max: 3, min: 0)	50	3.75 (max: 20, min:0)	50
	Cow	2.5 (max: 10, min:0)	25	0.42 (max: 3, min:0)	25
	Sheep	2.25 (max: 4, min:0)	75	1.08 (max: 10, min:0)	25
	Camel	0 (max: 0, min:0)	0	0 (max: 0, min:0)	0
	Chicken	2.25 (max: 5, min:0)	50	3.33 (max: 15, min:0)	67
	Donkey	0.25 (max: 1, min:0)	25	0.67 (max: 3, min:0)	50

Source: Baseline Survey and JICA Project Team

With regards to physical assets, most of the target members have mobile phones (100% in Jirime and 75% in Dakabaricha). Even a TV is owned by almost half of the households interviewed. They also have bicycle and motorcycle with relatively high percentage out of the total samples. This could be because these areas are close to Marsabit town and they are considered to have more economic opportunities than other pastoralist areas.

For livestock assets, both number of shoats per household (several shoats per household) and percentage of households who have shoats (not more than around 50% except sheep in Jirime) are considered relatively low in both locations. No households have camels which are important livestock assets for pastoralists. Instead, the percentage of households that have chicken is high (more than 50%). This is an interesting result and perhaps because the target people live close to the town and have gradually left the pastoralist-type of livelihood. In this sense, it could be said that chicken merry go-round system works in these locations (current average numbers of chicken is two to three chickens per household). After implementing the sub-project, changes on these assets will be surveyed to assess its impact.

## 2. By group

Group asset including information general group profile is shown as below:

**Table AG3.1.16 Number of Assets by Group**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 19, illiterate: 10) Asset: land Group account: Ksh. 250,000 Established: 2010
2	MOTI SELF HELP GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 17, illiterate: 15) Asset: 10 chickens Group account: Ksh. 50,000 Established: 2012

	Group name	Indicator as of Jan-Mar 2013
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 19*, illiterate: 11*) Asset: none Group account: Ksh. 24,000 Established d: 2012
4	GORO KORKORE WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 20, illiterate: 20) Asset: none Group account: Ksh. 48,000 Established: 2007
5	KIWANJA NDEGE	Number of Group members: 16 Out of which, target members are 16 (female: 9, illiterate: 9) Asset: none Group account: Ksh. 21,600 Established: 2003
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 5*, illiterate: 11*) Asset: none Group account: Ksh. 140,000 Established: 2010
7	TUSHIKAMANE SELF HELP GROUP	Number of Group members: 18 Out of which, target members are 18 (female:11, illiterate: 12) Asset: none Group account: Ksh. 19,000 Established: 2013
8	TAKUMA WOMEN GROUP	Number of Group members: 18 Out of which, target members are 18 (female:18, illiterate: 16) Asset: none Group account: Ksh. 25,000 Established: 2009

Source: Baseline Survey and JICA Project Team, \*: information for one is missing

Most of the groups are made of 20 members. By coincidence, most of the groups selected have a high percentage of female members except two (Kiwanja Ndege, and Mata Arba Baretum United Self Help Group). Another characteristic is that majority of the members are illiterate (68% are illiterate overall), indicating that the few leaders who are literate and capable are leading the groups. All the groups have a certain amount of money and two groups have more than Ksh. 100,000.

4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

1. By member (household income and expenditure)

Household income and expenditure for the sampled target members are summarized in the table below:

**Table AG3.1.17 Household Income and Expenditure (Baseline in Ksh)**

	Jirime	Dakabaricha
Annual Household Income	Average: 315,900 Max: 432,000, Min: 256,800	Average: 393,608 Max: 1,404,000, Min: 177,600
Annual Household Expenditure	Average: 263,425 Max: 417,999, Min: 184,200	Average: 237,723 Max: 442,800, Min: 101,920

Source: Baseline Survey and JICA Project Team

Income level in both Jirime and Dakabaricha among the sampled households is around Ksh.300,000 to Ksh.400,000/year/household. To what extent an individual benefits in terms of money planned to be accrued from the chicken sub-project would give impacts to the households will be discussed based on this baseline information at the end of the sub-project.

## 2. By group (only financial impact)

Since the sub-project has not yet started, financial impacts of the groups for this indicator are none.

**Table AG3.1.18 Financial Impact by Group**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	None
2	MOTI SELF HELP GROUP	None
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	None
4	GORO KORKORE WOMEN GROUP	None
5	KIWANJA NDEGE	None
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	None
7	TUSHIKAMANE SELF HELP GROUP	None
8	TAKUMA WOMEN GROUP	None

Source: JICA Project Team

## 5) Any opinions on the sub-project (expectations, satisfaction, any change in measures in terms of livelihood to cope with drought with the sub-project, etc.)

### 1. By member

Out of four selected members in Jirime, all of them expect that the individual resilience against future drought will be enhanced by the sub-project. The main reason for this is that they can benefit from the group saving sourced from selling eggs and chicken.

All 12 sample members in Dakabaricha expect the same as in Jirime. The reasons are, in addition to the one in Jirime, making profit out of selling eggs to increase their income, supplementing their diet using chicken.

When the sub-project is completed, a survey will be done to confirm whether these positive expectations will have been met.

### 2. By group

Groups' Opinions on the sub-project are shown as follows:

**Table AG3.1.19 Any Opinions on the Sub-project (Group)**

	Group name	Indicator as of Jan~Mar 2013
Jirime		
1	TUMEAMUA SELF HELP GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes and the sales of eggs and cocks will uplift the living standard.</p> <p><u>Expectation about group benefit:</u> Fostering members solidarity and culture to help each others</p> <p><u>Difference compared to other past donor projects:</u> More meeting, transparency, focusing on future problems unlike others which focus on immediate problem.</p>
2	MOTI SELF HELP GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes</p> <p><u>Expectation about group benefit:</u> Fostering members' solidarity</p> <p><u>Difference compared to other past donor projects:</u> JICA' one is a long term approach, others are more like short term approaches.</p>

	Group name	Indicator as of Jan~Mar 2013
Dakabaricha		
3	ALLAHAYO SELF HELP GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes</p> <p><u>Expectation about group benefit:</u> Fostering culture of resilience and members' solidarity</p> <p><u>Difference compared to other past donor projects:</u> Though they said they did not get donors assistance and thus they do not know much, JICA seems to have a long term approach.</p>
4	GORO KORKORE WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes</p> <p><u>Expectation about group benefit:</u> Enhancing cohesion and togetherness</p> <p><u>Difference compared to other past donor projects:</u> Previous donors target immediate need.</p>
5	KIWANJA NDEGE	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, the groups will sell the products they get from the chicken and improve their livelihoods.</p> <p><u>Expectation about group benefit:</u> Fostering solidarity and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> Though they said they did not get donors assistance and thus they do not know much, this approach has numerous meetings which help them have more knowledge about the sub-project.</p>
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes and they expect to generate income through the sale of eggs and cocks; and eggs and cocks are a source of protein.</p> <p><u>Expectation about group benefit:</u> Fostering solidarity and awareness of resilience as a group.</p> <p><u>Difference compared to other past donor projects:</u> A long term approach unlike others, chicken are considered drought resistant in their sense and of great help during drought</p>
7	TUSHIKAMANE SELF HELP GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes and they get income through the sale of eggs and cocks.</p> <p><u>Expectation about group benefit:</u> Members' solidarity, enhancing cohesion and togetherness</p> <p><u>Difference compared to other past donor projects:</u> Not known (the previous donors might targeted more vulnerable individuals)</p>
8	TAKUMA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> No because they are not prepared to fight back drought.</p> <p><u>Expectation about group benefit:</u> Though resilience is not expected, they answered fostering members's solidarity as a group benefit</p> <p><u>Difference compared to other past donor projects:</u> Other donotrs provided money that did not stay longer (this time animal is more like a fixed asset); and they adopted a short term approach rather than a long term one.</p>

Source: JICA Project Team

Majority of the groups, except one, have a positive expectation to enhance resilience by the sub-project.

They also have a positive expectation on group solidarity and cohesion as group's benefits.

Interestingly, the groups mentioned that JICA's approach is unique in terms of 1) long term approach, and 2) providing more meetings and more knowledge compared with other donors.

## G3.2 Works Done

Works done during the implementation of the sub project are shown below

### G3.2.1 Inputs from the Project as Assistance Activities

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

#### (1) Provision of Chicken and Poultry Houses

The following table shows the provision of chicken to the groups. Both hens (F) and cocks (M) were provided to the groups.

**Table AG3.2.1 Provision of Input**

Groups		Sub-group (10 members)	Total No of Initial Input	System for Initial Provision	Change in Input (Additional Input) and Final No of Initial Provision
<b>JIRIME LOCATION</b>					
1	Tumeamua Self Help	2 sub groups	12 (8F, 4M)	2 sets* for each sub group (2F, 1M/set)	2F were actually 2M, that's why additionally 2F were provided. In addition, 1F were realized as 1M, thus 1F was also provided. <b>Total initial input: 15 (8F, 7M)</b>
2	Moti Self Help	2 sub groups	<b>12</b> <b>(8F, 4M)</b>	2 sets for each sub group (2F, 1M/set)	No change
<b>DAKABARICHA LOCATION</b>					
1	Allahayo Self Help	2 sub groups	12 (8F, 4M)	2 sets for each sub group (2F, 1M/set)	3F were actually 3M, that's why additionally 3F were provided. <b>Total initial input: 15 (8F, 7M)</b>
2	Goro Korkore Women	2 sub groups	12 (8F, 4M)	2 sets for each sub group (2F, 1M/set)	4F were actually 4M, that's why additionally 4F were provided. <b>Total initial input: 16 (8F, 8M)</b>
3	Kiwanja ndege	2 sub groups	12 (8F, 4M)	2 sets for each sub group (2F, 1M/set)	5F were actually 5M, and additionally 4F were provided. <b>Total initial input: 16 (7F, 9M)</b>
4	Mata Arba Baretum United Self Help	2 sub groups	12 (8F, 4M)	2 sets for each sub group (2F, 1M/set)	2F were actually 2M, that's why additionally 2F were provided. <b>Total initial input: 14 (8F, 6M)</b>
5	Tushikamane Self Help	2 sub groups	12 (8F, 4M)	2 sets for each sub group (2F, 1M/set)	4F were actually 4M, that's why additionally 4F were provided. <b>Total initial input: 16 (8F, 8M)</b>
6	Takuma Women	2 sub groups	12 (8F, 4M)	2 sets for each sub group (2F, 1M/set)	2F were actually 2M, that's why additionally 2F were provided. <b>Total initial input: 14 (8F, 6M)</b>

\*: One set has one cock and two hens

Source: JICA Project Team

The initial idea was to provide two sets of chicken to one sub group, namely one group can receive four sets of chicken (12 = 8F + 4M). However especially for Sasso breed cases, as time went by, some "female" (hen) actually became male (cock). Therefore, additional hens were provided to adjust the number of hens to the original numbers (8F). Groups that got replacements for the cocks were encouraged to sell the cocks and save the funds under the drought fund or use the funds for rearing the remaining chicken.

One chicken house was provided to each sub-group for all groups (16 houses in total). The design of the house was made in consultation with an officer in the DLPO office, and the local carpenters made, assembled, and installed them.



Source: JICA Project Team

**Figure AG3.2.1 Group Members with Sasso Chicken with Chicken Houses Installed in their Homestead in Dakabaricha**

Signed delivery notes on chicken and chicken houses were obtained from the target groups members to confirm their receipt.

Considering the assets of both the groups and the individuals, it can be said that our input of the chicken certainly impacts on their assets.

## (2) Provision of Training

### 1) Technical training

The aim of the chicken technical training is two-fold. First, to equip the members with no knowledge about keeping healthy herds with skills on the same. Secondly, to refresh the skills of those who have had experience keeping poultry. Better management practices are emphasized in this training hence the title of the course.

Many members of the women groups are not new to chicken rearing but the new ones benefit a lot from such training. The course is structured such that it not only has a trainer but also that exchange of information is done interactively. This enables everybody to bring their knowledge and experiences to the fore.

Given the governments' emphasis on agri-business, the course also equips participants with knowledge on how to not only keep chicken but see them as a business and thus engage in raising chicken for the local market.

#### 1. Course objective

Using a participatory method, the training's aim is to share knowledge with learners on the best practices of poultry management including the use of the same resource as a source of income.

#### 2. Course content

The course content is as shown in the table below

**Table AG3.2.2 Course contents of Technical Training**

Item	Contents
BREED SELECTION	Characteristics of good layers Characteristics of good cocks
Housing	Ventilation, Floor space, Equipment ( drinkers, feeders, laying boxes)
Feeding and management of chicks	Free range and supplementary feeding, use of maize, sunflower etc.
Disease Control	Vaccination, identification of diseases,
Hygiene and Sanitation	Cleaning, disinfection, disposal of old litter
Routine Management	Deworming, debeaking, culling, control of ecto-parasites

Item	Contents
Egg production and brooding	Egg laying, percentages, brooding period, differences
Record Keeping	Number of birds bought, mortality, vaccination and medication, feeds, egg production
Sample records	Name of farm, production

Source: JICA Project Team

A total of 32 participants were trained on the above issues. Some have had prior experience raising local chicken while a few had not. The course was very interactive with participants taking active role in the training. The training was done for the two locations between 21<sup>st</sup>-22<sup>nd</sup> February, 2013.



Source: JICA Project Team

**Figure AG3.2.2 Poultry Technical Training in Dakabaricha**

## 2) VICOBA training

VICOBA stands for Village Community Banking. The basic principle of VICOBA system is that members of a self-selected group form a VICOBA and save money, which is the source of loan capital from which they can borrow. The aim of VICOBA is to provide savings and simple insurance facilities in a community that does not have access to formal sector financial services. However when the amount of money saved by members is sufficient, anyone of them can borrow from this source and must repay the loan with interest. This allows the fund to grow. The following are some of the characteristics of VICOBA:-

- VICOBA is autonomous and self-regulating;
- All transactions are carried out at meetings in front of the members to ensure transparency and accountability. Money may be kept in a simple wooden box;
- The cycle of savings and lending is usually time bound. Members agree to save and to borrow as they wish from the accumulated savings of the VICOBA for a limited period of time;
- All VICOBA keep records and are made up of as few as five and as many as 30 members;
- VICOBA agree on a set of rules, or a constitution to guide their activities; and
- A VICOBA may decide to create a social fund or it may not.

### 1 Course objective

To introduce the fundamentals of Village Community Banking (VICOBA) to group members in order to strengthen their savings and loan abilities. successful use of VICOBA will contribute to the sustainability of the chicken merry-go-round system.

### 2 Course content

The course content is as shown in the table below:

**Table AG3.2.3 Course Contents of VICOBA Training**

<b>Item</b>	<b>Contents</b>
Introduction to VICOBA	<ul style="list-style-type: none"> <li>- What is VICOBA</li> <li>- How does VICOBA work</li> <li>- Comparing VICOBA and Merry-go round</li> <li>- Useful terms in VICOBA (savings, loan, interest, fine)</li> </ul>
Individual self-screening(ISS) and group formation	<ul style="list-style-type: none"> <li>- Importance of ISS in group formation</li> <li>- Importance of knowing each other and its impact on group VICOBA activities</li> <li>- Value of ISS in elections</li> <li>- Importance of ISS in dispute resolution</li> </ul>
Types of group funds	<ul style="list-style-type: none"> <li>- Savings and loan fund (Compulsory)</li> <li>- Social fund (optional)</li> <li>- Drought fund (optional)</li> <li>- Others</li> </ul>
Group membership, leadership and elections	<ul style="list-style-type: none"> <li>- Who can be a group member</li> <li>- Elections</li> <li>- Characteristics of specific leaders (Chairlady, secretary and treasurer)</li> <li>- Roles of each leader</li> <li>- Terms of leadership (6 months to one year)</li> </ul>
Record keeping	<ul style="list-style-type: none"> <li>- Types of record books to be kept</li> <li>- Types of records</li> <li>- Who should keep what records</li> </ul>

Source: JICA Project Team

The VICOBA training targeting the chicken merry go round had 160 participants. Among them some had prior experience with VICOBA through a CARE- supported program. This training was conducted from 24th to 25th June, 2013.

### 3) Group strengthening training and others

There were no other group strengthening activities undertaken apart from monitoring and mentoring. During some sessions held with the women groups, issues arising were amicably resolved for the continued group cohesion.

### (3) Provision of Mentoring Activities

Other than the above, monitoring activities were scheduled on a bi- monthly ad hoc basis. If any problem was noted during monitoring, then appropriate advice was given as part of monitoring. In most cases, it was just a reminder of what the groups had learned during the technical training. Among the issues noted and advice given were cases of sickness, feeding times and rations, laying, egg shell strength, hatching and record keeping, and any group related issues if any.



Source: JICA Project Team

**Figure AG3.2.3 Group Meeting Visited in Jirime**



~from September 2013 to February 2014~

#### (4) Provision of Second Poultry Technical training

During the monitoring and evaluation activities of the Sasso chicken distributed by JICA-ECORAD project, it was found out that the targeted community members face the following challenges:

- Low hatchability due to poor storage of eggs or use of unfertilized eggs;
- Poor brooding/hatching due to inability of Sasso hens to sit on eggs;
- Death from preventable or treatable diseases;
- Cocks pecking hens especially those introduced for brooding;
- Inadequate feeding/lack of minerals leading to cannibalism among hens;
- Cocks have long nails that hurts hens during mating; and
- Irregular laying of eggs.

To improve the targeted community members' ability to manage their chicken and overcome the above mentioned problems, the project delivered an additional technical training on how to solve these problems and other related issues affecting poultry production in Jirime and Dakabaricha locations. The training was delivered to the first recipients of the chicken in Marsabit Central through interactive format.

##### 1) Course objective

The objective is to train targeted community members in Marsabit Central on better poultry management practices to increase hatchability rate and address other issues of concern.

##### 2) Course content

The course content is as shown in the table below:

**Table AG3.2.4 Course Contents of Technical Training**

Topic	Course Contents
Proper handling of eggs	<ul style="list-style-type: none"> <li>- Collect laid eggs daily from the chicken preferably immediately after laying</li> <li>- Wash hands thoroughly before handling eggs</li> <li>- Use tray to store eggs or other appropriate mediums</li> <li>- Positioning of eggs to avoid spoilage</li> <li>- Separation of eggs from different breeds</li> <li>- Marking of eggs for date laid (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>)</li> <li>- Separate cracked and broken eggs from the good ones</li> <li>- Checking fertility of the eggs</li> </ul>
Better hatching techniques	<ul style="list-style-type: none"> <li>- Signs of broodiness</li> <li>- Selection of a good brooder</li> <li>- Selection of eggs for brooding and maximum number of eggs for brooding</li> <li>- Duration for storage before brooding (Hatchability holds up to seven days and beyond this period it declines)</li> <li>- Provide good brooding area (dark and quiet)</li> <li>- Avoid disturbances during brooding</li> <li>- Feeding of brooding hens</li> </ul>
Disease control	<ul style="list-style-type: none"> <li>- Cleaning the chicken house regularly</li> <li>- Care for the chicken</li> <li>- Vaccinate the chicken when necessary</li> <li>- Treating chicken with wounds</li> <li>- Avoid congestion (build extra house using local materials)</li> <li>- Use clean water and clean containers daily before putting food or water in it.</li> <li>- Remove dead chicken from the house and dispose correctly</li> </ul>

Topic	Course Contents
Beak trimming	<ul style="list-style-type: none"> <li>- Equipment to trim the beak (hot/cold blade, scissors, secateurs)</li> <li>- Procedures for beak trimming</li> <li>- Pros and cons of beak trimming</li> <li>- Consult an expert when not sure on how to go about it</li> </ul>
Nail clipping	<ul style="list-style-type: none"> <li>- Equipment for clipping the long nail</li> <li>- Procedures to follow</li> </ul>
Proper feeding	<ul style="list-style-type: none"> <li>- Daily feeding at twice a day</li> <li>- Use whole grains as chickenfeed</li> <li>- Use of kitchen waste as chicken feed</li> <li>- Daily provision of water using local containers</li> </ul>
Record keeping	<ul style="list-style-type: none"> <li>- Importance of records</li> <li>- Daily egg production</li> <li>- Number of eggs hatching</li> <li>- Production of chicks</li> <li>- Mortality rate (chicks, cocks, hens)</li> <li>- Use charts, diaries, books, calendars as records</li> </ul>
Proper housing	<ul style="list-style-type: none"> <li>- Put windows for proper ventilation</li> <li>- Good floor to ease cleaning and prevent cold</li> <li>- Use of sawdust as litter for the chicken house</li> <li>- Reinforced structure (door and windows) to keep away predators</li> <li>- Size of the chicken house</li> <li>- Space requirements for the chicken in m2</li> </ul>
Care for chick	<ul style="list-style-type: none"> <li>- Care for the chicks</li> <li>- Confinement of chicks</li> <li>- Provision of water and feed</li> <li>- Vaccination</li> <li>- Separation of females and males at 4 weeks old</li> <li>- Duration of the chicks with the mother</li> </ul>

Source: JICA Project Team

A total of 37 participants (32 chicken owners, two bank staff and three JICA staff) were trained on the above issues. The course was very interactive with participants taking an active role during the training. The training was done at St. Stephens Hall for the two locations on 7<sup>th</sup> October, 2013.



Source: JICA Project Team

**Figure AG3.2.4 2<sup>nd</sup> Poultry Technical Training in Dakabaricha**  
(left: record keeping on eggs laid, middle: presentation, right: photo at the end of the program)

#### (5) Provision of Mentoring Activities and Others

During the regular monitoring and mentoring, the groups were reminded to:

##### Technical point of view

- Confine their newly hatched chicks to avoid predators;
- Provide chicks with adequate feed and water during confinement period;
- Clean chicken house, feeder and drinker on daily basis;

- Clip sharp claws of the cocks (using demonstration);
- Treat sick chicken (they were provided with information on type of drug to buy and where to buy them);
- Distribute old chicks to subsequent members to increase transfers;
- Keep proper record of eggs so as to know the exact age of the egg for brooding;
- Sell eggs that are more than one week old to avoid spoilage as such eggs cannot hatch chicks; and
- Distribute eggs to second recipients for them to sit on their local hens to increase multiplication.

#### Viewpoint of the concept of the sub project

- Contribute to Drought Fund through contributions and sale of eggs (Although feed is very important, they can save some money for drought fund).

In addition, all the groups received Drought Fund bags made by the project so that they can put the money and physically differentiate the money for Drought Fund from the rest.



Source: JICA Project Team

**Figure AG3.2.5 Monitoring and Mentoring Activities**  
(left: provision of advise on poultry management, right: explanation of drought fund bag)

~from March 2014 to August 2014~

#### (6) Implementation of Intergroup PFS

##### 1) Introduction

Due to low chicken multiplication and transfer in Jirime and Dakabaricha, it was necessary for the project to organize an exchange visit and learning experience for all chicken owners. This process allowed members to learn from other advanced members from the same area so as to enable everyone to receive chicken in the shortest time possible.

##### 2) Objectives

The objective was that all chicken owners can learn from advanced groups (Tumeamua and Tushikamane) in order to organize exchange visits for Chicken Merry-Go-Round in Dakabaricha and Jirime.

##### 3) Contents

The session was such that the advanced members explained the cause of their success to other members and later had an opportunity to ask questions and clear all the doubts on chicken rearing. Later after the sessions, some members visited the homes of the advanced members so that they

could see for themselves how chicken are being properly reared.. Topics that were presented by the selected members are shown as below:

**Table AG3.2.5 Topics Presented by Selected Members**

Members to Present	Group	Topics
Pastor	Tumeamua	<ul style="list-style-type: none"> <li>• Suitable and available feeding options for chicken in Marsabit</li> <li>• Provision of water for chicken</li> <li>• Cleaning and maintenance of chicken house</li> <li>• Procurement of chicken for members who need to buy Sasso</li> </ul>
Pamela	Tumeamua	<ul style="list-style-type: none"> <li>• Egg production</li> <li>• Transfer of eggs to subsequent members</li> <li>• Techniques of Brooding of eggs</li> <li>• Caring of 1 day old chicks</li> </ul>
Halima Mohamed	Tushikamane	<ul style="list-style-type: none"> <li>• Production of eggs combine with good feeding and watering</li> <li>• Brooding techniques and identification of hens ready to sit on eggs</li> <li>• Caring of 1 day old chicks up to maturity</li> <li>• Facilitation and transfer of chicks to subsequent members</li> </ul>
Guyo Wako Nuria Guyo Halima Halkano	Mata Arba Goro Korkore Allahayo	<ul style="list-style-type: none"> <li>• Poultry keeping technique required</li> <li>• Reasons of success</li> </ul>

Source: JICA Project Team

A total of 64 participants, eight from each of the eight groups, were trained on the above issues by two project staff members. The session was done at St. Stephens Hall for the two locations on 14<sup>th</sup> and 15<sup>th</sup> July, 2014.



Source: JICA Project Team

**Figure AG3.2.6 Intergroup PFS at St. Stephens**  
(left and middle: training session, right: field interaction at the end of the program)

#### 4) Observations

The session was an interactive one, with participants taking an active role in the training. Some members claimed difficulty in understanding poultry technical issues such as diseases and more care needed. On the other hand, the advanced members emphasized the importance of the general rules of this system, and also benefits of keeping Sasso chicken including selling eggs and chicken, if they can take enough care of chicken technically. After the training, most members promised to pragmatically apply what they had learned.

#### (7) Provision of Mentoring Activities and Others

During the regular monitoring and mentoring, the groups were reminded to:

- Confine their newly hatched chicks to avoid predators;
- Provide chicks with adequate feed and water during confinement period;
- Clean chicken house, feeder and drinker on daily basis;

- Clip sharp claws of the cocks (using demonstration);
- Treat sick chicken (they were provided with information on type of drug to buy and where to buy them);
- Distribute old chicks to subsequent members to increase transfers;
- Keep proper record of eggs so as to know the exact age of the egg for brooding;
- Sell eggs that are more than one week old to avoid spoilage as such eggs cannot hatch chicks; and
- Distribute eggs to second recipients for them to sit on their local hens to increase multiplication.

In order to improve on nutrition and reduction of infectious diseases, targeted members were advised and encouraged to buy mineral and vitamin supplements and medication from available agro vet shops in town.

This time, mentoring was given mostly on technical issues.



Source: JICA Project Team

**Figure AG3.2.7 Monitoring and Mentoring Activities  
(Clipping Claws in Tushikamane Group)**

~from September 2014 to December 2014~

#### (8) Provision of Mentoring Activities

During the regular monitoring and mentoring, the groups were reminded to follow the items they were trained on during the monitoring period from September 2013 to February 2014 from the technical viewpoint.

#### (9) End line Survey

To set the end-line figures for the above indicators, the end-line survey was implemented as below:

Both in Jirime and Dakabaricha, the same method was used. Three kinds of questionnaires were used; one for individual, another for group, and the other for the chief to obtain the end-line condition. Sample numbers for individuals, 10% of total target group members were randomly selected and surveyed in total 14 (intended 16 but two were not able available), stratified two from each group. For groups, five out of eight groups were surveyed by having focus group discussions. The survey was implemented by the JICA team from the end of October to end of December, 2014.

Detailed procedure of the survey is shown in the table below:

**Table AG3.2.6 Procedure of End-line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Jirime/Dakabaricha	Chief and Elders	1 (3 Participants)		Questionnaire
	<b>Groups</b> Mata Arba (9) Tumeamua (6) Tushikamane (8) Allahayo (5) Gor Korkore (7)	5 (35 Participants)	17/12/2012, 16/12/2014, 18/12/2014, 21/12/2014	Questionnaire with 5 focus groups
	<b>Individuals</b> Mata Arba (2) Tumeamua (2) Tushikamane (2) Allahayo (2) Kiwanja Ndege (2) Gor Korkore (1) Takuma (2) Moti Self Help (1)	14 (14 Participants)	29 Oct-20 Dec (The interview in Jirime and Dakabaricha was done on alternating days)	Questionnaire with individual members interview

Source: JICA Project Team

### G3.2.2 General Overall Situation of the Sub Project

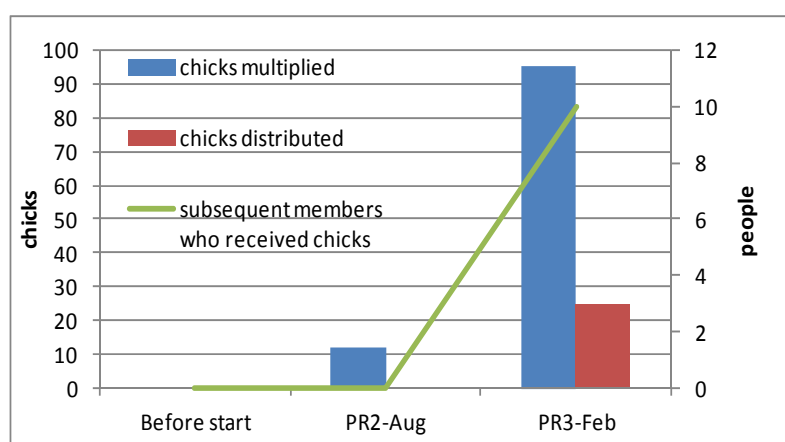
~from the beginning of the sub project Jan-Feb 2013 to August 2013~

As previously noted there are two groups one interested in Sasso rearing and the other in local chicken. However even those who rear Sasso have been forced by circumstances to keep some local hens. Some members of the groups have had a long relationship with chicken and are better versed with poultry farming. However all groups are enthusiastic, cooperative and willing to learn more about the sub-project and activities. Due to different socio-economic conditions, some differences have been observed in the ability of groups to quickly move to the next stage. For example one of the groups, Tumeamua, translated to mean “we have decided”, has moved ahead and purchased two poultry houses for their members from their own resources.

~from September 2013 to February 2014~

Following to the second training and continuous mentoring activities, the groups in general have adopted some important techniques including using local hens for brooding. Now, 95 chicks in total for both Sasso and indigenous chicken are alive; and out of this, 25 chicks have been delivered; and 10 subsequent members have received chicks with great improvement compared with these figures as shown in the right graph:

However, the current progress is slow when compared with the initial plan. The possible reasons for this are discussed later, and in sum, the facts and the reality learnt after implementation is not the same as the assumption used. Though the current progress is behind schedule, it is nevertheless firm and improving as the communities have continued to accept and get used to the new ideas and techniques.

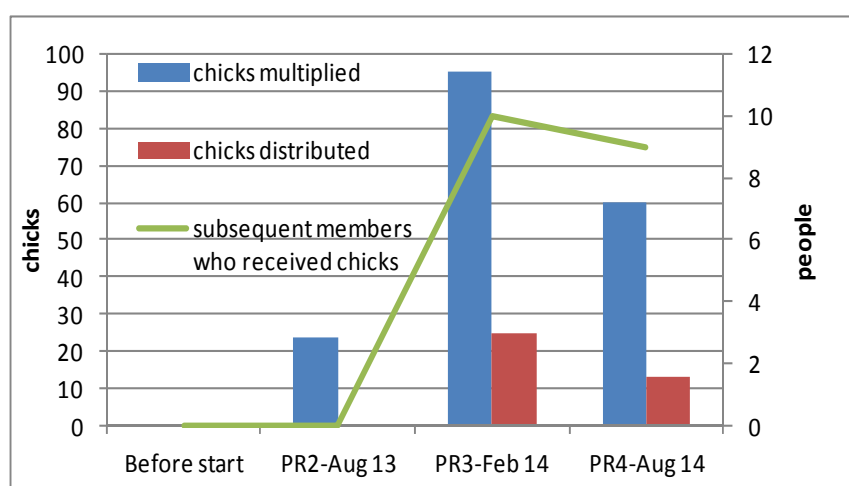


Source: JICA Project Team

**Figure AG3.2.8 Current Progress of Chicken Merry-go-round Sub-project**

~from March 2014 to August 2014~

From the previous PR3, there were about 95 chicks both for Sasso and indigenous, 25 chicks were transferred to 10 subsequent members. The rest of 70 chicks remained with owners but due to low levels of management like lack of constant hygiene maintenance, low provision of balanced feed rations, lack of major vaccinations, exposure to coldness from continuous blow of wind resulted in many chicks dying.



Source: JICA Project Team

**Figure AG3.2.9** Current Progress of Chicken Merry-go-round Sub-project

In the current monitoring period (from March to August), there are 60 chicks alive of which 17 chicks were carried over from previously hatched ones and 43 were newly hatched. Still the production is below par as from the initial and expected plan, possible reasons are discussed later. Use of local broody hens as a way of multiplication is still maintained by all the groups. Distribution of eggs to subsequent members as a faster way of transfer is still the mode accepted by all the groups. Out of 60, 13 were alive with nine subsequent members, reduced from 25 chicks.

~from September 2014 to December 2014~

The monitoring figures in PR4 showed that there were 60 chicks (17 old + 43 new). Out of them, 56 survived to this reporting period (PR5); 16 of them were sold; in addition to them 19 chicks were produced in the period (Sept to Dec); and seven died. None have been transferred to subsequent members. All the surviving chicks are still with the owners except the sold ones. There are technical challenges on low levels of management like lack of constant hygiene maintenance, low provision of balanced feed ratio, and lack of major vaccinations resulting in wiping out of many chicks.

Still the production is below par as from the initial and expected plan, possible reasons are discussed later. Use of local broody hens as a way of multiplication is still maintained by all the groups. Distribution of eggs to subsequent members as a faster way of transfer slowed due to low rate of egg production in this period.

#### Chicken Initially provided

The following table shows the current number of the chicken initially provided.

**Table AG3.2.7** Current Number of Chicken Initially Provided

	Group Name	Condition as of the end of August 2013	Condition as of the end of February 2014	Condition as of the end of August 2014	Current Condition as of the end of December 2014	Remarks (change from PR4 to PR5)
Jirime						
1	TUMEAMUA SELF HELP GROUP	4M 7F	4M 8F	4M 7F	4M 7F	No change
2	MOTI SELF HELP GROUP	4M 4F	3M 5F	1M 3F	1M 3F	No change
Dakabaricha						
3	ALLAHAYO SELF HELP GROUP	5M 8F	4M 7F	3M 5F	3M 5F	No change

	Group Name	Condition as of the end of August 2013	Condition as of the end of February 2014	Condition as of the end of August 2014	Current Condition as of the end of December 2014	Remarks (change from PR4 to PR5)
4	GORO KORKORE WOMEN GROUP	5M 7F	3M 4F	3M 4F	3M 4F	No change
5	KIWANJA NDEGE	7M 3F (3M 7F was type error in PR2)	4M 3F	4M 2F	3M 2F	1 male cock eaten by wild dogs in early September.
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	4M 8F	3M 5F	2M 4F	2M 4F	No change
7	TUSHIKAMA NE SELF HELP GROUP	8M 7F	5M 6F	1M 2F	1M 2F	No change
8	TAKUMA WOMEN GROUP	5M 8F	4M 8F	1M 6F	1M 6F	No change
	Total	42M 52F	30M 46F	19M 33F	18M 33F	-

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

In general, though some of the chicken has died through sickness and/or predator attack, the groups have kept their chicken to be able to continue the system.

~from September 2013 to February 2014~

Some differences among the groups have been observed on the initial provided chicken. Some groups have lost chicken due to diseases, bee attacks and theft. There are also some cases where somewhere sold. Basically, selling the initial provided chicken is prohibited but extra cocks are allowed to be sold as long as the money is used for the group including putting for Drought Fund and paying for feed expenses. Tumeamua bought one hen for the group to replace one that as reported in August report.

~from March 2014 to August 2014~

Chickens lost in the period were through infectious diseases, stung by bees, being bruised by long toes from the cock. Three cocks were sold. In total, 24 chickens (11 males and 13 females) reduced from the previous report.

~from September 2014 to December 2014~

In the entire monitoring period from August to December 2014, only one cock was eaten by wild dogs in early September in Kiwanja-Ndege group.



Source: JICA Project Team

**Figure AG3.2.10 Dead Cock in Takuma**

### G3.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are summarised.

(1) Number of Chicken Multiplied based on the Chicken Introduced in the First Member  
The following is the monitoring results for this indicator.



**Table AG3.2.8 Number of Chicken Multiplied**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	0	28 chicks	33 chicks (old: 3 + new: 30)	33chicks (carry over: 16, died: 1, new: 17 (Sept to Dec), sold: 16)
2	MOTI SELF HELP GROUP	0	3 chicks	3 chicks (old: 0 + new: 3)	3 chicks (carry over: 3)
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	12 chicks alive	12 chicks	0 chicks	0 chicks
4	GORO KORKORE WOMEN GROUP	3 chicks alive	5 chicks	3 chicks (old: 2 + new: 1)	5 chicks (carry over: 3 + new: 2)
5	KIWANJA NDEGE	0	4 chicks	1 chick (old: 1 + new: 0)	1chick (carry over: 1)
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	5 chick alive	9 chicks	10 chicks (old: 4 + new: 6)	10 chicks (carry over: 10)
7	TUSHIKAMANE SELF HELP GROUP	3 chicks alive	30 chicks	9 chicks (old: 6 + new: 3)	3 chicks (carry over: 3, died: 6)
8	TAKUMA WOMEN GROUP	1 chick alive	4 chicks	1 chicks (old: 1 + new: 0)	1chick (carry over: 1)
	Total	24 chicks	95 chicks	60 chicks	56 chicks+16 sold

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

A total of 24 Sasso chicks were alive as at the end of August and early September. There was also a case where a farmer had chicks that were crossed between a local chicken and a Sasso cock, which is not included in the above.

~from September 2013 to February 2014~

As of this time of reporting, in total 92 Sasso chicks and three local chicks have been multiplied and are alive, with great improvement compared with the situation at the time of PR2. TUMEAMUA and TUSHIKAMANE have showed great improvement in chick hatching, followed by MATA ARBA. Others are still struggling to have many chicks.

Ideally, it is said that one Sasso hen even under extensive system (a kind of free range but in an ideal condition) lays 200 eggs/year (365 days) according to the Sasso breeder. In our initial plan, a matured Sasso hen is conservatively assumed to produce 10 eggs/month continuously. The current performance (calculated as around two eggs/month on average across all the groups) is lower than this assumption, and this could be because of 1) the environment in the area, 2) poor feeding, 3) confinement stress (some confine chicken in the cage and not let them out), and so on. There is also a hatchability issue. Though eggs are laid, the number of chicks becomes smaller if hatchability is low.

There is still room to improve performance on these issues. Despite this, the traits of this improved variety is still beneficial to them (big eggs, higher number of eggs compared with indigenous one, and bigger sized cocks). The following table shows the current performance.



Source: JICA Project Team

**Figure AG3.2.11 Multiplied Chicks**  
 (left: chicks just after hatching, right: members holding chicks)

~from March 2014 to August 2014~

From the 95 chicks alive by February, 17 were able to withstand the pressure to August (unfortunately 78 died). As of August 2014, 60 chicks are alive (with the 17 chicks carry-over from the February period included) meaning 43 new live chicks were hatched during this monitoring period. Total numbers of chicks multiplied/hatched in the period are as in the table below:-

**Table AG3.2.9 Number of chicks hatched in the period**

	March-April	May	June-July	August	Total
Number of chicks hatched	30	17	27	48	122

Source: JICA Project Team

The total number of chicks hatched in the period was 122 with 43 surviving as live ones, thus 79 chicks newly hatched in this period died. Other than this, 78 chicks hatched during the last monitoring period also died during this period, totalling 157 chicks died during this period. The possible cause hampering chick multiplication maybe attributed to lack and unavailability of major vaccines and medication in the area e.g. Newcastle and Infectious Bronchitis vaccines, Infectious Bursal vaccines, lack of balanced feed rations, extreme colds aggravated by blowing wind (lack of heat source to chicks).



Source: JICA Project Team

**Figure AG3.2.12 Multiplied Chicks**  
 (left: Tumeamua, right: Tushikamane)

~from September 2014 to December 2014~

By December 2014, 56 chicks were alive and with the members; carry-over 37 and 19 new ones (from Sept to Dec). From the 23 remainder of the August chicks, 16 (not included in the available chicks)

were sold by one member while 7 died. Number of chicks produced in the monitoring period was low in respect to the number of eggs produced, this has been attributed to the old age of the hens as well as under-nutrition and disease outbreaks. Total number of chicks hatched in the period are shown in the table below:-

**Table AG3.2.10 Number of Chicks Hatched in the Period**

	September-December	Total
Number of chicks hatched	31	31

Source: JICA Project Team

The total number of chicks hatched in the period was 31 with 19 surviving thus 12 died. Comprehensive comparison is shown as below.

#### Comparison with the initial plan

Initial plan assumed that a mature Sasso hen is assumed to produce 10 eggs/month continuously. The current performance is still lower than the assumption. The following table shows the current performance.

**Table AG3.2.11 Indicative Estimation for Chicken Performance**

	Sep to Oct 2013	Nov to Dec 2013	Jan to mid Feb 2014	Total Number during the last Period	
Total eggs laid	226	171	147	544	
Number of total hens	46 (just assuming this across the period)			-	
Average number of eggs laid per month per hen	2.2 eggs/month/hen			-	
Number of chick increased from Aug 13 to Feb 14	-			95 – 24 = 71	
Rate for having alive chick	-			13%	
	Mar to Apr 2014	May 2014	June July 2014	August 2014	Total Number during this Period
Total eggs laid	108	235	186	99	628
Number of total hens	40 (=46+33)/2, just assuming this across the period)				-
Average number of eggs laid per month per hen	2.6 eggs/month/hen				-
Number of chick increased from Feb 14 to Aug 14	-				43
Rate for having alive chick	-				7%
	September to December 2014				Total Number during this Period
Total eggs laid	97				97
Number of total hens	33				-
Average number of eggs laid per month per hen	0.7 eggs/month/hen				-
Number of chick increased from Aug 14 to Dec 14	-				19
Rate for having alive chick	-				20%

Source: JICA Project Team, for this estimation, combined data for both Sasso and indigenous chicken is used.

The numbers of eggs produced were 97. In respect to the number of hens available which were 33, the performance is estimated 0.7 eggs/months/hen and below the expectation, even lower than the past two monitoring periods.

Low egg and chick production could be attributed to insufficient feed provision and high chick mortalities. Mortalities may have been brought about by poor hygiene, lack of vaccination and medication, exposure to coldness. Ageing and *moulting* (shed old feathers, skin for new growth) could be other factors since the Sasso breed was brought early 2013 while at *point of lay* (nearly starting to lay).

On the other hand, rate for having alive chick (nearly equal to chick mortality rate) has been improved from 7% to 20%. It can be said that skills that the first recipients handle chick might be improved; or maybe because environmental conditions were just favourable for chicks.

(2) Number of Chicken Distributed to Subsequent Members (chicken/member)

The following is the monitoring results for this indicator.

**Table AG3.2.12 Number of Chicken Distributed**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	0	10	2	2
2	MOTI SELF HELP GROUP	0	0	0	0
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	0	0	0	0
4	GORO KORKORE WOMEN GROUP	0	2	2	2
5	KIWANJA NDEGE	0	4	1	1
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	0	4	4	4
7	TUSHIKAMANE SELF HELP GROUP	0	2	3	3
8	TAKUMA WOMEN GROUP	0	3	1	1
	<b>Total</b>	<b>0</b>	<b>25</b>	<b>13</b>	<b>13</b>

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Out of all five groups that have chicks, no chicks are distributed as all chicks are still very young and could not be separated from the mother hen.

~from September 2013 to February 2014~

Out of 95 chicks available, 25 chicks have been transferred to the subsequent members. TUMEAMUA has a largest number, followed by KIWANJA NDEGE and MATA ARBA. The other 70 chicks which is not transferred yet are still young, being kept by the first recipients, and expected to be transferred in due course.

~from March 2014 to August 2014~

Out of 60 chicks available, 13 chicks have been transferred to the subsequent members. These 13 chicks were all hatched during the last monitoring period. New 43 hatched chicks have not yet been transferred. This means out of 25 chicks distributed as of February, 12 chicks died.

~from September 2014 to December 2014~

Out of 56 chicks currently available, 19 are new ones and still young that can't be distributed. Out of 37 carry-over chicks, 13 were transferred in previous periods and still alive. The rest of 24 which are carried over from the previous period are the older ones. Members with the 24 chicks' claim they are still young to be distributed to other members, they argued that the slow growth by the chicks was due to lack of feeds and medication. The observation assumes that the initial members may not possibly want to give them out to subsequent members just because they spent a lot for feeding and caring chickens. Information on members who has chicken is shown in Attachment G3-2.

(3) Number of Subsequent Group Members who Received Increased Chicken

The following is the monitoring results for this indicator.

**Table AG3.2.13 Number of Subsequent Group Members Who Received Increased Chicken**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	0	3 (1 person: 6, 1 person: 2, 1 person: 2,)	2 (1 person: 1, 1 person: 1)	2 (1 person: 1, 1 person: 1)
2	MOTI SELF HELP GROUP	0	0	0	0
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	0	0	0	0
4	GORO KORKORE WOMEN GROUP	0	1 (2)	1 (2)	1(2)
5	KIWANJA NDEGE	0	1 (4)	1 (1)	1(1)
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	0	2 (1 person: 2, 1 person: 2)	2 (1 person: 2, 1 person: 2)	2 (1 person: 2, 1 person: 2)
7	TUSHIKAMANE SELF HELP GROUP	0	1 (2)	2 (1 person:1, 1 person: 2)	2 (1 person:1, 1 person: 2)
8	TAKUMA WOMEN GROUP	0	2 (1 person: 1, 1 person: 2)	1 (1)	1(1)
	<b>Total</b>	<b>0</b>	<b>10</b>	<b>9</b>	<b>9</b>

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

As previously explained the chicks are too young to be separated from the mother. Further the sexes cannot be determined when chick is too young for ease of distribution.

~from September 2013 to February 2014~

Number of subsequent recipients (10) seems not so high but to have improved from zero in the previous report. One group (TUMEAMUA) devised a way of distributing eggs to subsequent members. The system has been adopted by other groups as it accelerates the distribution rate (subsequent members do not have to wait for two months or so, and the critically important process of hatching may not necessarily depend on the first recipients). Now, two groups (TUMEAMUA and KIWANJA NDEGE) adopt eggs distribution system for faster distribution. The project team is encouraging other groups to do so.

The initial idea of distributing is that at least one set (1M and 2F) is given to one subsequent member when chick grows at two-month age. The above distributed chicks are not exactly following one set. Because timing to distinguish cock and hens by appearance is at the age of around three months, sex of young chick cannot be differentiated. Then, group dynamics come in, and the groups have discussed this issue and decided they will exchange chicks later to create one set per one member when chick grows to show the difference though the members generally prefer hen to cock.



Source: JICA Project Team

**Figure AG3.2.13 Chicken to Subsequent Members**  
(from left: Goro Korone, Tushikamane, Allahayo and Mata Arba)

~from March 2014 to August 2014~

Unfortunately total number of subsequent members also reduced from 10 to nine. This could be attributed to high chick mortalities due to challenges facing group members especially coldness and lack of sufficient balanced feeds. Good news is that one hen distributed to one second recipient member in Mata Arba has grown and started laying eggs, meaning that second generation is about to be produced.

In Attachment 11, information of first recipients and second recipients are shown. Opinions of second recipients were asked because the speed of transfer was slow. The result is shown in the table below:

**Table AG3.2.14 Opinion of Group's Subsequent Members on the Current Situation of Slow Multiplication and Transfers**

	Group Name	Subsequent members opinion
1	TUMEAMUA SELF HELP GROUP	Most members feel the process distributing chicks takes long time thus they accepted the adoption of egg distribution. Since one of the members was given a poultry house, some members feel they also need to be given a poultry house so as to receive eggs or chicks.
2	MOTI SELF HELP GROUP	Members feel egg distribution is the best option for faster multiplication. From experience from 1st recipients, they feel the most challenging issue is feed provision to the chickens since majority of them are struggling in provision of their own feeds.
3	ALLAHAYO SELF HELP GROUP	Most members haven't gotten chicks but do feel egg distribution is the best option. However distribution of eggs is the best for faster multiplication it works if one has a broody local hen and ready to sit on eggs and if not, chances of spoilage are high.
4	GORO KORKORE WOMEN GROUP	Members feel the process of multiplication is taking too long thus distribution of eggs is good. Some members had fear of getting eggs that have overstayed which could not later hatch.
5	KIWANJA NDEGE	Members say the process is slow in multiplication of chicks although they had resolved that eggs be dispatched if available.
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Most members feel the process of multiplication is too slow. They suggested if the seed chicken could have been owned altogether by members, they could have benefited.
7	TUSHIKAMANE SELF HELP GROUP	Recipients feel the system of transfer is too slow. Members feel giving of eggs is the best to reduce biasness since some feel 1st recipients may be withholding female chicks for their own multiplication.
8	TAKUMA WOMEN GROUP	Recipients feel the process of multiplication is too slow, also the breed of Sasso demands high feed requirements so they suggested if they can be given local chickens that require low feeds.

Source: JICA Project Team

All the subsequent members feel the transfer speed is too slow, though they agree and accept egg transfer which they believe is faster. It indicates that the system or rule that takes time would not be favourable. For this sub project, it can be said that adoption of technique by the initial members to handle improved breed takes more time than expected.

~from September 2014 to December 2014~

In the entire period, no member received increased chicks other than the August standing.

#### Comparison with the initial plan

By the initial plan, all 160 members would have received at least one set of chicken by June 2014. The following table shows comparison between the initial plan and the current progress.

**Table AG3.2.15 Comparison of Progress between Initial Plan and Current Progress**

Group Name	Initial plan	Current Progress
Initial members who get/have initial set of chicken	16	23*
Subsequent members who receive/have multiplied chicks	144 (Indigenous chicken by May 2014, Sasso by June 2014)	9
Total	160	32

Source: JICA Project Team

\*: As per the request from the groups, additional one more set was decided to be provided to one sub group, thus total four sets per group were given. However, now some first recipients lost all initially provided chicken, and others keep chicken together on other initial members' behalf.

The current progress is static at 20% of the initial plan in terms of number of members who have chicken. There are key issues hindering the success of chick production and distribution; low number of laid eggs due to under-nutrition, old age of the hens, high chick mortality rates (though improved a bit). Sasso is a heavy breed and needs much feeds to lay many eggs. For those who have not experienced keeping improved breed, it may not be easy to give enough feed to produce expected number of eggs. Although chicks are hatched, techniques to rear them to maturity seem not easy by majority of the people. The latter issue is considered more important because this high mortality rate directly affect transfer of chicks to subsequent members or even survival rate of chicks which have already been transferred to subsequent members (this happened). Out of 23 initial members, five still keep complete one set (one cock and two hens), the others keep part of the initial sets.

(4) Records of Any Transaction on the Above (how many eggs / chick/ chicken sold, when, at what price, how much money is earned, how much money is contributed and deposited to the group account)

1) Individual Benefit

The following is the monitoring results for this indicator.

**Table AG3.2.16 Records of Any Transaction on the Above (Individual)**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	None	Pastor consumed six eggs during December period.	Paster consumed 10 eggs.	Pastor sold 16 chickens@Kshs 540 = Ksh 8,640
2	MOTI SELF HELP GROUP	None	None	None	None
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	None	None	None	None
4	GORO KORKORE WOMEN GROUP	None	None	None	None
5	KIWANJA NDEGE	None	None	None	None
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	None	None	None	None
7	TUSHIKAMANE SELF HELP GROUP	One member consumed 5 eggs.	Two cocks were eaten	-One sold a cock at Kshs 1000/-.Used the cash to buy personal goat.	One kid born from female goat bought
8	TAKUMA WOMEN GROUP	None	None	None	None

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

One member has consumed five eggs from all the eggs laid. Although during the training and mentoring, it was emphasized that members may consume some eggs sells some and keep some for multiplying, the number consumed is low. The low rate of consumption may be attributed to the belief that the chicken belong to the group. Also in some groups feeding has been a collective responsibility and therefore this may work as a hindrance to individual consumption of the benefits.

~from September 2013 to February 2014~

Although in majority of group individuals haven't felt benefits directly, they are yet to benefit technically indirectly through crossbreeds of chicks after Sasso cocks mating local hens of which their products (eggs and chicks in later stages) are to be sold later.

TUSHIKAMANE group members ate two cocks. This is against our rule but the members that ate promised to contribute the same money of the value of eaten cocks (KShs.2,000 to 3,000) to Drought Fund.

~from March 2014 to August 2014~

Majority of group individuals haven't got benefits directly due to slow transfer. One member of TUSHIKAMANE sold a cock at 1,000/-, added personal money and used the cash to buy a local female goat, though it has not yet been allowed at this point where not all of the members receive one set of chicken. This shows that since a group member had less sense of responsibility on the common property, i.e. chickens, this person looked for her personal benefits instead of the group benefit.



Source: JICA Project Team

**Figure AG3.2.14 Individual Female Goat Bought from Sale of Cock**

~from September 2014 to December 2014~

Majority of group individuals haven't got benefits directly due to slow transfer. One member of TUMEAMUA group sold 16 chickens (previously little chicks hatched in August) at an average of Ksh. 540 each. This shows that since a group member had less sense of responsibility on the common property, i.e. chicken, this person looked or his personal benefits instead of the group benefit, which was unfortunately observed even in the advanced group, TUMEAMUA.

As an indirect individual benefit, the goat bought using money gained by selling a cock in TUSHIKAMANE during the last monitoring period delivered one kid. This is enjoyed by this member individually. Primarily this is against the rule of the sub project, however it can be said that this case proves SASSO can be beneficial enough to buy goats.





Source: JICA Project Team

**Figure AG3.2.15 Individual Benefit (left: Size of chickens sold by member of TUMEAMUA group, right: born kid from the goat bought in Tushikamane)**

2) Group Benefit

The following is the monitoring results for this indicator.

**Table AG3.2.17 Records of Any Transaction on the Above (Group)**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	5 eggs were sold at Kshs.20 each for Kshs.100 and also 3 cocks were sold @ Kshs.1,200 for Kshs.3,600	75 eggs sold: 20@Kshs.20, 55@Kshs.15 = Kshs.1,225. Then members used all the money to buy feeds for the chicken. (the money spent to buy 1 hen came from individual money)	76 eggs sold@15=1140/-, money used to buy chicken feeds.	8 eggs sold@15=120/-
2	MOTI SELF HELP GROUP	10 eggs are sold @Kshs.10 = Kshs.100 15 eggs were sold @Kshs.12 = Kshs.180	15 eggs @Kshs.10 (=Kshs.150). The money was used to buy feeds. 1 cock sold @Kshs.1,500 and used money to buy a hen and the balance for feeding	40 eggs sold@15=600/-, money used to buy chicken feeds.	8 eggs sold@15=120/-
Dakabaricha					
3	ALLAHA YO SELF HELP GROUP	20 eggs were sold @Kshs.15 = Kshs.300 1 cock were sold @Kshs.1,000, out of this Kshs.500 for the group account (Kshs.500 out of the money obtained from 1 cock sold @Kshs.1,000 for sub group leader (feeding))	38 eggs sold @ Kshs.15. The money was used to buy feeds for the chicken. 1 cock sold @Kshs.1,000 to drought fund.	48 eggs sold@15=720/-, money used for chicken feeds.	7 eggs sold@15=105/-

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
4	GORO KORKOR E WOMEN GROUP	2 cocks were sold @Kshs.1,500 = Kshs.3,000 tentatively kept by one sub group leader	10 eggs @Kshs.15 (Kshs.150) sold and money used to buy feeds	53 eggs sold@15=795 used for chicken feeds.	0
5	KIWANJA NDEGE	None	2 cock were sold @Kshs.2,000. Money was used to buy food and drugs. (the money spent to buy 1 hen came from individual money)	28 eggs sold@15=420/- Money used for chicken feeds.	5 eggs sold@15=75/-
6	MATA ARBA BARETU M UNITED SELF HELP GROUP	6 eggs sold @Kshs.20 = Kshs.120 2 cocks wold @Kshs.900 = Kshs.1,800	15 eggs sold @Kshs.12 (Kshs.180). The money was used to buy feeds for the chicken	18 eggs sold@15=270/- Money used for chicken feeds.	0
7	TUSHIKA MANE SELF HELP GROUP	None	5 eggs sold @Kshs.15 (Kshs.75). The money was used to buy feeds for the chicken and some to . 1 cock sold @Kshs.1,000, Kshs.500 is used to buy feed, and Kshs.500 from the sale of cock to Drought Fund	28 eggs sold@15=420/- Money used to buy chicken feeds. -Other member of TUSHIKAMANE sold 1 cock at Kshs.1000/-,used half the money to buy feeds as other 500/- to Drought Fund.	3 eggs sold@15=45/-
8	TAKUMA WOMEN GROUP	1 cocks wold @Kshs.500 = Kshs.500 32 eggs were sold. (4@Kshs.35, 5@Kshs.20 and 23@Kshs.15 totalling Kshs.585. Out of this Kshs.585, Kshs.540 goes to the group account (Kshs.45 were used to buy chicken feed)	19 eggs sold; 10@Kshs.15, 3@Kshs.20,6@Kshs.15 = 300 Kshs used for buying feed. 1 cock sold@Kshs.1000 tentatively kept by the member (promised to put it to Drought Fund).	36 eggs sold@15=540/- Money used to buy chicken feeds. -One member of TAKUMA sold a cock at 1000/- and took the money to group Drought Fund kitty. -The other member of TAKUMA sold a cock at 1000/- and took the money to group Drought Fund kitty.	6 eggs sold@15=90/-

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

During the distribution, some chicken could not be positively identified as male or female. It was therefore decided that these have to be replaced as they grew bigger. However given that the recipients had invested in feeding and caring for the first batch, it was agreed that the cocks that were replaced with hens, must be sold and the money put on the groups drought fund. Some groups have done this and therefore benefited from that. Also, some groups have sold eggs and got money for the group.

~from September 2013 to February 2014~

Most groups sold eggs and used the money to buy feed for the chicken because the first recipients feel feeding is somehow a burden for them. Currently they also have spoiled eggs as well. The second technical training and the mentoring activities recommends that eggs with the age of seven days and younger after they are laid shall be used for hatching (including the cases of transferring to the subsequent members), and eggs beyond that age are encouraged to be sold because of low hatchability, so that spoiled eggs can be reduced. Likewise, the members are expected to effectively and efficiently utilize eggs e.g. to increase hatching and chicks, and to sell eggs more to reduce feeding cost without having any spoiled eggs.

~from March 2014 to August 2014~

More eggs were sold in the period to August than in February; this could be attributed to most members being aware on spoilage of eggs thus realized the need to reduce the loss, indicating that they acquired skills to reduce spoiled eggs. During the period, there has been certain drought whereby members also felt to cushion scarcity of feeds by selling eggs.

~from September 2014 to December 2014~

Eggs sold were few in respect to the low number of eggs produced unlike in previous monitoring periods. Money from sold eggs were used to buy feeds as reported by the members.

(5) Amount of the Money as the Group Saving in the Account as Drought Fund

1) Amount of the Money as the Group Saving in the Account as Drought Fund

The following is the monitoring results for this indicator.

**Table AG3.2.18 Amount of the Money as Drought Fund**

	Group name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	Kshs.3,700	Kshs.3,700 (they set the upper limit as Kshs.6,000)	Kshs.3,700(still maintained)	Kshs.3,700 (still maintained)
2	MOTI SELF HELP GROUP	Kshs.280	Kshs.3,000 (they decided to contribute for their drought fund)	Kshs.3,000(still maintained)	Kshs.3,000 (still maintained)
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	Kshs.800	Kshs.1,500 (1 cock was sold @ Kshs.1,000 and money put as drought fund, but they used Kshs.300 for feeding. We continue to encourage them not to use the money from the fund.)	Kshs.1,500(still maintained)	Kshs.1,500(still maintained)
4	GORO KORKORE WOMEN GROUP	Kshs.16,500	Kshs.8,000 (They loan out 11,000 to the members. And, again contribute some money upto 8,000. They started being aware of not doing so. They will start contributing the money to it.) <i>Kshs.3,000 obtaiend from 2 cocks sales in August actually went to VICOBA fund, not Drought Fund. They agreed to return this from VICOBA fund to Drought Fund.</i>	Kshs.11,000 (Kshs. 3000 from sale of cocks was returned to drought fund from VICOBA funds).	Kshs.11,000(no change)
5	KIWANJA NDEGE	Kshs.11,000	Kshs.11,000	Kshs.11,000(no change)	Kshs.11,000(no change)

	Group name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Kshs.11,920	Kshs.1,180 (They used the money (Kshs.10,740) to buy office equipment. They promised to contribute the same amount to replace it)	Kshs.4300(from monthly contribution of 50/- each)	Kshs.4300(no change)
7	TUSHIKAMA NE SELF HELP GROUP	Ksh.0	Kshs.620 (Kshs.500 from sale of cock and 120 form contribution)  <i>Later 2,000-3,000 from eaten cocks must come to the fund.</i>	-Kshs.1120/-(increase by 500/- from the sale of cock).  <i>This has not yet been done -&gt; 2,000-3,000 from eaten cocks must come to the fund.</i>	-Kshs.1120/-(no change)  <i>This has not yet been done -&gt; 2,000-3,000 from eaten cocks must come to the fund.</i>
8	TAKUMA WOMEN GROUP	Kshs.1,040	Kshs.1,800  <i>Later 1,000 from cock sold must come to the fund.</i>	-Kshs.3800 (increase from sale of 2 cocks by 2 members).  <i>This has not yet been done -&gt; 1,000 from cock sold must come to the fund.</i>	-Kshs.3800 (no change).  <i>This has not yet been done -&gt; 1,000 from cock sold must come to the fund.</i>

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Out of eight groups, seven groups started to save some money in Drought Fund. Mostly the money comes from the sale of poultry products, and two groups use the money from the members' contributions and the previous account also, meaning that the concept of the sub-project might have been gradually understood by the groups. However, some of the groups may not have physically separated bags to make sure that this fund is put aside apart from the other money. The money itself does not have colour to be differentiated; therefore it is important to continue emphasizing on letting them keep the fund physically separately.

~from September 2013 to February 2014~

Mostly the money came from the sale of poultry products and contribution of the group members. Though there is in general a stable and increasing trend, two groups used the money for reasons that are not related to drought preparation. Through our monitoring and mentoring activities, they admitted that this was not the rule they agreed, and therefore they promised to save the money up to some amount. It is also important to continue emphasizing on keeping the fund in the bags provided by us physically separately from other group funds.

~from March 2014 to August 2014~

In most groups, the funds are static or slow in increase though awareness was made for them to contribute for future use in case of calamity (e.g. drought). Products like eggs sold are supposed to be channelled to Drought Fund (DF) though due to long spell of drought; members use the cash for chicken feeds.

~from September 2014 to December 2014~

In all the groups, the funds are static though awareness was made for them to contribute for future use in case of calamity (e.g. drought). Products like eggs sold are supposed to be channelled to Drought Fund (DF) however, due to long spell of drought, members use the cash for chicken feeds.

## 2) Any Record with Reason When Drought Fund Is Used

No groups have used Drought Fund so far and this is shown in the table below.

**Table AG3.2.19 Any Record with Reason When Drought Fund Is Used**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	None	None	None	None
2	MOTI SELF HELP GROUP	None	None	None	None
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	None	None	None	None
4	GORO KORKORE WOMEN GROUP	None	None	None	None
5	KIWANJA NDEGE	None	None	None	None
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	None	None	None	None
7	TUSHIKAMANE SELF HELP GROUP	None	None	None	None
8	TAKUMA WOMEN GROUP	None	None	None	None

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

No groups used Drought Fund so far

~from September 2013 to February 2014~

As seen, actually some changes have been observed for decreasing the fund, but those are not because of drought reasons, but other reasons. Therefore, such cases are not captured here but the above.

~from March 2014 to August 2014~

No group used money for drought fund.

~from September 2014 to December 2014~

No groups have used Drought Fund so far and this is shown in the table below.

## (6) Other Fund for the Groups

The following is the monitoring results for this indicator. This is other group fund apart from Drought Fund.

Table AG3.2.20 Other Fund for the Group

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Jirime					
1	TUMEAMUA SELF HELP GROUP	Kshs.508,000 (VICOBA is implemented)	Kshs.83,890 (VICOBA is implemented).	Kshs.88,850 (VICOBA is active)	Kshs.92,500 (VICOBA is active)
2	MOTI SELF HELP GROUP	Kshs.40,400 (VICOBA is implemented)	Kshs.49,050 (VICOBA is implemented)	Kshs. 52,500 (VICOBA is active)	Kshs. 54,000(VICOBA is active).
Dakabaricha					
3	ALLAHAYO SELF HELP GROUP	Kshs.45,200 (VICOBA is not implemented)	Kshs.70,000 (Bank: Kshs.20,000 and Loan: 50,000 = VICOBA is implemented)	Kshs.75,300 (VICOBA is active)	Kshs.75,300 (VICOBA is active)
4	GORO KORKORE WOMEN GROUP	Kshs.7,000 (VICOBA has not yet implemented though they want to start)	Kshs.20,000 (Bank: Kshs.10000, cash in the box: Kshs.7000, Loan: Kshs.3000 = VICOBA is implemented)	Kshs.25,600 (VICOBA is active)	Kshs.28,300 (VICOBA is active)
5	KIWANJA NDEGE	Ksh. 0	Kshs.6000: Kshs.4,000 (Merry-Go-Round), Loan: Kshs.2,000 = VICOBA is implemented	Kshs.7500 (VICOBA is active)	Kshs.8100(VICOBA is active)
6	MATA ARBA BARETUM UNITED SELF HELP GROUP	Kshs.120,000 (VICOBA not fully implemented)	Kshs.121,850 (same)	Kshs 123,780 (VICOBA is active)	Kshs.124,600(VICOBA is active).
7	TUSHIKAMA NE SELF HELP GROUP	Around Kshs.15,000 (VICOBA is implemented)	Kshs.40,000 (Bank: Kshs.25,000 and Loan: Kshs.15,000 = VICOBA).	Kshs.43,650 (VICOBA is implemented)	Kshs.45,900 (VICOBA is implemented)
8	TAKUMA WOMEN GROUP	Ksh.0	Kshs.31,000 (VICOBA is implemented)	Kshs.33,480 (VICOBA is implemented)	Kshs.34,670(VICOBA is active)

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Compared with the baseline information, some groups increased the amount, and the amount decreased in other groups due to various group dynamics. In terms of VICOBA, the number of the groups which implement VICOBA has not yet changed and remains at three. One group has a will to start VICOBA, therefore some assistance could be made to this group, however, it would not be a good idea to force VICOBA because this is a bit complicated considering the capacity of some of the groups based on the observation of our mentoring activities. Lower priority may put on this part than giving the assistance for the chicken merry go round system.

~from September 2013 to February 2014~

Most of the groups have increased their accounts through the monthly contributions and loaning. All groups loan money out to the members at interest rate of 10%. TUMEAMUA initially had Kshs.508,000; but in October they started buying goats and opening small canteens for the group; and now they currently have Kshs.83,890. KIWANJA NDEGE and TAKUMA that had zero balance as of August 2013, but now they have at least some money in their group accounts.

~from March 2014 to August 2014~

In most groups, VICOBA is active as members meet either weekly, or monthly for their respective contributions.

~from September 2014 to December 2014~

In all groups, VICOBA is active as members meet either weekly or monthly for their respective contributions; and the amount of money has generally increased.

### G3.2.4 Monitoring of Effect Indicators and Others

Here, information for effect and other indicators at the end of the sub project period is written.

#### (1) Group members' livelihood

According to the end-line survey, current members' livelihood is mainly agriculture (mainly maize, beans and miraa), livestock, small business and casual labour. Compared to the baseline information, basically their livelihood is the same. There may be small tendency to increase members who do small businesses (mostly small shops = kiosks).

#### (2) Current measures in terms of livelihood to cope with drought

##### 1) By member

Through the end-line survey, the interviewed members replied mostly the countermeasures were sale of agricultural produce (maize and miraa), sale of livestock and its product (goat milk), wages from casual labour, sale of livestock and agricultural produce, profits from small businesses. Compared with the baseline condition, basic measures are the same, but it seems that business profits increased.

##### 2) By group

Only one group (TUMEAMUA) actively does the activities to cope with future drought, namely hay making and sale of it, and water harvesting by use of polythene bags.



Source: JICA Project Team

**Figure AG3.2.16 TUMEAMUA's Group Activities**  
(left: Water harvesting, right: Hay-making)

Otherwise, their monthly contribution and VICOBA can be somehow one of the countermeasures against future drought. Also, all the interviewed groups said that Drought Fund that the sub project intended to create can serve to prepare for future drought.

#### (3) Assets by member and group

Here whether some impacts are observed or not to their assets by the sub project compared to the baseline condition is argued as below.

## 1) By member

The baseline condition of assets holding, especially number of chicken is on average 2.25 in Jirime groups, and 3.33 in Dakabaricha groups. Now, there are in total 107 chickens including initial sets and multiplied ones for all 160 members (though not all of them have them). Taking average per member gives 0.7 chickens with 30% and 20% increment by the project. Of course, actually not all of the members received chickens, and these chickens (107) are kept by about 20% of all the members. For the members who keep chicken, increment of chicken as asset is not small (107/32 who keep = around three). The most successful member has around 25 chickens including chicks, this is significant impact on asset holding for their previous chicken asset. Actually, the initial plan assumes that the members would have 20 chickens at the end of the sub project, which can be somehow considered a big impact (if converted to monetary form, 20 x Kshs 500/chicken = Kshs 10,000 as asset).

## 2) By group

Through the observation, there have not been changes on group assets attributable only to this sub project, compared with the baseline, except chicken provided by the sub project. The chicken's ownership is with the groups until all members receive chick.

## (4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Here whether some impacts are observed or not to their assets by the sub project compared to the baseline condition is argued as below.

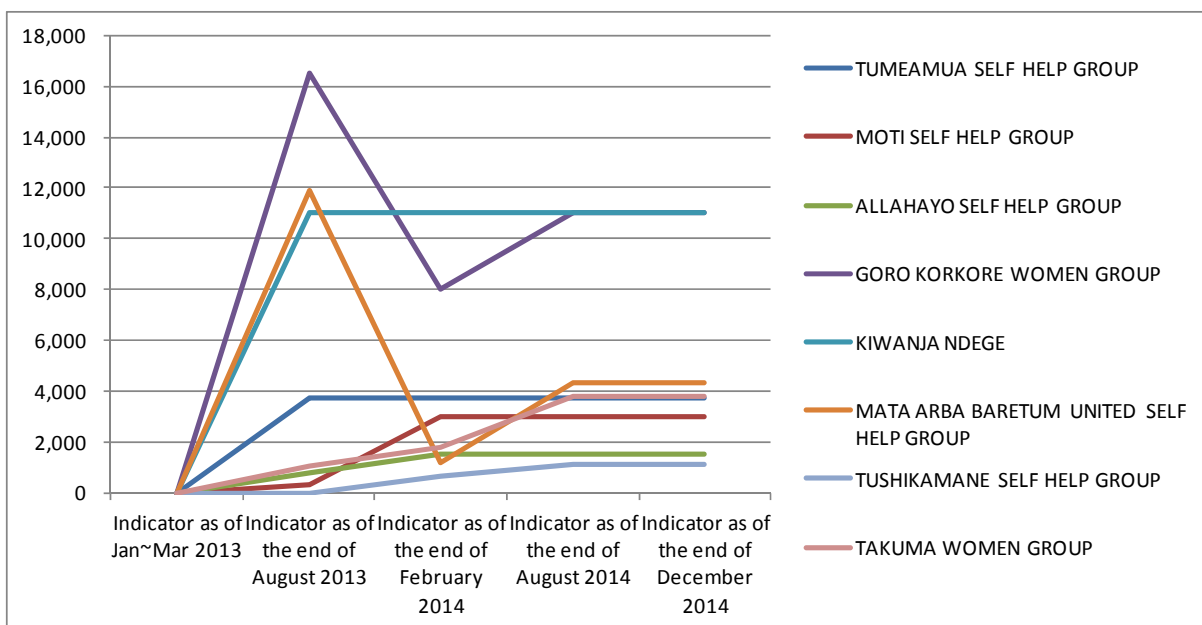
## 1) By member

The baseline household income of the group members is Kshs 300~400,000 on average per year. According to the initial plan, several thousand shilling per person can be earned for around one and half or two years since its inception (or even faster because number of initial sets given was actually more than the planned number). In fact, one member was able to sell 16 chickens at Kshs 540/one and got around Kshs 9,000. This becomes around two to three percent of their average annual income. If members get appropriate skills to multiply, certain financial impact can be enjoyed by them.

## 2) By group

Drought Fund and VICOBA money are tangible financial benefits for groups. Around Kshs 1,000 to 10,000 can be saved as Drought Fund. If chick is to be bought out of this as initial set, 10~100 chicks can be bought at rate of Kshs 100/one. If matured chicken is to be bought, 2 to 20 chickens can be bought as their initial seed chickens to restart if drought occurs. Even though the money is not to be used as planned, they can use it at least for another purpose to mitigate drought.

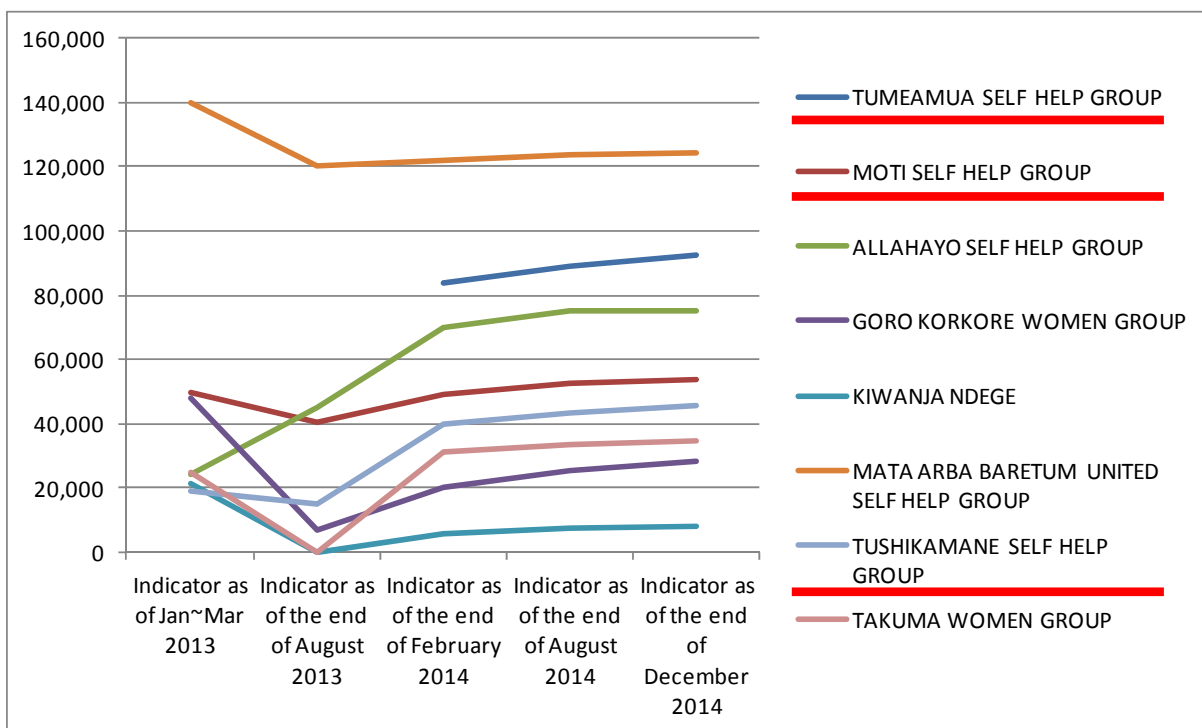




Source: JICA Project Team

**Figure AG3.2.17 Change of Drought Fund**

For VICOBA, there were three groups which had started VICOBA based on the baseline information. Now, all eight groups are actively doing VICOBA and increased.



Source: JICA Project Team, Tushikamane's fund of the first two monitoring period is Kshs 250,000 and 508,000 respectively. Red underlined groups had started VICOBA before the sub project started.

**Figure AG3.2.18 Change of Other Group Fund**

At last for most of the groups, the group fund has gradually increased, though some groups spent some money for the group purposes. Most part of the money is used for loans to the members who want money to expand their own businesses or for any other purposes.

(5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1) Expectation to enhance resilience by the sub-project

Across the groups, nine sampled members out of 14 (64%) replied they think they enhanced resilience by the project. Major reasons that individual replied are; skills and knowledge of chicken rearing technique can be used to increase the number of chickens so as to sale products; awareness on drought preparedness; and drought fund kitty is useful in that it can be used to buy more chickens if the first set perishes.

Two stated resilience has not been enhanced because they know how to cope with drought regardless of the sub project. The reply of remaining three is unknown.

All five sampled groups for the end-line survey also stated that their group resilience is enhanced because of increased funds (perhaps both Drought Fund and VICOBA).

2) Expectation in general

The individual members stated through the end-line survey as earlier expectation to the sub project that physical material provision such as water tanks, loans, payment of school fees, greenhouse, toilet construction, improved JIKOS, cow, goat heifers (local goats), plots, and target to disabled persons. An opinion related to the sub project is houses for chicken for all members. Though the application process was taken and the groups were supposed to agree what the project would do, the members still think such hand-out as their expectation.

Out of 14 individuals, only two mentioned positive evaluation on whether expectation is met, and others were negative. However, most of the members who showed negative opinions stated that JICA's mentorship and even chicken itself. Perhaps, it can be said that their negativity was because the above handouts were not provided, but the sub project itself might not be so bad.

Unfortunately, five groups interviewed as groups also showed all negative opinions in terms of expectation.

3) Knowledge Obtained

Individual members interviewed for the end-line survey listed the following items:

- Culture of saving for the drought
- Knowledge and skills in chicken rearing (hatching, disease control and vaccines) and Sasso breed
- Social interaction with other members
- Preparedness for drought and drought resilience

Similarly, the interviewed groups also stated that the above items were learned.

4) JICA approach

The following opinions are raised in the end-line survey:

**Table AG3.2.21 Opinion on JICA's Approach**

	Group Name	Individual	Groups
1	Opinion on Sasso chicken	Chicken itself, sale and consumption of eggs. High cost of buying feed and medicine. High mortality rate of chicks and even seed chicken No benefit for subsequent members who neither received chicks nor eggs.	Positive-Sasso breed is good if given good care, however its costly to feed. On the other hand subsequent members felt they didn't get anything from the Sasso chicken project. Negative - Sasso breed is very expensive due to high costs of feeding.

	Group Name	Individual	Groups
2	Opinion on whole system	<p>Positive-Distribution of chicks increases chicken assets at home and thus individual can benefit by selling increased number of eggs and cocks.</p> <p>Drought fund kitty can be used to buy more chicken or food during extreme droughts</p> <p>Sasso chicken is a fast growing and good layer, thus when good care is given it can give products that can be sold and money put aside to cushion members against drought.</p> <p>Positive-But only if chicks grow and reach maturity for distribution and one is able to commercialize the products and if all members cooperate and take responsibility</p> <p>Negative-First recipients appeared to own the chickens and could not give to the other members or it took a lot of time for everyone in the group to get the chicks. Its expensive to feed and care for the chicks.</p>	<p>Positive-Passing of chicks enable members to increase their flock although there is high mortality rate of chicks, while drought fund creates culture of saving for the droughts, and creates resilience, the money have already be put aside for drought purpose</p> <p>However, passing chicks to subsequent members takes very long time.</p>
3	Challenges		<ul style="list-style-type: none"> <li>• High chick mortalities</li> <li>• Low hatchability of eggs</li> <li>• Low egg production</li> <li>• Lack of vaccines</li> <li>• High costs of feeding</li> <li>• Frequent disease outbreaks</li> </ul>
4	Opinion on Drought Fund		<p>Yes</p> <p>-Encourage groups to save money for future use.</p> <p>-Enhances culture of saving among group members.</p> <p>-Money in accounts might be used later to restart projects after drought.</p>
5	Opinion on continuity of the system	<p>Yes</p> <p>-Chickens are more profitable in that they're alternative sources of income (sale of eggs, chicks and cocks).</p> <p>-Can continue as long as chick production continues but if chicks die, they may stop the project.</p> <p>-Being in a group one can get loans and social funds during emergencies.</p> <p>-It's an opportunity to get new ideas and skills from other group members.</p>	<p>Yes</p> <p>-Members can access loans</p> <p>-Groups have been in existence and will have to continue.</p> <p>-Rearing chickens has benefits therefore a source of livelihood.</p> <p>-To ensure that everybody gets the Sasso breed.</p> <p>-Chicken merry go round keep groups together, also members can benefit from the easy loans.</p>
	Opinion on VICOBA		<p>Yes-Its source of friendly soft loans for members.</p>
6	Opinion on JICA's approach	<p>Positive</p> <p>-Frequent mentorings and trainings by JICA provided knowledge and skills in chicken production that are actually at use at the moment.</p> <p>-Mentoring/PFS provided a good opportunity to learn new techniques on chicken rearing and room for sharing information and thus creates transparency among group members.</p> <p>-Kujitegemea creates problem solving technique among group members.</p> <p>Negative</p> <p>-One needs money assistance to buy medicines and food for the chicken since its very challenging to feed Sasso chickens.</p>	<p>Positive</p> <p>-Frequent mentorships and training provides the group with skills in chicken keeping.</p> <p>-Kujitegemea spirit has made some members successful.</p> <p>Suggestion-while kujitegemea is a good idea, members could have been provided with feed and drugs for the chicken.</p> <p>Observation-kujitegemea spirit is becoming hard for them (members) since sasso chicken requires a lot of care.</p>

Source: JICA Project Team based on the end-line survey

In summary, the results shows that the members and the groups interviewed understood the concept of the sub project well. From the Drought Fund concept, majority of group members grasped the idea since they are aware of drought imminence in the area, at least they save little cash they get for future use in drought times. However, practical difficulty such as necessity of good care of Sasso is a big challenge for some of the members.

#### 5) Overall satisfaction

The answers of the individual members interviewed were all “satisfied”. Out of 14, number of the answer “highly satisfied” were three (21%), and “moderately satisfied” was 11 (79%). Most of them realized benefits of Sasso and appreciated the technique and skills given. Major reason of “moderate” not “highly” comes from technical difficulty of Sasso rearing and thereby late transfer with no provision of financial support e.g. cost of buying medicine and feeds.

On groups, all the groups interviewed answered “moderately satisfied”. Reason of not answering “highly satisfied” is similar to the individual one with additional reasons that chicken houses should have been given to all members, also not all subsequent members benefited from the project.

#### (6) Other indicators to see impact

##### 1) Members efforts on the sub projects

Individual efforts made for this sub project are monthly contribution, attending meetings, taking care of chicks and chicken, and distribution of eggs according to the end-line survey. Distribution of eggs was their significant invention to make the system run faster. Group efforts are also similar, namely monthly contribution from the members, passing of eggs, chick distribution, caring for the chicken, and VICOBA.

As specific examples, TUMEAMUA group built poultry houses for some members by their own efforts in addition to the houses given by the project.

##### 2) Gender

Women are empowered in terms of ownership and decision making. Main opinions raised by the interviewees are; women make decisions whether to sell eggs or not without consulting their husbands; empowerment of women on chicken rearing and alternative sources of income; women are the main beneficiaries of the system where they sell chicken products and cater for their families; women can own something; women are seen as beneficiaries of improved breed of chicken among the community. Only one replied that there was no impact on gender.

The results of the groups’ sessions are also similar; women can own assets; women make decisions on sale of eggs and chicken by products; women acquired skills and knowledge during trainings and mentorships; and thereby women have been empowered with a source of livelihood of chicken.

##### 3) Environment

There was no significant change in all groups on environment since the chicken project was introduced per answers by both individuals and groups. One minor opinion by one individual was that this leads to environmental conservation by applying chicken manure for farming.

##### 4) Other community members’ opinions

The end-line survey tells the following opinions based on focused group interview with the chief (plus elders, and in case available, DMC/DC members). Some additional observation is also mentioned.

Awareness of livelihood activities by Chief (DMC/DC)

The chief of Jirime is aware of the sub project. During planning, distribution of chicken to the groups, and implementation, they have been seeing JICA staff coming regularly to check on the chickens.

Other community members' opinions

According to the chief of Jirime, there are some individuals who want to benefit from the project. In fact, community members in proximity to target group members have welcomed the idea positively; this has been shown by most of them buying either cocks or eggs for interbreeding purposes. They appreciated the reasonable size of the Sasso breed which attracts higher prices at the market places.

However, there are also others who feel that chicken provision was not a good idea. They wanted the project to provide goats and camel.

Another issue before the project started was a gender perception that chicken rearing was a women affair, after realizing the high demand of eggs and high price of mature chicken, men started to aggressively involve themselves in rearing too. This is a positive move since majority of them (men) are able to counter challenges faced in the rearing like going to market to buy drugs and medications in-case of any disease outbreaks, buy feeds unlike women who are always at home, also they help women in construction of the poultry houses.

DMC/DC function on livelihood program

Unfortunately the chief of Jirime said that there is no DMC/DC in the area and therefore they do not know the function either.

**G3.3 Discussion****G3.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub project is as follows:

- According to the baseline survey, it can be said that about 50 to 67% of the target members had chicken in Jirime and Dakabaricha groups. Main livelihood of them is agriculture, livestock (shoats), and small business. Chicken rearing with improved breed of Sasso can add some livelihood onto their other major livelihood if they can handle it well.

If people can take care as the initial plan shows, several thousands of shillings could have been gained. In terms of the number of chicken, if good care had been taken, a big increase onto the baseline condition could have been realized. Chicken is a more liquid asset than goats and therefore easy to convert to money. This can therefore be a good livelihood measure for people residing in close proximity to towns where the demand for eggs and chicken is high;

- Since Drought Fund has been increasing slowly, target groups are expected to gradually understand the concept of the sub project. Groups that have put money for drought fund have cushioned themselves against drought, though the initial idea to save money out of sales of poultry products has not been fully realized at this point in time. They can use the accumulated Drought Fund to buy chicken and restart the whole project again; and
- VICOBA is also positively evaluated by the members. Easy financial access by individual is very useful to do some livelihood related activities individually. In this sense, the increased group fund by VICOBA can contribute to enhancing individual resilience.

**G3.3.2 Positive Impact**

Positive impacts are as follow:

- Several efforts have been made to adjust the rules set, modify them and make it easier for themselves. The most effective invention is to pass eggs not chicks. This method will continue, showing their positive and flexible attitude to the system.
- *Acquisition of skills*: although the levels of acquisition of skills on chicken rearing entirely vary from group to group, and individual to individual, some individuals like the Pastor, have acquired substantial skills in poultry rearing and are seriously taking the activity as a source of livelihood. He managed to put up a house mainly for rearing Sasso chicks. Other members have also acquired skills in rearing chicken and adopted it as a source of livelihood.
- The Pastor has even brought his business plan to expand chicken business to the project, though the project could not finance the plan. This is evidence that a member recognized the positive impact, internalized the techniques and knowledge given, and has willingness to utilize them for his own development. This is the desired self-reliant attitude that was initially envisaged.



Source: JICA Project Team

**Figure AG3.3.1** *Chicken Houses for Chicks That Invented by The Member*

- There are positive gender impacts. Women have been empowered in ownership of chicken and decision making by themselves for chicken handling. This is possible because skills and knowledge were gained from training and mentorship. Also, men have also started to aggressively involve themselves in rearing chicks as well;
- There has been an increase in interbreeding between local chicken and Sasso breeds leading to crossbreeds with higher growth-rates as well as resistant to most of the diseases. This has been confirmed by the fact that those who have the crosses started realizing reduced mortality rates among the hatched chicks as well as faster growth rates compared to local breeds.
- There are individuals of the subsequent members who have not yet received chicks, but have adopted the design of the chicken house provided by the project;



Source: JICA Project Team

**Figure AG3.3.2** *Chicken Houses That Community Built by Themselves*

### G3.3.3 Issues and Challenges

Issues and challenges are as follows:

- Although majority of the community have positively accepted the concept of chicken rearing, rate of adoption is still slower than expected though anticipated to be fully adopted with time. This is primarily attributed to technical issues, but such technical issues may lead to reluctance of the members.



Source: JICA Project Team

**Figure AG3.3.3** *Photos of Some Technical Problem Faced  
(Left: Confined Chicken Which Gives Stress to Chicken, Right: Soft Shell Egg due to Poor Feeding)*



Source: JICA Project Team

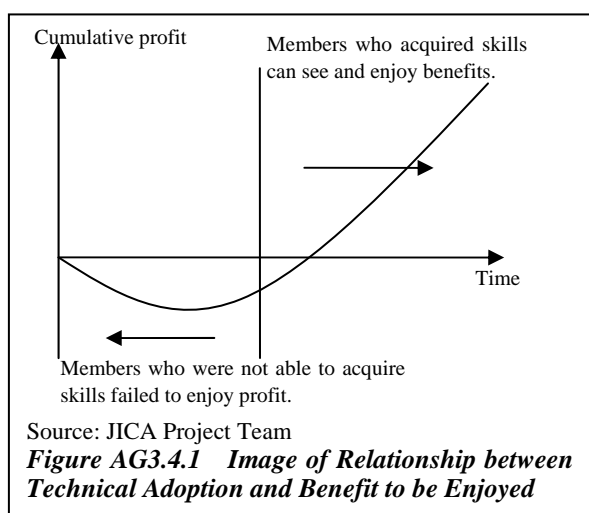
**Figure AG3.3.4** *Chicken Suspected for Diseases Infection*

- Chick mortality is a problem that needs to be tackled. Night and morning colds in Marsabit Central greatly influence chicks survival. This has not yet been so much emphasized and therefore group members might have paid no attention to it.
- Issue of hygiene like cleaning of poultry houses has been persistent and a menace to most group members who have been struggling with it. This could be the cause of recurrence of infectious diseases to most members. However, hygiene is still encouraged for the health of the chickens and their chicks to increase multiplication and further transfers.
- Due to high feeding costs, first recipients feel overburdened and seem unwilling to distribute chicks to the second recipients.
- Medication- There have been frequent occurrences of diseases most of which have no vaccines available.

### G3.4 Conclusion and Lesson Learned

Based on the foregoing, the conclusion and lesson learnt can be summarized as follows:

- Primarily this chicken merry-go round system envisaged individual benefits as well as group mechanism to help each other for coping with drought. Due to technical difficulties of rearing improved breed of chicken for most of the members, the initial plan has not yet been realized and progress is still at 20%, maybe leading to reluctance of group work. However, members who really acquire the skills can start benefiting from Sasso rearing, and Drought Fund has been saved though by different means (contribution). As long as the improved breed can be taken up by the people, chicken rearing will give additional livelihood for enhancing resilience, with the Drought Fund as a group element.
- However, it might be concluded that management of improved breed for the ordinary community people here in Jirime and Dakabaricha seems difficult. And, most of the people might not overcome this technical issue, resulting in slow progress of passing chicks to subsequent members, though some of them did and benefited. It needs a longer period of time to follow up when a new idea is introduced. In this sense, frequent visits and provision of mentoring as the JICA's approach were positively evaluated by the members, however it may not have been enough in terms of period.
- Although chicken rearing for earning some money is still new to majority of the target members, it's gradually being appreciated. This has been shown by a number of people requesting for the Sasso breed. Including technical advice, it is necessary to conduct continuous and longer period of mentoring if needed to introduce some new ideas to the community.
- More technically, disease outbreaks without proper diagnosis, leaves speculation and gestures. To overcome such, there's a need for the local government to liaise with stakeholders to ensure a modern laboratory established for first hand analysis. The government extension services on chicken rearing are also important.
- Success can only depend on individual efforts and resilience preparedness which need to be emphasized among individual members. Individual benefits rather than group benefits must be emphasized in planning.



**Figure AG3.4.1 Image of Relationship between Technical Adoption and Benefit to be Enjoyed**



## CHAPTER G4. GOAT MERRY-GO-ROUND SUB-PROJECT

### G4.1 Outline of the Sub-project

#### G4.1.1 General Outline of the Sub-project

(1) Outline of the sub-project

The outline of the sub project is summarized as follows:

**Table AG4.1.1 Outline of Goat Merry-Go-Round Sub-project**

Item	Contents	Remarks								
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities using goat and giving technical training, VICOBA training, and mentoring activities including PFS to enhance community resilience against drought.									
2. Number of Beneficiaries	15 groups in all locations, around 290 group members in Kalacha, Gar Qarsa, and Arapal	Gar Qarsa is a sub location.								
3. Implementation Organization	JICA ECoRAD Project, and the community groups									
4. Project Contents										
1) Project Outline	1) Distribution of goats (improved breed) 2) Technical training (if necessary) 3) Mentoring activities including group strengthening and PFS 4) VICOBA Training									
2) Facility / Activity	<table border="1"> <thead> <tr> <th><i>Facilities/Activities</i></th> <th><i>Implementer</i></th> </tr> </thead> <tbody> <tr> <td>1) Procurement of goats</td> <td>1) Project Team</td> </tr> <tr> <td>2) Implementation of training</td> <td>2) NGO</td> </tr> <tr> <td>3) Monitoring and mentoring</td> <td>3) Project Team &amp; NGO</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementer</i>	1) Procurement of goats	1) Project Team	2) Implementation of training	2) NGO	3) Monitoring and mentoring	3) Project Team & NGO	
<i>Facilities/Activities</i>	<i>Implementer</i>									
1) Procurement of goats	1) Project Team									
2) Implementation of training	2) NGO									
3) Monitoring and mentoring	3) Project Team & NGO									
3) Organization for O&M	Target community groups and their chief and elders									
4) Construction Period	23 months(starting Feb 2013 around up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.								

Source: JICA Project Team

## (2) Basic principle of the merry go-round

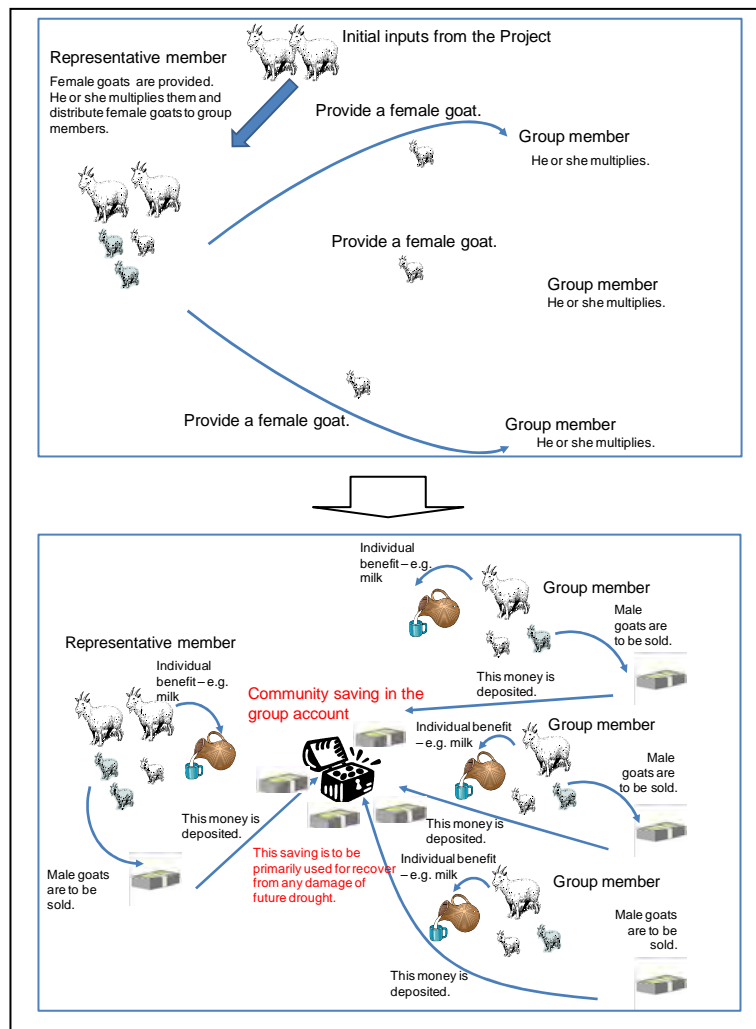
This sub-project is to select groups of 20 members; provide goats to target groups; to increase numbers of goats; to share increased goats with group members (this is called “Merry-Go-Round”, borrowed from the saving system of groups which is common in Kenya); and to encourage members to save money out of them as seed money which will be used to recover from the possible future loss of introduced goats by drought (called Drought Fund).

The breed used to the sub-project is Galla goat which is famous as an improved one and better served in the Kenyan arid and semi-arid areas. Detailed explanation of the program is shown in Attachment G3-1.

## G4.1.2 Selection of Target Groups

## (1) Participatory planning

In selection of the target groups, participatory planning approach was taken. Depending upon the local condition, the way the approach was applied was slightly different as shown below



Source: JICA Project Team

**Figure AG4.1.1 Image of Goat Merry-Go-Round System**

## 1) Kalacha

In Kalacha, the team visited the chief and explained our planned idea on the activities regarding the livelihood diversification in Kalacha and he agreed. Meetings arranged by the chief and elders were held, and all the necessary items for the sub-project including the concept, principle, and basic rules were explained to the elders and community people as potential targets. And, the team told them about the limit of the number to be accepted, namely four groups which has one sub group only, because another sub-project was also planned to be implemented in the same location under livelihood diversification. The team let the communities select groups by themselves. Later the team obtained the result of the selection from the community. For the selected four groups, the team requested them to prepare group regulations which are somehow considered as their commitment to participate in our sub-project. All four groups submitted their regulations.

## 2) Gar Qarsa

The process taken in Gar Qarsa is the same as the one taken in Jirime and Dakabaricha locations for the chicken sub-project mentioned in Chapter 10 (refer to 10.1.2 (1) for more detail). The explanatory meeting was held on 11th of January 2013. Number of submitted applications was nine and all were accepted. All selected groups concluded their group regulations and submitted to the team.

## 3) Arapal

In Arapal, at first the chief was visited like other areas and consulted about the sub-project. He indicated the importance of goats and agreed our idea of the sub-project about the goat merry go round. Then, meetings arranged by the chief were held, and the explanations on the detailed sub-project were made to the elders and communities as potential target. In this place, the team decided to focus on women groups because the livelihood activities are basically handled by women and men normally care for herds of their livestock. The chief and elders introduced two women's groups, and finally both groups were targeted as a result of the discussion with them since their willingness to participate in the sub-project was confirmed. Subsequently the groups were asked to prepare group regulations like other groups, and successfully concluded them with signature/thumb print from all participants and submitted to the team.



Source: JICA Project Team

**Figure AG4.1.2 Participatory Planning for Goat Merry-Go-Round Sub-project**  
(Left: Meeting with Community in Gar Qarsa Groups, Right: Regulation Signing (thumb print) in Arapal)

## (2) Target community groups

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG4.1.2 Information for Target Group**

	Group name	Location
1	SELF HELP WOMEN	Kalacha
2	MWANGAZA WOMEN GROUP	Kalacha
3	WOLDAGENA SELF-HELP	Kalacha
4	MAZINGIRA WOMEN GROUP	Kalacha
5	AWAN BORRI BORRO WOMEN GROUP	Gar Qarsa
6	ARTHA JILLA WOMEN GROUP	Gar Qarsa
7	GAR QARSA AIC WOMEN GROUP	Gar Qarsa
8	ARTHA BALLA WOMEN GROUP	Gar Qarsa
9	HALCHA WOMEN GROUP	Gar Qarsa
10	OBSINA SUKUNANA WOMEN GROUP	Gar Qarsa
11	BALCHUMA CONTACT MOTHERS GROUP	Gar Qarsa
12	BADAQICHA WOMEN GROUP	Gar Qarsa
13	BARITE WOMEN GROUP	Gar Qarsa
14	PARKISHON WOMEN GROUP	Arapal
15	NASERIAN WOMEN GROUP	Arapal

Source: JICA Project Team

### G4.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

#### (1) Indicators

##### 1) Operational indicators

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. Throughout the monitoring period, they were monitored.

**Table AG4.1.3 Operational Indicators**

	<b>Operational Indicators</b>
1	Number of goats multiplied based on the initial goats introduced to the group
2	Number of female goats distributed to subsequent members (goats/member)
3	Number of subsequent group members who received increased goats
4	Number of male goats sold
5	Records of any individual benefits (milk consumed from the distributed goats, etc)
6	The group saving the account as Drought Fund
6-1	Amount of the money as the group saving in the account as Drought Fund
6-2	Any record with reason when Drought Fund is used
7	Other fund for the group (and any information about VICOBA implementation)

Source: JICA Project Team

##### 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be documented. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG4.1.4 Effect Indicators**

	<b>Effect Indicators</b>
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Number of assets by member and group (especially livestock-goat)
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

#### (2) Baseline survey

To set the baseline figures for the above indicators, the baseline survey was implemented as below:

##### 1) Methodology

###### 1. Kalacha

Questionnaires for individual group members and groups were used to collect baseline information. Six samples from each group which has 10 members were randomly selected and interviewed for individual questionnaires. For group questionnaires, all the groups were surveyed in sessions with group members. The survey was done by the NGO, and information obtained was as of January, 2013.

## 2. Gar Qarsa

The two kinds of questionnaires were used; one is for an individual, the other is for a group to obtain the baseline condition. Sample number for individuals, 10% of total target group members were randomly selected and surveyed in total (18), stratified two from each group. For groups, all the selected groups were surveyed having focus group discussion. The survey was implemented by the NGO from the end of January to February, 2013.

## 3. Arapal

Like others, the two kinds of questionnaires were used, namely one for individuals, and the other for groups. Sample number for individuals was 11 out of total members of 77 in both of the two groups (five for Parkishon, and six for Naserian). Group interviews were conducted with focus group discussion method for the two groups, and the questionnaires were filled. The survey was conducted by the NGO from the end of January to February in 2013.

### 2) Brief summary of socio economic condition of the target areas

Socio-economic condition of the target areas are briefly summarized in the following table:

**Table AG4.1.5 Summary of Socio Economic Condition of the Target Areas**

	Socio Economic Condition
Kalacha Location	Area: 2,608 sq km Sub location: Two, namely Kalacha and El-Gade sub locations Population: 7,964 (1,751 households) Located 54 km from Maikona at the ridges along the Chalbi desert Inhabitants mainly depend on livestock. Community: Gabra Mobile network and electricity: basically none in town (some spots of network are available some km away, and some solar panels are available in town)
Gar Qarsa Sub location (Qilta Location)	Area (for Qilta Location): 282.5 sq km Area (for Gar Qarsa Sub location): 214 sq km Sub location in Qilta Location: two, the other is Qilta Sub location Population (for Qilta Location): 3,985 (774 households) Population (for Gar Qarsa Sub location): 1,156 (233 households) Classified as part of the agro-pastoral zone of Marsabit county Close to Marsabit town Community: Borana Mobile network and electricity: basically available
Arapal sub location (Mt. Kulal Location)	Area(for Mt.Kulal Location): 1,554 sq km Area (for Arapal Sub location): 428 sq km Sub location in Mt. Kulal Location: four, the others are Olturot, Larachi, Mt. Kulal Sub locations Population (for Mt. Kulal Location): 4,789 (1,087 households) Population (for Arapal Sub location): 975 (248 households) Located in the slopes of Mt.Kulal, and most of people are pastoralists. Far from towns and cars rarely passing. Community: Samburu Mobile network and electricity: basically none (some spots of network are available some km away, and a very few solar panels are available)

Source: 2009 Kenya Population and Housing Census and JICA Project Team

### (3) Baseline information of Operational indicators

Here, baseline figures for the indicators are set and shown based on the information obtained from the baseline survey and the activities by the project team.

1) Number of goats multiplied based on the initial goats introduced to the group

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG4.1.6 Number of Goats Multiplied**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	0
2	MWANGAZA WOMEN GROUP	0
3	WOLDAGENA SELF-HELP	0
4	MAZINGIRA WOMEN GROUP	0
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	0
6	ARTHA JILLA WOMEN GROUP	0
7	GAR QARSA AIC WOMEN GROUP	0
8	ARTHA BALLA WOMEN GROUP	0
9	HALCHA WOMEN GROUP	0
10	OBSINA SUKUNANA WOMEN GROUP	0
11	BALCHUMA CONTACT MOTHERS GROUP	0
12	BADAQICHA WOMEN GROUP	0
13	BARITE WOMEN GROUP	0
Arapal		
14	PARKISHON WOMEN GROUP	0
15	NASERIAN WOMEN GROUP	0

Source: JICA Project Team

2) Number of female goats distributed to subsequent members (goats/member)

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG4.1.7 Number of Female Goats Distributed to Subsequent Member**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	0
2	MWANGAZA WOMEN GROUP	0
3	WOLDAGENA SELF-HELP	0
4	MAZINGIRA WOMEN GROUP	0
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	0
6	ARTHA JILLA WOMEN GROUP	0
7	GAR QARSA AIC WOMEN GROUP	0
8	ARTHA BALLA WOMEN GROUP	0
9	HALCHA WOMEN GROUP	0
10	OBSINA SUKUNANA WOMEN GROUP	0
11	BALCHUMA CONTACT MOTHERS GROUP	0
12	BADAQICHA WOMEN GROUP	0
13	BARITE WOMEN GROUP	0
Arapal		
14	PARKISHON WOMEN GROUP	0
15	NASERIAN WOMEN GROUP	0

Source: JICA Project Team

3) Number of subsequent group members who received increased female goats

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG4.1.8 Number of Subsequent Group Members Who Received Increased Female Goats**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	0
2	MWANGAZA WOMEN GROUP	0
3	WOLDAGENA SELF-HELP	0
4	MAZINGIRA WOMEN GROUP	0
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	0
6	ARTHA JILLA WOMEN GROUP	0
7	GAR QARSA AIC WOMEN GROUP	0
8	ARTHA BALLA WOMEN GROUP	0
9	HALCHA WOMEN GROUP	0
10	OBSINA SUKUNANA WOMEN GROUP	0
11	BALCHUMA CONTACT MOTHERS GROUP	0
12	BADAQICHA WOMEN GROUP	0
13	BARITE WOMEN GROUP	0
Arapal		
14	PARKISHON WOMEN GROUP	0
15	NASERIAN WOMEN GROUP	0

Source: JICA Project Team

4) Number of male goats sold

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG4.1.9 Number of Male Goats Sold**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	0
2	MWANGAZA WOMEN GROUP	0
3	WOLDAGENA SELF-HELP	0
4	MAZINGIRA WOMEN GROUP	0
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	0
6	ARTHA JILLA WOMEN GROUP	0
7	GAR QARSA AIC WOMEN GROUP	0
8	ARTHA BALLA WOMEN GROUP	0
9	HALCHA WOMEN GROUP	0
10	OBSINA SUKUNANA WOMEN GROUP	0
11	BALCHUMA CONTACT MOTHERS GROUP	0
12	BADAQICHA WOMEN GROUP	0
13	BARITE WOMEN GROUP	0
Arapal		
14	PARKISHON WOMEN GROUP	0
15	NASERIAN WOMEN GROUP	0

Source: JICA Project Team

5) Records of any individual benefits (milk consumed from the distributed goats, etc)

Since the sub-project had not yet started, all the records of the groups for this indicator are none.

**Table AG4.1.10 Records of Any Individual Benefits**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	none
2	MWANGAZA WOMEN GROUP	none
3	WOLDAGENA SELF-HELP	none
4	MAZINGIRA WOMEN GROUP	none
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	none
6	ARTHA JILLA WOMEN GROUP	none
7	GAR QARSA AIC WOMEN GROUP	none
8	ARTHA BALLA WOMEN GROUP	none
9	HALCHA WOMEN GROUP	none
10	OBSINA SUKUNANA WOMEN GROUP	none
11	BALCHUMA CONTACT MOTHERS GROUP	none
12	BADAQICHA WOMEN GROUP	none
13	BARITE WOMEN GROUP	none
Arapal		
14	PARKISHON WOMEN GROUP	none
15	NASERIAN WOMEN GROUP	none

Source: JICA Project Team

6) The group saving the account as Drought Fund

## 1. Amount of money saved by the group as Drought Fund

Since the sub-project had not yet started, all the figures of the groups for this indicator are zero.

**Table AG4.1.11 Amount of the Money as Drought Fund**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	0
2	MWANGAZA WOMEN GROUP	0
3	WOLDAGENA SELF-HELP	0
4	MAZINGIRA WOMEN GROUP	0
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	0
6	ARTHA JILLA WOMEN GROUP	0
7	GAR QARSA AIC WOMEN GROUP	0
8	ARTHA BALLA WOMEN GROUP	0
9	HALCHA WOMEN GROUP	0
10	OBSINA SUKUNANA WOMEN GROUP	0
11	BALCHUMA CONTACT MOTHERS GROUP	0
12	BADAQICHA WOMEN GROUP	0
13	BARITE WOMEN GROUP	0
Arapal		
14	PARKISHON WOMEN GROUP	0
15	NASERIAN WOMEN GROUP	0

Source: JICA Project Team

## 2. Any record with reason when Drought Fund is used

Since the sub-project had not yet started, all the records of the groups for this indicator are none.



**Table AG4.1.12 Any Record With Reason When Drought Fund Is Used**

	Group name	Indicator as of Jan-Mar 2013
Kalacha		
1	SELF HELP WOMEN	none
2	MWANGAZA WOMEN GROUP	none
3	WOLDAGENA SELF-HELP	none
4	MAZINGIRA WOMEN GROUP	none
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	none
6	ARTHA JILLA WOMEN GROUP	none
7	GAR QARSA AIC WOMEN GROUP	none
8	ARTHA BALLA WOMEN GROUP	none
9	HALCHA WOMEN GROUP	none
10	OBSINA SUKUNANA WOMEN GROUP	none
11	BALCHUMA CONTACT MOTHERS GROUP	none
12	BADAQICHA WOMEN GROUP	none
13	BARITE WOMEN GROUP	none
Arapal		
14	PAKISHON WOMEN GROUP	none
15	NASERIAN WOMEN GROUP	none

Source: JICA Project Team

**7) Other fund for the group**

Total money in the group account before the sub-project started is shown in the following table:

**Table AG4.1.13 Other Fund for the Group**

	Group name	Indicator as of Jan-Mar 2013
Kalacha		
1	SELF HELP WOMEN	(Ksh. 100,000 for the original group) VICOBA had not been implemented.
2	MWANGAZA WOMEN GROUP	(Ksh. 10,600 for the original group) VICOBA had not been implemented.
3	WOLDAGENA SELF-HELP	(Ksh. 6,200 for the original group) VICOBA had not been implemented.
4	MAZINGIRA WOMEN GROUP	(Ksh. 131,600 for the original group) VICOBA had been implemented for the original group.
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	Ksh. 22,000 VICOBA had been implemented.
6	ARTHA JILLA WOMEN GROUP	Ksh. 90,000 VICOBA had been implemented.
7	GAR QARSA AIC WOMEN GROUP	Ksh. 40,000 VICOBA had not been implemented.
8	ARTHA BALLA WOMEN GROUP	Ksh. 21,000 VICOBA had been implemented.
9	HALCHA WOMEN GROUP	Ksh. 57,000 VICOBA had been implemented.
10	OBSINA SUKUNANA WOMEN GROUP	Ksh. 30,000 VICOBA had been implemented.
11	BALCHUMA CONTACT MOTHERS GROUP	Ksh. 31,000 VICOBA had been implemented.
12	BADAQICHA WOMEN GROUP	Ksh. 4,000 VICOBA had been implemented.
13	BARITE WOMEN GROUP	Ksh. 28,000 VICOBA had been implemented.

	Group name	Indicator as of Jan-Mar 2013
Arapal		
14	PARKISHON WOMEN GROUP	Ksh. 7,000 VICOBA had not been implemented.
15	NASERIAN WOMEN GROUP	Ksh. 4,500 VICOBA had not been implemented.

Source: JICA Project Team

All of the groups had some money in their group account. The money of four Kalacha groups was for the original groups (refer to the effect indicators) and therefore this is the indicative baseline information since any money to be changed for the participant of 10 members will be monitored.

Out of fifteen groups, nine had started practicing VCOBA activities before the entry of our sub-project.

#### (4) Baseline information of Effect indicators

##### 1) Group members' livelihood

###### 1. Kalacha

According to the information obtained from the baseline survey, majority of the members rely on livestock for their livelihood because Kalacha mainly practice pastoralism. Few depend on casual work and other sources of livelihood like relative's remittances and employment. Agriculture is rarely practiced here.

###### 2. Gar Qarsa

Based on the baseline survey, livestock are the major livelihood. Following are agriculture and casual work among the interviewed members.

###### 3. Arapal

In Arapal, livestock is significantly the major and most important livelihood based on the result of the baseline survey. The next source of livelihood among those interviewed is casual work, while others like agriculture and employment are minor.

###### 4. Observation

Out of these three locations, Kalacha and Arapal are remote areas (Arapal is farthest) and therefore the economic activities seem not to be as active as areas closer to towns. Hence, their main livelihood is still pastoralism, though settlement in the area has progressed there unlike other pastoralist areas. Gar Qarsa, though is relatively close to the Marsabit town still relies on livestock followed by agriculture and casual works.. These differences may affect the sub-project; thus must be understood for the livelihood diversification.

##### 2) Current measures in terms of livelihood to cope with drought

###### 1. By member

Pertaining to current measures to cope with drought, in Kalacha, majority of the members of the sample selected lack better knowledge on planning ahead of anticipated drought thus are always caught unprepared. Most of them depend on livestock and no tentative measures to cope with drought and few numbers depend on casual labour and a negligible number relies on formal employment.

In Gar Qarsa, major coping measures are depending on agriculture related measures and casual works. For agricultural measures, in most cases they store grains, and sell farm products to get some money. For casual works, they try to seek any chances such as washing clothes. They also do

some measures related to livestock. For protection purpose, they store fodder and serve it to their animals during drought. Then they sell livestock product and obtain money to cope with drought. A minority relies on salary, and small business. One answered there is nothing in particular to cope with drought.

For Arapal case, most of the sample members answered that the measure is to rely on livestock products, such as milk, meat, blood. Only one replied to depend on relief food. This result indicates that if their livestock are eliminated by severe drought, they definitely suffer.

## 2. By group

The current measures by group are summarized in the table below:

**Table AG4.1.14 Current Measures to Cope with Drought (Group)**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	Giving out loans to members to assist them
2	MWANGAZA WOMEN GROUP	Advising to use resources together as much as possible to assist members
3	WOLDAGENA SELF-HELP	Giving loan to members and using group money saved
4	MAZINGIRA WOMEN GROUP	Sharing/loaning money accrued from logging and sales of mats and thaches making
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	Hay harvesting, and monthly contributions
6	ARTHA JILLA WOMEN GROUP	Harvesting of hay and selling it to the community during drought season
7	GAR QARSA AIC WOMEN GROUP	No
8	ARTHA BALLA WOMEN GROUP	Loans and merry go rounds (money)
9	HALCHA WOMEN GROUP	Some poultry products are used
10	OBSINA SUKUNANA WOMEN GROUP	Water business e.g selling of water per litres
11	BALCHUMA CONTACT MOTHERS GROUP	Helping each other to transport water, making some contribution for those who are financially weak
12	BADAQICHA WOMEN GROUP	By selling grass and helping each
13	BARITE WOMEN GROUP	In search of fodder and assist with the member who have animals, storing fodder and providing during drought
Arapal		
14	PAKISHON WOMEN GROUP	No
15	NASERIAN WOMEN GROUP	No

Source: JICA Project Team

In Kalacha, most of the groups mentioned loan for the members to cope with drought. In Gar Qarsa, though several measures were raised, harvesting and storing of hay/fodder/grass are the common measure that the target members answered. The groups in Arapal do not have any measures as the baseline condition.

## 3) Number of assets by member and group (including group profile)

## 1. By member

Main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below.

**Table AG4.1.15 Number of Assets by Member**

		Kalacha		Gar Qarsa		Arapal	
		Average/sample HH	% of having/sample HH	Average/sample HH	% of having/sample HH	Average/sample HH	% of having/sample HH
Physical	TV	0	0	0.06	6	0.09	9
	Car	0	0	0*	6	0.09	9
	Mobile phone	1.38	92	1.13 ***	78	1	55
	Bicycle	0	0	0.22	22	0	0
	Motorcycle	0	0	0.12*	17	0	0
Livestock	Goat	11.01 (max: 19, min: 2)	100	2.81** (max: 20, min: 0)	50	23 (max: 54, min: 6)	100
	Cow	0 (max: 0, min: 0)	0	1.69** (max: 10, min: 0)	61	3.82 (max: 14, min: 0)	64
	Sheep	18.96 (max: 34, min: 3)	100	1.19** (max: 10, min: 0)	39	8.27 (max: 26, min: 0)	82
	Camel	2.46 (max: 6, min: 0)	71	0.35* (max: 6, min: 0)	11	1.09 (max: 5, min: 0)	36
	Chicken	0.67 (max: 10, min: 0)	13	3.11* (max: 10, min: 0)	72	0.82 (max: 9, min: 0)	9
	Donkey	1 (max: 3, min: 0)	63	0.47* (max: 2, min: 0)	39	1.09 (max: 3, min: 0)	45

Source: Baseline Survey and JICA Project Team, \*:missing data is 1, \*\*: missing data is 2, \*\*\* missing data is 3.

Physical assets: For all locations, percentage of the households that have mobile phones are more than 50% and the largest. In Gar Qarsa, percentage of the households that have bicycle and motorcycle are more (around 20%) than others perhaps because of its proximity to the town.

Livestock assets: In Kalacha and Arapal, almost 100% of households have shoats with average number of around 30 shoats per household. On the other hand, 50-60% of households in Gar Qarsa have around five shoats per household, less percentage and number than in the other two areas. For chicken, Gar Qarsa, where the area is closer to town, has 72% of households who have chicken with a average of three per household.

## 2. By group

Group asset including the information of general group profile is shown as below:

<sup>1</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (100~200 shoats/family).The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit);and 2) these households live close to the town/centre of locations(especially in Gar Qarsa and Kalacha) so smaller figures are not far from the true figures. For the reference, average household size of the samples is 5.6 in Kalacha, and 7.5 in Gar Qarsa, and 5.8 in Arapal.

**Table AG4.1.16 Number of Assets by Group**

	<b>Group name</b>	<b>Indicator as of Jan~Mar 2013</b>
Kalacha		
1	SELF HELP WOMEN	Number of Group members: 44 Out of which, target members are 10 (female: 10, illiterate: 10) Asset: furniture, land, and logging Group account: Ksh. 100,000 Established: 2006
2	MWANGAZA WOMEN GROUP	Number of Group members: 33 Out of which, target members are 10 (female: 10, illiterate: 10) Asset: furniture, land, and lodging Group account: Ksh. 10,600 Established: 2006
3	WOLDAGENA SELF-HELP	Number of Group members: 25 Out of which, target members are 9 (female: 9, illiterate: 9) Asset: 4 goats Group account: Ksh. 6,200 Established: 2012
4	MAZINGIRA WOMEN GROUP	Number of Group members: 38 Out of which, target members are 7 (female: 7, illiterate: 7) Asset: furniture, land, and lodging Group account: Ksh. 131,600 Established: 2001
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 20, illiterate: 16) Asset: none Group account: Ksh. 22,000 Established: 2008
6	ARTHA JILLA WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 20, illiterate: 20) Asset: some furniture Group account: Ksh. 90,000 Established: 2004
7	GAR QARSA AIC WOMEN GROUP	Number of Group members: 21 Out of which, target members are 20 (female: 20, illiterate: 20) Asset: land Group account: Ksh. 40,000 Established: 2008
8	ARTHA BALLA WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 20, illiterate: 18) Asset: none Group account: Ksh.21,000 Established: 2005
9	HALCHA WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 20, illiterate: 16) Asset: 6 chickens Group account: Ksh. 57,000 Established: 2006
10	OBSINA SUKUNANA WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 12, illiterate: 19) Asset: none Group account: Ksh. 30,000 Established: 2009

	Group name	Indicator as of Jan~Mar 2013
11	BALCHUMA CONTACT MOTHERS GROUP	Number of Group members: 16 Out of which, target members are 16 (female: 16, illiterate: 12) Asset: none Group account: Ksh. 31,000 Established: 2008
12	BADAQICHA WOMEN GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 20, illiterate: 20) Asset: two bicycles Group account: Ksh. 4,000 Established: 2005
13	BARITE WOMEN GROUP	Number of Group members: 18 Out of which, target members are 18 (female: 18, illiterate: 16) Asset: land and five chickens Group account: Ksh. 28,000 Established: 2007
Arapal		
14	PARKISHON WOMEN GROUP	Number of Group members: 35 Out of which, target members are 35 (female: 20*, illiterate: 20*) Asset: land, lodging, and 3 goats Group account: Ksh. 7,000 Established: 2012 (previous one was registered in 2003)
15	NASERIAN WOMEN GROUP	Number of Group members: 42 Out of which, target members are 35 (female: 20*, illiterate: 19*) Asset: lodging Group account: Ksh. 4,500 Established: 2010

Source: JICA Project Team, \*: information of 15 out of 35 is missing

In Kalacha, all the target groups have 25-44 members, and the participants in this sub-project are 10. Three groups have lodging facilities; one group has three goats; and all have certain amount of money for the original groups. However our activities target only 10 members, and these assets are not only for 10. Therefore new group assets specifically for our JICA's 10 members are to be monitored.

Gar Qarsa groups have 20 members in general, which are basically all our target members. Almost all of the target members are female, and literacy rate is low for all the groups. Basically they have no assets, except some chicken and others in some groups. They have some money in the group accounts.

Two groups in Arapal have larger numbers of the members. The sub-project only accommodates 35 members, and Naserian group have more than that. All of the members are women with high percentage of illiterate persons. Naserian has a literate member, and it seems she leads the group in practice. Two have lodging facilities, and Parikishon has three goats.

In terms of overall illiteracy, 93% of the target members are illiterate.

#### 4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

##### 1. By member (household income and expenditure)

Household income and expenditure for the sampled target members are summarized in the table below:

**Table AG4.1.17 Household Income and Expenditure (Baseline in Ksh)**

	Kalacha	Gar Qarsa	Arapal
Annual Household Income	Average: 105,708 Max: 470,000 Min: 20,500	Average: 220,133 Max: 720,000 Min: 39,600	Average: 31,398 Max: 115,680 Min: 5,000
Annual Household Expenditure	Average: 66,222 Max: 255,600 Min: 20,900	Average: 177,600 Max: 510,000 Min: 28,400	Average: 22,444 Max: 107,000 Min: 4,400

Source: Baseline Survey and JICA Project Team

Out of these three location, the target members in Gar Qarsa have the highest annual household income of Ksh 220,133 on average, followed by those in Kalacha (Ksh 105,708). Average annual household income of the sample members in Arapal is the lowest, Ksh 31,398. This could intuitively be understood because of the economic condition of each site. Gar Qarsa is obviously closer to the town (Marsabit) and hence has more economic opportunities<sup>2</sup>. Kalacha, though it is located slightly far from the town (Maikona), but the centre of Kalacha location has somehow more social and economic activities than those in Arapal. In terms of monetary impact of the sub-project to the member households, it seems to be highest in Arapal.

## 2. By group (only financial impact)

Since the sub-project had not yet started, financial impacts of the groups for this indicator are none.

**Table AG4.1.18 Financial Impact by Group**

	Group name	Indicator as of Jan-Mar 2013
Kalacha		
1	SELF HELP WOMEN	none
2	MWANGAZA WOMEN GROUP	none
3	WOLDAGENA SELF-HELP	none
4	MAZINGIRA WOMEN GROUP	none
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	none
6	ARTHA JILLA WOMEN GROUP	none
7	GAR QARSA AIC WOMEN GROUP	none
8	ARTHA BALLA WOMEN GROUP	none
9	HALCHA WOMEN GROUP	none
10	OBSINA SUKUNANA WOMEN GROUP	none
11	BALCHUMA CONTACT MOTHERS GROUP	none
12	BADAQICHA WOMEN GROUP	none
13	BARITE WOMEN GROUP	none
Arapal		
14	PARIKISHON WOMEN GROUP	none
15	NASERIAN WOMEN GROUP	none

Source: JICA Project Team

- 5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

<sup>2</sup>Average income level in Jirime and Dakabaricha is higher than that in Gar Qarsa, most probably resulting from the distance between Marsabit town to each area. The distance between Marsabit town and Gar Qarsa is farther.

## 1. By member

Nineteen selected members out of 23 in Kalacha are optimistic that the sub-project will help them improve their livelihood whereas four members are pessimistic of its importance. For those who have positive expectations, majority said that saved money obtained from sales of male goats and knowledge of how to prepare for drought will help to enhance resilience, and also they will benefit from the goats, milk and money accrued from sale of milk. On the other hand for the four who do not expect substantive benefits they stated that many NGOs implemented similar activities and conducted interview, but there have been no fruitful results, and therefore thought this sub-project might be the same.

Seventeen target members in Gar Qarsa, out of total 18 individuals surveyed, answered that resilience is expected to be enhanced by the sub-project. The main reason given was to increase their resilience by improving livelihood conditions through sale of products from goats. One member did not expect the sub-project because of the personal financial problem.

In Arapal, 10 out of 11 selected members had positive expectations on the sub-project. The major reason is to improve household income. Others include were ownership of goats, and to appreciate the system to reduce dependency from donors to maintain the system. It is noted that one member answered not to expect the sub-project because the goat may not be strong against severe drought.

Majority had positive expectations of the sub-project at the beginning. In Kalacha, relatively high members have negative expectations. Through course of activities, the people may change their expectation depending on results. When the sub-project is completed, expectations will be surveyed and compared with the baseline expectations.

## 2. By group

Opinions on the sub-project as groups are shown as follows:

**Table AG4.1.19 Any Opinions on the Sub-project (Group)**

	Group name	Indicator as of Jan~Mar 2013
Kalacha		
1	SELF HELP WOMEN	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through enhancing working spirit, and improve livelihood.</p> <p><u>Expectation about group benefit:</u> Fostering awareness of resilience as a group members' solidarity, culture to help each other, and lastly improving individual members' livelihood.</p> <p><u>Difference compared to other past donor projects:</u> This approach is appreciated because the goats used are familiar to the group unlike others who use difficult concepts.</p>
2	MWANGAZA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, training and gained knowledge enhance better coping mechanism. And saving money from the goat merry ground sub-project is expected to be good useful.</p> <p><u>Expectation about group benefit:</u> Fostering awareness of resilience as a group members' solidarity, and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> No difference</p>
3	WOLDAGENA SELF-HELP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, knowledge gained will be of great importance. This sub-project provides platform to exercise planning and independence, and the goats given will be an asset for resilience.</p> <p><u>Expectation about group benefit:</u> Fostering awareness of resilience as a group members' solidarity, and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> This approach is unique because the goats used are familiar to the group unlike others who use difficult concepts like VICOBA which could not be well understood.</p>



	Group name	Indicator as of Jan~Mar 2013
4	MAZINGIRA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, the sub-project will provide knowledge of how to cope with drought and what should be done, and also give the goats as assets which help the group.</p> <p><u>Expectation about group benefit:</u> Fostering awareness of resilience as a group members' solidarity, and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> Unlike others, it seems more practical and promising because goats are familiar. JICA gives group autonomy to manage and take control of the sub-project to the group.</p>
Gar Qarsa		
5	AWAN BORRI BORRO WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes through sales of milk and goats</p> <p><u>Expectation about group benefit:</u> Awareness of resilience, solidarity, culture to help each other, and increasing group assets.</p> <p><u>Difference compared to other past donor projects:</u> Precious donor projects did not consult with the community members, but JICA does leading to creation of ownership.</p>
6	ARTHA JILLA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes</p> <p><u>Expectation about group benefit:</u> Awareness of resilience, solidarity, culture of helping on another</p> <p><u>Difference compared to other past donor projects:</u> They can not compare as they have never received donor projects.</p>
7	GAR QARSA AIC WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through selling animals</p> <p><u>Expectation about group benefit:</u> Awareness on resilience and solidarity creation</p> <p><u>Difference compared to other past donor projects:</u> JICA's assistance targets groups and communities.</p>
8	ARTHA BALLA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through also milk from goats (even milk could also be sold), and sharing of offsprings</p> <p><u>Expectation about group benefit:</u> Promoting awareness of resilience of a group, solidarity, and culture to help each other.</p> <p><u>Difference compared to other past donor projects:</u> Benefits of other donors are short lived such as relief food, but JICA's one could stay longer.</p>
9	HALCHA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes through sale of male goat and milk</p> <p><u>Expectation about group benefit:</u> Solidarity and cohesion</p> <p><u>Difference compared to other past donor projects:</u> JICA provides longer benefit, and other donors do shorter benefits.</p>
10	OBSINA SUKUNANA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes through goat milk and saved money</p> <p><u>Expectation about group benefit:</u> Awareness of resilience, solidarity, culture to help each other, and increasing group assets.</p> <p><u>Difference compared to other past donor projects:</u> Unlike other organization, JICA sub-project looks at future problems.</p>

	Group name	Indicator as of Jan~Mar 2013
11	BALCHUMA CONTACT MOTHERS GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes through milk as food, group cohesion, and selling male goats.</p> <p><u>Expectation about group benefit:</u> Awareness creation of resilience, and fostering solidarity and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> Other donors target humanitarian relief while JICA does development.</p>
12	BADAQICHA WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> No because they could not do anything due to water shortage.</p> <p><u>Expectation about group benefit:</u> Cohesion and togetherness</p> <p><u>Difference compared to other past donor projects:</u> Previous donors targeted vulnerable individuals rather than groups as the current project is doing.</p>
13	BARITE WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through selling of goats and raising money</p> <p><u>Expectation about group benefit:</u> Solidarity, cohesion, helping one another, having group assets</p> <p><u>Difference compared to other past donor projects:</u> Not known because this is the first donor.</p>
Arapal		
14	PARKISHON WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, and also, benefit from milk and source of income to the group due to the ownership of goats as a group.</p> <p><u>Expectation about group benefit:</u> Fostering members' solidarity and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> Past donors might have focused on family ties.</p>
15	NASERIAN WOMEN GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, and sale of livestock and ownership are also expected.</p> <p><u>Expectation about group benefit:</u> Fostering members' solidarity and culture to help each other</p> <p><u>Difference compared to other past donor projects:</u> Other projects targeted the vulnerable as individuals.</p>

Source: JICA Project Team

Out of 15, 14 groups expect to enhance resilience through the sub-project. Though some groups mentioned the importance of utilizing knowledge obtained from the sub-project (saving etc.), others tend to think that benefits themselves from products are more important than the resilience system.

As group benefits, most of the groups talked about awareness of resilience, solidarity, culture to help each other, and increasing group assets as expectations.

In terms of differences on approaches of other donors, some said that other donors targeted vulnerable individuals for short lived benefits as humanitarian aid, on the other hand JICA' approach targets groups and aims at long term benefits.

Other ways that JICA's approach is positively recognized are 1) ease of introduced system/input to understand, namely goats which are familiar (VICOBA is somehow a bit difficult to be understood); 2) many consultations with communities thereby leading to creation of ownership.

## G4.2 Works Done

Works done during the implementation of the sub project are shown below

### G4.2.1 Inputs from the Project as Assistance Activities

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

#### (1) Provision of Goat

The following table shows the provision of goats to the groups.

**Table AG4.2.1 Provision of Input**

Groups		Sub-group (10 members)	Total No of Input	System for Initial Provision	Change in Input (Additional Input) and Final No of Initial Provision
<b>QILTA LOCATION GAR QARSA</b>					
1	Awan Borri Borro Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
2	Artha Jilla Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
3	Gar Qarsa AIC Women	2 sub groups	8 (7F, 1M)	1F for each member - 4members/sub groups, 1M for breeding (1F goat was died upon provision)	1F (local goat) was provided, because the death was not owed by the group. <b>Total initial input is 9 (8F, 1M)</b>
4	Artha Balla Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
5	Halcha Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
6	Obsina Sukunana Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
7	Balchuma Contact Mothers	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
8	Badaqicha Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
9	Barite Women	2 sub groups	<b>9 (8F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
<b>ARAPAL LOCATION</b>					
1	Parikishon Women	3.5 sub groups	<b>15 (14F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
2	Naserian Women	3.5 sub groups	<b>15 (14F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
<b>KALACHA LOCATION</b>					
1	Self Help women	1 sub group	<b>5 (4F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change

Groups		Sub-group (10 members)	Total No of Input	System for Initial Provision	Change in Input (Additional Input) and Final No of Initial Provision
2	Mwangaza women	1 sub group	<b>5</b> <b>(4F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
3	Woldagena self help	1 sub group	<b>5</b> <b>(4F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change
4	Mazingira women	1 sub group	<b>5</b> <b>(4F, 1M)</b>	1F for each member - 4members/sub groups, 1M for breeding	No change

Source: JICA Project Team

The idea is to provide one he-goat and four she-goats (Gala goat as improved breed) to one sub group which consists of 10 members. Depending on the number of sub groups in a group, the number of goats to be the initial input was determined and given to the groups. For Gar Qarsa AIC Women group, one additional she-goat (local) was provided because another died before distribution. In this case, the member herself selected a goat (local breed) in the livestock market in Dirib Gombo which was established by the Project under another sub-project (Livestock Value Chain).



Source: JICA Project Team

**Figure AG4.2.1 Delivery of Goats in Gar Qarsa**

Delivery notes on goats were obtained from the target group members with their signature to have the record on their receiving the provision from the Project.

Considering number of the assets of the groups, it can be said that the input of the goats has a certain impact on their assets. For impact on individual assets, the members in Gar Qarsa would have more impacts than in other two. These will be evaluated at the end of the sub-project.

## (2) Provision of Training

### 1) Technical training

The aim of the goat technical training is twofold. First, to equip new members with knowledge about keeping healthy herds and secondly, to renew the knowledge of those who have prior experience in goat keeping.

Many members of the women groups are not new to goat keeping. This is based on the historical understanding that they are part of the pastoralist communities residing in either Marsabit or adjacent communities. However, due to some other factors- for example religion, some of the women may not

be familiar with goat rearing. This is even more so in the settled areas. Thus some especially in the settled areas have little contact with goat rearing. These women are expected to benefit from such training as they are able to acquire skills relevant for rearing goats in a sedentary lifestyle.

For those with a long pastoralist experience, the course serves as a form of a refresher. However, it also enhances their skills on issues that they may not be familiar with, for example disease diagnosis and control. Therefore even for this group, the technical training is useful.

The course is structured such that it has a trainer and exchange of information is done. This enables everybody to bring their knowledge and experiences to the fore.

Given the nature of the governments' emphasis on agri-business, the course also equips participants with knowledge on how to not only keep goats but see them as a business and thus engage in the local market.

### 1. Course objective

The main objective of the training is to share knowledge with learners on the best practices of goat management including the use of the same resource as source of income.

### 2. Course content

The course content is as shown in the table below

**Table AG4.2.2 Course Contents of Technical Training**

Item	Contents
GOAT BREEDS 1. Small East African 2. Galla Goats	Its characteristics Its characteristics and superior qualities
BREEDING	Mating system How to control kidding Cross breeding Pre-mating Doe examination Heat detection
MARKETING	Definition and types of markets Market infrastructure Stakeholders in livestock marketing Single Day Markets and their importance
VACIINATION	Routine vaccinations against Foot and Mouth Disease,(FMD) Petites des Pites Ruminanats (PPR), Rabies
ROUTINE ANIMAL PRACTICES	Castration, Disbudding, Identification, Deworming, Vaccination, Hoof trimming, Dehorning, Weighing, Dipping/Spraying, Selection and Culling
DISEASES	Signs of a healthy animal Signs of an unhealthy animal Common diseases: CCPP (Contagious Caprine Pleuro-Pneumonia) PPR (Pestis Des petits Ruminants) Anthrax, Rift Valley Fever (RVF) Helminthes (worms) Examination Vector (ticks, tsetse flies, mosquitoes, fleas, Camel flies)

Source: JICA Project Team

A total of 142 participants took part in the goat technical training program. The courses were held in each area as applicable. They were participatory and thus sharing of knowledge was highly encouraged. The training was implemented from 25<sup>th</sup> to 27<sup>th</sup> April in Kalacha, from 2<sup>nd</sup> to 3<sup>rd</sup> April in Gar Qarsa, and from 17<sup>th</sup>-19<sup>th</sup> of April in Arapal in 2013.



Source: JICA Project Team

**Figure AG4.2 Technical Training in Arapal**

## 2) VICOBA training

VICOBA stands for Village Community Banking. The basic principle of the VICOBA system is that members of a self-selected group form a VICOBA and save money, which is the source of loan capital from which they can borrow.

### 1. Course objective

To introduce the fundamentals of Village Community Banking (VICOBA) to group members in order to strengthen their savings and loan abilities. The successful use of VICOBA will contribute to the sustainability of the goat merry-go-round system.

### 2. Course content

The course content is as shown in the table below:

**Table AG4.2.3 Course Contents of VICOBA Training**

Item	Contents
Introduction to VICOBA	<ul style="list-style-type: none"> <li>- What is VICOBA</li> <li>- How does VICOBA work</li> <li>- Comparing VICOBA and Merry-go round</li> <li>- Useful terms in VICOBA (savings, loan, interest, fine)</li> </ul>
Individual self-screening(ISS) and group formation	<ul style="list-style-type: none"> <li>- Importance of ISS in group formation</li> <li>- Importance of knowing each other and its impact on group VICOBA activities</li> <li>- Value of ISS in elections</li> <li>- Importance of ISS in dispute resolution</li> </ul>
Types of group funds	<ul style="list-style-type: none"> <li>- Savings and loan fund (Compulsory)</li> <li>- Social fund (optional)</li> <li>- Drought fund (optional)</li> <li>- Others</li> </ul>
Group membership, leadership and elections	<ul style="list-style-type: none"> <li>- Who can be a group member</li> <li>- Elections</li> <li>- Characteristics of specific leaders (Chairlady, secretary and treasurer)</li> <li>- Roles of each leader</li> <li>- Terms of leadership ( 6 months to one year)</li> </ul>
Record keeping	<ul style="list-style-type: none"> <li>- Types of record books to be kept</li> <li>- Types of records</li> <li>- Who should keep what records</li> </ul>

Source: JICA Project Team

A total of 192 participants took part in the training program across all the areas. A participatory approach was highly encouraged and thus the communities shared the information they had. This training was conducted from 20<sup>th</sup> to 25<sup>th</sup> March in Kalacha, from 16<sup>th</sup> to 17<sup>th</sup> in May in Gar Qarsa, and 26<sup>th</sup>–29<sup>th</sup> in March in Arapal in 2013.



Source: JICA Project Team

**Figure AG4.2.3 VICOBA Training in Kalacha**

### 3) Group strengthening training and others

There were no other group strengthening activities undertaken apart from the monitoring and mentoring. During some sessions held with the women groups, issues arising were amicably solved for the continued group cohesion.

One thing to be noted is that 10 members who participated from Waldagena women group in Kalacha named their 10-member group as Aneesa women group for possibly expressing somehow cohesion for this sub-project.

### (3) Implementation of PFS

For Arapal groups, PFS was implemented on VICOBA from 3<sup>rd</sup> to 6<sup>th</sup> in July 2013. Detail of the activities is as follows:

#### 1) Objective

To give the Arapal women groups a chance to interact with established women groups which are successfully practicing VICOBA in Gas Sub location of Loiyangalani Location, Loiyangalani Division of Loiyangalani District in Marsabit County.

#### 2) Participants

Sixteen women (8 from each group, Parkishon and Naserian) from Arapal attended the PFS activities.

#### 3) Activities

##### 1. Day 1

They attended a regular monthly meeting of Ipeand Muslim women groups. This day was dedicated to getting to know each other for the four groups but with an emphasis on the following activities of VICOBA as done by the two groups that are well established in Gas:

- Sitting arrangement during VICOBA meetings;
- Meeting procedures and protocol;
- The role of the money box and the custodians of the keys;
- What is stored in the box;

- Types of records books;
- Types of funds;
- Amount contributed monthly by the host groups; and
- Types and amount of fines paid in the host groups.

## 2. Day 2

This day was dedicated to more information exchange from both sides using a question and answer method where both groups had questions to ask and answer to give. The questions were not prearranged. Among the areas covered were the following:

- Leadership and roles of different leaders;
- Interest rates charged on monies loaned out to members;
- Mode of doing business; either individual members having business or a group business, advantages and disadvantages of both modes;
- Possible alternative income generating activities that can be done at group level; and
- Identifying markets for products that may be produced in pastoralist areas that can support livelihoods.

## 4) Observation

The PFS training was very successful being an eye opener for the women groups from Arapal who have been reluctant to pick up the VICOBA activities either because they did not understand the concept or they didn't envision it as a way of achieving internal economic self-reliance.



Source: JICA Project Team

**Figure AG4.2.4 PFS Held in Gas for Arapal Groups**

## (4) Provision of Mentoring Activities

Other than the above, the groups have been continuously visited either on a monthly, half monthly and when the need arises in order to mentor and advice on proper management of activities. Routine monitoring was done.





Source: JICA Project Team

**Figure AG4.2.5 Mentoring Activities**

**(Left: VICOBA in Arapal, Centre: Goat Keeping in Arapal, and Right: Monitoring in Gar Qarsa)**

~from September 2013 to February 2014~

#### (5) Implementation of PFS

For Kalacha groups, Pastoralist Field School (PFS) was implemented for both salt business and goat merry-go round sub-projects together in Kalacha on 19<sup>th</sup> September 2013 by PACIDA. Detail of the activities is as follows:

##### 1) Objective

Objective of this PFS is to learn difficulty, success story, and other considerations on the activities from each member and other groups, and give feedback to their own activities for improvement.

##### 2) Participants

From the Goat Merry-Go-Round teams, 23 members attended the PFS activities. 12 members attended from the salt groups, also, and in total 35 members were present.

##### 3) Activities

During the session, the attendants discussed the issues mainly of VICOBA, social fund, IGAs, and the group activities for the sub projects as a kind of brainstorming way to know their current issues faced.

##### 4) Observation

To have the attendances from different sub-projects seems not to earn fruitful results. In addition it seems a bit early to have this PFS session in September for goat groups because there had not yet been significant progress at that time. Now, gradually some progress have been observed, it is becoming appropriate time to implement PFS from now on among the groups in this sub-project only not combining with the salt group.

#### (6) Provision of Mentoring Activities and Others

Other than the above, the following activities were made to assist the groups:

- Management of the goats provided (monitor the number and progress of the pregnant goats);
- Keeping the records of the kid delivered (sex, date of birth and estimated distribution age);
- Vaccination of the goats against lethal diseases by the groups' initiative in Kalacha and Gar Qarsa;
- Maintaining the purpose of the project, namely to sell male goats and distribute the female goats to the subsequent members;

- Continuation of the accumulation of the Drought Fund money i.e. if they cannot sell the young male kids they can make monthly contributions until the young male goats reach market age;
- VICOBA, and other group strengthening work has been done. Information of some government funds which can be applied was share with all groups. Especially for Arapal groups, they showed the interest and assisted connection to the social service office, some fund application assistant (Kenya women enterprise development fund by social services office), and opening of bank account; and
- The Drought Fund bags were distributed to all the goat groups in Kalacha and Gar Qarsa, one group in Arapal (Parkishon). The bags were made and distributed by the project so that the groups can put the money meant for the drought. The idea is that members can differentiate money since it has no colour.



Source: JICA Project Team

**Figure AG4.2.6 Mentoring Activities**

**(Left: Monitoring in Gar Qarsa, Centre: Arapal group in the KCB office, Right: VICOBA in Arapal)**

~from March 2014 to August 2014~

#### (7) Veterinary Officers' Consultation

Due to the prevalence of miscarriages among the distributed Galla goats in all projects areas, it was necessary to consult the District veterinary officer for advice. The vet officer agreed to visit all the areas to check and take blood samples of the goats that had miscarriages. It was also necessary to take samples of local goats that had the same problems of miscarriages. The blood samples would have been later taken to Kabete for laboratory analysis. Detail of the activities is as follows:

##### 1) Objective

Objective is to take blood samples of the Galla goats that miscarry to determine its causes for appropriate actions to be undertaken.

##### 2) Participants

Participants were the first goat beneficiaries (Arapal, Kalacha and Gar Qarsa) (not all) with respective veterinary officers in charge of the target areas.

##### 3) Activities

The vet officer took blood samples of Galla goats that had miscarriages, other Galla goats that delivered kids without no observation of miscarriages as a control and local goats that also presented the problems of miscarriages. The blood samples were taken from each goat and marked with particular identification to avoid confusion during the release of the results. Later all the blood samples were put in a cool box for better storage and transportation to the destinations. The blood samples have been delivered to Kabete livestock laboratory for disease analysis. The results are not yet been released.

**Table AG4.2.4 Number of Sample**

Region	Galla goats sampled	Local goats
Kalacha	6	2
Arapal	4	2
Gar Qarsa	3	1

Source: JICA Project Team

#### 4) Observation

According to the vet officers' experience of the prevalence of diseases in the region, their position was that the goats were suffering from attack of Brucellosis. It might be said that newly brought breed could be easier to be infected with the disease during adaptation periods. The disease main symptoms were miscarriages among the females. Another reason that prompted the position of the vet officers is that even the local goats were having miscarriages as well.



Source: JICA Project Team

**Figure AG4.2.7 Photos of Vet Officers Sampling**

#### (8) Provision of Mentoring Activities and Others

Other than the above, the following activities were made to assist the groups:

- Monitoring of the system has been done for management of the goats provided (monitor the number and progress of the pregnant goats) including keeping the records of the kid delivered (sex and month of birth);
- Maintaining the purpose of the project, namely to sell male goats and distribute the female goats to the subsequent members has been repeated;
- Continuation of the accumulation of the Drought Fund money has been emphasized i.e. if they cannot sell the young male kids they can make monthly contributions until the young male goats reach market age;
- VICOBA and other group strengthening work have been done. Information of some government funds which can be applied was shared with all groups. Especially for Arapal groups, they showed the interest and were assisted on connection to the social service office, and some fund application

(Kenya women enterprise development fund by social services office), and opening of bank account;

- As for the evaluation of current system, discussion on new system was made with the groups where the initial beneficiary keeps the seed goat for only one year, and later transfers the seed goat to another person. The first beneficiary can keep the kids born during that period even though the initial seed is transferred to another person;
- Opinions of subsequent recipient regarding the slow multiplication and transfers were collected; and
- The groups have been advised to visit the agro vet regularly whenever their goats presents signs of abnormalities. As a result vaccination of the goats against lethal diseases by the groups' initiative in Kalacha and Gar Qarsa occurred.



Source: JICA Project Team

**Figure AG4.2.8 Mentoring Activities  
(Discussion with Awan Borri Borro Group by Dr.Sun)**

~from September 2014 to December 2014~

#### (9) Provision of Mentoring Activities

The following activities were made to assist the groups:

- Monitoring of the system has been done for management of the goats provided (monitor the number and progress of the pregnant goats) including keeping the records of the kid delivered (sex and month of birth);
- Maintaining the purpose of the project, namely to sell male goats and distribute the female goats to the subsequent members has been repeated;
- Continuation of the accumulation of the Drought Fund money has been emphasized i.e. if they cannot sell the young male kids they can make monthly contributions until the young male goats reach market age;
- VICOBA and other group strengthening work have been done. Information of some government funds which can be applied was shared with all groups. Especially for Arapal groups, they showed the interest and were assisted on connection to the social service office, and some fund application (Kenya women enterprise development fund by social services office), and opening of bank account; and

## (10) End line Survey

To set the end-line figures for the above indicators, the end-line survey was implemented as below:

In all the target areas of Gar Qarsa, Kalacha and Arapal, the same method was taken. Three kinds of questionnaires were used; one for individual, another for group, and the other for chief to obtain the end-line condition. Sample numbers for individuals were randomly selected and surveyed stratified from each group. For groups, all the selected groups were surveyed having focus on group discussion. In addition, chief and elders were also interviewed. The survey was implemented by the JICA team from the end of October to early December in 2014. Detailed procedure of the survey is shown in the table below:

**Table AG4.2.5 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Kalacha	Chief and 1 elder	1 (2 participants)	23/10/2014	Questionnaire with one focus group discussion
	Groups Jajabana (7) Mwangaza (5) Mazingira (6) Self Help (5) Aneesa (4)	5 (27 participants)	23/10/2014, 24/10/2014, 25/10/2014, 19/12/2014	Questionnaire with 5 groups
	Individuals Jajabana (6) Mwangaza (6) Mazingira (6) Self Help (5) Aneesa (5)	28 (28 participants)	23/10/2014, 24/10/2014, 25/10/2014, 19/12/2014, 20/12/2012, 21/12/2014	Questionnaires with individual interview
Arapal	Chief and elders	1 (4 Participants)	31/10/2014	Questionnaire with one focus group discussion
	Groups Naserian Women Group (20) Parkishon Women Group (8)	2 (28 Participants)	1/11/2014 & 2/11/2014	Questionnaire with 2 Groups
	Individual Naserian (7) Parkishon (9)	16 (16 participants)	31/1/2014, 1/11/2014, 2/11/2014	Questionnaires with individual interview
Gar Qarsa	Chief and elders	1 (3 participants)		Questionnaire with one focus group
	Groups Artha Balla (6) Obsina sukunana (8) Halcha (7) Baadaqicha (9) Artha Jilla (10) Gar Qarsa (6)	6 (30 Participants)	21/11/2014, 20/11/2014, 17/11/2014	Questionnaire with 6 focus groups
	Individuals Artha Balla (1) Obsina sukunana (2) Halcha (1) Baadaqicha (2) Artha Jilla (2) Awan Bori Boro (1) Balchuma (1) Barite (2) Qar Garsa (2)	14(14 Participants)	29 oct-20 Dec (The individual interviews in Qar qarsa were done on different days depending on the availability of individuals)	Questionnaire with individual members interview

Source: JICA Project Team, in Kalacha, salt group is also included.

## G4.2.2 General Overall Situation of the Sub Project

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

The groups taking part in the goat merry go round are active. Most have been in existence for a long time. In Kalacha for example, three of the groups own campsites from which they are able to generate some extra income. The groups in Gar Qarsa are more urbanized and settled though variation in terms of economic potential may vary. Some groups to the southern part of the location occupy slightly bigger chunks of than those to the north. The groups located next to Marsabit town seem to be better informed about project activities than those far removed as they have interacted longer with other donor and development organizations. In Arapal, variations have been observed in group activities. One group seems to be more active and less challenged by group leadership issues. The two groups however are faced with a higher illiteracy rate that may affect their understanding of certain concepts.

Though the progress has not yet been fast, some groups have new born kids, and gradually the system is progressing..

~from September 2013 to February 2014~

As an overall picture of this sub project, it is still slow but progressing. In terms of death of the provided goats, the situation has been stabilized. As of August at the time of PR2, there were 13 kids and one was delivered to the second recipient. Now, 21 kids are alive and five female kids have been delivered to the subsequent members. There are some pregnant goats but also some abortion, miscarriages.. Since initially provided goats have been stabilized in terms of getting used to the surrounding environments, more will be expected to be born and passed to the subsequent members in the groups. There are six female goats with their mother goats, which have not yet been transferred, and they are at least expected to be passed to the next members soon.

~from March 2014 to August 2014~

As an overall outlook of this sub project, it is still slow but progressing compared with what was reported in PR3. As of February at the time of PR3, there were 21 kids and five were delivered to the second recipients. Now, 32 kids are alive and eight female kids have been delivered to the subsequent members. Still, the overall performance of the initially provided goats is not well since miscarriages hinder acceleration of the system. Six more female kids will be transferred to subsequent members after weaning.

~from September 2014 to December 2014~

In this monitoring period, unfortunately the general progress is stagnant. Currently thirty two kids (13 females and 19 males) are alive, but number is the same as in the previous report (PR4). The only change was increase in male by one and a decrease in female by one. In PR4, there were thirty two kids (14 females and 18 males). In this period, four kids were only born in Gar Qarsa; one male and three females. However in the period, four female kids died; three in Gar Qarsa and one in Arapal (three are the ones which had been transferred previously to subsequent members; and one is newly born one during this monitoring period). Number of initially provided goats remained same at 11M and 86F.

The following table shows the current number of the goat initially provided.

**Table AG4.2.6 Current Number of Goats Initially Provided**

	Group Name	Condition as of August 2013	Condition as of the end of February 2014	Condition as of the end of August 2014	Current Condition as of the end of December 2014	Remarks (change from PR4 to PR5)
Kalacha						
1	SELF HELP WOMEN	1M 4 F	1M 3F	1M3F	1M3F	No change
2	MWANGAZA WOMEN GROUP	1 M 4 F	0M 4F	0M4F	0M4F	No change

	Group Name	Condition as of August 2013	Condition as of the end of February 2014	Condition as of the end of August 2014	Current Condition as of the end of December 2014	Remarks (change from PR4 to PR5)
3	WOLDAGENA/ANE ESA SELF-HELP	4 F	4F	3F	3F	No change
4	MAZINGIRA WOMEN GROUP	1M 3 F	1M 3F	1M3F	1M3F	No change
Gar Qarsa						
5	AWAN BORRI BORRO WOMEN GROUP	1 M 7 F	1M 7F	1M6F	1M6F	No change
6	ARTHA JILLA WOMEN GROUP	1 M 3 F	1M 3F	1M3F	1M3F	No change
7	GAR QARSA AIC WOMEN GROUP	1 M 6 F	1M 6F	1M6F	1M6F	No change
8	ARTHA BALLA WOMEN GROUP	1 M 7 F	1M 7F	1M 7F	1M 7F	No change
9	HALCHA WOMEN GROUP	1 M 4 F	1M 3F	1M 3F	1M 3F	No change
10	OBSINA SUKUNANA WOMEN GROUP	1 M 8 F	1M 8F	1M 8F	1M 8F	No change
11	BALCHUMA CONTACT MOTHERS GROUP	7 F	7F	7F	7F	No change
12	BADAQICHA WOMEN GROUP	1 M 6 F	1M 5F	1M 5F	1M 5F	No change
13	BARITE WOMEN GROUP	1 M 7 F	1M 7F	1M 5F	1M 5F	No change
Arapal						
14	PARIKISHON WOMEN GROUP	1 M 13 F	1M 13F	1M 12F	1M 12F	No change
15	NASERIAN WOMEN GROUP	0M 13 F	0M 13F	0M 11F	0M 11F	No change
	Total	12M96F	11MF93F	11M86F	11M86F	

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

In Gar Qarsa, total 18 goats provided have died mostly because of diseases. Loss rate for three places are 10% in Kalacha, 22% in Gar Qarsa, and 10% in Arapal, and the rate in Gar Qarsa is high. This is probably because the altitude of Gar Qarsa is higher than the rest of the areas and therefore temperature is lower especially at night and morning than the one that Galla goats normally live in, and some died before they got used to the climate condition. Now, the condition of the rest is relatively stable.

~from September 2013 to February 2014~

Almost one year has passed since the goats were delivered to the target groups. Number of provided goats are almost the same as the situation as of PR2. Across the three locations, only four were lost, far below the figure as of PR2 (in total 23 died). The goats in all areas are basically now in good body conditions. The group members in Gar Qarsa, where 22% loss rate at PR2 time was seen, commented that the goats have adapted to the area.

~from March 2014 to August 2014~

Number of provided goats is slightly reduced but does not see drastic changes as compared to the situation as of PR3. Across the three locations, seven were lost (all were female; one in Kalacha, three in Gar Qarsa, and three in Arapal), higher than the loss cases reported PR3 (four). The reasons of the death are mostly reported by cycling disease.

~from September 2014 to December 2014~

Number of initially provided goats is still same as reported in PR4. Goats were reported to be in good health although the challenging factor currently is scarcity of pastures which forced majority to be taken away to far areas in hillsides in search of grass and water.

### G4.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are written.

(1) Number of Goats Multiplied Based on the Initial Goats Introduced to the Group

The following is the monitoring results for this indicator.

**Table AG4.2.7 Number of Goats Multiplied**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014	Remarks (change from PR4 to PR5)
Kalacha						
1	SELF HELP WOMEN	1 female and 1 male	2	3 (1 female, 2 male)	3 (1 female, 2 male)	No change
2	MWANGAZA WOMEN GROUP	1 female	1	2 (1 female, 1 male)	2 (1 female, 1 male)	No change
3	WOLDAGENA/A NEESA SELF-HELP	Nil	0	0	0	No change
4	MAZINGIRA WOMEN GROUP	Nil	0	0	0	No change
Gar Qarsa						
5	AWAN BORRI BORRO WOMEN GROUP	Nil	3 (2 female and 1 male)	2 (1 female and 1 male)	3 (2 female and 1 male)	1 female kid born in September
6	ARTHA JILLA WOMEN GROUP	Nil	1 female	2 (1 female and 1 male)	2 (1 female and 1 male)	No change
7	GAR QARSA AIC WOMEN GROUP	Nil	1 male	0	0	No change
8	ARTHA BALLA WOMEN GROUP	1 female	3 (2 female and 1 male)	3	2 (1 female and 1 male)	1 transferred female kid died in September.
9	HALCHA WOMEN GROUP	1 female	1	1 male	1 male	No change
10	OBSINA SUKUNANA WOMEN GROUP	Nil	1 female	4 (2 female and 2 male)	3 (1 female and 2 male)	1 transferred female kid died in September.
11	BALCHUMA CONTACT MOTHERS GROUP	Nil	0	1 male	1 male	No change



	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014	Remarks (change from PR4 to PR5)
12	BADAQICHA WOMEN GROUP	Nil	0	2 male	4 (3 males, 1 female)	1 male kids born late October 2 female kid born in September and October. 1 female kid died in October.
13	BARITE WOMEN GROUP	Nil	0	3 (1 female and 2 male)	3 (1 female and 2 male)	No change
Arapal						
14	PARIKISHON WOMEN GROUP	2 males	2	3 (1 male and 2 female)	2 (1 male and 1 female)	1 transferred female kid died in Mid October.
15	NASERIAN WOMEN GROUP	4 males and 2 females	6	6 (3 male and 3 female)	6 (3 male and 3 female)	No change
	Total	7M6F	10M11F	18M14F	19M 13F	

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Thirteen kids are alive as at the time of writing this report (six groups out of fifteen groups). There were some cases of kids that died and miscarriages. It was the initial assumption on distribution that the goats that were pregnant will give birth after a short while. However, there being no accurate way of testing for pregnancy, it turned out that not all those assumed to be pregnant were. The other factor that may affect the live births includes the death of a number of goats from natural causes, miscarriages and the death of some kids. It is also evident that some of the males and female goats had not reached mating age. However, as of now, some cases of pregnancy have been reported, and it is expected more kids will be born.

~from September 2013 to February 2014~

Twenty one kids (11 female and 10 male) are alive at the time of writing this report (10 groups out of 15 groups), increased from 13 kids and six groups as of PR2. There were some cases of abortions as well as other groups reported deaths of young kids. As of now, there are a total 93 female goats initially provided which have delivered 21 kids alive. Rate of the kids that are alive is only 22.6% from the above mother female goats for one year.

It was an initial assumption on distribution that the goats that were pregnant would give birth after a short while. However, there being no accurate way of testing for pregnancy, it turned out that not all those assumed to be pregnant were. The other factors that affect number of births include deaths of a number of goats from environmental factors (natural causes), nutritional deficiencies, abortions, and the death of some kids. It is also evident that some of the males and female goats had not reached the mating age. These are possible reasons for the above low rate of delivered kids.

However, as of now, more pregnancies have been reported (around 40 pregnant goats in total), *flushing* (feeding highly nutritious rations), mineral supplementation and veterinary officers' check-ups are needed to improve on pregnancy sustenance and number of kids to be born later. After-care of the kids is important also till weaning time comes.

~from March 2014 to August 2014~

Thirty two kids (14 female and 18 male) are alive at the time of writing this report (12 groups out of 15 groups), increased from 21 kids and 10 groups as of PR3. There were some cases of miscarriage as

well as other groups reported deaths of young kids. As of now, there are a total 86 female goats initially provided which have delivered 32 kids alive. Rate of the kids that are alive becomes 37% out of the above mother female goats for one and half year. Actually, in total 19 kids (13 male, 6 female) were born and eight kids (5 male and 3 female) died during this monitoring period.



Source: JICA Project Team

**Figure AG4.2.9 Dead Male Kid in Gar Qarsa**

~from September 2014 to December 2014~

Currently there are 32 kids (13 females and 19 males); no change in number of kids although a slight change where there was an increase in male by one and a decrease in female by one, in PR4 there were 32 kids (14 females and 18 males). In the monitoring period, four kids were born in Gar Qarsa; one male kid and three females. Unfortunately in the monitoring period, four female kids died; three in Gar Qarsa and one in Arapal; the three were kids transferred previously to subsequent members, and one female kid that died in Gar Qarsa was born in this monitoring period.

#### Comparison with the initial plan

From the initial plan, all the members were supposed to have gotten female kids by the end of December 2014, but on the contrary the majority have not yet received.

The possible reasons could have been 1) the initially provided goats had not actually been pregnant, and some were too young to be mated; 2) death of certain number of initially provided goats due to inadaptability to the natural environment; 3) low performance of goats on their delivery (many miscarriages); and 4) death of kids born due to attack by wild animals.

Attachment G4-2, detail history of each goat provided for the performance is shown. Out of 86 surviving initial female seed goats, those that aborted at least once are 49 (57%) the same figure reported in PR4. Goats that have never conceived are seven (8%), decreased two from nine reported in PR4 indicating that goats which had not conceived started conceiving as time went by, though slowly.

#### (2) Number of Female Goats Distributed to Subsequent Members (goats/member)

The following are the monitoring results for this indicator.

**TableAG4.2.8 Number of Female Goats Transferred**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014	Remarks (change from PR4 to PR5)
Kalacha						
1	SELF HELP WOMEN	Nil	1	1	1	No change
2	MWANGAZA WOMEN GROUP	Nil	1	1	1	No change
3	WOLDAGENA/ANEE SA SELF-HELP	Nil	0	0	0	No change

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014	Remarks (change from PR4 to PR5)
4	MAZINGIRA WOMEN GROUP	Nil	0	0	0	No change
Gar Qarsa						
5	AWAN BORRI BORRO WOMEN GROUP	Nil	0	1	1	No change
6	ARTHA JILLA WOMEN GROUP	Nil	0	1	1	No change
7	GAR QARSA AIC WOMEN GROUP	Nil	0	0	0	No change
8	ARTHA BALLA WOMEN GROUP	Nil	0	1	0	Distributed kid died in September 2014
9	HALCHA WOMEN GROUP	Nil	0	0	0	No change
10	OBSINA SUKUNANA WOMEN GROUP	Nil	1	1	0	Distributed kid died Sept 2014
11	BALCHUMA CONTACT MOTHERS GROUP	Nil	0	0	0	No change
12	BADAQICHA WOMEN GROUP	Nil	0	0	0	No change
13	BARITE WOMEN GROUP	Nil	0	0	0	No change
Arapal						
14	PARKISHON WOMEN GROUP	Nil	0	1	0	Distributed kid died in mid-October 2014
15	NASERIAN WOMEN GROUP	1	2	1	1	No change
	Total	1	5	8	5	

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

One kid was passed to the next recipient and this was in Arapal. The goats that have been born have not reached an age where most can be separated from the mother. The rest of the five females born cannot be passed to the next recipient are expected to be passed to the subsequent members as they grow.



Source: JICA Project Team

**Figure AG4.2.10 First Subsequent Member Who Received Female Kids in Arapal**

~from September 2013 to February 2014~

In total, five female goats have been distributed to subsequent recipients; four additional ones since August report, one in Arapal, one in Gar Qarsa, and two in Kalacha. The other six female kids are still young but to be distributed later when they mature. For some groups like ARTHA BALLA, they have identified new recipients for the female kids they have, but argue that they can be distributed after new ones are born.



Source: JICA Project Team

**Figure AG4.2.11** *Second Subsequent Member Who Received Female Kids in Arapal*

~from March 2014 to August 2014~

In total, eight female goats have been distributed to subsequent recipients; four additional ones since February report, one in Arapal, three in Gar Qarsa but one died in Arapal after transfer. The other six female kids are still young and to be distributed later when they mature.



Source: JICA Project Team

**Figure AG4.2.12** *Second Subsequent Members Who Received Female Kids (left in Gar Qarsa, right in Arapal)*

~from September 2014 to December 2014~

No female kids distributed in the entire period. Unfortunately, three of the transferred kids died; one distributed in Feb (Gar Qarsa), one in June (Gar Qarsa), one in August (Arapal) 2014. Five distributed ones are still alive; 2 in Kalacha, 2 in Gar Qarsa and 1 in Arapal. These were suspected to have died from common prevalent diseases in the areas.



Source: JICA Project Team

**Figure AG4.2.13 Distributed Kids That Died**

**(Left: Kid in Gar Qarsa, Right: kid in Arapal)**

In total, eight female goats were distributed to subsequent recipients, three died and five still alive; 2 in Kalacha, 2 in Gar Qarsa and 1 in Arapal. There are 13 female kids in total of which 5 have been distributed thus 8 remaining of which those in their possession feel they are still too young to be distributed to other subsequent members.

(3) Number of Subsequent Group Members Who Received Increased Female Goats

The following are the monitoring results for this indicator.

**Table AG4.2.9 Number of Subsequent Group Members Who Received Increased Female Goats**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Kalacha					
1	SELF HELP WOMEN	Nil	1	1	1
2	MWANGAZA WOMEN GROUP	Nil	1	1	1
3	WOLDAGENA/ANEESA SELF-HELP	Nil	0	0	0
4	MAZINGIRA WOMEN GROUP	Nil	0	0	0
Gar Qarsa					
5	AWAN BORRI BORRO WOMEN GROUP	Nil	0	1	1
6	ARTHA JILLA WOMEN GROUP	Nil	0	1	1
7	GAR QARSA AIC WOMEN GROUP	Nil	0	0	0
8	ARTHA BALLA WOMEN GROUP	Nil	0	1	0
9	HALCHA WOMEN GROUP	Nil	0	0	
10	OBSINA SUKUNANA WOMEN GROUP	Nil	1	1	0
11	BALCHUMA CONTACT MOTHERS GROUP	Nil	0	0	0
12	BADAQICHA WOMEN GROUP	Nil	0	0	0
13	BARITE WOMEN GROUP	Nil	0	0	0
Arapal					
14	PARKISHON WOMEN GROUP	Nil	0	1	0
15	NASERIAN WOMEN GROUP	1	2	1	1
	Total	1	5	8	5

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

One person has received the increased goats. This was in Arapal. Other five female goat kids alive as at the time of reporting had not reached an age where they can be separated from the mother.

~from September 2013 to February 2014~

Other than the first one who received a female goat in Arapal as of PR2, four additional recipients have received; an additional one in Arapal location, two in Kalacha and one in Gar Qarsa.

~from March 2014 to August 2014~

Other than the five who received female goats by the time of as of PR3, four additional recipients have received born female goats; an additional one in Arapal location, three in Gar Qarsa; but one member lost one female kid in Arapal, meaning that eight members in total received female kids.

~from September 2014 to December 2014~

In PR4, 8 members had received female kids, but by mid October 2014 three members lost their kids; one in Arapal and two in Gar Qarsa. The five remaining recipients still possess their kids; 2 in Kalacha, 2 in Gar Qarsa and 1 in Arapal (we have 13 female kids in total of which 5 have been distributed to subsequent members thus 8 remaining). Two female kids were born in the monitoring period meaning 6 had been born earlier, those with the kids claim they are still young and can only be distributed after *weaning* (leaving to suckle and start eating grasses and forbs).

#### Comparison with the initial plan

The initial idea was that by September 2014, all the target members would have received one female goat. Current progress shows 31% of achievement rate even decreased from the rate in PR4 because of death of the delivered female kids. The most significant reason can be attributed to physiological performance of introduced Galla goat. If Galla goat's performance from time of delivery could have been better or local goats used, progress would have been greatly more than the current one.

**Table AG4.2.10 Overall Progress of the System Introduced**

Group Name	Initial plan	Current Progress
Initial members who get/have initial female goat	116	86
Subsequent members who receive/have multiplied female goat	174	5
Total	290	91

Source: JICA Project Team

The speed of transfer is slower than expected, and therefore subsequent members could have complicated feelings. The following table summarizes the opinions of subsequent members who have not yet received.

**Table AG4.2.11 Opinion of Group's subsequent Members on the Current Situation of Slow Multiplication and Transfers**

	Group Name	Subsequent members opinion
1	SELF HELP WOMEN	They believe that the 1 <sup>st</sup> recipients are not lying. Although the system is very slow, they hope that they will get the kids even if it's a long time.
2	MWANGAZA WOMEN GROUP	The members say that they work together to take care of goats. They buy medicine and look for hay and therefore they don't think the other members are lying. They are hopeful to get the female kids in future if all goes well.
3	WOLDAGENA/ANEE SA SELF-HELP	They believe that the miscarriages and deaths of kids is natural. They believe that the 1 <sup>st</sup> recipients are not lying.
4	MAZINGIRA WOMEN GROUP	They believe that they will get female kids as long as that the goats are not going to die. They assured that none of the 1 <sup>st</sup> recipients is hiding the information.
5	AWAN BORRI BORRO WOMEN GROUP	They trust each other therefore there is no chance of hiding information. What's occurring among the goat is natural, when the remaining goats adapt the new environment or use the local ones, they hope to get the female kids.

	Group Name	Subsequent members opinion
6	ARTHA JILLA WOMEN GROUP	There seems to be some mistrust among the goat beneficiaries in general. Although they blame the project for giving the the galla goats rather than the local ones.
7	GAR QARSA AIC WOMEN GROUP	There are no complains among the subsequent recipients since they understand the situation of the goat and they don't think that the first recipients are lying.
8	ARTHA BALLA WOMEN GROUP	The group members trust each other and they don't think that the 1 <sup>st</sup> recipients are hiding any information from them.
9	HALCHA WOMEN GROUP	Although the multiplication and transfer is taking longer than expected, the members are hopeful to get the females kids. They don't blame the first recipients or think that they hiding the information rather they blame the project for buying the goats outside of the region. The local goats can multiply faster than the Galla ones
10	OBSINA SUKUNANA WOMEN GROUP	They don't blame the 1 <sup>st</sup> recipient but rather blame the approach of the project for giving out the goats that are not adapted to the region. However they are hopeful to get the females.
11	BALCHUMA CONTACT MOTHERS GROUP	They understand the situation which is natural and are hopeful to get the female kid som time in future.
12	BADAQICHA WOMEN GROUP	The subsequent members who as interviewed claimed that they dont see anything wrong with the process because what's occurring with the goats is natural. They believe that they will benefit even if takes a lot of time.
13	BARITE WOMEN GROUP	They don't think that the 1 <sup>st</sup> recipients are hiding information since they discuss everything in the meetings. They are hopeful that they will get the female kids.
14	PARIKISHON WOMEN GROUP	Although the multiplication of the goats is very slow, they are hopeful to get the female kids in future.
15	NASERIAN WOMEN GROUP	They are going to be patient until they get the female kids. The proces is very slow but they will wait for their turn.

Source: JICA Project Team

Basically, most of the subsequent members trust the first recipients and believe this is due to physiological challenges not human error. Therefore most of them can wait even though it takes time. Some minor opinions show some sort of complaints those local goats which are believed to deliver more and faster should have been given. Only one group seems to have mistrust among the members.

An idea of a new system modifying the current system was discussed to seek a possibility of making the transfer faster. This new system is to transfer the initially provided goats from the first recipients to second recipients if initial goats do not deliver any kids after one year (the purpose is to raise incentive of recipients of seed goats). Opinions and reactions of the groups when they heard the idea of the new system are summarized in the table below:

**Table AG4.2.12 Opinion of Groups on New System of Goat Transfer**

	Group Name	Opinion on new system
1	SELF HELP WOMEN	They prefer the older system since its difficult to rotate the seed goat among all the members. The goat might not deliver during the stipulated time, leaving some members bitter.
2	MWANGAZA WOMEN GROUP	The new idea seems better since its easier to take care of the older animal than the fragile young kid however, the prefer sticking to the older system.
3	WOLDAGENA/ANE ESA SELF-HELP	They stick to the older system arguing out that new system might not benefit all the people. The seed goat might leave some members unlucky.
4	MAZINGIRA WOMEN GROUP	They prefer sticking to their older system of transferring kids.
5	AWAN BORRI BORRO WOMEN GROUP	The new system is OK but they already have a successful transfer. They prefer sticking to older system. They doubt the new system since some members might be unlucky. They can stay with the goat for one but it might not deliver. They prefer continuing the older system with local goats.
6	ARTHA JILLA WOMEN GROUP	The new system is OK for them. The chairlady had earlier proposed the system to the other group members.

	Group Name	Opinion on new system
7	GAR QARSA AIC WOMEN GROUP	They prefer the older system compared to the new one. Since they work together as the group, the older system is OK although its slow due to the inability of the Galla goats to adapt to the area.
8	ARTHA BALLA WOMEN GROUP	The prefer the older system. No need of trasfering the seed goat.
9	HALCHA WOMEN GROUP	The system is OK however they doubt that the goat might not deliver during the stipulated time and the member do not benefit.
10	OBSINA SUKUNANA WOMEN GROUP	The system is OK but it may imply that no one benefits since some goats can take long time before they deliver.
11	BALCHUMA CONTACT MOTHERS GROUP	The system looks fine but they prefer the older one. Both systems are matter of who is lucky and unlucky. Some members can stay with the goat but might not deliver.
12	BADAQICHA WOMEN GROUP	They see that its OK to rotate the goat among the members.
13	BARITE WOMEN GROUP	They prefer the older system since they don't like the idea of goat moving from one person to another. It can spread some diseases and later die without benefiting anyone.
14	PARIKISHON WOMEN GROUP	They prefer using the older system since its in full functioning. It might seem unfair to the first recipients
15	NASERIAN WOMEN GROUP	They prefer the older system.

Source: JICA Project Team

Majority of the groups prefer the current system to the new idea. Though some groups at first said the second system is ok, but later they added objection with some reasons such as fairness, physiological problem, and diseases.

#### (4) Number of Male Goats Sold

The following is the monitoring results for this indicator.

**Table AG4.2.13 Number of Male Goats Sold**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Kalacha					
1	SELF HELP WOMEN	0	0	0	0
2	MWANGAZA WOMEN GROUP	0	0	0	0
3	WOLDAGENA/ANEESA SELF-HELP	0	0	0	0
4	MAZINGIRA WOMEN GROUP	0	0	0	0
Gar Qarsa					
5	AWAN BORRI BORRO WOMEN GROUP	0	0	0	0
6	ARTHA JILLA WOMEN GROUP	0	0	0	0
7	GAR QARSA AIC WOMEN GROUP	0	0	0	0
8	ARTHA BALLA WOMEN GROUP	0	0	0	0
9	HALCHA WOMEN GROUP	0	0	0	0
10	OBSINA SUKUNANA WOMEN GROUP	0	0	0	0
11	BALCHUMA CONTACT MOTHERS GROUP	0	0	0	0
12	BADAQICHA WOMEN GROUP	0	0	0	0
13	BARITE WOMEN GROUP	0	0	0	0
Arapal					
14	PARKISHON WOMEN GROUP	0	0	0	0
15	NASERIAN WOMEN GROUP	0	0	0	0

Source: JICA Project Team



~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Seven male kids were alive at the time of reporting. Most of the community groups said that they want to sell them once they reach a certain age at least after the age of six months, not now, though they agree to sell them and put the money obtained from that sale to Drought Fund. The progress will be monitored.

~from September 2013 to February 2014~

The male goats are still young to be sold, and this is the main reason not to sell. Also, most of group members across all locations feel that prices of goats have nose-dived now thus can't make profits out of them, even if these goats become mature enough to be sold. They also consider such price fluctuation.

~from March 2014 to August 2014~

The opinion is still the same, meaning that the male goats are still young to be sold. They said at least the age must be more than a year. Male kids born during the monitoring period of PR2 attain around one year of age. From now, cases will be observed that the group sells male kids and put the money into Drought Fund.

~from September 2014 to December 2014~

No goats have been sold yet although there are about 5 males with over one year, those in possession claim they haven't found appropriate markets to sell them for higher profit margins.

(5) Records of Any Individual Benefits (milk consumed from the distributed goats, etc)

The following is the monitoring results for this indicator.

**TableAG4.2.14 Records of Any Individual Benefits**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Kalacha					
1	SELF HELP WOMEN	Nil female goats which delivered kids have not produced enough milk for human consumption.	Nil Kids have grown, no milk from mother goats.	Some milk enjoyed by the owner	Kids grown
2	MWANGAZA WOMEN GROUP	Nil female goats which delivered kids have not produced enough milk for human consumption.	Nil Kids have grown, no milk from mother goats.	Milk enjoyed by the owner	Kids grown
3	WOLDAGENA/AN EESA SELF-HELP	None	None	none	None
4	MAZINGIRA WOMEN GROUP	None	None	none	None
Gar Qarsa					
5	AWAN BORRI BORRO WOMEN GROUP	None	Some milk Enjoyed by herdsmen	none	Milk enjoyed by herdsman
6	ARTHA JILLA WOMEN GROUP	None	Some milk Enjoyed by herdsmen	Milk enjoyed by the herdsman	Milk enjoyed by the herdsman
7	GAR QARSA AIC WOMEN GROUP	None	Some milk Enjoyed by herdsmen	none	None
8	ARTHA BALLA WOMEN GROUP	About one litre/day/female for memebrrs Milk was not sold but for human consumption only.	Some milk Enjoyed by herdsmen	none	None

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
9	HALCHA WOMEN GROUP	Nil female goats which delivered kids have not produced enough milk for human consumption.	Nil Kids have grown, no milk from mother goats.	Milk enjoyed by the herdsman	Kids grown
10	OBSINA SUKUNANA WOMEN GROUP	None	Nil Already transferred, though young	Milk enjoyed by the herdsman	Milk enjoyed by the herdsman
11	BALCHUMA CONTACT MOTHERS GROUP	None	None	Milk enjoyed by the herdsman	Kids grown
12	BADAQICHA WOMEN GROUP	None	None	Milk enjoyed by the herdsman	Milk enjoyed
13	BARITE WOMEN GROUP	None	None	Milk enjoyed by the owner	Milk enjoyed
Arapal					
14	PARKISHON WOMEN GROUP	Nil female goats which delivered kids have not produced enough milk for human consumption.	Nil Kids have grown, no milk from mother goats.	Milk enjoyed by the owner	Milk enjoyed
15	NASERIAN WOMEN GROUP	Around half to one liter/day/female for members Milk was not sold but for human consumption only.	Nil Kids have grown, no milk from mother goats.	Milk enjoyed by the owner	Kids grown

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Immediately after kidding some of the mothers were noted to produce half to one litter of milk for human consumption reported in two groups. It was noted that this amount tapered off after some time. Also, four groups which have kid goats have not enjoyed milk. Although the decline is expected over the long run even for the goats that produce milk, it is possible that the reduced/nil milk production was as a result of decreasing feed as the dry season set in.

~from September 2013 to February 2014~

Immediately after kidding some of the mothers were noted to produce half to one liter per day of milk for human consumption as reported in four groups. It was noted that this amount tapered off after some time. Although the decline was expected in the long run even for the goats that produce milk, it is possible that the reduced/nil milk production was as a result of decrease in feeds in the dry season.

~from March 2014 to August 2014~

The situation is the same as reported in PR3. Immediately after kidding some of the kids' mothers were noted to produce half to one liter per day of milk for human consumption as reported in four groups.

~from September 2014 to December 2014~

Milk is enjoyed mostly by herdsman guarding the goats far away in the grazing fields. With time, milk diminishes and is later left for the kids alone to suckle.

## (6) Amount of the Money as the Group Saving in the Account as Drought Fund

## 1) Amount of the Money as the Group Saving in the Account as Drought Fund

The following is the monitoring results for this indicator.

**Table AG4.2.15 Amount of the Money as Drought Fund**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Kalacha					
1	SELF HELP WOMEN	Ksh.0	Kshs.8,000 (Members contribution)	Ksh.18000 (Members contributions)	Ksh.18000 (No change)
2	MWANGAZA WOMEN GROUP	Ksh.0	Kshs.14,400 (Members contributions + donations + Kshs.3,000 obtained from meat sale)	Ksh19,400 (Members contributions)	Ksh19,400 (No change)
3	WOLDAGENA/ANEE SA SELF-HELP	Ksh.0	Kshs.5,500 (Members contributions)	Ksh.8,000 (Members contributions)	Ksh.8,000 (No change)
4	MAZINGIRA WOMEN GROUP	Ksh.0	Kshs.8,000 (Members contributions)	Ksh.18,000 (Members contributions)	Ksh.18,000 (No change)
Gar Qarsa					
5	AWAN BORRI BORRO WOMEN GROUP	Ksh.0	Kshs.0	Ksh.3,000 (Members contributions)	Ksh.3,000 (No change)
6	ARTHA JILLA WOMEN GROUP	Ksh.0	Kshs.0 (Not kept due to food problem but still in group's future plans).	Ksh.2,000 (started contributing to months ago)	Ksh.2,000 (No change)
7	GAR QARSA AIC WOMEN GROUP	Ksh.0	Kshs.0 (Drought fund not implemented but aware of it).	Ksh.0 (Not implemented but will contribute as soon as the current drought ends)	Ksh.0 (Not implemented)
8	ARTHA BALLA WOMEN GROUP	Ksh.0	Kshs.4,000 (From monthly contributions).	Ksh.4,000 (No change since the current drought has intensified, they have to channel the money to buying water and food)	Ksh.4,000 (No change)
9	HALCHA WOMEN GROUP	Ksh.0	Kshs.0 (Aware of drought fund but not yet implemented).	Ksh.0 (They may contribute in a month. They are struggling in life, the current drought is hard on them)	Ksh.0 (No change)
10	OBSINA SUKUNANA WOMEN GROUP	Ksh.0	Kshs.0 (Aware of drought fund but not yet implemented).	Ksh.0 (members are struggling to buy water, feed and food for the family, No money left to contribute to Drought fund)	Ksh.0 (No change, members claim to have grasped concept for future use).
11	BALCHUMA CONTACT MOTHERS GROUP	Ksh.0	Kshs.0 (Still in negotiation to make contributions but aware of drought fund).	Ksh.0 (Members have many contributions to make in a month, thus not afford for DF)	Not implemented (members claim to have grasped the idea)
12	BADAQICHA WOMEN GROUP	Ksh.0	Kshs.3,000 (Was made from monthly contribution).	Ksh.3,000 (No change, the current drought is severe and members are struggling to survive)	Ksh.3,000 (No change)

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
13	BARITE WOMEN GROUP	Kshs.5,000	Kshs.5,000	Ksh.4,000 (used Ksh.1000 to buy drugs)	Ksh.4,000 (No change)
Arapal					
14	PARKISHON WOMEN GROUP	Kshs.21,000 (by contribution, not from male goat sale)	Kshs.21,000 (No change)	Ksh.23,000 (Members contributions)	Ksh.23,000 (no change)
15	NASERIAN WOMEN GROUP	Kshs.40,000 (by contribution, not from male goat sale)	Kshs.38,500 (used some money for condolence. Promised to contribute to supplement).	Ksh.42,000 (Initial members contribution)	Ksh.42,000 (no change)

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Most groups have been slow in starting the drought fund. This may be attributed to the notion that the fund should largely come from the sale of male goats. However, the group in Arapal, motivated by their visit to Gas under the PFS program decided to make their own contributions to the fund. This is why the two groups currently have the highest amount of money under the goat merry go round. As seen in the previous section, the groups want to sell the male goats at certain months, it could be later that they put the money onto Drought Fund. In this case, the contributions from the members like the Arapal groups are one of the ways to accelerate the saving of money. Also, the persistent reminder of the importance of Drought Fund is necessary.



Source: JICA Project Team

**Figure AG4.2.14** VICOPA Box and Drought Fund Box (Indicated by Yellow Circle) in Arapal

~from September 2013 to February 2014~

This drought kitty has been gradually established for each group in the target area. Arapal groups are ahead of this fund. In these six months, the groups in Kalacha agreed to contribute money for the fund. The groups in Gar Qarsa have not yet started their contribution.

~from March 2014 to August 2014~

Contribution to Drought Fund is progressed in Kalacha and Arapal. They seem to understand for the preparedness. On the other hand in Gar Qarsa, most of the groups are stagnant for contributing for Drought Fund because they said they are suffering from the current drought and cannot afford to contribute.

~from September 2014 to December 2014~

Contribution to Drought Fund stagnated in all the groups, members claimed that because of challenging economic times, they were unable to contribute towards the kitty though they have grasped the saving concept for use in providence (future).

2) Any Record with Reason When Drought Fund Is Used

Basically no reason to use Drought Fund as shown below.

**Table AG4.2.16 Any Record with Reason When Drought Fund Is Used**

	Group name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
Kalacha					
1	SELF HELP WOMEN	Not yet	Not yet	Not yet	Not yet
2	MWANGAZA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
3	WOLDAGENA/ANEESA SELF-HELP	Not yet	Not yet	Not yet	Not yet
4	MAZINGIRA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
Gar Qarsa					
5	AWAN BORRI BORRO WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
6	ARTHA JILLA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
7	GAR QARSA AIC WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
8	ARTHA BALLA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
9	HALCHA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
10	OBSINA SUKUNANA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
11	BALCHUMA CONTACT MOTHERS GROUP	Not yet	Not yet	Not yet	Not yet
12	BADAQICHA WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
13	BARITE WOMEN GROUP	Not yet	Not yet	Used Ksh.1000 to buy drugs for the goats	Not yet
Arapal					
14	PARKISHON WOMEN GROUP	Not yet	Not yet	Not yet	Not yet
15	NASERIAN WOMEN GROUP	Not yet	Not yet	Not yet	Not yet

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

By the time of writing the report, no drought had occurred hence there was no need for using any funds for drought.

~from September 2013 to February 2014~

Only Arapal group used some for condolence and said that they are going to refund this as shown before.

~from March 2014 to August 2014~

Only Gar Qarsa group used to buy drugs for goats, thought the purpose of the fund does not support this purchase.

~from September 2014 to December 2014~

No group reported to have used drought fund. All claimed to have grasped the concept of saving and its importance thus had to keep the funds intact despite any circumstances only to be used in drought times.

## (7) Other Funds for the Group

The following is the monitoring results for this indicator. This is other group fund apart from Drought Fund.

**Table AG4.2.17 Other Funds for the Group**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014	Remarks (change from PR4 to PR5)
Kalacha						
1	SELF HELP WOMEN	Kshs.12,500 (VICOBA has started for 10 members)	Kshs.13,400	Ksh.15,900	Ksh.17,100	VICOBA is implemented
2	MWANGAZA WOMEN GROUP	Kshs.11,900 (VICOBA has started for 10 members)	Kshs.14,400	Ksh.16,900	Ksh.17,500	VICOBA is implemented
3	WOLDAGEN A/ANEESA SELF-HELP	Kshs.12,500 (VICOBA has started for 10 members)	Kshs.13,300	Ksh.14,300	Ksh.15,800	VICOBA is implemented
4	MAZINGIRA WOMEN GROUP	Kshs.11,900 (VICOBA has started for 10 members)	Kshs.13,900	Ksh.18,900	Ksh.20,600	VICOBA inactive
Gar Qarsa						
5	AWAN BORRI BORRO WOMEN GROUP	Kshs.40,000 (VICOBA is implemented)	Kshs.42,000 (Loan:35,000, Bank:7,000, Cash:0)	Ksh.47,000 (Loan:35,000, Bank: 12,000)	Kshs.50,720 (Loan;37,000 Bank;13720) -VICOBA active	VICOBA is active.
6	ARTHA JILLA WOMEN GROUP	Kshs.90,000 (VICOBA is implemented)	Kshs.90,000 (Cash:60,000, Loan:0 & Bank:30,000).	Ksh.90,000 (Cash:43,000 , Loan: 37,000 & Bank: 10,000)	Kshs.92000 (Loan;62000,Bank;15000, Cash;15000) VICOBA is active.	Aware of VICOBA and started loaning recently)
7	GAR QARSA AIC WOMEN GROUP	Kshs.40,000 (VICOBA is implemented)	Kshs.40,000 (Loan 40,000,Cash;0,Bank; 0)	Ksh.40,000	Kshs.40,000 (Static) VICOBA is inactive	VICOBA is inactive
8	ARTHA BALLA WOMEN GROUP	Kshs.70,000 (VICOBA is implemented)	Kshs.75,000 (Bank;40,000 (equity), Loan;35,000)	Kshs.75,000 (Bank;40,000 (equity), Loan;35,000)	Kshs.77000 (Loan;45,000,Bank;32,000 ) VICOBA is active	VICOBA is implemented
9	HALCHA WOMEN GROUP	Kshs.13,000 (VICOBA is implemented)	Kshs.37,550 (Loan:32,000, Interest:2,150, Monthly contributions:3,400)	Ksh. 91,000 (Loan: 80,000, Bank: 11,000)	Kshs.93000 (Loan;78000,Bank;13000, Cash:2000) VICOBA implemented	VICOBA is implemented
10	OBSINA SUKUNANA WOMEN GROUP	Kshs.70,000 (VICOBA is implemented)	Kshs.70,000 (Loan:70,000, Cash:0,Bank:0)	Kshs.75,000 (Loan:50,000, Cash:0,Bank:25,00)	Kshs.77000 (Loan;62000,Bank;10000, Cash;3000) VICOBA implemented	VICOBA not so active but group aware of concept.
11	BALCHUMA CONTACT MOTHERS GROUP	Kshs.40,000 (VICOBA is implemented)	Kshs.58,000 (Cash/bag:30,000, Loan:20,000, Bank(KCB):8,000)	Kshs.60,000 (Cash/bag:0, Loan:40,000, Bank(KCB):20,000)	Kshs.63000 (Loan;45000,Bank;13000, Cash;5000) VICOBA is active	VICOBA is implemented

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014	Remarks (change from PR4 to PR5)
12	BADAQICHA WOMEN GROUP	Kshs.50,000 (VICOBA is implemented)	Kshs.130,000 (Loan:130,000, Cash:0, Bank:0)	Kshs.130,000 (Loan:130,000, Cash:0, Bank:0)	Kshs.133000 (Loan;128000,Bank;0,Cash;5000) VICOBA is active	VICOBA is implemented
13	BARITE WOMEN GROUP	Kshs.70,000 (VICOBA is implemented)	Kshs.48,800 (Cash:6,000, Bank:2,800, Loan:40,000)	Kshs.180,000(Cash:0, Bank:60,000, Loan:120,000)	Kshs.180,000 (Cash: 0, Bank:60,000, Loan:120,000) VICOBA inactive	VICOBA inactive (Loan from CARITAS)
Arapal						
14	PARKISHON WOMEN GROUP	Kshs. 7,570 (VICOBA has started but not well done)	Kshs.10,300 (Cash:7,500, Bank:1,500,Loan:1,300)	Kshs.14,500 (Cash:0, Bank:1,500,Loan:13,000)	Kshs.17250 (Loan;12000,Bank;1500,Cash;3750) VICOBA is active	VICOBA is active
15	NASERIAN WOMEN GROUP	Kshs. 8,450 (VICOBA is implemented)	Kshs.11,200 (Cash:1,200, Loan:10,000, Bank:0)	Kshs.37,000 (Cash:0, Loan:37,000, Bank:0)	Kshs.41000 (Loan;38000,Bank;0,Cash;3000)	VICOBA active

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Members who received goats belong to the larger groups in Mazingira, Mwangaza and Self Help, and Kalacha Aneesa (Woldagena) have started their own VICOBA and raise their fund among 10 members, though they have not yet loaned out. For other groups, generally they increased the fund compared with the baseline conditions. One of the possible reasons is that most of the groups implement VICOBA for the goat sub-project (all 15 groups), therefore they collect monthly contributions.

With regards to VICOBA, the number of groups which practice it have increased from nine to fifteen. However, some groups, e.g. Parkishon in Arapal, have difficulty in handling the “complicated” system of VICOBA. Hence, VICOBA may not be fully emphasized for future unless the groups have the will and capacity to do it.

~from September 2013 to February 2014~

With group dynamics, we have some that are active while others are not. For those groups which have interests, the project created awareness on availability of the loans and grants to be provided by the county government.

~from March 2014 to August 2014~

Most of the groups succeeded to increase the fund mostly because of VICOBA implementation.

~from September 2014 to December 2014~

VICOBA is implemented in most of the groups, though it is not active in several (four or five) groups as of now.

#### G4.2.4 Monitoring of Effect Indicators and Others.

Here, information for effect and other indicators at the end of the sub project period is written.

## (1) Group members' livelihood

**Kalacha:** - Is a dry, hot and windy area that can't sustain farming activities, majority of group members rely on their livestock both for food and cash after sale of livestock (goats). Few own small shops as a source of their livelihood.

**Gar Qarsa:** - The area has good arable land thus group members normally do miraa farming (for cash), plant beans and maize for their subsistence, others do some menial jobs for daily cash while few are entrepreneurs who have small shops. Since they are in same area, system of livelihood is somehow similar.

**Arapal:**-Majority of group (Parkishon and Naserian) members over-rely on their livestock especially goats for food as well as selling for cash, this is because they have no arable land that can be used for farming activities. Few own small shops for their sustenance.



Source: JICA Project Team

*Figure AG4.2.15 Member's Livelihood (Arapal: Parkishon group member in her shop)*

## (2) Current measures in terms of livelihood to cope with drought

## 1) By member

**Kalacha:** - Sale of livestock is the major measure to cope with drought. Minority replied that profit from small business, husband remittance, and governmental relief are the measures.

**Gar Qarsa:** - Coping measures are sale of livestock, sale and stock of agricultural products, profit from business, and wage from casual labour.

**Arapal:**- Here also the major measure is sale of livestock. Some use saving and profits from the small business, and minority said that the measures are consumption of wild tubers, to borrow goods and later pay with a goat.

All above is in general based on the current livelihood.

## 2) By group

Interviewed groups may not have really changed their coping measures compared with the baseline conditions. All the groups in Kalacha and Arapal interviewed, they replied somehow the system introduced and idea of Drought Fund can be a measure for drought. Gar Qarsa, two groups out of six interviewed expressed negative on the system introduced as a coping measures because of slow speed of the system.

## (3) Assets by member and group

Here whether some impacts are observed or not to their assets by the sub project compared to the baseline condition is argued as below.



## 1) By member

There has been no significant change in assets ownership by majority of members except few who received female kids and alive from first recipients. The baseline survey results show that goat holding number is 11 (100% of the sampled members have goats) in Kalacha, around three (only 50% of the sampled members have them), and 23 (100% of them do) in Arapal. Number of holding goats in Gar Qarsa is small, this may be because they are in town and/or female might not have correctly answered goats of which ownership is husband. If it is true, one female goat per member for members who have received is not a small number.

From common knowledge, the livestock size for the pastoralist family is quite large, and thus in general one/member may not have a significant impact until they multiply certain number of them. However, in terms of gender perspective, even though one goat is provided, female members have certain confidence and in terms ownership because husband knows that this goat belongs to his wife (not perfectly distinguished, though) and she can decide everything on the goat.

## 2) By group

The goats provided in this system have dual purpose. Once provided, members can take care of the goats, but at the same time, the goats are also for the groups. Thus, numbers of the current goats alive are the assets increased for the groups. In this sense, the impact is not small.

## (4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Here whether some impact is observed or not to their assets by the sub project compared to the baseline condition is argued as below.

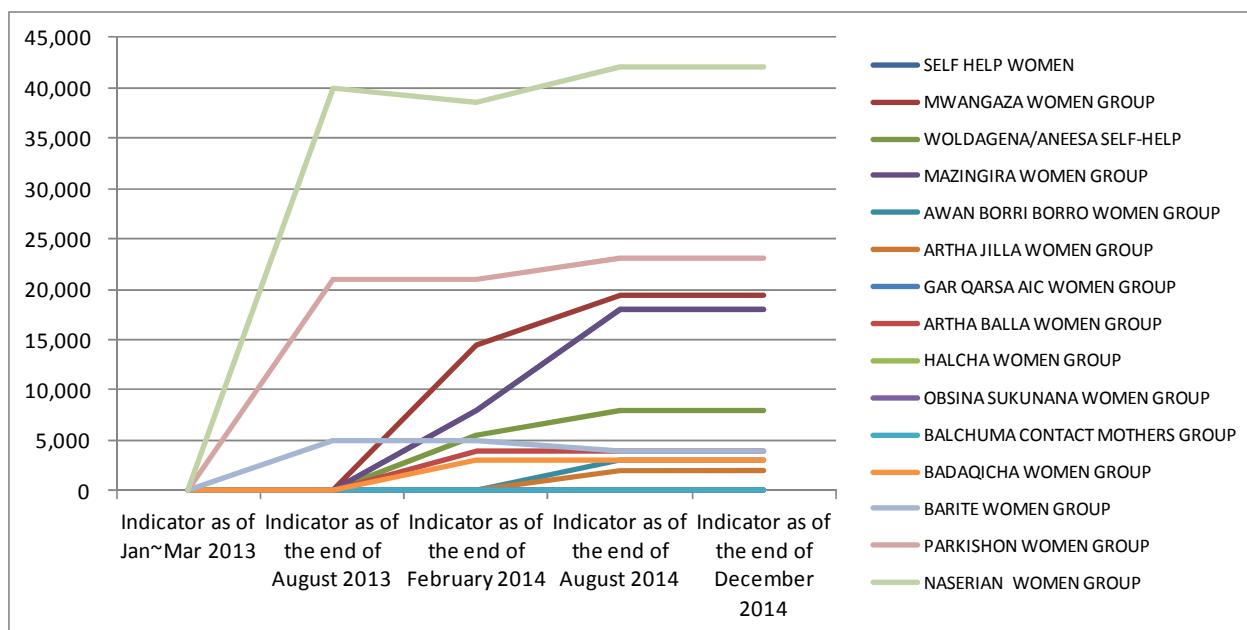
## 1) By member

There was no household income by the system on members since milk produced wasn't enough for the market but mainly consumed by herdsmen in pasture fields. Those with seed goats claimed to have undergone expenses especially on drugs whenever the goats fell sick.

Household income average in Gar Qarsa is Ksh 220,133 and the highest, and therefore they may not be interested in only one goat provision (even slow multiplication). Members' household incomes in Kalacha and Arapal are Ksh 105,708, and 31,398, respectively. Though any tangible financial monetary benefits from the system have not yet been seen, acquisition of a potential source of cash in terms of the goat (several thousand shillings per one goat) is generally welcomed by the members.

## 2) By group

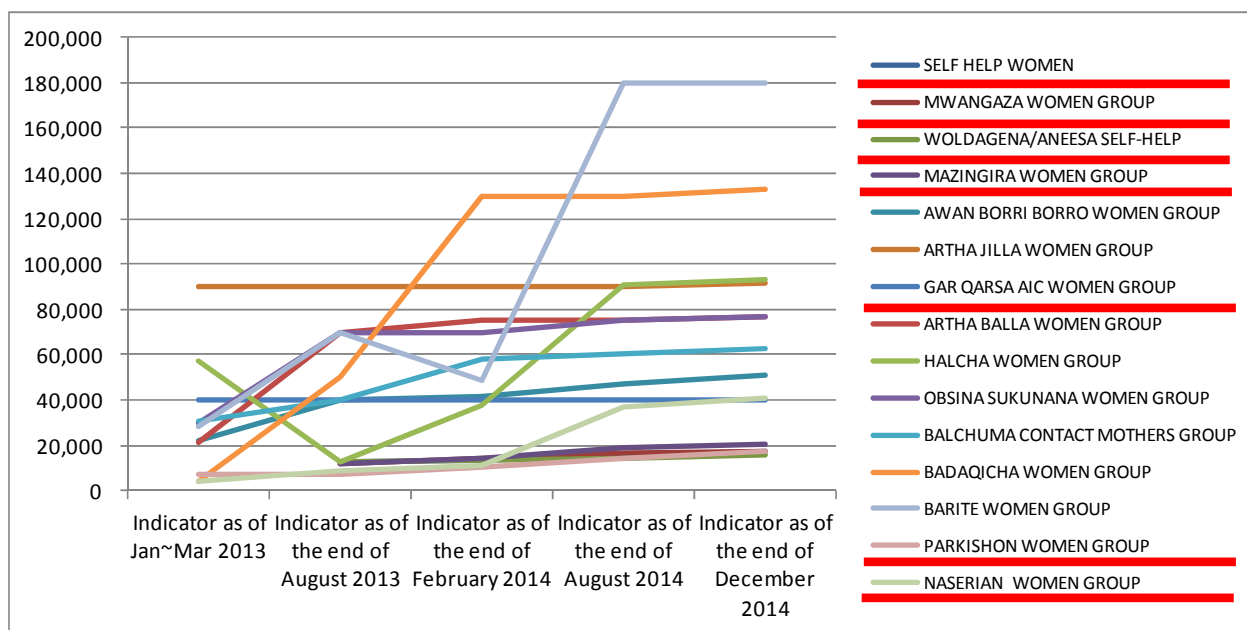
Drought Fund and VICOBA money are tangible financial benefit for groups. With the exception of four groups (all of them in Gar Qarsa), the groups saved Drought Fund from about Ksh 2,000 to Ksh42,000. In fact as a whole, members were to gain collectively from the sale of mature male goats where the returns were to be kept in the drought fund kitty. Unfortunately, no male goat has so far been sold by any group for the kitty. In that sense, no income has been generated for the groups since no male kids have been sold. However the groups who understood the concept agreed to contribute money for the drought kitty, indicating that the concept seems to sound beneficial. If goats are to be bought using this money when drought occurs, at least one or two can be bought for the groups which have Drought Fund more than several thousand shillings. So that they can again replicate the system among the group members.



Source: JICA Project Team

**Figure AG4.2.16 Change of Drought Fund**

For VICOBA, there were seven groups which had not started VICOBA based on the baseline information. Now, all 15 groups are doing VICOBA and increased the fund (though four are inactive).



Source: JICA Project Team, Original Mazingira group had implemented VICOBA but newly formed group for the sub project had not. Red underlined groups had not started VICOBA before the sub project started.

**Figure AG4.2.17 Change of Other Group Fund**

Finally, for most groups, the group fund has gradually increased, though some groups are slow or stagnant. Most of the money is used for loans to the members who want money for their individual purposes.

- (5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1) Expectation to enhance resilience by the sub-project

Individual answers are as follow:

**Kalacha:** - Eighty two percent of the respondents said that resilience is enhanced because of drought fund or saving idea itself.

**Gar Qarsa:** - Ninety four percent said that resilience is enhanced because they learned to put money aside for future use during drought.

**Arapal:-** Hundred percent of the respondents said that resilience is enhanced. Similarly the reason raised is saving money for future drought.

It seems that resilience has been enhanced by developing the idea of drought saving (not necessarily Drought Fund for groups, but fundamental idea at individual level). Unfortunately no one stated that the reason is the goat system.

Interestingly most of the groups interviewed also stated the same as the above except two groups in Gar Qarsa (these two groups said resilience is not enhanced).

2) Expectation in general

**Kalacha:-**Expectation from majority of group members was to get soft loans for business purposes, PVC tanks for water storage, cattle/camel heifer and more goats. About 45% said their expectations were met, others said expectations were not met. As groups, general expectation is the same as individual ones, and all of the groups said expectations were not met in terms of what they had wanted.

**Gar Qarsa:** - Expectation from majority of group members was to get soft loans for business purposes, PVC tanks and construction of underground water tanks on slopes of the hills, farming equipments etc. Around 29% said expectation was met, others said expectation was not met. As groups, general expectation is the same as individual ones, and 16% of the groups interviewed said expectation was met.

**Arapal:-**Expectation from both groups was to get soft loans for small businesses, PVC tanks-water storage and hospital construction. Referring to this expectation, 44% of the sampled individual members replied expectation was met. However, though initial expectation was not met, most of the members who answered in the negative added that they thanked JICA for their mentoring. The trend for the groups, is similar to the individuals with 50% of the groups stating that their expectation was met.

3) Knowledge Obtained

For all the interviewed members and groups across the three locations, the knowledge they learnt are: drought preparedness, goat merry go round as new system of sharing (transfer of female kids to subsequent members), VICOBA, new concept of drought preparedness, caring for Galla goats and goat caring in general (buy drugs and hay), and how to prepare for the future droughts (contribute and save money for the coming droughts) as culture of saving.

4) JICA approach

The following opinions are raised in the end-line survey:

**Table AG4.2.18 Opinion on JICA's Approach**

		Individual	Groups
1	Opinion on Galla goat	Most of the first recipients responded that the Galla goat is beneficial since they have additional	In the group there are mixed reactions and opinion on the Galla goats. 50% of the groups argued that the

		Individual	Groups
		<p>asset (improved goat breed) and the Galla goat produces milk that they can use to make tea (otherwise they could have incurred extra costs to buy milk from the shop). Other subsequent recipients who responded that the Galla is beneficial said that they have benefitted from the transfer of the female kid.</p> <p>Most subsequent recipients responded that they have not benefitted from the Galla mainly because its have taken long time for them to receive the female kids from the first recipients. Other people (first recipients) feel that they have not benefitted because the initial goats given to them died leaving them without any benefits.</p>	<p>Galla is beneficial since it produces more milk and its comparatively bigger in size compared to the local goats. Furthermore it was a chance for the first recipients to increase their household assets and in some groups they have seen that the Galla goat have adapted to the region. The other 50% of the groups argue that the Galla goat has high mortality and miscarriages rates that have hindered the faster transfer of female kids to the subsequent members. They have associated the mortality and miscarriages to the inability of the breed to adapt to the local conditions. One group however argued that the male goat does not mate and thus the good traits cannot be disseminated to the other local goats.</p>
2	Opinion on whole system	<p>96.2% of the individuals responded that the whole system is positive because they can contribute drought fund that they can use during drought emergency times to replace initial goats, buy drugs and hay. The system also allows the group members to share the little they have thus creating cohesion in the group. They further argue that the system through the provision of initial goats and transfer of female kids increases the household assets. The male kids born can be sold and the money put in the drought fund kitty. And lastly, since Galla goat is improved breed, when it mates with local goat it can spread good traits of good milk and meat production.</p> <p>Its only 3.8% of the individuals that argued that the system is negative since they had to incur a lot of cost in procuring drugs for the Galla goats provided. They argue that the breed is susceptible to diseases and thus requires expensive medicine for its treatment.</p>	<p>Positive- 83.3% of the groups (mostly from Kalacha, Qar Qarsa and Arapal) responded that the system is very positive. The groups based their arguments on the following reasons; The system prepares and creates resilience of the groups against drought since they can contribute for the drought fund and also they can sell the male kids born and add the money to the kitty. On the other hand, the provision of the initial goats and the transfer of the female kids increase both individual and household assets of the women. Furthermore, the system as whole helps the group members to be together and therefore creating cohesion among the group.</p> <p>Negative- Its only two groups, 16.7% mainly from Gar Qarsa (Halcha and Qar garsa AIC) responded that the system is negative. The two groups argued that due to high mortality rate of the initial goats provided (Halcha) due to difference in climate plus high rate of miscarriages, it takes long time for the subsequent members to benefit from the female kids. They argued that each individual in the group should have been given a goat to facilitate immediate increase in household assets.</p>
3	Challenges	/	<ul style="list-style-type: none"> <li>• High mortality rate of the initial goats provided due to prevalence of the diseases in the region</li> <li>• A lot of miscarriages among the Galla goats provided</li> <li>• Attack by predators-wild animals.</li> <li>• Inability of the Galla goat breed to adapt to the local climate (especially the cold climate of Gar Qarsa)</li> </ul>
4	Opinion on Drought Fund	/	<p>All the groups responded that the drought fund Kitty is important in that it prepares and creates resilience against drought because they can contribute money that can be used during drought to buy hay, food, drugs or even restart the whole project. Above all it creates the culture of saving among the group and its individuals.</p>

		Individual	Groups
5	Opinion on continuity of the system	All the individuals agreed that they will continue with system since the system allows them to be together and that's how the individual members can benefit from cheaper loans from the group, a chance to get a female Galla kid, skills and knowledge (through trainings and seminars offered to the group) and ideas can be shared among the members of the group.	All the groups will continue with the system because they feel that it brings them closer to each other and thus each member can access loans from the group, have opportunity to own a female kid and share ideas with other members of the group. And through the creation and saving of the drought fund their resilience against future droughts is enhanced.
	Opinion on VICOBA		All the groups responded that VICOBA is very useful in that it allows the individual members of the group to access cheaper loans at affordable interest's rates based on mutual understanding. Its only one group (ANEESA) that has not embarked on VICOBA since its working with CARE (COSALO).
6	Opinion on JICA's approach	All the individual are positive that JICA's approach has been beneficial to them because through Trainings, Seminars, PFS and mentorings they have acquired knowledge and skills in entrepreneurship, goat husbandry and care, drought preparedness, kujigetegema spirit, VICOBA and financial management. They further comment that JICA frequent visits and monitorings has improved group cohesion and transparency since the members meet occasionally to share information with JICA staff.	All the groups cited that the JICA's approach is appropriate because JICA has provided trainings, seminars and PFS that has enabled the groups to gain knowledge and skills in business management, entrepreneurship, VICOBA and goat rearing. Furthermore unlike NGOs, JICA has good aftercare where its staff visits the groups on regular basis to offer mentors and monitor the progress of the groups. This has improved transparency and accountability among the group since all information (regarding dead goats, kids born, monthly contribution, drought and group funds) is shared with staff in presence of all the members.

Source: JICA Project Team based on the end-line survey

In summary, the system introduced saving idea and VICOBA were positively evaluated in general. The most unfortunate thing is the low multiplication rate of Galla goat. They also positively understand JICA's after care and mentoring concepts.

#### 5) Overall satisfaction

Individual members' satisfaction is as below:

**Table AG4.2.19 Overall Satisfaction**

	Category	Respondent
Kalacha		
1	Highly satisfied	7 (32%)
2	Moderately satisfied	13 (59%)
3	Moderately unsatisfied	1 (5%)
4	Highly unsatisfied	1 (5%)
Gar Qarsa		
1	Highly satisfied	4 (29%)
2	Moderately satisfied	8 (57%)
3	Moderately unsatisfied	1 (7%)
4	Highly unsatisfied	1 (7%)
Arapal		
1	Highly satisfied	13 (81%)
2	Moderately satisfied	3 (19%)
3	Moderately unsatisfied	0 (0%)
4	Highly unsatisfied	0 (0%)

Source: JICA Project Team based on the end-line survey

For all locations, the interviewed individuals are in most cases satisfied. Arapal members are satisfied the best, followed by Kalacha, and Gar Qarsa. However, though they showed positive satisfaction, they added that low performance of Galla goats and slow multiplication was unsatisfactory

Groups' answers are also similar to the individual ones as follows:

**Kalacha:-** they were moderately/highly satisfied with the project since they gained skills on goat rearing, realized usefulness of saving with frequent visit/after care although economic conditions couldn't allow them.

**Gar Qarsa:** - they were moderately satisfied with the project since they gained skills on goat rearing, realized usefulness of saving although economic conditions don't allow them. Two groups; Obsina-Sukunana and Artha-Jilla were highly/moderately unsatisfied with the project since its members felt they haven't gained by getting kids, frequent abortions and sickness among their seed goats.

**Arapal:-** two groups were highly satisfied by JICA's assistance especially on apply for loan scheme, VICOBA, and care for the goats.

(6) Other indicators to see impact

1) Members efforts on the sub projects

Most group members across all locations have been congregating either weekly or monthly for money contributions and VICOBA participation, in the process as well, they discussed the welfare of the goats whereby they could sometimes make emergency funds to buy drugs whenever they heard of sick goats.

Even though male kids are less or too small to be sold, they agreed to contribute money for the drought kitty.

Also, following the group autonomy, they digested the rule given and set their rules. E.g. the groups decided their own order of subsequent members to get female goats. For the groups which was formed newly for this sub project by selecting some from their original groups decided to pass kids to non group members for JICA who are in the original members reached here 12.28pm

2) Gender

In Northern Kenya communities, ownership of livestock is mainly by men. Giving women goats in the project was a major milestone. This way of women members have felt ownership of the goats as well as having a say on enjoyment of their benefits like milk. Men appreciate the importance of the project by allowing their women to participate in it since its benefits will be shared by them as well.

Also, women members are empowered financially through VICOBA, which contributes to their business and satisfying their family needs in most cases.

3) Environment

All stakeholders felt that the project did not have any negative impact on the environment

4) Other community members' opinions

The end-line survey gives the following opinions based on focus group interview with chief (and elders). Opinions were primarily conveyed through local leaders and elders who fully understand the needs of the communities.

Awareness of livelihood activities by Chief (DMC/DC)

All of them across the three locations are aware of the livelihood activities by JICA. Mostly they had a positive understanding of the goat program, especially women's ownership of them.

### Other community people's opinions

According to chiefs and elders, other community members wanted to be included in Arapal and Kalacha. Gar Qarsa chief said that JICA could have given the groups the local goats and also each person should have received a goat rather than wait.

### DMC/DC function on livelihood program

Their understanding on function of DMC/DC is to oversee the activities of the group, avoid too much exploitation of resources and teach on ways to combat drought. In addition, they also stated that the role is to sensitize member to buy hay, repair water systems, control and protect grazing areas, to monitor the use of water and pasture in the area.



Source: JICA Project Team

**Figure AG4.2.18 Interview with Chief**  
(Left: Chief-Gar Qarsa and Qilta sub locations, Right: Arapal Ass Chief and elders)

## G4.3 Discussion

### G4.3.1 Resilience Building as Diversified Livelihood Measures

Discussion on resilience building for this sub project is as follows:

- It was intended that through this system, sustainable livestock sharing system as groups would be established. Even though goats are common, building a “sustainable” system itself is the initial purpose as resilience building against drought, so that they could restart the system as groups to restock/increase goats without relying on external support even after their goats die due to drought;
- Unfortunately since performance of Galla goats on multiplication has been low and the system has not fully run as planned in terms of speed, it cannot be judged whether the system works or not. However, the concept itself was positively evaluated by the members and they expressed their willingness to continue after the project withdraws, indicating that the concept is understood and agreed to by the members;
- Within the project period, some individual members were given one female goat. This one may not have a significant impact on their livestock asset as of now in terms of numbers (only one per member). It is however expected that the number of goats will gradually increase with time, and constitute a substantial part of their assets with significant effect on resilience building with a system that can be replicated, though it may take time.; and
- They were lucky to learn and understand the Drought Fund concept where mature male goats would be sold at market prices and the money saved for future use during drought times.

Unfortunately since the inception of the project, no male kid has been sold for cash to be kept in drought fund kitty. Luckily though members in most groups devised methods of establishing a drought fund kitty by making monthly contributions and saving it as such. At least the groups can buy goats to start a cycle once again, or even use that money to at least mitigate future drought losses .

### **G4.3.2 Positive Impact**

Positive impacts observed are as follow:

- Acquisition of skills. Members have learned skills on goat rearing through continuous mentoring and monitoring;
- From the Drought Fund concept, majority of members agreed to have realized the need of saving and they promised to have a saving culture. They said that they would apply this saving idea to their individual life and business although hard economic times may not allow them to do so at the moment;
- By this system, group cohesion is enhanced to work together. By this cohesion, it is expected that members will help each other when severe drought hits them;
- VICOBA was appreciated by most of the members. This could satisfy individual fund demand for their family matters as well as their individual IGA activities in situations where formal banks are not available within their proximity; and
- Through this sub project, women are empowered both by goat ownership and improvement of their financial status.

### **G4.3.3 Issues and Challenges**

Issues and challenges are as follows:

- There have been continuous reports of frequent abortions among the pregnant Galla goats, an issue that has not been solved since inception of the project. To counter the problem, follow ups have continuously been made on tests done earlier in the year on samples from goats to get the root cause but the results have not yet been availed.

The may be because of outbreak of diseases, weak conditions of Galla goats, and/or less care by the members;

- Lack of crucial vaccinations and medication together with veterinary personnel in the target areas (groups) hampered acceleration of multiplication of kids due to the high number of abortions reported; and
- Although interbreeding can be positive on one respect, its intended purposes may not have been achieved because off-springs produced would not be the original Galla breed intended to be distributed to subsequent members.

## **G4.4 Conclusion and Lesson Learned**

Based on the above argument, conclusion and lesson learnt can be summarized as follows:-

- For the areas with few economic opportunities and for people who do not have assets, it is still possible that the goat merry go round is can be an effective measure for building resilience;
- The main difficulty is low multiplication rate by Galla goats but at least the idea and concept of a new sharing system has been learnt by the communities. In retrospect it would seem local goats which perform better could have been provided especially in the cold areas like Gar Qarsa which



is not favourable for Galla goats. Alternatively in areas with good markets like Gar Qarsa, a merry go round system using milking cow is also another option so that members can sell milk and get cash income;

- This low multiplication rate may also be attributed to less care by the members. Especially for Gar Qarsa, their cash income is high. They might not have had a strong demand for goats. They were selected through application process that normally shows willingness and capacity to follow the system. However, there might be more suitable targets who do not have livestock asset and thus poor. Such people could have stronger willingness to take care of goats carefully; and
- It is generally said that pastoralists do not have a saving culture. Indeed, the project staff also felt the same through the implementation of the sub project. However, people are changing, and the environment is also changing. It is not inappropriate to introduce new things especially saving culture.

The end-line survey shows that they learnt this idea. The reason for success is aftercare and repeating the concept persistently. In this sense, it is very important to have a long monitoring and mentoring period in order to repeat self reliance and new concept; and

- Extension services are important. Veterinary personnel, modern agricultural laboratories for disease diagnosis are supposed to be put in place by the local (County) Government to assist farmers to deal with from the menace of disease(s) outbreaks.

## CHAPTER G5. RESIN AND HONEY BUSINESS SUB-PROJECT

### G5.1 Outline of the Sub-project

#### G5.1.1 General Outline of the Sub-project

(1) Outline of the sub-project

**Table AG5.1.1 Outline of the Sub-project**

Item	Contents	Remarks								
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities by assisting their micro scale business activities (IGA: income generating activities targeted resin, and honey) and giving entrepreneur/business training, VICOBA training, and mentoring activities to enhance community resilience against drought.									
2. Number of Beneficiaries	2 groups and individual, around 22 group members/individuals	Later individuals formed one group.								
3. Implementation Organization	JICA ECoRAD Project, and the community groups									
4. Project Contents										
1) Project Outline	1) Business training 2) VICOBA Training 3) Mentoring activities including market linkage									
2) Facility / Activity	<table border="1"> <thead> <tr> <th><i>Facilities/Activities</i></th> <th><i>Implementer</i></th> </tr> </thead> <tbody> <tr> <td>1) Implementation of training</td> <td>1) NGO</td> </tr> <tr> <td>2) Market linkage</td> <td>2) NGO</td> </tr> <tr> <td>3) Monitoring</td> <td>3) Project Team &amp; NGO</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementer</i>	1) Implementation of training	1) NGO	2) Market linkage	2) NGO	3) Monitoring	3) Project Team & NGO	
<i>Facilities/Activities</i>	<i>Implementer</i>									
1) Implementation of training	1) NGO									
2) Market linkage	2) NGO									
3) Monitoring	3) Project Team & NGO									
3) Organization for O&M	Target community groups and their chief and elders									
4) Construction Period	23 months(starting Feb 2013 around up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.								

Source: JICA Project Team

(2) Basic principle of the sub-project

This sub-project is to assist target groups to do business utilizing local resources (products) near their domiciles and encourage them to make savings out of the proceeds during the lean drought periods. The use of local resources (resin and honey) in business cannot be imposed on local people. However the project will emphasize capacity building of the business skills of the people such as understanding cost and benefit structure, and identifying/linking markets. The activities to be done include entrepreneurship and VICOBA training and mentoring activities.

### G5.1.2 Selection of Target Groups

#### (1) Participatory planning

In selection of the target groups, participatory planning approach was taken. Firstly the team visited the chief and discussed the preliminary idea of the activities planned in this location, namely gum and resin and honey business assistance as a model using local resources. The chief agreed and suggested that the business activities would not work out if groups are large especially in this location and therefore small groups or even individuals would be suitable. The team also interviewed some of the community members who do similar activities. It was revealed that some of the groups which got some assistance from donors were not so active and even were split mainly due to some group dynamics. Those groups tend to have larger number of members (more than 50). Considering this, the team decided to accommodate small groups and/or individuals because business activities are not easy.



Source: JICA Project Team

**Figure AG5.1.1 Interview with Community People to See How Current Business Activities Go in Ngurnit**

When the team met the chiefs next time, the team explained the detailed planned activities (only provision of training basically) and preference on smaller groups. The chiefs agreed and promised to inform the community of the detailed activities and select target candidates. Consequently two small groups and five individuals were selected, and after interviewing them, all were accepted as project targets.



Source: JICA Project Team

**Figure AG5.1.2 Several Meetings with Chiefs in Ngurnit**

At the end of this process, two groups and the team concluded a memorandum on receiving assistance from JICA and they would cooperate in the activities.

#### (2) Target community groups

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG5.1.2 Information for Target Group**

	Group name	Location	Number of members
1	NDOTO HONEY	Ngurnit	12
2	ASALI KINGI GROUP	Ngurnit	5
3	Individual business persons*	Ngurnit	5

\*: later they formed one group as MALAB.

Source: JICA Project Team

It was decided that the two groups should join the sub-project and the rest as individuals (five members). Later, these five individuals decided by themselves to form one group named MALAB. The constitution and memorandum are being prepared.

### G5.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

#### (1) Indicators

##### 1) Operational indicators

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. Throughout the implementation period, they were monitored.

**Table AG5.1.3 Operational Indicators**

	Operational Indicators
1	Business Transaction
1-1	Cost and benefit structure
1-2	Production and Transaction
1-3	Market
2	Records of any individual benefits (profit share, labour fee, etc)
3	Records of any group benefits
4	Total money in the group account (and any information about VICOBA implementation)

Source: JICA Project Team

##### 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be captured. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG5.1.4 Effect Indicators**

	Effect Indicators
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Assets by member and group
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, a baseline survey was undertaken as below:

## 1) Methodology

Like other sub-projects, two kinds of questionnaires were used; one is for an individual, and the other is for a group to obtain the baseline condition. Sample number for individuals was a total of 12 randomly selected out of total beneficiaries (22); five from NDOTO HONEY, two from ASALI KINGI GROUP, and five from individual participants (later they formed one group as MALAB).

All the selected groups were surveyed using focused- group discussions. At the time of the survey, MALAB had not been formed; therefore the total number of groups was two. The survey was implemented by an NGO in February, 2013.

## 2) Brief summary of socio economic condition of the target areas

Ngurnit location is located 65 km from Laisamis, in the slopes of Ndoto hills that join the Matthew ranges with 1,211 sq km of area. It borders Samburu County to the East. Ngurnit location has three sub-locations<sup>1</sup>, namely Ngurnit, Illaut, and Lonyori Pichau. Population of Ngurnit location is 8,293 with 1,918 households, and population of Ngurnit sub-location is 3,036 with 682 households (2009 Kenya Population and Housing Census). Inhabitants are Samburu, Rendille, and Ariaal (a cross between Samburu and Rendille). Mobile network and electricity are basically unavailable in the town (some spots of network are available some distance away, and some solar panels are available in town). Also cars pass relatively frequently.

## (3) Baseline information of Operational indicators

Here, baseline information for the indicators are set and shown based on the information obtained from the baseline survey and the activities by the project team.

1) Business transactionsGum and resin

As mentioned in Interim Report, the target variety gum and resin is black frankincense (Commiphora resin the word used here). According to the current information obtained through the activities of the sub-project, there seem two individuals in the target community members dealing with Commiphora in Ngurnit.

## 1. Cost and benefit structure

The general picture for the two for the baseline condition can be summarized in the table below.

**Table AG5.1.5 Cost and Benefit Structure of Gum Resin (Baseline)**

Item	Qty	Low case Selling: Ksh. 80/kg Buying: Ksh. 50/kg		High case Selling: Ksh. 200/kg Buying: Ksh. 150kg	
		Price (KES)	Total (KES)	Price (KES)	Total (KES)
Income					
50kgs bags	50	80	4,000	200	10,000
Cost					
Transportation to Isiolo/Marsabit (per bag)	1	400	400	400	400
Empty bags	1	50	50	50	50
Buying in Ngurnit (50kgs bags)	50	50	2,500	150	7,500
Estimated Net profit (% of net benefit/gross sale)			1,050 (26%)		2,050 (20%)

Source: JICA Project Team

<sup>1</sup>According to the interview with the chief, current sub-locations are Ngurnit, Namarei, and Mpagas.

There is the information about two cases on prices for Commiphora. For both cases, estimated net profit for minimum unit (50kg-bag) is good with more than 20% of benefit/gross sales ratio. The above is a simple analysis and does not include transportation of the business persons. Normally these ladies have other commodities for their business, therefore they take Commiphora to the markets and bring other commodities back to Ngurunit to save on transportation cost.

## 2. Production and transaction

These two individuals buy Commiphora from herders/children who are asked to collect Commiphora and sell them in markets. On average, the two have their transaction volume of buying and selling for around 20 bags of 50 kgs per year for each though this figure fluctuates. This business does not need any specific processing technique therefore is easy to be handled by the community.

## 3. Market

Markets that they had sold to were mainly in Ngurnit, Isiolo, and Marsabit towns. Major market for them before the assistance activities commenced was Ngurnit, and they had tried their sales in Isiolo and Marsabit. In Marsabit market, there are retailers who sell Commiphora. The interview done with some retailers indicated that they bought from Moyale. These retailers buy not only Commiphora but other commodities as well at Moyale to minimize transportation cost. To penetrate this Marsabit market is one of the target areas of the assistance activities.



Source: JICA Project Team

**Figure AG5.1.3 Market Situation for Gum and Resin**  
(Left: Retailer in Marsabit market, Right: Black Frankincense sold in Marsabit)

The information on Isiolo's market is not much available so far because this is out of our activities' area, but is considered a potential market with consideration of its population and its proximity from Ngurnit. In fact, both ladies have their experiences in selling Commiphora to Isiolo.

For both markets, there may not be a big demand, because the usage of this is for fragrance in the house or for some special occasions. This also could be smaller number of the community people who deal with this commodity (even most of them do not know where markets are). Also, the buyer may not buy huge amounts at one time to reduce risks. Hence, an appropriate supply level is recommended to be sought, on the other hand. Possible issues on this business could be 1) expansion of markets by the current business ladies and 2) seeking possibilities for other target members to do this business with an appropriate amount of supply to potential markets in order to improve the current business level and the target members' income.

## Honey

As written in Interim Report, Ngurnit is known as a famous honey production area in Northern Kenya, and there are several groups and individuals trading in honey. Other NGOs have assisted honey business before and seem to focus on establishment of modern beehives (this trial seems to

have failed according to the local chief). The approach for this sub-project, unlike the others, is to provide training and knowledge.

### 1. Cost and benefit structure

The general picture for the people's transaction for the baseline condition can be summarized in the table below.

**Table AG5.1.6 Cost and Benefit Structure of Honey (Baseline)**

	Qty	Price/unit (KES)	Total (KES)
<b>Income</b>			
Sales	24	350	8,400
<b>Costs</b>			
Empty containers	24	0*	-
4kg raw honey	4	1,400	5,600
<b>Transportation</b>			
Ngurunit-Marsabit (Trip)	1	500	500
Ngurunit-Laisamis (Trip)	1	300	300
Ngurunit-Loglogo (Trip)	1	300	300
Net profit			1,700

\*: Coca-cola plastic bottles are not bought, but collected. Out of 4 kg raw honey, almost 6 bottles of 500ml are produced.

Source: JICA Project Team

One unit used in the above analysis is four plastic containers. This plastic container is normally purchased by the members, and one has four kilograms of raw honey. Out of this, one four-kilogram raw honey comb, the members can make around six plastic bottles of 500ml on average; and thus four plastic containers provide 24 bottles (these 24-bottles may be one unit for transportation but not fixed as the number of bottles differs among members).

The selling price is Ksh. 350/bottle. Transportation costs above capture three places (divided 24 into three for each place), and one way for each because these members take other commodities on the way back. Net profit becomes around Ksh. 1,700 with 20% of net profit/gross sales ratio.

### 2. Production and transaction

Although honey is sold in Ngurnit, most of it is bought at wholesale prices from Illaut market. There are two production systems in operation. One is the wild honey collected by pastoralists who then sell it to the traders in Ngurnit. The second group is those who have hives in the mountain areas around and beyond Ngurnit. These group harvest honey and sell it either at Ngurnit or on Tuesdays at the Illaut market. The wholesale price of honey varies from Ksh. 1,200 to Ksh. 1,600. This varies with season and perceived quantity and quality by the buyers. Bargaining on buying is the order of the day. Other areas noted as sources of honey for Ngurnit include Siang'al, Arsim, and KARI.

Honey bought from Ilaut or other sources is processed, and offered for sale. Most women packed their honey using used coca-cola bottles. Basic technique to produce honey from honey combs is understood and practised by most of the target group members.



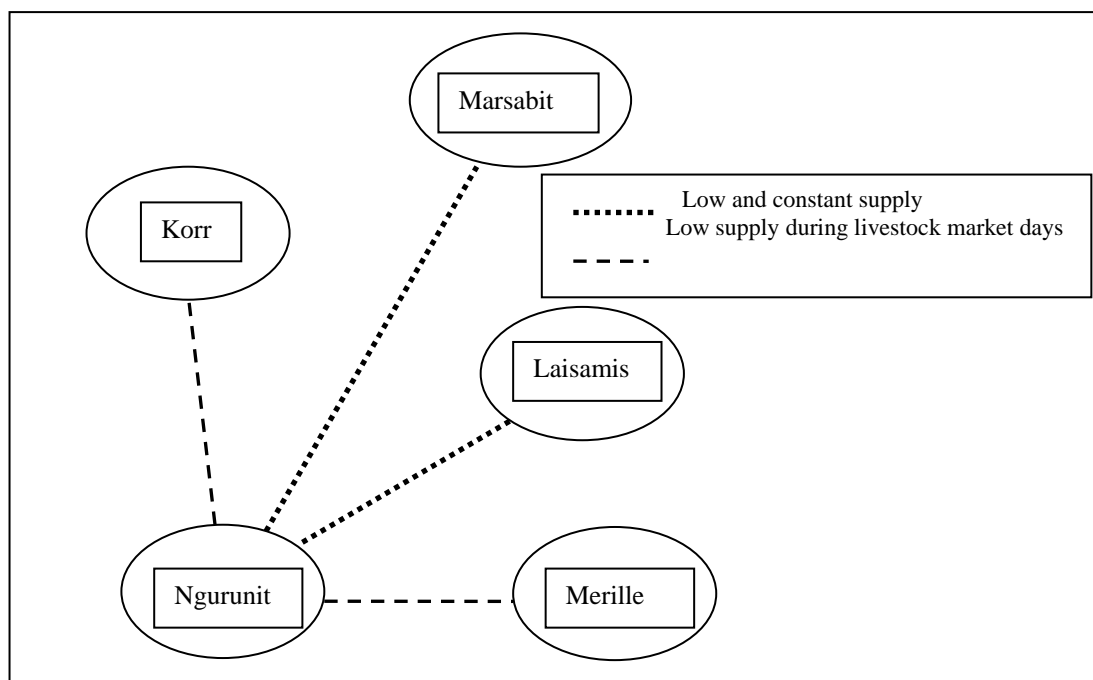
Source: JICA Project Team

**Figure AG5.1.4 Processing Honey from Raw Honey Combs in Ngurnit**

Previously, honey sales per year was approximately 70 bottles, 500ml each per person, meaning that one member could have around three-time transactions of 4kg-container. And, the total number of the target members are 22 (12+5+5), therefore the total transaction volumes for all the project target members is estimated at around 1,500 bottles per year.

### 3. Market

The sale of honey has almost been restricted to Ngurnit areas with little sales outside. Most buyers are travellers passing through Ngurnit occasionally. The following figure shows the markets before the assistance started.



Source: JICA Project Team

**Figure AG5.1.5 Honey Markets Before the Sub-project Started**

Honey is brought and sold in Korr and Merille only during their livestock market days. Marsabit and Laisamis have been the nearest big centres where women buy items such as food stuff, clothing and other accessories that they sell in their small shops. It is through these business errands that women transported honey packed in bottles to sell in Marsabit and Laisamis. Sales were low because customers did not like the packaging material.



Coca-cola bottles which they used were not well received by the buyers as there were fears about hygiene as their sources are unclear. There was need for more training on processing and packaging, improve packaging as well as identification of new markets. Honey from Ngurnit is famous for its purity and is preferred by mothers for children's health and thus can compete with other types. Other industrially produced honey is also available in Marsabit supermarkets (retail prices: 300-400Ksh/500mg), but the perception of the consumers is that it may contain chemical substances, indicating that it may not be good for health.



Source: JICA Project Team

**Figure AG5.1.6 Market Situation for Honey**  
(Left: Honey in A Shop in Ngurnit, Right: Ngurnit Honey (left) in A Shop in Marsabit)

Therefore, possible issues for this activity are to improve the packaging and thereby expand markets, in terms of places and customers, so that the volume sold will be increased.

### 2) Records of any individual benefits (profit share, labour fee, etc)

Business transactions in these selected two groups are basically conducted by individual members. Therefore, for both gum and resin, and honey business, the above information shown in (1) relating to cost and benefit is the individuals' benefits. In terms of profitability, Commiphora and honey may not be different considering the unit used for the analysis (20-30% out of gross sale), however once the current annual transaction volume of one individual is taken into consideration, absolute net profit of Commiphora is higher (20 bags times 1,050 = Ksh. 20,100 /year) than honey (70 bottles /24 bottles times 1,700 = Ksh. 5,100/year).

Despite this it is understood that fewer people are doing Commiphora business than honey, even though absolute net benefit per year in Commiphora business seems higher than honey. This could be because the supply of Commiphora is not stable and timely (herders bring it to the members; this depends on their timing, not timely manner; and also amount is not constant).

On the other hand, to buy honey raw combs is not as difficult. In addition, unlike one lady to sell Commiphora in bulk, to make good connection to bulk buyers may not be so easy for majority of community people. This could be one of the issues to be improved by the project activities.

### 3) Records of any group benefits

As shown above, the net income of business transaction is enjoyed by the individual members. Benefits as groups are 1) to help members to bring products such as honey to market as one to reduce transportation cost; and 2) to gather contributions from members (as initial capital raising) and give that money to a member so that that money helps members to do some IGA activities.

### 4) Total money in the group account

Total money in the group account before the sub-project started is summarized in the table below:

**Table AG5.1.7 Total Money in the Group Account**

	<b>Group name</b>	<b>Indicator as of Jan~Mar 2013</b>
1	NDOTO HONEY	Ksh. 4,680 VICOBA was implemented.
2	ASALI KINGI GROUP	Ksh. 3,000 VICOBA was implemented.
3	Individual	none

Source: JICA Project Team

Both groups had implemented VICOBA before the sub-project started. In Ngurunit, some NGOs assisted VICOBA activities, and these groups have experienced VICOBA assistance before from them.

(4) **Baseline information of Effect indicators**

1) Group members' livelihood

The sample target members do business as their main livelihood. Livestock is their secondary and tertiary measure of livelihood. A few replied that their major livelihood is employment.

2) Current measures in terms of livelihood to cope with drought

1. By member/individual

Current measures to cope with drought by the sample target members are buying food from shops. The money can come from their main livelihood of business, and some replied that money comes from sale of livestock. A few said they depend on livestock.

2. By group

The current measures by group are summarized in the table below:

**Table AG5.1.8 Current Measures to Cope With Drought (Group)**

	<b>Group name</b>	<b>Indicator as of Jan-Mar 2013</b>
1	NDOTO HONEY	Not specifically (just doing their business year around including ones other than honey)
2	ASALI KINGI GROUP	As above

Source: JICA Project Team

Both groups replied that they do not have specific counter measures against drought as of now.

3) Assets by member and group (including group profile)

1. By member/individual

Main assets (physical and livestock) by households<sup>2</sup> of individual members are shown below.

<sup>2</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (100~200 shoats/family).The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit);and 2) these households live close to the town/center of location so smaller figures are not far from the true figures. For the reference, average household size of the samples is 7.2 in Ngurunit.

**Table AG5.1.9 Assets by Member**

		Average/sample HH	% of having/ sample HH
Physical	TV	0.08	8
	Car	0.25	17
	Mobile phone	1.73	75
	Bicycle	0.08	8
	Motorcycle	0.08	8
Livestock	Goat	25.33 (max: 110, min: 0)	92
	Cow	7 (max: 25, min: 0)	50
	Sheep	7 (max: 30, min: 0)	67
	Camel	6.08 (max: 35, min: 0)	50
	Chicken	8.75 (max: 30, min: 0)	75
	Donkey	0.5 (max: 2, min: 0)	33

Source: Baseline Survey and JICA Project Team

Overall, these sample target members have more assets than those who participate in chicken and goat merry go-round sub-projects. In this location, high percentage of members' households have mobile phone (75%), and interestingly 17% have cars. For livestock assets, percentage of member households who own livestock other than donkeys are almost more than 50%. Goats are the highest (92%) with an average of 25 goats/household.

In terms of assets, the target members are considered to have a certain amount of assets. This could be because the target members do business as of now, and they are considered more capable than other community people, meaning that they seem not poor.

## 2. By group

Group asset including the information of general group profile is shown as below:

**Table AG5.1.10 Assets by Group**

	Group name	Indicator as of Jan~Mar 2013
1	NDOTO HONEY	Number of Group members: 12 Out of which, target members are 12 (female: 12, illiterate: 5) Asset: none Group account: Ksh. 4,680 Established: 2009
2	ASALI KINGI GROUP	Number of Group members: 5 Out of which, target members are 5 (female: 5, illiterate: 3) Asset: none Group account: Ksh. 3,000 Established: 2011

Source: JICA Project Team

The target group members are all female. Illiterate members are five in Ndotto group, and three in Asali Kingi group. With regard to the five individuals (later one group was formed), all are also female, with two being illiterate and three literate.

The literacy level (55%) for the target people in this sub-project is higher than other chicken and goat sub-project (32% and 7% respectively). This is probably because business activities somehow require some profit calculation and negotiation with buyers, and such people were

selected. Further all the participants are females, indicating that this kind of business activities is in most cases handled by female.

Two groups have certain amount of money as a group, but do not have any group assets.

4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

1. By member/individual

The household income and expenditure for the sampled target members are summarized in the table below:

**Table AG5.1.11 Household Income and Expenditure (Baseline)**

	Indicator as of Jan~Mar 2013
Annual Household Income	Average: Ksh. 219,043 Max: Ksh. 1,416,000 Min: Ksh. 12,000
Annual Household Expenditure	Average: Ksh. 151,000 Max: Ksh. 1,044,000 Min: Ksh. 7,550

Source: Baseline Survey and JICA Project Team

Annual average household income for the sampled members is Ksh. 219,043. This income level is almost the same as the one in Gar Qarsa, near Marsabit town.. The possible reasons are 1) the target members are business women and therefore they could have higher income level than normal residents in Ngurnit; and 2) the centre of Ngurnit seems larger than Kalacha centre and has more frequent car-visits.

2. By group (only financial impact)

Since the sub-project has not yet started, financial impacts of the groups for this indicator are none.

**Table AG5.1.12 Financial Impact (by Group)**

	Group name	Indicator as of Jan~Mar 2013
1	NDOTO HONEY	None
2	ASALI KINGI GROUP	None

Source: JICA Project Team

5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1. By member/individual

All the sample target members out of 12 expect to enhance resilience through the project. They said this will happen through gaining business/entrepreneurship knowledge and skills. Some specifically expects to get knowledge on honey processing as a means for resilience.

As individual benefits, money and knowledge are the most important benefits that all of the respondents gave.

2. By group

Opinions on the sub-project as groups are shown as follows:

**Table AG5.1.13 Any Opinions on the Sub-project**

	<b>Group name</b>	<b>Indicator as of Jan~Mar 2013</b>
1	NDOTO HONEY	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through more sales from the standardized bottle.</p> <p><u>Expectation about group benefit:</u> Solidarity, provision of working opportunity and money to members, and success of business activities.</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is multidimensional, focusing on various areas such as entrepreneurship, VICOBA, and procedures of ways of wax making.</p>
2	ASALI KINGI GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, because of gaining knowledge on running business</p> <p><u>Expectation about group benefit:</u> Fostering culture of helping one another, provision of money to members, and success of business activities.</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is different from others in terms of providing training and knowledge.</p>

Source: JICA Project Team

Both groups have a positive expectation on enhancement of resilience through the sub-project by increasing sales and running business well with the knowledge gained. The groups have positive group benefits such as fostering a culture of helping one another, provision of money to members, and success of business activities. They think JICA's approach is unique because the sub-project is multi-dimensional, also gives business training and knowledge.

## **G5.2 Works Done**

Works done during the implementation of the sub project are shown below.

### **G5.2.1 Inputs from the Project as Assistance Activities**

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

#### (1) Provision of Training

##### 1) Entrepreneurship training

The focus of this course is on Income Generating Activities (IGAs) especially at the lower levels. It is meant to help the participants acquire skills for better management of their small and micro enterprises.

##### 1. Course objectives

The following are the overall learning objectives:

- To build the capacity of the women and women groups on how to identify existing business opportunities
- To build their capacity for planning and launching income generating activities
- To build their capacity to manage cash from their enterprises and identification and management of risks associated with them.
- To build their capacity for record keeping of their businesses.

## 2. Course Content

The contents covered are as below in an abridged form.

**Table AG5.2.1 Course Content of Entrepreneurship Training**

Item	Contents
Setting up a suitable IGA	<ul style="list-style-type: none"> <li>- The five important points:               <ul style="list-style-type: none"> <li>- Marketing (demand and supply of products)</li> <li>- Technical aspects (Knowledge, Skill, Attitudes, Time availability)</li> <li>- Capital (working capital: cash and raw materials)</li> <li>- Profitability (costs of inputs, total sales gross profit)</li> <li>- Household issues</li> </ul> </li> </ul>
Preparing an operation plan	<ul style="list-style-type: none"> <li>- Tasks that must be accomplished</li> <li>- Resources and their quantities that must be assembled to run the business</li> </ul>
Managing the IGA	<ul style="list-style-type: none"> <li>- Areas to which income from the business must be allocated</li> <li>- Managing risks from the business</li> </ul>

Source: JICA Project Team

The training was interactive with the participants given a chance to express their knowledge on the subject areas under discussion. A total of 22 participants took part in the course. This training was conducted from 29 April to 01 May, 2013.



Source: JICA Project Team

**Figure AG5.2.1 Entrepreneurship Training in Ngurnit**

### 2) VICOBA training

VICOBA stands for Village Community Banking. The basic principle of the VICOBA system is that members of a self-selected group form a VICOBA and save money, which is the source of loan capital from which they can borrow.

#### 1. Course objective

To introduce the fundamentals of Village Community Banking (VICOBA) to group members in order to strengthen their savings and loan abilities. The successful use of VICOBA will contribute to the sustainability of the gums and resin and honey businesses. The areas covered are shown below:

#### 2. Course Content

The contents covered are as below in an abridged form.

**Table AG5.2.2 Course Content of VICOBA Training**

Item	Contents
Introduction to VICOBA	<ul style="list-style-type: none"> <li>- What is VICOBA</li> <li>- How does VICOBA work</li> <li>- Comparing VICOBA and Merry-go round</li> <li>- Useful terms in VICOBA (savings, loan, interest, fine)</li> </ul>
Individual self-screening (ISS) and group formation	<ul style="list-style-type: none"> <li>- Importance of ISS in group formation</li> <li>- Importance of knowing each other and its impact on group VICOBA activities</li> <li>- Value of ISS in elections</li> <li>- Importance of ISS in dispute resolution</li> </ul>
Types of group funds	<ul style="list-style-type: none"> <li>- Savings and loan fund (Compulsory)</li> <li>- Social fund (optional)</li> <li>- Drought fund (optional)</li> <li>- Others</li> </ul>
Group membership, leadership and elections	<ul style="list-style-type: none"> <li>- Who can be a group member</li> <li>- Elections</li> <li>- Characteristics of specific leaders (Chairlady, secretary and treasurer)</li> <li>- Roles of each leader</li> <li>- Terms of leadership ( 6 months to one year)</li> </ul>
Record keeping	<ul style="list-style-type: none"> <li>- Types of record books to be kept</li> <li>- Types of records</li> <li>- Who should keep what records</li> </ul>

Source: JICA Project Team

The training was interactive involving question-and-answer sessions as the training progressed and the total number of trainees was 22. The training was held from 15<sup>th</sup> to 18<sup>th</sup> of March, 2013.

### 3) Group strengthening training and others

Through continuous monitoring, group strengthening activities have been carried out. This has focused mainly on group marketing and solving challenges as a group as opposed to individual efforts.

### (2) Provision of Mentoring Activities

Mentoring has been done as a continuous process. During visits to the traders, many times on an individual level, issues confronting them have been discussed and where quick solutions apply, are resolved. Among the issues that were of concern were marketing and the sources of suitable packaging materials. This led to the acquisition of containers for better packaging by the Project team which the groups paid for. A total of 450 containers of 300 grams capacity and 3,240 containers of 500 grams capacity were purchased at a total cost of Ksh. 44,808. The groups and individuals shared out the containers and paid for them



Source: JICA Project Team

**Figure AG5.2.2 Mentoring and Monitoring Activities in Ngurnit (Right: Introduced Containers)**

~from September 2013 to February 2014~

### (3) Participation of Investors Conference

Ministry of Trade of Marsabit County held an Investors Conference on 11<sup>th</sup> October, 2013 to introduce resources available in Marsabit County and attract investors to the county. Through talks with officers of the Ministry of Trade, the resin and honey groups were invited for the conference together with the salt group. Details of the activities are as follows:

#### 1) Objective

Objective of this participation is to explain the activities of JICA ECoRAD project in Marsabit County, and to show the resin and honey (basically, display only honey) in Ngurnit as a potential investment opportunity in collaboration with the women groups.

#### 2) Participants

Six women came from Ngurnit and two actively participated.

#### 3) Activities

A booth was made for the Project, and the members were in it to explain the business activities to investors, showing their product, primarily only honey.

#### 4) Observation

Of the honey, 13 containers were sold at Kshs.400 for a total of 5,200 shillings in one day. Out of two kinds of containers of which procurement was assisted by the project (big-500 g and small-300 g ones), smaller containers may have achieved higher sales. Honey and resin seemed to attract the visitors' attention.



Source: JICA Project Team

**Figure AG5.2.3 Investors Forum (honey bottles on the table)**

### (4) Study Tour on Advanced Resin and Honey Business

The project organized a tour to show advanced resin and honey business and related stakeholders to the groups from 8<sup>th</sup> to 13<sup>th</sup> December, 2013. Details of the activities are as follows:

#### 1) Objective

Objective of the study tour is to expose the women representatives to gum, resin and honey processing as is done on a slightly improved platform, and link the women groups to potential buyers of their products and suppliers.



## 2) Participants

Participants were two government officials from Social Services and NDMA, and representative of three women groups from Ngurnit dealing in gums, honey and resins making a total of nine women.

## 3) Activities

Schedule of the study tour is shown in the table below:

**Table AG5.2.3 Schedule of Study Tour**

Day	Date	Place Visited	Contents
1	8/Dec/2013	Marsabit-Ngurnit	Departure
2	9/Dec/2013	Nanyuki	Visit Arid Land Resources Ltd.
3	10/Dec/2013	Eldoret (Kabarnet/Rokocho)	Visit Kerio Valley Development Authority
4	11/Dec/2013	Nairobi	See Vendors (provider of plastic containers)
5	12/Dec/2013	Isiolo	Moving
6	13/Dec/2013	Ngurnit-Marsabit	Arrival

Source: JICA Project Team

## 4) Observation

### Arid Lands Resources Ltd (Gums and Resins)

Currently the company operates in areas close to Ngurnit but on the southern part in Samburu. The team was taken through grading for gum from Gum Arabic which is white. The last stage of the processing was testing for quality which was explained at the lab. If the group can collect 10,000 kilograms of Gum Arabic or more they could contact this company, which would buy on an agreed price. The transportation would be borne by the buyer and thus the women groups would not incur this cost. For frankincense, the demand may not be high. The company's upper limit is around 200 kg per year for frankincense. The customers including international markets people who come to this company require organic certification. They said this is one difficulty in increasing the transaction volume.

### Kerio Valley Development Authority (Honey)

Kerio Valley Development Authority (KVDA) is a development agency and their activities are varied. Their areas of operation include Nakuru, Turkana, Samburu, Elgeyo Marakwet, Uasin Gishu and West Pokot.

KVDA's honey requirements is about 2,000 tons but the current supply is 700 tons. They supply honey to supermarkets and have a shop at the KVDA plaza in Eldoret. Their honey is organic and they buy a kilogram at 280 shillings from their suppliers who are trained by the organization. KVDA is willing to provide training on production, process of registration and labelling if the women of Ngurnit would like to sell their honey in supermarkets. Rokocho is the main centre for buying, processing and storage of honey for KVDA. It is on the road to Kabarnet. The visiting team was taken round through all the processes, namely buying, weighing, sieving, packaging, storage and marketing.

Kabarnet is also the KVDA centre visited. The place where the hardware used in honey production is found. Bee hive making is done here. The different types of bee hives were shown to the group. A shop for selling all types of honey production equipment is being set up here. There is a metal, tailoring and furniture workshop here. Also plastic bottles can be sourced from here.

### Nairobi Vendor (Supplier)

Due to unavoidable circumstances, the team could not access the factory for honey plastic bottles that the project helped the groups to buy from at the initial stage. However, the women groups reached the premises and know where it is.

### Other Observations

Gum Arabic may be marketed in Nanyuki if the groups have enough supply. The small quantity they had brought was sold for 1,800 shillings. The demand for frankincense is not that high but possible to be marketed at the Arid Lands Resources Company as long as the amount is acceptable.

The price at which KVDA buys its honey is lower than what the groups in Ngurnit are willing to supply. Also, the honey in Ngurnit is in all cases processed and thus not suitable for KVDA. There is need for the women groups to improve on processing if they hope to compete with honey from other areas. The dark type of honey produced in Ngurnit may not be suitable for external markets. Therefore, the primary target market segment for this honey is within Marsabit county.



Source: JICA Project Team

**Figure AG5.2.4 Study Tour**

*(above two: Visit to Arid Lands Resource Ltd, lower two: Visit to Kerio Valley Development Authority)*

#### (5) Provision of Mentoring Activities and Others

Mentoring has been done as a continuous process on processing and marketing of resin and honey, and monitoring on business transactions.

In addition, though this has not yet been emphasized in this sub-project, the drought fund bags were distributed to all the groups. The bags were made and distributed by the project so that the groups can put the money meant for the drought.



Source: JICA Project Team

**Figure AG5.2.5 Mentoring and Monitoring Activities in Ngurnit**  
(Left: distribution of Drought Fund Bag, Right: Explanation by the officer of the social services dept.)

~from March 2014 to August 2014~

- (6) Provision of Mentoring Activities and Others
- 1) Specific Session for Procuring Containers and Other

1. Objective

Objectives are to find a cheaper and easier option for procuring the containers for honey from Nairobi, that is now the important key issue to start their second cycle honey business; and in addition for the government official (gender and social services department) to explain the regulations of UWEZO fund and how it can help to expand the honey business.

2. Attendance

The meeting session was attended by members of all groups (malab:4, Asali Kingi: 5, and Ndoto: 5) and also some community members (around 10) who were interested in knowing about UWEZO fund on 13<sup>th</sup> July, 2014. This session was offered by the project staff and the officer from gender and social services department.

3. Activities

Containers

The options of procuring the containers were explained to the group, and the group decided that they will send one of their members who knows Nairobi well. They argued that the presence of their member will help them get containers of good quality. And the groups decided to contribute money to purchase the containers and cater for the logistics of their member.. the details of the plastic manufacturer were provided to the groups (The name of the enterprise, telephone numbers and location of the same).

Uwezo fund

The Government officer explained details of Uwezo fund i.e. the aim of the fund, who should apply and procedures of applications.

#### 4. Observation

##### Containers

By agreeing to send one of their members who knows the area to purchase the containers by themselves, they decided to contribute money for logistics of the member; it means that the groups seem capable of doing things by themselves with only little guidance on technical issues.

##### Uwezo fund

They decided to prepare proposals and submit to the responsible department. An application of Uwezo fund requires basic business information/plan, which the groups are able to discuss, decide and provide.



Source: JICA Project Team

**Figure AG5.2.6 Specific Session in Ngurnit**

#### 2) Others

Other than the above, the following activities were made to assist the groups:

- To give guidance on how to procure the containers: Other than the above specific session, the groups were given various options on how to procure the containers by themselves. Various meetings were held where members were engaged on how to get the containers;
- To encourage VICOBA: Members contribute money and loan among themselves. Interest is charged on the loans, which is mostly 10% of the principal. ASALI KINGI and MALAB were previously lagging behind in terms of VICOBA, but they are now doing well;
- To encourage members to contribute to the drought fund: Although, they have not yet contributed due to the hardships, they are willing to put money aside to help them cope with future droughts; and
- To guide groups in registration of groups with social services and Uwezo fund.

~from September 2014 to December 2014~

#### (7) Visit to Nairobi to Procure Containers for Honey Groups

JICA had taught the importance of “*Kujitegemea*” spirit to honey groups so that even after the Project exits, the same women can procure the containers by themselves cheaply and without depending on external help. Those who needed the containers contributed money earlier. The Project availed one of their staff to guide them to procure containers from the manufacturer and have them delivered to Ngurnit town. With JICA’s assistance the women managed to purchase 945 containers from SAFFPAK and transport them to Eastley and then Ngurnit via Isiolo. It was an important opportunity for the women to connect with the manufacturer and know the mode of transport to Eastley.

**Table AG5.2.4 Schedule of the Trip**

Date	Activity
29th October	Travelled from Marsabit to Ngurnit to Pick Nalapan from Ngurnit. Spent a night in Isiolo town.
30th October	Travelled to Nairobi and arrived late. Spent Night in Nairobi.
31st October	Took a taxi to the manufacturer. Purchased and transported the containers to Eastleigh. Booked the bus and spent a night in Eastley
1st November	Travelled to Isiolo where Nalapan took a car to Ngurnit

Source: JICA Project Team

Objectives

- To Guide women to procure containers without depending on external help

Participants

- Nalapan (Women representative chosen to go to Nairobi to procure the containers) and JICA staff to provide guide to the manufacturer of the containers

Activities

- To purchase good quality containers with perfect lid from industrial area and also to get contacts of the manufacturers and mode of transport to Ngurnit.

Observations

- The women managed to buy 9 boxes of small containers (250g) each with 105 containers: total containers bought on that specific trip was 945. The containers were transported to Eastleigh bus station using a taxi. The taxi driver provided the women representative with his contacts just in case they needed his services next time. The women representative admitted that using the taxi driver and the manufacturers contacts was an easier means rather than sending an individual.



Source: JICA Project Team

**Figure AG5.2.7 Trip to Procure Containers in Nairobi**  
(Left: selecting containers at Nairobi, Centre: Procured containers in the taxi, right: distributed containers held by a member at Ngurnit)

## (8) Provision of Mentoring Activities

The following activities were made to assist the groups:

- Linking the groups to Government funds and institutions- JICA staff provided the groups with access to government funds (especially UWEZO fund) and institutions through provision of information and a chance to meet the government officers involved.
- Fostering the spirit of Kujitegemea - Although the Project was providing guidance and support, the groups were encouraged to do things by their own so that when the Project exits, they can still carry out their activities without depending on the external help. In this regard, the groups were advised on how to procure containers without depending entirely on the Project. Some group individuals managed to contribute money and sent one of their members to Nairobi to purchase the containers on their behalf.
- Guidance- the Project guided the groups on how to procure the containers. This included persuading the groups to contribute the money and further providing guidance for the group to go to Nairobi and purchase the containers.
- Provision of information on demands for honey- the Project staff has always acted as informant for the groups whenever the honey is needed either in Nairobi or in Marsabit. The Project staff informs the members on the importance of the customers.
- Business Dynamic- The Project encouraged the groups to keep records of all transactions e.g. the members with loans, loans returned and other individuals' records for the business.

## (9) End- line Survey

The end line survey was done by interviewing all the 12 individual members of the group who were previously interviewed during the baseline survey. The questionnaires were further applied to chiefs/elders and the three (3) honey groups in Ngurnit town that were working with JICA.

The questionnaires were prepared based on the effect and other impact indicators so as to evaluate the impact of the sub project both at the individual and group level. The following table shows the procedure of the end-line survey.

**Table AG5.2.5 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Ngurnit	Chief and elders	1 (3 Participants)	20/11/2014	Questionnaire with one focused- group discussion
	<b>Groups</b> Ndoto (8) Malab (4) Asali Kingi (3)	3 (15 Participants)	21/1/2014, 20/1/2014	Questionnaire with 3 groups
	<b>Individual</b> Ndoto (4) Malab (5) Asali Kingi(3)	12 (12 participants)	20/11/2014, 21/1/2014, 22/1/2014	Questionnaires with individual interview

Source: JICA Project Team

### G5.2.2 Overall Situation of the Sub Project

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

There are three groups involved in this sub-project in Ngurnit. Initially only two groups and five individuals were involved but recently the independent members formed a group known as Malab. All the groups are involved in honey business though there are differences in scope and scale. Ndoto has more members and among them some members are well ahead of the others in terms of business acumen. Asali Kingi comes second and Malab is newly formed hence has a shorter history and is yet to properly coalesce. For gum, members of Ndoto and Malab are involved and they have been doing the business for long.

With regards to their IGA activities for gum resin, there have not been much substantial changes on their activities. However, one lady inspired by the entrepreneurship training has tried to expand the markets. As for the honey business, the newly introduced bottles have enabled more sales and profits.

~from September 2013 to February 2014~

All the groups have been continuing their business. Honey business is more active than the resin one. For resin business, though it has not been significantly changed, some members were inspired by the study tour and started engaging in the resin business. Further, the group created new linkage with a new buyer from Nanyuki because of the study tour.

With regards to honey business, sales of the containers of which procurement was assisted by the project have increased from 68% (2,500) as of August 2013 to 87% (3,198 bottles). The group was preparing for honey production for the upcoming transaction right after the short rains end. They also learned processing techniques through the tour and are going to use it for the next processing activities.

The above activities are being done by the groups themselves. The project only sponsored the tour as an ad hoc input and did not provide car transport for delivering honey bottles. Self reliant activities to improve their business are being fostered.

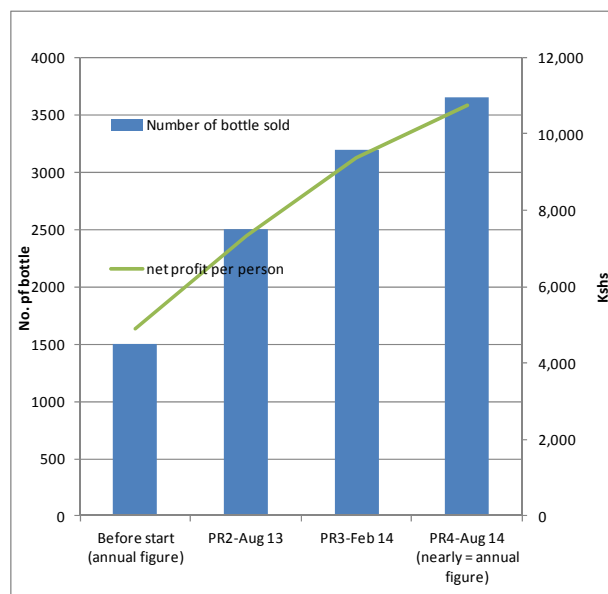
~from March 2014 to August 2014~

All the groups have been continuing with their business. Honey business is more active than the resin one. This monitoring period can be understood as low season because of the long rain season, and the group members continued selling the remaining honey.

With regards to honey business, sales of the containers of which procurement was assisted by the project have increased from 87% (3,198) as of February 2014 to 99% (3,651 bottles), this is a great improvement compared with the previous transaction of coca-cola bottles of about 1,500 bottles per year.

When it comes to net profit per members, the previous transaction showed Ksh 4,900 per year on average across all the group members. This increased to Kshs 10,735 (we can say this figure is considered per year) after the first business cycle, twice as big as the previous transaction.

After the long rains season, the groups have started buying raw honey for the second business cycle. They have also continued discussions on how to procure the containers that they used without assistance by the JICA team.



Source: JICA Project Team

**Figure AG5.2.8 Honey Business Record So Far**

~from September 2014 to December 2014~

All the groups have been continuing their business. Honey business is more active than resin one. During this monitoring period, the important event was that the groups procured containers with assistance from the Project for their second cycle.

With regards to honey business, sales of the containers of which procurement was assisted by the Project have almost been completed 99.9% (3,688 bottles), this is great improvement compared with the previous transaction of coca-cola bottles of around 1,500 bottles per year.

When it comes to net profit per members, the previous transaction showed Ksh 4,900 per year on average across all the group members. This increased to Kshs 10,839 (this figure is considered per year) after the first business cycle, more than twice as big as the previous transaction.

Individual members who have the capacity have procured containers and sold some of them for the second business cycle. Other members who couldn't buy containers by their individual capacities got together, contributed money, sent a member Nairobi, procured, and shared containers. Such members are now 12 out of 23 - 53 %). Already these new containers have started moving (about 400 bottles have been sold). Further, other members who had not participated for collective procurement now buy them from the members who have them. As such, their own efforts to continue the business are being observed.

### G5.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are documented.

## (1) Business Transaction

Gum and resin (frankincense)

## 1) Cost and benefit structure

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Since the specific assistance activities for gum and resin have not yet been made, cost and benefit structure seems the same as the baseline condition.

~from September 2013 to February 2014~

Cost and benefit structure is the same as the baseline condition.

~from March 2014 to August 2014~

Cost and benefit structure is the same as the baseline condition. Just for some updates, buying prices of gum Arabic are Kshs 65/kg and frankincense Kshs 50/kg and selling prices of them are now Kshs 120/kg and 80/kg respectively.

~from September 2014 to December 2014~

Cost and benefit structure is the same as the baseline condition. Just for some updates, buying prices of gum Arabic are Kshs 65/kg and frankincense Kshs 50/kg and selling prices of them are now Kshs 120/kg and 80/kg respectively.

## 2) Production and Transaction

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Like the above, the way the groups buy Commiphora is the same as before. As shown below, one lady has tried to expand the market but the transaction volume has not yet changed significantly.

~from September 2013 to February 2014~

One lady continues to try to expand the market but the transaction volume has not yet changed significantly. The other lady who deals with frankincense keeps them to increase the amount of frankincense for bulk buyers. Now, she has 70 sacks of 50-kg bag.

~from March 2014 to August 2014~

Out of our target group members, four members are currently doing gum and resin business, including gum Arabic and frankincense. From March to August as this monitoring period, their accumulated amount varies from 2 kg (gum Arabic) to 70 bags (50kg/bag) of frankincense.

~from September 2014 to December 2014~

At the end of the monitoring period, the following members have gum and resin.

- Falhat has 20 kgs of frankincense (her usual market is Loglogo)
- Fatuma has 50 sacks of frankincense (her usual market is Isiolo)
- Risayon has 3 kgs of frankincense (her usual markets are Merrille and Marsabit)
- Nalapan has 2 kg of Gum Arabic.

Though the number is not big, interest has slightly increased on this business, and atmosphere of new entrance of people who want to start this business is being created after the study tour and observation of other members' business results.



Source: JICA Project Team

**Figure AG5.2.9 Stocked Frankincense**



## 3) Market

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

There may not be huge difference compared with the baseline condition. What can be seen now is that small quantities of gum (frankincense) are sold for local household consumption by mainly one trader who packages it in quantities of about 250 grams. She sells these for Ksh 50 after packaging it in polythene bags. This could be one of the efforts that she took. In this case, the total sale of one kilo gram becomes Ksh. 100, meaning that Ksh. 50 is net profit if buying price is 50 ksh/kg because there is no transportation cost.

Some gum is sold to traders in Isiolo for onward transmission to Nanyuki where bulk buyers have set up shop as before. The frankincense sold in Isiolo is packaged in 50 kilogram bags. The seller from Ngurnit being slightly better endowed financially transports the gum to Isiolo as she goes to buy goods for her business. Another effort is that the trader (our target community member) started to penetrate the Loglogo market. These activities are to be monitored.

~from September 2013 to February 2014~

During this monitoring period, there have not been significant changes. However, some new activities have been observed. One member sold frankincense in Loglogo (50 kg), and this seems to be their continued efforts on penetration to a new market as reported in PR2. Also, another member sold 50 kg of frankincense to the Nanyuki trader, whom they met with during the study tour.

In addition, one member sold Gum Arabic (30 kg) to the same Nanyuki trader, while another has started accumulating Gum Arabic (currently 2 kg). In Addition some other members have started thinking about this business because they were inspired by the tour.



Source: JICA Project Team

**Figure AG5.2.10 Commiphora from Ngurnit Sold in A Shop in Loglogo**

~from March 2014 to August 2014~

During this monitoring period, the above four members sold gum and resin to Ngurunit town, Isiolo, Loglogo, and Merille. In Ngurnit town, one sold frankincense in small quantity (retail); another one sold frankincense to her relatives in Loglogo (wholesale). One also sold frankincense in Merille to traders who come from Isiolo. The other sells directly to traders from Ishiolo.

~from September 2014 to December 2014~

During this monitoring period, the members sell gum and resin to Ngurunit town, Isiolo, Loglogo, Marsabit and Merille. In Ngurnit town, one sells frankincense in small quantity (retail); another one sell frankincense to her relatives in Loglogo (wholesale). One also sells frankincense in Merille to traders who come from Isiolo. The other sells directly to traders from Ishiolo. The new market is Marsabit where Risayon sells small amounts of frankincense to traders in Marsabit town, this is a positive change.



Source: JICA Project Team

**Figure AG5.2.11 Frankincense sold in Ngurnit**

Honey

## 1) Cost and Benefit Structure

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

As a result of our assistance activities for containers, some changes on the cost and benefit structure have been observed as follows:

**Table AG5.2.6 Cost and Benefit Structure of Honey (Current)**

	Container for 500-gram capacity			Container for 300-gram capacity		
	Qty	Price/unit (KES)	Total (KES)	Qty	Price/unit (KES)	Total (KES)
Income						
Sales	32*	300	9,600.00	48*	200	9,600.00
Costs						
Empty containers	32*	20	640.00	48*	17	816.00
4kg raw honey	4	1400	5,600.00	4	1,400	5,600.00
Transportation						
Ngurunit-Marsabit (Trip)	1	500	500.00	1	500	500.00
Ngurunit-Laisamis (Trip)	1	300	300.00	1	300	300.00
Ngurunit-Loglogo (Trip)	1	300	300.00	1	300	300.00
Net profit	2,260.00			2,084.00		

\*: out of 4kg raw honey, around eight containers for 500 gram and 12 for 300 gram are produced.

Source: JICA Project Team

Keeping the unit volume of materials for the analysis (four 4kg raw honey combs) and the transportation cost constant, net profits become Ksh. 2,260 for the case of 500-gram containers and Ksh. 2,084 for 300-gram containers.

These net profits have improved and become more than the Ksh. 1,700 baseline figure using coca-cola bottles (refer to Table A12.1.6). Though the selling prices of new containers (Ksh. 300 and Ksh.200 each) are set lower than that of coca cola bottle and additional cost for containers are required, the number of containers obtained from the same four (4) kg-raw honeycombs are more than that of coca-cola bottles leading to more net benefits. Of course this analysis could be simple, because it does not include the cost of transportation to get the containers from Nairobi and commission for the market agents. The transportation part could be managed for example to reduce the cost by sharing this cost among group members and dealing with other commodities as well.

~from September 2013 to February 2014~

The cost and benefit structure have been the same as the one reported in PR2.

~from March 2014 to August 2014~

The cost and benefit structure have been the same as the one reported in Progress Report 2 (PR2).

~from September 2014 to Merille December 2014~

The cost and benefit structure have been the same as the one reported in Progress Report 2 (PR2).

## 2) Production and Transaction

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

The way of procuring honey has not changed. As a result of the assistance activities, 3,690 in total combining 300-gram and 500-gram containers were introduced to the groups. Though the group

members do not remember exact numbers of containers sold, it is estimated that around 2,500 containers in total (both sizes combined) were sold with 68% of the introduced containers sold.

~from September 2013 to February 2014~

The way of procuring honey does not change. For processing, the groups have learned techniques of purification from KVDA, namely 1) use of white linen cloth to sieve the honey (folding cloth and making stitches smaller for finer filtering) and 2) leaving the filtered honey to settle for one or two days before packing in order to avoid the formation of foam on the neck of the bottle.



Source: JICA Project Team

**Figure AG5.2.12 Honey Processing**  
(honey comb in the containers, right: rough sieving before using white cloth)

In this monitoring period, there was a short rain season (around November to December). Honey production decreases during rainy seasons, and increase during dry seasons. In January and February, they have started to collect (buy) raw honey and store it. They are now using the containers for this business to sell honey, which were introduced by the project. The members will discuss the number later, but they almost ran out of the bottles. Thus they are keeping the collected honey and waiting for procurement of new bottles for further sales.

For procurement of new bottles, three groups are organizing meetings to discuss on how to order for new packages. They have intentions and willingness to buy new bottles, using information given by the project, by their own efforts. This will be monitored. Remarkably, two individual members successfully procured bottles by themselves through the suppliers' mobile phone number provided by the project. This is evidence of their self reliant attitude being built throughout the activities.

~from March 2014 to August 2014~

The way of procuring honey does not change. For processing, the groups still use techniques of purification that they learned from KVDA as reported in PR3.

In this monitoring period, there was a long rain season (around March to May). Thus, basically this monitoring period was low season for honey, and they concentrated on selling the rest of the stored bottles and most of them sold them out. After the long rain season ended, they have started buying raw honey and storing it. Now they are waiting for procurement of new bottles for further sales (it can be understood that new containers for newly procured raw honey will be used for the second business cycle).

For procurement of new bottles, three groups have been are organizing meetings to discuss on how to order for new packages. They have intentions and willingness to buy new bottles using information given by the project by their own efforts. As mentioned, the specific session was also held to facilitate their discussion; and they made the decision to dispatch one member to Nairobi to procure containers needed as a representative for all three groups; and started preparing for it. Their agreed plan to procure the containers is as shown in the tale blow:

**Table AG5.2.7 Their Agreed Plan for Procurement of New Containers**

	500g container	300g container	Total
Basic unit for 2 members	1 box (180 bottles/box) Ksh 10.7/bottle -> Ksh 1926 ~ = Ksh 2000/box	1 box (45 containers/box) Ksh 8.8/bottle -> Ksh 396 ~ = Ksh 400/box	225 bottles/2 members → 112.5 bottles/member → Ksh 1,200/member
Total group members	Ndoto 12 + Asali Kingi 5 + Malab 6 = 23 members → 11.5 units of 2 members		
Total number of bottle to be procured	11.5 boxes = 2070 bottles	11.5 boxes = 517.5 bottles	2,587.5 bottles for all three groups
Cost for sending one person to Nairobi			Total Ksh 5000 → Ksh 217/member
Cost per person			Ksh 1,427/member

Source: JICA Project Team

Total planned number of new containers to be procured is about 2,600 bottles, less than the ones in the last year. The cost per person to procure is estimated at Ksh 1,427, now being contributed by members.

On the other hand, all members in Ndoto group successfully procured bottles by themselves through the suppliers' mobile phone number provided by the project. The following is the result of their procurement so far.

**Table AG5.2.8 Individual Efforts on Procurement New Containers**

	500g container	300g container	Total
Member A	1 box (180 bottles/box)	-	180 bottles
Member B	-	2 boxes (45 containers/box)	90 bottles
Member C	1 box (180 bottles/box)	1 box (45 containers/box)	225 bottles
Member D	1 box (180 bottles/box)	1 box (45 containers/box)	225 bottles
Total	3 boxes = 540 bottles	4 boxes = 180 bottles	720 bottles

Source: JICA Project Team

Depending on their assumed markets, their decisions on the composition of big and small containers are different. It could be said that they somehow acquired knowledge of the market through the first business cycle. This is evidence of their self reliant attitude being built throughout activities.

~from September 2014 to December 2014~

The way of procuring honey does not change. For processing, the groups still use techniques of purification that they learned from KVDA as reported in PR3.

Since the last dry season, some members had procured raw honey and stored until the new containers come. During this monitoring season, there was a short rain season, and now raw honey is available in markets since the short rain season was over. For those who procured new containers, they have used stored honey as well as procuring honey from producers.

For procurement of new bottles, PR4 reported that three groups planned for around 2,600 bottles to be procured, and the cost per person to procure was estimated at Ksh 1,427.

During this monitoring period, since only 9 individuals were ready to contribute money to purchase the containers, they decided to raise their contributions from Ksh.1,427 to Ksh.2,000 so that they can cater for the logistics, transport and cost of purchasing the containers. In total the 9 members contributed Ksh. 18,000 to buy the containers (both sizes). Due to the unavailability of the bigger containers, the money was used to buy 945 (nine boxes; a box contains 105) small containers. This procurement was basically done by themselves assisted by the Project (refer to Section 13.2.1).

The cost of procuring the containers is as follows:

- Logistics for Nalapan who went to Nairobi: Ksh.5,000
- Transport within Nairobi (To reach the factory and Eastleigh): Ksh.1,000
- Transport of containers from Nairobi to Isiolo: Ksh.500
- Transport of containers to Ngurnit from Isiolo: Ksh.500
- Total price of purchasing containers:  $Ksh.945 \times Ksh.12/\text{container} = Ksh.11,340$
- And, total cost of procuring 945 containers is Ksh.18,340

Among the four members that had previously procured the containers by themselves, it's only Nalapan (180 bottles) and Mama Zawadi (90 small bottles) that have successfully sold all their containers due to the volume of their market. The two ladies took their honey to Nairobi. The other two members Fatuma and Zeinab have only sold all the small containers, however, the record of how much they have sold is not known since they have been away in Nairobi due to sickness. It's also important to note that these individuals are the most active in honey business and have means of commuting to different markets, therefore selling honey faster compared to other active members.

During this period it was only one individual who procured the container by herself, that's Seyere (2 boxes of small containers).

**Table AG5.2.9 Individual Efforts on Procurement New Containers**

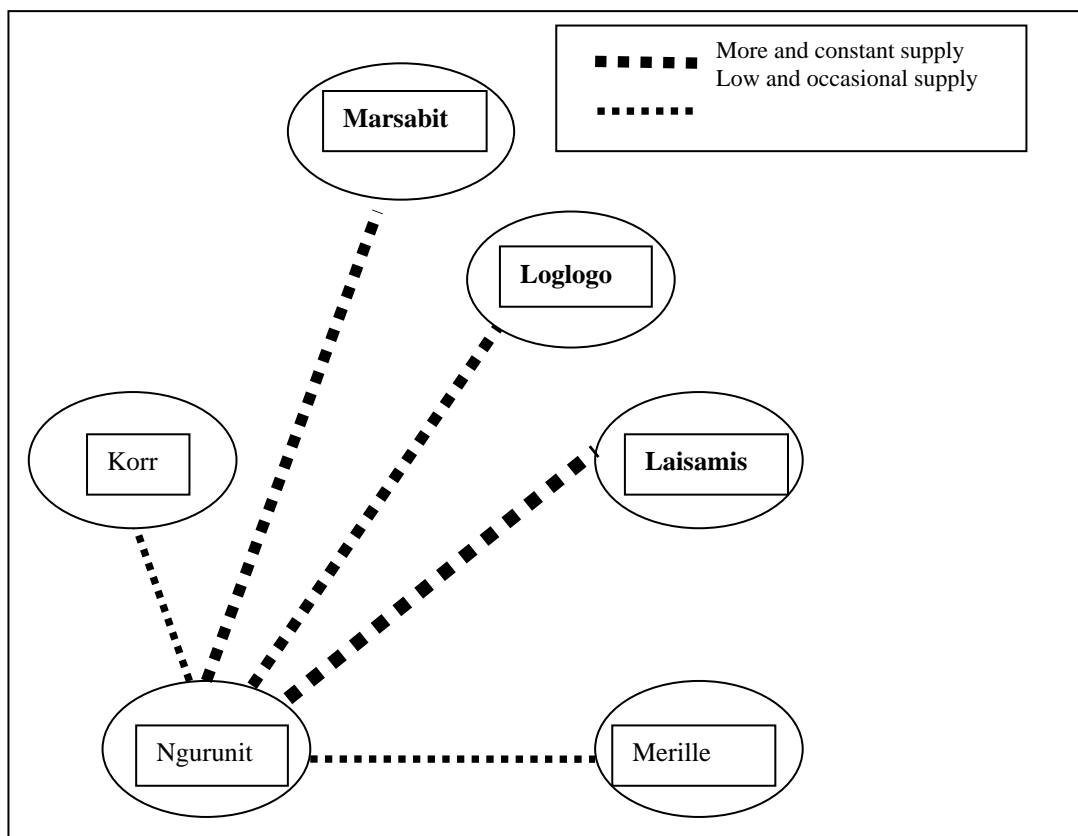
	<b>Total Reported PR4</b>	<b>Sold until now</b>	<b>New purchase during this monitoring period</b>
Nalapan	180 bottles	180 (sold out)	-
Mama Zawadi	90 bottles	90 (sold out)	-
Fatuma	225bottles	Some of smaller one	-
Zeinab	225 bottles	Some of smaller one	-
Seyere	-	-	2 boxes of small containers = 210
Total	720 bottles	-	210 bottles

Source: JICA Project Team

### 3) Market

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Marketing of honey from Ngurnit may be thought of as an individual effort but supported by the groups or family linkages. There is a local market for honey as it is used as medicine for humans and livestock. There are also passersby on the main Marsabit - Isiolo road and to Loiyangalani. The other market areas include Korr, Marsabit, and Archers post, Loglogo, Laisamis and Merille. For the trading centres located on the Marsabit - Isiolo road, the honey is sold to locals and to passersby. The following figure indicates image of current markets of honeys by the target group members.



Source: JICA Project Team

**Figure AG5.2.13 Honey Markets (from January to August 2013)**

By the activities, currently the group members started to expand markets to Loglogo, and more quantities to Marsabit and Laisamis towns. The following photos show that honey from Ngurunit is sold in Laisamis and Loglogo.



Source: JICA Project Team

**Figure AG5.2.14 Honey from Ngurnit Sold in Expanded Markets (Left: Laisamis, Right: Loglogo)**

~from September 2013 to February 2014~

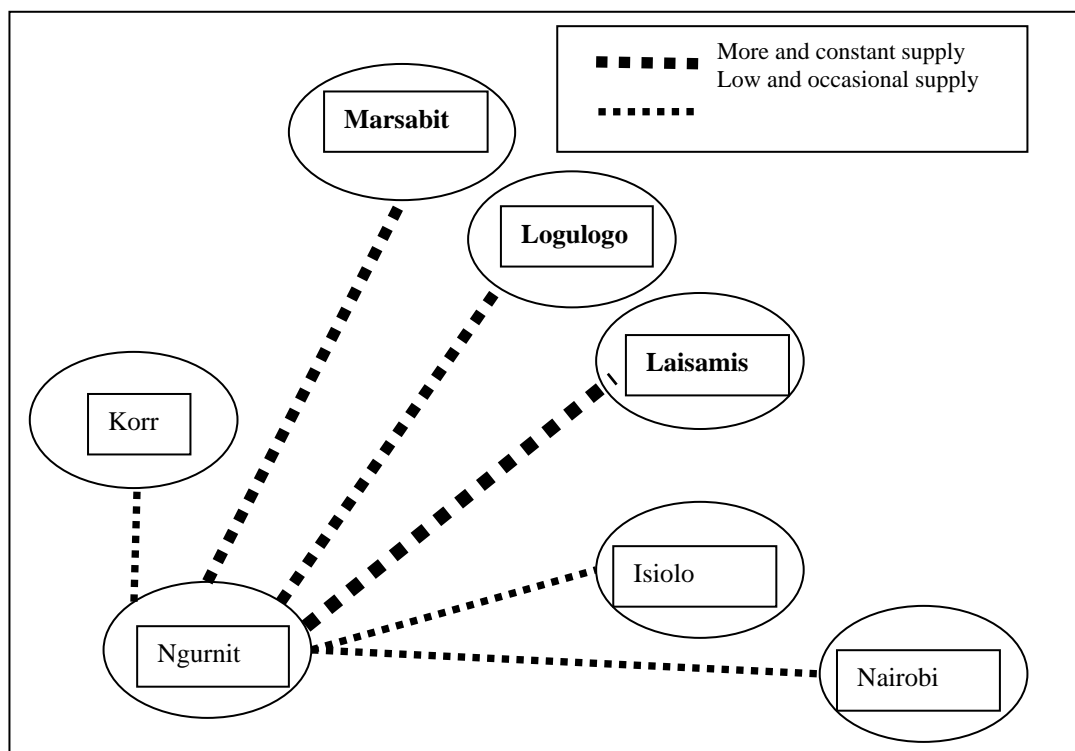
As of now, the markets are almost similar to the ones reported as of PR2; namely, Ngurnit, Marsabit, Loglogo, and Laisamis are becoming the major four markets. In addition, the members said Korr, and Archers post, Isiolo, and Nairobi. (Merille reported in PR2 was not raised for this time). The figure in the next page shows the image of current markets of honey by the target group members.

The following photos show that honey in the markets.



Source: JICA Project Team

**Figure AG5.2.15 Honey of Ngurnit Sold in Markets**  
(Left: Ngurnit, Centre: Loglogo, Right: Marsabit)



Source: JICA Project Team

**Figure AG5.2.16 Honey Markets (from September 2013 to February 2014)**

During the period covered in PR2, a total of 3,690 bottles combining both 300-gram and 500-gram containers were introduced to the groups. And, it was estimated that around 2,500 containers in total were sold with 68% of the introduced containers sold. Now, the numbers sold at the time of this reporting have been monitored as below:

**Table AG5.2.10 Sales Record of Provided Bottle (from September 2013 to February 2014)**

	Ndoto				Asali Kingi			Malab			Total		
	500g-bottle	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total
Bottle Sold	1,972	435	194	629	394	203	597	2,801	397	3,198			
Bottle Provided	2,160	540	225	765	540	225	765	3,240	450	3,690			
Rate of sale	91%	81%	86%	82%	73%	90%	78%	86%	88%	87%			

Source: JICA Project Team

Overall performance of sales for both containers is 3,198 bottles with 87% of sale's rate, increased from the figures reported in PR2. As seen, percentage of sales of 300g bottle is higher across all the groups. The group members said that the pace of selling smaller containers was faster. The groups

are aware of this, and they say they will discuss this issue in the meetings and decide how many small and big bottles they will procure.

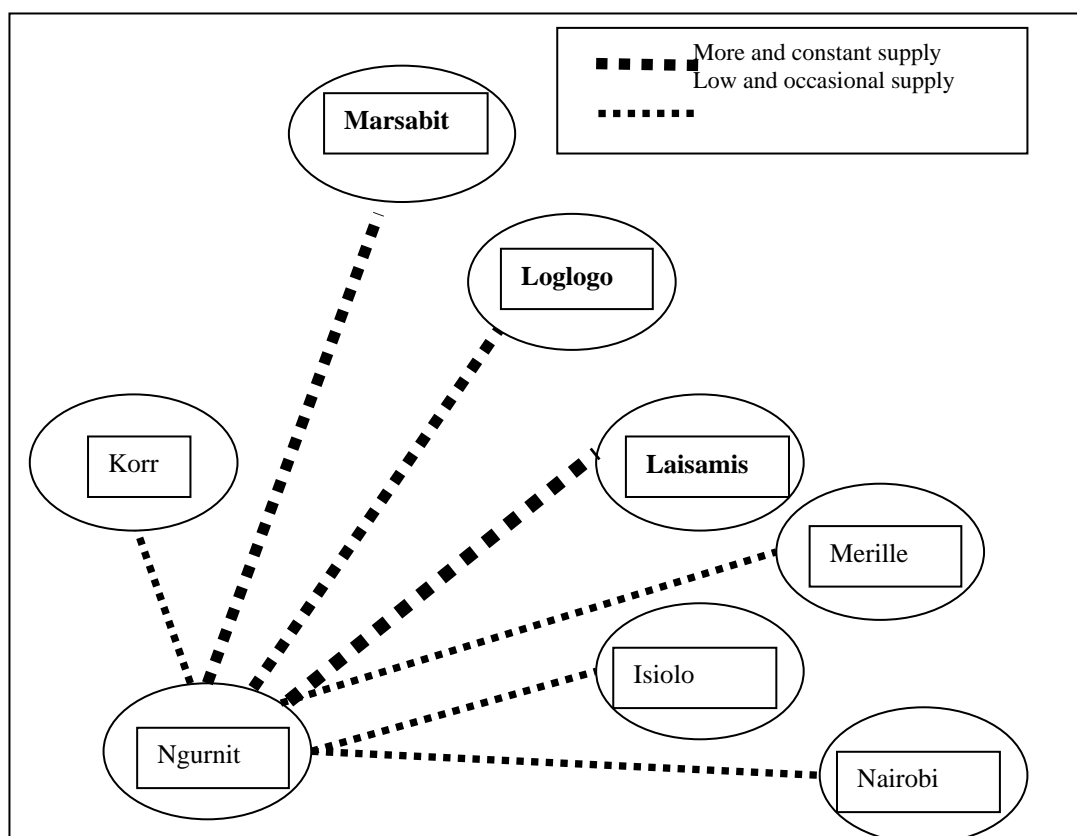
~from March 2014 to August 2014~

Marketing of honey from Ngurnit may be thought of as an individual effort but supported by the groups or family linkages. The markets where honey was taken are mostly the same, and Merrille has been revived which was reported in PR2 but dropped in PR3. The location chief actually bought a car and the case was in place in Ngurnit in March this year. Since the chief's wife is also one of our group members, middle distance markets have become easy to commute to using the car such as Merrille. The following figure shows an image of current markets of honey by the target group members.



Source: JICA Project Team

**Figure AG5.2.17 Honey of Ngurnit Sold in Ngurnit**



Source: JICA Project Team

**Figure AG5.2.18 Honey Markets (From March to August 2014)**

During the period covered in PR2, 3,690 bottles in total combining 300-gram and 500-gram containers were introduced to the groups. And, it was estimated that around 2,500 containers in total (both size combined) were sold with 68% rate of the introduced containers as of PR2. In PR3, total 3,198 bottles were sold with 87% of sales rate. Now, the numbers sold at the time of this reporting period have been monitored as below:



**Table AG5.2.11 Sales Record of Provided Bottle (From March to August 2014)**

	Ndoto	Asali Kingi			Malab			Total		
	500g-bottle	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total
Bottle Sold by PR3	1,972	435	194	629	394	203	597	2,801	397	3,198
Bottle sold during this period	188	105	31	136	117	12	129	410	43	453
Bottle Sold by PR4	2,160	540	225	765	511	215	726	3,211	440	3,651
Bottle Provided	2,160	540	225	765	540	225	765	3,240	450	3,690
Bottle remains	0	0	0	0	29	10	39	29	10	39
Rate of sale	100%	100%	100%	100%	95%	96%	95%	99%	98%	99%

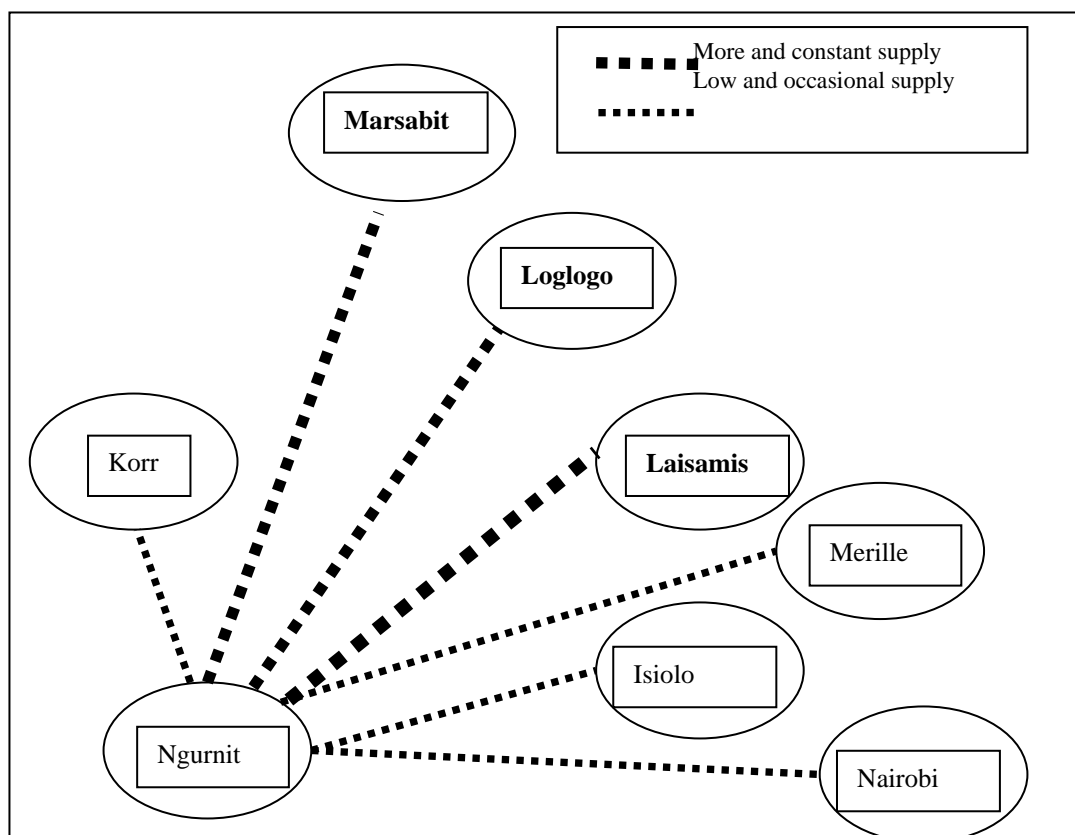
Source: JICA Project Team

Overall performance of sales for both containers is 3,651 - 99% sale's rate, increased from the figures reported in PR3. Since the containers were introduced, around one year has passed. Although previous reports said that the pace of selling smaller containers was faster, in terms of the absolute numbers, both size were almost sold out at the end of the year (even big containers have more number than smaller one).

Analysis on this is that markets like Ngurnit for retail purpose, smaller containers are better, but also for wholesale purpose, the big one can still work. Also, it can be said that this 3,690 bottles are considered as the current demand size for the present markets of the three groups.

~from September 2014 to December 2014~

Markets that were reached are mostly same as reported in PR4. The following figure shows an image of current markets of honey by the target group members.



Source: JICA Project Team

**Figure AG5.2.19 Honey Markets (from September to December 2014)**

3,690 bottles in total combining 300-gram and 500-gram containers were introduced to the groups. And, it was estimated that around 2,500 containers in total (both size combined) were sold with 68% rate of the introduced containers as of PR2. In PR3, total 3,198 bottles were sold an 87% of sales rate. Now at this time of PR5, the numbers sold have been monitored as below:

**Table AG5.2.12 Sales Record of Provided Bottle (from September to December 2014)**

	Ndoto		Asali Kingi		Malab			Total		
	500g-bottle	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total
Bottle Sold by PR4	2,160	540	225	765	511	215	726	3,211	440	3,651
Bottle sold during this period	0	0	0	0	29	8	37	29	8	37
Bottle Sold by PR4	2,160	540	225	765	540	223	763	3,240	448	3,688
Bottle Provided	2,160	540	225	765	540	225	765	3,240	450	3,690
Bottle remains	0	0	0	0	0	2	2	0	2	2
Rate of sale	100%	100%	100%	100%	100%	99%	99.7%	100%	99.6%	99.9%

Source: JICA Project Team

The previous bottles that remained unsold in Malab, have been sold except for 2 bottles (small ones) that were with Risayon. Overall performance of sales for both containers is 3,688 bottles – a 99.9% of sales rate, almost all of them were sold.

Here is the table that shows how the 9 members shared and sold the containers procured in the 2<sup>nd</sup> business cycle.

**Table AG5.2.13 Containers Bought by Them for 2<sup>nd</sup> Business Cycle**

Name of the Participant	Number of containers obtained on 2nd procurement	Containers sold as of December
Fatuma	105	50
Risayon	105	4
Kalindi	105	0
Ngusat	105	12
Martha	105	0
Nalapan	105	15
Naperu	105	0
Alice	105	12
Pauline	105	12
Total	945	105

Source: JICA Project Team

Though not a long time has passed since they procured the new containers, already 105 containers had been sold as of December 2014 an 11% rate. It can be said that around 400 bottles might have been sold including bottles bought by the individual members. This is nine percent of the first cycle record, indicating that there are more markets.

Regarding the other honey group members that have not bought or contributed money to buy the containers, the group members have reported that these individuals buy small number of bottles from the individuals who had procured by themselves from Nairobi. The main individuals who sell the bottles to other group members or other women in Ngurnit who engage in honey are Fatumah, Zeinab, Nalapan, Seyere and other members with more containers at Ksh 18-20/bottle. However, the records of how much they have bought are not known due to the unavailability of the individuals in Ngurnit town.

As reported in PR4, now it has become easier to commute to far-away markets like Loglogo, Marsabit, Laisamis, Ilaut, Korr and Merille since there are two additional individuals who have

bought cars in Ngurnit town. These cars go to these markets every week providing honey dealers means of selling their product to such markets.

(2) Records of Any Individual Benefits (profit share, labour fee, etc)

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

There is no sharing of benefits from the sales of gums resins and honey for each group. Individual benefits are enjoyed from the sales of individual transactions.

~from September 2013 to February 2014~

There is no sharing of benefits from the sales of gums resins and honey for each group. Individual benefits are enjoyed from the sales of individual transactions. By using the above honey data, individual net profit from the above honey sales as of now is estimated as below:

**Table AG5.2.14 Estimated Individual Net Profit (from September 2013 to February 2014)**

	Ndoto	Asali Kingi			Malab		
	500g-bottle	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total
Bottles Sold	1,972	435	194	629	394	203	597
Net profit per bottle (refer to Table AG5.2.6)	2,260/32 = 71	2,260/32 = 71	2,084/48 = 43	-	2,260/32 = 71	2,084/48 = 43	-
Total net profit for the group	140,012	30,885	8,342	39,227	27,974	8,729	36,703
Number of members of the group	12	5			6*		
Estimated average total net profit per one member (round)	11,700	-	-	7,800	-	-	6,100

\*: now six members

Source: JICA Project Team

So far, they earned from Kshs.6,100 to Ksh11,700 per person since they started improvement of the honey business.

~from March 2014 to August 2014~

As reported in PR3, there is no sharing of benefits from the sales of gums resins and honey for each group. Individual benefits are enjoyed from the sales of individual transactions. By using the above honey data, individual net profit from the above honey sales as of now is estimated as below:

**Table AG5.2.15 Estimated Individual Net Profit (from March to August 2014)**

	Ndoto	Asali Kingi			Malab		
	500g-bottle	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total
Bottles Sold	2,160	540	225	765	511	215	726
Net profit per bottle (refer to Table AG5.2.6)	2,260/32 = 71	2,260/32 = 71	2,084/48 = 43	-	2,260/32 = 71	2,084/48 = 43	-
Total net profit for the group	153,360	38,340	9,675	48,015	36,281	9,245	45,526
Number of members of the group	12	5			6*		
Estimated average total net profit per one member (round)	12,800	-	-	9,600	-	-	7,600

\*: now six members

Source: JICA Project Team

So far, they earned from Kshs.7,600 to 12,800 per person since they started improvement of the honey business, this increased from Kshs.6,100 to Ksh11,700 per person as reported in PR3.

~from September 2014 to December 2014~

As reported before, there is no sharing of benefits from the sales of gums resins and honey for each group. Individual benefits are enjoyed from the sales of individual transactions. By using the above honey data, individual net profit from the above honey sales as of now is estimated as below:

**Table AG5.2.16 Estimated Individual Net Profit (from September to December 2014)**

	Ndoto	Asali Kingi			Malab		
	500g-bottle	500g-bottle	300g-bottle	Total	500g-bottle	300g-bottle	Total
Bottles Sold	2,160	540	225	765	540	223	763
Net profit per bottle (refer to Table AG5.2.6)	2,260/32 = 71	2,260/32 = 71	2,084/48 = 43	-	2,260/32 = 71	2,084/48 = 43	-
Total net profit for the group	153,360	38,340	9,675	48,015	38,340	9,589	47,929
Number of members of the group	12	5			6*		
Estimated average total net profit per one member (round)	12,800	-	-	9,600	-	-	8,000

\*: now six members

Source: JICA Project Team

So far, they have earned Kshs.8,000 to Ksh12,800 per person since they started improvement of the honey business, almost similar to the reported figures in PR4 (because the bottles had been almost sold out since PR4).

Further, for the group members who were able to buy containers as either individuals or through the group they have started gaining profit for the second business cycle.

#### Comparison with the previous exercise

As mentioned in PR4, before the Project assistance, net profit from honey business per person was estimated at Ksh 4,900 per year on average, across all the group members. A similar average figure of the transaction after the assistance is calculated, and the result is that average net profit per person becomes  $(153,360+48,015+47,929)/(12+5+6) =$  Kshs 10,839 (we can say this figure is considered per year, slightly increased from the figure reported in PR4), twice as much as the previous transaction.

Since some of the members have already started the second business cycle, it is expected that they will continue this improved business transaction in a sustainable manner (12 members out of total 23 -52% for both individual and group collective procurement).

#### (3) Records of Any Group Benefits

The following is the monitoring results for this indicator.

**Table AG5.2.17 Records of Any Group Benefits**

	<b>Group Name</b>	<b>Indicator as of the end of August 2013</b>	<b>Indicator as of the end of February 2014</b>	<b>Indicator as of the end of August 2014</b>	<b>Indicator as of the end of December 2014</b>
1	NDOTO HONEY	For every 9 bottles of honey sold 1 is donated by a member to the group	They changed. They contribute Ksh.200/month to the groups from the sale of honey.	They contribute Ksh.200/month from the sale of honey	They contribute Ksh.500/month from the sale of honey- They shared out the profits and started afresh.
2	ASALI KINGI GROUP	For every 9 bottles of honey sold, 2 are donated to the group.	Due to the low seasons, now they have not done the donation mentioned left	They contribute Ksh.200/month from the sale of honey	They contribute Ksh.200/month from the sale of honey
3	MALAB = former individuals	They are new and operate a merry go round (money) where on a monthly basis, one member gets Ksh. 6,000 contributed from members (Ksh. 1000 /member)	They continue the merry go round mentioned left.	They contribute Ksh.100/month from the sale of honey to the group	They contribute Ksh.100/month from the sale of honey to the group

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Although the members indicated that honey is donated to the group, this is recorded as a member's contribution in terms of money. Therefore for one bottle, this will be Ksh. 300.

In addition to the above, cooperation in the honey business among members is also being implemented e.g. to transport honey together to a remote market and so on.

~from September 2013 to February 2014~

One group has changed the way of contributing the money to the group from honey sales. Others kept the exercises the same but one has tentatively stopped donations to the group.

Cooperation in honey business continues as a group benefit e.g. to transport honey together to a remote market and so on.

~from March 2014 to August 2014~

All groups replied that they contribute some amount of money from the sales of honey to the group, which is the source of the loan mentioned below.

As discussed above, cooperation in honey business continues as a group benefit e.g. to procure containers together, to transport honey together to a remote market and so on.

~from September 2014 to December 2014~

All groups replied that they contribute some amount of money from the sales of honey to the group, which is the source of the loan mentioned below.

- Ndoto Honey group finished their business cycle in August 2014 and they shared out their profits. They started afresh and changed their contributions from Ksh.200/month to Ksh.500 month
- Asali Kingi and Malab still maintain their contributions at Ksh.200 and Ksh.100 per month respectively from the sale of the honey

Cooperation in honey business continues as a group benefit, e.g. to procure containers together, to transport honey together to a remote market and so on.

## (4) Total Amount of Money in the Group Account

The following is the monitoring results for this indicator.

**Table AG5.2.18 Total Amount of Money in the Group Account**

	Group Name	Indicator as of the end of August 2013	Indicator as of the end of February 2014	Indicator as of the end of August 2014	Indicator as of the end of December 2014
1	NDOTO HONEY	The group has Kshs.12,000 but the money is in circulation as loans. (VICOBA is implemented)	Kshs.32,375 (Loan: Ksh 31,357, Cash: Ksh 1,000), VICOBA is implemented	Ksh.55,000 (Loan: Ksh.55,000, Cash:0)	Ksh.6,000 (Loan:Ksh.6,000, cash:0)- They shared out their profits
2	ASALI KINGI GROUP	They have Kshs.15,000 of which 10,000 is out in circulation and Kshs.500 kept by the group. (VICOBA is implemented)	Kshs.15,000 (Loan: Kshs.9,000, Cash: Kshs.6,000), VICOBA is implemented	Ksh.20,000 (All in loans)	Ksh.40,000 (Loan:20,000, bank: 20,000)- They raised Ksh.20,000 from members contribution and deposited in a bank
3	MALAB = former individuals	The group has Kshs.600 which is membership fees. However, they are considering lending it to have it in circulation. (VICOBA has not yet been implemented however they think to start in due course)	Kshs.1,600 (Loan: Kshs.600, Cash: Kshs.1,000) VICOBA is implemented	Ksh.4,900 (All in loans)	Ksh.7,100 (All is out as loan to the members) Bank: Ksh.5500 (from members contributions)

Source: JICA Project Team

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Two groups that existed from the beginning have increased the group money. For newly formed group it now has Ksh. 600 as membership fees. The members of Malab said that they were considering starting VICOBA soon.

~from September 2013 to February 2014~

Two groups have increased the group money, and the other has the same amount compared to the amounts in August 2013.

For Drought Fund, out of two groups, Ndoto honey group has saved Kshs.3,000 in the Drought Fund bag from members' contribution. Others are still discussing on this fund.

~from March 2014 to August 2014~

All the groups have increased the group money from their contributions out of the sales of honey. As for Drought Fund, Ndoto group kept the amount of Kshs.3,000 as reported in PR3. Other groups are willing but have not saved yet because they have a lot of contributions for loaning. The idea for preparedness is generally agreed by all groups but not yet implemented.

~from September 2014 to December 2014~

- Ndoto honey group shared out their profits equally at the end August 2014 (after all the loans and interest were returned by the members so that they could close the year) since they had completed their year cycle. Later they changed their monthly contributions from Ksh.200 to Ksh.500. Therefore they currently have Ksh.6, 000 as loans.

- Asali Kingi made members contribution of Ksh.20,000 which was deposited in the bank. The previous loan of Ksh.20,000 is still with the members. Since they took the loans, the members have reported that the sales from the business are low and that's why they have not yet returned the loans plus the interest.
- Malab currently have Ksh.7,100 which is still out as loan among the group members. Since the end of August 2014, the members held a meeting to contribute funds so that they can increase their savings in the bank account. They decided to contribute Ksh.1,100 per member every month. This money will be deposited in their account on a monthly basis so as to keep it active. This ensures that they can get access to any funds available for women at the County Government level.
- All the groups have increased the group money from their contribution out of the sales of honey. As for the drought fund, Ndoto group has kept the Kshs.3,000 as reported in PR3. Other groups are willing but have not saved yet because they have a lot of contributions for loaning. The idea for preparedness is generally agreed by all groups but not yet implemented.

#### **G5.2.4 Monitoring of Effect Indicators and Others**

Here, information for effect and other indicators at the end of the sub project period is documented.

##### (1) Group members' livelihood

The main source of livelihood for the members is mainly;

- Small business: This comprise of kiosk where members sell honey, cereals (maize, rice and beans), sugar, cooking utensils, beads and other household items; and
- Livestock: Most members here own livestock but the animals are far away from Ngurnit town. They only keep a few animals.

##### (2) Current measures in terms of livelihood to cope with drought

###### 1) By member

- All the members depend entirely on proceeds from the small business to cope with drought. They use this profit to buy their basic needs although some individuals save part of it for future use.
- A few individuals replied that apart from small business, they also depend on their livestock as a means of coping with drought.

###### 2) By group

- When the group was interviewed as a whole in the end-line survey, they replied that now they can prepare for drought using money obtained from the business as a group.

##### (3) Assets by member and group

Here, whether some impacts are observed or not to their assets at this point of time by the sub project to the baseline condition is argued as below.

###### 1) By member

Significant change due to the sub project alone for this implementation period might not have been observed in terms of individual assets. However, as their business activities are progressing, it is expected that they are getting more profit leading to having more assets.

###### 2) By group

So far, they do not have any group assets. Group members are also the same.

(4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Here whether some financial impacts are observed or not at this point in time by the sub-project to the baseline condition is argued as below.

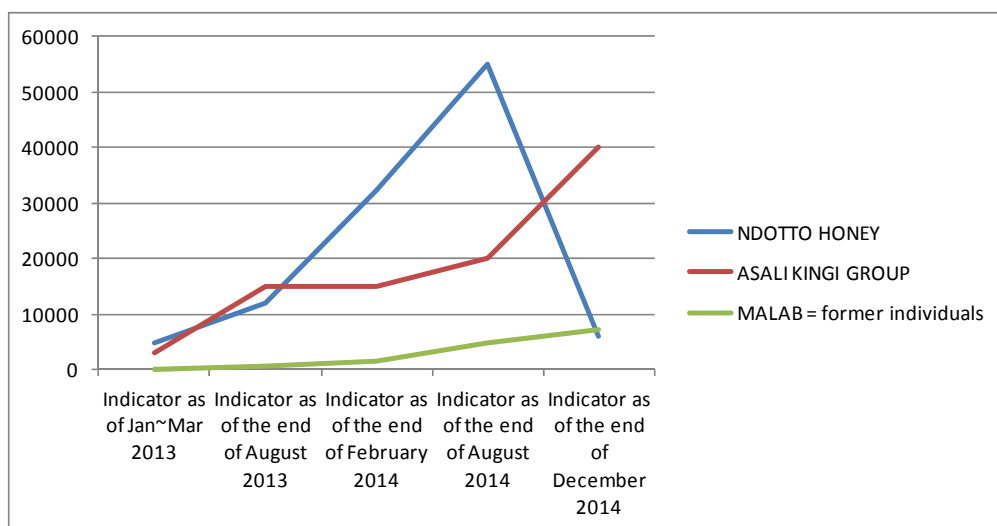
1) By member

According to the baseline survey, annual household income of the sampled members was Ksh 219,043. This is considered not small, and this is probably because some of the members had big shops for their retail business activities.

Out of this, honey business contribution was estimated at approximately two percent (2%) (Ksh 4,900 of the net income per year on average per member). After the assistance, the net profit from the honey business became Kshs 10,839 per year per member as a result of the first business cycle, making five percent (5%) proportion of the annual household income. Through the Project it can be stated that three percent (3%) of their annual income has been increased.

2) By group

Through their business activities and the contribution from their business, the group money has been increased as shown below:



Source: JICA Project Team

**Figure AG5.2.20 Change of Other Group Fund**

As noted, Ndoto group's decline was attributed to the share-out and they started afresh. In this sense, all groups have increased their group fund. Not all of these increases can only be because of the Project activities. However, at least VICOBA training and frequent visits and mentorship activities by the Project must have accelerated the above trend.

For Drought Fund, now only Ndoto group has kept Ksh 3,000.

(5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1) Expectation to enhance resilience by the sub-project

All members replied that their resilience against drought has been enhanced because the introduction of the new containers increased net profits, hence increase in household income. They also argued that the trainings, seminars, mentorship and technical support provided by the sub-project enabled them to gain entrepreneurial skills (increase profits) and a culture of saving money for future droughts.



The three (3) groups' answers are also the same as the individual's replies.

## 2) Expectations in general

### By member

Generally all the sampled members had different expectations regarding the Project, and the most common are business loans, water tanks, provision of means of transport, construction of business hall, provision of goat heifers, construction of greenhouse, education grants, construction of schools and toilets. Despite the individuals' expectations of all these things from the Project, they responded that although they haven't been fulfilled, they are satisfied with the guide, support, trainings and mentoring that the Project provided to improve the honey business in the area.

### By group

Generally all the three groups expected the Project to give them loans to expand their business and to brand their honey so that they can access bigger markets (supermarkets). They also expected social amenities like construction of closed market and toilets. Again, like the individual members, all groups think that expectation was met though their initial expectations seem different from what the Project did.

## 3) Knowledge Obtained

All members replied that they have applied the knowledge they obtained from the Project in; when new containers were introduced all the members stopped using used coca cola bottles to pack their honey. Other members also responded that they keep inventory of their stock and furthermore they have started putting money aside to restart their businesses in case the current investment fails. Others still replied that they have applied the modern techniques they have learnt from the PFS in their honey processing and they are seeing good results since their honey is pure and liked by the customers. Others have applied the knowledge in expansion of their business and also in procuring containers by their own individual efforts.

## 4) JICA approach

All the individuals/groups are positive about JICA's approach because the Project started by providing them trainings and seminars in entrepreneurship and business management. The Project also decided to take the group for PFS to KVDA where members learnt the technical knowhow on honey processing and purification. The groups further argued that JICA had taught them on self reliance because it has shown them clearly through guidance and support how to get the honey containers from Nairobi on their own without entirely depending on external support.

Though honey business and containers improvement are evaluated very positively, resin business was somehow evaluated generally as negative because of less availability of reliable markets for it. Individuals who continue or realize how they can continue seem positive on this business.

For Drought Fund, two groups replied it is beneficial though only one group kept money. VICOBA is also evaluated as positive. Especially for Malab group, which was formed as a group after the assistance started, realized VICOBA's benefit because they had not started such savings and loans, until the Project encouraged them to do so. Now they have increased their money and are happier.

## 5) Overall satisfaction

### By member

58.3% of the individuals interviewed replied that they are highly satisfied with JICA assistance because apart from regular and constant support, JICA had introduced the first new containers with seal that earned customers trust leading to expansion of the market and hence increase in net profits by members. The individuals argued that they have gained entrepreneurial skills during the seminars and trainings provided by the Project. The individuals also appreciated the PFS to KVDA where members learned modern honey processing techniques that they are still applying it in their businesses.

Lastly, the individuals explained their high satisfaction that JICA has taught the importance of self reliance since it had shown them how and where to procure the containers from Nairobi (The groups have the contacts of the manufacturer and can use it any time they want the containers).

The other 41.7% of respondents are moderately satisfied because they had expected JICA to provide them with loans so that they can expand their businesses, but, in general they appreciate the PFS, trainings and guide since they have gained entrepreneurial skills and they now know how to get the containers from Nairobi by themselves.

#### By Group

All the 3 groups are highly satisfied that since inception of the Project, JICA procured new containers (although the groups later paid for the containers) for the groups to replace used coca cola bottles. The groups argued that these new bottles improved and increased the net profits that members can earn from the honey, because the customers trusted the new containers, thus expanding the market for the honey. Furthermore, the groups have highlighted that the PFS that the Project provided the groups to visit KVDA has really enabled them to apply the knowledge learnt in processing and purifying honey. On the other hand, JICA had shown them where and how to procure the containers by themselves without depending on external help.

#### (6) Other indicators to see impact

##### 1) Members efforts on the sub projects

The members contributed for the success of the sub project through the following activities:

- Planning and contributing to buy new containers,
- Attending meetings to contribute and share ideas,
- Hygiene during honey processing,
- Applying knowledge learnt during the training and PFS,
- Members survey for new markets to sell honey,
- Following advice provided by the Project staff,
- Participation in VICOBA activities (making monthly contributions, taking loans and returning with agreed interest), and
- Drought fund contribution for active group like Ndoto honey.

##### 2) Gender

The end-line survey noted mostly very positive replies from the members (mostly women) as follow:

- Women have been empowered by the Project (through technical trainings, PFS and regular monitoring) to expand the honey business;
- Women have been provided with business skills that have enabled them to engage in honey business and expand it;
- Women can now even travel to Nairobi to buy containers and without depending on men;
- The PFS and trainings have enabled women to venture in other businesses other than honey;
- Women now have business and technical skill in honey processing and marketing;
- Women status has been elevated and women have been empowered economically since women are excelling in honey business; and
- Women can run businesses and make decisions regarding their businesses on their own without consulting or men intervention.

### 3) Environment

Except for sustainable exploitation of natural resources in the area, the individuals and groups interviewed feel that JICA has not contribute in any negative way to the environment.

### 4) Other community members' opinions

The end-line survey shows the following opinions based on focused-group interview with the chief and elders.

#### Awareness of livelihood activities by Chief (DMC/DC)

They are aware of JICA activities since they were consulted before the Project started and furthermore he has been meeting with the sub project team regularly. His wife is also a beneficiary of the sub project.

#### Other community member's opinions

Other community members opined that apart from the constant support and guide, JICA could also have taken a step in branding the honey for the women groups so that they can access bigger markets.

#### DMC/DC function on livelihood program

Although a Drought management Committee does not exist in the area (at least he recognized as such, even though the Project established the committee at the very beginning of the Project), the chief mentioned that its intended function should be to control water use and grazing areas in the region.

## **G5.3 Discussion**

### **G5.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub project is as follows:

- Honey and gum/resin are one of the commodities that the group members deal with for their small retail business. For honey in particular, the net profit from the honey business increased from two (2%) before the assistance to five percent (5%) of the total household income. This three percent (3%) increase can be said to be the tangible benefit for building resilience as raising buffer and bounce-back functions of resilience in terms of business success for one out of other commodities as well as the monetary increment itself as livelihood diversification. Satisfaction of the group members is high and they themselves think that resilience is enhanced.
- Not only success of individual business, group mechanism for resilience can also be enhanced through VICOBA success using profit from honey business and cooperative actions for their business.
- Unfortunately gum and resin business might not have expanded as the honey business.

### **G5.3.2 Positive Impact**

Positive impacts are as follow:

- Due to the guide and support provided by JICA, unlike before when they were unable to procure the containers by themselves, the women can contribute money and procure the containers from the manufacturers they knew thanks to JICAs assistance. And since the new containers have increased their portion of the market (due to customers trust in the new containers with a safety seal), the women have promised not to go back to using used coca-cola bottles to sell their honey.

- Skills and knowledge obtained from the training and mentorship activities have been applied through their on-the-job application. These have been even for other commodities and possible positive improvement is expected in these other areas.
- Women have been empowered by economic success. Through this introduction of the new containers in Ngurnit town, the customer's confidence in the honey from the area has grown due to the good presentation of the container and the seal of protection. Hence the honey sells faster and generates cash quickly the women use for their daily life without entirely depending on their husbands. Women have also been able to interact more with different people outside Ngurnit town (including relationship with a taxi driver in Nairobi in procurement of containers) through their business activities than before. Men have accepted the role played by women in honey business and therefore do not interfere in their activities.
- Individuals somehow understand the benefit of working as a group. Individuals who previously participated in the status of individual formed a group and developed VICOBA. Of course business itself is done individually, but at least the people understand the benefit of a group e.g. VICOBA, collective action to buy containers, and access to the governmental assistance such as Uwezo fund etc..
- Technological and infrastructure innovations can make them operate business more conveniently, such as mobile phone (communication and Mpesa), and cars for travel.

### **G5.3.3 Issues and Challenges**

Issues and challenges are as follows:

- The main challenge of honey business is its seasonality: During the rainy and extremely dry seasons, the honey production in Ngurnit and other neighbouring areas goes down and the little honey that can be found is very expensive. Normally during the high season of honey production, a 4 kg can of raw honey goes at Ksh.1,000 - 1,500 but when the production goes down the same can sell at Ksh.2,500-3,000.
- The main constraint in resin business is the supply and market. The herders only collect the resin when they see it and they don't do it as a business. Therefore the supply of the resin is very low and takes a lot of time to accumulate to reach amounts the buyers from Nairobi/other parts who are big buyers are ready to come and buy. On markets (local retail market), the little amount that can be bought by women is hard to sustain a reliable market or right prices along the high way towns. These two challenges have made the transaction of the resin to dwindle, and not easily improved compared with honey.

### **G5.4 Conclusion and Lesson Learned**

Based on the above arguments, conclusion and lessons learned can be summarized as follows:

- Honey in Ngurnit plays a very important role as one of the major sources of livelihood among the women groups in the area. The business has succeeded (for this time, improved packaging has expanded the honey markets). However, gum and resin might not be as good as honey. This means that it is important to identify local resources that can be a source of IGA, study their supply and value chain, and then decide which part of the chain should be improved within the capacity of the target members.
- The Methodology adopted by the Project, namely training, mentorship, and PFS/study tour are useful and effective to build the community's self-reliant attitude when this concept is repeated.. To show success to the members is important so that they start believing what the Project recommends.

- Such business activities are normally handled by women and women are better at handling money than men in general. From this gender point of view, to assist IGA is beneficial for resilience building because women always think about their family for their living and empowered women can do better than before.

## CHAPTER G6. SALT BUSINESS SUB-PROJECT

### G6.1 Outline of the Sub-project

#### G6.1.1 General Outline of the Sub-project

(1) Outline of the sub-project

*Table AG6.1.1 Outline of the Sub-project*

Item	Contents	Remarks								
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities by assisting their micro scale business activities (IGA: income generating activities targeted salt) and giving entrepreneur/business training, VICOBA training, and mentoring activities to enhance community resilience against drought.									
2. Number of Beneficiaries	1 group, around 17 group members									
3. Implementation Organization	JICA ECoRAD Project, and the community groups									
4. Project Contents										
1) Project Outline	1) Business training 2) VICOBA Training 3) Mentoring activities including market linkage									
2) Facility / Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Facilities/Activities</i></th> <th style="text-align: center;"><i>Implementer</i></th> </tr> </thead> <tbody> <tr> <td>1) Implementation of training</td> <td>1) NGO</td> </tr> <tr> <td>2) Market linkage</td> <td>2) NGO</td> </tr> <tr> <td>3) Monitoring</td> <td>3) Project Team &amp; NGO</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementer</i>	1) Implementation of training	1) NGO	2) Market linkage	2) NGO	3) Monitoring	3) Project Team & NGO	
<i>Facilities/Activities</i>	<i>Implementer</i>									
1) Implementation of training	1) NGO									
2) Market linkage	2) NGO									
3) Monitoring	3) Project Team & NGO									
3) Organization for O&M	Target community groups and their chief and elders									
4) Construction Period	23 months (starting Feb 2013 around up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.								

Source: JICA Project Team

(2) Basic principle of the sub-project

This sub-project is to assist target groups to do business utilizing local resources (products) near their homes, and encourage them to make savings out of the proceeds. The use of local resources (salt) in business cannot be imposed on local people. However the project will emphasize capacity building of the business skills of the people such as understanding cost and benefit structure, identifying/linking markets, and improving packaging. The activities to be done include entrepreneurship and VICOBA training and mentoring activities.

### G6.1.2 Selection of Target Groups

#### (1) Participatory planning

In selection of the target groups, participatory planning approach was taken. Firstly the team visited the chief and discussed the preliminary idea of the activities planned in this location, namely salt business assistance as a model using local resource, and the chief basically agreed with the idea. Meetings arranged by the chief were held with the participants from the community and the elders. Soon after the idea was explained, the discussion was provoked among the community people. In the first meeting held on 20<sup>th</sup> January, 2013, some people expressed their objection on the salt business because the salt collection was physically hard; finding transportation was difficult; and there were no markets according to them.

The team asked the community to once again discuss among themselves for a week. In the second meeting on 26<sup>th</sup> January, 2013, there were still objections on the salt business from some people, but interestingly other people started the positive argument to support the salt business. Eventually the team and the chief decided to take up one group which showed strong commitment for participation in the sub-project even though they understood the current difficulties in this business such as transportation etc., and several trainings that would be the only support to be obtained from the sub-project (no physical support).

At the end of this process, this group and the team concluded a memorandum showing they would receive the assistance from JICA and cooperate in the activities.



Source: JICA Project Team

**Figure AG6.1.1 Meeting with community in Kalacha**

#### (2) Target community groups

The following table shows the selected target community group. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG6.1.2 Information for Target Group**

	<b>Group name</b>	<b>Location</b>	<b>Number of members</b>
1	MULUDHE SELF HELP	Kalacha	17

Source: JICA Project Team

### G6.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

## (1) Indicators

## 1) Operational indicators

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. Throughout the monitoring period, these were monitored.

**Table AG6.1.3 Operational Indicators**

	Operational Indicators
1	Business transaction
1-1	Cost and benefit structure
1-2	Production and transaction
1-3	Market
2	Records of any individual benefits (profit share, labour fee, etc)
3	Records of any group benefits
4	Total money in the group account (and any information about VICOBA implementation)

Source: JICA Project Team

## 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be captured. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG6.1.4 Effect Indicators**

	Effect Indicators
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Assets by member and group
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, the baseline survey was implemented as below:

## 1) Methodology

Questionnaires for individual group members and groups were used to collect baseline information. Nine samples from each group which has 17 members of Muldhe group were randomly selected and interviewed for individual questionnaires. For group questionnaires, all the groups were surveyed in sessions with group members. The survey was done by the NGO, and information obtained was as of January, 2013.

## 2) Brief summary of socio economic condition of the target areas

Kalacha location is located 54 km from Maikona at the ridges along the Chalbi desert with the area of 2,608 sq km. It has two sub locations, namely Kalacha and El-Gade sub locations. Population is 7,964 with 1,751 households, and inhabitants mainly depend on livestock. For Kalacha sub location, population is 5,992 with 1,318 households in 818 sq km of area (2009 Kenya Population and Housing Census). Here, Gabra is the main community that lives in this location. Mobile network and



electricity are basically unavailable in the town (some spots of network are available some distance away, and some solar panels are available in town but not all of community members).

### (3) Baseline information of Operational indicators

Here, baseline figures for the indicators are set and shown based on the information obtained from the baseline survey and the activities by the project team.

#### 1) Business transaction

Salt business in Kalacha has existed for years. It has previously been managed by a very large group of more than 100 members who did occasional collection of salt and sold it mainly in Kalacha. They also had ventured into some markets outside Kalacha but with little success. The activities of this group had ended when the chairperson, who had strong leadership died. Since then, no major organizational activities for salt business have taken place. The selected group was recently formed getting independent from the larger group in order to resume salt business with assistance from JICA's sub-project.

##### 1. Cost and benefit structure

Since the sub-project has not yet started, all the records of the groups for this indicator are nil.

##### 2. Production and transaction

Since the sub-project has not yet started, all the records of the groups for this indicator are nil. Previously, salt was collected from the Chalbi desert where salty water covers the desert during the rainy seasons and is dried up during the dry seasons into salt. According to the preliminary survey made by the Project team, this salt collected can be used for livestock use without any processing. This can be strength if the capacity of the community is taken into consideration.



Source: JICA Project Team

**Figure AG6.1.2 Chalbi Desert**  
(Left: Salt in Chalbi Desert, Right: Salt Harvested in Chalbi Desert)

##### 3. Market

Since the sub-project has not yet started, all the records of the groups for this indicator are none. It had been believed that the low market penetration was caused by inadequate transportation system and poor packaging methods which made salt transportation very difficult. The corrosive nature of salt makes owners of trucks not to make their vehicles available for hire during transportation of salt to far markets. For the purpose of the use of this salt, namely for livestock, the potential markets are considered to be in the northern areas closer to Ethiopia where many livestock are herded. These areas are far from the southern part of Kenya where salt is industrially produced, and therefore salt in Kalacha is possibly able to compete.

2) Records of any individual benefits (profit share, labour fee, etc)

Since the sub-project had not yet started, all the records of the groups for this indicator are nil.

3) Records of any group benefits

Since the sub-project had not yet started, all the records of the groups for this indicator are nil.

4) Total money in the group account

The money in the account before the sub-project started was nil. VICOBA had not yet been implemented.

## (3) Baseline information of Effect indicators

1) Group members' livelihood

The majority of the interviewees largely rely on livestock. Few interviewees depend on casual labour. A minority of them rely on are employment, petty business (Miraa) and agriculture but this is rare.

2) Current measures in terms of livelihood to cope with drought

## 1. By member

Majority of interviewees responded that they don't have measures or mechanisms for creating resilience against drought while one correspondent said that she saves little money from the income for drought although not constantly, the other mentioned the lack of knowledge to plan and enhance resilience.

## 2. By group

Before the sub-project had started, the group did not have any measures to cope with drought as a group.

3) Assets by member and group (including group profile)

## 1. By member

Main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below:

**Table AG6.1.5 Assets by Member (Baseline)**

		Average/sample HH	% of having/ sample HH
Physical	TV	0	0
	Car	0	0
	Mobile phone	1.33	89
	Bicycle	0	0
	Motorcycle	0	0
Livestock	Goat	11.44 (max: 24, min: 0)	89

<sup>1</sup> It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (100~200 shoats/family). The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit); and 2) these households live close to the center of locations so smaller figures are not far from the true figures. For the reference, average household size of the samples for the salt group is seven in Kalacha.

		Average/sample HH	% of having/ sample HH
	Cow	1.22 (max: 6, min: 0)	22
	Sheep	16.67 (max: 50, min: 0)	89
	Camel	3.56 (max: 25, min: 0)	22
	Chicken	0 (max: 0, min: 0)	0
	Donkey	0.33 (max: 2, min: 0)	22

Source: Baseline Survey and JICA Project Team

The result is not so different from the one for the members of the goat merry go-round system in Kalacha. For physical assets, 89% of the respondents have mobile phone (average number/household is 1.33). Instead, other major assets are zero.

With regards to livestock assets, shoats are the most common livestock that the target members have (89% of the sample target members have shoats). Other livestock are owned by around 22% of the respondent households except chicken.

## 2. By group

Group asset including the information of general group profile is shown as below:

- Number of Group members: 17  
Out of which, target members are 17 (female: 15, illiterate: 16)
- Asset: none
- Group account: none
- Established: 2013 (previously they were in a big salt group. The activities of the group had not been implemented for so long, and this time they decided to separate and formed a new group).

## 4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

### 1. By member

Household income and expenditure for the sampled target members are summarized in the table below:

**Table AG6.1.6 Household Income and Expenditure (Baseline in Ksh)**

	Kalacha (salt group)
Annual Household Income	Average: 131,278 Max: 324,000 Min: 36,500
Annual Household Expenditure	Average: 114,256 Max: 189,200 Min: 36,000

Source: Baseline Survey and JICA Project Team

This result is also not very different from the one for the target group members for the goat merry go-round system, though household expenditure seems a bit higher than that of the goat group. Though the difference is not that huge, in general it could be said that the sample members for the salt business have a slightly higher income and expenditure than the goat one.

## 2. By group (only financial impact)

Since the sub-project had not yet started, the financial impact of the group for this indicator is nil.

## 5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

### 1. By member

All the nine interviewees have expectations that the project will enhance their resilience against future drought. The majority of the interviewees reasoned that the project will improve livelihood and utilization of local resources (Salt sales). While few said that they will obtain loans, knowledge and add resource to the group.

As individual benefits, the majority said that they will get money from the sale of salt, satisfaction to participate in a working opportunity and satisfaction working as a group. As additional benefits, two interviewees mentioned sustainability and knowledge as individual benefits.

### 2. By group

As for the expectation to enhance resilience by the sub-project, they answered that resilience will be expected to be enhanced through increase of group income and improved financial status of the group.

They answered several things as the expectation about group benefit i.e. fostering awareness of resilience as a group, members' solidarity, and culture to help one another; and providing both working opportunities and money to members.

Lastly, they mentioned improved livelihood and financial stability as JICA's approach compared with other donor projects.

## **G6.2 Works Done**

Works done during the implementation of the sub project are shown below.

### **G6.2.1 Inputs from the Project as Assistance Activities**

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

#### (1) Provision of Training

##### 1) Entrepreneurship training

The focus of this course is on Income Generating Activities (IGAs) especially at the lower levels. It's meant to help the participants acquire skills for better management of their small and micro enterprise. Basically, the contents are similar to the one implemented in Ngurunit.

##### 1. Course objective

The Following are the overall learning objectives:

- To build the capacity of the women and women groups on how to identify existing business opportunities;
- To build their capacity for planning and launching income generating activities;
- To build their capacity to manage cash from their enterprises and identification and management of risks associated with them; and
- To build their capacity for record keeping of their businesses.

## 2. Course content

The contents covered are as below in an abridged form.

**Table AG6.2.1 Course Content of Entrepreneurship Training**

Item	Contents
Setting up a suitable IGA	<ul style="list-style-type: none"> <li>- The five important points:               <ul style="list-style-type: none"> <li>- Marketing (demand and supply of products)</li> <li>- Technical aspects (Knowledge, Skill, Attitudes, Time availability)</li> <li>- Capital (working capital: cash and raw materials)</li> <li>- Profitability (costs of inputs, total sales gross profit)</li> <li>- Household issues</li> </ul> </li> </ul>
Preparing an operation plan	<ul style="list-style-type: none"> <li>- Tasks that must be accomplished</li> <li>- Resources and their quantities that must be assembled to run the business</li> </ul>
Managing the IGA	<ul style="list-style-type: none"> <li>- Areas to which income from the business must be allocated</li> <li>- Managing risks from the business</li> </ul>

Source: JICA Project Team

This training was participatory as in the other cases. A total of 17 trainees were in attendance. These are all the members of the community taking part in this activity. This was implemented from 16<sup>th</sup> to 18<sup>th</sup> April, 2013.



Source: JICA Project Team

**Figure AG6.2.1 Entrepreneurship Training**

## 2) VICOBA training

VICOBA stands for Village Community Banking. The basic principle of the VICOBA system is that members of a self selected group form a VICOBA and save money, which is the source of loan capital from which they can borrow.

### 1. Course objective

To introduce the fundamentals of Village Community Banking (VICOBA) to group members in order to strengthen their savings and loan abilities. The successful use of VICOBA will contribute to the sustainability of the salt project

### 2. Course content

Course content is summarized in the table below:

**Table AG6.2.2 Course Content of VICOBA Training**

Item	Contents
Introduction to VICOBA	<ul style="list-style-type: none"> <li>- What is VICOBA</li> <li>- How does VICOBA work</li> <li>- Comparing VICOBA and Merry-go round</li> <li>- Useful terms in VICOBA (savings, loan, interest, fine)</li> </ul>
Individual self-screening(ISS) and group formation	<ul style="list-style-type: none"> <li>- Importance of ISS in group formation</li> <li>- Importance of knowing each other and its impact on group VICOBA activities</li> <li>- Value of ISS in elections</li> <li>- Importance of ISS in dispute resolution</li> </ul>
Types of group funds	<ul style="list-style-type: none"> <li>- Savings and loan fund (Compulsory)</li> <li>- Social fund (optional)</li> <li>- Drought fund (optional)</li> <li>- Others</li> </ul>
Group membership, leadership and elections	<ul style="list-style-type: none"> <li>- Who can be a group member</li> <li>- Elections</li> <li>- Characteristics of specific leaders (Chairlady, secretary and treasurer)</li> <li>- Roles of each leader</li> <li>- Terms of leadership ( 6 months to one year)</li> </ul>
Record keeping	<ul style="list-style-type: none"> <li>- Types of record books to be kept</li> <li>- Types of records</li> <li>- Who should keep what records</li> </ul>

Source: JICA Project Team

All 17 group members attended this training held from 29 April to 1 May, 2013.

### 3) Group strengthening training and others

There are no specific groups strengthening activities. However during mentoring activities to find markets for the salt, trainings on how to operate in a group were done.

### (2) Provision of Mentoring Activities

Other than the above, the following mentoring activities were done to assist the groups in establishment of their business activities:

- Provision of gunny bags: Initially the groups were supplied with gunny bags from Marsabit by the team, which they promptly paid for. However, later the groups were able to procure bags by themselves from Maikona and Marsabit town. It is easier to get more bags in Marsabit than Maikona;
- Market linkage: The groups were assisted to access markets such as Dukana, Ballessa, El Hadi, Forole, Huri Hills and El Yibo whereby all these places are north from Kalacha. The assistance activities were to bring salt bags with some group members to potential markets and to contact buyers or agents there with the group; and
- Business mentoring: Efforts were made to mentor the traders (the group members) on the overall business cost/benefit structure, especially the transportation costs, and potential best ways of transportation in order to maximize on profits. To secure transportation is still difficult but hiring a lorry could be one of the solutions.



Source: JICA Project Team

**Figure G6.2.2 Mentoring Activities**  
(Left: Discussion about Cost and Benefit Structure, Right: Assisting Transportation to Markets)

~from September 2013 to February 2014~

### (3) Implementation of PFS

For Kalacha groups, PFS was implemented for both salt business and goat merry-go round sub-projects together in Kalacha on 19<sup>th</sup> September, 2013 by PACIDA. Details of the activities are as follows:

#### 1) Objective

Objective of this PFS is to learn difficulties, success story, and other considerations on the activities from each member and other groups, and give feedback to their own activities for improvement.

#### 2) Participants

Twelve members from this group attended the PFS activities. From the goat groups, 23 members attended and therefore in total 35 members were present.

#### 3) Activities

During the session, the attendants discussed the issues mainly of VICOBA, social fund, IGAs, and the group activities for the sub projects as a kind of brainstorming way to know issues facing them..

#### 4) Observation

To have the attendants from different sub-projects seems not to have earned good results. For this particular salt business group, another PFS or study tour to show the good examples of womens business transaction (or perhaps our groups of another sub project - gum and resin -) shall be considered as a next step.

### (4) Participation at the Investors Conference

Ministry of Trade of Marsabit County held the Investors Conference on 11<sup>th</sup> of October 2013 to introduce resources available in Marsabit County and try to attract investors to the county. Through talks with the officers of the Ministry of Trade, this salt group was invited for the conference together with the groups of resin and honey. Details of the activities are as follows:

#### 1) Objective

Objective of this participation is to explain the activities of JICA ECoRAD project in Marsabit County, and to show the potential of salt from Chalbi Desert as an investment opportunity in collaboration with the women group.

## 2) Participants

Six women came from Kalacha and three actively participated.

## 3) Activities

A booth was made for the ECoRAD project, and the members were inside to explain the business activities to investors, showing salt bags.

## 4) Observation

Though salt was not so attractive to investors, participation in this conference in Marsabit seems to have given some confidence to the members in presentation to many unknown people, and they were proud of themselves of their business.



Source: JICA Project Team

**Figure AG6.2.3 Investors Forum**  
(salt bags under the table)

## (5) Southern Marketing Trip

The group had showed strong interest to expand their markets to the southern part of Marsabit County. The project organized a trip to the area and did market research with the group from 9<sup>th</sup> to 14<sup>th</sup> of November, 2013.

Details of the activities are as follows:

### 1) Objective

Objective is to seek the possibility to expand the markets of salt to southern part as well as build the capacity of the group members on this field.

### 2) Participants

The group selected three members of their group to go with the project car to the southern areas to look for markets of the salt.

### 3) Activities

For the above period, the group members visited Korr, Ngurnit, and Illaut.



#### 4) Observation

##### Korr

The Korr community gave their views that they do not need salt for their animals, since they take their animals to the source of water and their water is salty and thus act as alternative source of the salt for the animals. The residents need refined salt for drying the hides and skins produced in the area, but the group is currently not capable of refining salt to meet these needs.

##### Ngurnit

Ngurnit is a potential market for Chalbi desert salt since there is a very high demand for it. In Ngurnit there are all sorts of livestock i.e. camel, cattle and shoats. On the first day the members arrived at Ngurnit town, the first 10 bags of salt were bought on cash by a buyer who declared that she wants to be the agent of the group. She can buy on bulk on cash from the group and later sell on retail to the local people.

##### Illaut

The company travelled to Illaut town with six bags of salt. Four of these bags were bought on cash and the other two were sold on retail basis by individual women. The bags were sold @ 1,000/bag and the ones for retailing sale were at Kshs.40/kg.

##### Others

Although the company did not reach South Horr area, one of the businessmen from the area who was present at Illaut Market confirmed that there would be high demand for the salt in the town. Also Marsabit central (specifically Dirib Gombo) was indentified as a potential market and the group found an agent to deal with the bags.



Source: JICA Project Team

**Figure AG6.2.4 Salt Sold in Illaut**

#### (6) Provision of Mentoring Activities and Others

Other than the above, the following activities were done to assist the groups for establishment of their business activities:

- Market linkage: The efforts continued. Especially, a buyer from Ethiopia expressed his interest to buy the salt at Forole, one of our market areas. The team linked the group to the buyer, and the group decided to deliver the salt bags by their own initiative. However unfortunately, the mode of payment that the buyer showed was not cash but in kind (cloths and so on), therefore the group rejected this offer, and this deal was not done. This is one of their learning processes;

- Business mentoring: Efforts also continued to mentor the traders (the group members) on the overall business. This time, the focus was on 1) monitoring the sales of markets places and collection of money from markets; 2) accelerating the salt delivery to potential markets in order to avoid disruption by short rains; and 3) storage for the rest of the bags during this short rain season; and
- Provision of Drought Fund bag: Though this has not yet been emphasized in this sub-project, a bag was provided to the group to save money out of sale to prepare for future drought.

~from March 2014 to August 2014~

#### (7) Provision of Additional Business Training

During this period of reporting from March to August, the activities of this salt business have been low due to off season. Thus, the following additional training was done by the JICA team on 5<sup>th</sup> of July 2014 as follows:

##### 1) Objective

Objective of this training is to learn important key areas of the business that can be referred to their business planning for their next second business cycle, based on their business result of the first business cycle.

##### 2) Participants

Ten members from this group attended.

##### 3) Activities

During the session, the main focus was given to record keeping, and preparation of next business plan. The following points were explained and discussion was made among the participants:

**Table AG6.2.3 Main Points Taught and Discussed in the Additional Training**

Record keeping	Preparation of next business plan
<u>Quality of salt</u> <ul style="list-style-type: none"> <li>- Collect salt of good quality to avoid losses due to salts of bad quality sold to markets</li> <li>- Choose the best spot in the desert with salt of good quality</li> <li>- Supervise to make sure members collect salt of good quality</li> <li>- Purchase new bags for proper storage of salt</li> <li>- Choose where to put the salt to avoid damage by rain</li> </ul> <u>Specific markets to deliver salt</u> <ul style="list-style-type: none"> <li>- Markets that are cheaper and easily accessible</li> <li>- High demands for Chalbi salt</li> <li>- Reliable relationship with shops</li> <li>- Good agents/relatives to sale salt on behalf of the group</li> </ul> <u>Prepare budgets for collection</u> <ul style="list-style-type: none"> <li>- Logistics for members (determine how many members are needed and how much each should be paid per day)</li> <li>- Determine the number of bags to be collected</li> <li>- Transport from Chalbi to Kalacha</li> <li>- Costs for loading and offloading</li> <li>- Cost of transport to specific market areas</li> <li>- Number of bags per lorry</li> </ul>	<u>Simple forms of records</u> <ul style="list-style-type: none"> <li>- Exercise books</li> <li>- Ledger books</li> </ul> <u>What to record</u> <ul style="list-style-type: none"> <li>- Total number of bags collected</li> <li>- Bags in store</li> <li>- Bags delivered to various markets</li> <li>- Bags sold on cash</li> <li>- Bags sold on credit</li> <li>- Money collected in different markets</li> <li>- Cost of transportations</li> <li>- Cost of sending members to markets</li> <li>- Loans given to members</li> </ul> <u>Why record</u> <ul style="list-style-type: none"> <li>- Easy to remember</li> <li>- Facilitate transparency</li> <li>- Efficient management of group funds</li> </ul> <u>Points to note</u> <ul style="list-style-type: none"> <li>- Records should be kept in a safe place preferably inside the safe box</li> <li>- Should be updated in front of all members present</li> <li>- Records should be updated on daily basis</li> </ul>

Source: JICA Project Team

#### 4) Observation

As a result of the session, the group members that attended seemed to be convinced that they can sell salt bags in a short period. And thus they decided to collect less bags referring to the previous record of the first business cycle. And, they said they will look for collection of salt of good quality, and also make efforts to seek new markets. Regarding record keeping, the group members understood the importance of keeping them but the problem is they are illiterate, except the secretary. They were reminded that their school children shall be used whenever need arises.

#### (8) Provision of Mentoring Activities and Others

Other than the above, the following activities were done to assist the groups for establishment of their business activities:

- Business mentoring: Efforts also continued to mentor the group members on the overall business in addition to the above additional business training. In particular the focus should be on preparation for the second cycle using lessons learnt from their business; and
- Normal monitoring: information for the operational indicators was collected.

~from September 2014 to December 2014~

#### (9) Provision of Mentoring Activities

The following activities were done to assist the groups in establishment of their business activities:

- Collection of money from the markets: during the regular visits, the groups were reminded of the importance of having liquid cash in their group account. The group was therefore advised to send members to the specific market areas to collect the money for the bags sold. Although, the collection of the money was important the groups were advised to do it through a cheaper way.
- Identifying the right market: Since the group had markets but there was slow sale of salt, they were advised to focus on markets where the demand was very high such markets included Dukana, El Hadi, Ilaut, and Balesa. In markets like Forole, where a lot of bags that have not been sold (due to incompetence of the agents), the group was advised to send one of their own members to sell the salt.
- Giving incentives to the Agents: Salt is a business to the group, therefore the agents who are selling the salt on behalf of the group should also benefit from the same. Therefore the group was instructed and guided on how to give some small commission/sack of salt to the agent.
- Alternative means of transport: It was seen that the group had difficulties reaching areas far like Dirib Gombo and Ilaut where the demand for salt is very high. The group was given choices like using the frequent buses that operate between Kalacha and Marsabit to transport their salt to these areas. Although the buses cannot transport a lot but can at least accommodate 5-10 bags which they charge very cheaply for transport. Once in Marsabit there are several vehicles that ply Dirib Gombo and Ilaut routes.
- Insist on keeping records: Since the group has started doing VICOBA, the groups were advised on the importance of keeping clear records to aid the members in finance management so that they can know who borrowed and how much they are supposed to bring back. The group



Source: JICA Project Team

**Figure AG6.2.5 Mentoring Activities**

secretary is the only learned member of the group and therefore the staff depended on her ability to keep records.

(10) End line Survey

During the baseline survey that was conducted by PACIDA, 9 individuals out of the 21 initial members were interviewed. The 6 individuals out of 9 have been interviewed during the end line survey. The questionnaires were prepared based on the effect and other impact indicators so as to evaluate the impact of the sub project both at individual and group level. Together with individual members, the group, and chief and elders were also interviewed. The following table shows the procedure of the end-line survey.

**Table AG6.2.4 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Kalacha	Chief and 1 elder	1 (2 participants)	23/10/2014	Questionnaire with one focus group discussion
	<b>Groups</b> Jajabana (7) Mwangaza (5) Mazingira (6) Self Help (5) Aneesa (4)	5 (27 participants)	23/10/2014, 24/10/2014, 25/10/2014, 19/12/2014	Questionnaire with 5 groups
	<b>Individuals</b> Jajabana (6) Mwangaza (6) Mazingira (6) Self Help (5) Aneesa (5)	28 (28 participants)	23/10/2014, 24/10/2014, 25/10/2014, 19/12/2014, 20/12/2012, 21/12/2014	Questionnaires with individual interview

Source: JICA Project Team, goats groups are also included in the table.

### G6.2.2 General Overall Situation of the Sub Project

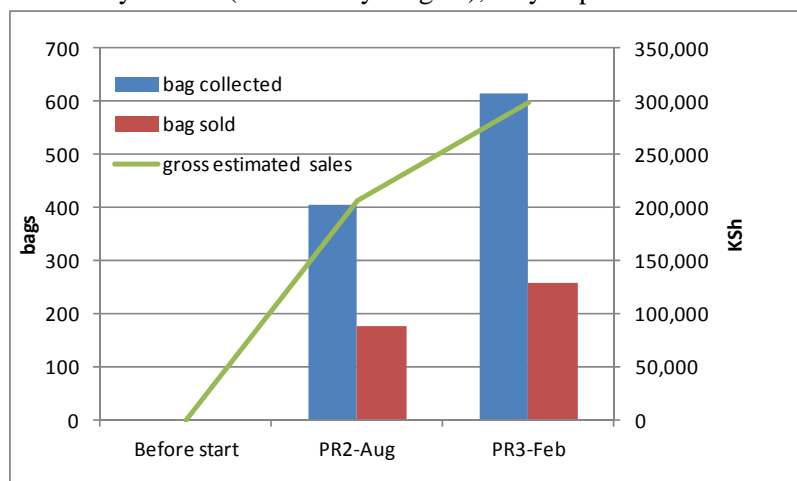
~from the beginning of the sub project Jan-Feb 2013 to August 2013~

The group is active and well organized and most of the members are aware of their activities. Muludhe Jajabana Salt group formerly known as Muludhe Salt group is the main actor in the salt sub-project. The group was formerly part of the much larger group but the current group members have completely disengaged from the older group. Their concentration and orientation towards the salt sub-project is quite positive especially after several trainings and mentoring activities were provided. They have recently shown initiative by purchasing gunny bags from Marsabit, packing salt and sending it to buyers on their own. Some bags were sold at the potential markets, and gradually linkage started to be created. The group is highly receptive to mentoring activities and new ways of doing business despite their having only one literate member. With more guidance the group's activities will be more successful in the near future.

~from September 2013 to February 2014~

After they started this business in the last dry season (around July/August), they experienced one short rain season and now are in the second dry season. No collection has been made during the current dry season because it had abnormal rain in February even during the dry season, and they will resume new collection in the next dry season after the long rains.

Until now, they have collected in total 615 bags and 515 bags were delivered to the identified markets. Number of bags sold was 258, and gross expected sales are calculated as around Kshs.300,000. The expansion of



Source: JICA Project Team

**Figure AG6.2.6 Salt Business Record up to February 2014**

the business is summarized in the right figure. Through the business cycle, they have been learning the basic business skills. Though there are still some challenges, the business is continuing and the group is active in doing so.

~from March 2014 to August 2014~

After they started this business in the last dry season (around July/August 2013), they experienced one business cycle for a year. They are almost about to start their second business cycle from this long dry season although they cannot start because of abnormal rains.

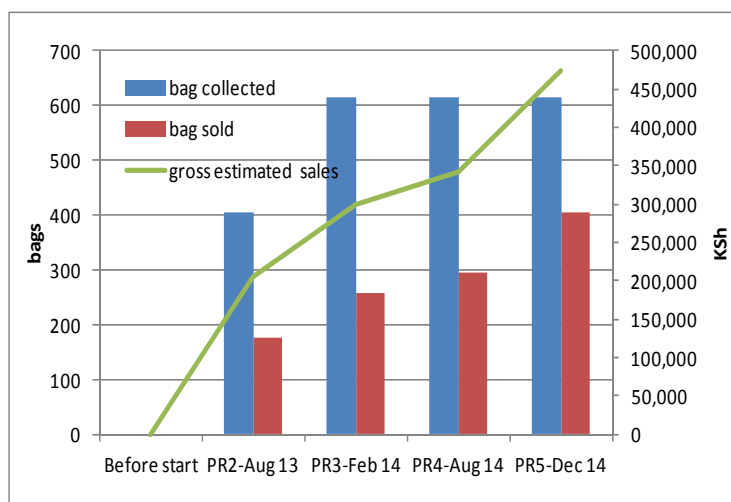
Until now as the result of the first cycle, they collected in total 615 bags, and 515 bags were delivered to the identified markets. This figure is the same as of PR3 because the markets were all sufficiently supplied or had a bit too much for the assumed demand. Number of bags sold was 296, and gross expected sales are calculated as around Kshs.350,000. The growth of the business is summarized in the right figure.

Through the business cycle, they have been learning the basic business skills. They are now preparing for the business plan based on this business experiences and expect to do this by themselves.

~from September 2014 to December 2014~

After the group started this business in the last dry season (around July/August 2013), almost one and half years have passed and they experienced one business cycle for a year. Though they are eager to start the second cycle, unfortunately there was abnormal rain during the last dry season and this short rains season, salt is not yet ready to be dried enough to be collected.

Until now as the result of the first cycle, they collected in total 615 bags, and 516 bags were delivered to the identified markets. Number of bags sold was 405, and gross expected sales are calculated as around Kshs.470,000. The growth of the business is summarized in the right figure.



Source: JICA Project Team

**Figure AG6.2.7 Salt Business Record up to December 2014**

### G6.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are written.

#### (1) Business transaction

##### 1) Cost and benefit structure

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

According to the information given by the group, the following are estimated as the basic cost and benefit structure if they do the business fully on their own from collection until sales.

**Table AG6.2.5 Basic Cost and Benefit Structure (Estimated)**

		Qty	Unit price	Total
Gross income				
	50kg-bags of salt for sale	200	1,100	220,000
Cost				
Collection of salt from Chalbi				
	Various cost for food etc. for 30 persons for 1 night 1day	1	3,000	3,000
	Cost of bags	200	50	10,000
	Transport from collecting point to town (car)	7	5,000	35,000
	Loading and Offloading for 4 person/day	4	3,000	12,000
Transportation to market place				
	Transport from town to Dukana e.g.	1	45,000	45,000
	Loading and Offloading	1	12,000	12,000
	Charge for market place (assumed 2 months for sold-out)	2	2,000	4,000
Total Cost				121,000
Net Profit				99,000

Source: JICA Project Team

According to this, net profit from the sale of 200 (50kg) bags of salt becomes KSh. 99,000 with 45% of net benefit/gross sales ratio. This is a relatively high figure, however, this does not include the wages for salt collection. Currently the group members voluntarily collect salt and do not get any wages. If they receive the wage at least for collection of salt, net profit becomes KSh 82,000 assuming KSh 500/person/day for two-day collection by 17 members. This still gives 37% of net benefit/gross sales ratio. This is just a simple calculation and does not include the commission of market agent etc, however, it indicates that salt business could be profitable as long as several difficulties can be overcome (transportation, communication, etc).

~from September 2013 to February 2014~

Cost and benefit structure has been the same as we reported in Progress Report 2 since they basically continued the same exercises.

~from March 2014 to August 2014~

Cost and benefit structure has been the same as reported in Progress Report 2 since they basically continued the same exercises.

~from September 2014 to December 2014~

Cost and benefit structure has been the same as reported in Progress Report 2 since they basically continued the same exercises.

## 2) Production and transaction

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

Salt production is mainly from Chalbi Desert. The collection is done by the members of the group during the dry season. Collection cannot be done during the rainy season. In order to collect the salt, the members move to the collection points and undertake the activities. They stay overnight as they do the salt collection. The system is fairly simple involving the use of a spade and the collected salt is packed in 50kg bags. These bags are then transported to the village for storage before delivery to the markets.



Source: JICA Project Team

**Figure AG6.2.8 Salt Collection and Temporary Storage in Kalacha**

So far, the groups have collected 405 bags as at the end of August since they started the activities.

~from September 2013 to February 2014~

Process of salt production has also been the same since Progress Report 2. Salt is collected from Chalbi Desert and packed in 50kg bags. These bags are then transported to the village for storage before delivery to the markets.

At the end of August, 405 bags were collected. Since then, another 210 bags have been collected up to February, and in total 615 bags have been collected for the entire period. Collection can only be made during the dry season. For the short rain season from October to December, they did not do. And, for this recent dry season between the short rain season and the next long rain season (it will commence in March), the group said that they did not collect since no good quality salt is available for this dry season.

~from March 2014 to August 2014~

Process of salt production has also been the same since Progress Report 2. Progress Report 3 shows that 615 bags in total were collected. Since then, no salt was collected as the first business cycle because the left-over have not yet been sold out in the markets and also the long rain season prevented them from collecting new salt from the desert.

From July when the long dry season started, they decided to start the second business cycle for this salt business. As a result of the additional business training, they reviewed the result of the first business cycle and it turned out that around 300 bags have been sold so far. They learned this result and decided to set a target as around 140-200 bags considering also the bags left-over and cost for transportation. Though they have decided to start salt collection, as of now, no bags have been collected because of abnormal rains which lead to dissolving of salt in Chalbi desert.

~from September 2014 to December 2014~

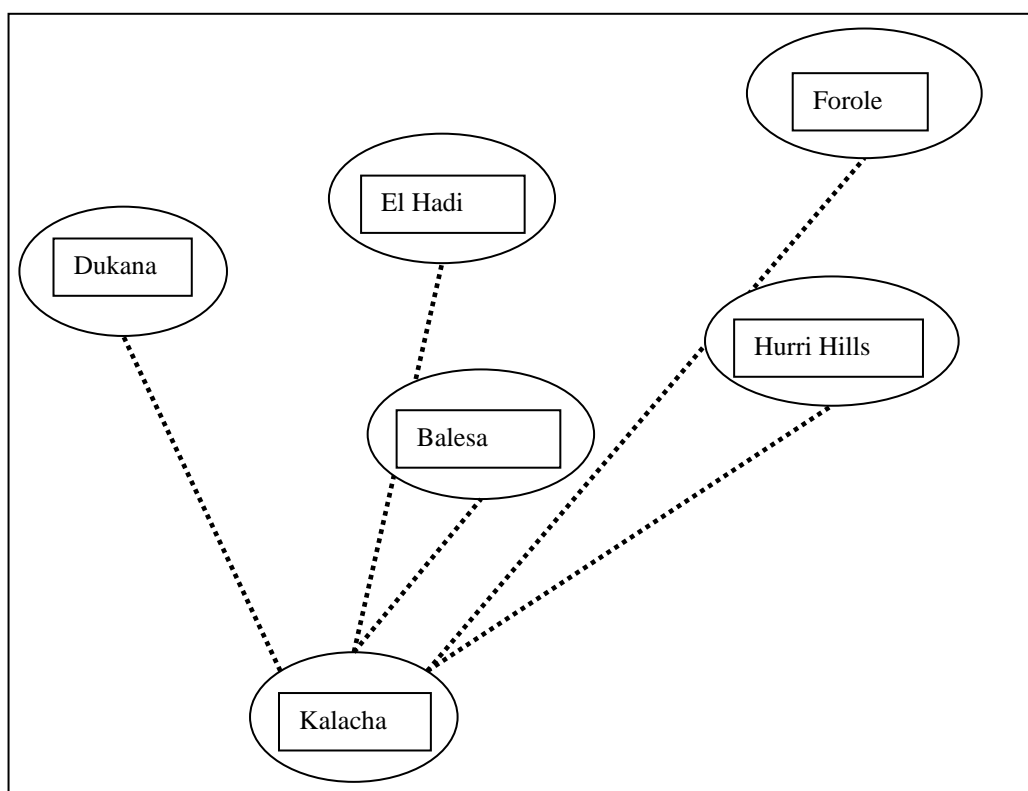
Process of salt production has also been the same since Progress Report 2. During the phase from March to August 2014, though it was the dry season, the collection was not able to be done because of the abnormal rain despite the group's eagerness. For this period of time, since this was the short rain season which had certain amount of rain, new salt could not be collected either. Currently

Chalbi dessert has started producing salt but it still with moisture according to the group. They said that salt will be able to be collected around March when the salt is dry enough.

### 3) Market

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

The usage of salt extends from the vicinity of the collection point to areas further away and even into the neighbouring country of Ethiopia. The nearer the area to the desert or Kalacha, the harder it is to sell salt as the people from these areas collect the salt on their own. The market areas have been explored and some linkages and sales have been done are the markets of Balessa, Dukana, El Hadi, Hurri Hills, and Forole. These areas are the primary target markets of the sub-project. Preliminary indications are that all pastoral areas of Marsabit could be potential markets as there exists some demand, though price and quality competitiveness must be carefully examined. The following figure depicts the current markets tried by the group and the sub-project.



Source: JICA Project Team

**Figure AG6.2.9 Salt Markets (from January to August 2013)**

The following photos capture the images when the group members went to the potential markets, sold salt, and received cash as sales of it.





Source: JICA Project Team

**Figure AG6.2.10 Market Penetration (Left: Balesa, Right: Hurri Hills)**

Out of 405 bags collected, 250 were sent to the above potential markets. Remaining bags in Kalacha are also ready for other opportunities to be transported to markets. Data of bags delivered to the markets is shown below:

**Table AG6.2.6 Bags Delivered as of the End of August 2013**

Market	1st trip	2nd trip	3rd trip	Total
Forole	10	10		20
Hurri Hills	8			8
Dukana		1	20	30
Balesa	20	60		80
El-Hadi	20	92		112
<b>Total</b>	<b>58</b>	<b>172</b>	<b>20</b>	<b>250</b>

Source: JICA Project Team

The Project team assisted the transportation for the 1<sup>st</sup> trip and 3<sup>rd</sup> trip. The group members themselves hired a lorry and conducted 2<sup>nd</sup> trip to markets. Balesa and El-Hadi are the places where most of the bags were delivered.

Out of 250, the bags sold and left are shown in the table below.

**Table AG6.2.7 Bags Sold as of the End of August 2013**

Market	Bags delivered	Bags Sold	Bags not sold
Forole	20	10	10
Hurri Hills	8	8	0
Dukana	30	20	10
Balesa	80	60	20
El-Hadi	112	77	35
<b>Total</b>	<b>250</b>	<b>175</b>	<b>55</b>

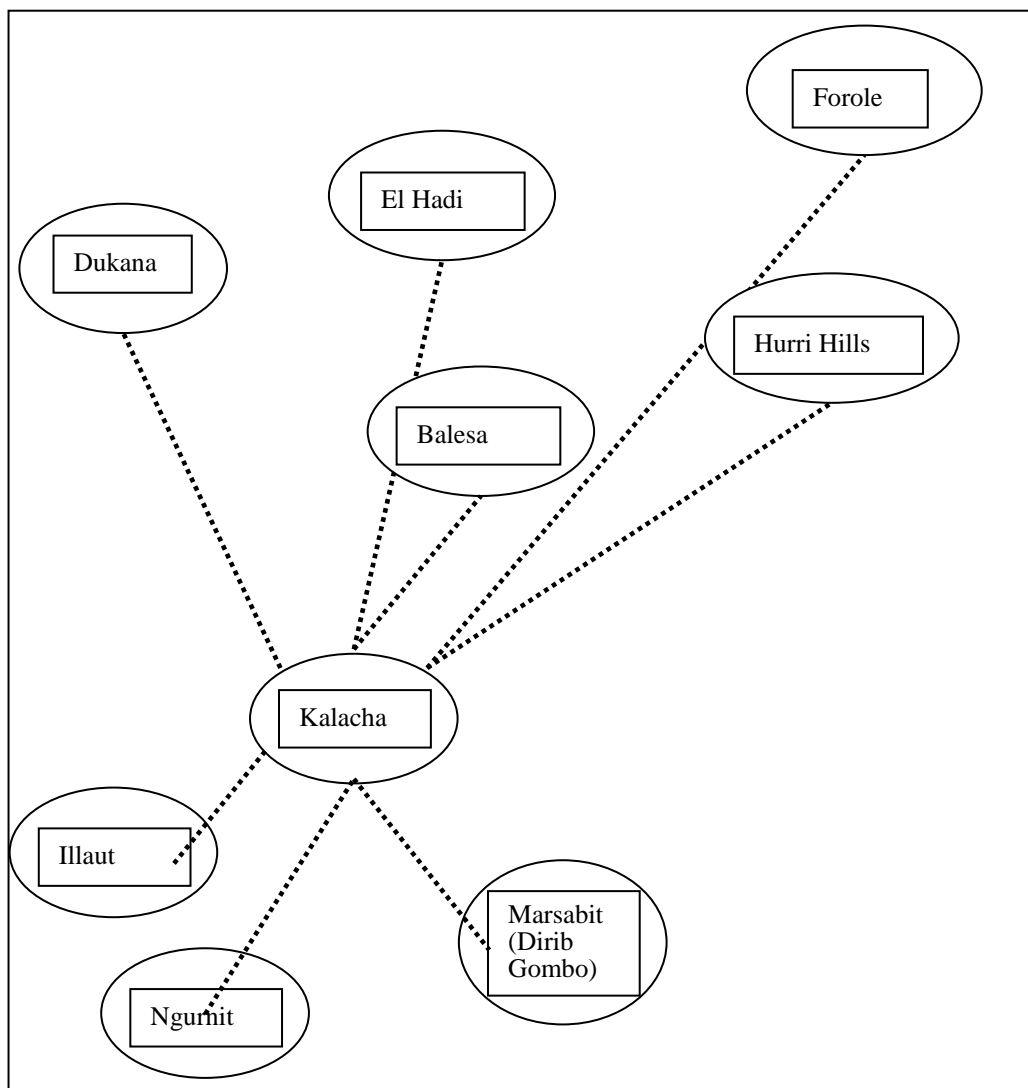
Source: JICA Project Team

As of the end of August, 175 bags (70%) were sold in each market place and 55 were left. This transaction took a duration of about one month. This data is based on the information given by the group and may not be very accurate, considering their illiteracy level (though it also may not be so different from the real figures).

These series of trial indicate that there are surely markets for Chalbi salt in the northern areas. Therefore, issues would be how they can establish sustainable business model including securing transportation and operational capital.

~from September 2013 to February 2014~

In addition to the identified markets such as Balessa, Dukana, El Hadi, Hurri Hills, and Forole by the time of Progress Report 2, some new markets have been identified, namely Illaut, Ngurnit, and Marsabit Central (Dirib Gombo) in mostly the southern areas from Kalacha. The following figure depicts the current markets tried by the group and the project.



Source: JICA Project Team

**Figure AG6.2.11 Salt Markets (from September 2013 to February 2014)**

For the markets in the south, there are some challenges, such as a language issue (the group members do not speak Samburu or Rendille), and a cost issue (transportation cost from Kalacha to the south). This needs continued discussion with the group members from a viewpoint of sustainability. The group has already confirmed that to deliver the salt to Ngurnit (170-180 bags) they will incur Kshs.60,000 for transportation and Kshs.8,000 for two members to load and offload, leading to a slightly less net profit.

Out of the above, 265 bags were delivered to the market places from September to January, and 515 bags in total were delivered to the market places since they started the activities. The rest of 100 bags are in Kalacha, of which 30 bags are in individual members' houses to avoid being rained on; and 70 bags are of bad quality though they are also stored.

**Table AG6.2.8 Bags Delivered as of the End of February 2014**

Market	August PR2	Sept	Nov	Jan	Total
Forole	20	170	-	-	190
Hurri Hills	8	7	-	- 6* (to Marsabit)	9
Dukana	30	20	-	-	50
Balesa	80	20	-	-	100
El-Hadi	112	20	-	-	132
Illaut	0	-	6	-	6
Ngurnit	0	-	14	-	14
Marsabit (Dirib Gombo)	0	-	7	7* (From Hurri)	14
<b>Total</b>	<b>250</b>	<b>237</b>	<b>27</b>	<b>1</b>	<b>515</b>

\*: the 6 bags were repacked and became 7 bags due to the size of bags.

Source: JICA Project Team

During this period of six months, the group themselves transported 170 bags of salt to Forole without any help of JICA project (64% out of total delivery of 265 bags). Other market delivery was assisted by the project car. For Hurri Hills, the group concluded that there is no market and decided to take them to a new market, Dirib Gombo.

Out of 265 bags delivered to the market places, the bags sold and left are shown in the table below.

**TableAG6.2.9 Bags Sold as of the End of February 2014**

Market	Bags delivered	Bags Sold by August	Bags Sold by Feb. After Aug	Bags sold in total	Bags not sold
Forole	190	10	11	21	169
Hurri Hills	9	8	1	9	0
Dukana	50	20	30	50	0
Balesa	100	60	3	63	37
El-Hadi	132	77	14	91	41
Illaut	6	-	6	6	0
Ngurnit	14	-	14	14	0
Marsabit (Drib Gombo)	14	-	4	4	10
<b>Total</b>	<b>515</b>	<b>175</b>	<b>83</b>	<b>258</b>	<b>257</b>

Source: JICA Project Team

Eighty three (83) bags were sold (31%) in all the market places out of the delivered 265 bags from September to February. This low figure is mostly due to Forole's left overs as a result of the failed deal with the Ethiopian trader. Since the sub project started, a total of 258 bags were sold out of 515 transported -a 50% rate. The balance of 257 bags left over in each market place is still there and can continue to be sold. Because the group is not going to harvest any salt until next season, the salt bags are expected to continue to be sold taking these three to four months to come.

Dukana, Balesa, and El-Hadi show relatively high percentage of selling (100%, 63%, and 69% respectively), indicating high demand there. Bags in Illaut and Ngurnit were also sold out showing good sign of high demand, but this was just a test result. Likewise, the group and the project have to carefully assess the market performance and accommodate the result into the delivery plan of the salt bags to the markets.

~from March 2014 to August 2014~

There had been no additional delivery to new markets.

Total salt bags delivered to the markets are 515 bags in total, the same amount reported in PR3. The rest of 100 bags are still in Kalacha, of which 30 bags are in good quality and 70 bags are bad quality and both are kept in the individual members' houses to avoid being rained on. They are planning to put them together with new salt bags for the second cycle.

**Table AG6.2.10 Bags Delivered as of the End of August 2014**

Market	August 2013 PR2	February 2014 PR3	March to August	Total
Forole	20	190	0	190
Hurri Hills	8	9	0	9
Dukana	30	50	0	50
Balesa	80	100	0	100
El-Hadi	112	132	0	132
Illaut	0	6	0	6
Ngurnit	0	14	0	14
Marsabit (Dirib Gombo)	0	14	0	14
<b>Total</b>	<b>250</b>	<b>515</b>	<b>0</b>	<b>515</b>

Source: JICA Project Team

During this period of six months, the group has not transported any salt bags to any market places, and instead the group focused on collecting the sales.

The bags sold and left in the market places are shown in the table below.

**Table AG6.2.11 Bags Sold as of the End of August 2014**

Market	Bags delivered	Bags Sold by August 2013	Bags Sold by Feb. 2014	Bags Sold by Aug 2014 after Feb 2014	Bags sold in total	Bags not sold
Forole	190	10	21	14	35	155
Hurri Hills	9	8	9	-	9	0
Dukana	50	20	50	-	50	0
Balesa	100	60	63	3	66	34
El-Hadi	132	77	91	11+5(destroyed)	102	25
Illaut	6	-	6	-	6	0
Ngurnit	14	-	14	-	14	0
Marsabit (Drib Gombo)	14	-	4	10	14	0
<b>Total</b>	<b>515</b>	<b>175</b>	<b>258</b>	<b>38 (excluding destroyed one)</b>	<b>296</b>	<b>214</b>

Source: JICA Project Team

Thirty eight (38) bags were sold during this period. Since the sub project started, total 296 bags were sold out of 515 transported -a 57% rate. The rest of 214 bags left over in each market place is still there and can continue to be sold. This high number is mostly due to Forole's left over as a result of failed deal with the Ethiopian trader.

Dukana, Balesa, and El-Hadi show relatively high demand with the absolute numbers of bags sold as 50, 66, and 102 bags respectively.

In addition, new bags currently being collected have not yet been delivered to any markets.

~from September 2014 to December 2014~

There had been no additional delivery to new markets.

Total salt bags delivered to the markets were 515 bags in total, the same amount reported in PR3. There are currently 49 bags in store in Kalacha. At the time of PR4, the group had 30 bags of good quality and 70 bags of bad quality however they mixed the two and obtained only 50 bags (they removed some parts of the salt that had turned into dust and therefore the amount of bags reduced). The salt has been packed in new bags and are being kept at individuals houses. Out of these 50 bags, one bag was sold in Kalacha and 49 bags stored.

**Table AG6.2.12 Bags Delivered as of the End of December 2014**

Market	August 2013 PR2	February 2014 PR3	August 2014 PR4	September – December 2014	Total
Forole	20	190	0	0	190
Hurri Hills	8	9	0	0	9
Dukana	30	50	0	0	50
Balesa	80	100	0	0	100
El-Hadi	112	132	0	0	132
Illaut	0	6	0	0	6
Ngurnit	0	14	0	0	14
Marsabit (Dirib Gombo)	0	14	0	0	14
Kalacha town	-	-	-	1	1
<b>Total</b>	<b>250</b>	<b>515</b>	<b>0</b>	<b>1</b>	<b>516</b>

Source: JICA Project Team

During this period, the group has not transported any salt bags to any market places except one in Kalacha town but instead the group focused on collecting the sales.

The bags sold and left in the market places are shown in the table below.

**TableAG6.2.13 Bags Sold as of the End of August 2014**

Market	Bags delivered	Bags Sold by August 2013	Bags Sold by Feb. 2014	Bags Sold by Aug 2014	Bags Sold by Dec 2014 after Aug 2014	Bags sold in total	Bags not sold
Forole	190	10	21	35	60	95	95
Hurri Hills	9	8	9	9	-	9	0
Dukana	50	20	50	50	-	50	0
Balesa	100	60	63	66	23	89	11
El-Hadi	132	77	91	102	25	127	5
Illaut	6	-	6	6	-	6	0
Ngurnit	14	-	14	14	-	14	0
Marsabit (Drib Gombo)	14	-	4	14	-	14	0
Kalacha town	1	-	-	-	1	1	0
<b>Total</b>	<b>516</b>	<b>175</b>	<b>258</b>	<b>296</b>	<b>109</b>	<b>405</b>	<b>111</b>

Source: JICA Project Team

One hundred and nine (109) bags were sold during this period. Since the sub project started, total 405 bags were sold out of 516 transported -a 78% rate. The rest of 111 bags left over in each market place is still there and can continue for sale. This time, 60 bags in Forole were the highest number of bags sold, though still 95 bags are remaining. This is mainly because of the efforts by one member of the group sent to Forole. This member is still there and selling their salts. This means that demand itself in Forole may not be low, but the past low record of sales perhaps is attributed to less efforts there of the previous agent.

Balesa, and El-Hadi show constant demand, and there are bags sold for this period as well (23 bags and 25 bags respectively).

## (2) Records of any individual benefits (profit share, labour fee, etc)

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

As this salt collection activities had not been done for long, the members have not shared out any of the money considered as net profit, though recently they started to enjoy some net benefits. As net profits increase, they will start sharing among members.

~from September 2013 to February 2014~

Similar to the situation as of Progress Report 2, the members have not shared out any of the money out of net profit of the salt business and neither received labour fee for collection.

In addition, the group said that personal skills obtained from the trainings and activities offered to the group are their individual benefits.

~from March 2014 to August 2014~

Similar to the situation as of Progress Report 3, the members have not shared out any of the money out of net profit of the salt business and neither received labour fee for collection. They discussed about the benefit sharing system, agreed among the members, and decided that they will share the rest of the profit equally among members after deducting necessary costs for the second business cycle.

The group said that personal skills obtained from the trainings and activities offered to the group are their individual benefits as well.

~from September 2014 to December 2014~

Similar to the situation as of Progress Report 3, the members have not shared out any of the money out of net profit of the salt business. Though they discussed and decided their profit sharing (they will share the rest of the profit equally among members after deducting necessary costs for the second business cycle), they have not yet done because the second cycle has not yet started. Instead meanwhile, they started VICOBA and the members are taking loan from the group as one of their benefits.

However in fact, though so far it has been reported that the members have not yet paid for collection, marketing activities, but the end line survey revealed that they actually have got paid for that. This can be counted as their individual benefits. For collection, they have got paid Ksh 500/member/day. Individual members of the group who participate in group activities also get paid for collecting money from the markets including all direct costs such as transportation and accommodation. For example, around Ksh 3-4,000 is given to one member for one trip to markets. In this case, actual cost can be around half, thus remaining half can be retained by a member, which is good money.

The group said that personal skills obtained from the trainings and activities offered to the group are their individual benefits.

## (3) Records of any group benefits

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

By forming the group, they can collect salt and sell to markets, therefore it can be said that the collective action enables them to continue this business. The money so far collected has been kept by the group and to be used for the next activities of their business.

Though accurate records are not available, the current net profit is estimated as below. Firstly gross income for the three trials is shown below.

**Table AG6.2.14 Gross Income for the Past Three Trials**

Market	Bags Sold (50Kgs)	Price/Unit in Kshs	Total Gross Income Kshs
Forole	10	1,200	12,000
Hurri Hills	8	1,200	9,600
Dukana	20	1,000*	20,000
Balesa	60	1,200	72,000
El-Hadi	77	1,200	92,400
<b>Total</b>	<b>175</b>		<b>206,000</b>

\*: In Dukana the price per bag was 1000 shillings because of the big supply by other traders

Source: JICA Project Team

Based on this estimation, the gross benefit from three trials is calculated as KSh 206,000. For cost side, it would be difficult to capture it precisely but the result of the monitoring figures of cost and benefit structure can be borrowed (because major part of the cost, transportation to market places, is not necessarily considered for 1<sup>st</sup> trip and 3<sup>rd</sup> trip; and number of bags are 175 and less than 200 used in the analysis for estimation of the monitoring figures of cost and benefit). Then, the estimated net benefit will be KSh 107,000.

~from September 2013 to February 2014~

Firstly gross income up to now is estimated and shown below.

**Table AG6.2.15 Gross Expected Income as of February**

Market	Total Gross Income Kshs by the end of Aug	Bags Sold (50 Kgs) during this Period	Price/Unit in Kshs.	Total Gross Income Kshs during this Period	Total Gross Income Kshs as of February
Forole	12,000	11	1,200	13,200	25,200
Hurri Hills	9,600	1	1,200	1,200	10,800
Dukana	20,000	30	1,000	30,000	50,000
Balesa	72,000	3	1,200	3,600	75,600
El-Hadi	92,400	14	1,200	16,800	109,200
		4	1,000	6,000	10,000
Illaut	-	2	Kshs.40*50kg/bag	4,000	
Ngurnit	-	14	1,000	14,000	14,000
Marsabit (Dirib Gombo)	-	4	1,000	4,000	4,000
<b>Total</b>	<b>206,000</b>	<b>89</b>	-	<b>92,800</b>	<b>298,800</b>

Source: JICA Project Team

Based on this estimation, the gross sales from September to February is calculated in total Kshs.92,800. The gross benefit from the beginning is calculated as Kshs. 298,800. For cost side, the result of the discussion for the monitoring figures of cost and benefit structure (37% ratio) is used, estimated net profit becomes Kshs.110,556. This could be an underestimated figure because the project provided transportation, thus the net profit could be more than that.

Out of this, the group said that Kshs.80,400 and nine small/young goats (= worth Kshs.16,000) were collected. Most of the collection was done by the group's own initiative. According to Progress Report 2, Kshs.24,900 was considered as collected money at that time. Total of Kshs.121,300 collected is below the gross estimated sales of Kshs.298,800.

The insecurity in market areas has greatly hindered the collection of money from the markets, however, the group is willing to send members to the markets if the insecurities in the area goes down. The other issue that hinders collection of salt and money is the ongoing school admission for secondary schools, where members put more effort in taking their kids to school rather than participate in group activities.

~from March 2014 to August 2014~

Firstly gross income up to now is estimated and shown below.

**Table AG6.2.16 Gross Expected Income as of August 2014**

Market	Total Gross Income Kshs by the end of Aug 2013	Total Gross Income Kshs by the end of Feb 2013	Bags Sold (50 Kgs) during this Period	Price/Unit in Kshs.	Total Gross Income Kshs during this Period	Total Gross Income Kshs as of August 2014
Forole	12,000	25,200	14	1,200	16,800	42,000
Hurri Hills	9,600	10,800	-	1,200	-	10,800
Dukana	20,000	50,000	-	1,000	-	50,000
Balesa	72,000	75,600	3	1,200	3,600	79,200
El-Hadi	92,400	109,200	11	1,200	13,200	122,400
Illaut	-	10,000	-	1,000	-	10,000
Ngurnit	-	14,000	-	1,000	-	14,000
Marsabit (Dirib Gombo)	-	4,000	10	1,000	10,000	14,000
<b>Total</b>	<b>206,000</b>	<b>298,800</b>	<b>38</b>	<b>-</b>	<b>43,600</b>	<b>342,400</b>

Source: JICA Project Team

Based on this estimation, the gross sales from March to August is calculated to be Kshs.43,600. The gross benefit from the beginning is calculated as Kshs.342,400. For cost side, the result of the discussion for the monitoring figures of cost and benefit structure (37% ratio) is used, estimated net profit becomes Kshs.126,688.

Out of this, the group said that Kshs.22,200 was collected. Most of the collection was done by the group's own initiative. According to Progress Report 3, Kshs.121,300 was considered as collected money at that time. Total of Kshs.143,500 collected is still below the gross estimated sales of Kshs.342,400. According to the group, there is still some money with 14 shoats that have not yet been collected. They plan to go and collect this revenue. .

The above sales all come from the first business cycle.

~from September 2014 to December 2014~

Firstly gross income up to now is estimated and shown below.

**Table AG6.2.17 Gross Expected Income as of August 2014**

Market	Total Gross Income Kshs by the end of Aug 2013	Total Gross Income Kshs by the end of Feb 2013	Total Gross Income Kshs as of August 2014	Bags Sold (50 Kgs) during this Period	Price/Unit in Kshs.	Total Gross Income Kshs during this Period	Total Gross Income Kshs as of December 2014
Forole	12,000	25,200	42,000	60	1,200	72,000	114,000
Hurri Hills	9,600	10,800	10,800	-	1,200	-	10,800
Dukana	20,000	50,000	50,000	-	1,000	-	50,000
Balesa	72,000	75,600	79,200	23	1,200	27,600	106,800
El-Hadi	92,400	109,200	122,400	25	1,200	30,000	152,400



Market	Total Gross Income Kshs by the end of Aug 2013	Total Gross Income Kshs by the end of Feb 2013	Total Gross Income Kshs as of August 2014	Bags Sold (50 Kgs) during this Period	Price/Unit in Kshs.	Total Gross Income Kshs during this Period	Total Gross Income Kshs as of December 2014
Illaut	-	10,000	10,000	-	1,000	-	10,000
Ngurnit	-	14,000	14,000	-	1,000	-	14,000
Marsabit (Dirib Gombo)	-	4,000	14,000	-	1,000	-	14,000
Kalacha town	-	-	-	1	1,000	1,000	1,000
<b>Total</b>	<b>206,000</b>	<b>298,800</b>	<b>342,400</b>	<b>109</b>	-	<b>130,600</b>	<b>473,000</b>

Source: JICA Project Team

Based on this estimation, the gross sales from September to December 2014 is calculated in total as Kshs.130,600. The gross benefit from the beginning is calculated Kshs.473,000. For cost side, the result of the discussion for the monitoring figures of cost and benefit structure (37% ratio) is used, estimated net profit becomes Kshs.175,010. Of course, collection of money at the market places needs some money which is used out of this net profit.

Out of this, the group said that no further collection was done during this monitoring period. Thus, it seems that total collected money is Kshs.143,500, still below the gross estimated sales of Kshs.473,000 (of course some of the sales has already been used for paying the costs for the first cycle). According to the group, there is still some money and 15 shoats in total at El Hadi and Dukana as exchange of salt bags, which have not yet been collected (one shoat increase from PR4). Of course, the sales of Ksh 72,000 made during this period must be with one member still in Forole, and will be put into the group account when the member comes back to Kalacha town. For others, they plan to go and collect the account receivables. As for the shoats, they have given instruction to their agents to sell shoats and get money at around Ksh 2,000/shoat.

As discussed later, they have started VICOBA activities. Also, they still keep social funds idea. These are also group benefits that can be beneficial also to members.

The above sales all come from the first business cycle.

#### (4) Total money in the group account

~from the beginning of the sub project Jan-Feb 2013 to August 2013~

At the time of report writing, the group answered total money in the group account was around KSh 30,000. Out of this, KSh 5,100 is for VICOBA money, and therefore the rest (KSh 24,900) could be the one that came from the salt business. According to the above estimation, the group was supposed to have around KSh 100,000 as a result of their business activities. However, it is observed that not all of the money has been collected due to far-away markets, and some of the money out of it was used for collecting additional salt and transportation costs to markets. It also must be noted that due to their current level of record keeping, it is difficult to grasp the correct transaction of business and money.

For VICOBA, they seem not so active to implement, maybe because they are busy doing the salt business.

~from September 2013 to February 2014~

As of February 2014, the group reported that the total money in the group account was around Kshs.50,000 and nine goats – an increase from Kshs.30,000 as of August. Since VICOBA is still not greatly emphasized, money only for VICOBA is not known. However, out of total group account, individual can take money from the group for personal use and refund later with interest (three

members so far have taken loans of Kshs.4,000, Kshs.5,000 and Kshs.8,000 respectively). In case of death, the bereaved member is given money by the group.

It also must be noted that due to the current level of their record keeping, it is still difficult to get the correct transaction of business and to differentiate between business income and money from other activities.

~from March 2014 to August 2014~

As of August 2014, the group reported total money in the group account was around Kshs.62,000 -an increase from Kshs.50,000 with nine goats as of February. Since VICOBA is still not greatly emphasized, money only for VICOBA is not known. As an idea, the group once discussed and resolved to use the benefit from the business as loan to members. If this happens, this is also one of the ways to use the benefit from the business positively for the group.

It also must be noted that due to the current level of their record keeping, it is still difficult to grasp the correct transaction of business and to differentiate between business income and money from other activities. The only member who knows how to read and write in the group is the secretary, who is currently in Nairobi completing her studies. The group has a book where the group keeps their records. It was reminded the importance of keeping records and in case where the secretary is not around, they can use their children to record for them. The secretary plans to come back in August (not yet come back at the time of writing this report), and thus it is expected to keep better records on the business.

~from September 2014 to December 2014~

Currently, total group money that the group has is (as of December 2014) Ksh 68,000. During this monitoring period, they started VICOBA and Ksh 50,000 was loaned out (Ksh 10,000 per person for five members). Then, the members returned the money with interest of Ksh 1,000/person and this money grew upto Ksh 67,000. Plus, as mentioned, one bag was sold at Ksh 1,000 in Kalacha town, therefore total becomes Ksh. 68,000. Now, again Ksh 50,000 has been loaned out to members and the group is awaiting the repayment.

Still record keeping is their difficult part but they have started especially for VICOBA.

#### **G6.2.4 Monitoring of Effect Indicators and Others.**

Here, information for effect and other indicators at the end of the sub project period is documented.

##### (1) Group members' livelihood

The end-line survey shows their livelihood is still livestock but small business (sugar, cereals and other household items) is also growing compared with the result of the baseline survey. Others are casual labour available in town including payment from salt activities, and fodder farms.

##### (2) Current measures in terms of livelihood to cope with drought

###### 1) By member

Majority of members interviewed said that sale of livestock especially goats and sheep is the measure. Similarly profits from the small business, and wages from casual labour including salt business. Some answered that it is remittance from family members working in big cities, and cash obtained from sale of hay for women who are doing hay activity.

The change compared with the baseline is that they have been proactively using several livelihood measures to cope with drought. Also, at least wages from salt business are also recognized to contribute to coping with future drought.

## 2) By group

When the group was interviewed as a whole in the end-line survey, they replied that now they can prepare for drought using money obtained from salt business as a group.

## (3) Assets by member and group

Here whether some impacts are observed or not to their assets at this point of time by the sub project to the baseline condition is argued as below.

## 1) By member

Significant change only by the sub project for this implementation period might not have been observed in terms of individual assets. However, as their salt business activities are progressing, it is expected that they are getting more profit leading to have more assets.

## 2) By group

So far, they do not have any group assets. Group members are also the same.

## (4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Here whether some financial impacts are observed or not at this point in time by the sub project to the baseline condition is argued as below.

## 1) By member

The baseline survey result shows that average annual household income of the group members are Ksh 131,278.

To collect 516 bags, 5.16 days by 17 members is estimated to be necessary. For this, one member can receive  $5.16 \times \text{Ksh } 500 = \text{Ksh } 2,550/\text{member}$ . This is 2% of annual household income. The members also receive some extra money when they go and collect money from markets, though actual costs shall be deducted. Net remaining money per one trip could be Ksh 1,000 to 2,000 per person, and one member may go once or twice. This is also good financial impact.

When it comes to profit sharing, assuming that around Ksh 100,000 can be shared out to each member deducting costs of collecting sales out of a net profit of Kshs.175,010. Net profit to be shared by each member is estimated around Ksh 6,000 for this first business cycle of 516 salt bags as around 5% of annual income.

If all of the above profits are considered, financial impact of one member can be around 10 % of household income, which is substantial.

Or, they also use part of the net profit as VICOBA, and social fund. This also will be beneficial for them to expand their other individual business activities and get more benefit though they need to repay back with interest.

## 2) By group

This argument is closely related to the above share-out (if all the profit is shared-out, there is no money as a group), but at least, now, the group has increased its account from Ksh.0 to Ksh.68,000 at hand. Although they may not be able to strictly manage their net profit, VICOBA and social fund are also being operated. Financial impact can also be large.

(5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1) Expectation to enhance resilience by the sub-project

All of the members interviewed answered that they think individual resilience against drought is enhanced after the sub project. The reasons raised are that salt is a source of income, take loan training makes them able to start and/or manage their own business, acquiring of business skills and drought awareness. The baseline survey also tells that all interviewees expected resilience enhancement, and thus it can be said that expectation on resilience building at individual level is met.

Even as a group, they are thinking that group resilience is enhanced, because some said that they save money from the sale of salt for future uses; and others said that members can take loans for personal use against the drought.

2) Expectation in general

Five out of six individuals sampled members (83%) replied general expectation has been met. One, who replied no, explained that she expected something different such as a lorry or any other form of hand-out. In fact, other members said that initially they expected that:

- JICA to purchase a lorry or fuel car for their transport to markets;
- JICA to provide transport or give them loans to start business;
- Buy salt from the group, buy truck or provide loans;
- Provision of goat heifers;
- Provision relief food, soft loans and restocking; and
- Capacity building programs, build salt store.

According to the above, it seems that majority of them thought some sorts of material provision even though the team had explained material assistance was not given in the participatory planning process. However, through the course of the activities, they seem to have changed their mind and are now thinking that they are capable of ripping from the salt; JICA has guided and supported them in market penetration; a member has gained entrepreneurial skills; JICA has built their capacities in business management; and JICA has empowered them as women on how to run and manage the salt business which is now bringing income to the group.

As a group also, they think expectation in general is met, though they did not get a lorry or truck.

3) Knowledge Obtained

Specific knowledge acquired mentioned by the interviewees is entrepreneurship and business management skills, record keeping and financial management, preparedness against drought, self reliant attitude, entrepreneurial skills, business management, solidarity as a group, drought awareness, and VICOBA, which are all what the team wants to deliver to them. As a group, the same knowledge was acquired.

4) JICA approach

This group has not yet received any donors in the past. And, they understand that JICA's approach is efficient and sustainable through knowledge and skills provision and aftercare, mentoring, and frequent visits. They seem to understand our concept well.

5) Overall satisfaction

All the members interviewed expressed that they were highly satisfied with JICAs assistance due to the following reasons:

- JICA builds self reliance and JICA also made them to exploit salt and make salt business as an alternative source of income.
- JICA as good in follow up (after care)

- JICA has helped them to find markets and further has made them realize salt as a source of income
- The member has gained entrepreneurial skills through JICA assistance
- JICA has close follow up which makes them keep proper information that creates transparency and accountability in the group

They are satisfied that JICA had supported and guided them through seminars, training and frequent visits which have improved their salt business.

(6) Other indicators to see impact

1) Members efforts on the sub projects

The group members have made the sub project a success through their own effort with:

- Transporting the salt to the markets;
- Collecting the money from the market;
- Finding agents who are active and persuade customers to sell salt;
- Regular visits to the market areas to see the progress of the salt;
- Dividing group tasks among the group members;
- Trying to keep the salt business transactions in ledger book though not perfectly done;
- Looking for the markets with a high demand for salt;
- The lead members of the group organize group meetings and activities;
- Changing agents when necessary; and
- Participatory decision making as a group.

2) Gender

Through the end-line survey and observation, the following can be found on gender issue:

- Women now can have alternative source of income and thereby contributing to creation of resilience against drought
- Self reliance for women- they can use money from the salt to cater for their families
- Single women like in doing business are supported and empowered via building entrepreneurial skills.
- Women have been empowered both economically and socially
- Social recognition of women - they can do their activities without the help of men
- Women are now respected than before - they work in a business without being controlled by men
- Women are seen as people who can manage business just like men do

3) Environment

Through the end-line survey and observation, the following learning can be found among the members on the environmental issue:

- Sustainable exploitation of natural resources, namely sustainable collection of salt-only to collect salt that can be delivered to the market
- No negative impacts on the environment

4) Other community members' opinions

The end-line survey tells the following opinions based on focus group interview with chief (plus elders, and DMC/DC members).

Awareness of livelihood activities by Chief (DMC/DC)

Through the discussion with them, they are aware of the livelihood activities by JICA. The Chief stated that the team consulted during the implementation stage of the sub project; and he sees the result of the salt activities positively, as the group gets alternative source of income.

Other community people's opinions

According to chief, the community has no objection to the activities and wants JICA to expand the assistance to others since it is very beneficial, especially to women.

DMC/DC function on livelihood program

The Chief said that the committee is to oversee the activities of the group, and avoid too much exploitation of resources and teach on ways to combat drought. It seems not far from what is intended. Unfortunately, activities since the training was done have not started.

**G6.3 Discussion****G6.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub project is as follows:

- The Main livelihood measures of the group members are livestock and small businesses. Through the implementation of the sub project, a new livelihood as the salt business was availed to them over and above the others;
- The Financial impact of this salt business is substantial for the group, as a form of wage payment, financial access as VICOBA and social fund, the group money saving that the member can access to, and/or future profit share being several percentage points of their individual annual household income;
- Further, the members themselves recognize that the salt business is one of the coping measures for future drought. Therefore considered with the foregoing, it can be concluded that resilience by this sub project has been enhanced.

**G6.3.2 Positive Impact**

Positive impacts observed through implementing the sub project are as follows:

- The most obvious impact is that the group has seen salt as source of income through JICA support and guidance. The group is now focusing on exploiting the raw salt as an alternative source of livelihood for its members with the knowledge and skills obtained. The group is determined to continue with the salt business even if JICA will exit since they have learnt how to access the market, negotiate the prices and even manage their own funds, indicating the level of sustainability of this activity is high;
- The group has created VICOBA out of the funds obtained from the sale of salt and is thus providing an easy micro-finance base for women who are involved in their individual business. One of the members was able to start his own business using the business skills given by JICA;
- Similar to VICOBA, the group is also thinking of using part of the group money as a Social Fund, which can be accessed by the members when they have some social events or challenges and need money;
- Women have been empowered through the success of the salt business. Even other community members see this is successful and some of them have copied the salt activities; and
- All the above was made through frequent visit, mentoring and aftercare by the team.

**G6.3.3 Issues and Challenges**

Issues and challenges faced are as follows:

- Seasonal and unpredictability of the rainy pattern in the area has hindered the second phase of collection of salt; and

- 
- Some areas do not have frequent means of transport and therefore this hinders the collection of salt, as well as of money from the markets.

#### **G6.4 Conclusion and Lessons Learnt**

Based on the above argument, conclusion and lesson learned can be summarized as follows:

- Summary of what the sub project has done is that JICA made the first linkages to introduce the group to the markets; the group now has money from the sale of salt and they are using it for VICOBA; and through this microfinance, the individual members of the group can take loans and start businesses. The activities of the group such as transport of salt to markets and collection of money from the market have provided some members with means to get income as a form of wage or allowance. Furthermore, the members will also benefit when the profit is shared out. As they themselves evaluate that this activity enhances resilience against drought, it can be concluded that the objective has been achieved. Moreover, women's empowerment is also one of the positive impacts that have been observed; and
- In terms of the approach, *Kujitegemea* spirit can be instilled in them. To do so, the aftercare is very important in implementation of the Project. Through seminars and trainings, the groups or targeted beneficiaries acquire skills and knowledge, however, frequent follow ups/regular visits are necessary to make sure that the skills and knowledge acquired are applied in the right way. After care also provides a room for improvement where the implementer can identify problems mistakes and errors in the assistance and on the other hand it allows the community to contribute positively by suggesting different methods on the approach.

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## **CHAPTER G7. PRESENT SITUATION OF LIVELIHOOD MEASURES AND SELECTED SUB PROJECTS FOR LIVELIHOOD DIVERSIFICATION IN TURKANA**

### **G7.1 Present Situation in Terms of Livelihood Diversification**

Main livelihood in Turkana is based on extensive livestock production, and cash earning of people in Turkana comes from sales of livestock and/or livestock products. Over time, pastoralists and dwellers in the settlement have adopted non-pastoral income strategies by diversified livelihood in order to cope with drought impacts, to meet their increasing consumption needs, and to prepare for the other risks on livestock. The following livelihood measures are found in general, but not limited to, Turkana County (ILRI Research Report 5, 2008):

- Agriculture;
- Fishery;
- Weaving of mats and baskets;
- Collection and sale of aloe, gum arabic, honey, wild fruits, firewood;
- Production and sale of charcoal, and alcohol;
- Processing and sale of skins and hides;
- Chicken production;
- Gold mining;
- Petty itinerant; and
- Kiosk-based trade.

They are generally exercised based on spatial characteristics, namely resources available (land close to water/river for agriculture, Lake Turkana for fishery, places with other resources available for aloe, gum arabic, honey, etc.), and urban or settlement areas for some trades.

### **G7.2 Constraints in This Sector**

#### **G7.2.1 ILRI's Evaluation on the Livelihood Measures**

The above ILRI report evaluated some of the livelihood measures. They used four categories for the evaluation, Strength, Weakness, Constraints, and Opportunity. The following are the result:

(1) Strength and Opportunity

First of all, positive sides, strength and opportunity are shown in the table below:



**Table AG7.2.1 ILRI's Evaluation on Livelihood – Positive Sides**

	Strength			Opportunities	
	Ample natural resources	High potential to expand	High potential to expand	High potential to expand	Better marketing
Aloe production	1	1		1	
Ecotourism	1			na	na
Gum arabic	1	1		na	na
Honey production	1	1	1	1	1
Irrigated agriculture	1	1	1	1	1
Fishing	1	1	1		1
Basket-making	1	1			1
Hides and skins	1	1		1	
Small-scale business		1	1	1	
Charcoal	na	na	na	1	
Trading small stock	na	na	na	na	na
Forage trees	na	na	na	na	na
Poultry production	na	na	na	na	na

Source: ILRI Research Report 5, 2008, “na” means information is “not available” for the particular livelihood measures

According to this report, honey production and irrigated agriculture have high rates from the positive viewpoint, followed by fishery.

## (2) Weakness and Constraints

Next, negative sides, weakness and constraints are shown in the table below:

**Table AG7.2.2 ILRI's Evaluation on Livelihood – Negative Sides**

<b>Weakness</b>						
	Arduous and tedious	NRM	Processing	Production	Marketing	Value-added
Aloe production		1	1	1	1	1
Ecotourism	na	na	na	na	na	na
Gum arabic	na	na	na	na	na	na
Honey production			1		1	1
Irrigated agriculture	1	1		1	1	1
Fishing		1		1	1	1
Basket-making	1			1	1	1
Hides and skins			1		1	1
Small-scale business	na	na	na	na	na	na
Charcoal	na	na	na	na	na	na
Trading small stock	na	na	na	na	na	na
Forage trees	na	na	na	na	na	na
Poultry production	na	na	na	na	na	na

## **Constraints**

	Banned	Lack of know how and business skills	Lack of modern inputs	Lack of capital and access to credit	Marketing	Entry Costs too high
Aloe production		1				
Ecotourism	na	na	na	na	na	na
Gum arabic	na	na	na	na	na	na
Honey production		1	1	1	1	1
Irrigated agriculture		1	1	1	1	1
Fishing		1	1	1	1	1
Basket-making		1		1	1	
Hides and skins		1	1	1	1	1
Small-scale business		1		1		1

	Banned	Lack of know how and business skills	Lack of modern inputs	Lack of capital and access to credit	Marketing	Entry Costs too high
Charcoal	1					
Trading small stock				1		
Forage trees	1					
Poultry production		1		1		

Source: ILRI Research Report 5, 2008, “na” means information is “not available” for the particular livelihood measures

In this analysis, irrigated agriculture has the highest rank in terms of weakness and constraints, followed by fishery. These two measures are highly rated for all four categories of the analysis, strength and opportunity as well as weakness and constraints.

Across the measures, marketing and value-addition are pointed out the most as weakness. Similarly, the most important items for constraints across the measures are two; one is lack of knowhow and business skills and the other is lack of capital and access to credit. These points are important to note.

### (3) ILRI’s Conclusion

The above analysis is not done using uniformed livelihood measures, and therefore overall evaluation to identify the best livelihood measure is not drawn. It is obvious because types of livelihood measures must be different by nature from place to place, from people to people, and hence it should not be decided which measure the best workable is in Turkana as a whole. Instead, it is understood as a way of using the above analysis that the points raised must be carefully noted and used to consider any countermeasures for sustainability when a particular livelihood measure is chosen.

## G7.2.2 Constraints in General

In general, compared with the down country of Kenya, Turkana County has harsh climate conditions known as ASAL area, less infrastructure development (poor road and less coverage of mobile phone network), less access to services such as banking, government support except relief food. Also, as a whole, it is said that pastoralists may be willing to try new ideas but adoption takes slightly longer, and their dependent attitude has been fostered due to exposure to relief support. All these are hindering factors for economic activities.

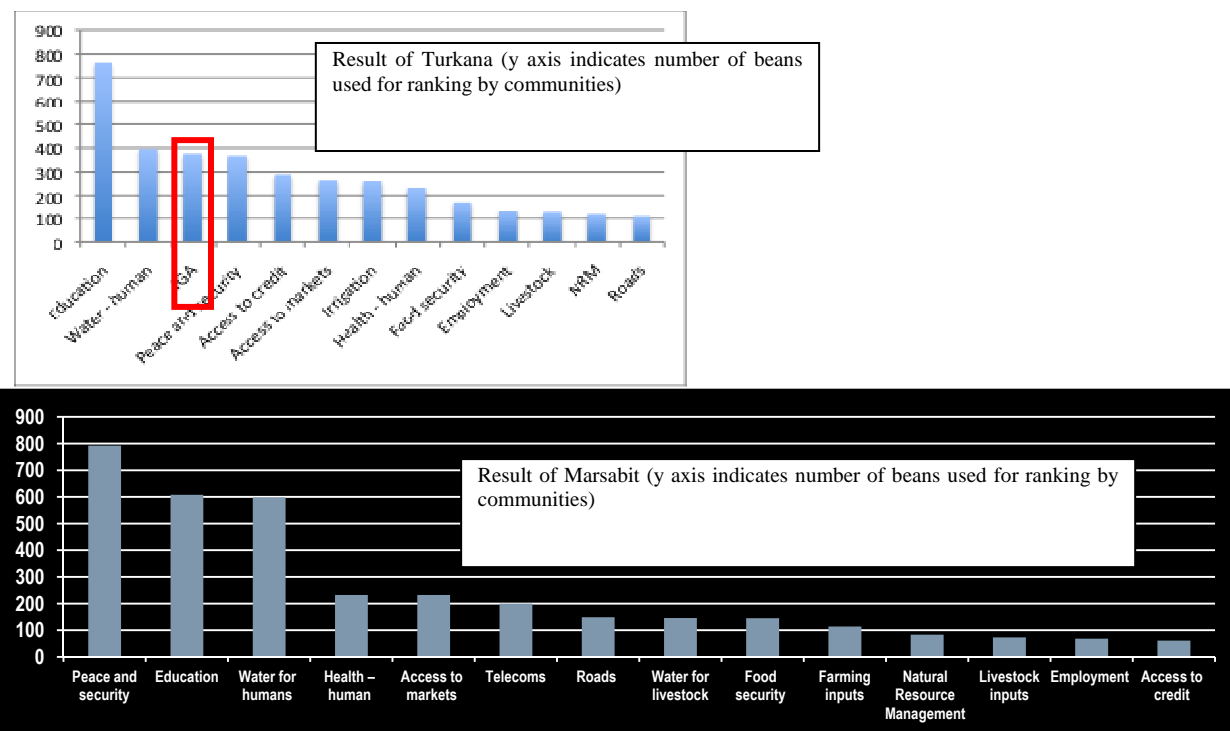
## G7.3 Approach in This Sector

### G7.3.1 Comparison with Marsabit in Terms of Infrastructure

Though generally infrastructure is not well developed compared with the down country, Turkana County has in general relatively better infrastructure e.g. almost daily commercial flights between Nairobi and Lodwar, tarmac road networks, and wider mobile coverage than those in Marsabit. There are several economic centres, such as Lokichoggio, Kakuma, Lodwar, and Lokichar. Particularly near Lokichar, Tullow Oil invested for oil production. There are major rivers (Turkwel, and Kerio) and some agricultural activities are exercised. In this sense, opportunities for economic activities are considered to be more in Turkana than in Marsabit.

### G7.3.2 Other Donors’ Findings

CoBRA (Community Based Resilience Analysis) study assisted by UNDP states that IGA (Income Generating Activities) and business are the important livelihoods to prepare for the drought in Turkana as shown below.



Source: materials for CoBRA Workshop held in Lodwar in Oct 2013

**Figure AG7.3.1 Communities' Rates on Important Issue for Preparedness for Drought in Marsabit and Turkana Counties**

The above result shows clear differences in desired preparedness for drought by the community people in Marsabit and Turkana. This provides clues on needs for the community people, and in Turkana, IGA is the one that community desires.

According to the ILRI's report, there are recommendations as summarized below:

- *To conduct a systematic and thorough assessment of the whole commodity system/value chain associated with the selected livelihood option, particularly if a large-scale and costly intervention is proposed;*
- *Where resources are limited, the focus should primarily be on improving marketing and opportunities for adding value. Where possible, intervention agencies should organize exposure visits and promotional events/craft fairs;*
- *To improve access to credit for organized groups interested in investing in alternative livelihood activities;*
- *To provide training in both business and technical skills and endeavour to develop high levels of innovative capacity/entrepreneurship;*
- *To investigate the viability of a wider range of alternative livelihoods, including, healthy and nutritious camel's milk and vanilla production;*
- *To investigate ways to reduce the arduous and tedious nature of some of the work; and*
- *To consider piloting grants to facilitate entry into alternative livelihood activities where relatively high entry costs act as a barrier to extremely resource poor pastoralists.*

The project considers that important recommendations are market improvement and provision of training in both business and technical skills for livelihood diversification in Turkana.

### **G7.3.3 Approach Taken**

Under these circumstances of relatively good economic opportunities compared with Marsabit, and other donors' findings, it could be suitable to build capacity of people mainly for their IGA. Therefore, the program focuses on how to implement the program rather than the subject activities of the livelihood exercised by target people. In other words, unlike the "relief type" of approach which other donors/NGOs take, our approach must be "development type" and emphasize human resource development, envisaging that community people are able to apply knowledge obtained from JICA's assistance to several livelihood measures that they want to take (mainly IGA), so that they are expected to be able to diversify and continue their livelihoods sustainably.

## **G7.4 Selected Sub Projects**

### **G7.4.1 General**

Though the summarized selection procedure of sub projects is shown in ANNEX B, there, further detail concept for the selection of sub project for Livelihood Diversification is mentioned.

### **G7.4.2 Selection of Sub Projects for Livelihood Diversification**

#### **(1) General Principle**

Assumed livelihood activities/measures to be assisted by the program are IGA in general. Concrete activities/measures are decided through a participatory planning process with communities. In assistance, strengthening of business capacity shall be emphasized, and the method and experience used/obtained by the local resource utilization type in Marsabit are referred to. First of all, entrepreneurship/business training is implemented, followed by regular/ad hoc visits to assist and monitor the activities. Through these visits, business consulting and mentoring activities are to be provided for various aspects of IGA activities, thereby communities are expected to be able to apply knowledge obtained from the training to practical IGA activities (communities can learn whole process by OJT).

Though IGA is the main activity, small scale agriculture, fishery, and processing of livestock products could also be selected as livelihood measures; some improvements on current technique and exercises are envisaged through our trainings and mentoring activities. In addition, cash grant and/or equipment may not be easily provided since our approach aims at fostering self reliance.

Depending on the livelihood measures and activities selected by communities, it might be necessary to provide new techniques agriculture/fishery etc. In these cases, resource persons who have necessary techniques in existing institutions such as government institutions are used to provide their techniques and make linkage to the community, so that the community can continue to receive advice after the project withdraws.

#### **(2) Relationship of CMDRR and CAP**

For all selected 11 sites (community people in sub locations), CMDRR approach was taken, and CAPs were prepared. Though NGO's initial explanation was not that very good (in fact, community people were also expecting some hand-outs from the donor), the plans were prepared by the selected drought management committee members. In the CAPs, the livelihood measures are included (refer to ANNEX B for more detailed information on CAPs).

The function expected for the committees is to oversee overall drought preparedness and response in the jurisdiction of sub locations, not to do specific livelihood activities. Thus, livelihood related plans in their CAPs are primarily expected to be done by groups/individuals.

It is better if livelihood measures to be assisted under this program are selected from these CAPs. However, the measures listed in the CAPs seem like some kind of shopping lists of which any technical viability was not considered (not all).

In this sense, when participatory planning approach is taken to select groups/individuals for the program, the measures to be assisted must be confirmed again referring to the CAP results as well as local socio-economic conditions (technical viability).

(3) Selected Sub-location and Assumed Livelihood Measures to be assisted

Selection of target sub locations under the livelihood diversification program was made mainly considered with balance for sub projects in the other two programs, micro geographical/spatial conditions of sub locations. To know micro geographical/spatial conditions, the project team visited all 11 target sub locations and conducted interviews with sub chiefs to grasp the general socio economic conditions as summarized in Table BG7.4.1. As a result, the following five sub locations were selected for the livelihood diversification program as shown in the table below:

**Table AG7.4.1 Selected Five Sub-locations for Livelihood Diversification Program**

District	Sub-locations:	Population Area (km <sup>2</sup> ), Pop. Dens.	Contents of Livelihood Activities for Sub-projects
West	LORITIT (Location: LETEA Division: OROPOI)	Population: 8,527 Area: 577 Pop Dens: 15	IGA, Small scale rainfed agriculture
Loima	LOKIRIAMA (Location: LOKIRIAMA Division: LOIMA)	Population: 3,615 Area: 164 Pop Dens: 22	IGA, Dry meat
Central	ELIYE (Location: KANGATOTHA Division: KALOKOL)	Population: 4,792 Area: 494 Pop Dens: 10	Fishery
South	LOCHWANGAMATAK (Location: LOCHWANGAMATAK Division: LOKICHAR)	Population: 14,561 Area: 1,072 Pop Dens: 14	IGA
East	LOPII (Location: KOCHODIN Division: LOKORI)	Population: 2,810 Area: 324 Pop Dens: 9	IGA

Source: JICA Project Team

Referring to CAPs and the current socio economic conditions of the target community areas, the above livelihood measures were firstly assumed as contents of sub projects. In the next step these measures were confirmed through the participatory planning process as shown in ANNEX G8~G11.

(4) Concept for Categorization for Livelihood Diversification

The Concept for the livelihood diversification program in Turkana is summarized as below referring to the concept established for the Marsabit activities:

**Table AG7.4.2 Categorization of JICA's Approach in Livelihood Diversification in Turkana**

Type	Livelihood Measures (sub projects)
Livestock utilization	Processing of livestock product (dry meat)
	IGA- livestock trading
Local resource utilization	Small scale rainfed agriculture
	Fishery
Provision of necessary goods and services (new addition in Turkana)	IGA- Retail business
	IGA- Others (provision of some services)*

\*: finally this was not selected.

Source: JICA Project Team

In Marsabit, considered with the general socio economic conditions in the target locations, two types of livelihood diversification are being implemented with four sub projects; chicken and goat merry-go-round sub projects under livestock utilization type, and salt business and resin and honey business sub projects under local resources utilization type.

In Turkana, this general concept of categorization is still followed, and one new type is added as JICA's approach with consideration of socio economic condition in Turkana, namely the type of

provision of necessary goods and services. The program implemented in Turkana focuses mainly on IGA, and possible contents of IGA are several. Depending on contents of IGA, types differ. If livestock trading is assumed, such IGA can be under livestock utilization type; and the type of provision of necessary goods and services is being applied when retail businesses are assumed.

(5) Methodology

Basically, the target community people are groups. However, the activities are not necessarily done as a group, and individual exercises are acceptable because especially it is sometimes difficult to implement business activities as a group. Here, groups are meant as the interface to receive trainings from the project.

The Entry point of this program in the selected sub location is the assistant chief and the drought management committee. As a pilot activity, target groups are to be selected in full consultation with assistant chief and the drought management committee. Generally two for each sub location are assumed (subject for future change depending upon participatory planning). Contents of the livelihood measures for the sub-project are confirmed based on the discussion with the committee, the assistant chief, and candidate groups. As a result, the following four sub projects are established in Turkana County for the livelihood diversification program.

## CHAPTER G8. SUB-PROJECT OF INCOME GENERATING ACTIVITIES

### G8.1 Outline of the Sub-project

#### G8.1.1 General Outline of the Sub-project

##### (1) Outline of the Sub-project

The outline of the sub project is summarized as follows:

*Table AG8.1.1 Outline of the Sub-project*

Item	Contents	Remarks
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities by assisting their micro scale business activities (IGA: income generating activities of livestock trading and retail shops) and giving entrepreneur/business training, and mentoring activities to enhance community resilience against drought.	
2. Number of Beneficiaries	7 groups, and 125 group members	
3. Implementation Organization	JICA ECoRAD Project, and the community groups	
4. Project Contents		
1) Project Outline	1) Business training 2) Business consulting and market linkage	
2) Facility / Activity	<i>Facilities/Activities</i>	<i>Implementer</i>
	1) Implementation of training	1) Project Team and groups
	2) Business consulting and market linkage	2) Project Team and groups
	3) Monitoring	3) Project Team and groups
3) Organization for O&M	Target community groups under supervision of their assistant chief, elders, and the committee	
4) Construction Period	14 months (starting Nov 2013 around up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.

Source: JICA Project Team

##### (2) Basic Principle of the Sub-project

The sub-project aims at assisting target groups to venture into business activities through utilization of local resources and/or by providing necessary goods and services near their domiciles, and encourage them to make savings out of the proceeds during the lean drought periods. For sustainability purposes, the contents of business trainings and activities will be tailored towards needs and priorities of group members in the project area. The project emphasizes capacity building able to cause change in knowledge, skills and attitude regarding business and alternative livelihoods important for food and income security required for resilience building. This would be realized through understanding cost and benefit structure and identifying/linking markets. The main activities under ECoRAD project would be technical entrepreneurship training and mentoring activities to selected groups with expectation of trickle-down effect to the rest of the community indirect beneficiaries.

### G8.1.2 Selection of Target Groups

#### (1) Participatory Planning

In selection of the target groups, participatory planning approach was taken. The flow of the planning was the same across the four sub locations as shown below:

##### 1) Loritit

**Table AG8.1.2 Process of Participatory Activities in Loritit**

Date	Planned Activities	Participants	Results
28/10/2013	Mobilization for livelihood sub project	The project staff	Met the people and informed them of the next visit – mobilization achieved
31/10/2013	First meeting with the community	The project staff, assistant chief and committee members	Introduction of the project concept
05/11/2013	2nd Meeting with the community members	The project staff, the drought management committee members, potential groups (4 in number), group officials and assistant chief	All groups were assessed and 2 groups were selected. Loritit youth group and Loritit Farming Group
2/12/2013	Signing of MOU	The project staff, assistant chief, committee members, group members	The MOU was signed and shared.

Source: JICA Project Team



Source: JICA Project Team

**Figure AG8.1.1 Photo of Participatory Planning Process in Loritit**

##### 2) Lokiriama

**Table AG8.1.3 Process of Participatory Activities in Lokiriama**

Date	Planned Activities	Participants	Results
1/11/2013	First meeting with the community	The project staff, assistant chief and the drought management committee members	Introduction of the project concept. The community was mobilized.
06/11/2013	2nd Meeting with the community members	The project staff, the drought management committee members, potential groups (7 in number), group officials and Assistant chief	All groups were assessed and 3 groups were selected. Lokiriama women group and Lokiriama dried meat group and Abekun self help group
03/12/2014	Signing of MOU	The project staff, assistant chief, the drought management committee members, group members	The MOU was signed and shared.

Source: JICA Project Team



## 3) Lochwaangikamatak

**Table AG8.1.4 Process of Participatory Activities in Lochwaangikamatak**

Date	Planned Activities	Participants	Results
25/10/2013	To meet the committee 1st meeting	The project staff, the drought management committee, and assistant chief	Met the committee and discussed pertinent issues of the project.
29/10/2013	2nd meeting – assess/ select 2 groups to work with.	The project staff, the drought management committee members, potential groups (9 in number), group officials and assistant chief.	All groups were assessed and 2 groups were selected. Akicha women group and Nameturan youth group.
06/12/2014	Signing of MOU	The project staff, assistant chief, the drought management committee members , group members	The MOU was signed and shared.

Source: JICA Project Team



Source: JICA Project Team

**Figure AG8.1.2 Photo of Participatory Planning Process in Lochwaangikamatak**

## 4) Lopii

**Table AG8.1.5 Process of Participatory Activities in Lopii**

Date	Planned Activities	Participants	Results
04/11/2013	Mobilization 1st meeting	The project staff, and the drought committee	To sensitize the community and introduce the project. Selection of the groups. 2 groups were identified, 1 group at Kaaruko area- Titim self help group and 1 group in Lopii- Lopii self help group.
04/12/2014	Signing of MOU	The project staff, assistant chief, committee members , group members	The MOU was signed and shared.

Source: JICA Project Team

In selection, assistant chiefs in all sub locations, elders if available, and the drought management committees were involved. The above process was done by sub location and groups in other sub projects are also included in the table above (Loritit and Lokiriama). At the end of the process, MOU was signed between the project team and the groups regarding the receipt of the assistance from the JICA project. This MOU should not be used to force the activities but is just expected to show their commitment. When any problem occurs, an ad hoc discussion is the only way of solving it.

## (2) Selected Target Community Groups

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG8.1.6 Information for Target Group**

	Group Name	Location	Main Contents of Possible IGA
1	Loritit Youth Group	Loritit	Livestock trade
2	Abekun Self Help Group	Lokiriama	Livestock trade
3	Lokiriama Women Group	Lokiriama	Retail shop
4	Nameturun Youth Group	Lochwaangikamatak	Livestock trade
5	Akicha Women Group	Lochwaangikamatak	Retail shop
6	Timtim Self Help Group	Lopii	Retail shop
7	Lopii Self Group	Lopii	Retail shop

Source: JICA Project Team

Main contents of possible IGA shown in the above come from the groups.



Source: JICA Project Team

**Figure AG8.1.3 Photo of Retail Shop in Lopii-Kaaruko**

### G8.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

#### (1) Indicators

##### 1) Operational indicators

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. Throughout the monitoring period, they were monitored.

**Table AG8.1.7 Operational Indicators**

	Operational Indicators
1	Business Transaction
1-1	Cost and benefit structure
1-2	Production and Transaction
1-3	Market
2	Records of any individual benefits (profit share, labour fee, etc)
3	Records of any group benefits
4	Total money in the group account

Source: JICA Project Team

## 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be captured. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG8.1.8 Effect Indicators**

Effect Indicators	
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Assets by member and group
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, the baseline survey was implemented as below:

## 1) Methodology

For all sub-locations, the same method was used. Two kinds of questionnaires were used; one is for an individual, the other is for a group to obtain the baseline condition. For sample number for individuals, basically almost all target group members were surveyed (depending upon the availability of members, some were lower such as 55% for the Akicha group). For groups, all the selected groups were surveyed having focus group discussion. The survey was implemented by the project staff as shown in the table below.

**Table AG8.1.9 Schedule of Baseline Survey for IGA Sub-project**

Target Sub-location	Date	Sample Numbers
Loritit	13-14/11/2013	17 loritit youth group members were interviewed.
Lokiriama	14/11/2013	24 Lokiriama women group, 11 Abekun self-help group members were interviewed.
Lochwarngamatak	26/11/2013	11 members from Akicha women group, 12 members from Nameturan youth group were interviewed.
Lopii	18/11/2013	20 Lopii self-help group, 10 Titim self help group were interviewed.

Source: JICA Project Team

## 2) Brief summary of socio economic condition of the target areas

Socio-economic condition of the target areas are briefly summarized in the following table:

**Table AG8.1.10 Summary of Socio Economic Condition of the Target Areas**

Sub-location	Socio Economic Condition
Loritit Sub-location	<p>Area: 577 sq km            Location: under Letea location            Population: 8,527 (1,185 households)            Community: Turkana            Mobile phone: some spots            Electricity: n.a. (some solar panels)            Regular transportation: n.a. need to arrange (motorbike to Kakuma, freq.: twice/week). Letea from/to Kakuma has regular transportation.            Nearest market: Letea (feeder local market), and Kakuma. Especially in Letea, a livestock market has recently been established, and open once/week.            Located inside from the main road from Kakuma</p>
Lokirama Sub-location	<p>Area: 164 sq km            Location: under Lokirama Location            Population: 3,615 (482 households)            Community: Turkana            Mobile phone: some spots            Electricity: no (some solar panels)            Regular transportation: no matatsu, no public transportation (cars passing by 2~3 times a week)            Nearest economic center: Moroto in Uganda, and Lodwar            Forest and mountains are close            Some insecurity issues with Uganda</p>
Lochwaangikamatak Sub-location	<p>Area: 1,072 sq km            Location: under Lochwaangikamatak Location            Population: 14,561 (1,636 households)            Community: Turkana            Mobile phone: some spots            Electricity: n.a. (some solar panels)            Transportation: available            Along with the main road between north and south in Turkana</p>
Lopii Sub-location	<p>Area: 324 sq km            Location: under Kochodin Location            Population: 2,810 (347 households)            Community: Turkana            Mobile phone: some spots            Electricity: n.a.            Transportation: many /day between Lokichar and Lokori            Local resources: wild fruits, aloe vera (both in insecure places)            Some insecurity issues with West Pokot. Fences are installed at the border of the village.</p>

Source: 2009 Kenya Population and Housing Census and JICA Project Team (Table B20.3.1)

### (3) Baseline information of Operational indicators

Here, baseline figures for the indicators are set and shown.

#### 1) Business transaction

##### 1. Cost and Benefit Structure

##### **Livestock trade**

In all three sub locations (Loritit, Lokirama, and Lochwaangikamatak), the main livestock for their trade was goat. Camel and cattle were also dealt with if there was demand and they have capital. In general, this trade was done by individual members.

For goat trade, cost and benefit structure for all the three groups in three places were in general summarized as below:

**Table AG8.1.11 Cost and Benefit Structure of Livestock Trade (Baseline)**

Group	Grade	Buying Price	Selling Price	Profit Margin Ksh/goat
Loritit youth group (Loritit)	big good one	6,000	6100~6200	100~200
	small one	3,000	3300	300
Abekun (Lokiriama)	big good one	3,500	5,000 (Lodwar), 7,000 (Uganda)	1,500 (Lodwar) 3,500 (Uganda)*
	middle	2,000	2,000~3,000 (Lodwar), 4,000 (Uganda)	1,000 (Lodwar), 2,000 (Uganda)*
	small one	1,500	2,500 (Lodwar), 3,000 (Uganda)	1,000 (Lodwar), 1,500 (Uganda)*
Nametran (Lochwar)	big good one	4,000	4,500	500
	small one	1,000~2,000	1200~1300 to 2200~2400	200~400

\*: if they sell to local areas, profit margin becomes around Ksh 300-500.

Source: JICA Project Team, based on the hearing form the members

Except for the group in Lokiriama, cost and benefit structure of the other two groups were similar with profit margin per goat from Ksh 100 to 500. For the group in Lokiriama, profit margin was high probably because of border trade with Uganda with strong Kenyan currency against Ugandan currency (one Kenyan shilling is equal to about 30 Uganda shilling as of September 2014).

### **Retail shop**

Across the groups, their business was almost the same as they purchased goods for daily needs such as foodstuffs and provide them in their living areas. Cost and benefit structure as a whole can be summarized in the table below:

**Table AG8.1.12 Cost and Benefit Structure of Retail Shop (Baseline)**

	Group name	Cost of goods for one time procurement	Net Profit from this one time procurement*
3	Lokiriama Women Group (Lokiriama)	20,000 (10,000 other cost, 10,000 goods) 40,000 (15,000 transport etc, 25,000 goods) 50,000 (20,000 transport etc, 30,000 goods)**	Ksh 2,500 to 5,000 to 7,000
5	Akicha Women Group (Lochwar)	Ksh 20,000 ~ 80,000 (~150,000: rare case)	Ksh 2,000/3,000 ~ 8,000/9,000
6	Timtim Self Help Group (Lopii)	5,000-7,000-20,000	1000 ~ 2000 ~ 4000/5000
7	Lopii Self Group (Lopii)	Ksh 5,000~10,000	Ksh 1,500 ~ 3000/4000

\*: this is net profit which is left after deducting all necessary related costs., \*\*:they assume to go and buy stuff at Moroto and Lodwar.

Source: JICA Project Team

The above is the information related to one- time procurement. All the groups said that they went and procured goods in most cases when the stock was sold and remained 25% of the total stock.

## 2. Production and transaction

### **Livestock trade**

For Loritit, livestock is bought from pastoralists in the catchment areas (Lokipoto, Letea, Loreng) and those who bring for sale in Loritit. For Lochwaangikamatak, livestock are bought from pastoralists in the catchment areas of Napusimoru, Kaaroge, Sopol hills and Kaatir, and middlemen who intend to take them for sale in Lochwaangikamatak, Lodwar and Lokichar. For Lokiriama, livestock is bought from pastoralists in the catchment areas (Urum, Loima hills, Lochor Alomala & Ata Lokamusio, etc) and those who bring for sale in Lokiriama trading centre. If no livestock is

supplied to their places, the group members may go to grazing land to look for livestock for their trade.

Transaction volume of the trade before was reported as below:

**Table AG8.1.13 Transaction Volume (Baseline)**

	Group name	Sub Location	Transaction Volume/week
1	Loritit Youth Group	Loritit	1~10 goats either 1 camel either 1 cattle
2	Abekun Self Help Group	Lokiriyama	5~15 goats either 1~4 camel either 1 cattle
4	Nameturan Youth Group	Lochwaangikamatak	4~20 goats

Source: JICA Project Team, based on the hearing form the members

Main stock is goat and about 1~20 goats/week were transacted per one member of the groups in general. Therefore, their operating capital was estimated varying from Ksh 10,000 to around Ksh 80,000. There is seasonal variation; low transaction in dry season, high transaction in wet season mainly due to condition of livestock.

#### **Retail shop**

All the groups bought commodities which were needed in their localities from the nearest market towns as shown below:

**Table AG8.1.14 Place of Procurement and Major Commodities Dealt With (Baseline)**

	Group name	Places of Procurement	Major commodities
3	Lokiriyama Women Group (Lokiriyama)	Moroto (maize) and Lodwar (household commodities)	Maize, rice, sugar, tobacco, wheat flour, cooking oil, beans, cloth, stationary, shoes, drug for livestock, beads, soda, and beer
5	Akicha Women Group (Lochwar)	Lodwar, Lokichar (Vegetable from Kitle)	Beans, maize, tea leaf, sugar, wheat flour, oil, detergent, beads, earring, slippers, cloths, drinks, etc.
6	Timtim Self Help Group (Lopii-Kaaruko)	Lokori, Lokichar (when transportation is secured)	Sugar, maize, salt, beans, oil, tobacco, tea leaf, scratch card for mobile, soda, beer, rice, detergent (omo), beads, wheat flour, cloth, stationary.
7	Lopii Self Group (Lopii-center)	Lokichar	Beans, sugar, maize flour, rice, maize, detergent, oil, tea leaf, salt (not cloth and stationary)

Source: JICA Project Team

Cost and benefit structure mentioned earlier was for one time procurement. Times of the procurement were as follows:

Lokiriyama women group went for procurement once to two times/month. For Akicha women group, frequency of procurement was twice a month or less depending on the demand in their area. Frequency of Timtim self help group was two to three times/month. Lopii self group had gone mainly one time/month, and could go two times/month during wet seasons.

### 3. Market

#### **Livestock trade**

Markets that they sell livestock to are as follows:

For Loritit, livestock markets were Letea and Kakuma. If the selling price was low there, they used to go to Lokichoggio, and also Kotido in Uganda (not often). Basically they went on foot with livestock when they used up all operational capital; or livestock became sufficient number to be transported. They get the market information by mobile phone, and use it for their business judgment.

For Lokiriyama, the markets were Lokiriyama area for butcheries & breeding stock, Namoruputh and Lorugum markets, the markets in Lodwar and Kakuma, and even Moroto and Kotido in Karamoja Uganda. Actually, Ugandan markets such as Moroto were close from Lokiriyama, and they seemed

to enjoy cross-border trade, indicating that they were within Moroto's economic zone. When they targeted Kotido and Moroto as markets, they walked there with livestock, and on the way back, they procured goods to be sold in Lokirama with a hired car back. When they went to Lodwar, they walked to Namoruputh and hired a car to go to Lodwar.

For Lochwaangikamatak, livestock markets were within Lochwaangikamatak, Kaaroge, Sopol, Napusimoru, and sometimes to other a little bigger markets such as Lokichar and Lodwar. The group members said that they knew traders in these markets and have their contacts. They used mobile phone to get price and demanded information to be referred to for their business decision-making.

### **Retail Shop**

Customers of the retail shops came mainly from just around the surrounding areas of the shops where the group members lived. This model was that necessary goods were procured wherever available (in most cases the nearest and relatively bigger towns) and sold to people who lived in such areas and could not easily and frequently access to the bigger towns.. Transiting people passing by the areas were also customers.

### 2) Records of Any Individual Benefits (profit share, labour fee, etc)

### **Livestock trade**

Across the three areas, the members do their business individually; and thus, profit from the individual activities is enjoyed by the individual member. This business is one of their important livelihood measures and plays a crucial role in sustaining families.

The following is a roughly estimated figure of the net profit of this business, though many assumptions have been made..

**Table AG8.1.15 Estimated Net Profit per Member(Baseline)**

	<b>Group name</b>	<b>Location</b>	<b>Estimated Net Profit per Member per Year</b>
1	Loritit Youth Group	Loritit	Average 5 goats x Ksh 200/goat x 4 week/M x 12M = Ksh 48,000
2	Abekun Self Help Group	Lokirama	Average (10+5)/2* goats x Ksh (1000*1+400*4)/5**/goat x 4 week/M x 12M = Ksh 187,200
4	Nameturam Youth Group	Lochwaangikamat ak	Average (12+4)/2* goats x Ksh 350/goat x 4 week/M x 12M = Ksh 134,400

Remarks: the above does not consider transportation and other miscellaneous costs

\*: consideration of rainy season and dry season, \*\*: consideration of sales both in Lodwar/Moroto and adjacent area

Source: JICA Project Team

According to the above estimation, possible annual net profit ranges from Ksh 48,000 to Ksh 187,200. These are indicative figures and might be smaller if miscellaneous costs and the low season are considered.

### **Retail Shop**

The business was individually operated as the livestock trade was done. Thus, net profit from this retail business was enjoyed primarily by individual members, and each member recorded the benefits from this business Annual net profit can be indicatively calculated with previously described information and shown in the table below:

**Table AG8.1.16 Estimated Net Profit per Member(Baseline)**

	<b>Group name</b>	<b>Location</b>	<b>Estimated Net Profit per year</b>
3	Lokiriama Women Group	Lokiriama	Ksh 5,000/procurement x 2 times/M x 12M/year = Ksh 120,000
5	Akicha Women Group	Lochwaangikamatak	Same as above
6	Timtim Self Help Group	Lopii	Ksh 3,000/procurement x 2.5 times/M x 12M/year = Ksh 90,000
7	Lopii Self Group	Lopii	Ksh 2,750/procurement x 1.5 times/M x 12M/year = Ksh 49,500

Source: JICA Project Team

Estimated net profit from this business per annum was tentatively calculated ranging from Ksh 48,500 to Ksh 120,000. This result seems intuitively to reflect each area's economic environment. Lopii was far from main road and hence their economic activities were less. Lochwaangikamatak, since this center was along the main roads, was in a better economic condition. Lokiriama, though far from Lodwar, was close to Moroto in Uganda and is good economically.

### 3) Records of Any Group Benefits

#### **Livestock trade**

Group benefit that the members said they enjoyed since the training was given is shown below by groups.

For the Loritit group, they helped each other in their business cycle. For example, when they wanted to buy a camel and a cow which needed high capital, they purchased together as a group by putting money together and sold it, then they shared the net profit obtained through the group transaction based on their respective contributions. They also did joint access to markets.

Further, when a member got in business trouble, the other group members came and helped. Apart from the business group activities, they cooperated with each other on social occasions. When a member got sick, the group helped to take him/her to a hospital.

Similarly, the Lokiriama Abekun group also did their collective action for both business and social occasions. For example, when Kotido was aimed at as the market place for sales, the group went together for security purposes. When they came back from Moroto, they purchased goods jointly (this was apart from the livestock business but they did some retail business, too). They have started VICOBA..

The same applied to the Lochwar group. When they went to sell livestock to Lokichar, they hired a car as a group. Also, they shared market information for better decision-making as a group. They had social protection related activities, too.

#### **Retail shop**

Though retail activities were done individually, they sometimes (not frequently) purchased goods jointly especially in towns far from their local areas. Lokiriama and Akicha women groups had the group works too, far away from individual retail shops (guest house for Lokiriama and bakery shop for Akicha).



**Table AG8.1.17 Group Benefit (Baseline)**

	Group name	Location	Group Benefit
3	Lokiriama Women Group	Lokiriama	Joint purchasing of goods, some group work (guest house), interface of group members with donor supports, social support.
5	Akicha Women Group	Lochwaangikamatak	Some group work (e.g. bakery shop), interface of group members with donor supports
6	Timtim Self Help Group	Lopii - Kaaruko	Joint purchasing (some time)
7	Lopii Self Group	Lopii	Experiential learning on business opportunities, share ideas, setting common prices and common measurement

Source: JICA Project Team

#### 4) Total Money in the Group Account

##### **Livestock trade**

Before the sub project started, the groups had the money as follows:

**Table A25.1.18 Money in Group Account (Baseline)**

	Group name	Location	Group Account
1	Loritit Youth Group	Loritit	Kshs. 5,000.
2	Abekun Self Help Group	Lokiriama	Kshs. 60,000
4	Nameturun Youth Group	Lochwaangikamatak	Kshs. 8,000

Source: JICA Project Team

The groups saved some amount of money from their previous activities.

##### **Retail shop**

According to the baseline survey result, the groups had the following money as their group money.

**Table A25.1.19 Money in Group Account (Baseline)**

	Group name	Location	Group Account
3	Lokiriama Women Group	Lokiriama	Ksh. 30,000
5	Akicha Women Group	Lochwaangikamatak	Ksh. 18,000
6	Timtim Self Help Group	Lopii	Ksh. 0
7	Lopii Self Group	Lopii	Ksh. 0

Source: JICA Project Team

#### (4) Baseline information for effect indicators

Based on the baseline survey, baseline figures/information for effect indicators are set and shown as below:

##### 1) Group members' livelihood

Baseline livelihood for four sub locations is compiled in the table below:

**Table AG8.1.20 Group Members' Livelihood in the Target Areas**

Sub-location	Indicator as of November ~December 2013
Loritit	The sample target members do business as their main livelihood. Livestock is their secondary and tertiary measure of livelihood, but the least number of them answered that the livestock is the main livelihood.
Lokiriama	The same as above.
Lochwaangikamatak	The same as above.
Lopii	The business is the main livelihood. However, the second most important livelihood is livestock with slightly lower percentage of members than business.

Source: JICA Project Team

The target group members are currently doing small business as their main livelihood. The members whose main livelihood is livestock are very few. In Lopii, still livestock is as important as business for the target group members though most of the members said business is the main livelihood.

## 2) Current measures in terms of livelihood to cope with drought

### 1. By member

**Table AG8.1.21 Current Measures To Cope with Drought**

Sub-location	Indicator as of November ~December2013
Loritit	Current measures to cope with drought by the sample target members are proceeds from business including charcoal and kiosk.
Lokiriama	Current measures to cope with drought by the sample target members are getting cash from profits from business, sale of livestock in Lokiriama and Moroto.
Lochwaangikamatak	Current measures are basically business including charcoal, and livestock sale. Few number rely on employment.
Lopii	Mostly the same as above.

Source: JICA Project Team

Since all of the group members are currently doing some kinds of business, the current countermeasures against drought are basically business, meaning that money obtained from business.

### 2. By group

The current measures by group are summarized in the table below:

**Table AG8.1.22 Current Measures to Cope With Drought (Group)**

	Group name	Indicator as of November ~December2013
Loritit Sub-location		
1	Loritit youth group	Not specifically
Lokiriama Sub-location		
2	Lokiriama women group	Not specifically
3	Abekun self group	Not specifically
Lochwaangikamatak Sub-location		
4	Nameturan youth group	Not specifically
5	Akicha women group	Not specifically
Lopii Sub-location		
6	Lopii self help group	Not specifically
7	Titim self help group	Not specifically

Source: JICA Project Team

All groups replied that they do not have specific counter measure against drought as of now.

## 3) Number of assets by member and group (including group profile)

### 1. By member

Main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below.

<sup>1</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (30~200 shoats/family of course it depends on each family). The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit); and 2) these households live close to the town/center of location so smaller figures are not far from the true figures. For the reference, average household size of the samples for this sub project is 4.0 in Loritit, 5.9 in Lokiriama, 6.5 in Lochwaa and 6.4 in Lopii sub-locations.

**Table AG8.1.23 Number of Assets by Member**

		Loritit		Lokiriama		Lochwaangikamatak		Lopii	
		Average/ sample HH	% of having/ sample HH	Average/ sample HH	% of having/ sample HH	Average/ sample HH	% of having/ sample HH	Average/ sample HH	% of having/ sample HH
Physical	TV	0	0	0.03	3	0.04	4	0	0
	Car	0	0	0	0	0	0	0	0
	Mobile phone	0.29	22	0.31	29	0.52	52	0.38	38
	Bicycle	0.47	44	0.14	14	0.14	14	0.09	9
	Motorcycle	0.06	6	0.09	9	0	0	0.03	3.3
Livestock	Goat	26.4 (max:100, min: 0)	88	10.3 (max: 50, min: 0)	74	12.69 (max: 50, min: 0)	78	17.1 (max: 30, min: 5)	100
	Cow	0.4 (max: 5, min: 0)	12	1.3 (max: 10, min: 0)	17	0 (max: 0, min: 0)	0	0.1 (max: 2, min: 0)	7
	Sheep	8.7 (max: 50, min: 0)	65	3.7 (max: 22, min: 0)	37	2.78 (max: 15, min: 0)	73	5.3 (max: 17, min: 0)	88
	Camel	0.6 (max: 3, min: 0)	35	0.5 (max: 10, min: 0)	11	0.49 (max: 35, min: 0)	17	0.4 (max: 4, min: 0)	19
	Chicken	2.2 (max: 16, min: 0)	29	5.2 (max: 20, min: 0)	60	1.3 (max: 7, min: 0)	39	2.4 (max: 11, min: 0)	44
	Donkey	0.4 (max: 2, min: 0))	29	0.5 (max: 20, min: 0)	20	0 (max: 0, min: 0)	0	0.47 (max: 3, min: 0)	25

Source: JICA Project Team

For physical assets, around 20-50 % of the members have mobile phones. Also the majority of member households have shoats with a smaller number of shoats when compared to other typical pastoral households.

## 2. By group

Group asset including the information of general group profile is shown as below:

**Table AG8.1.24 Assets by Group**

	Group name	Indicator as of November ~December 2013
Loritit Sub-location		
1	Loritit youth group	Number of Group members: 20 Out of which, target members are 20 (female: 5, illiterate: 11 out of surveyed 17 members) Asset: none Group account: KCB- 5,000/= Established: April 2013
Lokiriama Sub-location		
2	Lokiriama Women Group	Number of Group members: 35 Out of which, target members are 24 (female: 24, illiterate: 23) Asset: none Group account: EQUITY- 30,000/= Established: February 2013.
3	Abekun self Help Group	Number of Group members: 11 Out of which, target members are 11 (female: 5, illiterate: 7) Asset: none Group account: KCB. Over 60,000 with members Established: 2010.

	Group name	Indicator as of November ~December 2013
Lochwaangikamatak Sub-location		
4	Nameturan youth group	Number of Group members: 20 Out of which, target members are 20 (female: 6, illiterate: 9 out of surveyed 12 members) Asset: none Group account: Equity bank- 8,000/=
5	Akicha women group	Number of Group members: 20 Out of which, target members are 20 (female: 11, illiterate: 7 out of surveyed 11 members) Asset: none Group account: KCB- 18,000/=
Lopii Sub-location		
6	Lopii self Help group	Number of Group members: 20 Out of which, target members are 20 (female: 15, illiterate: 15) Asset: none Group account: none
7	Titim self help group	Number of Group members: 10 Out of which, target members are 10 (female: 4, illiterate: 7) Asset: none Group account: none

Source: JICA Project Team

Out of seven target groups, some members of one group are not joined. Four out of seven groups have been established recently in 2013. Out of the surveyed members (105), 65 members are female (62%), and illiterate members are 79 (75%).

#### 4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

##### 1. By member/individual

Household income and expenditure for the sampled target members as of November 2013 are summarized in the table below:

**Table AG8.1.25 Household Income and Expenditure (Baseline - provisional)**

	Loritit	Lokiriama	Lochwaangikamatak	Lopii
Annual Household Income	Average: Kshs.105,565 Max: Kshs.216,000 Min: Kshs.21,000	Average: Kshs.220,526 Max: Kshs.540,000 Min: Kshs.33,200	Average: Kshs.117,851 Max: Kshs.384,000 Min: Kshs.24,000	Average: Kshs.73,456 Max: Kshs.260,000 Min: Kshs.25,200
Annual Household Expenditure	Average: Kshs.96,671 Max: Kshs.196,000 Min: Kshs.21,000	Average: Kshs.214,566 Max: Kshs.540,000 Min: Kshs.33,200	Average: Kshs.115,006 Max: Kshs.381,500 Min: Kshs.24,000	Average: Kshs.73,269 Max: Kshs.256,210 Min: Kshs.25,200

Source: JICA Project Team, Remarks: the above figures are preliminary and to be confirmed.

Sampled members in Lokiriama have the highest annual household income and expenditure with approx. Kshs.210,000 - Kshs.220,000 on average. These preliminary figures seem high and, may be because of border trade with Uganda, but would be confirmed. In contrast, Lopii has the lowest annual average income and expenditure of around Kshs.73,000 per year. The Major part of their income comes from business, livestock sale and fuel wood sale in most groups.

##### 2. By group (only financial impact)

Since the sub-project has not yet started, financial impacts of the groups for this indicator are none.

5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1. By member/individual

Individual opinions on this sub project are as follows:

**Table AG8.1.26 Group Members' Opinion on the Sub-project**

Sub-location	Indicator as of November ~December 2013
Loritit	All the target members expect to some extent enhancement of resilience through this IGA sub project. The reasons of the expectation they raised are mainly capacity building and training related to business and some expect financial support.
Lokiriama	All the members in two groups in Lokiriama expect this IGA sub project. The reason they think is that they can acquire business skills through trainings. Minority said that financial assistance, kiosk, and fostering group dynamics as reasons of the expectation
Lochwaangikamat ak	All the sample target members expect to enhance resilience using the project of IGA. Most of them mentioned this will happen through gaining business/entrepreneurship knowledge and skills. They also expect to get some financial help in terms material support and skills. As individual benefits, money and knowledge are the most important benefits that all of the respondents raised.
Lopii	All the sample target members expect to enhance resilience through the IGA project targeted in the site. Most of them mentioned this will happen through gaining business/entrepreneurship knowledge and skills and financial support. As individual benefits, money and knowledge are the most important benefits that all of the respondents raised.

Source: JICA Project Team

Across the four sub- locations, all the target members expect this sub project because they can obtain business and entrepreneurship skills, thereby they can increase benefit leading to enhanced resilience against drought. Still, some of the members are also expecting financial support from the project, though the project will not do any financial support, but only make linkage to financial institutions.

2. By group

Opinions on the sub-project as groups are shown as follows:

**Table AG8.1.27 Any Opinions on the Sub-project (Group)**

	Group Name	Indicator as of November ~December 2013
Loritit Sub-location		
1	Loritit youth group	<u>Expectation to enhance resilience by the sub-project:</u> Yes, through training on business skills and financial management. <u>Expectation about group benefit:</u> Solidarity, provision of working opportunity and money to members, success of business activities and fostering culture of resilience as a group <u>Difference compared to other past donor projects:</u> The JICA project is unique in that there is no provision for handouts. Most of the activities towards empowering communities and buiding self reliance.
Lokiriama Sub-location		
2	Lokiriama women group	<u>Expectation to enhance resilience by the sub-project:</u> Yes, through training of individual memebrs on business skills and knowlegde people can become enlightened. Formation of market linkages with other groups in other areas. <u>Expectation about group benefit:</u> Solidarity, awareness of resilience, provision of working opportunity and money to members, and success of business activities. <u>Difference compared to other past donor projects:</u> This sub-project is objective it focusses on self reliance approaches, so they don't encourage the giving out of hand outs.

	Group Name	Indicator as of November ~December 2013
3	Abekun Self Help Group	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through training of individual members on business skills and knowledge people can become enlightened. Formation of market linkages with other groups in other areas.</p> <p><u>Expectation about group benefit:</u> Solidarity, awareness of resilience, provision of working opportunity and money to members, and success of business activities.</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is objective it focusses on self reliance approaches, so they don't encourage the giving out of hand outs.</p>
Lochwarngamatak Sub-location		
4	Nameturun youth group	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through gaining skills in business their income generating activity will flourish..</p> <p><u>Expectation about group benefit:</u> Fostering awareness of resilience as a group, culture to help each other, providing working opportunity and providing some amount to group members.</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is good. It provides a window for the people to gain sustainability. JICA teaches ways of making people self reliant as opposed to providing them with incentives.</p>
5	Akicha women group	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, because of gaining knowledge on running business</p> <p><u>Expectation about group benefit:</u> Fostering culture of helping one another, provision of money to members, and success of business activities.</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is different from others in terms of providing training and knowledge.</p>
Lopii Sub-location		
6	Lopii self help group	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, the project assists one to gain skills and knowledge on business.</p> <p><u>Expectation about group benefit:</u> Fostering awareness of resilience as a group, Solidarity, provision of working opportunity and money to members for the success of business activities.</p> <p><u>Difference compared to other past donor projects:</u> JICA does not give handouts. It gives life time skills that are geared towards development.</p>
7	Titim self help group	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, because of gaining knowledge on running business</p> <p><u>Expectation about group benefit:</u> Fostering culture of helping one another, solidarity, provision of money to members, and success of business activities.</p> <p><u>Difference compared to other past donor projects:</u> The way JICA works is unique. Choosing to work with groups. Mobilising them to get technology and skills to handle modern business.</p>

Source: JICA Project Team

In general, the expectation of all seven groups is high. In terms of approach, all the groups answered that JICA's way is unique and unlike others in a sense that the focus is on capacity building. At the end of the sub project period, it is to be monitored if their expectations are met or not.

## G8.2 Works Done

Works done during the implementation of the sub project are shown below.

### G8.2.1 Inputs from the Project as Assistance Activities

~from March 2014 to August 2014~

#### (1) Provision of Entrepreneurship Training

For this sub project, building their business capacity and providing business knowledge is the starting point. Thus, the following training was implemented:

##### 1) Course Objective

Objective of this training is for the groups to learn basic business knowledge so that their current IGA activities are expected to be improved.

##### 2) Course Contents

Course was delivered by the specifically assigned staff of the project for this course with the schedule and participants summarized in the table below:

**Table AG8.2.1 Schedule and Participants for Entrepreneurship Training**

Location	Date and Place	Participants Attended
Loritit	24 <sup>th</sup> -26 <sup>th</sup> of Feb 2014 at Loritit	24
Lokiriama	1st - 4 <sup>th</sup> March 2014 at Lokiriama	24
Lochwaangikamatak	6th - 8 <sup>th</sup> March 2014 at Lochwaangikamatak	24
Lopii	9th - 11 <sup>th</sup> March 2014 at Lokichar	29

Source: JICA Project Team

The participants also include Drought Management Committee members, not only the target group members, in order for them to acquire the knowledge and, as expected, disseminate to other community members as per our framework of the community resilience model. The following course contents were applied using techniques such as group discussions, role plays, question and answer method, plenary presentations, lecture, brainstorming and diagrammatic presentation as shown in the table below:

**Table AG8.2.2 Training Contents**

Items	Contents
1. Business identification	<ul style="list-style-type: none"> <li>a. Analyzing existing businesses to undertake within your environment.</li> <li>b. The five important points to consider in order preceding with the business you have or identify a different one</li> <li>c. Marketing and marketing plans.</li> </ul>
2. Business planning	<ul style="list-style-type: none"> <li>a. Capital aspects of the business.</li> <li>b. Business records</li> <li>c. Managing cash flow and profit margins calculations.</li> <li>d. Costing</li> </ul>
3. Managing Businesses	<ul style="list-style-type: none"> <li>a. Business money allocation</li> <li>b. Managing stock in business</li> <li>c. Factors for business success/failure</li> <li>d. Managing business risks.</li> <li>e. House hold expenses</li> </ul>

Source: JICA Project Team

##### 3) Observation

Basically, the course was delivered in an interactive way, and most of the group members have learned the basic business skills and knowledge. Across the groups, it seems that more financial

knowledge was sort by them such as household budgeting, savings plan to accumulate the money for diversifying their business, wise use of borrowed money (loans) understanding financial institutions for saving and loaning services, the rights and responsibilities of a consumer of financial services, and finally the need for group savings and loaning (like VICOBA: village community bank), indicating their high interest in financial management for their IGA.



Source: JICA Project Team

**Figure AG8.2.1 Entrepreneurship Training**  
(From left: Lochwaangikamatak, Lopii, Lokiriama, and Loritit)

## (2) Implementation of Exposure Visit (Livestock Trade Group in Loritit)

As one of the ways to create a new market channel, this visit was planned and implemented as shown below:

### 1) Objective

The exposure visit was meant to support the Loritit youth group to learn from the achievements of Kakuma Livestock Marketing Association (LMA) which has been supported by ECoRAD Livestock Value Chain program in aspects of livestock mobilization, marketing systems, information sharing, pricing and off take. Objective is also to create a linkage between the group and the LMA for future business transactions.

### 2) Participants

The traders' exposure visit took place on 22nd July, 2014 in Kakuma. It involved transporting community members from Loritit to Kakuma of which they were transported back home after the event. Regarding attendance and participation, it involved 20 members of Loritit youth groups (12 men and 8 women), two Drought Management Committee members, one area chief representative and four LMA representatives from the Kakuma livestock market. The visit was led by the project team. The activity started at 8.30am and ended at 1.30 pm

### 3) Activities

There were three sessions on the day, namely the exposure visit part, plenary session part, and leaning session part. Activities for each are shown below:

#### What was done during the exposure visit

- There was adequate interaction with LMA members and the community members in the sale yard while livestock marketing was going on. This involved hands-on comparison of livestock prices, understanding of livestock catchment areas and livestock business ethics and processes as understood by LMA representatives;
- Buyer and seller relations especially on rapport building and price negotiations were enhanced during the event;
- Comparing livestock prices per species in relation to Loritit prices;
- Determining possible profit margins in consideration of cost of production and market access;
- Informal inquiries in regard to general aspects of livestock marketing in Kakuma; and



- Drought preparedness and livestock marketing was presented whereby drought cycle management is key towards reducing impact of drought in causing livestock related losses for pastoralist.

#### What was done during the plenary session

- This involved use of panellists i.e. selected 3 LMA members answering questions from Loritit group members and other guests in a conference room including sharing of lessons learned from the exposure and interactions within the sale yard;
- Ongoing livestock marketing systems for livestock business in Kakuma were reviewed for the aim of adding value for the benefit of traders through better returns;
- Livestock marketing information systems, early off-take were presented by the project team;
- CDC / DMC synergies and complementarities for the bigger goal of ECoRAD, i.e. resilience against drought, was well delivered by the project team; and
- Drawing the flow of livestock trade in Kakuma showing catchment areas, primary and secondary livestock markets was done which generated a lot of lessons regarding aspects of livestock trade in regard to catchment areas, primary, secondary and tertiary markets and stakeholders involved.

#### What was done during the learning session (Training section)

- There are stakeholders in livestock market chain (boundary partners), and how best to influence them towards achieving livestock marketing goals in Kakuma was well shared; and
- Possible synergies, linkages & complementarities for sustainability of livestock marketing between Loritit and other markets in Turkana West with Kakuma market shared and community members were satisfied.

#### 4) Observation

There was a strong recommendation from participants i.e. Loritit youth group about the beneficiaries of the exposure visit to sensitize other community members regarding the outputs of the exposure visit. Implementation of lessons learned from the exposure visit is viewed important in improving their livestock trade in Loritit and its environs, though time was limited to cover more topics pertinent to livestock trade e.g. cost benefit analysis important for choosing specific livestock species for trade and specific markets.



Source: JICA Project Team

**Figure AG8.2.2 Exposure Visit**  
(left: exposure visit to the market, right: plenary and learning session)

#### (3) Provision of Mentoring Activities and Others

Other than the above, the following activities were done to assist the groups for improvement of their business activities:

- Business mentoring: Mentoring activities have continued on the overall business in addition to the additional business training for both kinds of IGAs; and
- Normal monitoring: information for the operational indicators was collected.



Source: JICA Project Team

**Figure AG8.2.3 Monitoring Activities**  
(left: Livestock trade session in Loritit, right: Retail session in Lopii-Kaaruko)

~from September 2014 to December 2014~

#### (4) Exchange Visit between the Groups (PFS)

##### 1) Objective

The objective of this exchange visit is to give an opportunity to learn their business activities between them and use the opportunity to improve their own business activities. For this exchange visit, two groups were selected; one from Lopii Kaaruko (Timtim self help group) due to their willingness to improve and their less developed level of the business; and the other from Lochwaangikamatak (Akicha women group) because they are relatively close to Lopii and at a better development level of their business than Timtim.

##### 2) Participants

Ten members of Timtim group and two DMC/DC members from Kaaruko visited Akicha group (4 members) in Lochwaa on 15<sup>th</sup> October, 2014. A Total of 20 members from both groups attended this session.

##### 3) Activities

Time table is shown in the table below:

**Table AG8.2.3 Schedule of Exchange Visit**

Date	Time	Activity
15/10/2014	9.00am – 11.00am	Travel from Kaaruko to Lochwaa
	11.00am – 12.00pm	Learning at Akicha women group shops
	12.00pm – 1.00pm	Learning at Akicha women bakery*
	1.00pm – 3.30pm	LUNCH at Lokichar
	3.30pm – 5.30pm	travel from Lochwaa to Kaaruko

Source: JICA Project Team, \*: this group has group bakery but this is not operational now.

Areas of focus for this visit were:

- Types of businesses undertaken by Akicha Women Group,
- Factors considered in business identification,

- Marketing and marketing plans,
- Business planning,
- Managing stock in business,
- Factors for business success,
- Business records, and
- Capital aspects of business.

#### 4) Observation

Groups exchanged that their learning from the sub project as below:

- Procurement strategies i.e. stocking only those commodities having high demand in the area;
- Good customer relationships - treating customers with respect without giving much attention to their negative comments. This in turn has enhanced good relationship and use of friendly language;
- Proper book keeping skills;
- Separating home consumption from business;
- Keeping of business premises clean throughout; and
- Proper supply chain management which enhances consistency of commodities.

And, Timtim's observations after the visit are:

- They appreciated these concepts as stated by the Akicha women group and confirmed that they are also doing the same in their business;
- They do not have a group business however they plan to start one when they get enough capital;
- They have transport challenges which has increased cost of purchases of commodities;
- They shared their marketing challenges;
- They source their commodities from Lokori though they wish to source their goods from Kitale so as to enjoy economies of scale;
- Their attitude towards livestock as the only source of livelihood is changed as they have discovered business as also a viable source of livelihood even better than livestock as it can withstand the devastating effects of droughts and famines;
- They now stock different commodities so as to create more varieties which create market amongst themselves;
- They have rules for conducting the business in the family; and
- The level of debts is reduced since they now give less debt and make clear agreements on when to repay.

As such, both learned. Akicha may acquire confidence by being treated as an advanced group and a trainer for another group. Obviously Timtim group learned a lot from Akicha business.

Summary of observations is:

- Timtim self help group and Akicha women group have embraced the contents of the sub-project entrepreneurial trainings as far as their reflections were concerned;
- Both groups are willing to take business venture risks;
- Akicha group is better off than Timtim group in terms of access to finances, road connectivity and other infrastructural benefits;
- Both groups desire to expand their businesses in future; and
- Timtim group had a lot to learn from Akicha group and vice versa.



Source: JICA Project Team

**Figure AG8.2.4 Photo of Exchange Visit**

**(left: Timtim group members viewing retail shops of some of the members of Akicha women group, right: at the Akicha women Bakery premise, a member of Akicha showing timtim members oven used to heat the baked products)**

(5) Creation of Linkage to Financial Institutions

The training was facilitated by constituency officer from the ministry of youth affairs –Youth Enterprise Development Fund (YEDF) to provide an opportunity for the groups to access capital for their business development. The Youth Enterprise Development Fund (YEDF) was established in 2006 with the sole purpose of reducing unemployment among the youth who account for over 61% of the unemployed in the country. The target of the fund is young people within the age bracket of 18 to 35 years. The Fund was gazetted on 8th December 2006 and then transformed into a State Corporation on 11th May 2007. The Fund's strategic focus is on enterprise development as a key strategy that will increase economic opportunities for, and participation by Kenyan youth in nation building. Depending on the specific situation of the groups, the officer gave advice to the group on how to access the YEDF. UWEZO fund and Women Enterprise Fund were also introduced.

**Table AG8.2.4 Date for Introducing An Officer**

	<b>Group name</b>	<b>Location</b>	<b>Date</b>
1	Loritit Youth Group	Loritit	28th October 2014
2	Abekun Self Help Group	Lokirama	23rd October 2014
3	Lokirama Women Group	Lokirama	23rd October 2014
4	Nameturan Youth Group	Lochwaangikamatak	18th October 2014
5	Akicha Women Group	Lochwaangikamatak	18th October 2014
6	Timtim Self Help Group	Lopii-Kaaruko	17th October 2014
7	Lopii Self Group	Lopii- Center	17th October 2014

Source: JICA Project Team



Source: JICA Project Team

**Figure AG8.2.5 Photo of Linkage Creation**

**(left: Mr Alfred, an officer talking to the Timtim self help group members, center: Members of Lopii group listening to Mr. Alfred talking about benefits of formalizing the group, right: Nameturan youth group asking Mr. Alfred questions concerning YEDF)**

#### (6) Provision of Mentoring Activities

The following contents have been stressed as the mentoring activities whenever the Project staff visited the groups.

**Table AG8.2.5 Mentorship Contents**

Site	Group	Mentorship contents
Loritit	Loritit youth group (Livestock trade)	Proper management of business returns for both business expansion and savings for unforeseen incidences
Lokiriama	Lokiriama women group (Retail Shop)	Importance of good customer relationships and debts management
	Abekun youth group (Livestock trade)	Need to use body conditions of the animals as area of bargaining during both buying and selling of livestock
Lochwaa	Akicha women group (Retail Shop)	Debts management and procurement of commodities with high demand
	Nameturan youth group (Livestock trade)	Use of net profit for business expansion and saving against undesired future occurrences
Lopii	Timtim self help group (Retail Shop)	Procurement of different commodities by different group members to create and increase internal demand since the area is locked
	Lopii self help group (Retail Shop)	Importance of attitude change towards taking individual initiative to create sources of livelihood despite existing challenges. Knowledge on unsustainable reliance on external support

Source: JICA Project Team

#### (7) End-line Survey

An End-line survey was conducted mainly to get the views of related stakeholders on the sub project. This survey was conducted by the technical assistants of the Project following the procedure shown below:

**Table AG8.2.6 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Loritit	DMC	1 (4 participants)	24/12/2014	Questionnaire with one focus group discussion
	Groups -Loritit youth group	1 (13 participants)	24/12/14	Questionnaire with one focus group discussion
	Individual -Loritit youth group	13	11/11/14, 23/12/2014	Questionnaires with individual interview
Lokiriama	DMC	1 (8 participants)	15/11/2014	Questionnaire with one focus group discussion
	Groups - lokiriama women group -Abekun youth group	1 (7 participants)	14/11/14, 15/11/14	Questionnaire with one focus group discussion
		1 (7 participants)	14/11/14, 15/11/14	
	Individual - lokiriama women group -Abekun youth group	14	14/11/14, 15/11/14	Questionnaires with individual interview
7		14/11/14, 15/11/14		
Lochwaa	DMC	1 (5 participants)	27/12/2014	Questionnaire with one focus group discussion
	Groups -Nameturan youth group  - Akicha women group	1 (5participants)	20/11/2014	Questionnaire with one focus group discussion
		-	-	-
	Individual - Nameturan youth group - Akicha women group	10	20/11/2014	Questionnaires with individual interview
1		20/11/2014		
Lopii (Both Center and Karuuko)	DMC	-	-	-
	Groups - Lopii self group - Timtim self help group	-	-	-
		Individual -Lopii self group - Timtim self help groups	-	-

Source: JICA Project Team

Results are presented in sections on operational, effect and other impact indicators. Unfortunately, due to continued insecurity in the area, the end-line survey could not be conducted in Lopii (both center and Kaaruko). In addition, members of Akicha women group were not cooperative enough to participate in the individual and group surveys.

## G8.2.2 General Overall Situation of the Sub Project

~from March 2014 to August 2014~

### **Livestock trade**

While the way of livestock traded remains in generally the same as compared with the baseline information, due to capacity created by the trainings provided by the project, the livestock business system is getting well enhanced in that linkages are being developed between catchment areas (pastoralists) and various stakeholders found in the markets. Specifically, they have been able to increase number of transactions by using part of their net profit thereby increasing their net profit.

### **Retail shop**

Like livestock trade, their basic operation of the retail shop business is the same. However, with knowledge and skills obtained from the training, they realized the importance of cost and benefit, as well as how to use the net profit for their next business transaction. Through this, some of the members have been able to increase frequency and amount of their procurements, and others were able to reduce unnecessary purchases and to distinguish home consumption from business sales, leading to improvement in their profit margin.

~from September 2014 to December 2014~

For all groups of both IGA components, they are continuing their business as before. Slight improvement especially in transaction volume of livestock trade groups has been observed, but others are still at the previous level.

### G8.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are documented.

#### (1) Business Transaction

##### 1) Cost and Benefit Structure

~from March 2014 to August 2014~

#### **Livestock trade**

Even after the training was given, the above cost and benefit structure has not been drastically changed according to an interview with members for two groups in Lokiriama and Lochwaangikamatak. However, Loritit youth group said that they improved the above profit margin using the business knowledge obtained. They explained that they are able to negotiate buying and selling prices (using negotiation skills by discussing conditions of livestock not just accepting the price offered) and improve profit margin from Ksh100-200 to about Ksh 500/head.

#### **Retail shop**

Most of the groups said that they started distinguishing between home consumption and commodities for sale. When they consume some items, they say they now pay for them. As such they started improving the profit margin of business.

Also, especially Akicha group said that the profit margin has increased because they started considering not only costs for commodities but other costs such as transportation and accommodation necessary for procurement activities. They have started preparing lists of commodities for next procurement and thus have reduced unnecessary goods bought. All these skills were learned from the training given and are contributing to improvement of the profit margin.

Lopii Self Group said that though they learned business knowledge, they have not yet changed their cost and benefit structure.

The above is still hard for them to precisely quantify.

~from September 2014 to December 2014~

#### **Livestock trade**

The situation is the same as reported in PR4.

**Table AG8.2.7 Cost and Benefit Structure of Livestock Trade**

Group	Grade	buying price	selling price	profit margin Ksh/goat
Loritit youth group (Loritit)	big good one	6,000	6100~6200	100~200
	small one	3,000	3300	300
Abekun (Lokiriama)	big good one	3,500	5,000 (Lodwar), 7,000 (Uganda)	1,500 (Lodwar) 3,500 (Uganda)*
	middle	2,000	2,000~3,000 (Lodwar), 4,000 (Uganda)	1,000 (Lodwar), 2,000 (Uganda)*
	small one	1,500	2,500 (Lodwar), 3,000 (Uganda)	1,000 (Lodwar), 1,500 (Uganda)*
Nametran (Lochwar)	big good one	4,000	4,500	500
	small one	1,000~2,000	1200~1300 to 2200~2400	200~400

\*: if they sell to local areas, profit margin becomes around Ksh 300-500.

Source: JICA Project Team, based on the hearing form the members

Though cost and benefit structure itself has not been drastically changed, some say that it can be improved by negotiating buying and selling prices. For such a case, improve profit margin could be from 100-200 to around 500/head.

### **Retail shop**

Similarly, cost and benefit structure might not be drastically changed.

**Table A25.2.8 Cost and Benefit Structure of Retail Shop**

	<b>Group name</b>	<b>Cost of goods for one time procurement</b>	<b>Net Profit from this one time procurement*</b>
3	Lokirama Women Group (Lokirama)	20,000 (10,000 other cost, 10,000 goods) 40,000 (15,000 transport etc, 25,000 goods) 50,000 (20,000 transport etc, 30,000 goods)**	Ksh 2,500 to 5,000 to 7,000
5	Akicha Women Group (Lochwar)	Ksh 20,000 ~ 80,000 (~150,000: rare case)	Ksh 2,000/3,000 ~ 8,000/9,000
6	Timtim Self Help Group (Lopii)	5,000-7,000-20,000	1000 ~ 2000 ~ 4000/5000
7	Lopii Self Group (Lopii)	Ksh 5,000~10,000	Ksh 1,500 ~ 3000/4000

\*: this is net profit which is left after deducting all necessary related costs., \*\*:they assume to go and buy stuff at Moroto and Lodwar.

Source: JICA Project Team

Some say that knowledge learned from the training given contributes to improvement of profit margin, though still hard for them to quantify.

### 2) Production and transaction

~from March 2014 to August 2014~

### **Livestock trade**

Places from which livestock is procured have not seen any significant changes in general, though the volume may vary from place to place as per the specific conditions.

Accordingly on interview, some members said that the transaction volume after training has been increasing as below:

**Table AG8.2.9 Example of Transaction Volume (Current)**

	<b>Group name</b>	<b>Sub Location</b>	<b>Transaction Volume/week - goat</b>
1	Loritit Youth Group	Loritit	From baseline of 1 to 2 currently Another case, from baseline of 10 to 15~20
2	Abekun Self Help Group	Lokirama	Frequency to go to markets increases. And effectively control transaction volume
4	Nameturan Youth Group	Lochwaangikamatak	From baseline of 4 to 7 currently

Source: JICA Project Team, based on the hearing form the members

In Loritit youth group, the benefits from the training are not only improvement of the profit margin, but also increase of the transaction volume. This is because they started using a portion of net profit from the previous transaction in the next operation capital, which was all previously used for home consumption. This is one of the skills that they learned from the training.

Abekun members explained that previously they just bought livestock and sold them in the markets, without considering any demand, prices, leading to perhaps less profit or even occasional loss. Since they learned the importance of market information such as demand and selling prices, they have become conscious about effective transaction eliminating unnecessary loss.



One member in the Nameturan group said that he did not distinguish business capital from his private money previously, but now has a wallet specifically for his livestock business. Also, like the case of Loritit, it is reported that previously all the net profit earned was used for privately. At the moment however half of it is added to the operational capital and the rest is used for their home consumption. The group can thus increase their operating capital to transact more goats leading to more net profit.



Source: JICA Project Team

**Figure AG8.2.6 Livestock Trade Activities**

(left: goat trade in Loritit, right: specifically used wallet for this trade in Lochwaangikamatak)

### **Retail shop**

They are continuing the same business dealing with foodstuffs and other household durable commodities. For most of the groups, they said that they have been able to increase the frequency and amount procured by using part of the net profit obtained from their previous transaction. They learned how to manage their net profit. Before, they used all of the net profit for their home consumption without thinking about any business expansion. The following are examples of members who increased the frequency and amount.

**Table AG8.2.10 Example of Transaction Volume (current)**

	<b>Group name</b>	<b>Location</b>	<b>Example of Transaction Volume</b>
3	Lokiriama Women Group	Lokiriama	Frequency of procurement: 2 times to 4 times / month    1 time to 3 times Operation capital: around 1.3 to 1.5 times increase
5	Akicha Women Group	Lochwaangikamatak	Increased
6	Timtim Self Help Group	Lopii	Operation capital per one time procurement: from 5,000 to 9,000    7,000 to 10,000    9,000 to 15,000
7	Lopii Self Group	Lopii	No change

Source: JICA Project Team, based on the hearing form the members

In addition, some members for Lokiriama changed the types of commodities by observing the market demand closely; e.g. stocking fast moving products more. Now, not all sell the same commodities. Similarly, Timtim group also shared their experience of diversifying commodities from less kinds of goods to more kinds of goods, which attracts more customers.



Source: JICA Project Team

**Figure AG8.2.7 Retail Activities**  
(From left: two in Lokirama, Lochwaangikamatak, and Lopii-Kaaruko)

~from September 2014 to December 2014~

### **Livestock trade**

Raw data of the end-line survey is shown as below:

**Table AG8.2.11 How Many Livestock Traded per Week**

Group name		Before	After
Loritit Youth Group	1	None	None
	2	Goats 3-4 a week Camels 2-3 a month Cows 2-3 a month	The animals had moved to the ugandan side and he could not access them to buy and sell October 1 camel
	3	Drought season: 10 per week Rainy seasons: 3-4 per week	May 8 a week June 10 a week July 11 ,, ,, Aug 10 ,, ,, Sept 9 a month October 3 a month
	4	3 goats per week	May 3 June 4 July 3 Aug 2 Sept 3 Oct 3
	5	7 shoats/ week 4 cows/week 2 camels/week	May - 28 shoats, 16 cows, 8 camels Jun - 28 shoats, 16 cows, 8 camels Jul - 28 shoats, 16 cows, 8 camels Aug - 28 shoats, 16 cows, 8 camels Sept - 28 shoats, 16 cows, 8 camels Oct - 28 shoats, 16 cows, 8 camels
	6	For shoats 5 For big animals – 1 in two months	May - ( weekly 5, monthly 20) goats Jun - (weekly 5, monthly 20) goats Jul - (weekly 5, monthly 20) goats Aug - (weekly 5, monthly 20) goats Sept - (weekly 5, monthly 20) goats Oct - (weekly 5, monthly 20) goats Camels , cows, donkeys – are rarely bought
	7	Shoats 10/week Camel 1/week Cows 2/week Donkeys 1/week	May – 40 goats,4 camels, 8 cows, 4 donkeys Jun – 40 goats,4 camels, 8 cows, 4 donkeys Jul – 40 goats,4 camels, 8 cows, 4 donkeys Aug – 40 goats,4 camels, 8 cows, 4 donkeys Sept – 40 goats,4 camels, 8 cows, 8 donkeys Oct – 40 goats,4 camels, 8 cows, 8 donkeys
	8	2 shoats/week 1 camel/week 2 cows/week	May – 8 goats, 4 camels, 8 cows Jun – 8 goats, 4 camels, 8 cows Jul – 8 goats, 4 camels, 8 cows Aug – 8 goats, 4 camels, 8 cows

Group name		Before	After
			Sept - 8 goats, 4 camels, 8 cows Oct - 8 goats, 4 camels, 8 cows
	9	N/A	N/A
	10	30 goats per month	May 20 goats 2 camels Jun 15 goats 2 camels Jul 10 goats Aug 25 goats 3 camels Sept 30 goats 3 camels Oct 25 goats 2 camels
	11	N/A	Oct once ( the start of the business)
	12	Occasionally	May 3 Jun 2 Jul 1 Aug 2 Sept once Oct once
	13	Weekly 4 goats	May 20 goats Jun 18 goats Jul 16 goats Aug 10 goats Sept 21 goats Oct 25 goats
Abekun Self Help Group	1	Goats - 10 per month Camels - once in 3 months	May - goats 40 Camels 2 Cows 2 Jun - cows 2 Jul - goats 15 Aug - goats 31 Sept - goats 40 Oct - goats 40
	2	10 goats for two months	May - 17 goats Jun - oct none
	3	10-15 goats a week	May 24 June 0 Jul 0 Aug 16 Sept 24 Oct 16
	4	0	May 15 Jun 22 Jul 0 Aug 7 Sept 0 Oct 0
	5	3 goats /week	May 12 Jun 12 Jul 12 Aug 12 Sept 12 Oct 12
	6	Goats =10	May - 40 goats,4 cows, 4,camels

Group name		Before	After
		Cows = 1 Camels = 1 } On very rear days	Jun - 40 goats, 4 cows, 4 camels Jul - 40 goats, 4 cows, 4 camels Aug - 40 goats, 4 cows, 4 camels Sept - 40 goats, 4 cows, 4 camels Oct - 40 goats, 4 cows, 4 camels
	7	In a month they can gather a bout 50 goats by 4 people They drive either to moroto or lodwar depending on the season and the market Monthly transaction is difficult due to insecurity issues –walking alone	May –October –he could not continue with the business because of other related family issues like supporting the family, practising herding
Nameturan Youth Group	1	Weekly 4 Monthly 16	Weekly 4 Monthly 16
	2	Weekly 10 goats	Change of business to kiosk because of drought as from June Commodities: Maize =20 sacks Unga =10 sacks Sugar =1 1/2 sacks Cooking fat = 10 litres Tea leaves =1 dozen
	3	Weekly 10 goats	Weekly 10 goats
	4	Weekly 10 goats	Weekly 10 goats Monthly 40goats
	5	Weekly 7 goats	Weekly 7
	6	Weekly 10 goats	Weekly 10
	7	Na	na
	8	1 week =10 goats	May 30 June 30 July 20 Aug 20 Sept 20 Oct 30
	9	1 week = 7 Monthly =28	May 32 June 24 July 36 Aug 40 Sept 32 Oct 28
	10	Weekly = 2-3 goats	May 7 June –October , demand for livestock fall and she decided to fall back into retail business management

Source: JICA Project Team based on the end-line survey

There are many cases to keep same, reduce transaction, and increase transaction. Fluctuation can happen due to external factors such as livestock movement. For the cases of increase, the members said that they used knowledge learnt and applied to their transactions (resulting in several times increase).

#### **Retail shop**

They are continuing the same business dealing with foodstuffs and other durable household goods. Still, commodities and transaction volume was as the figure reported in PR4.

**Table AG8.2.12 Place of Procurement and Major Commodities Dealt With**

	Group name	Places of Procurement	Major commodities
3	Lokirama Women Group (Lokirama)	Moroto (maize) and Lodwar (household commodities)	Maize, rice, sugar, tobacco, wheat flour, cooking oil, beans, cloth, stationary, shoes, drug for livestock, beads, soda, and beer
5	Akicha Women Group (Lochwar)	Lodwar, Lokichar (Vegetable from Kitle)	Beans, maize, tea leaf, sugar, wheat flour, oil, detergent, beads, earring, slippers, cloths, drinks, etc.
6	Timtim Self Help Group (Lopii-Kaaruko)	Lokori, Lokichar (when transportation is secured)	Sugar, maize, salt, beans, oil, tobacco, tea leaf, scrach card for mobile, soda, beer, rice, detergent (omo), beads, wheat flour, cloth, stationary.
7	Lopii Self Group (Lopii-center)	Lokichar	Beans, sugar, maize flour, rice, maize, detergent, oil, tea leaf, salt (not cloth and stationary)

Source: JICA Project Team

Lokirama women group went for procurement once to two times/month. For Akicha women group, frequency of procurement was twice a month or less depending on the demand. Frequency of Timtim self help group was two to three times/month. Lopii self group had gone mainly one time/month, and could go two times/month during wet seasons. According to the end-line survey, this volume may not be have changed much..

### 3) Market

~from March 2014 to August 2014~

#### **Livestock trade**

In all the target sub locations, markets which livestock are being mobilized for remain the same as in the baseline.

For Loritit, through the exposure visit, now the group members have more access to the Kakuma market than before.

For Lokirama, the members continue to maximize the potential of livestock markets in Uganda i.e. Moroto and Kotido. They also take livestock to the Lodwar market as well. Only this group had not experienced using a mobile phone for collecting market information. They said that they would now start using a mobile phone to get market information after the training.

Unfortunately, Lokirama livestock trade is suffering setbacks due to government quarantine imposed to Moroto and Kotido livestock markets in Uganda as from the month of July 2014 because some diseases have been prevailing there. These are the markets that have been so beneficial to the traders from Lokirama, and this was unfortunate. Since the quarantine imposed in Uganda, about 60 goats per month are taken to Lodwar market. The prices in Lodwar are said Ksh. 2,800 to Ksh. 4,000. This countermeasure was taken by the Diocese of Lodwar and it takes care of the transport costs, traders somehow maximize profits through this temporal change and measures.

For Lochwaangikamatak, especially during favourable market seasons, the members take their livestock to Lokichar market.

#### **Retail Shop**

The marketing structure has been the same. Lokirama group members emphasized importance of marketing as a result of the training. They also mentioned the



Source: JICA Project Team

**Figure AG8.2.8 Member who learned using Mobile Phone in Lokirama**

importance of market survey. For this retail business model, important market information is how the local person is thinking. Now, the members have started paying attention to their customers. In Lochwaangikamatak, the group members are trying to sell foodstuffs and other durable household commodities to not only residents but also travellers since the Lokichar – Lodwar highway passes through the area.

Across the groups, most of them talked about the risk of failure by borrowing and lending money. In particular, it was repeated that they need special attention for sales by credit. Previously they sold goods by credit without paying special attention. They have now started keeping records on credit and negotiate at least to reduce the amount that such customers really need, and setting deadline of payment in order to decrease sales by credit.

~from September 2014 to December 2014~

#### **Livestock trade**

In all the target sub locations, markets which livestock are being mobilized for remain the same as in the baseline as reported in PR4.

For Loritit, livestock markets are Letea and Kakuma. If selling price is low there, they may go to Lokichoggio, and also Kotido in Uganda (not often). Basically they go on foot with livestock when they use up all operational capital; or livestock becomes sufficient number to be transported. They get the market information by mobile phone and use it for their business decision. Through the exposure visit, now the group members have more access to the Kakuma market than before.

For Lokiriama, markets are Lokiriama area for butcheries & breeding stock, Namoruputh and Lorigum markets, the markets in Lodwar and Kakuma, and even Moroto and Kotido in Karamoja Uganda. Actually, Ugandan markets such as Moroto are close from Lokiriama, and they seem to enjoy border trade, indicating that they are within Moroto's economic zone. When targeting Kotido and Moroto markets, they walk down there with livestock, and on the way back, they procure goods to be sold in Lokiriama and use a hired car back.

When going to Lodwar, the group walks to Namoruputh and hire a car to go to Lodwar. Unfortunately, Lokiriama livestock trade is suffering setbacks due to a government quarantine imposed to Moroto and Kotido livestock markets in Uganda as from the month of July 2014 due to outbreak of some diseases..

For Lochwaa, livestock markets are within Lochwaa, Kaaroge, Sopol, Napusimoru, and sometimes to other bigger markets such as Lokichar and Lodwar. The group members said that they know traders in these markets and have their contacts. They use mobile phone to get price and demand information to be referred to in their business decision making.

#### **Retail Shop**

This marketing structure has been the same. Customers of the retail shops come mainly from the surrounding areas where the group members live. This model is that necessary goods are procured wherever available (in most cases the nearest and relatively bigger towns) and sold to people who live in such areas, cannot easily and frequently access to the town to buy the necessary goods. Transiting people passing by the areas are also customers.

### (2) Records of Any Individual Benefits (profit share, labour fee, etc)

~from March 2014 to August 2014~

#### **Livestock trade**

As shown earlier, they have increased their business transactions in some areas such as improving their operational capital and thus number of transactions, and making effective transaction with reduction of unnecessary loss. Just for the first part, their increment goat number is around one to five goats/member/week. Assuming this continues, annual change is estimated as  $(1+5)/2$  goats/week x Ksh 300/goat x 4 weeks/M x 12M = Ksh 43,200 except sales in Moroto. Each member records benefits from livestock business. As seen, they use some part of the net profit for their further

up-scaling of the business as operational capital, as well as expenses for family upkeep, school, medical fees etc.

Other than the above net-profit improvement, the individuals are proud of business knowledge and skills got from the sub project activities.

#### **Retail Shop**

Direct increment of net profit of the business can be estimated with the previously reported information as around one to two times of increase. Of course doubling of the net profit could be too high, and perhaps annual fluctuation must be considered in the long run. However, in general, it could be concluded that they are at least able to increase the net profit through reduction of previous unnecessary costs, increase of frequency and amount of procurement by using part of net profit, and diversified commodities after assessing customers' needs.

Individual members are proud of the knowledge and skills learnt from the training.

~from September 2014 to December 2014~

#### **Livestock trade**

As shown, there are cases that they have increased their business transaction such as improving number of transaction. Just taking a simple case as an example, this business annual income and its improvement are estimated.

**Table AG8.2.13 Net Annual Income and Increment for Livestock Trade**

Group	Grade	profit margin Ksh/goat	Net annual income	Increase of transaction	Improved annual income
Loritit youth group (Loritit)	big good one	100~200	70,000 (7/week)	Assuming roughly 1.2 times as before as an example	84000
	small one	300			
Abekun (Lokiriama)	big good one	1,500 (Lodwar) 3,500 (Uganda)*	180,000 (10/week)		216000
	middle	1,000 (Lodwar), 2,000 (Uganda)*			
	small one	1,000 (Lodwar), 1,500 (Uganda)*			
Nametran (Lochwar)	big good one	500	120,000 (7/week)		144000
	small one	200~400			

\*: if they sell to local areas, profit margin becomes around Ksh 300-500.

Source: JICA Project Team, based on the hearing form the members

This is just an example and the above cannot be applied for all.

Other than the above net-profit improvement, individuals are proud of business knowledge and skills got from the sub project activities.

#### **Retail Shop**

Direct increment of the net profit of the business can be generally at the same level, although PR4 reported some good scenario. Of course, qualitatively it could be said that some improvement in transaction volume and operational investment has been done. It is safe to keep the numerical net profit at the same level as before.

The net income per year is estimated as below:

**Table AG8.2.14 Net Annual Income for Retail Shop**

	Group name	Net Profit from this one time procurement*	Times of procurement	Net Profit Per year
3	Lokiriyama Women Group (Lokiriyama)	Ksh 2,500 to 5,000 to 7,000	1~2 /month	Ksh 90,000~
5	Akicha Women Group (Lochwar)	Ksh 2,000/3,000 ~ 8,000/9,000	2 or less/month	Ksh 100,000
6	Timtim Self Help Group (Lopii)	1000 ~ 2000 ~ 4000/5000	2~3/month	Ksh 50,000
7	Lopii Self Group (Lopii)	Ksh 1,500 ~ 3000/4000	1/month	Ksh 24,000

\*: this is net profit which is left after deducting all necessary related costs.

Source: JICA Project Team

Also, individuals are happy about the knowledge and skills got from the training..

### (3) Records of Any Group Benefits

~from March 2014 to August 2014~

#### **Livestock trade**

Generally, the activities that they had done are continuing. By the training and other activities, there have been more opportunities of learning as groups and it seems that such group activities might have been emphasized through the sub project intervention. One thing that has changed after the training is that Nameturan Youth group has started merry-go-round contributing to the members' activities as a group, enlightened by the training. Members can borrow that money to enable them increase their operational capital for the livestock business ( and repay back with interest).

#### **Retail shop**

In general, the same group benefits continue as the baseline information. Above this, specifically, training knowledge seems to have been well shared among the members.

**Table AG8.2.15 Additional Group Benefit (Current)**

	Group name	Location	Additional Group Benefit
3	Lokiriyama Women Group	Lokiriyama	Knowledge share from the training.
5	Akicha Women Group	Lochwaangikamatak	Experiential learning by the members and introduced Merry - Go - Rounds, joint purchase of goods
6	Timtim Self Help Group	Lopii - Kaaruko	Experiential learning on business opportunities, sharing knowledge discuss and decide harmonized price of commodity
7	Lopii Self Group	Lopii	Nothing much

Source: JICA Project Team

Timtim and Lopii self groups have started considering merry go round now, indicating that indirectly the activities by the sub project may lead to enhancement of group collective action.

~from September 2014 to December 2014~

#### **Livestock trade**

Generally, the activities that they had done are continuing. By the training and other activities, there have been more opportunities of learning as groups and it seems that such group activities might have been enhanced by the sub project intervention.

#### **Retail shop**



In general, the same group benefits continue as the baseline information as joint purchasing. The training knowledge seems to be well shared among the members.

(4) Total Money in the Group Account

~from March 2014 to August 2014~

**Livestock trade**

The group money is shown as below:

**Table AG8.2.16 Money in Group Account (Current)**

	Group name	Location	Group Account
1	Loritit Youth Group	Loritit	Kshs. 1,500.
2	Abekun Self Help Group	Lokiriana	Kshs. 8,000. Social protection is Kshs. 50 per month per member.
4	Nameturam Youth Group	Lochwaangikamatak	Kshs. 10,000.

Source: JICA Project Team

For Loritit, the group accumulated funds during the start of the project i.e. Kshs. 5,000 mobilized as membership contributions, and the money is being used to support expenses related to coordination (communication costs) of group activities with other stakeholders i.e. livestock traders at catchment and other primary and secondary livestock markets in Turkana West Sub County. Lokiriana Self Help group at the start of the project activities had Ksh. 60,000 in the group pool which was used to increase the operational capital for members' livestock business especially for Moroto and Kotido livestock markets in Karamoja Uganda.

**Retail shop**

The group money is shown in the table below:

**Table AG8.2.17 Money in Group Account (Current)**

	Group name	Location	Group Account
3	Lokiriana Women Group	Lokiriana	Ksh. 50,000
5	Akicha Women Group	Lochwaangikamatak	Ksh. 20,000
6	Timtim Self Help Group	Lopii	Ksh. 5000
7	Lopii Self Group	Lopii	Ksh. 0

Source: JICA Project Team

Most of the groups have increased money in the account. It seems that the groups have become more active and their business and other activities are doing well. Lopii self group has not increased the money. This could be because their business activities are still the same according to them and therefore such dynamics of group money are not activated and enhanced.

~from September 2014 to December 2014~

**Livestock trade**

Since the group account was not able to be updated, PR4 data is shown:

**Table AG8.2.18 Money in Group Account for LT Groups**

	Group name	Location	Group Account
1	Loritit Youth Group	Loritit	Kshs. 1,500.
2	Abekun Self Help Group	Lokiriana	Kshs. 8,000. Social protection is Kshs. 50 per month per member.
4	Nameturam Youth Group	Lochwaangikamatak	Kshs. 10,000.

Source: JICA Project Team

**Retail shop**

Since the group account was not able to be updated, PR4 data is used:

**Table AG8.2.19 Money in Group Account for RS Groups**

	Group name	Location	Group Account
3	Lokiriama Women Group	Lokiriama	Ksh. 50,000
5	Akicha Women Group	Lochwaangikamatak	Ksh. 20,000
6	Timtim Self Help Group	Lopii	Ksh. 5000
7	Lopii Self Group	Lopii	Ksh. 0

Source: JICA Project Team

### G8.2.4 Monitoring of Effect Indicators and Others

Here, information for effect and other indicators at the end of the sub project period is documented.

(1) Group members' livelihood

**Livestock trade**

Across three groups (Loritit youth, Abekun and Nametran), small business is the major livelihood followed by livestock.

**Retail shop**

Major livelihood of Lokiriama women group members is small business (retail shop) followed by livestock. They enjoy the same livelihood as the groups for livestock trade.

(2) Current measures in terms of livelihood to cope with drought

**Livestock trade**

Current measures are business, selling of some animals, selling of charcoal, collection of sisal, collection of firewood, casual labour, and so on.

**Retail shop**

Basically the members' current measures to cope with drought are business, harvesting sisal, firewood collection, and also relief food.

For both, business is an important livelihood for coping with drought, meaning that strengthening business can contribute to building resilience.

(3) Assets by member and group

Since assets should not have been changed drastically in only one year by this sub project input, here whether some impacts are observed or not at this point in time by the sub project are argued as below.

1) By member

**Livestock trade**

According to the baseline survey, number of goats per household of the members is 26 in Loritit, 10 in Lokiriama, and 13 in Lochwaa. For livestock trade, they had dealt with 30~40 goats per month. And, some of them have increased several goats per month after the assistance. Though this increment is not their asset but instead quickly bought and sold, size of the business is not small.

**Retail shop**

There have not been significant changes.

## 2) By group

There have not been significant changes.

## (4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Since financial status could not have been changed drastically in this one year only by this sub project input, here whether some impacts are observed or not at this point of time by the sub project are argued as below.

## 1) By member

The baseline survey results show that annual household income of the members is Ksh 105,565 in Loritit, Ksh 220,526 in Lokiriama, Ksh 117,851 in Lochwaa, and Ksh 73,456 in Lopii.

**Livestock trade**

Annual estimated income from this business is a high percentage of their total household income. If 1.2 times of transaction volume increase is achieved, net increase can be Ksh 14,000 to 36,000, which is around 10% of annual income. This is considered a big impact.

**Retail shop**

Similarly, annual estimated income from this business formed a high portion of the annual household income. Unfortunately tangible increase of business might not have been observed. It is however clear that an improvement of this business has a significant impact on improvement of their livelihood, indicating enhancing resilience.

## 2) By group

The sub project basically targeted individual members' business, and VICOBA training was not done in Turkana. There is a tendency to increase the group account but the sub project has not focused on this.

## (5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

## 1) Expectation to enhance resilience by the sub-project

**Livestock trade**

87% of the sampled members stated that resilience is enhanced. The reason for the positive answers is their appreciation of acquiring knowledge and its application to their business.

**Retail shop**

86% of the interviewed members said resilience has been enhanced. Particularly for Lokiriama women group, they appreciate business skills, and due to this resilience is enhanced by strengthening of their business. Unfortunately responses from Akicha and Lopii are not known (Akicha always stated that financial provision or handouts are needed).

## 2) Expectation in general

**Livestock trade**

Most of them expected both training and financial support. In this sense, the sample members who think expectation in general has been met are 27%; while 47% think they are not. Interestingly the responses for both yes and no are 20%.

**Retail shop**

Proportion of the answers of expectation met, not met, and both is 29, 57, and 14% respectively, showing the same tendency of the above even in the most positive group of Lokiriama women group.

A Strong desire for both financial and material support emerged.

## 3) Knowledge acquired.

For both IGA groups, majority replied that they acquired business skills. Detailed knowledge is the same as reported in PR4 as follows:

**Table AG8.2.20 Skills Knowledge that They Learned (LT Groups)**

Category	Skills
Financial	<ul style="list-style-type: none"> <li>● Financial management: clear demarcation between business and home consumption</li> <li>● How to maximize profit</li> <li>● Expenses: need to know cost involved, and such cost should be the part of selling price</li> <li>● Keeping record</li> <li>● Profit should be used for both next business expansion and home consumption</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>● Understanding of market (price low -&gt; less transaction, price high -&gt; more transaction)</li> <li>● Networking with traders</li> <li>● Use of mobile phone</li> <li>● Livestock should be fed before selling so that they can prevent selling price from falling</li> </ul>
Other business skill	<ul style="list-style-type: none"> <li>● Business negotiation</li> </ul>

Source: JICA Project Team

**Table AG8.2.21 Skills Knowledge that They Learned (RS Groups)**

	Group name	Category	Knowledge they leaned
3	Lokiriama Women Group (Lokiriama)	Financial	<ul style="list-style-type: none"> <li>● Profit and timeline are important to grasp past transaction, especially period of sales for certain procurement.</li> <li>● Profit earning is business. If profit is not obtained, it is meaningless to do business. <ul style="list-style-type: none"> <li>● To know stock value is important. To do so, keep record.</li> </ul> </li> <li>● Planning and budgeting is important. Before procurement, calculate and make a plan of items to buy including other costs e.g. transportation <ul style="list-style-type: none"> <li>● Failure comes in most cases from sale by credit.</li> </ul> </li> </ul>
		Marketing	<ul style="list-style-type: none"> <li>● To make sure of customers is a key of success.</li> <li>● How to attract and maintain customers are also important. (in this sense, they feel markets in this place are becoming small and need to find demand in other areas.)</li> <li>● To change stock depending on market demand is also crucial. If there are items that have not been sold so long, it needs to procure less.</li> <li>● It is necessary to procure items that customers do not have. It always needs to do market surveys to grasp that.</li> </ul>
		Other business skills	<ul style="list-style-type: none"> <li>● Business diversification is important e.g. aloe vera and others.</li> </ul>
5	Akicha Women Group (Lochwaangikamata k)	Financial	<ul style="list-style-type: none"> <li>● Expenses such as transportation and accommodation were not considered before. Now these are counted in budgeting.</li> <li>● Previously they used items of shops for family use. Now they start distinguishing items for sale and home use, and if they use it, they pay for it.</li> <li>● Lending is not a good exercise for business. They no top lending money (cash). Though they still continue sale by credit, they try to record lending.</li> </ul>
		Marketing	-

	Group name	Category	Knowledge they leaned
		Other business skills	<ul style="list-style-type: none"> <li>● They realize importance of preparation of business plan. They start preparing list for procurement so that cases they buy unnecessary stuffs decrease.</li> <li>● Record keeping is important (though they have not done really). If record is kept, success and failure is easily known.</li> </ul>
6	Tintim Self Help Group (Lopii-Kaaruko)	Financial	<ul style="list-style-type: none"> <li>● Basic business, “sales – procurement = profit”, is understood. And they now know that out of profit, some is used for further business, and the other for household matter. <ul style="list-style-type: none"> <li>● Proper budgeting is important for business planning</li> </ul> </li> <li>● Household expense and shop business money should be distinguished and can't be mixed.</li> <li>● Regarding sale by credit, they sell by credit without setting deadline before, but now, they start to set deadline upon sale by credit.</li> </ul>
		Marketing	<ul style="list-style-type: none"> <li>● They realize to diversify the commodities are attracting customers.</li> </ul>
		Other business skills	<ul style="list-style-type: none"> <li>● They learned importance of record keeping. They start caring how much profit they can get from particular procurement.</li> <li>● Ownership to business increased. E.g. previously they just enjoyed chatting, and went to fetch water without caring their shop, but now if doing so, they close shops in order not to be stolen.</li> </ul>
7	Lopii Self Group (Lopii-center)	Financial	<ul style="list-style-type: none"> <li>● Household expenditure and business expenditure should be separated. If they use items from shop for their own consumption, now they pay for it. <ul style="list-style-type: none"> <li>● If they borrow money, amount should be small.</li> </ul> </li> <li>● Lending minimum i.e. sales by credit. If money is not returned, they cannot buy next stock, leading to failure.</li> <li>● They start making lists of customers who buy items by credit including amount, and deadline.</li> </ul>
		Marketing	-
		Other business skills	-

Source: JICA Project Team

#### 4) JICA approach

Generally groups take self-reliance of JICA's concept as positive. But there is one group which sticks to the need of financial support.

**Table AG8.2.22 Group Opinions on JICA Approach**

	Group name	Location	Opinion
1	Loritit Youth Group	Loritit	It is a good philosophy though there is need for some material consideration especially for groups that are not yet well off to stand on their own
2	Abekun Self Help Group	Lokiriana	Kujitegemea is a good philosophy as it fosters self reliance instead of depending on external support which is not always there
3	Lokiriana Women Group	Lokiriana	Even before JICA, there was kujitegemea, within themselves therefore kujitegemea only without finance is of no purpose How can they apply the philosophy if they don't have the finance to support the theory
4	Nameturan Youth Group	Lochwaangikamat ak	This philosophy is good and it is not JICA alone, because many development agencies including churches and several other NGOs and even the government have embarked on this philosophy and so JICA is just one of these agencies waking them up to take development responsibilities

Source: JICA Project Team based on the end-line survey

## 5) Overall satisfaction

The members interviewed answered as follows:

**Table AG8.2.23 Overall Satisfaction**

	Group name	Livestock trade (%)	Retail shop (%)
1	Highly satisfied	33	7
2	Moderately satisfied	53	71
3	Moderately unsatisfied	3	14
4	Highly unsatisfied	10	7

Source: JICA Project Team based on the end-line survey

Generally IGA sub project members are satisfied. Livestock trade group members are more satisfied than retail shop group members.

## (6) Other indicators to see impact

## 1) Members efforts on the sub projects

Across the IGA contents and the groups, the members basically do their business through their own efforts. Although specific invention has not yet been made, they continue their efforts on their business. There is a member from Loritit Youth group who stated that using profit of the livestock trade; he bought a bicycle for *bodaboda* business. This is an indirect benefit as a result of their efforts.

## 2) Gender

For both IGA components, women members are many; for the retail shop, majority of the members are women. Therefore most of the sample members said that women have been empowered by the sub project. They improved their businesses using knowledge acquired from the trainings, and are now able to support their families without support from men. The dependency level is decreasing as many of the women have realized the importance of working to earn a living. Even in the family, the decision making has improved, since the women contribute to the family's sustainability.

## 3) Environment

For this sub project of two IGA components, there is no change on environment reported.

## 4) Other community members' opinions

The end-line survey tells the following opinions based on focused- group interview with DMC/DC members.

Awareness of livelihood activities by DMC/DC

DMC/DC members interviewed in Loritit, Lokiriama, and Lochwaangikamatak are all aware of the livelihood activities as technical training and visiting groups.

Other community people's opinions

According to the members who participated in the focus group interview, other community members wish to be included, given the training as well as material support.

DMC/DC function on livelihood program

They replied that their roles are as follows:

- Visiting and monitoring livelihood group activities
- Regular meetings with the groups for evaluation of progress and follow ups
- Regular meetings on monthly basis for social audit and find out challenges

- Proposal writing to external donors
- Participating actively in group activities
- Mobilization on various activities to be undertaken
- Sensitization of drought awareness
- Training the community

### **G8.3 Discussion**

#### **G8.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub project is as follows:

- Livestock trade and retail shop businesses are themselves important and major livelihood for the members. Their net profit constitutes a big part of their annual household income. In this sense, it is logical to assist and strengthen the IGA activities in resilience building.
- For livestock trade, fortunately some of the members applied the knowledge given by the sub project and improved the net profit by increasing the number of transactions. This net increment makes about 10% of annual household income. Therefore, the sub project has contributed to enhance resilience in terms of buffer and bounce back using the increased profit.
- For the retail shop unfortunately, tangible improvement might not have been noticed for net profit. However, a majority of the members appreciate knowledge imparted and are willing to use it for future improvement of the business. Thus, it is expected that they will improve the business and increase net profit, thereby contribute to enhancement of resilience.

#### **G8.3.2 Positive Impact**

Positive impacts are as follow:

##### **Livestock trade**

- The active members across the groups have increased their business operational capital using part of the net profit to expand the business
- Most of these active members have embraced saving a part of their net profit for future use
- Most of the members across the groups engage in retail trade also which has increased their resilience even when the livestock business is not doing well
- A member of Abekun youth group who used to steal other people's livestock to sell has reformed and is now doing legitimate livestock trade after attending our entrepreneurship trainings
- For Loritit youth group, members are engaging in sale of big animals such as camels, cows and donkeys as well as shoat, that fetch more cash than the sale of shoats only. This has increased their net profit hence increasing their resilience against future droughts. This is the same with the Abekun livestock group in Lokirama. This move is attributed to availability of markets in Kakuma for Loritit youth group and Lodwar /Moroto for Abekun group.
- Nameturan youth group engages mostly in the sale of shoats. They are now supplying shoats to the Tullow Oil Company. This has increased their activeness in search for shoats to meet the target required by the company. They have also applied for loans from the Youth Enterprise Fund because at the time of linkage they had met all the eligibility criteria for getting the loans. This is intended to increase their operational capital so as to increase chances of getting more tenders from many other companies in need of the service.

- Across the groups, many members use the returns from the livestock business to purchase food commodities and other durable household goods for sale in their villages. This is already a positive move towards resilience building.
- Through the activities, group cohesion is enhanced.
- The groups have learned business skills and have been increasing their net profit using the knowledge obtained through the training. Following is the knowledge and skills that they said they learned including the above mentioned.

**Table AG8.3.1 Skills Knowledge that They Learned (Livestock Trade Groups)**

Category	Skills
Financial	<ul style="list-style-type: none"> <li>● Financial management: clear demarcation between business and home consumption</li> <li>● How to maximize profit</li> <li>● Expenses: need to know cost involved, and such cost should be the part of selling price</li> <li>● Keeping record</li> <li>● Profit should be used for both next business expansion and home consumption</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>● Understanding of market (price low -&gt; less transaction, price high -&gt; more transaction)</li> <li>● Networking with traders</li> <li>● Use of mobile phone</li> <li>● Livestock should be fed before selling so that they can prevent selling price from falling</li> </ul>
Other business skill	<ul style="list-style-type: none"> <li>● Business negotiation</li> </ul>

Source: JICA Project Team

### **Retail shop**

- Most of the group members across the four groups, have embraced good customer relations, debts management and use of net profit for business expansion as learnt from the training;
- Some active members of Timtim group have started diversifying into other income generating activities such as hotel business;
- Some of the groups, Lokiriama and Akicha women groups, have other group activities, guest house for Lokiriama women group and bakery for Akicha women group. They intend to apply the knowledge obtained for their group business;
- For Lokiriama women group, they are doing table banking using the money got from the business. This is increasing their hard work and creativity so they are able to service the loans taken out of the kitty and the continuity of the business. This group also enjoys cheap goods from Moroto that are usually brought by the traders hence minimizing transportation cost of goods. All these factors combined have increased their net profit, though there are those that are doing better;
- Akicha women group are also doing well with their weekly merry-go-round schemes. They have diversified their commodities with more procurement of goods of high demand. One member mama Brenda started operating a hotel business after attending our entrepreneurship trainings. She used to operate a small kiosk but now she uses her kiosk commodities to stock the hotel therefore creating her own market. She gets net profits from her hotel besides the kiosk profit. This according to her has enhanced her self reliance as she does not depend too much on her husband's remittances to meet the school fees needs of her children and her household is food secure;
- Timtim group is coming up as some of the active members started hotel business after the exchange visit to Lochwaa. Mama Brenda's entrepreneurship case study was an inspiration to them. Most of them now stock different food commodities so as to create internal demand. At the time of linkage though they had not met the requirements for getting the loans, they contributed the money for registration and are now processing it;



- Loppii group is still not doing well due to over- reliance on external support mentality. However, they are also processing their registration and there is a slight attitude change towards self reliance principles; and
- Retail business is normally handled by women not men. Thus, women empowerment is achieved by actively doing this business.
- Similar to the livestock trade groups, they have learned business skills and are ready to increase their net profit using the knowledge obtained through the training in general (except Loppii center). Following is the knowledge and skills that they said they learned including the above mentioned.

**Table AG8.3.2 Skills Knowledge that They Learned (Retail Shop Groups)**

	<b>Group name</b>	<b>Category</b>	<b>Knowledge they leaned</b>
3	Lokiriama Women Group (Lokiriama)	Financial	<ul style="list-style-type: none"> <li>● Profit and timeline are important to grasp past transaction, especially period of sales for certain procurement.</li> <li>● Profit earning is business. If profit is not obtained, it is meaningless to do business.</li> <li>● To know stock value is important. To do so, keep record.</li> <li>● Planning and budgeting is important. Before procurement, calculate and make a plan of items to buy including other costs e.g. transportation</li> <li>● Failure comes in most cases from sale by credit.</li> </ul>
		Marketing	<ul style="list-style-type: none"> <li>● To make sure of customers is a key of success.</li> <li>● How to attract and maintain customers are also important. (in this sense, they feel markets in this place are becoming small and need to find demand in other areas.)</li> <li>● To change stock depending on market demand is also crucial. If there are items that have not been sold so long, it needs to procure less.</li> <li>● It is necessary to procure items that customers do not have. It always needs to do market surveys to grasp that.</li> </ul>
		Other business skills	<ul style="list-style-type: none"> <li>● Business diversification is important e.g. aloe vera and others.</li> </ul>
5	Akicha Women Group (Lochwaangikamata k)	Financial	<p>Expenses such as transportation and accommodation were not considered before. Now these are counted in budgeting.</p> <ul style="list-style-type: none"> <li>● Previously they used items of shops for family use. Now they start distinguishing items for sale and home use, and if they use it, they pay for it.</li> <li>● Lending is not a good exercise for business. They no top lending money (cash). Though they still continue sale by credit, they try to record lending.</li> </ul>
		Marketing	-
		Other business skills	<ul style="list-style-type: none"> <li>● They realize importance of preparation of business plan. They start preparing list for procurement so that cases they buy unnecessary stuffs decrease.</li> <li>● Record keeping is important (though they have not done really). If record is kept, success and failure is easily known.</li> </ul>
6	Timtim Self Help Group (Loppii-Kaaruko)	Financial	<ul style="list-style-type: none"> <li>● Basic business, “sales – procurement = profit”, is understood. And they now know that out of profit, some is used for further business, and the other for household matter.</li> <li>● Proper budgeting is important for business planning</li> <li>● Household expense and shop business money should be distinguished and can't be mixed.</li> <li>● Regarding sale by credit, they sell by credit without setting deadline</li> </ul>

	Group name	Category	Knowledge they leaned
			before, but now, they start to set deadline upon sale by credit.
		Marketing	<ul style="list-style-type: none"> <li>● They realize to diversify the commodities are attracting customers.</li> </ul>
		Other business skills	<ul style="list-style-type: none"> <li>● They learned importance of record keeping. They start caring how much profit they can get from particular procurement.</li> <li>● Ownership to business increased. E.g. previously they just enjoyed chatting, and went to fetch water without caring their shop, but now if doing so, they close shops in order not to be stolen.</li> </ul>
7	Lopii Self Group (Lopii-center)	Financial	<ul style="list-style-type: none"> <li>● Household expenditure and business expenditure should be separated. If they use items from shop for their own consumption, now they pay for it.</li> <li>● If they borrow money, amount should be small.</li> <li>● Lending minimum i.e. sales by credit. If money is not returned, they cannot buy next stock, leading to failure.</li> <li>● They start making lists of customers who buy items by credit including amount, and deadline.</li> </ul>
		Marketing	-
		Other business skills	-

Source: JICA Project Team

### G8.3.3 Issues and Challenges

Issues and challenges are as follows:

#### **Livestock trade**

- Insecurity in Lokiriama. Some of the Abekun members reported incidences of being attacked by raiders on their way to Moroto to sell their animals. The group members incur extra costs of hiring security personnel to escort them to the market in Moroto and Lodwar. The same situation prevails in Loritit especially in catchment areas beyond the village.
- Transportation problems. Most of the members trek their animals to the market which contributes to loss of animal weight hence reduced profit margins.
- Over- dependency on external aid. This sometimes hinders smooth implementation of the sub project.

#### **Retail shop**

- Insecurity issues especially in Lopii and Kaaruko disrupts normal trading activities;
- Transportation problems. Apart from Akicha group that enjoys the benefits of Kitale – Lodwar highway, the rest of the groups have transportation problems that affect procurement transactions hence increasing their cost of production.
- Over-dependency on external aid. This sometimes hinders smooth implementation of the sub project.

### G8.4 Conclusion and Lesson Leaned

Based on the above argument, conclusion and lesson learned can be summarized as follows:

- In Turkana, where lots of IGA opportunities are t, it is an important livelihood measure to improve their livelihood, leading to enhancing resilience. Components of IGA shall be based on the economic situation of target areas and willingness of the target people.

- Since a pastoralist is basically individualistic, IGA activities shall be handled by individual members, and groups are understood as a mechanism for cooperation with each other, and access to existing funds.
- Training, exposure/study tour, PFS, and mentorship are all good tools to build self reliance.
- Place where external exposure is less is a potential area for assistance, but if areas are too much exposed to external donors' past relief activities, community gets used to enjoy free handouts. A Self-reliant approach, not to provide handout but skills and technique, may not really be appreciated by such a community.. Thus, first of all, selection must be done from areas where external exposure is less if the self-reliance approach is taken. In case areas where exposure has been a lot must be selected, it can be one option to provide some handouts, loan or necessary equipments to the very active members on top of the normal tools.

## CHAPTER G9. SUB PROJECT OF SMALL SCALE RAIN-FED AGRICULTURE

### G9.1 Outline of the Sub-project

#### G9.1.1 General Outline of the Sub-project

(1) Outline of the Sub-project

The outline of the sub-project is summarized as follows:

**Table AG9.1.1 Outline of the Sub-project**

Item	Contents	Remarks						
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities by assisting small scale rain fed agriculture activities giving technical training, and mentoring activities to enhance community resilience against drought.							
2. Number of Beneficiaries	1 group, and 11 group members							
3. Implementation Organization	JICA ECoRAD Project, and the community groups							
4. Project Contents								
1) Project Outline	1) Agriculture technical training 2) Provision of technical advice and monitoring							
2) Facility Activity /	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Facilities/Activities</i></th> <th style="text-align: center;"><i>Implementer</i></th> </tr> </thead> <tbody> <tr> <td>1) Implementation of training</td> <td>1) Project Team and groups</td> </tr> <tr> <td>2) Provision of technical advice together with operation of Experimental Plot and monitoring</td> <td>2) Project Team and groups</td> </tr> </tbody> </table>	<i>Facilities/Activities</i>	<i>Implementer</i>	1) Implementation of training	1) Project Team and groups	2) Provision of technical advice together with operation of Experimental Plot and monitoring	2) Project Team and groups	
<i>Facilities/Activities</i>	<i>Implementer</i>							
1) Implementation of training	1) Project Team and groups							
2) Provision of technical advice together with operation of Experimental Plot and monitoring	2) Project Team and groups							
3) Organization for O&M	Target community groups under supervision of their assistant chief, elders, and the committee							
4) Construction Period	14 months (starting Nov 2013 up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.						

Source: JICA Project Team

**(2) Basic Principle of the Sub-project**

This sub-project is meant to assist target groups to conduct small scale rain fed agriculture in their localities by making use of the rainy seasons. Despite climate change causing reduced amount and unreliability of rainfall in Turkana, dry land farming is still regarded as a primary livelihood option. On the basis of this background, the project facilitates change of knowledge, skills and attitude through agricultural technical trainings, and provision of technical advice and a hand on learning on farming practices to be employed in individual farms for purposes of building farming capacity of the people. This way agricultural product can contribute to their household food and income security and enhance resilience to drought. Crops considered in Turkana are sorghum, cowpea, and maize (staple cereals in Turkana).



Source: JICA Project Team

**Figure AG9.1.1 Sorghum Grown in Loritit**

**G9.1.2 Selection of Target Groups****(1) Participatory Planning**

In selection of the target groups, participatory planning approach was taken. The same process was taken as specified in Chapter G8 together with the selection of IGA groups in Loritit.

**(2) Selected Target Community Groups**

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG9.1.2 Information for Target Group**

	<b>Group Name</b>	<b>Location</b>	<b>Group members</b>
1	Loritit Farming Group	Loritit	11

Source: JICA Project Team

**G9.1.3 Monitoring Framework**

To monitor the sub-project, the following monitoring framework is set.

**(1) Indicators****1) Operational indicators**

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be discerned. Throughout the monitoring period, they were monitored.

**Table AG9.1.3 Operational Indicators**

	<b>Operational Indicators</b>
1	Agriculture practice
1-1	Season, kinds of crops, size of area
1-2	Farming Practice and Its Cost
1-3	Yield, Production, market and Income
2	Records of any individual benefits (home consumption, selling to market, etc)
3	Records of any group benefits
4	Total money in the group account

Source: JICA Project Team

## 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be captured. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG9.1.4 Effect Indicators**

Effect Indicators	
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Assets by member and group
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, the baseline survey was implemented as below:

## 1) Methodology

Two kinds of questionnaires were used; one is for an individual, the other is for a group to obtain the baseline condition. As for sample number for individuals, all target group members were surveyed. For groups, this group was surveyed using focus group discussion. The survey was implemented by the project staff as shown in the table below.

**Table AG9.1.5 Schedule of Baseline Survey for Agriculture Sub-project**

Target Sub-location	Date	Sample Numbers
Loritit	13-14/11/2013	11 loritit farming group members were interviewed.

Source: JICA Project Team

## 2) Brief summary of socio economic condition of the target areas

Socio-economic condition of the target area of Loritit is shown in Annex G8.

## (3) Baseline information of Operational indicators

Here, baseline figures for the indicators are set and shown.

1) Agriculture Practice

## 1. Season, kinds of crops, size of area

Normally, they started planting in January expecting the long rains. This was slightly earlier than the other Turkana areas because they knew rain normally started a little bit earlier here. Early planting was not being done, and thus crop failure frequently occurred.

Crops they plant were local sorghum and cowpea, and local maize when rainfall was adequate. For sorghum, different types of seeds were planted regardless of their maturity age.

They did their farming in their individual farms, not as a group. Size of the area differed but majority of the members seemed to cultivate around one acre/member.

## 2. Farming Practice and Its Cost

Basically, normal practice was done by broadcast sowing method. They normally start sowing in January and harvest in March. If rain delayed, their investments became a loss. They did a second sowing when rains came late.

They did weeding. They said weeding was done around two times after first and the second rain. They did not use fertilizer.

They did not buy seed and used it out of the previous harvest. According to them, around 10 kg of seed was used for one acre of land for sorghum. Weeding needed no cost also.

### 3. Yield, Production, Market and Income

Sorghum yield ranged from one and two bags to five bags per acre when rain was enough and no pests affected the crop (one bag is 50kg).

Most of the farm produce was for domestic consumption and barter trading. It is said that if the yield became less than around three bags/acre for one typical household, they consumed their harvest only for their domestic purpose. When harvest exceeded five bags, they exchanged bags of the produce with goats and other goods. As an example, they could exchange one bag of sorghum for a heifer goat.

#### 2) Records of Any Individual Benefits (home consumption, selling to market, etc)

They enjoyed all the harvest from their farm individually. Traditional knowledge, skills, and attitude regarding farming were also their previous knowledge assets.

#### 3) Records of Any Group Benefits

They gathered in some social occasions. They have, however, not really been active as a group; they have not acted positively to do farming works together.

#### 4) Total Money in the Group Account

Before the assistance activities commenced, the group did not have any group money. As a farming group, they did not do any financial activities.

### (4) Baseline information for effect indicators

Based on the baseline survey, baseline figures/information for effect indicators are set and shown as below:

#### 1) Group members' livelihood

Current livelihood for the group members is mainly livestock, followed by small business (the two are similar in extent). Out of 11 members interviewed, only one replied that agriculture is the main livelihood.

#### 2) Current measures in terms of livelihood to cope with drought

##### 1. By member

All members interviewed replied that business is the current measure to cope with drought. Kinds of businesses mentioned are kiosk, charcoal, livestock trade.

##### 2. By group

They do not have any specific activities to cope with drought as a group.

### 3) Number of assets by member and group (including group profile)

#### 1. By member

Main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below.

**Table AG9.1.6 Assets by Member**

		Average/Sample HH	% of Having/ Sample HH
Physical	TV	0	0
	Car	0	0
	Mobile phone	0.36	36
	Bicycle	0.45	45
	Motorcycle	0.09	9
Livestock	Goat	21.6 (max: 50, min: 0)	91
	Cow	0 (max: 0, min: 0)	0
	Sheep	11.8 (max: 30, min: 0)	73
	Camel	1.1 (max: 8, min: 0)	27
	Chicken	1.1 (max: 5, min: 0)	27
	Donkey	0.5 (max: 3, min: 0)	18

Source: Baseline Survey and JICA Project Team

Out of a total 11 members, 45% and 36% have bicycle and mobile phone as their physical asset. Goats and sheep are the most common livestock among the members with 21.6 goats and 11.8 sheep on average per household.

#### 2. By group

Group asset including the information of general group profile is shown as below:

**Table AG9.1.7 Assets by Group**

	Group Name	Indicator as of November ~December 2013
1	Loritit Farming group	Number of Group members: 11 Out of which, target members are 11 (female: 5, illiterate: 10) Asset: none Group account: None Established: October 2013

Source: JICA Project Team

Members are 11 and all are our target members. Out of these, 45% are female and 91% are illiterate. Loritit farming group have no assets and money collected from members since it is a new group.

### 4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

#### 1. By member/individual

<sup>1</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (30~200 shoats/family of course it depends on each family). The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit); and 2) these households live close to the town/center of location so smaller figures are not far from the true figures. For the reference, average household size of this sample group for this sub project is 6.2 in Loritit.



Household income and expenditure for the sampled target members as of November 2013 are summarized in the table below:

**Table AG9.1.8 Household Income and Expenditure (Baseline - provisional)**

	Indicator as of November ~December 2013
Annual Household Income	Average: Kshs.123,691/= Max: Kshs.480,000/= Min: Kshs.15,200/=
Annual Household Expenditure	Average: Kshs.122,709/= Max:Kshs.469,200/= Min: Kshs.15,200/=

Source: JICA Project Team, Remarks: the above figures are preliminary and to be confirmed.

For this one group, average income per annum is around Kshs.120,000, mostly come from livestock sale, business, and fuel wood sale. Expenditure level is similar to the income level.

## 2. By group (only financial impact)

Since the sub-project has not yet started, the financial impacts of the groups for this indicator are none.

## 5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

### 1. By member/individual

All members expectations from the sub project are getting improved farming techniques.

### 2. By group

Opinions on the sub-project as groups are shown as follows:

**Table AG9.1.9 Any Opinions on the Sub-project (Group)**

	Group Name	Indicator as of November ~December 2013
1	Loritit farming group	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through training on new technique on production crops.</p> <p><u>Expectation about group benefit:</u> Solidarity, provision of working opportunity and fostering culture of resilience as a group. JICA may provide water to the farms.</p> <p><u>Difference compared to other past donor projects:</u> JICA is new and has not yet been known. Information given is there is no provision of money but only training.</p>

Source: JICA Project Team

Since JICA is new to them, they seem not to know much about JICA. However, they understand that they will receive training to improve their current level of farming practices. They expect JICA will provide water but in principle, this sub project is rain-fed agriculture, not irrigated agriculture and thus water provision is difficult.

## G9.2 Works Done

Works done during the implementation of the sub project are shown below.

### G9.2.1 Inputs from the Project as Assistance Activities

~from March 2014 to August 2014~

#### (1) Provision of Agricultural Technical Training

One of the main inputs from the project is to provide this technical training to the group. Outline of the training is shown as below:

##### 1) Course Objective

Objective of this training is to provide knowledge and skills enabling adequate utilization of agricultural potential in the area for resilience against drought, and also to create an avenue for linkages between farmers and relevant government agencies.

##### 2) Course Contents

Major contents delivered are shown below:

**Table AG9.2.1 Course Contents of Agriculture Technical Training**

Items	Contents
1.Crop selection	<ul style="list-style-type: none"> <li>• Prevailing local conditions (biotic and climatic)</li> <li>• Crop adaptability</li> <li>• Marketing and profitability</li> <li>• Crop adaptability</li> <li>• Resistance to pests and diseases</li> <li>• Appropriate farming technology</li> <li>• Farming systems</li> <li>• Security</li> </ul>
2.Land preparation	<ul style="list-style-type: none"> <li>• Tools used</li> <li>• When to prepare land</li> <li>• Why do land preparation</li> </ul>
3.Seed selection and quality (compare to livestock)	<ul style="list-style-type: none"> <li>• Varietal purity characteristics (physical, chemical and crop)</li> <li>• Seed lot characteristics ( impurities, size, damage, deformities, infections)</li> <li>• Seed viability (stored moisture levels, germination potential, vigor)</li> </ul>
4. Planting	<ul style="list-style-type: none"> <li>• Making furrows or holes</li> </ul>
5.Weeding	<ul style="list-style-type: none"> <li>• Identify common weeds</li> <li>• Why weeding is necessary</li> <li>• Economic importance of weeds</li> </ul>
6.Thinning	<ul style="list-style-type: none"> <li>• Why carry out thinning</li> </ul>
7.Common pests and diseases	<ul style="list-style-type: none"> <li>• Identify common pests</li> <li>• See its effects on crops</li> <li>• Know how to control them</li> <li>• Common diseases and their control</li> </ul>
8.Harvesting	<ul style="list-style-type: none"> <li>• How to tell a psychologically mature cereal crop</li> <li>• Drying of cereals</li> <li>• Shelling</li> <li>• Utilization – selling , storage( storage facilities), consumption</li> </ul>

Source: JICA Project Team

The training was conducted from 22nd to 27th February 2014 at Letea Primary school by a trainer from Agriculture Department in Loima and a translator from the same department in Lodwar. Eleven members of the group (seven women and four men) benefitted from the training. This also involved five CDC / DMC committee members responsible for foreseeing the implementation of resilience activities in every locality of the project (these five are also members of the farming group).

Based on the structure of ECoRAD project whereby resilience building requires community participation and mobilization, CDC / DMC as umbrella is required to take part in all resilience

building activities in order to empower sustainable engagements on supporting community contingency and development plans for meaningful resilience.

### 3) Observation

The learners were enthusiastic about new techniques in agriculture as many of the things they learned seemed new and it could be said that the training has motivated the participants about farming potential in their area.

## (2) Operation of Experimental Plot and PFS

Other than the above, the sub project operated an experimental plot using PFS approach in addition to one-time training in order to internalize the knowledge given during the training. The details are outlined below;

### 1) Objective

The objective of experiential learning as adopted is to impart necessary knowledge, skills and techniques regarding farming for improvement of dry land farming outputs. Their main form of agriculture in Loritit is rain fed agriculture. Unfortunately the long rain season when they normally cultivate had passed, and therefore, the experimental plot used irrigation from the area borehole. However, the main point is the different cultivation method, and the irrigation part has not been emphasized.

### 2) Participants

Eleven members of farming group including five Drought Management Committee members of Loritit participated throughout the phases of demo/experimentation implementation.

### 3) Activities

Activities undertaken for the experimental plot are summarized as below:

- Identification of the land near the watering point (Loritit hand pump);
- Demonstrations done on land demarcation, fencing and land tillage;
- Seed selection and comparison. Out of four varieties one was selected on the basis that it takes only about two and half months to be ready for harvest, tolerant to disease and requires less water to produce the intended output;
- Sowing of seeds in both plots using respective measurements. In this case, under broadcasting, traditional method of random distribution of seeds was adopted while in line planting, 15cm was put between the holes while 75cm between the rows;
- Training of group members on AESA Tool (Agro-ecosystem analysis) was done which was continuously used to monitor experiments and help members draw conclusions; and
- Weekly mentoring of members at the demo/experimental plots (Hands on learning) to perfect skills and lessons accrued from farm sites.

In short, there were two areas comparing the traditional planting exercise (broadcasting) and new exercise (line planting with some tillage). Used crop is local sorghum. Sowing date was 27<sup>th</sup> June 2014, and now the crop is almost at maturity age.



Source: JICA Project Team

**Figure AG9.2.1** *Photos of Activities of Experimental Plot*

#### 4) Observation

By the tools adopted for their learning, they participated actively in the experimental activities. Though perfect involvement was not seen because of their daily life, e.g. taking care of their livestock etc., they learned most of the actual practices of line planting.

Maturity period of local sorghum is around two months at the earliest. In terms of the result of the experimental plot between broadcasting and line planting, parameters of change were accessed by the project team and the groups members on 13th August, 2014, when maturity had almost started, whereby the following changes were found out:

**Table AG9.2.2** *Result of the Comparison of Broadcasting and Line Planting*

Parameter	Broadcast plot	Line planting plot
Amount of seeds planted	250gm	125gm
Population (those germinated)	1,570	964
Stunted growth	400	99
Mature with panicle	25	71
Tallest sorghum plant with panicle (Height)	6.5"	7.5"
Shortest sorghum plant with panicle (Height)	3.4"	3.8"
Length of the leave of the tallest sorghum plant	2.2"	2.4"
Segments of tallest sorghum plant	5	7
Number of plants which have yellow leaves	508	98

Source: JICA Project Team

In general, it can be said that line planting needs less seeds, provides more healthy plants, and obtains more matured plants. Alternatively, broadcasting requires more seeds, give more population but less healthy plants, and gets less mature plants for expected harvest.

another benefit observed and reported by the group members themselves was that labour works was reduced. One of the jobs reduced was sowing. In the experimental farm, broadcasting was not the work that seeds were simply scattered. After scattering seeds, soil was put on top of seeds, that was somehow labor intensive. However, line planting required only dropping seeds into holes along the line, and just covering by soil in the holes, that was less labour intensive. Another task was weeding. Plots by broadcasting actually were full of plants and difficult for members to move inside the field. But plots of line planting were easy to move in, leading to easy weeding. another benefit, when it rained, rain water normally got together and became like flush flood to make plants collapse and damaged in broadcast plots. On the other hand, in line planting plots, flush flood could easily pass through and plants did not get damaged because there were some spaces between plants. As such, the group members learned that line planting had many benefits that could be replicated at field level.

As of this reporting time of PR4, it is very unfortunate that donkeys and goats entered into the plots guided by children and ate stems even though the plots were fenced. panicles/grains were also attacked by birds. Thus no harvest is expected now from the experimental plot. However this occurrence also becomes one of their lessons.

In addition, in this experimental plot, they also grew cowpea on their own initiative.



Source: JICA Project Team

**Figure AG9.2.2 Photos of Experimental Plot As of 2<sup>nd</sup> September 2014**

### (3) Provision of Mentoring Activities and Others

During the course of the experiment, mentoring missions were conducted which involved hands- on engagement and induction of community members (group) on various aspects of dry land farming as follows:

- During the initial stages of the experiment, review of activities done on farm preparation, protection and seed selection were compared to the traditional practices. Mentoring added value and motivation to group members towards replication of such activities in a better way in their own individual farms during the next planting seasons;
- Knowledge sharing and successes from other PFS / FFS experiences involved in dry land farming was shared with the group members. This was done through sharing case studies. Knowledge sharing became so powerful as it facilitated comparison of outputs as cherished from the group project; and

- Technical skills on weeding, watering, and pest and diseases control were delivered through hands on mentoring. According to adult learning principle of participation, group members undertook all the activities (routine) practices coupled by mentoring by the project team. This facilitated better understanding of routine activities essential for productive farming.

~from September 2014 to December 2014~

#### (4) Completion of Experimental Plot

The experimental plot was closed in early October 2014. After meeting the rain-fed agriculture group and informing of the purpose of closing the experimental plot, they agreed to close the experiment plot and members decided to replicate knowledge learnt in their individual farms.

#### (5) Linkage Creation to Existing Financial Institutions

To give an option for the groups to access financial institutions for expansion of their activities, an officer from the ministry of youth affairs was introduced. Three development committee members who helped in mobilization of the groups, rain-fed agriculture and Loritit youth group members, were the key participants though other community members also attended. The training was conducted with a constituency officer for Turkana west sub-county in the ministry of youth affairs on 28/10/14, mainly focusing on Youth Enterprise Development Fund.

#### (6) End-line Survey

End-line survey was conducted mainly to see current opinions of related stakeholders on the sub-project. This survey was conducted by the technical assistants of the Project following the procedure shown below:

**Table AG9.2.3 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Loritit	DMC	1 (4 participants)	24/12/2014	Questionnaire with one focus group discussion
	Groups - ran fed agriculture	1 (11 participants)	10/11/14	Questionnaire with one focus group discussion
	Individual -ran fed agriculture	7	12/11/2014	Questionnaires with individual interview

Source: JICA Project Team

Results are shown in parts which describe operational, effect and other impact indicators.

### G9.2.2 General Overall Situation of the Sub Project

~from March 2014 to August 2014~

Current situation of this sub project in general is that the activities of the experimental plot have almost been completed, and the group members have learned new technique of line planting and motivated to test and try this new one in their individual farms during next farming season. Unfortunately the products are not able to be harvested in the experimental plot.

It is noted that one group member has already adopted line planting in her plot just right after the technical training was given. Unfortunately she said that significant yield increase was not seen but benefits of the practices were observed, such as easy work for weeding. From the next planting seasons, more members are expected to adopt this line planting to see the benefits.



Source: JICA Project Team  
**Figure AG9.2.3 Individual Member Who Tested Line Planting**

~from September 2014 to December 2014~

Overall current situation of this sub-project is that the members equipped with knowledge are waiting for the upcoming next main farming season which starts in January onwards. Some of the members tried line planting in their farms during this short rain season which had more rain than other normal years, though harvesting has not yet been done.

### G9.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are written.

#### (1) Agriculture Practice

##### 1) Season, kinds of crops, size of area

~from March 2014 to August 2014~

This indicator is still the same as the baseline condition.

~from September 2014 to December 2014~

This indicator is still the same as the baseline condition (January-May with long staggering period but farming season is long rain season). Apart from the intervention of the sub-project, the members always told us about recent climate change, which is unpredictable rain and a variable climate pattern. Though it rained during this short rain season, the members were not able to predict, therefore some did not do farming. Others said that they try to start farming when it rains regardless of the conventional rainy seasons.

Size of the area according to the end-line survey is also the same as the baseline (one - three acres per family depending upon family size), meaning that the farming situation is just the same before the sub-project started.

##### 2) Farming Practice and Its Cost

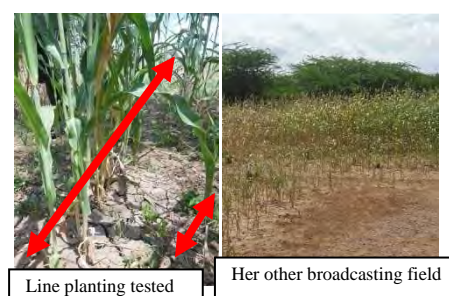
~from March 2014 to August 2014~

Next planting season (January 2015) has not yet come, and still their ways are the same. However, one lady member tested line planting in a part of her plot for her late farming practices. This happened soon after the training was given.

~from September 2014 to December 2014~

In general, though it rained in this short rain season, some of the members did not plant crops because this rain was unexpected. The result of the end-line survey shows around 43% (three out of seven) of the sampled members have already tested line planting though not in all of their plots but together with broadcasting for their farming during the last late long rain season and even this short rain season. Obviously they do not use any fertilizer.

According to the end-line survey, the members replied that cost is several hundred shilling for procuring seeds (some use seeds from the previous harvest), and several thousand shillings for labour and equipments. By the sub-project, total cost might not have significantly been reduced except the cost of seeds (according to the result of the experimental plot shown in PR4, amount of seeds can be half that of broadcasting).



Source: JICA Project Team

**Figure AG9.2.4 Individual Plot of Line Planting**

## 3) Yield, Production, Market and Income

~from March 2014 to August 2014~

As mentioned, most of the members have not yet practically adopted the new technique in their own farms, the above situation is consequently still the same.

One lady member who only adopted the line planting said that the harvest from the part of line planting unfortunately did not make a significant difference from the other part of broadcasting plot.

The understanding is if more harvest is attained, markets will be accessed in Kakuma and other areas to sell surplus harvest and maximize economic returns from farming.

~from September 2014 to December 2014~

So far, though some members adopted partially line planting in their plot, there have been no reports on significant yield increase, perhaps because application might not have been perfectly done, also some of them adopted during this short rain period (not yet harvested).

In PR3, baseline yield was reported as around one to five bags per acres. Borrowing the rate of increment from the result of the experimental plot (“mature with panicle” is used as a proxy indicator for production because the production was not able to be seen in the experimental plot due to livestock), production could be assumed to be around 2.8 times. Of course this may be too ambitious, but at least increment around 1.3 times can be expected for another case<sup>2</sup> for sorghum in Kenya.

Assuming that the farm of the members which applied line planting successfully produces increased production, increment can be 0.75 bags/acre (2.5 bags/acre multiplied by 1.3 – 2.5 bags/acre). Since size of the member’s farm ranges from less than one to 3~5 acres (though majority is around one/member), increment production per season per member can be one bag if 1.3 acres are cultivated. This means one goat or around 2~3,000 ksh of gross increase is enjoyed by a member.

In terms of marketing, the situation is the same, that basically harvest is consumed for home consumption, but if more harvest is attained, markets will be accessed in Kakuma and other areas to sell any surplus and maximize economic returns from farming. The mode of selling can be cash, or exchange of livestock-goats. Some of the members said that this surplus is used for restocking in wet seasons. This farming provides impacts on not only providing food stuff to family members, but also positively affecting increase of their livestock. Thus, achieving production increase is beneficial to them.

## (2) Records of Any Individual Benefits (home consumption, selling to market, etc)

~from March 2014 to August 2014~

After the series of activities done, at this stage, individuals are proud of new knowledge and skills got and ready to replicate it beyond the project. They will still do their farming activities in their own farms individually, so that their individual profit shall be any farm products harvested from their farms.

~from September 2014 to December 2014~

Unfortunately tangible production increase from their farm has not yet been observed, as of now, gained knowledge of line planting is the most important benefit for them. To support this, the result of the end-line survey shows that the interviewees mentioned learning of new technology/knowledge,

<sup>2</sup> “The mean yields were 3484 and 4703 kg/ha for the broadcast and row spacing methods respectively”, from the website of Kenya Agriculture Information Network,

<http://www.kainet.or.ke/documents/response-sorghum-varieties-different-planting-methods>



experience of learning, and participation in working opportunities as their individual benefits that they feel after the sub-project.

(3) Records of Any Group Benefits

~from March 2014 to August 2014~

After they received our assistance activities by PFS and AESA approaches and mentoring activities, they have realized the importance of the group learning process to enhance knowledge acquisition. They said that they exercised their farming practices in their individual plots, but they learned the usefulness of collective action, so that they would help each other for their individual farming practices.

~from September 2014 to December 2014~

Group benefits through the sub-projects are the same as reported in PR4, namely the importance of the group learning process to enhance knowledge acquisition, usefulness of collective action. Otherwise, the new technique on farming was the benefit as mentioned above.

(4) Total Money in the Group Account

~from March 2014 to August 2014~

As of now, still the group does not have any group money since the sub project activities have not focused on any financial activities.

~from September 2014 to December 2014~

Still the group does not have any group money since the sub-project activities have not focused on any financial activities.

### G9.2.4 Monitoring of Effect Indicators and Others

Here, information for effect and other indicators at the end of the sub project period is shown.

(1) Group members' livelihood

Members' major livelihood as of now has not been changed according to the end-line survey, which is livestock and business. A change on livelihood for agriculture is its importance as their livelihood. The result of the baseline survey shows that 10 out of 11 selected replied that agriculture is of the lowest importance. But now according to the end-line survey, there are no sampled members who replied agriculture is the lowest, and 5 out of 7 replied it is second and third most important though no one replied it was the first one.

(2) Current measures in terms of livelihood to cope with drought

1) By member

The result of the end-line survey showed that small scale business is the current measure to cope with drought such as collection of firewood, and burning charcoal. Collection of wild fruits and casual labour for NGOs is the minority opinion. Compared with the results of the baseline survey, major livelihood to cope with drought has not been changed.

2) By group

There have been no changes on the measures to cope with drought as a group because agriculture is basically an individual activity.

## (3) Assets by member and group

Since assets should not have been changed drastically only by this sub-project input in about one year, here whether some impacts are observed or not at this point in time by the sub-project is explained as below.

## 1) By member

Unfortunately, farming activities after the sub-project have generally not been exercised and, therefore assets should not have been changed by this intervention.

If, full increment is enjoyed, one goat can be added per one farming season. Indicative results of the baseline survey show that one member has 21 goats on average (actual number may be more), and thus one farming season (in most cases once in a year) can contribute to increase around 5% of goat as asset.

## 2) By group

Similarly, the group assets have not been changed.

## (4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Since financial status should not have been changed drastically only by this sub-project input in about one year, here whether some impacts are observed or not at this point in time by the sub-project are argued as below:

## 1) By member

The baseline survey result shows that average annual household income of the group members is Ksh 123,691. Similar to the above discussion on asset, as of now there has been no significant financial asset gained.

As above, supposing the increment of farming production as a form of cash is Ksh 3,000, this knowledge may give about 2% increase of cash inflow.

## 2) By group

Financial impacts as a group are not observed because they do not do any group activities related to farming.

## (5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

## 1) Expectation to enhance resilience by the sub-project

Four out of seven members interviewed (57%) answered that they think individual resilience against drought is enhanced after the sub-project. The major reason for this is that acquired knowledge encourages them to do farming. On the other hand, the others (43%) said that resilience may not be enhanced because they have not yet fully applied the knowledge. Compared with their high expectation of enhancing resilience as of the baseline, it may be said that not all of the members have met their initial expectation.

One thing that should be noted, as realized through the mentorship activities, is that there are members who get to see rain-fed agriculture activities further positively as an economic source. They stated that they want to use farm production if that exceeds home consumption as a capital for small scale business such as retail shop and livestock trade, perhaps influenced by another sub-project of IGA assistance.

As a group, the opinion after the sub-project on resilience building is unfortunately negative, but the major reason raised is they have not yet applied the knowledge. Their reason for no expectation

is that they have not been assisted for their actual application of the knowledge. Further, unpredictable rainfall was also stated as a reason for the uncertainty of future agriculture production.

## 2) Expectation in general

Out of 7 selected members, yes was only one (14%); those of no are three (43%); those of both are two (29%); and the one did not respond. The reasons that their expectation is not met are that they are waiting for the next farming season for the practical application to their farm; and there was no practical support for the individual application. The reason for 'yes' is the knowledge given though rain is an unknown factor. The reason of both answers is that further assistance was not yet provided after the learning sessions, though they appreciate the knowledge itself.

The Group opinion on this is also 'no'. Their views on this is that they expected irrigation water but that was not provided. This opinion may be inspired by the implementation of the experimental plot, which used borehole water.

## 3) Knowledge Obtained

Most of individual members interviewed replied that the acquired knowledge is new farming technique of line planting. Out of 7, actually three members have already tried the new skills (43%). The rest (57%) did not apply it because the next regular season has not come. When the question of whether they will use or not was raised, all replied 'yes'. This is because, through the experimental plot and the experience of action research, all of them understand the benefit of line planting.

## 4) JICA approach

This group said that they have not yet received any donors in the past. However, they stated that the JICA approach of building "*Kujitegemea*" spirit without easy hand-out provision is not beneficial. They seem influenced by many other donors' relief support to the area with financial support.

## 5) Overall satisfaction

Results of individual members are 5 (71%) are moderately satisfied, 1 (14%) is moderately unsatisfied, and 1 (14%) is highly unsatisfied. Reason of satisfaction is to gain practical knowledge that is expected to be applied. Dissatisfaction for both moderately and highly can be attributed to the current situation that they have not yet been able to apply and thus no tangible benefit has been observed so far, and there was no material assistance. Unfortunately, the group rated "highly unsatisfied" as a group because of no financial assistance, though majority of individuals replied moderately satisfied. This group seems to have complicated thoughts as individuals and as a group, in a balance between knowledge benefit and practical and financial assistance.

## (6) Other indicators to see impact

### 1) Members efforts on the sub-projects

They think they just wait for next season to apply the new knowledge and no major efforts have been made except some members trials. There has been nothing made as a group.

### 2) Gender

Both a majority of individual members and the group as a whole replied there has been no change on gender. Some individual interviewees answered some positive change e.g. empowered by farming activities may be arising.

### 3) Environment

No opinions on environmental impacts were raised both by the group and the individuals. They replied that they use resources as per availability in their locality.

#### 4) Other community members' opinions

The end-line survey tells the following opinions based on focus group interview with DMC/DC members.

##### Awareness of livelihood activities by DMC/DC

Through the discussion with the members, it is said that they understood this sub-project as provision of training, visits of the staff, and technical agricultural experimentation.

##### Other community people's opinions

According to the members who participated in the focus group interview, other community people wish to be included, given the training as well as material provision such as seeds.

##### DMC/DC function on livelihood program

They replied that their role is monitoring and encouraging the rain-fed agriculture group. They stated that the specific group which JICA assisted wishes to continue though they require some support from donors to motivate them to do this activity. What can be inferred from the above is that DMC/DC members interviewed may not fully understand what DMC/DC is intended to do, not only monitoring and encouraging the specific group and relying on external support, but teaching and disseminating the technique to other community members on their own initiative.

### **G9.3 Discussion**

#### **G9.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub-project is as follows:

- Loritit rain-fed group resilience against drought has slightly improved through the whole process from inception of the sub-project to completion of the experimental plot. Though the group has not in general enjoyed any harvests after the sub-project completed, the knowledge gained and its application are expected benefited them through a certain increase in cash or livestock.. Such a positive assumption is expected in their harvest be done in January and their main season of the long rains (January to May 2015);
- Increase of agricultural food production can be a source of food as well as livestock through exchange. The farming livelihood and livestock are well linked with each other as diversified livelihood measures to enhance resilience to future drought in terms of preparedness and buffer function, or even recovery function when rain comes back normally; and
- The resilience achieved is the change of their attitude towards farming as a viable source of livelihood and their readiness to implement the new techniques learnt from the training implemented by this organization.

#### **G9.3.2 Positive Impact**

Positive impacts observed through implementing the sub-project are as follows:

- Acquisition of line planting and other farm management techniques. This group has got knowledge and skills, of which benefits are not only increment of production (though not yet realized in individual farms), but easy farming practices (easy movement inside the field, flood that can pass easily in the field not affecting plants down etc.), though the degree of acquisition still varies from individual to individual; and
- Their attitude towards farming as a source of livelihood has changed positively. This is reflected primarily from their mind set to recognize agriculture itself as beneficial, but also their commercialized mind set on the farm produce. They now think of selling most of their harvest leaving just enough for domestic use and using the returns to do other businesses such as retail or

livestock trade during times of drought. This was not the case previously when farming was done mainly for exchange of livestock.

### **G9.3.3 Issues and Challenges**

Issues and challenges faced are as follows:

- The major challenge facing this group is unstable rainfall. Rains in this area come once in a blue moon and unpredictability of these rains has increased in the recent years. This can be mainly attributed to climate change. As a result farming in this area has become unreliable. It is hoped that rainfall pattern becomes at least stable, so that the members can make plans to start their planting; and
- Their attitude to expect something from the donor is strongly observed especially in this Loritit group. Sometimes this made it hard for the Project staff to talk to the members and implement monitoring and mentoring activities. This perhaps leads to a low expectation in general (though expectation to build resilience and overall satisfaction may not be as low).

### **G9.4 Conclusion and Lesson Learned**

Based on the above argument, conclusion and lesson learnt can be summarized as follows:

- In terms of livelihood diversification for enhancing future resilience, rain-fed agriculture is positively evaluated. This does not need a huge investment, complicated techniques beyond their capacity, and can be continued as they have done in the past with a little improvement. Considered with their capacity as pastoralists, gradual assistance is a key not aiming at high level technique like irrigation (irrigation is also good when conditions are met). Of course, a big jump cannot be expected but small benefits can be sustainable.

Local crop varieties that they can easily get is recommended. Fertilizer that is not accessible by them is not recommended as of now. Their livelihood is diversified with livestock, business, and agriculture to mitigate the risk of drought shock, thus it is beneficial for them to strengthen rain fed agriculture activities. Even though final harvest cannot be made, stems can also be used as feed for livestock. Rain is still a challenge to stabilize the production, and perhaps irrigation can be introduced in the future. This measure is not applicable to all over northern Kenya but is possible in places where there is some substantial rainfall available with a definite pattern;

- The Community's attitude to expect handouts so much could most likely have been fostered by other donors' past humanitarian aid which just distributed food and even money. Harmonization in terms of approach especially aiming at development is important (give not fish but how to fish);
- Assistance in agriculture needs more time than the sub-project did. Ordinarily, a typical case is that firstly trial or experimental plots are operated to demonstrate the new technique, then individual applications of the introduced technique to their fields where they are monitored and mentored at least for one or two seasons; and
- The approach that the project took, such as PFS and AESA as provision of learning process through experimental plot, is effective. Also, regular visit of monitoring and mentoring works well, rather than doing training once and no follow-up.

## CHAPTER G10. SUB PROJECT OF FISHERY

### G10.1 Outline of the Sub-project

#### G10.1.1 General Outline of the Sub-project

(1) Outline of the Sub-project

The outline of the sub-project is summarized as follows:

*Table AG10.1.1 Outline of the Sub-project*

Item	Contents	Remarks
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities by assisting their fishery activities including business elements giving fishery technical and entrepreneur/business trainings, and mentoring activities to enhance community resilience against drought.	
2. Number of Beneficiaries	2 groups, and 30 group members	
3. Implementation Organization	JICA ECoRAD Project, and the community groups	
4. Project Contents		
1) Project Outline	1) Fishery technical training and entrepreneurship training 2) Provision of technical advice and business consulting including identifying new buyers etc. 3) Monitoring	
2) Facility / Activity	<i>Facilities/Activities</i>	<i>Implementer</i>
	1) Implementation of training 2) Provision of advice and mentoring 3) Monitoring	1) Project Team and groups 2) Project Team and groups 3) Project Team and groups
3) Organization for O&M	Target community groups under supervision of their assistant chief, elders, and the committee	
4) Construction Period	14 months (starting Nov 2013 around up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.

Source: JICA Project Team

(2) Basic Principle of the Sub-project

This sub-project is to assist target groups to fishery including business elements such as processing, and marketing. The project will emphasize capacity building of the fishery technical knowledge and business skills of the people to improve their current fishery business activities. The activities to be done include fishery technical and entrepreneurship trainings, and mentoring activities.

#### G10.1.2 Selection of Target Groups

(1) Participatory Planning

In selection of the target groups, participatory planning approach was taken as shown below:

**Table AG10.1.2 Process of Participatory Activities in Eliye**

Date	Planned Activities	Participants	Results
26/10/2013	Mobilization 1st meeting	The project staff, and the drought management committee, and assistant chief	To sensitize the community and introduce the project.
03/11/2013	2nd meeting – assess/ select 2 groups to work with.	The project staff, the drought management committee members, potential groups (6 in number), group officials and assistant chief	All groups were assessed and 2 groups were selected. Nakode fishing group and Nawoyatira fishing group. 1 other extra youth group was also selected only for the entrepreneurship training.
05/12/2014	Signing of MOU	The project staff, assistant chief, committee members, and group members	The MOU was signed and shared.

Source: JICA Project Team

The process taken for this sub project is the same for the other sub projects. Important stakeholders are the sub chief and the drought management committee and they were involved in the selection of the groups.

#### (2) Selected Target Community Groups

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.



Source: JICA Project Team

**Figure AG10.1.1 1<sup>st</sup> Meeting in Eliye**

**Table AG10.1.3 Information for Target Group**

	Group Name	Location	Group Members
1	Nakode Fishing Group	Eliye	20
2	Nawoyatira Fishing Group	Eliye	10

Source: JICA Project Team

In addition to the above, it was decided that one group in Eliye, Youth Group (10 members), be selected only for provision of the entrepreneurship training to accommodate a request by the communities.

### G10.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

#### (1) Indicators

##### 1) Operational indicators

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. Throughout the monitoring period, they were monitored.

**Table AG10.1.4 Operational Indicators**

	Operational Indicators
1	Fishery Practice
1-1	Season, kinds of fish, times per year/season
1-2	Fishing practice (including fishing gear), processing practice if there is, and their cost
1-3	Production, Market, and Income
2	Records of any individual benefits (home consumption, selling to market, etc)
3	Records of any group benefits
4	Total money in the group account

Source: JICA Project Team

## 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be captured. They were monitored at two intervals; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG10.1.5 Effect Indicators**

	Effect Indicators
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Assets by member and group
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, the baseline survey was implemented as below:

### 1) Methodology

Two kinds of questionnaires were used; one is for an individual, the other is for a group to obtain the baseline condition. For sample number for individuals, 50% for Nakode, 70% for Nawoitira of the target group members were surveyed. For groups, all the selected groups were surveyed having focus group discussion. The survey was implemented by the project staff as shown in the table below.

**Table AG10.1.6 Schedule of Baseline Survey for Fishery Sub-project**

Target Sub-location	Date	Sample Numbers
Eliye	21/11/2013	10 Nakode group members, 7 Nawoitira fishing group were interviewed.

Source: JICA Project Team

### 2) Brief summary of socio economic conditions of the target areas

Socio-economic condition of the target area is shown in the following table:

**Table AG10.1.7 Summary of Socio Economic Condition of the Target Area**

	Socio Economic Condition
Eliye Sub Location	Area: 494 sq km Location: under Kangatoha location Population: 4,792 (804 households) Community: Turkana Mobile phone: n.a. (some spots) Electricity: n.a. (some solar panels) Lake side (tourist resources) and water is available (spring) Regular transportation: n.a. to Lodwar (need arrangement, freq.: once/week), 2 hrs Nearest market: Lodwar and Kalokol

Source: 2009 Kenya Population and Housing Census and JICA Project Team (Table B20.3.1)



## (3) Baseline information of Operational indicators

Here, baseline figures for the indicators are set and shown.

### 1) Fishery Practice

#### 1. Season, kinds of fish, times per year/seasons

Both groups experience fishing activities during the dry season. Rainy seasons are low season for fishery. And, in August and September, there were always strong winds and waves, and therefore they were not able to go with boats for fishing.

Fish obtained from the lake are Tilapia, Nile perch, dog fish, mud fish among other common species possible for harvest in Lake Turkana.

Their fishing activities were categorized into two. The first category was fishing along the eastern side of the lake (Marsabit), and the second category was fishing in this side of the lake (Turkana). For the first one, they go to the other side of the lake and stayed for around two to three months per one time fishing depending upon fish availability (around three times/year). Duration of the second category of fishing was in the most active case twice a day (morning and evening) but not every day and not able to be defined.

#### 2. Fishing practice (including fishing gear), processing practice if there is, and their cost

For the first category, wooden/plastic made boats were used so that they could sail and row to the other side of the lake. The second category of fishing for both groups needed rowing smaller vessels (Doum palm logs). They do not use engines because fuel is costly.

As for fishing gear, use of logs, hooks, nets, and fishing lines are the gadgets used generally by fishermen to do fishing in Lake Turkana, and either two groups did the same for two categories. Fishing gears were owned by individual members, and boats, especially for the first category, were owned by groups.

Fish is normally processed by local methods of fish processing and preservation (sun drying, salting, and few cases by frying). Costs are minimal due to less value addition techniques employed by the group. Fish caught under the first category were all sun dried with salting. Fish by the second category could be marketed fresh and raw, and also were dried. These depended on how they are marketed.



Source: JICA Project Team

**Figure AG10.1.2 Their Fishing Activities**  
 (From left: fishing boats for the first category, rowing vessels for the second category, -ditto-, maintenance of fishing net)

### 3. Production, market, and income

For fish produced in Eliye, the main market of the dried fish was Kalokol which was the main fishery center and market place along the east side of Lake Turkana. Fresh fish was sold in Eliye areas and local consumption at village level. For the first category, all of the fish were dried and sold to Kalokol. They continuously stayed for around two to three months on the other side of the lake, so that all harvest could be kept for some time by drying.

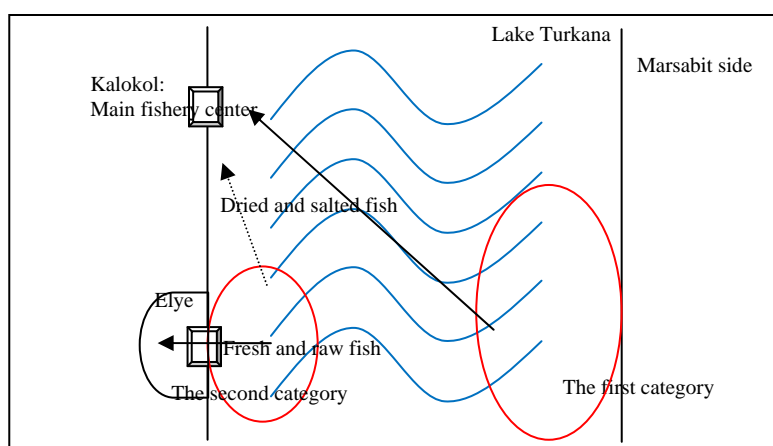


Source: JICA Project Team

**Figure AG10.1.3 Dry Fish in Kalokol**

Fish of the second category was fresh and sold in the adjacent areas (sometimes they dried fish as well). Groups had not attained the surplus production levels for fresh fish beyond the local demand.

The above is depicted as follows:



Source: JICA Project Team

**Figure AG10.1.4 Image of Markets for Fishing Activities (Baseline)**

The members said that the selling price of dried fish to Kalokol buyer was Ksh 30-35/fish for big one, Ksh 15-20/fish for middle size, and Ksh 10-15/fish for small one.

For fresh fish, the cluster of fish (about six small Tilapia fish depending on size) was sold at between Ksh 30-50 in the villages, whereas at Eliye beach resorts was sold between Ksh 80-100. But the group members normally sold fish in the villages and not much to resorts due to limited production. If fish was very big, the price could be several hundred shilling per fish. Income from the second category was just around Ksh 100-200/day, indicating Ksh 150-450/week per member.

#### 2) Records of Any Individual Benefits (home consumption, selling to market, etc)

Fishing activities were done to some extent by groups. However, sale from fish caught was attributed to individual members. For example of the first category, though they fished together, fish caught was divided and distributed to each member as per each member's owned fishing gear that caught fish. The second category was small scale, and therefore individual benefit accrued from fish harvested individually.

The economic returns obtained from sale of fish were used for the members' subsistence purposes, such as food to the family, support to medical & education bills.

### 3) Records of Any Group Benefits

for the first category, they went as a group. For detail, it is explained that they divided group members into two sub groups (Nakode: 10 each, Nawoiyatira: 5 each). While one sub group went to the other side of the lake, the other remained at the near shores. When one sub group returned, the other went. As such they shared the opportunity from the first category fishing.

The members help each other for social events. They had contributed money to the group and assistance was provided to acquire some fishing gears for members.

### 4) Total Money in the Group Account

The baseline survey gives the following group money as baseline information. Though at that time the remaining balance was zero, they had saved some amount of money and spent some for e.g. buying gears etc.

**Table AG10.1.8 Group Money (baseline)**

	<b>Group Name</b>	<b>Location</b>	<b>Group Money</b>
1	Nakode Fishing Group	Eliye	Ksh.0
2	Nawoiyatira Fishing Group	Eliye	Ksh.0

Source: JICA Project Team

#### (4) Baseline information for effect indicators

Based on the baseline survey, baseline figures/information for effect indicators are set and shown as below:

##### 1) Group members' livelihood

The sample target groups do fishing as their main livelihood. Basketry making is their secondary measure of livelihood. However some collect firewood and they make charcoal for sale to earn income. Some depend on small business trade for earning income to sustain them.

##### 2) Current measures in terms of livelihood to cope with drought

###### 1. By member/individual

Current measure to cope with drought by sample target group is to catch fish for either subsistence as well as for earning cash. Some make baskets for sale and others collect firewood and charcoal for sale and finally some sell livestock to have money to cater for their family needs.

###### 2. By group

The current measures by group are summarized in the table below:

**Table AG10.1.9 Current Measures to Cope With Drought (Group)**

	<b>Group Name</b>	<b>Indicator as of November ~December2013</b>
1	NAKODE FISHING GROUP	Not specifically
2	NAWOIYATIRA F.GROUP	As above

Source: JICA Project Team

Both groups replied that they do not have specific counter measure against drought as of now.

### 3) Assets by member and group(including group profile)

#### 1. By member/individual

Main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below.

**Table AG10.1.10 Assets by Member**

		Average/Sample HH	% of Having/ Sample HH
Physical	TV	0	0
	Car	0	0
	Mobile phone	0.12	12
	Bicycle	0	0
	Motorcycle	0	0
Livestock	Goat	4.6 (max: 10, min: 1)	100
	Cow	0 (max: 0, min: 0)	0
	Sheep	1.9 (max: 5, min: 0)	53
	Camel	0 (max: 0, min: 0)	0
	Chicken	0.6 (max: 4, min: 0)	24
	Donkey	0 (max: 0 min: 0)	0

Source: Baseline Survey and JICA Project Team

Overall, these sample target members have less physical assets. Two members out of 17 have mobile phones and the percentage of having mobile phones is 12%. The percentage of having goats is 100% with an average of 4.6 goats per household, while the one of sheep is 53%, and chicken is 24%. In a nutshell this community depends on fishing as primary livelihood; this confirms the low number of livestock.

#### 2. By group

Group asset including the information of general group profile is shown as below:

<sup>1</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (30~200 shoats/family).The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit);and 2) these households live close to the town/center of location so smaller figures are not far from the true figures. For the reference, average household size of the samples is 6.2 in Eliye Sub-location.

**Table AG10.1.11 Assets by Group**

	<b>Group Name</b>	<b>Indicator as of November ~December2013</b>
1	NAKODE F. GROUP	Number of Group members: 20 Out of which, target members are 20 (female: 0, illiterate: 10 out of surveyed 10 members) Asset: none Group account: None Established: 2013
2	NAWOIYATIRA F. GROUP	Number of Group members: 10 Out of which, target members are 10 (female: 1, illiterate: 5 out of 7 surveyed) Asset: aboat Group account: None Established: 2013

Source: JICA Project Team

According to the above table there is only one female member in the target group, the lady represents the name of her deceased husband. She doesn't go fishing but sends her male children to attend at the activity. This tells us that the fishing business is mainly done by men. Men travel across the lake to look for fish during the time of shortage at Eliye site. Illiterate members are 10 in Nakode group, and 5 in Nawoiyatira group. Literacy rate of surveyed members is 12% in this sub-project.

The two groups have not been registered yet and have not opened bank account yet. It is only Nawoiyatira who have a boat but Nakode have no asset at all. They struggle with fishing despite the numerous challenges they are facing. The challenges include lack of boats to take them to deeper waters where there is big fish, lack of skilled knowledge in modern fishing and group dynamics.

#### 4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

##### 1. By member/individual

Household income and expenditure for the sampled target members are summarized in the table below:

**Table AG10.1.12 Household Income and Expenditure (Baseline - provisional)**

	<b>Indicator as of November ~December2013</b>
Annual Household Income	Average: Kshs.57,238 Max: Kshs.112,800 Min: Kshs.33,600
Annual Household Expenditure	Average: Kshs.54,480 Max:Kshs.92,800 Min: Kshs.33,600

Source: JICA Project Team, Remarks: the above figures are preliminary and to be confirmed.

Annual average household income for the sampled members is Kshs.57,238. This income is contributed by the sale of fish in small quantities due to the fact that most fish is for subsistence purposes. Other sources include sale of firewood. The income level is low compared to other areas.

##### 2. By group (only financial impact)

Since the sub-project has not yet started, financial impacts of the groups for this indicator are none.

**Table AG10.1.13 Financial Impact (by Group)**

	Group Name	Indicator as of November ~December 2013
1	NAKODE F. GROUP	None
2	NAWOIYATIRA F.GROUP	None

Source: JICA Project Team

5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1. By member/individual

Across these two groups, all the sample target members expect to enhance resilience by engaging in this project. Most of them mentioned this will happen through empowerment in form of training and provision of fishing equipment to be enable them improve their fishing. They may think the training should touch on modern fishing techniques and business/financial management and group dynamics. As individual benefits fishing skills, fishing equipment and money through sale of fish are the most important benefits that the respondents raised. Basically the project will not provide easy hand-outs to them, therefore this expectation may be changed after the assistance period is over. This must be monitored.

2. By group

Opinions on the sub-project as groups are shown as follows:

**Table AG10.1.14 Any Opinions on the Sub-project (Group)**

	Group Name	Indicator as of November ~December 2013
1	NAKODE F. GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, through enhancing better fishing techniques and improving their major livelihood.</p> <p><u>Expectation about group benefit:</u> Empowerment for the group through training and enhancement of group dynamics to enable groups bond together in terms helping one another and saving culture.</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is unique in that it fosters self reliance in the group members. The project do not give hand outs but assists groups to realise their potential for making better development.</p>
2	NAWOIYATIRA F. GROUP	<p><u>Expectation to enhance resilience by the sub-project:</u> Yes, fishing assists them in getting cash to cater for their family needs.</p> <p><u>Expectation about group benefit:</u> Trainings and skills gained will benefit the group</p> <p><u>Difference compared to other past donor projects:</u> This sub-project is different from others in terms of providing training and knowledge.</p>

Source: JICA Project Team

Both the two groups have positive expectations on enhancement of resilience through sub-project of supporting fisher folks by giving the needed skills to improve the fishing activities in order to empower the target group on the development of their activities. The groups think they will benefit from this sub project, and the training will assist them to improve the fishing activities and also marketing of their products (though individuals expect provision of fishing equipments). The groups also think they will foster group dynamics using this project. The groups will revive their activities while working together to strengthen their ties.

## G10.2 Works Done

Works done during the implementation of the sub project are shown below.

### G10.2.1 Inputs from the Project as Assistance Activities

~from March 2014 to August 2014~

#### (1) Provision of Fishery Technical Training

Since the activities of the groups are fishery, technical knowledge on fishery was decided to be provided as below:

##### 1) Course Objective

Objective is to equip the group members with knowledge and skills for commercial fishing, fish processing and value addition and thereby increasing fish catches per members' households with a view to ensuring food security.

##### 2) Course Contents

The course contents are listed for major ones below:

- Commercial fishing including fishing vessels and gears,
- Commercial fish species in Lake Turkana,
- Fish quality assurance and value addition,
- Fish handling techniques,
- Fish processing and preservation methods, and
- Fish marketing.

This was done in 10<sup>th</sup> and 11<sup>th</sup> April 2014 at Eliye with 30 participants, including the Drought Management Committee members. The lecturer was invited from the officer of the fishery department.

#### (2) Provision of Entrepreneurship Training

Like the IGA groups, assumed fishery activities include business elements. Thus, for this sub project, the entrepreneurship training was also provided.

##### 1) Course Objective

The main objective of this training is to build the capacity of the participants in entrepreneurial skills in a sustainable manner in order to grow their fishery businesses, thereby contributing to enhancement of community resilience.

##### 2) Course Contents

A three days training starting 13<sup>th</sup> – 15<sup>th</sup> March 2014 was done for 48 members. The attendance includes the Drought Management Committee members. Also, the attendance from the Eliye Youth group in addition to the two fishery groups was also accepted for this training upon their request, though activities of the groups were not monitored as the sub project.

The course contents are the same as mentioned in the other sub projects.

##### 3) Observation

It was observed that the whole course was active and vibrant. The participants were open to discussions, contributing to the training, suggesting and acknowledging their gaps for rectification.



Source: JICA Project Team

**Figure AG10.2.1 Entrepreneurship Training**  
(left and middle: group discussions on start-up and working capital, and the right: plenary presentation on profit margins)

### (3) Provision of Mentoring Activities and Others

Other than the above, the following activities were made to assist the groups for establishment of their business activities:

#### 1) Strengthening of Knowledge and Skills Obtained from the Trainings Provided by the Project

Groups were visited about two times per month to review the rate in which realization of intended project outputs are being achieved. Provision of technical knowledge and skills, and experiences from other fishing communities were capitalized to ensure improvement of fishing practices of Eliye targeted groups.

#### 2) Mentoring Activities

- Follow-up of group fishing activities and provision of technical advice on improvement:  
The main areas of focus to ensure the realization of this mentoring activity were fishing activities and its significance on livelihood measures;
- Improvement of economic returns from fish business:  
During this support, the project team supported group members to understand their fish outputs per fishing properly; and
- Finding out existing gaps in the individual/group members fishing business to be dealt with:  
Mentoring exercises helped in identification of needs of groups and individuals which were expected to be addressed through on-job trainings.

#### 3) Monitoring Activities

Through the above visits, the project team focused on operational indicators of the sub project.

~from September 2014 to December 2014~

### (4) Exposure Study Tour to Kalokol

#### 1) Objective

It was implemented for the Eliye fish folks to learn how advanced the area where fishery is active is and give an opportunity to get some ideas for improvement of their fishery activities back in Eliye.

#### 2) Participants

The participants were 15, 9 from Nakode and 6 from Nawoiyatira group.

#### 3) Activities

The following activities were implemented.



**Table AG10.2.1 Activity Schedule**

Date	Time	Activity
8/10/2014	9.00am – 10.00am	Travel from Eliye to Kalokol
	10.00am – 10.30am	Courtesy call to Area Chief
	10.30am – 11.00am	Courtesy call to other fish associations in Kalokol town
	11.00am – 12.00pm	Learning at lake site
	12.00pm – 1.00pm	Learning at Impressa
	1.00pm – 2.00pm	Learning at Fish Associations in Kalokol town
	2.30pm – 3.30pm	Travel from Kalokol to Eliye

Source: JICA Project Team

Keys areas of focus in during the study tour are as follows:

1. Fishing at the lake i.e. fishing techniques being used;
2. Comparison of the use of the lake at Kalokol and Eliye;
3. Differences in the types of fish caught;
4. What is the daily output (fish production) as compared to Eliye;
5. Number of fishermen, associations and driving forces towards fishing;
6. Techniques for fish processing in Kalokol;
7. Other aspects of value chain;
8. How is fish trade conducted, who is involved and when;
9. Discuss internal fish business in Kalokol and the neighbourhood;
10. Discuss fish business externally i.e. terminal markets to other countries e.g. Congo;
11. Discuss fish business protocols and their impact in utilization of lake resources and maximization of economic returns from fish;
12. Focus on the sustainability of fish business in Kalokol and the intentions of fishing associations; and
13. How fish business has changed peoples way of living.

#### 4) Observation

They actively participated in the tour, observed the activity in Kalokol, and absorbed what they saw. The following are findings:

- The Eliye fisher folks are knowledgeable about almost all fishing aspects used in the lake;
- The potential of Eliye fishermen to exploit the lake is still high based on the fact that they understand what fishing in their area entails;
- Availability of social amenities, road connectivity and communication connectivity are all factors that influence fish production at the lake (Eliye is still underdeveloped in all these facilities as compared to Kalokol);
- The level of fish production is directly proportional to the number of fishing boats and fishermen involved;
- Eliye springs seems potential for Japanese fishing, which aims to fish bigger fish like Nile perch;

- Fishing is the best option for the Eliye folks as far as building community resilience against drought is concerned;
- Eliye fishermen already have a fish market at Kalokol; and fish dealers are also ready to set up their office in Eliye once the production levels rise to meet the tonnage required for external market; and
- Eliye fishing groups said they require material support as they are already knowledgeable on basic fishing techniques.



Source: JICA Project Team

**Figure AG10.2.2 Photo of Study Tour to Kalokol**  
*(left: Kalokol fishers who bring fish caught, right: Fishermen in Kalokol displaying Japanese Nets to study tour participants)*

#### (5) Linkage Creation to Financial Institutions

Financial demand is very high from the groups. Since the sub-project does not provide any financial support to them, linking the groups with the ministry of youth affairs was intended for them to apply for funds. Four development committee members mobilized the groups for the meeting. The training was conducted with a constituency officer for Turkana central and Loima sub-county in the ministry of youth affairs on 29/10/14 on mainly Youth Enterprise Development Fund and others such as UWEZO fund. Apart from the fishery groups there were other groups attending the meeting. These included:

1. Maendeleo group (already registered)
2. Livestock traders
3. Kambi moto eliye women group
4. Nabei women group
5. Eliye fishermen -Lobeikoiyan group
6. Ilarate youth group

These groups expressed their desire to learn and undertake development initiatives.

#### (6) Provision of Mentoring Activities

The following contents have been repeated as the mentoring activities whenever the Project staff visited the groups.

**Table AG10.2.2 Mentorship Contents**

Group		Mentorship contents
Eliye	Nawoyatira	Sensitization on proper utilization of lake resources through proper fishing techniques and availability of ready fish markets at Kalokol and even beyond the country in Congo
	Nakode	The same as above

Source: JICA Project Team

### (7) End line Survey

End-line survey was conducted mainly to see the current opinions of related stakeholders on the sub-project. This survey was conducted by the technical assistants of the Project following the procedure shown below:

**Table AG10.2.3 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Eliye	DMC	1 (6 participants)	18/11/2014	Questionnaire with one focus group discussion
	Groups - Nawoyatira - Nakode	1 (9 participants)	17/11/2014	Questionnaire with one focus group discussion
		1 (5 participants)	17/11/2014	
	Individual - Nawoyatira - Nakode	6	17/11/2014	Questionnaires with individual interview
		5	17/11/2014	

Source: JICA Project Team

Results are shown in parts which describe operational, effect and other impact indicators.

## G10.2.2 General Overall Situation of the Sub Project

~from March 2014 to August 2014~

After the trainings, the groups learned business and technical knowledge in general. They have been continuing their fishing activities mainly in two ways; one to fish on the Marsabit side of the lake, and the other is in the Turkana side of the lake. For the first one, their fishing production and economic returns out of it has not yet changed significantly. For the second category, some group members have been motivated by the series of inputs from the project, and increased their production and thereby income at individual level.

Through the monitoring and mentoring activities, they have acknowledged the importance of marketing. Now it turned out that the primary hindering factor as a whole is low production even though some individual have been successful.

~from September 2014 to December 2014~

After all our activities are done, they learned, are inspired by knowledge and exposure tour to see advanced examples. Still, transactions are almost the same, though there are some minor improvements. One change is that some members have started going to Kalokol and to do commission fishing, learnt from the exposure tour. Now, their practical actions are expected.

### G10.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are written.



Source: JICA Project Team

**Figure AG10.2.3 Members of the Groups**

## (1) Fishery Practice

## 1) Season, kinds of fish, times per year/seasons

~from March 2014 to August 2014~

Though this indicator is in general the same as baseline, some active members (five out of 10 of Nawoyatira and four out of 20 from Nakode) increased the frequency of fishing in the second category. Now Nakode people go in for five days in a week, and four days for Nawoyatira as the maximum fishing days.

~from September 2014 to December 2014~

This indicator is in general the same as baseline

Rainy seasons are low season for fishing. Further, in August and September, there are always strong winds and waves, and therefore fishermen are not able to go with boats for fishing.

Fish obtained from the lake are Tilapia, Nile perch, dog fish, mud fish among other common species possible for harvest in Lake Turkana.

PR4 reported that some active members increased the frequency of fishery in the second category (Nakode people go in five days per week, while Nawoyatira do four days for as the maximum fishing days). This could be applied still, but the end-line survey shows no significant increase.

However after the Kalokol visit, some of them started commission fishing in Kalokol as a part of the second category. This has the potential to increase their fishing production.

## 2) Fishing practice (including fishing gear), processing practice if there is, and their cost

~from March 2014 to August 2014~

Fishing practice and processing remains as baseline but through knowledge and skills improvement and attitude change facilitated through trainings and mentoring, group members are enlightened on the possible aspects to improve the enterprises but still struggling to buy due to lack of individual and group resources.

In both groups, logs, hooks, fishing lines are still used but the plan to mend and use old boats is also in place. Another admired technology is use of “Japanese nets” that the groups mentioned this net works better than the current one because it is said to fit to current natural condition of the lake along with Eliye areas, though the groups has not actually introduced.

~from September 2014 to December 2014~

Fishing practice and processing remains as baseline but through knowledge and skills improvement and attitude change, facilitated through trainings and mentoring, group members are enlightened on the possible aspects to improve the enterprises but are still struggling to buy due to lack of individual and group resources.

In both groups, logs, hooks, fishing lines are still used but the plan to mend and use old boats is also in place. Another admired technology is use of “Japanese nets” that the groups have learned more during their visit to Kalokol. The groups have not actually introduced it.

## 3) Production, market, and income

~from March 2014 to August 2014~

As shown in the baseline, main market for dried fish remains Kalokol. For the second category, they continue as they did before. According to fishermen in Kalokol, the selling price seems slightly better than the above prices given by the members of Eliye (e.g. Ksh 50-60 for big one, Ksh 40 for medium, and Ksh 20 for small one). Because the target group members do not have engine boats and thus it may not be easy for them to go to Kalokol directly, they said that they sell fish on the other side or even on the lake to the buyers from Kalokol. This probably leads to low selling prices.

For the second category, the training and the mentoring provided have influenced the fishery activities of the active members of both groups. Such active members have started to venture into other sites where more fish could be obtained, i.e. Longech near Kalokol and central highland in Lake Turkana. Most of fishermen concentrated their efforts within Eliye before.

Fresh fish supplied by the active group members is now consumed locally by resorts, and community members. As stated, the active members in both groups are now increasing fish production by the new venture, and have started selling to the resorts. And thus now their income has increased, ranging now from Ksh. 300 – 500/day for individuals of both groups. It means that total average income for individuals of Nakode group per week is Ksh. 2,000 while for Nawoyatira is Ksh. 1,600.

Another remarkable improvement is that both groups have acknowledged the need to explore fish markets in the neighbouring areas such as Kang’atosa, Naoros and Loboolo. if there are surplus fresh fish, there is a fish market (market facilities was constructed using the fund provided by the Government of Japan) in Lodwar, where Kalokol people access everyday by car and motorcycle (this flow does not use any cold chain). Here, a bundle of seven to eight small fishes can be sold at Ksh 40. Markets and demand are confirmed. The quantity Produced has not experienced a significant increase as a whole except for some members, and the key issue is how to increase it.

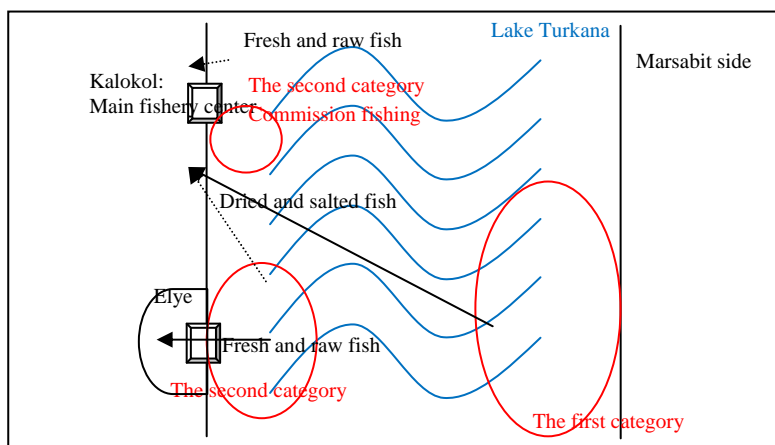


Source: JICA Project Team

**Figure AG10.2.4 Lodwar Fish Market**  
 (From left: structure of fish market, fishes brought by motorcycle, rest two are fish sold)

~from September 2014 to December 2014~

The production and markets of the baseline is still the same. Main market for dried fish remains Kalokol. Some fresh fish in Eliye and in proximity in Kalokol. As stated earlier, commission fishing has been added in the second category. This is depicted as follows:



Source: JICA Project Team

**Figure AG10.2.5 Image of Markets for Fishing Activities**

Typical image of the income for the first category is shown in the table below:

**Table AG10.2.4 Income for the First Category**

Detail	
<b>Group:</b>	
Daily catch	=400
Monthly	=400*30=12,000
3 months	=12,000*3=36,000
Price	=36,000*7=252,000
One season	=252,000
Expenses:	8,400
Net Profit	=243,600 for 10 members
Individual gain per season:	24,360
Yearly, there are two to three seasons. Therefore, annual net income per member becomes	
24,360*2.5 =Ksh 60,900/member/year	

Source: JICA Project Team

This has not yet had significant changes. One thing to be mentioned is that Nawoitira group's boat had unfortunately broken down and the first category cannot be implemented.

For the second category, typical image of the income is shown in the table below:

**Table AG10.2.5 Income for the Second Category**

Detail	
<b>Individual:</b>	
Daily catch	=20
Montly	=20*30=600 => income/month 600*7 = Ksh4,200
Period of the second category is 3~6 months	
Yearly income = Ksh 16,800	

Source: JICA Project Team

The training and mentoring provided have influenced the fishery activities of the active members of both groups. They have started venturing into other sites where more fish can be obtained i.e. Longech near Kalokol and central highland in Lake Turkana. PR4 stated that some individual members reported to increase fishing quantities, but not at a significant level according to the end line survey.

(2) Records of Any Individual Benefits (home consumption, selling to market, etc)

~from March 2014 to August 2014~

Specifically for the active members, they are able to increase income from Ksh 300 to Ksh 1,800/week, with more number of fishing days as well as increased fish volume by venturing into new areas and also selling to resorts which buy at higher prices. Of course not all of the members improved their income as such, but at least the project activities were able to motivate some members. Further, the groups said that personal knowledge and skills acquired from the training on both business and fishery techniques are the individual benefits.

~from September 2014 to December 2014~

As mentioned above, all the fishing activities for both categories, finally individual members have their own income. If they can do as per typical assumption, their net income from fishing activities might be 70 to 80 thousand shilling per year. Unfortunately, Nawoitira cannot do the first category, the most profitable fishing. Empowered individuals are expected to enhance their fishing activities and increase their income from fishing activities.

In addition to the above, the groups said that personal knowledge and skills obtained from the trainings on both business and fishery techniques are the individual benefits.

## (3) Records of Any Group Benefits

~from March 2014 to August 2014~

Other than the above, they learned technical and business knowledge together as groups.

~from September 2014 to December 2014~

The group continues with their group collective actions as they did as the baseline. They learned technical and business knowledge together as groups.

## (4) Total Money in the Group Account

~from March 2014 to August 2014~

Since then, they contributed money, used some, and now have the following balance:

**Table AG10.2.6 Group Money (current)**

	Group Name	Location	Money in the Account
1	Nakode Fishing Group	Eliye	Ksh.1,000
2	Nawoiyatira Fishing Group	Eliye	Ksh. 1,500

Source: JICA Project Team

~from September 2014 to December 2014~

Since the group account was not able to be updated, PR4 data is shown:

**Table AG10.2.7 Group Money**

	Group Name	Location	Money in the account
1	Nakode Fishing Group	Eliye	Ksh.1,000
2	Nawoiyatira Fishing Group	Eliye	Ksh. 1,500

Source: JICA Project Team

**G10.2.4 Monitoring of Effect Indicators and Others**

Here, information for effect and other indicators at the end of the sub project period is documented.

## (1) Group members' livelihood

The results of the end line survey shows that major livelihood of the sampled members is fishery, followed by small business. This is the same as the baseline information.

## (2) Current measures in terms of livelihood to cope with drought

## 1) By member

Most of the interviewed members replied that fishing is their current measure to cope with drought, followed by small business. Major measure is the same as the baseline information. Interestingly some stated that saving is important and one of the coping measures that they learnt.

## 2) By group

The current measures by group are summarized in the table below:

**Table AG10.2.8 Current Measures to Cope With Drought (Group)**

	Group name	Indicator as of November ~December2013
1	NAKODE FISHING GROUP	Not specifically
2	NAWOIYATIRA F.GROUP	As above

Source: JICA Project Team

Of course, fishing activities on the other side of the lake must be done together as groups, but apart from the fishing activities, both groups replied that they do not have specific countermeasure against drought as of now; and this is the same information as the baseline.

(3) Assets by member and group

Since assets could not have been changed drastically only by this sub-project input in about one year, here whether some impacts are observed or not at this point in time are argued as below:

1) By member

The member assets have not changed by this sub-project.

2) By group

Even group assets have not yet changed so far. Unfortunately the group boat of Nawoiyatira group had been broken down. Instead, though the baseline did not capture this, in fact Nakode group has the group boat and continues using it for the first fishery category. Otherwise, since JICA project did not provide any handouts (also they have not yet done any procurement of equipment and gears), they have not added any assets for the groups.

(4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Since financial status should not have been changed drastically only by this sub-project input in about one year, here whether some impacts are observed or not at this point in time by the sub-project are argued as below:

1) By member

Annual household income based on the baseline survey was Ksh 57,238. Major livelihood they answered is fishery, and net profit per year from fishery activities estimated is around Ksh 70,000. Order is the same and perhaps, practically fishery production may be a bit smaller than the estimation. Unfortunately still, clear tangible increment due only to the sub-project has not yet been observed except minor improvements.. It is understood that fishery is the main and important livelihood and improvement on this activities will definitely enhance resilience.

2) By group

For the group account, slight increase has been there. However there has been no emphasis on the group financial activities, therefore it is concluded that there is no financial impact as groups.

(5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

1) Expectation to enhance resilience by the sub-project

Across the two groups, all interviewed members expressed that they think they enhanced resilience against future drought. The major reason was that business and technical knowledge given through trainings and exposure study tour enable them to expand their thoughts to try other ways of doing things. The baseline information was that all of them expected building resilience through the sub-project. Therefore, at least, it can be said that their expectation has been met on resilience building at individual level.

Group expectation is shown in the table below:



**Table AG10.2.9 Group Opinions on Building Resilience**

	Group name	Location	Yes/no reason
1	Nakode Fishing Group	Eliye	<input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No: Reason: They are empowered to identify possible sources of funding such as loans and grants from different institutions. They are also exposed to commission fishing in kalokol that is an alternative source of income.
2	Nawoiyatira Fishing Group	Eliye	<input type="checkbox"/> Yes/ <input checked="" type="checkbox"/> No: Reason: They have only learnt on fishing techniques of which most of them understood. It is because they have not got equipment needed to exploit resources in the lake.

Source: JICA Project Team based on the end-line survey

Expectations are opposite between the two groups. Nakode group evaluated the sub-project positively in terms of resilience building. The reason it said is that at least some new learning to them (e.g. linkage of financial source and exposure tour to Kalokol).

On the other hand, Nawoiyatira group showed a negative opinion on resilience building because the knowledge given by the sub-project is not really new according to the result of focused group discussion, and they also expected a hand-out but were not given.

## 2) Expectation in general

All of the interviewees expected some financial support and handouts. In this sense, JICA's approach is just provision of knowledge therefore almost all the sample members said that expectation has not been met, except one. The only one stated yes and no, meaning that provision of knowledge is appreciated but no handouts are negatively evaluated.

## 3) Knowledge Obtained

Most of them stated that fishing techniques and entrepreneurship skills. Also one mentioned learning was made from the exposure tour. When the question of whether they will use or not was asked to them, 90% of them replied yes. Actually 73% of the respondents have already applied the skills. Knowledge itself given seems to be evaluated positively.

## 4) JICA approach

For both groups, they said that fishing is generally *Kujitegemea* activity because the moment you decide to go fishing is the beginning of independence/self reliance philosophy. This is because fishing is a technical activity that cannot be done by lazy minded fellows/people. It is a tedious activity that requires total commitment from the fisherman's side. So *Kujitegemea* is good. They appreciate this philosophy.

## 5) Overall satisfaction

Across the groups, the answer "highly satisfied" occupies 18%, "moderately satisfied" 73%, and "moderately unsatisfied" 9%. This means that generally they satisfied the sub-project, especially for provision of knowledge and exposure tour, not handouts. However the reason of "moderately" not "highly" is no provision of financial and material support.

The answers as groups are both "moderately satisfied" with the same reason as above.

## (6) Other indicators to see impact

## 1) Members efforts on the sub-projects

Continuation of fishing is for the most cases their efforts. One thing, commission fishing at Kalokol is the new thing learned after the exposure tour and some do this as their efforts.

## 2) Gender

Only one woman member in the Nawoyatira group. This woman replied that she herself has been empowered by the sub-project. However, except this case, there is not major impact on gender by this sub-project, since fishery is done by men.

## 3) Environment

Both the individual and groups stated there has been no change on environment. This means that their fishery activities seem to be still below the resource capacity of Lake Turkana.

## 4) Other community members' opinions

The end-line survey tells the following opinions based on focus group interview with DMC/DC members.

Awareness of livelihood activities by DMC/DC

Interviewed members are aware of the livelihood activities in Eliye as provision of trainings and visits by JICA staff.

Other community people's opinions

According to them, the other community members are happy about JICA's trainings on livelihood diversification though they are not happy that the JICA beneficiaries have not received any material help. This is the same opinion as the group members.

DMC/DC function on livelihood program

They raised the function of them on livelihood program as follow:

- Training groups on various development concepts;
- Visiting the groups and emphasizing on positive attitude and personal initiatives to livelihood diversification; and
- Linking the community with development agencies.

They also stated for the continuity of this role and function that this is their community and they wish to voluntarily perform these roles.

**G10.3 Discussion****G10.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub-project is as follows:

- As seen, fishery activities are the main and important income source. Compared with other livelihood, fishery itself is more resilient than others because of the lake. Furthermore, if the activities are further accelerated and income is increased, resilience of the members should be enhanced; and
- The sub-project provided trainings, mentorship activities, and exposure tour to empower the members for enhancing the fishing activities. Some minor change has been observed, but in general, still the exercises are more or less the same as before, except the mindset of the members.

They appreciate the knowledge given. In this sense, tangible result on resilience building might not have been observed.

### G10.3.2 Positive Impact

Positive impacts observed through implementing the sub-project are as follows:

- After linking these groups with the ministry of youth affairs, they are now following up legalizing their groups existence with social services department to apply to get fund for their fishery activities;
- Through the exposure tour to Kalokol, some of the group members have started commission fishing where they are hired by the owner of the boat. This is a major resilience for the Nawoyatira group whose group's boat broke down paralyzing the group fishing;
- Nakode group however still derive their resilience from fishing on the other side of the lake. Some of the income derived from the fishing activities is saved for future use while the rest is used by the family. During the break period when they are not fishing on the other side of the lake, they utilize that time to fish in west side of the lake for domestic consumption mainly; and
- Knowledge of fishery technique and business skills is both positively evaluated by the members. The following is the items of leaning from the trainings that they raised.

**Table AG10.3.1 Skills Knowledge that They learned**

Category	Skills
Technical	<ul style="list-style-type: none"> <li>● Dry fish technique: previously fish was dried on the ground, but they learned it is important to hang fish in the air for sanitary issue.</li> <li>● Dry fish technique: previously they directly put salt onto open fish but this method did not make salt put uniformly. Now, they learned to dip fish in salted water so that salt uniformly spreads to fish;</li> <li>● Size of net: they used 4cm size-net but smaller fish is caught with this. Thus, 5cm is recommended in order not to catch smaller one from the viewpoint of resource management; and</li> <li>● Life jacket: Jacket will be needed for future when permit is issued.</li> </ul>
Business	<ul style="list-style-type: none"> <li>● Communication and marketing: they learned importance of using mobile phone to get price and demand information with buyers.</li> </ul>

Source: JICA Project Team

### G10.3.3 Issues and Challenges

Issues and challenges faced are as follows:

- Though the concept aimed at building self reliance and the sub-project tried to draw their willingness to raise their activities up, but unfortunately it has not produced fruitful results yet. It was expected that if they need to repair a boat or to buy "Japanese net", they themselves start contributing money and saves money enough to be able to buy them. However, they seem to get too much used to get the handouts. For this type of livelihood which needs some equipment e.g. boats, nets, hooks, it could have been good to provide some of them under this circumstances (not just we compromise and accept what they say);
- The main challenge facing these groups is lack of modern fishing equipment, which translate to low production of fish along the Eliye side of the lake; and
- Nawoyatira group whose boat broke is incapacitated to do fishing on the eastern shores of the lake.

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**G10.4 Conclusion and Lesson Learned**

Based on the above argument, conclusion and lesson learnt can be summarized as follows:

- It may be too early to judge that their resilience has been enhanced by the sub-project. Approach taken is to build self reliance and no handouts were provided. If so, it may take time for them to access available funding sources, make efforts to increase fishery production;
- In addition, for this kind of livelihood assistance which needs some equipment by nature, it might be faster to see changes and impacts if necessary gears/loans are provided. Needless to say, it is necessary to pay attention not to create further dependency; and
- Tools like training, mentorship, and exposure tour are still useful to create capacity building.

## CHAPTER G11. SUB PROJECT OF DRY-MEAT

### G11.1 Outline of the Sub-project

#### G11.1.1 General Outline of the Sub-project

(1) Outline of the Sub-project

The outline of the sub-project is summarized as follows:

*Table AG11.1.1 Outline of the Sub-project*

Item	Contents	Remarks
1. Objectives	Poverty and food insecurity induced by the drought in Northern Kenya shall be mitigated. To enhance pastoralist communities' resilience against drought, livelihood diversification shall be realized as one of the key components in the target communities. This sub-project aims to diversify the livelihood of the target communities by providing conventionally technical skills to preserve meat in a dry expected to use it during the drought period to enhance resilience against drought.	
2. Number of Beneficiaries	1 group, 20 group members	
3. Implementation Organization	JICA ECoRAD Project, and the community groups	
4. Project Contents		
1) Project Outline	1) technical training of processing dry meat 2) Provision of technical advice and monitoring	
2) Facility / Activity	<i>Facilities/Activities</i>	<i>Implementer</i>
	1) Implementation of training 2) Provision of technical advice and monitoring	1) Project Team and groups 2) Project Team and groups
3) Organization for O&M	Target community groups under supervision of their assistant chief, elders, and the committee	
4) Construction Period	14 months (starting Nov 2013 around up to Dec 2014)	For the case of this sub-project, construction period is read as implementation period.

Source: JICA Project Team

(2) Basic Principle of the Sub-project

This sub-project is to provide conventional and technical skills to preserve meat in a dried form because recent generation does not know the skills. By acquiring the skills, it is expected that they can use this skills to prepare dry meat when drought comes, rather than letting their livestock died, so that at least drought shock could be mitigated by eating this dried meat. The activities to be done include technical training and monitoring activities.

### G11.1.2 Selection of Target Groups

#### (1) Participatory Planning

In selection of the target groups, participatory planning approach was taken. The same process was taken as specified in ANNEX G8 together with the selection of IGA groups in Lokiriyama.



Source: JICA Project Team

**Figure AG11.1.1 2<sup>nd</sup> Meeting in Lokiriyama**

#### (2) Selected Target Community Groups

The following table shows the selected target community groups. Group information is shown in the section of the baseline figures of effect indicators.

**Table AG11.1.2 Information for Target Group**

	Group Name	Location	Group members
1	Lokiriyama Dried Meat Group	Elye	20

Source: JICA Project Team

### G11.1.3 Monitoring Framework

To monitor the sub-project, the following monitoring framework is set.

#### (1) Indicators

##### 1) Operational indicators

Operational indicators are set as shown in the table below. By these indicators, the operational progress of the sub-project is intended to be captured. Throughout the monitoring period, they were monitored.

**Table AG11.1.3 Operational Indicators**

	Operational Indicators
1	Dry meat processing
1-1	Technique
1-2	Transaction Volume
1-3	Usage of Final Product (including cost and benefit)
2	Records of any individual benefits
3	Records of any group benefits
4	Total money in the group account

Source: JICA Project Team

##### 2) Effect indicators

Effect indicators are set as shown in the table below. By these indicators, the effect and impact of the sub-project is intended to be captured. They were monitored at two timings; one was before the sub-project started as the baseline and the other was at the end of the monitoring period.

**Table AG11.1.4 Effect Indicators**

	Effect Indicators
1	Group members' livelihood
2	Current measures in terms of livelihood to cope with drought
3	Assets by member and group
4	Household income and expenditure, and financial impact by the introduced system (individually and as a group)
5	Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

Source: JICA Project Team

## (2) Baseline survey

To set the baseline figures for the above indicators, the baseline survey was implemented as below:

### 1) Methodology

Two kinds of questionnaires were used; one is for an individual, the other is for a group to obtain the baseline condition. Sample number for individuals surveyed was 70% out of all target group members as shown. For groups, this group was surveyed having focus group discussion. The survey was implemented by the project staff as shown in the table below.

**Table AG11.1.5 Schedule of Baseline Survey for Dry Meat Sub-project**

Target Sub-location	Date	Sample Numbers
Lokirama	11/2/2014	14 dry meat group members were interviewed.

Source: JICA Project Team

### 2) Brief summary of socio economic condition of the target areas

Socio-economic condition of the target area is shown in ANNEX G8.

## (3) Baseline information of Operational indicators

Here, baseline figures for the indicators are set and shown.

### 1) Dry Meat Processing

#### 1. Technique

The traditional method of dry meat processing involved cutting of slightly bigger strands of meat. Fats and ligaments were not removed. This made the meat decompose or took time to dry. They used camel, goat, and cattle depending upon the members.

For further detail, after stripping, the meat was cut about one inch thickness using traditional sharp knives, and the meat stranded up to one meter long. The cutting was done by at least two people. No salt was used. Preservation could take up to one month for red meat but if the meat was fatty, it could only stay between 5-7 days before it changed colour and even went bad.

#### 2. Transaction volume

Transaction volume was not that much. Normally when their livestock died and/or they wanted to make, they processed the dry meat. Perhaps frequency was assumed several times per year depending upon the needs during normal season. During drought periods, the amount was assumed increased using their emaciated livestock.

#### 3. Usage of final product (including cost and benefit)

Dry meat was mainly for household consumption not only drought seasons, but normal seasons. Some were sold locally but not often. Since this was not commercial activities, the cost was minimal.

2) Records of Any Individual Benefits

Most of the members have participated in dry meat processing during the past drought with traditional technique, by which dry meat did not last long. As such, they had traditional skills to somehow cope with drought.

3) Records of Any Group Benefits

This group was newly formed for this sub project. Therefore there was no group benefit before.

4) Total Money in the Group Account

Similarly, they did not have any group money.

## (4) Baseline information for effect indicators

Based on the baseline survey, baseline figures/information for effect indicators are set and shown as below:

1) Group Members' Livelihood

For this group, main measure of livelihood for the members is livestock, followed by small business.

2) Current measures in terms of livelihood to cope with drought

## 1. By member

Current measures to cope with drought at individual level are diversified, such as livestock trade, kiosk, sale of aloe, casual labour, etc.

## 2. By group

They do not have any specific activities to cope with drought as a group.

3) Number of assets by member and group (including group profile)

## 1. By member

Main assets (physical and livestock) by households<sup>1</sup> of individual members are shown below.

**Table AG11.1.6 Assets by Member**

		Average/Sample HH	% of Having/ Sample HH
Physical	TV	0	0
	Car	0	0
	Mobile phone	0.21	21
	Bicycle	0.21	21
	Motorcycle	0	0
Livestock	Goat	19.4 (max: 57, min: 5)	100
	Cow	1.5 (max: 11, min: 0)	14
	Sheep	7.8 (max: 28, min: 0)	71
	Camel	0.3 (max: 3, min: 0)	14

<sup>1</sup>It must be noted that to get accurate figures on this information in fact seems not so easy. Interviewees sometimes may not properly remember/provide accurate numbers. Especially for the number of livestock, the result could possibly be smaller than the figure of nomadic commonsense (30~200 shoats/family of course it depends on each family). The followings are possible considerations; 1) polygamy family affects the number (information of one wife' unit); and 2) these households live close to the town/center of location so smaller figures are not far from the true figures. For the reference, average household size of this sample group for this sub project is 6.6 in Lokirama.



		Average/Sample HH	% of Having/ Sample HH
	Chicken	3.7 (max: 11, min: 0)	64
	Donkey	0.5 (max: 2, min: 0)	29

Source: JICA Project Team

Bicycle and mobile phone have the same percentage of ownership (21% out of total sample members). Goat and sheep are the common livestock as other groups in other areas do, but interestingly ownership of chicken are high in this group, 64% with 3.7 chickens on average.

## 2. By group

Group asset including the information of general group profile is shown as below:

**Table AG11.1.7 Assets by Group**

	Group Name	Indicator as of November ~December2013
3	Lokiriyama Dry Meat Group	Number of Group members: 20 Out of which, target members are 20 (female: 8, illiterate: 18) Asset: none Group account: None Established: October 2013.

Source: JICA Project Team

This group is relatively new and has 20 members with right female and 18 illiterate members. The group has neither any asset and group money as of now.

## 4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

### 1. By member/individual

Household income and expenditure for the sampled target members as of November 2013 are summarized in the table below:

**Table AG11.1.8 Household Income and Expenditure (Baseline - provisional)**

	Indicator as of November ~December2013
Annual Household Income	Average: Kshs.123,614/= Max: Kshs.276,000/= Min: Kshs.60,000/=
Annual Household Expenditure	Average: Kshs.119,379/= Max:Kshs.276,000/= Min: Kshs.25,100/=

Source: JICA Project Team, Remarks: the above figures are preliminary and to be confirmed.

On average, the group members in general have around Kshs.120,000 income and expenditure per year.

### 2. By group (only financial impact)

Since the sub-project has not yet started, financial impacts of the groups for this indicator are none.

## 5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

### 1. By member/individual

Their expectation is basically to obtain the skills and knowledge on dry meat.

### 2. By group

Opinions on the sub-project as groups are shown as follows:

**Table AG11.1.9 Any Opinions on the Sub-project (Group)**

	Group Name	Indicator as of November ~December 2013
3	Lokirama Dry Meat Group	<u>Expectation to enhance resilience by the sub-project:</u> Yes, through training and knowledge people can process the dry meat. <u>Expectation about group benefit:</u> Solidarity, awareness of resilience. <u>Difference compared to other past donor projects:</u> This sub-project is objective it focusses on self reliance approaches, so they don't encourage the giving out of hand outs. Their involvement of the targeted beneficiary is to ensure that what people sustainably use knowledge.

Source: JICA Project Team

To some extent, the group expects to get skills to dry meat in order to preserve it during the drought period.

## G11.2 Works Done

Works done during the implementation of the sub project are shown below.

### G11.2.1 Inputs from the Project as Assistance Activities

~from March 2014 to August 2014~

#### (1) Provision of Technical Training

##### 1) Course Objective

Objective is to build capacity of selected community members on dry meat techniques to improve their resilience in coping up with recurrent droughts due to ability to salvage emaciated livestock and improve their food security status during times of drought.

##### 2) Course Contents

The key contents and processes of the dry meat training were but not limited to rationale for meat preservation which considers dry meat as a livelihood resource option for protection of livestock resources through salvaging at least to recover some costs of production.

Carcass cutting, trimming and deboning which involves cutting right sizes of meat and ensuring adequate deboning of carcasses was treated important for quality dry meat products. Methods of suspending meat such as hanging/clipping, hooking and looping were analyzed with advantages and disadvantages of each discussed by trainees and trainers. The training also encouraged group presentations on traditional experiences of meat preservation such as drying, smoking and frying. The aim of it is to encourage value addition to traditional methods.

Aspects of technology transfer such as use of mobile solar meat dryers, Metallic/wooden sun meat dryers, ante-mortem & post-mortems in and Hygiene in meat handling were also given due consideration. At the terminal stages of dry meat processing during the training, quality of the finished product, i.e. managing well dried meat, traditional experiences, containers used in packaging and storage, were presented to trainees although theoretically. At the end of the training, consolidation of knowledge & skills, attitude change, lessons learned, best practices, action plans, recommendations, and way forward were discussed and the viability to practice dry meat processing is seen to be a reality and drought coping mechanism.

The training targeted 20 members of dry meat group. It also involved five members from CDC/DMC as part of strengthening their role in coordinating resilience building activities. Other officials who attended the training were area chief and former councillor who is also part of the CDC/DMC of Lokirama. The training was done for three days, i.e. between 10<sup>th</sup> – 12<sup>th</sup> July 2014,

at P.A.G church of Lokiriama. This training was delivered by the officers of Department of Livestock Production with the project staff.

### 3) Observation

During the training, the motivation of trainees to acquire knowledge and skills was high as traditional techniques have been causing a lot of losses as the preserved meat could not stay for long (go bad). The whole essence of the training was to get logic which denotes deference between traditional methods of dry meat production and the techniques delivered during the training. Experiential learning was applied throughout the course of the training in both theoretical and practical topics. At the end of the training, during review of lessons learned, it was observed that expectations to understand need for dry meat processing and the contents and processes involved were articulated and group members, CDC/DMC and other officials in attendance appreciated that the technology introduced is efficient and effective.

### (2) Provision of Mentoring Activities and Others

Since the training was recently done and the condition for livestock in Lokiriama is not worse at a moment to guarantee salvaging of livestock, nevertheless, the project team is maintaining contacts with the training beneficiaries through review of knowledge and skills obtained from the training.

~from September 2014 to December 2014~

### (3) Provision of Mentoring Activities

The following contents have been reminded as the mentoring activities whenever the Project staff visited the groups.

**Table AG11.2.1 Mentorship Contents**

Group		Mentorship contents
Lokiriama	Dry meat group	Need to formalize their group by registration with the ministry of social services. This would increase their access to financial support from different sectors both private and public institutions

Source: JICA Project Team

### (4) End line Survey

End-line survey was conducted mainly to see current opinions of related stakeholders on the sub-project. This survey was conducted by the technical assistants of the Project following the procedure shown below:

**Table AG11.2.2 Procedure of End line Survey**

SITE	CATEGORY	SAMPLE SIZE	WHEN	MEANS
Lokiriama	DMC	1 (8 participants)	15/11/2014	Questionnaire with one focus group discussion
	Groups -Dry meat group	1 (15 participants)	14/11/14	Questionnaire with one focus group discussion
	Individual - Dry meat group	12	14/11/14	Questionnaires with individual interview

Source: JICA Project Team

Questionnaires used are shown in Attachment 28. Results are shown in parts which describe operational, effect and other impact indicators.

### G11.2.2 General Overall Situation of the Sub Project

~from March 2014 to August 2014~

After the training and other activities, the group members have acquired new technique of dry meat. They had traditional technique making thick strands of meat which did not last long. Now, new technique that they learned focuses on long period of preservation with thin strands of meat (improvement of cutting) leading to faster dry and therefore not getting rotten soon.

Frequency of drying meat was not so high before because the purpose was just for home consumption and it happened maybe when livestock died; and this is still the same. They are ready to process as trained, and thus it is expected to apply this when drought occurs. In addition, the group members have ambition to use this technique for IGA purpose. It could be beneficial if they started IGA with this new dry meat technique.



Source: JICA Project Team

**Figure AG11.2.1 Dry Meat**  
(left: traditional method as a control, right: new technique given through the training)

~from September 2014 to December 2014~

Similar to the situation mentioned in PR4, the current situation is that members have continued to apply new techniques and made dry meat several times. Current conditions is shown as below through the indicators set.

### G11.2.3 Monitoring of Operational Indicators

Results of monitoring activities for operational indicators are written.

#### (1) Dry Meat Processing

##### 1) Technique

~from March 2014 to August 2014~

Indicated by the knowledge and skills adopted through the training, community is ready to use it to improve baseline knowledge and skills of meat processing. In fact, when the group was formed, the project team unofficially explained about this new technique to them. The formal training given in July practically enhanced understanding of the technique unofficially told. Although emaciated animals are not slaughtered now, knowledge obtained from the training is being used in butcheries especially hygiene and techniques for flaying, inspection and preservation with salt.

New techniques that they got are flaying, stripping, deboning, and preservation with salt. Concretely, using sharp knives, the meat is cut uniformly by 0.25 inch strands, free of fats and ligaments. And the meat is soaked in the salt-mixed water. This makes salt uniformly distributed on the meat. By this, the meat can be preserved for six months successfully if meat is free from moisture and other forms of contamination.

~from September 2014 to December 2014~

Technique they learnt and used are the same as reported in Progress Report 4. Below is the reported technique.

New techniques that now they get are flaying, stripping, deboning, and preservation with salt. Concretely, using sharp knives, the meat is cut uniformly by 0.25 inch strands, free of fats and ligaments. And the meat is soaked in the salt-mixed water.

## 2) Transaction volume

~from March 2014 to August 2014~

Still, there have not yet been significant changes so far in terms of transaction volume.

~from September 2014 to December 2014~

Sampled 12 members' transaction has been as follows:

**Table AG11.2.3 Transaction Volume**

	Before	After
1	3 times in these three years. One time depended on available meat	Four times since July. One time still depends on available meat
2	0	0
3	0	8 times each time requiring 2 steaks of meat
4	36 times in 3 years each time requiring taking different amounts	4 times since July each requiring an average of 2 kgs
5	5 times in 3 years. He cannot remember the amount used for each time	4 times since July. One time required 1 and half steaks of meat
6	0	8 times since July. One time required 1 kg
7	0	0
8	3 times in 3 years. one time approximately required 4-5kgs	8 times since July. One time required 3 kgs
9	5 times in 3 years. One time required 2-3kgs	2 times since July. One time required 1kg
10	6 times in 3 years. One time required 5kgs	2 times since July. One time required 2 steaks of meat
11	0	Once since July which required 2kgs
12	0	0

Source: JICA Project Team based on the end-line survey

Out of 12 members interviewed, number of the member who exercises dry meat has increased from six to nine. For those who had exercised already, generally frequency has been increased, though it depends on availability of meat.

## 3) Usage of final product (including cost and benefit)

~from March 2014 to August 2014~

Although there have not yet been significant changes so far in terms of usage of commercial product, they have used this primarily for household consumption purpose during both drought and normal periods. On top of that, this dry meat would be sold locally in Lokirama and other neighbouring areas since the meat can be preserved longer period than before. If it was realized, they would earn more profit out of it to also get some cash for livelihood.

~from September 2014 to December 2014~

Majority of them consumed dry meat at their house, and the exercises are still the same. However, out of nine members who do dry meat, two sold dry meat in markets, though other two replied that they tried but no market. Some little changes have been there.

## (2) Records of Any Individual Benefits

~from March 2014 to August 2014~

First of all, individual benefits that they got from this sub project are new knowledge, skills and change of attitude through the technical training provided to them. Using this technique, it is expected to improve the above activity (e.g. dry meat lasts long) as a future drought coping measure, as well as getting some income from the dry meat selling.

~from September 2014 to December 2014~

For all respondents, individual benefit they raised is obtainment of new dry meat technical knowledge. On top of that, five members added satisfaction to work as a group as their individual satisfaction.

(3) Records of Any Group Benefits

~from March 2014 to August 2014~

Now, they can share the knowledge and skills obtained from the training. Also, the group can be used as an interface to receive assistance from donors and government support.

~from September 2014 to December 2014~

The biggest group benefit they replied is knowledge, indicating that they can share the knowledge and skills obtained from the training.

(4) Total Money in the Group Account

~from March 2014 to August 2014~

Since the dry meat technique primarily is meant for individual skill, less activities by the group itself. Now, they do not have group money.

~from September 2014 to December 2014~

They do not have group money.

### G11.2.4 Monitoring of Effect Indicators and Others

Here, current information for effect and other indicators are written.

(1) Group members' livelihood

The end-line survey shows their livelihood is mainly livestock and small business, which have not been significant changes compared with the result of the baseline survey.

(2) Current measures in terms of livelihood to cope with drought

1) By member

Interviewed members said that business of small commodities and goat transaction including saving from profit, harvest from their farm, traditional beer making, and dry meat. Diversified measures, though they are mostly business to cope against drought, have not been significantly changed. Though not majority, somehow dry meat can be a measure to some extent.

2) By group

When the group was interviewed as a whole, they replied that they have the knowledge to use their animals even those stricken with drought. Before the sub-project came, they did not do anything as a group. They said they can now dry the meat and sell it for their resilience.

(3) Assets by member and group

Since assets should not have been changed drastically in this around one year only by this sub-project input, whether some impacts are observed or not at this point of time by the sub-project are argued as below.

1) By member

As the operational indicators shows, dry meat transaction is at mostly household level and seems small in size against the household assets showed as the result of the baseline survey. There are no opinions to increase any assets just because of the dry meat transaction.

## 2) By group

Since there have been no group activities, the group assets are none and the same as the baseline. However, group members have increased from 20 to 26 (women: 8 to 12; illiterate from 18 to 25), indicating that 6 members might have thought dry meat techniques are beneficial.

## (4) Household income and expenditure, and financial impact by the introduced system (individually and as a group)

Since financial status should not have been changed drastically in this around one year only by this sub-project input, whether some impacts are observed or not at this point of time by the sub-project are argued as below.

## 1) By member

The baseline survey result shows that average annual household income of the group members are Ksh 123,614. Similar to the above discussion on asset, just several-time increment of dry meat exercises for home consumption does not have significant financial impact on income.

## 2) By group

Financial impacts as a group are not observed because they do not do any group activities related to dry meat.

## (5) Any opinions on the sub-project (expectation, satisfaction, any change on measures in terms of livelihood to cope with drought with the sub-project, etc.)

## 1) Expectation to enhance resilience by the sub-project

All of the members interviewed answered that they think individual resilience against drought is enhanced after the sub-project. They expected skills and knowledge on dry meat before the sub-project started as a result of the baseline survey, meaning that expectation on resilience building at individual level is met.

As a group, the opinion after the sub-project on resilience building is positive, and they said that resilience has been enhanced by the skills and knowledge obtained.

## 2) Expectation in general

Out of 12 sample members, the answers of yes are 5 (42%); those of no are 2 (17%); and those of both are the rest 5 (42%). The major reason that their expectation is met is that knowledge given is appreciated by the members. Minor reason is that creation of linkage with financial scheme is appreciated. The reason of no and both is that the sub-project did not provide any financial support to the members.

Group opinion on this is also no with the same reason as the above, any financial or handout support was not provided.

## 3) Knowledge Obtained

Most of individual members interviewed replied obtained knowledge is the one to make dry meat that last longer than before. Out of 12, 9 members tried the new skills (75%). Three members who have not yet tried say that they did not have money to buy goats to be slaughtered for this purpose, indicating these members thought about business. When the question of whether they will use or not was asked to them, all of them replied yes. Around half of them expect commercial benefits from this dry meat technique.

## 4) JICA approach

This group has not yet been received any donors in the past. And, as for the JICA approach of building “*Kujitegemea*” spirit without easy handout provision, the group expressed that they appreciate this philosophy, which actually has been passed on by their parents though recently many donor relief supports somehow have come to them, according to the end-line survey.

## 5) Overall satisfaction

Results of individual members are 3 (25%) are highly satisfied, 8 (67%) are moderately satisfied, and 1 (8%) is moderately unsatisfied. Reason of satisfaction is to gain practical knowledge that is expected to be applied. Dissatisfaction can be attributed to the current situation that they have not yet be able to mobilize their livestock resources fully to the commercial scale. The group also rated “moderately satisfied” because of revival of dry meat exercises although any activities as a group have not yet been operated.

## (6) Other indicators to see impact

## 1) Members and group efforts on the sub-projects

As their efforts beyond the planned input, some members used this technique for the meat bought for this, not their own livestock. Also, others tried to sell dried meat for markets, though markets are not easily found. This could be seen as positive reaction. Unfortunately there have not been their own efforts as a group.

## 2) Gender

Out of 12 respondents, seven members (58%) answered that female gained some extent of positive impacts through using obtained knowledge. One female member answered that she is respected in her family as she has applied this knowledge in her household management, and another one said that she has been able to say something to the household decision making by acquiring some sort of confidence. The group session provided also a positive opinion that forming this group including women members has given opportunities of inclusive decision making and information access to women.

## 3) Environment

In general, most of the respondents replied that there have been no environmental impacts for both positive and negative by this sub-project. There are minor (two) opinions that there may be good impacts because animal carcass might be reduced expecting most of them are used for being preserved for future consumption. The group also said that there has been no environmental change.

## 4) Other community members’ opinions

The end-line survey tells the following opinions based on focus group interview with DMC/DC members.

Awareness of livelihood activities by DMC/DC

Through the discussion with the members, it is said that they realized this sub-project as provision of training, and awareness creation.

Other community people’s opinions

According to the members participated in the focus group interview, other community people want to be capacitated, indicating that at least some benefits are perceived from the sub-project.



DMC/DC function on livelihood program

They understand that they need to do progress valuation and follow-ups, education to other community members on livelihood measures, and even proposal writing to external donors. They answered that they can continue these function and role.

**G11.3 Discussion****G11.3.1 Resilience Building as Diversified Livelihood Measures**

Discussion on resilience building for this sub-project is as follows:

- It must be said that absolute magnitude of resilience building in terms of physical measurable ways such as financial return and volume of food is not big as of now. Their livelihood to cope with future drought is mainly business activities;
- However, the concept of this sub-project has been well received by this group. Most of the members have adopted the dry meat technique (frequency of making dry meat is increased) though for their own individual home consumption, and even they have wills to apply this technique. Also, individual satisfaction on resilience building is generally satisfactory; and
- Thus, on top of their current livelihood, it can be said that their resilience against future droughts is somehow increased with this dry meat intervention, though its extent is still small now. By this, the dried meat is expected to provide protein for the family during times of food scarcity with longer period of preservation, rather than making emaciated livestock die without making food out of it.

**G11.3.2 Positive Impact**

Positive impacts observed through implementing the sub-project are as follows:

- One big and obvious positive impact is for them to gain new dry meat techniques. Members of this group have embraced the dry meat knowledge and skills as most of them have already adopted the technique for family resilience against food insecurity;
- Beyond the initial design of the sub-project as aiming at self consumption, the group members express needs and even tried to test this dry meat for commercial purposes, e.g. some selling to the travellers and sometimes taking small quantity to the Ugandan side (Moroto), though there is still less viable current markets identified;
- Regarding gender, there have been positive impacts that women members somehow gained some sort of confidence by using this dry meat knowledge in their household decision making; and that also women members which were not in groups are given opportunities of participation in the group activities;
- It can be said that DMC/DC members seem to at least remember and understand the role and function in the livelihood diversification program (dissemination, follow-ups) by now, though there are still concerns that concrete activities by them may not be continued; and
- Some sorts of understanding of the approach of “Kujitegemea (self reliance)” is obtained to make them continue to stand up with their own foot though they say financial assistance is needed.

**G11.3.3 Issues and Challenges**

Issues and challenges faced are as follows:

- Lack of viable market for dried meat – individual members are willing to slaughter even their own goats. However, for those who want to sell dry meat as an IGA activity, they are sometimes discouraged because there is currently no dry-meat market available for commercial purpose; and
- The second challenge is lack of financial support for buying more and especially big animals which provide more meat for drying. This is a proposed group activity since individual members can afford to get only a goat. Of course, if market is not available, financial support may not be necessary. However regardless of the marketing issue, their mindset and perception created by the past donors make them expect such support primarily from us (our policy is not to provide financial support). With this challenge in mind, we linked the group with youth enterprise development fund in the ministry of youth affairs. The group is currently processing their registration with the social services department as a requirement for the fund.

#### **G11.4 Conclusion and Lesson Learned**

Based on the above argument, conclusion and lesson learned can be summarized as follows:

- It can be concluded that new dry meat technique which improves the previous exercises better for longer period of preservation is appreciated by the majority of the group members and contribute to resilience building on top of their other livelihood measures, though its impact may not be large;
- For them, dry meat exercise becomes much beneficial if it can be operated as an IGA activity for the commercial purpose. However, market is its challenge;
- The ECoRAD approach (training, knowledge provision, monitoring, follow-ups, and linkage creation as mentoring activities without easy provision of the handouts) is somehow understood. However, there is still the mindset to receive physical assistance among them. Depending on their willingness and capacity, it may be good to examine a little financial aid to boost their activities; and
- As an approach, it is important to provide mentoring activities, specifically to visit regularly for monitoring and follow-ups, to customize direction of advice as per changing situation and necessity. In this sense, business training/mentorship on market identification could have been effective if they were provided. Due to the time constrains of the sub-project, such assistance was not implemented enough.

# *Tables*

**Table BG4.4.1 General Socio Economic Condition in Target 11 Sub Locations in Turkana**

No.	Sub-locations:	Population Area (km2), Pop. Dens.	General Condition Surrounding the Sites	Main Livelihood
1	<b>MILIMATATU</b> (Location: YAPAKUNO Division: KALENG)	Population: 4,622 Area: 860 Pop Dens: 5	Mobile phone: n.a. Electricity: n.a. (some solar panels) Nearest economic center: Kakuma and Lodwar Transportation: once in two to three weeks Around 2 hrs from the junction of the main road Local resource: green garnet (they can not utilized fully)  Hills are near	<u>Main Livelihood</u> 1. Pastoralist Shoats: 100-200/HH Camel: 5~8-10/HH Donkey: 4~6-7/HH Poultry: not common (5-10/HH) 2. Relief once a year: GOK two to four a year: donors sorghum, maize flower 3. Eating wild fruits local consumption 4. Charcoal burning ksh300/50kg bag, Ksh 600/90kg-bag, selling to lorry trucks 5. Aloe vera collect sap in Morueris hill (25km away) Ksh 1000/20l-container, 500/ 10l-contrainer, 250/5l-container 2 days in rainy seasons, 4-5 days in dry seasons to tap to 20l, sell to Somali people (1 in town, others near collecting point) 6. Fire wood 7. Casual work some construction
2	<b>KANGAKIPUR</b> (Location: KAERIS Division: KALENG)	Population: 2,407 Area: 344 Pop Dens: 7	Mobile phone: n.a. (spots up hill) Electricity: n.a. (some solar panels) Nearest economic center: Makutano (junction of the main road, 70 km away from this sub location) Transportation: no regular matatu, bus. Use lorries passing by between Lokitaung and Lodwar once in a week.  Hills are near	<u>Main Livelihood</u> 1. Pastoralist Shoats: 30-50~200/HH Camel: 4-5~60-70/HH Donkey: 3~6/HH Cow: not common (6/HH) 2. Small scale business retail shop (buy food in Lodwar and Kakuma and sell to local residents and people passing by) 3. Aloe vera collect sap in Morueris hill (9-10km away) Ksh 1000~1200/20l-container, 600/ 10l-contrainer 2 days in rainy seasons, 3 days in dry seasons to tap to 20l, sell to Somali buyers come this town 4. Stone brick sell to contractors using skilled workers in town 5. Charcoal burning Ksh 300/50kg bag, Ksh 600/90kg-bag, selling to lorry trucks, chief does not like to promote charcoal. 6. Poultry now common. Eat egg and meat. 10-20/ HH. Matured one Ksh 500/cock, eggs Ksh 10Ksh/egg
3	<b>LORITIT</b> (Location: LETEA Division: OROPOI)	Population: 8,527 Area: 577 Pop Dens: 15	Mobile phone: some spots Electricity: n.a. (some solar panels) Regular transportation: n.a. need to arrange (motorbike to Kakuma, freq.: twice/week). Letea from/to Kakuma has regular transportation. Nearest market: Letea (feeder local market), and Kakuma. Especially in Letea, a livestock market has recently been established, and open once/week. Located inside from the main road from Kakuma	<u>Main Livelihood</u> 1. Small scale agriculture maize, sorghum (rainfed and near river from March ~ June) for local consumption 2. Pastoralist Shoats: 80-200/HH Camel: 3-20/HH Donkey: 2~7/HH Poultry: not common 3. Small scale IGAs retail shop agriculture product aloe vera (sell to Somali man in Letea, recently less production, Ksh 400~1000/ 20l-container) charcoal (sell here or in Kakuma by motorcycle, bicycle)

**Table BG4.4.1 General Socio Economic Condition in Target 11 Sub Locations in Turkana**

No.	Sub-locations:	Population Area (km2), Pop. Dens.	General Condition Surrounding the Sites	Main Livelihood
4	<b>LOKICOGGIO</b> (Location: LOKICHOGGIO Division: ) LOKICHOGGIO	Population: 10,980 Area: 504 Pop Dens: 22	Mobile phone: coverage Electricity: available Urban area: around 70% of population Along with main tarmac road from south to Sudan Good means of transportation	<u>Main Livelihood</u> 1. Small scale agriculture sorghum, cowpea, maize, beans, groundnut (rainfed from April and May) for local consumption 1. Firewood collection and sales to town 1. Small scale IGAs sugar, tea leaf, maize bought from Somali people in town to sell here 1. Casual work 2. Pastoralist Shoats: } Cattle: } 50/HH Donkey: } Poultry: not common
5	<b>LOKIRIAMA</b> (Location: LOKIRIAMA Division: LOIMA)	Population: 3,615 Area: 164 Pop Dens: 22	Mobile phone: some spots Electricity: no (some solar panels) Regular transportation: no matatsu, no public transportation (cars passing by 2~3 times a week) Nearest economic center: Moroto in Uganda, and Lodwar Forest and mountains are close  Some insecurity issues with Uganda	<u>Main Livelihood</u> 1. Pastoralist Shoats: 10-50~200-300/HH Camel: rare (~40-50 max/HH) Donkey: 2~5/HH Poultry: not common (2-10/HH) 2. Small business sell livestock to Moroto in Uganda (45km away, market day on Tuesday every week) and buy daily needs and sell here. Uganda traders come here to sell maize and exchange with goats. 3. Mines and aloe vera mines – little gold gold can be collected in river bed during dry seasons. Community collect and sell to local traders, and traders sell to Lodwar. Ksh 300 /point =0.1 gram is the price when community sell gold to local trader. Ksh 3500~400/gram is the wholesale price @Lodwar. mines- green garnet collection point is 8km away from town. Supply volume is not large. Local people collect and store. When buyers come from Lodwar (not regular), they sell bulk (perhaps kg-unit). aloe vera Collect sap from bush and sell Ksh 200-250/5l-container to local traders. Local traders dry and put residual into sack and transport to Lodwar. 4. Gift from NGO and GOK Rarely from GOK once every 3-4 months from Oxfam sorghum and maize, vegetable oil. 5. Wild fruits 6. Others Gum Arabic: collect during rainy seasons Ksh 40/kg if Lodwar buyers need. Honey: collect and sell locally. There are 5 beehives provided by Practical Action.
6	<b>LORENGIPPI</b> (Location: LORENGIPPI Division: LOIMA )	Population: 2,459 Area: 209 Pop Dens: 12	Mobile phone: some spots Electricity: no (some solar panels) Transportation: no regular means (car passing by: twice a week) Economic Center: Lodwar (109km) and Alale (57km) in West Pokot (if security is OK) Hill is near Some insecurity issues with West pokot	<u>Main Livelihood</u> 1. Pastoralist Shoats: 30~200/HH Camel: 5~25/HH Donkey: 3~15/HH Poultry: 7~50/HH, common 2. Relief once a month: Oxfam 30 % of population receive. Sorghum, cooking oils. 3. Wild Fruit collect easily 4. Petit trade sugar and tea leaves. They go to Lodwar and buy

**Table BG4.4.1 General Socio Economic Condition in Target 11 Sub Locations in Turkana**

No.	Sub-locations:	Population Area (km2), Pop. Dens.	General Condition Surrounding the Sites	Main Livelihood
				<p>stuff and sell here.</p> <p>5. Agriculture in common land. Sorghum, maize, cow peas for local consumption. From March April to June July during rainy seasons.</p> <p>6. Gold Available in hilly areas, but difficult due to insecurity area, and lack of tool, road, and water. Local community collect and sell to local traders at Ksh 200-250/point=0.1 gram and local traders sell at Lodwar, Kitale, and Eldrad at Ksh 3000-4000/g</p> <p>7. Gum resin very rare (gum Arabic and commiphora). Buyer comes from Lodwar.</p>
7	<b>ELIYE</b> (Location: KANGATOTHA Division: KALOKOL)	Population: 4,792 Area: 494 Pop Dens: 10	<p>Mobile phone: n.a. (some spots)</p> <p>Electricity: n.a. (some solar panels)</p> <p>Lake side (tourist resources) and water is available (spring)</p> <p>Regular transportation: n.a. to Lodwar (need arrangement, freq.: once/week), 2 hrs</p> <p>Nearest market: Lodwar and Kalkol</p>	<p><u>Main Livelihood</u></p> <p>1. Fishing in Lake Turkana Sell in Kalolol by boat, and here, even in the other side of the shore</p> <p>2. Pastoralist Shoats: 5-30/HH Camel: 10-100/HH Poultry: not common (5-10/HH) sold to tourist</p> <p>3. Basket weaving catholic mission buys, remaining are sold to tourist.</p> <p>4. Selling accessories as above</p> <p>5. Small enterprises Retail shops (buy stuff in Lodwar and sell them here) Lodge (for tourist)</p>
8	<b>KERIO</b> (Location: KERIO Division: KERIO)	Population: 4,254 Area: 266 Pop Dens: 16	<p>Mobile phone: n.a. (some spots)</p> <p>Electricity: n.a. (some solar panels)</p> <p>Lake side</p> <p>Regular transportation: available to Lodwar (once/day), 2 hrs</p> <p>Every Tuesday, a livestock market is held.</p> <p>Nearest market: Lodwar and Kalokol (fish buyers)</p>	<p><u>Main Livelihood</u></p> <p>1. Pastoralist Shoats: 50/HH Camel: 2/HH Poultry: not many (2/HH), demand in Lodwar not here</p> <p>2. Fishing in Lake Turkana Sell dry fishes to Kalolol by boat, and here</p> <p>3. Small scale farming along with river and rain harvested area Sorghum, cowpea, green gram for local consumption</p> <p>4. Mat weaving For Lodwar</p>
9	<b>LOCHWANGAMATAK</b> (Location: LOCHWANGAMATAK Division: LOKICHAR)	Population: 14,561 Area: 1,072 Pop Dens: 14	<p>Mobile phone: some spots</p> <p>Electricity: n.a. (some solar panels)</p> <p>Transportation: available</p> <p>Along with the main road between north and south in Turkana</p>	<p><u>Main Livelihood</u></p> <p>1. Pastoralist Shoats: 20-30-100/HH Camel: 6-100/HH Donkey: 1-2-6/HH Cattle: not common (1-2-10/HH) Poultry: not many (2-10/HH) only in center</p> <p>2. Charcoal burning wholesale and retail. Local people make -&gt; local trader -&gt; traders from south Price to sell lorries (outside traders): Ksh 700/90kg-bag, Ksh 300/50kg-bag</p> <p>3. Small business sell maize, beans, sorghum, cooking oil, sugar, vegetables, other daily needs in center They buy at three places, Kitale, Ortum in West Pokot, and Lodwar with each transportation</p> <p>4. Quarry stones, gravel, and sand</p> <p>5. Quarry stone: outsiders (just skilled workers) come and tell what to do gravel/sand: communities know how to collect,</p>

**Table BG4.4.1 General Socio Economic Condition in Target 11 Sub Locations in Turkana**

No.	Sub-locations:	Population Area (km <sup>2</sup> ), Pop. Dens.	General Condition Surrounding the Sites	Main Livelihood
				where to sell. They sell at local and buyers from Lodwar 6. Precious stones (green and red garnet) collection point is Nakimak primary school (20km away) with potentially and possibly large stock, but local people do not know this well.
10	<b>LOKICHAR</b> (Location: LOKICHAR Division: LOKICHAR )	Population: 10,820 Area: 188 Pop Dens: 58	Mobile phone: coverage available Electricity: not yet (line has been connected) Transportation: available Along with the main road between north and south in Turkana Urban center + satellite villages Tullow Oil is here.	<u>Main Livelihood (rural)</u> 1. Pastoralist Shoats: 20-50~200/HH Camel: less than 20~50/HH Donkey: 4~10/HH Poultry: 5-10/HH in town 2. Charcoal and fire wood Ksh 150/50kg-bag, and Ksh 250 Ksh/90kg-bag, to town to sell as bulk and also small tin cup 3. Relief food (not received for six months) for registered poor people only WFP->World Vision used to come GOK comes for emergency cases <u>Main Livelihood (rural)</u> 1. Employment (government, NGO) 2. Business (retail etc)
11	<b>LOPII</b> (Location: KOCHODIN Division: LOKORI)	Population: 2,810 Area: 324 Pop Dens: 9	Mobile phone: some spots Electricity: n.a. Transportation: many /day between Lokichar and Lokori Local resources: wild fruits, aloe vera (both in insecure places) Some insecurity issues with West Pokot. Fences are installed at the border of the village.	<u>Main Livelihood</u> 1. Pastoralist Shoats: 20-70~5000/HH Camel: 1~20/HH Donkey: 3-4~10/HH Poultry: not many (5-10/HH) World Vision provided and trained 2. Relief food once in two months by World Vision with maize, lentil, and oil. once every month by GOK (it used to be, now not regular) with only maize

Source: JICA Project Team, based on the hearing of chiefs

# *Attachments*



# *Attachment G3-1*

*Subproject: Chicken Merry Go Round Program*

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**ATTACHMENT G3-1 SUB-PROJECT: CHICKEN MERRY-GO-ROUND PROGRAM****18.1 Purpose of the program**

The purpose of the sub project is to enhance community resilience against drought by sustainably utilizing this program as one of the means of livelihood to be introduced by the project.

The project envisages fostering self-reliant group members through the program and to make them able to utilize saved money to re-start the same system by themselves (our approach is “development assistance”, not just “humanitarian aid”; therefore the program needs commitments from the participant groups). The program is implemented on a pilot basis hence the total target group cannot be very large. Therefore, it is expected that other groups outside the program come to adopt and start this system through their own initiative. In addition, it will be more than appreciated if the government will utilize this system as a model to apply to other areas of Marsabit County as one of the measures to mitigate future drought impacts.

**18.2 General**

As earlier indicated the use of animals and in this case chicken could be one of the ways in which communities can become resilient against drought by incorporating measures that include community effort, consumption and saving. This will amount to livelihood diversification. The chicken merry-go-round is one of the programs chosen under the livelihood diversification program. It aims to use chicken as a source of income and train farmers on how to create wealth that can be used to hedge against the adverse impacts of droughts. It was conceived based on previous studies and also chosen through a participatory system whereby the recipients strongly indicated that they wanted to keep chicken. It has been noted that a majority of the people who opted for keeping chicken are women. This could be an advantage for the project since chicken are considered property of the woman in the household in most of the communities in Marsabit. Chicken can be taken care of easily by women as they are almost always at home. The program is being implemented in the high potential area of Marsabit in Jirime and Dakabaricha locations. These areas are also close to Marsabit town which is the assumed nearest market for chicken products.

**18-3 Outline of the Sub-project**

This program is to select groups of 20 members; provide chicken (improved breed Sasso or indigenous breed, depend on the request from group members) to target groups; to increase numbers of chicken; to share increased chicken with group members (“Merry-Go-Round”, borrowed from the saving system of groups which is familiar in Kenya); and to encourage

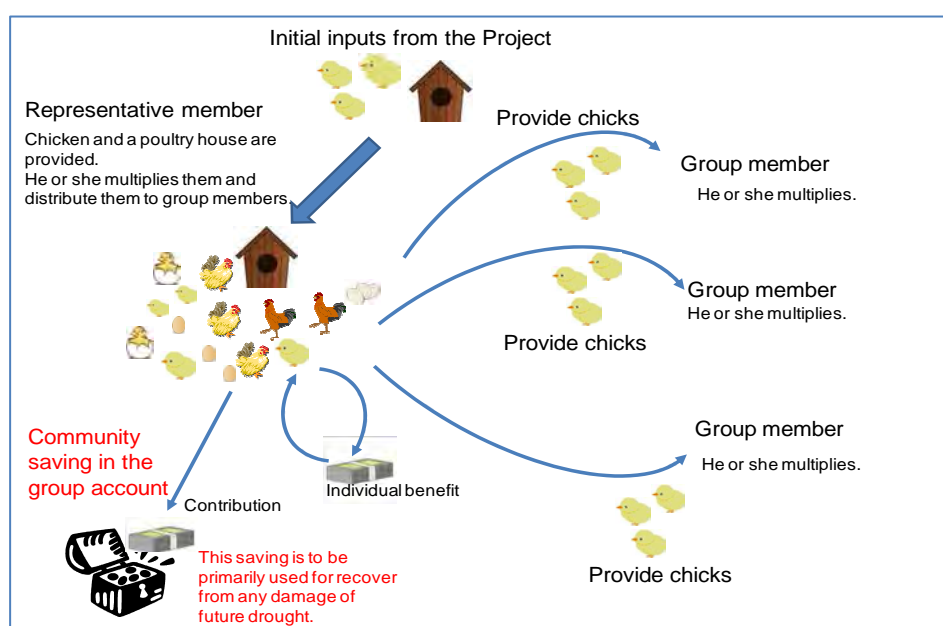
members to save money out of them as seed money which will be used to recover from the possible future loss of introduced chicken by drought.

### 18.3.1 Group selection

Members of target group are basically community people who have experienced keeping chicken, or the ones that do not have but want to start. Taking into consideration of the importance of commitment, the project involved selection of groups through a willing applicant process.

### 18.3.2 General System

The project provides four sets (one set means one male and two females) of chicken to four representatives of a group. These are the first recipient or beneficiaries. The first persons keep the chicken and hatch some to increase the numbers. Then one set out of the hatched chicken is given to another member at two months old. The chicken must be reared and increased and distributed until all members of the group get one set each. When they sell products from chicken (eggs, chick and chicken), they must save some amount of money to the group's saving account / box to prepare for damage by future drought. The figure below illustrates this concept.



Source: JICA Project Team

**Figure** Image of chicken merry go round system

### 18.3.3 Basic Rules

#### (1) Keeping chicken

- Basically chicken are the property of a group, but may belong to individual members for operation;
- The first two members (2 custodians) will receive an improved local chicken house. Members who are not the first two in a group to get chicken and chicken houses, must make/build their own chicken houses;
- Members must understand, agree, and follow the rules of this system;
- The first two members who received chicken and chicken house are responsible to multiply the number of chicken. All the members must bear all expenses related to keeping chicken such as feed, and water. Another two members who received chicken but not chicken house are also expected to contribute for multiplication. Chicken multiplication continues until all the members receive one set of chicken;
- Members are advised to keep the number of chicken at less than 20. They can sell eggs, chicks, and chicken as needed, but must retain a set of chicken equivalent to what was initially received.
- The first members must deposit some percentage of money made from the sales of chicken products to the group saving account if any sales are made;
- Profit after contribution is deducted can be taken by the individual members as their incentive;
- If the members lose provided chicken from the diseases only, the project will provide another one (group peer evaluation must be shown to the project as evidence. Traffic accident, attack by wild animals, and theft can't be accepted as reasons and are considered as carelessness of the members); and
- To make peer pressures enhance a group system sustainably, group peer monitoring must be introduced (a group monitors the number of chicken increased, and so on).

#### (2) Saving money

- First recipients must deposit some percentage of the money when they earn the money out of the provided chicken (sell eggs, chicks and chicken);
- Saved money can't be used until damage occurs to members' chicken introduced (not any other private property) due to future drought;

- The deposit must be increased at least until the money is enough to buy the initial input of chicken. After the money exceeds this minimum level, the group can choose whether they continue to increase the money or they stop contributing;
- Other cases other than the above that members can use the saved money could be decided among the members; and
- Group peer monitoring must be introduced (a group monitors the money saved and withdrawn by e.g. a treasurer).

### 18.3.4 Detailed Calculations

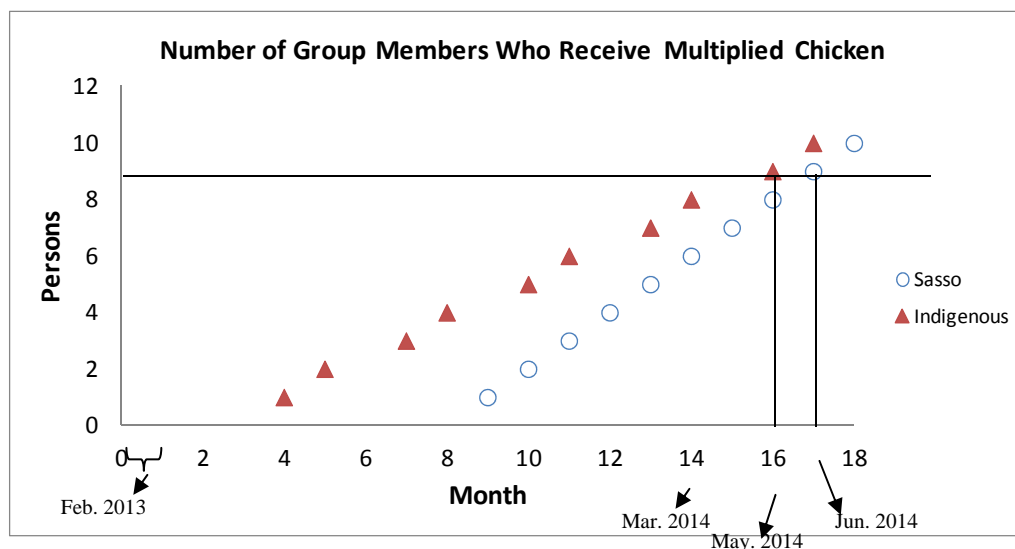
#### (1) Expected number of group members

At the beginning of the program, the following are provided to one group,

- Four sets of one male and two females (for Sasso 2 months old chick, for indigenous matured one).
- Two sets of improved chicken houses.

First two members who receive both chicken and house shall be in charge to increase the number of chicken.

Timeframe for one set is shown below:



Source: JICA Project Team

**Figure** Timeframe for receiving multiplied chicken

**Assumptions:**

For both kinds of chicken, the way to keep is basically free range system. But for Sasso, some amount of feeding and watering are assumed.

**Indigenous chicken**

- Period for maturing is 12 months; Once matured, laying 12 eggs for every 3 months.
- Already matured local chickens are provided
- Probability to deliver male (or female) is 50%

**Sasso**

- Period for maturing is 9 months; Once matured, laying 10 eggs for every month.
- Probability to deliver male (or female) is 50%

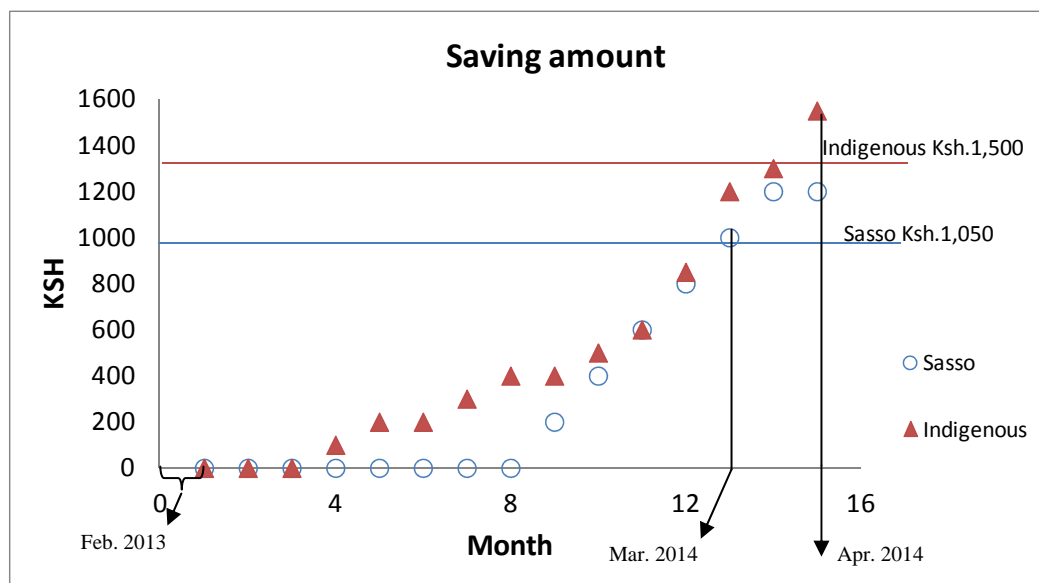
As time goes by, group members who receive multiplied one set of chicken increase. For indigenous chicken, timing to increase the members is faster than Sasso simply because matured chicken are introduced (on the other hand two months-old chicks are provided for Sasso).

For one set, one member can start to receive at the fourth month for indigenous chicken, and at the ninth month for Sasso respectively. The timing when total number of one sub-group becomes 10, namely one representative member and nine other group members who receive multiplied one set is at the 16<sup>th</sup> month (May 2004) for indigenous chicken and 17<sup>th</sup> month (June 2014) for Sasso (total number unfortunately will not have been 10 yet in March 2014 of the primal target of the project monitoring activities). Needless to say, one group has two sets, therefore, there are two sub-groups of the above.

If another two members who receive only chicken not house also can contribute for multiplying and distribution, the timeframe will be shorten.

**(2) Expected money saved to the group**

The minimum amount of money needed to be saved for one set (for 10 members) is 1,500 Ksh (one x 500 Ksh/matured cock plus two x 500 Ksh/matured hen) for indigenous chicken and 1,050 Ksh (one x 350 Ksh/male chick plus two x 350 Ksh/female chick at two months old) for Sasso. The following figure shows the timeframe of saving activities:



Source: JICA Project Team

**Figure Timeframe of saving amount**

As shown, for indigenous chicken, the minimum amount can be saved by March 2014, and by April 2014 for Sasso. Within the program schedule, the minimum amount can be saved for both programs.

However, the money around Ksh.1,000 - 2,000 may not be actually so difficult to be collected, and considered small as the group money. More money can be saved from group members, so that the money exceed the minimum amount can be utilized for loan principle to the members, or any other purposes for the group (it can be discussed and decided among the members).

Actually, this amount can only be saved just from the first members (discussed later). Other members can start earning by selling eggs at 10 months for indigenous chicken, seven months for Sasso after they receive chicks (because two-month old chicks are distributed). Though the project can't fully monitor this, the contribution from the other group members could be encouraged. If so, the group may have some rules to collect money out of the sales from the rest of the members.

### (3) Expected benefit and cost for the individual members

#### 1) The first/representative members

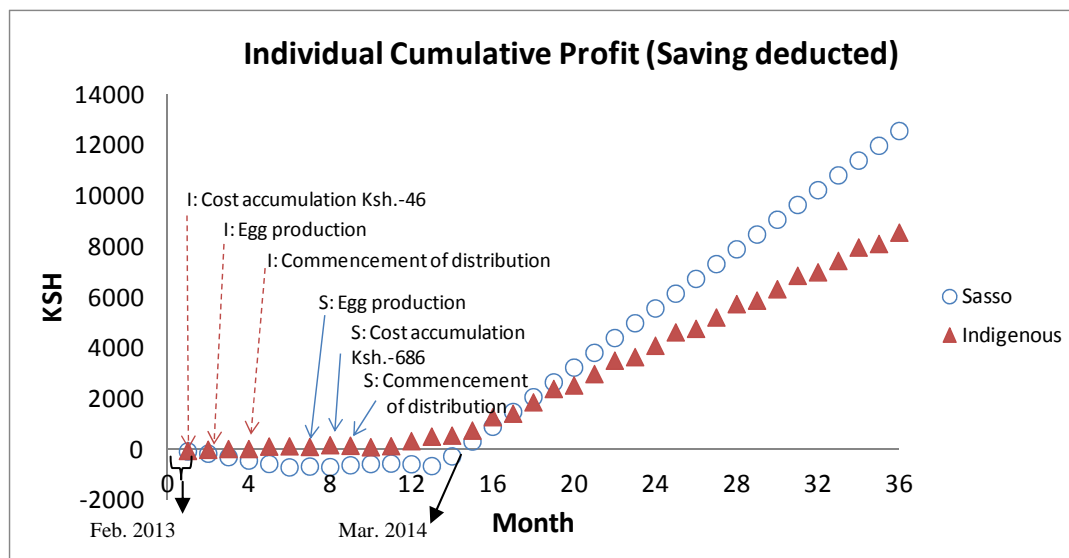
As the representative members, they have to increase the number of chicken and distribute to members. They have to bear any related cost except initial inputs (Sasso, they have to feed them to some extent). Also, the representative member must contribute some money to the group deposit to prepare for the future risk of drought. Current assumption of contribution is explained as below:

**-Indigenous chicken:**

All the sales of eggs are for the members. 50% of sales of chick (=50 Ksh/chick), 50% of sales of chicken (= 250 Ksh/chicken) is contributed to the group account. This contribution starts from 4<sup>th</sup> upto 15<sup>th</sup> month.

**-Sasso:**

All the sales of eggs are for the individuals. 50% of sales of chick (=100 Ksh/chick) is contributed to the group account. This contribution starts from 9<sup>th</sup> to 14<sup>th</sup> month.



Source: JICA Project Team

**Figure Individual cumulative profit (saving deducted)**

Beyond around the 14<sup>th</sup> and 15<sup>th</sup> month for both indigenous chicken and Sasso as shown in the previous figure, all the sales of eggs, chicks, and chickens can be thoroughly taken for him/her to give incentive to the representative members. The representative members must bear -46 Ksh for indigenous chicken at most as cumulative basis and -686 Ksh for Sasso, and these cumulative profits show negative figures until 11<sup>th</sup> month, 15<sup>th</sup> month respectively. However, once it is over, the representative members get continuously cumulative positive profits. If drought does not occur within three years, the profit exceed 10,000 Ksh at 32<sup>nd</sup> month for Sasso, and 8,000 Ksh at 35<sup>th</sup> month for indigenous chicken in addition to around 20 numbers of chicken as an asset (it takes around 13 and 14 months for both programs to reach 15 - 20 numbers of chicken).

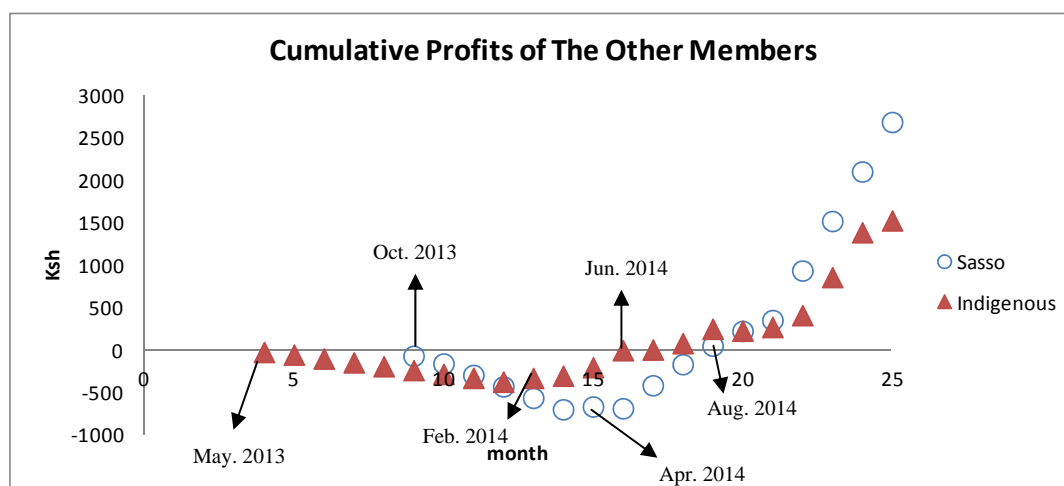
**2) The other members**

The other members can get any benefits from all the sales of eggs, chicks, and chickens as long as they can handle the distributed chicken by themselves including cost for fee, water, chicken cages if necessary, etc., and understand and obey the rule such as any obligation,



chickens' property, and minimum numbers kept with them because they have to wait for a bit longer period of time than the representative members.

They can start earning by selling eggs at 10 months for indigenous chicken, seven months for Sasso after they receive chicks (4<sup>th</sup> month and 9<sup>th</sup> month), meaning that 13<sup>th</sup> month and 15<sup>th</sup> month respectively after the program is commenced in the earliest member's case (others are obviously later). Cumulative profits can only show positive figures at 16<sup>th</sup> month (June 2014) for indigenous chicken, at 19<sup>th</sup> month (August 2014) for Sasso. In case that other members do not contribute to the group account, the timeframe and their cumulative profits are shown as below:



Source: JICA Project Team

**Figure** Cumulative profit of the other members

As discussed before, of course some of the money could be contributed by these other members if the group decides to do so to increase the group saving.

### 18.3.5 Implementation Procedure

The implementation will be done as following order;

- (1) Mobilization of community
- (2) Group Discussion
- (3) Procurement of Necessary Materials
- (4) Implementation of Baseline Survey for Target Group
- (5) Provision of Materials and Implementation of the Program
- (6) Monitoring of the Program

### 18.3.6 Necessary Materials and Inputs from the Project

The following inputs will be done by the project;

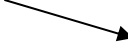
- (1) Chicken and poultry house

- (2) Trainings on technical chicken keeping
- (3) Training on group strengthening
- (4) Training on VICOBA
- (5) Periodical and ad hoc facilitating and mentoring activities to the group based on the events

# *Attachment G3-2*

*Information of First Recipients and  
Second Recipients As of December 2014*

**Attachment G3-2 Information of First Recipients and Second Recipients As of December 2014**

<b>Group name</b>	<b>First recipients</b>	<b>Second recipient(s)</b>
<b>Tumeamua</b>		
	C.Muthaura	<b>Awanja Paul</b> -Left the group and relocated to Isiolo <b>Sarah Martin Okale (Francis)</b> -Left the group after the advice from husband. <b>Kotiyo Moru (Susan)</b> -Left the group after advice from husband. <b>Martha Lomelo</b> -Left the group after advice from husband. <b>Alice Gaukwi</b> -Is yet to receive chicks. She is the wife to C.Muthaura.
	Pamela Cyprian Anyur	- <b>Peresede Martin</b> with multiplied chicks - <b>Loole Ekiru</b> with multiplied chicks - <b>Ngoroi</b> - She has insisted she wants to be built a house so that she can continue with keeping of Sasso chickens. - <b>Josephine Loragai Ekiru</b> - She left the group due to advice from the husband. <b>Sike Longolomoye Abalikin</b> -Yet to receive eggs.
	Angeline Eyan Lote	- <b>Mary Aroti</b> - She is the 2 <sup>nd</sup> recipient after receiving 7 eggs for hatching, 4 chicks were produced but later they were eaten by wild cats and hawks. She about 12 local chickens. - <b>Nasas</b> - Is a second recipient, received 5 eggs to be hatched. She has no chicks as the eggs didn't hatch. - <b>C.Muthaura</b> -although he is 1 <sup>st</sup> recipient. He received 8 eggs which hatched to 6 chicks that later died due to cold. <b>Long'oria Apei Anachile</b> - Has local hens. Willing to take Sasso eggs if provided with new poultry house.
	Mekelina N.	<b>Bernadette Anyur Akamar (Samuel)</b> - Now purchased local hen and ready to receive eggs from 1 <sup>st</sup> recipients. <b>Regina Lawrence Samal</b> - Has chicken but reluctant to take eggs. <b>Christine Nawapa kalaile</b> - No hens and reluctant to have any. <b>Rosemary Taraya</b> -Left the group without any reason. <b>Paskalina Sike</b> -Has local hen but reluctant to take eggs.
<b>2.Moti</b>		
	<u>1.Rose Musa</u> 	<b>Asili Nuno</b> -Not yet received eggs or chicks. <b>Saadia Hassan</b> -Hasn't received chicks/eggs <b>Hawo Hassan</b> -Hasn't received chicks/eggs this lady has initial two F now on behalf of Rose. <b>Shuke Dayo</b> -Hasn't received chicks/eggs
	2.Hussein Salesa She has initial one F.	<b>Halima Aali</b> <b>Okotu Godana</b> <b>Chole Godana</b> <b>Halima Mohammed</b> -Recipients haven't received chicks/eggs.
	<u>3.Fathe Elema</u>	<b>Qabale Jattani</b> <b>Amina Ali</b> <b>Fatuma Sora</b> <b>Osman Omari</b> -Recipients haven't received chicks/eggs.
	<u>4.Marian Tadi</u>	<b>Galgallo Dadacha</b> <b>Ali Harsame</b> <b>Jillo Dida</b> -Recipients haven't received chicks/eggs.
<b>3.Allahayo</b>		
	1.H.Nuno	<b>Hawo wako</b> -received chick but died. <b>Gedi Kitito</b> <b>Amina Huqa</b> <b>Bokayo Dido</b> <b>Happi</b>
	2.Kabale Bontara	<b>Hawo Abdi Huqa</b> <b>Lokho Waqo</b>

Group name	First recipients	Second recipient(s)
		<b>Halima Kachorai</b> <b>Zeinab Kimso Tadi</b>
	3.H.Halkano Keeps initial chicken together with Mary	<b>Yara Dulacha</b> <b>Abdia Boru</b> <b>Saafia Bagajo</b> <b>Jilmo Galma</b>
	<u>4.Mary Kole Benjamin</u>	<b>Mariam Galicha</b> <b>Saafia Jattani</b> <b>Rufo Liban</b>
<b>4.Goro-Kore</b>		
	Nuria Guyo Shibia	<b>Habiba Mohammed</b> <b>Mare Samwel</b> <b>Zeinab Mohammed</b> <b>Fatuma Mohammed</b> -Members haven't received chicks/eggs yet
	<u>2.Yatta Bayani</u>	<b>Qabale Galgallo Wako</b> <b>Fathe Kesho</b> <b>Amina Abilla</b> <b>Habadasso Guffu</b> -Members haven't received eggs/chicks after the seed chickens died from bee stings.
	3.Marta Jirra	<b>Fatuma Guyo/Jillo</b> <b>Elizabeth Daudi</b> <b>Dasso Marre</b> <b>Diramu Shunu</b> -Members haven't received chicks/eggs.
	4.Fatuma Galgallo (0717611473)	<b>Khadija Daki</b> -received chicks and alive now <b>Diramu Galgallo</b> <b>Diramu Guyo</b> <b>Halima Yussuf</b> -3 members haven't received chicks/eggs
<b>5.Kiwanja-Ndege</b>		
	1.Asafa Galata Kame Keeps initial chicken together with Galm	<b>Daku Abara</b> <b>Dhoko Salesa</b> <b>Qalm Dabaso Wila</b> -Members haven't received eggs/chicks yet
	2.Sarah M.Halkano Keeps initial chicken together with Qalich	<b>Nuria Halkano Dambi</b> chick from eggs distributed in August 2013. <b>Guyo Dabasso</b> <b>Luba Woche</b> -Last 2 recipients haven't received eggs or chicks
	<u>8.Galm Golombo</u>	<b>Dalabo Tadicha</b> <b>Dalesa Dima</b> -Haven't received eggs or chicks yet
	<u>9.Qalich Huqa</u>	<b>Orge Jaba</b> <b>Borge Dawe</b> <b>Qabale Halakhe</b> -Members haven't received eggs or chicks yet.
<b>6.Marta Arba Baretum</b>		
	1. Guyo Wako Keyate	<b>Yussuf Wako</b> <b>Abdi Sororo</b> <b>Abdullahi Ali Katelo</b> -Members haven't received chicks/eggs.
	2.Wario Jaba	<b>Doti Wako</b> -the chicks <b>Boru Jattani</b> <b>Wako Guyo Dodana</b> <b>Mariam Salesa</b> -Members haven't received chicks or eggs yet
	3.Elijah Joshua	<b>Shuke Boru Duba</b> has chicks distributed. <b>Qabale Dalacha</b>

Group name	First recipients	Second recipient(s)
		<b>Qampich Abdalla</b> <b>Bokayo Buri</b> -Three members haven't received chicks/eggs yet
	<u>4.Huqa Jattani</u>	<b>Golich Jarso</b> <b>Dida Wario</b> <b>Qabale Katelo</b> -Members didn't receive eggs/chicks as the seed chickens died.
<b>7.Tushikamane</b>		
	<u>1.Philip Wario</u>	<b>Wako Gusiya</b> <b>Diramu Wako</b> <b>Ganno Cholta</b> <b>Bore Gusiya</b> -Members haven't received chicks or eggs yet
	2.Halima M	<b>Abdikadir Diba Mohammed</b> has chicks distributed <b>Dasami Guyo</b> <b>Halima Dika</b> -3 members haven't received chicks/eggs.
	3.Jillo Borru	<b>Halima Goramu</b> has chicks distributed <b>Wario Wakalo</b> <b>Hashune Jattani</b> <b>Wario Guyo</b> -3 members haven't received chicks or eggs yet
	<u>4.Dub Godana</u>	<b>Kathuma Goramu</b> <b>Halima Jirimo</b> <b>Ashome Godana</b> -Members haven't received eggs/chicks yet
<b>8.Takuma</b>		
	1.Halima Guracha	<b>Gumato Mamo Molu</b> received chicks but died. <b>Daki Shanu</b> <b>Habiba Adan</b> <b>Adi Galgallo</b> -3 members haven't received eggs or chicks yet.
	2.Daki Dido	<b>Qaliti Huqa</b> <b>Hantut Wario</b> <b>Qabale Wario</b> <b>Salo Dido</b> -Members haven't received eggs or chicks yet.
	3.Habiba Kame Godana	<b>Hilo Ali</b> has chicks distributed <b>Bori Abduba</b> <b>Wato Dido</b> -2 members haven't received chicks/eggs yet.
	4.Bonsa Ginda	<b>Hadija Koya</b> <b>Amina Diqa</b> <b>Wato Shalu</b> -Members haven't received eggs/chicks yet.

Prepared by JICA Project Team

Remarks: underlined first recipients now lost/do not keep now all of their initially provided chicken. Marked second recipients currently have multiplied chicks alive.

# *Attachment G4-1*

*Sub-project: Goat Merry-Go-Round Program*

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**ATTACHMENT G4-1: SUB-PROJECT: GOAT MERRY-GO-ROUND PROGRAM****19.1 Purpose of the Program**

The purpose is to enhance community resilience against drought by sustainably utilizing this program as one of the means of livelihood to be introduced by the project.

The project envisages fostering self-reliant group members through the program and enabling them utilize saved money to re-start the same system by themselves (our approach is “development assistance”, not just “humanitarian aid”; therefore the program needs commitments from the participant groups). The program is implemented on a pilot basis hence the total target group cannot be very large. Therefore, it is expected that other groups outside the program come to adopt and start this system through their own initiative. In addition, it will be more than appreciated if the government will utilize this system as a model to apply to other areas of Marsabit county as one of the measures to mitigate future drought impacts.

**19.2 General**

Since time immemorial the local community in Marsabit has been keeping livestock and goats are one of the favorite animals. Based on consultation with them, the goat merry-go-round was chosen as one of the pilot programs for enhancing community resilience against drought. Two communities, one in Gar Qarsa near Marsabit town and two far off communities in Arapal and Kalacha indicated their desire to take part in the program.

This program is to provide a predetermined number of goats to target groups. The groups then rear and breed the goats to increase numbers and then share among the members in a very systematic manner following a predetermined order (this is called “Merry-Go-Round”, borrowed from the saving system of groups which is familiar in Kenya); It will also encourage members to save money out of the sale of goats and goat products as seed money which will be used to restock after the possible future loss of introduced goats due to drought.

Through a consultative process with the recipients, it was agreed that Galla goats should be the animal of choice for the areas that were keen on keeping goats. According to the National Agricultural and Livestock Extension Program (NALEP), in its National Farmers information Service, it states that “The Galla goat is an indigenous to Northern Kenya. It is also known as the Boran or Somali goat. It is the milk queen of the Kenyan arid and semi-arid areas. The female is about 60 cm wide at the shoulders and weighs 45 – 55 kg. The male weighs up to 70 kg. They are white haired with a black skin, on the nose (muzzle) feet and underneath the tail. Another subtype exists that has color around the neck and lower legs and black stripe down the spine. The females are long-lived and will continue to breed and rear healthy kids up to 10 years of age. They carry better milk genes and give greater opportunity for genetic selection for this



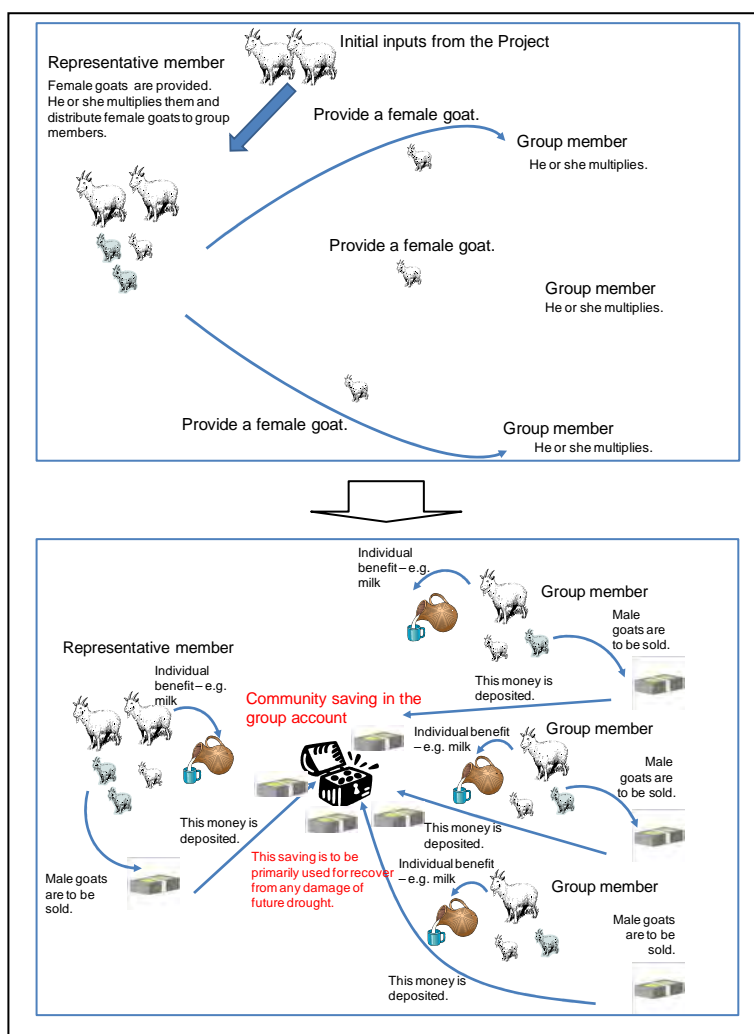
trait. The back is fairly long and slightly dipped. They are docile animals easy to handle but do not like cold wet climate, thriving best in low altitude preferably in acacia bush country. They have a higher compensatory growth rate after long dry season. The Galla produces about half liter of milk per day.” It is on the basis of such informed decision and of course in consultation with a majority of the stakeholders that the program chose the Galla goat.

### 19.3 Outline of the Sub-project

This program is to select groups of 20 members; provide goats to target groups; to increase numbers of goats; to share increased goats with group members (this is called “Merry-Go-Round”, borrowed from the saving system of groups which is common in Kenya); and to encourage members to save money out of them as seed money which will be used to recover from the possible future loss of introduced goats by drought.

#### 19.3.1 Group selection

Members of target groups are basically community people who have experience keeping goats. Different selection methods were applied by taking into consideration



Source: JICA Project Team

**Figure image of goat merry go round system**

different community characteristics. In Kalacha, group selection was done by through discussion with group representatives. The project involved selection of groups through a willing applicant process in Gar Qarsa, On the contrary, there are only two existing groups in Arapal and both groups were selected.

#### 19.3.2 General System

The project provides goats (for female goats, pregnant ones were preferred) to the group members. Representative members keep goats and breed them to increases numbers. When a

male goat is born, he is to be sold. When a female goat is born, she is distributed to the next group member in line. The goat keeper can use its milk for home consumption. Female goats must be multiplied until all the members get one. Once all the members get at least one female goat, each member may continue multiplying the number of goats for his/her own sake (to be discussed and decided with target groups). As a group, the money earned by selling male goats must be saved in the group's saving account/box to prepare for future drought. A representation of this system is shown on the previous page.

### 19.3.3 Basic Rules

#### (1) Keeping Goats

- Basically goats are the property of a group, but may belong to individual members for operation;
- The first members (custodians) are responsible for multiplying the numbers for the group. For mating services (reproduction), local male goats can be used from their own herd;
- Male goats are to be sold, and only female goats are distributed;
- Money obtained by selling male goats must be deposited in the group saving account (compulsory);
- Goats' multiplication continues until all the members receive at least one female goat;
- All the members must bear all expenses related to keeping goats but they are advised to cooperate with each other to take good care of the goats to make reproduction process faster;
- Members must understand, agree, and follow the rules of this system;
- All the members can enjoy milk from a provided female goat. And, they may enjoy all the benefits obtained from provided female goats after fulfilling agreed conditions; and
- To make peer pressures enhance a group system sustainably, group peer monitoring must be introduced (a group monitors the number of goats increased, and so on).

#### (2) Saving money

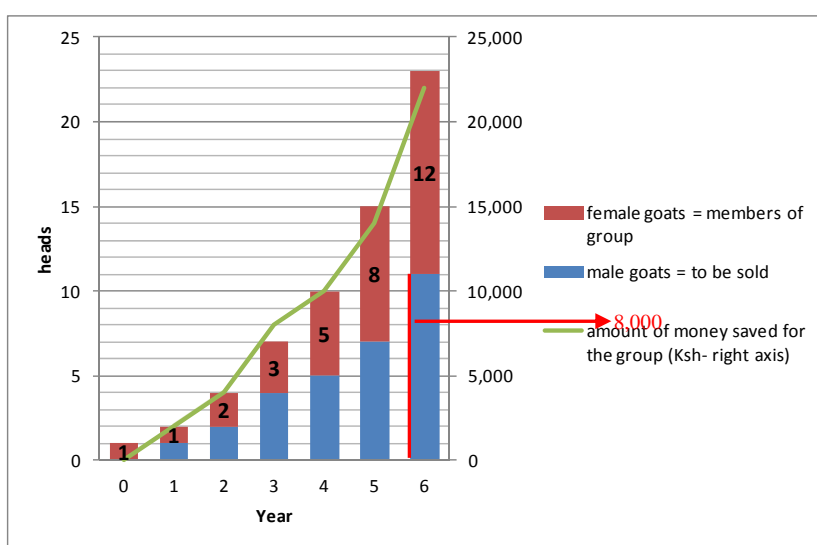
- Members must deposit the money when they sell male goats;
- Saved money can't be used until damage occurs to members' goats introduced (not any other private property) due to future drought;
- The deposit must be increased at least until the money is enough to buy the initial input of goats. After the money exceeds this minimum level, the group can choose whether they continue to increase the money or the group stops contributing;
- Other cases than the above that members can use the saved money could be decided among the members; and
- Group peer monitoring must be introduced (a group monitors the money saved and withdrawn by e.g. a treasurer).

### 19.3.4 Detailed Calculations

#### (1) The basic system

One female goat is considered to be provided at the initial point. After three years, members who can have one female goat will be three<sup>1</sup> including the first recipient member, and they can save enough money to buy one female goat (assuming Ksh.7,000/head as one and half years-old head) which can be utilized when this system is needed to be started again in future by themselves.

If there is no drought occurrence or any other event which reduces the number of goats, the future scenario of this system becomes the following:



Source: JICA Project Team

*Figure Image of increase of goat number*

As the number of delivered female goats increases and time goes by, number of total goats, benefited group members, and amount of money saved for the group increase cumulatively. Generally, the interval between one drought and another is considered around five years, and total goats to be delivered will be 15 goats, of which female goats (= new members) are eight. Actually, the conditions for the above study is conservatively assumed (delivery of twins are ignored for this assumption), therefore actual number could be more than the above. If the group continues for more than three years, they can save more money than that to be able to buy more than one goat.

#### 1 Assumptions:

- Period of pregnancy is 5 months; and three months are interval.
- Male kids are sold to save the money; and only female kids are distributed.
- One parent female delivers one kid, and probability to deliver male (or female) is 50%.
- One and half years are required for a newly born female goat to be able to service for pregnancy.

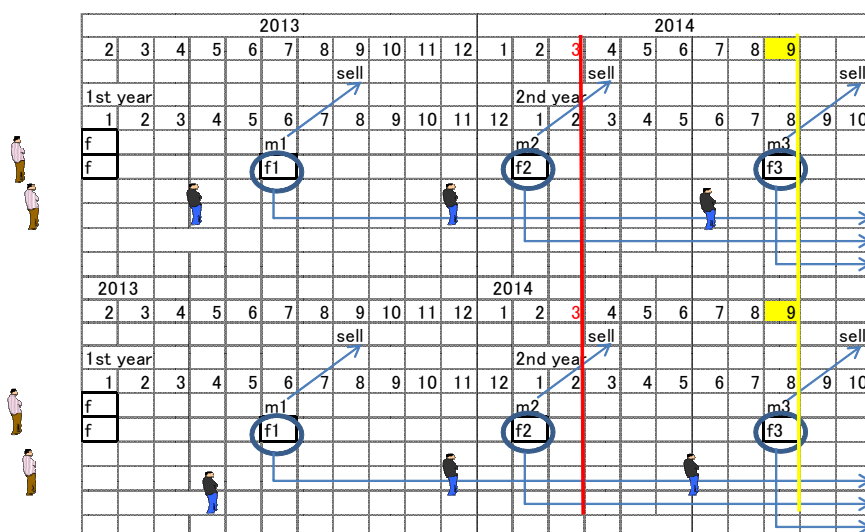
(2) Number of goats to be distributed under the project

The project has its own duration, around one and half years at longest, which is far less than three years. Also, it must be considered that one normal group in the project areas generally has around 20 members and their equitable benefits are desirable. If four female goats are provided, expected numbers of group members are supposed to be around eight to 10 after one and half years.

Based on the above examination, four female goats for eight to 10 members are considered as one set, and two sets are to be introduced to one group under this pilot program, so that most of the group members can benefit within the project duration. It can be said that the project starts the program from the stage of around fourth year of the basic system.

(3) Expected number of goats and group members

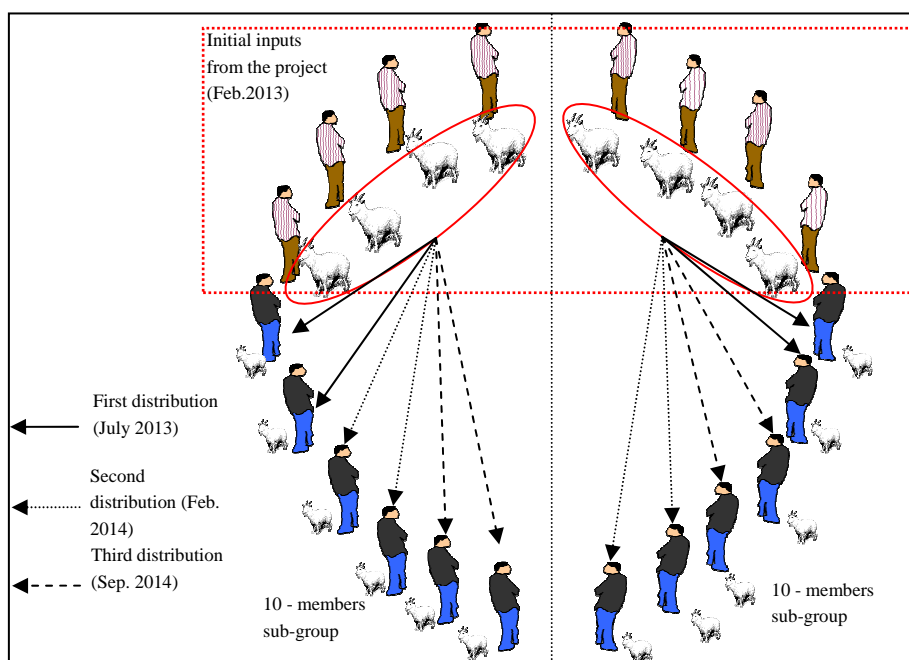
At the beginning of the program, four female goats x two sets = eight are to be provided to one group, hence eight representative members shall be in charge to increase the number of goats. Timeframe for one set is shown below:



Source: JICA Project Team

**Figure Image of goat distribution**

Two members are added in each month of July 2013, February, and September 2014. And the other one set has the same schedule. The project can monitor around until the September of 2014 (preferably by March 2014 but it is a bit short). Image of the increased group members during the program period is depicted in the following figure:



Source: JICA Project Team

**Figure** *Timeframe of goat distribution*

Unfortunately, any reproduction of the first distributed female goat will not be expected within the program timeframe. However, if the group continues this system further, the distributed female goats start to deliver the next generation, so that the speed of increasing group members or saving the money becomes faster.

#### (4) Expected money saved

Total number of male goats delivered within the program duration (by around Sep. 2014) is maximum six for one sub-group, which will give 12,000 Ksh at 2,000 Ksh/three months old. Even though some of the early delivered male kids are grown up to the end of the duration and sold (apparently grown goats have high value), total money can become around 23,000 Ksh for one sub group, which is unfortunately not enough to buy four female goats of the initial input (= around 28,000 Ksh). The project may encourage for the members to contribute some of the money (5,000 to 14,000 Ksh at maximum in total) in addition to the money of the sales until the amount comes to 28,000 Ksh just to show the final image of the system as the result of this pilot program.

Through the program, the project aims for making the community understand the basic idea of this system, so that they can save the money enough to buy the initial input. Therefore, persistent reminders about this idea will be a must to make the group continue the system until the money should be saved up to the necessary amount (in the case of the program, up to 28,000 Ksh of the money).

### **19.3.5 Implementation Procedure**

The implementation will be done as following order;

- (1) Mobilization of community
- (2) Group Discussion
- (3) Procurement of Necessary Materials
- (4) Implementation of Baseline Survey for Target Group
- (5) Provision of Materials and Implementation of the Program
- (6)Monitoring of the Program

### **19.3.6 Necessary Materials and Inputs from the Project**

The following inputs will be done by the project;

- (1) Goats for the groups
- (2) Trainings on technical goat keeping, if necessary
- (3) Training on group strengthening
- (4) Training on VICOBA
- (5) Periodical and ad hoc facilitating and mentoring activities to the group based on the events

# *Attachment G4-2*

*Detailed History of Initially Provided Goats  
as of December 2014*

## Attachment G4-2 Detailed History of Initially Provided Goats as of December 2014

Location	Group	Serial Number of Provided Goat	Goat Owner	Recipients	Current Data	Pregnancy			Kids			
						How many	when	Result	Sex	when delivered	Current condition/Location	when happened
Kalacha	Self-help	1	Kame Sako	Qatu Chachu	Alive	1	2013 Nov	Born	Male	2014 April	Healthy and with the	N/A
		2	Talaso Sora	Sororo Abudo	Alive	1	Assumed 2014 Apr-May	Still pregnant	No kid	No delivery	Goat is healthy and in (FORA)	N/A
		3	Ilo Gababa	Amina Galma	Alive	2	2013 Feb(1st preg),2014 April	Born(1st preg),Abortion(2014 June)-2nd preg	Male	2013 Aug	Goat and owner moved to Hurri-hills	2014 July(late)-moved to Hurri-hills
		4	Iladho Dambalo	Arbe Gindole	Dead	1	2013 Feb	Born	Female	2013 Aug	Mother goat dead(2014 Feb),female kid moved to Hurri hills	2014 Feb(mother goat died),2014 May(female kid with 2nd recipient to Hurri-hills) Transferred (Jan 2014)
		2-1	Arbe Gindole(2nd recipient)	Not yet decided	Alive	0(still young)	Not yet	Not yet	Not yet	Moved to Hurri-hills	2014 May(moving to Hurri-hills)	
Mwangaza		1	Gumato Ballo	yara Umuro	Alive	1	2014 March	Born	Male	2014 Aug	Goat and kid in FORA	N/A
		2	Boru Adano	Gorori Abduba	Alive	1	2014 March(1st preg),2014 April	Aborted in June(1st preg),Still preg(2nd preg)	No kid	No delivery	Goat in FORA	N/A
		3	Godoo Gacho	Ado Mohammed	Alive	1	2014 April	Aborted	No kid	No delivery	Goat in FORA	N/A
		4	Ramata Umuro	Midina Dube	Alive	1	2013 Feb	Born	Female	2013 Aug	Goat and transferred kid in FORA	Female kid transferred(2014 Jan)
Woldagena/Aneesa		1	Marti Molu	Shama Umuro	Alive	1	2014 May	Still pregnant	No kid	No delivery	Goat in FORA	N/A
		2	Ilato George	Qabale Yattani	Alive	1	2014 March	Aborted(2014 June)	No kid	No delivery	Goat in FORA	N/A
		3	Ilo Boru	Gudasoo Sora Abudho	Alive	1	2014 April	Aborted(2014 June)	No kid	No delivery	Goat in FOR A	N/A
		4	Adho Adano	Tume Wato	Dead	1	2014 Feb	Death before delivery	No kid	No delivery	Goat dead(2014 April)	N/A
Mazingira women		1	Wato Elle	Jillo Sora	Dead	1	2013 May	Aborted	No kid	No delivery	Goat dead(2013 July)	N/A
		2	Ellema Doyo Dire	Jarte Ali Dabello	Alive	2	1st pregnancy in May 2013 and 2nd in 2014 Feb	Abortion in 2013 Aug,aborted again in July(2014)	No kid	Aborted in July(2014)	Goat moved to Hurri-hills with owner	N/A
		3	Arrao Elema Galgalo	Kurfa Sora	Alive	1	2014 June	Still pregnant	No kid	No delivery	Goat in FORA	N/A
		4	Darare Mamoo	Shaku Bonaya	Alive	1	2014 May	Still pregnant	No kid	No delivery	Goat in FORA	N/A
Gar-Qarsa	Awan-Borri-Borro	1	Halakhu Dida	Dansa Jaldesa	Alive	1	2014 April	Born	Female	2014 Sept	Mother goat and kid in Qubi-qalo	N/A
		2	Garoo Guyoo Chukulisa	Amina Kosi Galgalo	Dead	1	2013 Feb	Goat died (2013 May)	No kid	No delivery	No kid.Mother goat died.	Died 2013 May
		3	Tume Chirri	Kabale Wako Bati	Alive	2	Mid March(1st preg),May-2013	Aborted(1st preg),Pregnant(2nd preg)	No kid	Not yet	No kid.Mother goat in Gar-Qarsa	Not yet
		4	Chirri Guyoo	Amina Jarso	Alive	3	2013 Feb,2013 May,2013 Sept	two aborted. Born(3rd preg)	Female	2014 Jan	Kid transferred to Amina Jarso.Mother goat and Kid in Qubi-qalo.	2014-June(end)-transfer
		5	Jillo Abdi Roba	Kabale Doyo Duba	Alive	1	2013 June	Born	Female	2013 Nov	Female kid died(May)	Female kid died early
		6	Chito Jillo Mukhe	Fatuma Halakhe	Dead(2014 July)	1	2013 June	Born	Male	2013 Nov	Kid healthy.In Qubi-qalo.	Not yet
		7	Hasaloo Buke Duba	Kabale Guracha Galgalo	Alive	1	2014 June	Aborted(2014 June)	No kid	No delivery	No kid.Mother goat in Qubi-qalo	Not yet
		8	Tume Somo	Amina Kosi Galgalo	Alive	1	2014 March	Aborted(2014 June)	No kid	No delivery	No kid.Mother goat in Qubi-qalo	Not yet
Artha-Jilla		1	Ruffu Gollo(Sec)	Group members not yet decided	Alive	1	2013 Nov	Born(2014 March)	Male	2014 March	Kid and mother are healthy.In Qubi-qalo.	None
		2	Fatuma Halake		Alive	1	2014 Feb	Aborted(2014 May)	No kid	No delivery	No kid.Mother goat in Qubi-qalo.	Not yet
		3	Mumina Halake	Helema Guyoo Malicha	Alive	1	2014 Feb	Born(2014 Jan)	Female	2014 Jan	Transferred to Helema Guyoo Malicha	Early July 2014(Transfer)
		4	Orge Galgalo	Goats died	Dead	0	No pregnancy	Not born	No kid	No delivery	N/A(Dead)	Dead(2013 April)
		5	Malich wako Boru		Dead	0	No pregnancy	Not born	No kid	No delivery	N/A(Dead)	Dead(2013 May)
		6	Elema Ganjora Karicha (Wako)		Dead	0	No pregnancy	Not born	No kid	No delivery	N/A(Dead)	Dead(2013 April)
		7	Lokidi Taraka		Dead	0	No pregnancy	Not born	No kid	No delivery	N/A(Dead)	Dead(2013 Aug)
		8	Elema Guyoo Ali		Dead	0	No pregnancy	Not born	No kid	No delivery	N/A(Dead)	Dead(2013 July)
Gar-Qarsa AIC		1	Jattani Huka	Not decided on 2nd recipients	Alive	1	2013 Nov	Abortion(2014 March)	No kid	No delivery	No kid.Mother goat in Qubi-qalo	Not yet
		2	Elizabeth Elema		Alive	2	2013 Feb(1st preg),2013 Sept(2nd preg)	Aborted-1st preg(2013 Jul),born(2nd preg)	Male (dead)	2014 Jan(2nd preg)	Dead(male kid).Mother goat at Gar-Qarsa	(Kid died)2014 July.
		3	Kabale Galgalo		Dead	1	2013 Feb	Died(2013 June)	No kid	No delivery	No kid	None
		4	Sake Huka Sora		Dead	1	2013 Feb	Died(2013 July)	No kid	No delivery	No kid	None
		5	Jillo Godana		Alive	0	Never pregnant	Never given birth	No kid	No delivery	No kid.In FORA(Qubi-qalo)	Not yet
		6	Tume Baruda		Alive	2	2013 Feb(1st preg),2014 March(2nd preg)	Aborted(2013 May),Still preg(2nd)	No kid	No delivery	No kid.In FORA(Qubi-qalo)	None
		7	Galgalo Wako		Alive	2	2013 Feb(1st preg),2014 May(2nd preg)	Aborted(2013 May), still preg(2nd)	No kid	No delivery	No kid.In FORA(Qubi-qalo)	Not yet
		8	Kabale Denge		Alive	2	2013 Feb(1st preg),2014 May(2nd preg)	Aborted(2013 April-1st preg),still preg-2nd	No kid	No delivery	No kid.In FORA(Qubi-qalo)	Not yet
Artha-Balla		1	Daki Gababo	Adi Qura Issako.	Alive	1	2013 April	Born	Male	2013 Sept	Healthy and with the	None
		2	Asha Baruda	Nuria Okotu	Alive	1	2013 March	Born	Female(dead)	2013 Aug	Female kid transferred to Nuria Okotu (2nd recipient).Goat in Qubi-qalo,female kid died.	Transferred in 2014 June. Kid died(2014 Sept).
		3	Elema Irma	Karu Adi Chone	Alive	1	2013 Sept	Born	Female	2014 Jan	Goat in Qubi-qalo	None
		4	Hakulo Adi Chone	Bokayo Liban Dido	Alive	2	2013 Dec,2014 June	Aborted(2014 April and Sept)	No kid	No delivery	N/A	None
		5	Amina Diba	Kabale Wako Huqa	Alive	1	2014 Jan	Aborted(end March)	No kid	No delivery	N/A	None
		6	Fatuma Galgalo	Lokho Halakhe Elema	Alive	1	Jan-2014	Aborted(end March)	No kid	No delivery	Again mating	None
		7	Guyatu Wako	Kabale Duba	Alive	2	2014 Jan and June	Aborted(mid-March and Sept)	No kid	No delivery	Again mating	None
		8	Kule Guyoo	Kabale Guyoo Godana	Dead	0	Never conceive	Never pregnant	No kid	No delivery	Goat died by 2013 Aug	None
Halcha		1	Shuke Elema	Qabale Wako	Alive	2	2013 Sep (1st) 2014 Feb(2nd)	-Had abortion in Dec 2013(1st preg),born July 2014(2nd preg)	Male	2014 July	Kid and mother goat in Qubi-qalo(FORA)	None
		2	Kabale Guyoo	Asha Halakhe	Alive	1	Nov-2013	Aborted	No kid	No delivery	Not mating by now	None
		3	Halakhu Ali	To be confirmed later	Alive	2	Nov-2013 April-2014	Aborted(Feb/2014 but again(April) pregnant.	No kid	No delivery	Pregnant	None
		4	Jillo Tadi Halakhe	Boru Jillo	Dead	1	2013 Feb	Died before	No kid	No delivery	Goat died by 2013(May)	None
		5	Jillo Dida Roba	Jillo Wako	Dead(2013 August)	1	2013 Feb	Born(2014 Aug)	Female	2013 aug	Kid dead(2014 June)	2014 June



Location	Group	Serial Number of Provided Goat	Goat Owner	Recipients	Current Data	Pregnancy			Kids			
						How many	when	Result	Sex	when delivered	Current condition/Location	when happened
		6	Elema Galgallo Kanchora	Adale Bonaya	Dead	1	2013 Feb	Died before delivery	No kid	No delivery	Goat dead(2013 July)	None
		7	Fayo Jattani Arero	Coso api	Dead(2014 Jan)	1	2013 Feb	Died before delivery	No kid	No delivery	Goat dead(2014 Jan)	None
		8	Kule Halakhe Lalicha	Elema Molu	Dead(2013 April)	0	N/A	N/A	No kid	No delivery	Goat dead(2013 April)	None
	<b>Obsina-Sukunana</b>	1	Jillo Were	Guyo Gababa	Alive	1	2013 Nov	Born	Male	2014 March	Kid(is healthy)+mother goat in Qubi-qalo(FOR A)	None
		2	Daki Galgallo	Elema Baruda	Alive	2	2014 April, 2014 July	Aborted(1st preg),preg(2nd)	No kid	No delivery	No kid.Goat in Qubi-qalo(FOR A)	None
		3	Jillo Halakhe	To be confirmed later	Alive	1	2014 June	Pregnant	No kid	No delivery	Goat in Qubi-qalo(FOR A)	None
		4	Kule Wako	Bokayo Dubuka Guyo	Alive	2	2013 June(1st preg), 2014 Jan(2nd preg)	Born(1st preg), Aborted(2nd preg)	Female(1st preg) (dead)	2013 Oct(1st preg)	Mother goat in Qubi-qalo(FOR A). Female kid transferred to Bokayo Dubuka Guyo was sick from circling disease(Sirgo-in Borana) and died.	Transferred in 2013 Dec. Kid died in Sep 2014
		5	Adi Golo Denge	Jilo Wako	Alive	2	2013 Feb(1st preg),2014 June(2nd preg)	Aborted(2013 May),Preg(2nd)	No kid	No delivery	No kid.Goat in Qubi-qalo(FOR A)	None
		6	Jillo Jarso	Halkano Wario	Alive	2	2013 Sept(1st preg)/2014 march(2nd preg)	Aborted(1st preg)/Born(2nd preg)	Male(2nd preg)	2014 Aug	Kid and mother goat in FORA	None
		7	Farah Gababa	Galgallo Guyo	Alive	1	2014 Jan	Born(2014 June)	Female	2014 June	Kid and mother goat in Qubi-qalo(FOR A)	None
		8	Jarso Boru	Diramu Wako	Alive	1	2014 April	Aborted 2014	No kid	No delivery	Goat in Qubi-qalo(FOR A)	None
	<b>Balchuma Contact Women</b>	1	Elema Molu	To be decided later by the members	Alive	1	2014 March	Still pregnant	No kid	No delivery	Goat in FOR A	None
		2	Qurfa Guyo		Alive	1	2014 Jan	Born	Male	2014 July	Goat and kid in Qubi-qalo(FOR A)	None
		3	Kabale Wario		Alive	1	2014 Feb	Aborted in April/2014	No kid	No delivery	Goat is healthy and in Qubi-qalo(FOR A)	None
		4	Amina Bonaya		Alive	0	0	No pregnancy	No kid	No delivery	Goat is healthy and in Qubi-qalo(FOR A)	None
		5	Sororo Halake		Alive	0	Not yet	No pregnancy	No kid	No delivery	Goat is healthy and in Qubi-qalo(FOR A)	None
		6	Godana Haron		Alive	0	Not yet	No pregnancy	No kid	No delivery	Goat is healthy and in Qubi-qalo(FOR A)	None
		7	Tume Galgallo		Alive	0	Not yet	No pregnancy	No kid	No delivery	Goat is healthy in Qubi-qalo(FOR A)	None
		8	Jillo Roba		Dead	0		No pregnancy	No kid	No delivery	Goat died by 2013 Aug	None
	<b>Baadaqicha</b>	1	Diko Wako	Not decided on 2nd recipients	Alive	1	2013 Dec	Born	Male	2014 March	Healthy	Not yet
		2	Chukulisha Roba		Alive	1	2013 Dec	Born	Male	2014 March	Healthy	Not yet
		3	Wato Tumicha		Alive	2	2014 Feb(1st),2014 April	Aborted(1st preg),born(2nd preg)	No kid(1st preg) Female(2nd preg)	No delivery(1st preg), 2014 sept(2nd preg)	Goat and kid in Qubi-qalo(FOR A)	NA
		4	Sharma Jarso Abgudo		Alive	2	Sep-2013(1st preg), 2014 June(2nd preg)	Aborted(1st preg), Born(2nd preg)	No kid(1st preg), Male kid(2nd preg)	2014 October(2nd preg)	Goat and kid in Qubi-qalo	January 2014(abortion);1st preg
		5	Guyatu Diba		Alive	1	2014 June	Born	Female (dead)	2014 October(early)	Kid died soon after born	Though born in early Oct.2014, soon died 2014 October(late)
		6	Mumina Huka		Dead	1	2013 Feb	Aborted(2013)	No kid	No delivery	Goat dead(July 2013)	Not yet
		7	Dima Boru		Dead	1	2013 Feb	Aborted(2013)	N/A	N/A	Goat dead(June 2013)	Not yet
		8	Buke Duba		Dead	1	2013 Feb	Aborted(2013)	N/A	N/A	Goat dead(Feb 2014)	Not yet
	<b>Barite women</b>	1	Diramu Elema	Members not yet agreed on 2nd recipients to get female kids incase they are born.	Dead	1	Nov-2013	Born(March)	Female	(26/3/2014)March	Kid is healthy and in FORA	Kid healthy but mother goat died in 2014 April.
		2	Esther Talaso		Dead	0	0	Goat died	No kid	No delivery	No kid as mother goat died	Mother goat died by Aug-2013
		3	Saafia Galgao		Alive	1	Jan-2014	Aborted	No kid	No delivery	Still recovering	Aborted on 26/3/2014
		4	Salo Bora		Alive	2	2013 Nov(1st preg),2014 Feb(2nd preg)	Aborted 2014 Jan(1st preg),born(2nd)	Male	2014 July(2nd preg)	Goat and kid in FOR A	Aborted in Jan/2014(1st preg)
		5	Diramu Dadecha		Alive	1	Jan-2014	Aborted(20 14 March)	No kid	No delivery	Goat in FOR A	None
		6	Gumato Boru		Alive	1	Dec-2013	aborted(2014 March)	No kid	No delivery	Goat in FOR A	None
		7	Ramata Denge		Alive	1	2014 March	Born	Male	2014 Aug	Goat in FOR A	None
		8	Jaro Denge		Dead	1	2014 April	Hadn't delivered	No kid	No delivery	Goat dead(early Aug 2014)	2014 Aug
<b>Arapal</b>	<b>Parkishon</b>	1	Nampaso Lekoli Leteya	Ntiliswa Parsanti	Dead	2	1st preg(2013 Feb),2nd Preg(2013 Nov).	Aborted(1st preg) Born (2nd)	Male	2014 March(Second kid)	Kid healthy (around Arapal). Goat dead(2014 July)	N/A
		2	Rose Ngede	Ntathanwa Lengoyap	Alive	2	1st preg(2013 Feb),2nd preg (2014 March)	Abortion(2013 June),born(2nd preg)	Female(2nd preg)	2014 Aug(2nd preg)	Around Arapal	N/A
		3	Mary Lesapicho	Nkilpan Site Lekoli	Alive	2	1st preg:2013 Feb,2nd preg: 2013 Dec	Born (1st) aborted(2nd preg)	Male(1st kid) (dead)	2013 Aug(1st kid)	Kid died(2014 May),Mother goat in FORA	2014 May
		4	Rungei Dabalen	Sailian Lekadaa Minitisian Lekula	Alive	1	2013 Feb	Born	Male (dead)	2013 Aug	Kid(died in 2014 Feb),Mother goat in FOR A	2014 Feb
		5	Chaachwa Lengoyap	Ntepeyon Leng'uro	Dead	1	2013 Feb	Not born	No kid	No delivery	N/A	Goat dead(2013 Aug)
		6	Martiyon Lepakiyo	Limayo Leparsanti Lisina Leparsanti	Alive	1	2013 Feb	Aborted(2013 May)	No kid	No delivery	Mother goat in FORA	N/A
		7	Masarwan Lenatapale	Nkisan Lekoli Namiri Lengesi	Alive	1	2013 Feb	Aborted(2013 June)	No kid	No delivery	Mother goat in FOR A	N/A
		8	Mariano Lentpan	Lina Letimo	Alive	1	2013 Feb	Aborted(2013 May)	No kid	No delivery	Mother goat in FOR A	N/A
		9	Nkorien Lekula	Nareyo Lekula	Alive	2	2013 Feb( 1st preg),2013 Oct (2nd preg)	Aborted 2013 June(1st preg), born(2nd preg)	Female(dead)	2014 Feb (2nd preg)	Goat and in FOR A	Transfer to Nareyo Lekura in August 2014 Female kid to Nareyo died in mid Oct.2014
		10	Nguruk Lesapicho	Nirasin Leparsanti	Alive	1	2014 Oct(1st preg)	Pregnant	No kid	No delivery	Goat in FOR A	N/A
		11	Ntelenwa Leparsanti	Nangasai Lekerde	Alive	2	2013 Feb(1st preg), 2014 Jan (2nd preg)	1st preg (no information=perhaps aborted), 2nd preg (aborted-2014 march)	No kid	No delivery	Mother goat around Arapal	None
		12	Nengisoi Lesiantam	Lina Lekoli	Alive	1	2013 Feb	Aborted(2013 May)	N/A	N/A	Mother goat in FORA	None
		13	Simpato Kaitogo	Ntalaswa Lefepelepe	Alive	1	2013 Feb	Aborted(2013 June),not yet pregnant	N/A	N/A	Mother goat around Arapal	None

Location	Group	Serial Number of Provided Goat	Goat Owner	Recipients	Current Data	Pregnancy			Kids			
						How many	when	Result	Sex	when delivered	Current condition/Location	when happened
		14	Nasiyo Lesingirah	Ntoronua Leparsanti	Alive	2	2013 Feb(1st preg), 2014 June(2nd preg)	1st preg; Aborted (2013 July), 2nd preg-still preg	N/A	N/A	Mother goat in FORA	N/A
		Male goat	Ntirasin	None	Alive	0(Male goat)	N/A	N/A	N/A	N/A	N/A	Goat in FOR A
	<b>Naserian</b>	1	Scholastica Lekoli(Hawo)	Nturwa Lesapicho	Dead	1	2013 Feb	Delivered/born	Female	2013 Aug	Kid dead(2014 July)	Transferred in 2013 Sept to NTURA LESAPICHO but died mid-June(2014).
		2	Lekula Ngeiywo	Ngekuyet Lekoli	Alive	1	2013 Feb	Delivered/born	Female	2013 Aug	Transferred to NGEKUYET LEKOLI	Transferred in 2013 sept
		3	Ngeyasim Lesiantam	Rapiyon Lesiantam	Alive	1	2013 Feb	Delivered/born	Male	2013 Aug	Still with owner,healthy and big in size to be sold any	N/A
		4	Sipiyan Lekula	Nadipan Natapale	Alive	2	2013 Feb(1st pregnancy),2014 Feb(2nd pregnancy)	1st preg delivered,2nd preg not yet delivered.	Male (1st preg) (dead)	2013 Aug	Kid dead(2014 April)	Kid dead(2014 April)
		5	Ripit Lentipan	Ntorian Lesapicho	Alive	1	2013 Feb	Delivered	Male	2013 Aug	Kid,mother goat in FOR A	N/A
		6	Nakiniya	Ndukas Lekope	Alive	1	2014 Feb	Delivered	Male	2014 Aug	Kid,mother goat in FOR A	N/A
		7	Naolen Lenawamuro Lesurungai	Asha Mpirikanyi	Dead	0	(The female goat died)	N/A	N/A	N/A	N/A	Goat dead(2013 Aug)
		8	Reti Leng'uro	Chaina Lenyumba	Dead	2	2013 Feb(1st),2013 Oct(2nd)	Born(1st preg),Aborted(2nd preg)	Male(1st preg), (dead)	2013 Aug(1st preg)	Kid died(2014 March). Goat dead(2014 April)	Kid died March 2014 Mother goat eaten by hyena in April
		9	Sokotian Lekula	Machachi	Alive	1	2013 Feb	Aborted	No kid	No delivery	Goat in FORA	N/A
		10	Rantini Lekaitogo	Ntirimo Leinte	Alive	2	2013 Feb,2014 March	Aborted(1st preg),born(2nd)	Female	2014 Aug	Goat and kid in FORA	N/A
		11	Naseye Lemadada	Nginangari Lepakiyo	Alive	0	Never conceived	Never pregnant	No kid	No delivery	Goat in FORA	N/A
		12	Ntaleitan Lenyumba	Silata Lewanamuro	Alive	2	2013 Feb(1st), 2014 March(2nd preg)	Aborted(1st preg),born(2nd preg)	Female	2014 Aug	Goat in FORA	N/A
		13	Ngeseni Lekula	Nguchungwan Lenatapale	Alive	2	2013 Feb, 2014May	Aborted(1st preg),still preg(2nd preg)	No kid	No delivery (Almost to deliver)	Goat in FORA	N/A
		14	Nariso Lekerde	Mpichowan Leparsanti	Alive	0	Never conceived	Never pregnant	No kid	No delivery	Goat in FOR A	N/A
		Male goat	Ntaruk		Dead	0(Male goat)	N/A	N/A	N/A	N/A	N/A	N/A

Hawo took female goat from Nalikon Lesiantam who died (previously Hawo did not received an initialy goat)