



MELCA-ETHIOPIA

# *Community Based Agrobiodiversity Management (CBAM)*

Gindeberet Project

*There were lots of traditional foods we used to prepare from our local seeds for our different cultural occasions: dabo, chuko, chechebsa, merka, affela etc. We can not prepare these from the new varieties. Our cultural occasions would be meaningless without these foods.*







## MELCA-Ethiopia

### Vision:

To see healthy and prosperous people that preserve their bio-cultural diversity

### Mission:

To work for healthy ecosystems, resilient communities and critical young generation through developing and institutionalizing innovative approaches and experiences

### Goal:

To increase the adaptive capacity to social and ecological challenges of communities and contribute to the creation of a healthy ecosystem.

## Project background


This project can be considered an extension of the Community Based Agro-biodiversity Management project that MELCA has been implementing in its Suba-sebeta project area Telecho Kebele since 2012. The CBAM Gindeberet project was started in 2014. Both the Telecho and Gindeberet CBAM projects have been implemented with a financial support obtained from the Norwegian based Development Fund (DF).

A community-based agro-biodiversity management is a program whereby farmers get the necessary support and technical assistance to maintain ecological farming practices through conserving their traditional seed varieties, maintaining on farm diversity and use of organic fertilizers to enhance their farm productivity and strengthen their adaptive capacity to the effects of climate change.

Supporting farmers to conserve, use and develop genetic diversity of crops of local importance is the core strategy both for achieving food security in general, and for climate change adaptation. Crop genetic diversity is best conserved on-farm (or in situ) and tested and utilized by smallholder farmers.







Accordingly, the overall objective of the program is supporting farmers to conserve, use and develop genetic diversity of crops of local importance with a target of bringing about sustainable climate change adaptation among the farmer communities.

## Community Based Agro-biodiversity Managenet (CBAM) related activities

Series of awareness raising trainings on agro-biodiversity management and value of conserving farmers' seed varieties have been organized both for farmer communities and experts and officers in relevant government structures.

In addition to the awareness raising trainings, the Haro berbabo community of Gindeberet have done Eco-cultural mapping of their area.

The mapping excersise is aimed at serving the double purpose of supporting the community in Gindeberet, and also adding to the methods and instruments that MELCA can use to encourage and support the work of farmers in improving their food production based on agrobiodiversity at same time as revitalizing, mobilizing and conserving their biocultural diversity including their seeds.

Another objective of the mapping process is to document the traditional ecological knowledge of the Haroberbabo community related to seeds to ensure that the knowl-

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edge can be strengthened and used for continued effective protection and sustainable use of their seed system.

In the mapping process, the actors participated in the planning of the mapping practice, including selection of an area and the places to be mapped, and refining the purpose of the process and the outcome.

Then, some of the outcomes of the mapping exercise were proposals from the community for projects ranging from soil and water conservation to income generating activities.

After the awareness creation trainings, farmers in Haro-berbabo kebele of Gindeberet woreda got organized and formed an association. They named their association Haro-Melca Farmers' Seed varieties Conservators and Producers Private Limited Association. Initially the association was formed by 60 members.

According to Ato Derese Gero, chairman of the association, the association is established with the objective of restoring, reproducing and conserving displaced and rare local seed varieties.

Members of the association, who were 60 at the beginning has reached 143 within only two years time, says Ato Derese.

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Community doing the mapping



Ato Derese Gero



Regarding how their association was formed and developed in a short period of time Ato Derese says “After being formed as association, we got different trainings on the value of conserving our local seed varieties. We also traveled to other places and shared and learned from the experience of farmers who are engaged in conservation and production of local seed varieties. We learned so many lessons from the trainings and the experience exchange visits. Inspired by what we saw and heard, we immediately started to identify local seed varieties that we had before some years in our area but we do not have now.

We had all these crop varieties just a couple of decades back. Our fathers and fore fathers used them. But as the years passed, the farmlands in our area started to be degraded along with the deforestation and expansion of agriculture. The soils became poorer and poorer and the yield we used to get from these varieties started to decline from year to year. As a result, many households faced food insecurity. Then the government introduced some improved varieties along with chemical fertilizers as a solution to the prevailing problem of less agricultural productivity.

In fact, we saw that the product we get started to increase after we started to use the improved varieties and the chemical fertilizers. So, many farmers started to abandon the local varieties and resort to these newly introduced ones. Though we knew the attachment of the local varieties to our culture and living style, many of us overlooked that and focused on the product we get per area of land. In this process, many farmers totally lost the local varieties. Yet some farmers, especially the elders, did not totally abandon the local varieties. They kept using them along with the new varieties at a smaller scale.

But as the years passed, we started to see and learn the effect of the new varieties and the fertilizers. The new varieties cannot perform without the chemical fertilizers. Unlike our local varieties, they can-

not survive even minor calamities, such as less moisture and crop diseases. We have also seen that the soil needs more amount of fertilizer each year once you start to use it. Furthermore, we learned that the food from the crops of the new varieties is different. The taste and flavor as well as nutritional content are different. These are not like the foods we used to eat some years back.”

Adding to this, Ato Fufa Tolesa, deputy chairman of the association says the following:

“With the loss of our local seeds we also were on the way to losing our culture. There were lots of traditional foods that we used to prepare from our local seeds for different cultural occasions. We cannot prepare traditional foods such as chuko, chechebsa, merka and affela from the new varieties. And the cultural occasions would be meaningless without these foods. So we were actually on the way of losing our culture and identities along with the seeds.

In addition, we were losing the seed and food diversity we were enjoying previously. The new improved varieties that came to us are very few; not more than four or five varieties. These are very few as compared to our diverse varieties. We used to have more than 25 crop varieties. The variety in one species is even many. If you take wheat for example, we had white wheat, black wheat, gonde, lowaa, qubsa etc. The same with crop varieties like teff, barley and sorghum. There is no such variety in the



Ato Fufa Tolesa







newly introduced seeds. So we lost all the benefits of food and economic gain we were enjoying from the diversity.“

Continuing to talk on the issue Derese says, “It is at this time, when most of us started to frustrate, that MELCA came with the idea of reintroducing our local varieties. We got trainings on the value of our local varieties and how to improve their productivity. We also saw how farmers at other areas are working on this through the experience exchange visits.

Inspired by what we learned and saw, we started to search for areas where our lost local seed varieties can be found. The next step was to purchase and bring the seeds back. We purchased and brought lost local seed varieties of wheat (locally called black and Gonde), black barley, teff (red and white), beans and others. We brought around nine lost local varieties back.

So we started to be engaged in conservation and production of the local seed varieties by forming an association. We started the association with 60 members. We got one hectare of land from the woreda administration to use as experiment field and build a Community Seed Bank. Soon members of our association increased to 103 and we have reached 143 in this farming season.

Initially we bought around 12.8 quintals of different local seed varieties



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and shared most to members to be planted in their private farmlands. We have also planted some from each variety on our experiment field to select the best performing ones through our Participatory Variety Selection (PVS) exercise with the aim of enhancing their productivity. We do the experiment at different stages of the crops’ growth. Then we select the best performing ones to be tried out on our private farmlands.

From this process, we are learning that the productivity of the local varieties can be significantly enhanced through better soil management. We use composts on the experiment fields and agreed to cultivate them on our private farmlands exactly in the same way we cultivate them on the experiment field.

The seeds have well performed on the private lands last year. We have recollected the seeds from the members with 5% increment. We redistributed, this farming season, 23.8 quintals of different local varieties to farmers. As farmers are seeing that the local varieties can well perform with good soil management, the demand for the local seeds is increasing.”

Regarding the initiative of local seed conservation started by the farmers’ association, Ato Tolesa Abdisa, Administrator of Gindeberet woreda shared his idea as follows:



Ato Tolesa Abdisa

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“As government we encourage our farmers to be engaged in conservation of local seed varieties. The improved varieties were introduced by the government to boost productivity per unit of land and tackle the problem of food insecurity that was prevailing in many rural areas including Gindeberet. But we do understand the social, cultural and economic benefits of the local varieties and the limitations of the newly introduced improved varieties.

The only limitation with the local varieties was less productivity. And this problem can be solved through better soil management; using compost and rehabilitating the ecosystem. As long as their productivity is enhanced, we know that the benefits our farmers get from the local varieties are by far greater than what they get from the improved varieties.

Firstly, the local varieties are adapted to the local environment. They can withstand calamities such as draught and crop diseases. Secondly, they are much attached to the culture and tradition of the community. Cultural values attached to these local seeds of the communities will be saved by conserving them. In addition to these, we also know that the farmers will benefit from the diversity of the local seeds. There are those they use for local consumption and others, such as oil seeds, are produced to



bring better income. Diversity on farm is one of the means by which farmers can increase their income.

Since the ultimate goal of the government is ensuring the food security at household level and reduce the poverty level of the farmers, we are happy as government organs if these can be done through our local varieties.”

To support the initiative by the farmers’ association, MELCA-Ethiopia is building a Community Seed Bank (CSB) complex by the side of the farmers’ experiment field in Haro-berbabo kebele. Construction of the CSB constitutes seed store, germplasm, laboratory, offices, conference hall and equipment store.

Regarding the CSB underconstruction, Ato Deme Feye, Agricultural extension tem leader in the Agriculture office of the woreda said, “MELCA wanted to get land to build a community seed bank and the woreda agriculture office immediately responded by providing a portion of the FTC land in Haro berbabo kebele. We did that because we believed the project is beneficial for the community.

As a government organ working in the agricultural sector, our office understands the value of conserving local seed varieties. It is true that we should also work on conservation of these seeds. As currently the government is working on provision of modern agricultural inputs such as improved seeds



Ato Deme Feye





and fertilizers, conservation of local seed varieties is being overlooked.

But we do understand that local seeds are adapted to the local ecosystem. They are resistant to diseases and can even perform on poor soils. We also know how much the local varieties are attached to the culture and life style of the community. So it is an opportunity to have a non-governmental organization working on this.“

Regarding short and long term future plans of the farmers’ association, Ato Derese, chairman of the association, said, ““We have two major focuses for the near future. One is to be engaged in rehabilitation of the general ecosystem and the other is strengthening the capacity of our association.



Regarding the ecosystem rehabilitation, we do understand that working on the ecosystem is a condition for enhancing productivity of the local seed varieties. We have to improve fertility of the soil through soil and water conservation works and increasing the vegetation cover. All our members have shown their commitment to contribute all they can to that end. We have requested a land for reforestation from the woreda and got three hectares for now. We work on reforesting that and also rehabilitating other degraded lands.

In relation to strengthening the capacity of our association, we have a plan

to be engaged in production of highland fruits and vegetables on the land adjacent to our experiment field. For that we have prepared a hand dug deep water well to be used during the dry seasons. Besides, we will also work on animal fattening. We have prepared evergreen fodder grasses for that.

In the long term, we are going to use the area as a research center; where we will come up with best methods and best performing crops, fruits, vegetables and animals and expand the experience to our private lands. I believe change begins in the minds of individuals. In this regard, I am sure there is a total change in the attitude of our members. What comes next is to put that in to practice. We have also started that. This is just the beginning. There is a lot to come.”

MELCA is also providing economically disadvantaged women and youth members of the association with livelihood improvement supports. The purpose of this support is to improve the life and livelihood of poor women and youth in the community to enable them actively participate in the social and economic activities in their community.

Through the livelihood support scheme, the beneficiaries are provided with entrepreneurship training, seed money and relevant W/ro Dawi (above) with her sheep (below)







business skill to keep their respective businesses sustained.

Accordingly, trainings and seed money amounting birr 80,000 has been provided for 40 beneficiaries (20 women and 20 youth), who are all members of the association, in the month of January 2016.

W/ro Dawi Mamo is one of the women beneficiaries of livelihood improvement. Speaking of the changes in her livelihood as a result of the support, she says, “I got birr 2000 some 8 months back and bought two ewe (mother sheep) with the money. Then each produced two lambs. One gave birth to a lamb just after a month after I bought it. So the number of my sheep rose from two to six in a very short period of time.

One of my sons got sick and I sold one of the newly born sheep to get him treated in hospital. He is my eldest son who supports me in many ways. So I sold the sheep to get him healed, as I have no other source of money. Now I have five sheep including the mothers. And shortly both will bear additional lambs and the number of my sheep will increase.

I have a home garden where I produce vegetables like potato and cabbages. I am now using the dung from the sheep to fertilize my garden. The product I get from the garden has increased since I started to add the manures to the soil. So the benefits I am getting from the sheep are diverse.



I expect more newborn lambs in the near future. And the existing ones will grow. I will fatten the male sheep and sell them. Then I am planning to buy an ox to plough my farmland. What I am getting from the farmland now is less because I have no ox and cannot till the whole land effectively by my own and my children’s labor. So the product I get from my farmland will increase and our suffering from the severe poverty we have been facing will be alleviated accordingly. Now I have this bright hope and I am happy.“

W/ro Dawi also speaks of the benefits she got from being a member of Haro Melca farmers’ seed varieties conservators and producers private limited association. In this regard, she said, “After becoming members of the association, we are benefitting not only economically. We are also learning new things from time to time. For example I learned a lot from the trainings organized by MELCA and I participated on. I am so happy with that. Moreover the fact that we are participating on meetings and sharing our ideas there equally with the men is something new for most of us. As far as I am concerned it is something I am equally benefiting from and enjoying. I never had such experience before and didn’t think I can be heard in a meeting where men and women participate together. To share my ideas and listen to what others say. There is a lot to learn from that. Now I am seeing that, as a member of the community, there is something I can do and contribute out of my kitchen. This all is happening because of







W/ro Korche Belay

the coming of MELCA's project to our kebele.

I think this is just the beginning and there is a lot more to come. The only thing expected of us is to open our minds and ready to learn the ways to improve our lives and get free of poverty."

In a similar manner, W/ro Korche Belay, who is also a member of the association and beneficiary of the livelihood improvement support, tells the following as the benefits she got from being a member of the association: "MELCA-Ethiopia has come to our kebele with a ringing bell to wake us up. We got trainings on the value of conserving our local seed varieties and culture. We have almost lost all our local seeds we had some years back and resorted to the new seeds.

We ignored the fact that our local seed varieties are strongly connected to our culture, are locally adapted and can withstand various crop diseases. Even some of them have medicinal value especially for mothers during delivery. Yet we ignored all these values and resorted to the new varieties, which give more produce but lack all these values. But now we are back to our senses. We have learned that we can also enhance productivity of our local seed varieties through better soil management.

Personally, I am much attached to the local seed varieties. My grandmother died at the age of 110 seven years ago. When she died, she gave

me some local seeds of maize and barley and told me not to lose them. She told me to use these crops for my family and specially to eat porridge from that barley when I give birth. She used to say the newly introduced varieties are not strong enough to build our body. She not only gave me the seeds but also a coin that they used during emperor Haile Sillassie. She believed that coin has also a power of curing both humans and domestic animals from illnesses. These are old things I inherited from my grandmother.

Now I am hearing what my grandmother told me about the local seeds from educated people and admiring how knowledgeable she was. So this project is actually reinforcing the insights I got from my grandmother."

W/ro Korche is also a beneficiary of the livelihood support scheme. Regarding the benefits she gained from the livelihood support scheme, she says, "MELCA is also supporting us to have better income and live improved life. I am one of the women getting the economic benefit. I got birr 2000 loan in January 2016 and bought two mother goats with the money. One gave birth to two baby goats and the other one. Now I have five of them. It is so promising that their number is increasing so quickly. Hope I will repay the debts in a short time and get more benefits from the goats. I am planning to buy a cow from the sells of the he goats. Then I will get more income from the sell of milk and butter for my family and also to support my children's schooling."



W/ro Korche with her five goats







Alemi Debelu is a 28 year old young beneficiary of the livelihood improvement support. She is a member of youth group in MELCA Haro farmers' seed varieties conservators and producers association.

Speaking of the benefits she got and the changes happened in her life as a result of the intervention, she says, "I got birr 2000 on loan eight years back. With that money, I started a small shop, in my rural area, where I sell coffee and tea as well as other drinks. I transport the beverages and drinks from town to my place on donkey. I started the business by bringing four boxes of drinks (two boxes of soft drinks and two boxes of beer, each box containing 24 bottles) and two bottles of liquors. After eight months, the amount of boxes of soft drinks and beer that I buy at once and make available to serve has doubled. The number of bottles of liquor I put on my shelf has also increased to six. I sell out this amount in a maximum of two weeks time before the rainy season came and now, in the rainy season, it takes up to three weeks to sell out all. I found the business profitable and promising.

Before I started this business I used to buy and sell some spices and pulses on market days. I left my schooling to support my parents and younger sisters and brothers by generating some income from this small trading. The profits I used to get from that is nothing

ing compared to what I am getting from this new business.

Now I support my parents and also save some money. I already bought two sheep with the money I save. I have also started to save birr 200 every month in the "Iqub" I started with some friends.

All in all I can boldly say now that in the near future my business will bring me more and more income. I am planning to rent a house in the town and continue the business there at a bigger scale. Now I have realized that it is a good business if I do it with more money at a bigger scale. Thanks to MELCA, my eyes are opened. I have started to see many things that I can use to improve my life and that of my family. Unlike my fate, now I am sure that my little sisters and brothers will continue going to school. The future is bright."

Shanko Firisa is an Agronomist officer at MELCA's Community Based Agro-biodiversity Management Project at Gindeberet. Shanko confirms that numerous changes and community movements around local seed conservation have been created in the past three years as a result of the p[roject] intervention. According to Shanko, the following are among the major achievements of the project:

- High rate of awareness created regarding the value of conserving farmers' seed varieties
- Restoration of 15 lost local varieties including four barley varieties and



Ato Shanko Firisa







eight teff varieties

- Reintroduction of pulses, for crop rotation and nitrogen fixation
- Adaptation of new varieties introduced to the area; like the Indian Gipto
- Reintroduction of oil seeds like linseeds and sesame to increase the income of farmers
- Introduction of fodder plants like Desho grass for animal fattening
- Conservation of on farm diversity, tried on experiment fields
- Formation of farmer centered experiment field where farmers conduct research on enhancement of productivity of local seed varieties through Participatory Variety Selection (PVS) exercise. Farmers are keen to have what they have tried on the experiment field in their own private farmlands.
- Making and use of organic fertilizers like compost along with the local varieties
- Active participation of women on the PVS exercise
- Formation of a vibrant farmers' association with the main objective of reinstating, conserving and reproducing displaced and/or rare farmers' seed varieties.
- = Establishment of a Community Seed Bank (CSB) complex, which is the key to sustain conservation of the local seed varieties.
- Creation of unity and cohesion among community members
- Creation of farmer researchers
- Improvement of the life and livelihood of women and youth members of the association through the livelihood support scheme







MELCA-ETHIOPIA



THE DEVELOPMENT FUND (DF)

