



REPORT ON SIX TRAINING WORKSHOPS FOR COFFEE FARMERS ON AGROFORESTRY PRACTICES IN COFFEE FARMS IN OKU- CAMEROON

From 25th to 29th November 2014

This Agroforestry training report is prepared by

**Cameroon Gender and Environment Watch
(CAMGEW)**

For

**OKU AREA COOPERATIVE UNION (OACU) LTD
Coffee Farmers**

Period: 2014

Report prepared by WIRSIY Emmanuel BINYUY of Cameroon Gender and Environment Watch CAMGEW
Website: www.camgew.com **Email:** camgew@yahoo.com; camgew@gmail.com
Telephone: (237) 75184310, 97037417 **Address:** P.O. Box 17 Oku, Bui Division, North West
Region, Cameroon

ACKNOWLEDGEMENT

Cameroon Gender and Environment Watch (CAMGEW) wishes to thank Oku Area Cooperative Union (OACU) LTD for contacting her to do this training for her farmers. It demonstrated a true local partnership needed to build an emerging Cameroon by 2035. CAMGEW also applaud the team efforts of the Oku Area Cooperative Union (OACU) LTD to make this training successful through their facilitation. We wish to thank the Manager of the Union - Mathew Ngangwa and President of the Union-Ngoran Peter Kentum for their support. Special thanks go to Mr Kenen Philemon and Babah Godwill who were our contact persons for facilitation before and during the trainings.

We also like to appreciate the managers and farmers of Cooperative Produce Marketing Societies (CPMS) in each village, for their warm reception to us in their Societies. We are proud of the Sub Divisional Delegate of the Ministry of Agriculture and Rural Development for Oku and his extension workers for encouraging coffee farmers to attend the training. CAMGEW staff showed their team spirit in making this training a success, this also call for appreciation.

PRESENTATION OF OKU

Oku is found in Bui Division of the North West Region of Cameroon. The population is English speaking. Coffee cultivation is highly practiced in Oku. Oku is a touristic destination with a rich culture and forest biodiversity. This biodiversity is in Kilum Mountain forest measuring up to 3011 m with a large crater lake call Lake Oku. According to the recent population census, Oku has a total population of 87,790 inhabitants on a surface area of 3750.50 km² distributed in 36 villages. The women make up 51.6% while the men make up 48.4% of the population. The population of the area is stratified into children, youths, adults and the old. The area has a vibrant active population that range between the ages 15 to 35. Its economy depends on agriculture with few other alternative sources of livelihood for the population. Farmers in the area practice mainly subsistence agriculture. The agriculture population of the area comprises essentially farmers, grazers, pond owners, poultry farmers and only a small proportion of the population practice hunting. The main crops cultivated are maize, beans, Solanum potatoes, cabbage tomatoes and huckleberry. Coffee cultivation is one of the main cash crop and it is grown more in the villages where there is still much land. Oku is hilly with coffee cultivated at high attitude of up to 2000 m. The area has an undulating terrain and suitable climate which favours animal husbandry with animals like cattle, goats, sheep, pigs, birds, horses, donkeys, dogs and cats. The grassland vegetation on the hills serves as grazing sites for the cattle as well as food source for other herbivores like goats and sheep. Within Oku, the extensive system of rearing is high with a high prevalence of stray animals in the communities. Despite the long hours and efforts put in by farmers in cultivation, farmers still get very low yields because of drawbacks like poor farming practices, crop and animal pest, high prices of farm inputs like chemical fertilizers, farmer/grazer conflict, unavailability of good storage facilities, use of poor quality seeds, poor state of farm to market roads, stony landscape and difficulties in adapting to climate variation.

TABLE OF CONTENT

ACKNOWLEDGEMENT.....	2
----------------------	---

PRESENTATION OF OKU.....	2
--------------------------	---

SECTION I: INTRODUCTION

1.1)- PRESENTATION OF CAMGEW	4
1.2)- PROJECT PRESENTATION AND METHODOLOGY.....	4
1.3)- PRESENTATION OF AGROFORESTRY AND ITS LINK TO COFFEE CULTIVATION.....	6

SECTION 2: REPORT ON TRAINING CARRIED OUT ON AGROFORESTRY TECHNIQUES FOR COFFEE CULTIVATION

2.1)-WINDBREAK:	7
2.2)-LIVING FENCES:	7
2.3)-ALLEY CROPPING:	8
2.4)-TERRACES & CONTOUR PLANTINGS:	8
2.5)-FIREBREAKS:	9
2.6)-THE FOREST GARDEN:	9

SECTION 3: TRAINING REPORT ON AGROFORESTRY SYSTEMS APPLICATION IN COFFEE FARMS

3.1)- IMPROVING SOIL FERTILITY IN COFFEE FARMS THROUGH NITROGEN FIXING TREES:	11
3.2)- COMPOSTING FOR COFFEE FARM IMPROVEMENT:	11
3.3)- HOUSEHOLD WASTE MANAGEMENT FOR IMPROVED COFFEE CULTIVATION:.....	12
3.4)- MANAGING VEGETATION IN FARMS TO INCREASE COFFEE PRODUCTION:	13
3.5)- IMPROVEMENT OF SHADE IN COFFEE FARMS:	13
3.6)- AGROFORESTRY AND COFFEE FOR LIVESTOCK MANAGEMENT:	13
3.7)- CONTROLLING WATER RUNOFF IN COFFEE FARMS:.....	14
3.8)- DIVERSIFICATION OF COFFEE FARMERS INCOME.....	15
3.9)- REMOVAL OF COFFEE UNFRIENDLY TREES FROM COFFEE FARMS:	15
3.10)- NURSERY DEVELOPMENT FOR COFFEE CROPS OR AGROFORESTRY TREES:	17
3.11)- NUMBER OF FARMERS TRAINED.....	17

SECTION 4: LESSONS LEARNED, CONCLUSION AND RECOMMENDATIONS

4.1)- LESSONS LEARNED.....	18
4.2)- CONCLUSION.....	18
4.3)- RECOMMEDATIONS.....	18

SECTION I: INTRODUCTION

1.1) PRESENTATION OF CAMGEW

CAMGEW is a non profit created in October 2007 with authorization number N° 000998/RDA/JO6/BAPP to solve environmental and gender issues in Cameroon. CAMGEW works locally and thinks globally. CAMGEW believes that the future of our mother planet-earth is in our hands and also that the planet can be sustained by putting social and environmental justice at the centre of development. CAMGEW seeks to achieve her objectives by liaising with other like-minded organizations worldwide. It is in this line that she has partnered with OKU AREA COOPERATIVE UNION (OACU) LTD to help her coffee farmers implement agroforestry systems in their farms to improve on coffee production in an ecological way and diversify their income sources. CAMGEW has resolved to function according to core values of honesty and engagement in respect of her constitution to help communities help themselves. CAMGEW has as vision “Changing lives of women, children and communities while protecting the environment and as mission to fight poverty; promote sound environmental management, gender balance and economic sustainable development. CAMGEW intervenes in domains of forest regeneration, environmental education, Vocational training, bee farming training, child and youth development, agroforestry and gender equality.

1.2) PROJECT PRESENTATION AND METHODOLOGY

Oku Area Cooperative Union (OACU) Ltd in her drive to build the capacity of her coffee farmers on the need to promote agroforestry systems in their coffee farms by integrating agroforestry trees that can improve on soil fertility, serve as weed breaks, give additional income and prevent soil erosion, reached out to Cameroon Gender and Environment Watch (CAMGEW)- an Oku Community Based organisation to lend a helping hand in passing on theoretical and practical agroforestry lessons to her coffee farmers. This also involved training on the methods that these farmers could use in their coffee farms to sustainably improve on their livelihoods. The trainings were done in 6 sites (Mbam, Elak, Nkwi, Mboh, Ngham and Shinga area). Each training was organised to cover 30 to 40 persons. The training had the following objectives:

- To help farmers provide shade to coffee crops and prevent soil erosion;
- To help coffee farmers have natural manure in their farms especially through the planting of Nitrogen fixing trees
- To help coffee farmers diversify the income and grow food crops in their coffee farms

CAMGEW after signing a Memorandum of Understanding with the Oku Area Cooperative Union Ltd, prepared a manual for this training titled “Training Manual On Agroforestry Practices in Coffee Farms in Oku-Cameroon”. This manual was presented to the Oku Area Cooperative Union Ltd for approval before the training started. The training manuals were multiplied and shared to all coffee farmers during this training on agroforestry techniques application in their farms.

The training started from 25th November 2014 and ended on the 29th November 2014, covering six Cooperative Produce Marketing Societies (CPMS) in six sites. The training was carried out per day in each CPMS. The training started each day at 9:00 am and ended at 4:30

pm. It involved theoretical lessons on coffee, agroforestry definition, agroforestry techniques and its application in coffee farms for improved shade, soil fertility, prevention of soil erosion and sustainable farmers' livelihood improvement. Each day, training ended with field visit to a nearby coffee farm where trained coffee farmers applied the knowledge learned through field discussion on how to apply the learned agroforestry techniques in coffee farms. CAMGEW agreed that agroforestry tree nurseries will be set in each of the 6 CPMS to enable farmers have access to shade trees, nitrogen fixing trees and other crop trees that can increase farmers income sustainably. A participatory approach was used in the training with farmers asking questions or contributing where need be. Through this training CAMGEW got local names in the local language of some agroforestry trees that have been used in Oku. CAMGEW will research on the scientific names and add to the existing list of agroforestry trees that she knows. The training was done following this programme

SN	DATE	SOCIETY AND VENUE
1	Monday 24 th November 2014	MBAM CPMS LTD in Mbam for both Bow and Mbam farmers
2	Tuesday 25 th November 2014	NKWI CPMS LTD in Nkwi for all coffee farmers around Nkwi, Lum, Simonkoh, Ntowel, and Nguvinkei II
3	Wednesday 26 th November 2014	OKU CENTRAL CPMS LTD at Elak for Lui , Ngashie, Fekeng, and Manchok farmers
4	Thursday 27 th November 2014	IJIM CPMS LTD in Ngham for Mellem, Ichim, and Ndum coffee farmers
5	Friday 28 th November 2014	SHINGAAH CPMS LTD at Ngemsiba for Lang, Mbockevu, Ibal and Nguvinkei I farmers
6	Saturday 29 th November 2014	ETUM CPMS for Mboh, Jiyane, and Jikijem farmers

Training programme for agroforestry training

The training team made up of trainers from CAMGEW and facilitators from OKU AREA COOPERATIVE UNION LIMITED left Elak every day and arrived at the training sites at 8:00 am each day before the training began. The team was made up of the following:

SN	NAME	ORGANISATION	FUNCTION	FUNCTION IN ORGANISATION
1	Wirsiy Emmanuel Binyuy	Cameroon gender and environment Watch (CAMGEW)	Trainer	Director
2	Ngum Jai Raymond	Cameroon gender and environment Watch (CAMGEW)	Facilitator/ Field Work	Field Staff
3	Ngoran Peter Kentum	Oku Area Cooperative Union Ltd (OACU LTD)	Facilitator	President of Board of Directors
4	Mathew Ngangwa	Oku Area Cooperative Union Ltd (OACU LTD)	Facilitator	Manager of the Union
5	Nkenen Philemon	Oku Area Cooperative Union Ltd (OACU LTD)	Facilitator	Chief of Staff
6	Babah Godwill	Oku Area Cooperative Union Ltd (OACU LTD)	Facilitator	Book Keeper

Trainers and facilitators in the training

1.3) PRESENTATION OF AGROFORESTRY AND ITS LINK TO COFFEE CULTIVATION

Agroforestry is a collective name for land use systems that combine trees with crops and/or animals on the same unit of land. From the name “agroforestry” one could think of agriculture and forestry. In another sense, we could think of how a natural forest can be transferred to the farms to enable farmers avoid soil erosion, get firewood, green manure, shade, wind breaks and variety of products from farms like it is done in the forest. Agroforestry creates farm micro-climate (humidity, sun intensity and wind) thereby helping farmers to get high farm yields. Coffee farms need agroforestry systems to conserve soil nutrients; protect and improve coffee yields; and avoid water and soil losses. This could be done by creating various tree canopies in coffee farms like it is found in a natural forest to enable coffee crops benefit from shade, soil conservation and micro-climate necessary for healthy coffee growth. Coffee farmers can plant various appropriate tree canopies of benefit to them and this will improve lives of farmers. Water and soil are two of the most important resources for coffee farmers around the world. The soil and water of any community must be conserved for the present and future generations. Soil nutrients are tampered with by erosion in farms and this reduces fertility. Farms with no shade and mulching promote evapo-transpiration leaving farms dry.

Agroforestry systems come to integrate trees, crops, people, and/or animals on the same piece of land in order to get higher productivity, greater economic returns, and more social benefits on a sustained basis. This can be done by planting appropriate trees and crops together with coffee in the same field. By planting the correct trees and shrubs on their coffee farms, farmers can improve the quality of their farmlands, develop organic fertilizer to conserve soil, increase income generating opportunities and establish sustainable supplies of high-protein animal forage, food, fuel, medicines and building materials. Not only does agroforestry provide useful and marketable products, it diversifies the timing of production so that farmers do not receive their entire year’s income at one time only from coffee. It can improve the yields of agricultural systems, while also diversifying the products from the system. Animals are confined and fed with fodder harvested from coffee farms and its dung use as manure in coffee farms. Ultimately, the use of agroforestry leads to food security, soil and water conservation, and long term sustainable agriculture. A coffee farmer needs to develop his/her farm in such a way that each month he/she should have something to harvest from the farm while waiting to harvest coffee later. Agroforestry system fulfils economic, social, and cultural needs of the individual owners and provides biological conservation, carbon sequestration, and other valuable benefits to society.

Agroforestry systems can be categorized as follows:

- Structural basis:** referring to vertical stratification or tree canopy layering.
- Functional basis:** referring to the major function or role of the system like windbreaks, shade provision, soil conservation, etc
- Socio-economic basis:** referring to either management for subsistence, commercial or intermediate. This will determine management inputs, scale and intensity.
- Ecological basis:** referring to soil conservation practices for sustainable management practices to improved organic matter of the soil and nutrient cycling

SECTION 2

REPORT ON TRAINING CARRIED OUT ON AGROFORESTRY TECHNIQUES FOR COFFEE CULTIVATION

Agroforestry techniques were taught to coffee farmers. These techniques can be used by farmers to address soil erosion, improve soil fertility, provide shade to crops, prevent fire out breaks, prevent water losses, avoid animal encroachment in farms and increase farmers' sources of livelihoods. Farmers learned the following agroforestry techniques during training:

2.1)-WINDBREAK: Windbreaks was presented as one of the agroforestry technologies that slow down wind at coffee level and diverted the force of the wind to higher altitudes. It was also shared with farmers that wind breaks had the following advantages to farms:

- It minimized damage to crops,
- It protected crop flowers and fruits from wind (fruits develop from the flowers, production can be increased by protecting flowers from heavy winds),
- It minimized soil erosion by wind and
- It minimized the amount of moisture the winds evaporate from soils.

It was discussed that the species composition of trees and shrubs used in windbreaks vary greatly, but that the basic design of windbreaks remained the same. Farmers learned that windbreaks should be planted perpendicular to the wind and that windbreaks could be planted on multiple sides of fields because sometimes winds often changes direction during the year. Desirable characteristics of windbreak species were presented to include: ability to withstand strong winds and deep spreading root system to add stability to the trees. Farmers also learned that windbreaks could be trees planted in lines or trees scattered all over the farm whose height is above that of the crop(s). Trees used in windbreaks could be Kolanuts, Pears, Plums, *Prunus africana*, etc.

2.2)-LIVING FENCES: A living fence was presented as an animal-proof barrier composed of trees and shrubs planted at close spacing around the perimeter of the coffee farm. It was said that living fences reduce the need (and cost) for standard fencing, but the trees and shrubs utilized in living fences can produce tangible benefits such as food, fuel wood, fodder, and other raw materials. Families were encouraged to normally build dead fences to protect the planted fence trees while waiting for the live fence to grow. Replanting should always be done to fill the gaps where the previous year's seedlings did not survive. Farmers were asked to prune the planted trees in order to maintain the height of the fence at a certain level. However, once the living fence was established, it could provide permanent safety and security especially against thieves as it offered permanent protection. In the training farmers learned that the desirable characteristics of living fences as follows: Tolerant to minor "injuries"; Fast growing; Compatibility with crops; Produce useful products (like fodder, green manure, & fuel wood); Protection (stiff branches, thorns, spines, nettles, or irritating latex to keep animals out) and Vegetative propagation.

2.3)-ALLEY CROPPING: Alley cropping was presented in the training as the planting of strips of ‘green manure’ trees among coffee crops. These green manure trees were said to be vital in producing nitrogen-rich organic matter (mainly in the small, easily degradable leaves) that could fall and increase soil fertility or harvested and mixed into the soil for soil fertility improvement. Despite the fact that the rows of trees reduce space for planting coffee, experience shows that there is an increase in soil fertility and crop production. The roots of the trees help hold the soil together preventing soil erosion and are also nitrogen fixing with nodules as those found in beans that increase soil fertility. In Designing alley cropping systems trainers said rows of planted trees should run from east to west - following the path of the sun to ensure that there is not too much shading among rows. Spacing between rows could range from 4 to 20 meters, depending on the farmer’s preferences. Farmers using the trees for animal forage should plant closer while farmers who will use the planted trees for firewood and construction should plant further apart. Rows of trees are often harvested or prune at 50 cm to 1 meter height. Branches are used for construction and for fuel wood, and leaves are mixed into the soil as an organic fertilizer, though leaves of some species like *Leucaena* are also collected and used as a high-protein animal forage. Examples of nitrogen fixing trees are *Leucaena* and *Calliandra*.

2.4)-TERRACES & CONTOUR PLANTINGS: Contour planting was presented as an agroforestry technology that can minimize soil erosion on hillsides by up to 50%. Contour lines were referred to as a set of points on a hillside that are all at the same altitude. Participants learned that Contour plantings are vegetative strips that follow contour lines and minimize hillside erosion by creating living terraces to encourage the infiltration of rainwater into the soil. Contours slowed the speed of water washing soil down the hillside. It was said that the more upland soils erode and degrade, the more the demand for food crops increase and farmers are forced to more marginal lands, including very steep hillsides. Participants learned it was common to see a farmer planting his crops up and down a steep hillside throughout without considering that the bare soils on those hillsides are eroding away creating deep gullies. Farmers who wanted to sustainably work these lands therefore needed to construct terraces that are often comprised of stones from the field. The eroding soil backs up behind them and, over time, these terraces become flat, looking like a series of giant steps down the hillside. Terracing is common only in house construction in Oku and not in farming. As the land is worked, stones, weeds, and other debris are continually thrown behind the rows of trees, forming a wall that helps catch the eroding topsoil. Many of these terraces or contours have tall grass, such as vetiver, elephant grass, Guatamala or napier, which are planted in combination with the trees like *Leucaena*, *Calliandra*, *Accacia*, *Prunus africana*, etc. This further strengthens the terrace and contours and some of these tree leaves could be continuously harvested as fodder for livestock, as organic matter to be added to the soils, and for other purposes. In this way, there can be a stone terrace, backed by trees and tall grasses, strengthened by hundreds of thousands of tree roots. In areas of heavy rain, soil build-up behind these terraces is as much as 30 cm (1 foot) per year - rich topsoil that would otherwise have been washed away.

2.5)-FIREBREAKS: Participants learned that firebreaks are necessary in the dry season to prevent fires from getting into coffee farms. Many coffee farms are surrounded by bushes or dry vegetation in the dry season and it is difficult to clear all this vegetation surrounding the coffee farms. It becomes more complicated when the surrounding land to the coffee farms are owned by different persons. In order to prevent bushfires from entering their coffee farms, farmers were asked to make firebreaks. Farmers learned that bushfires are always caused by cigarette smokers, poor honey harvesting or carelessness from farmers cultivating around coffee farms who set fire to burn vegetation in their farms. Farmers learned that there are two ways to make firebreaks. One way is through clearing a path that separate our farms from nearby bushes or vegetation. The path cleared needs to be clean with no vegetation on it and could be above 3 m wide. Some of the parts cleared could be farmed with ever green crops like sweet potatoes. Clearing should be done in November or early December each year before vegetation gets fully dry. Farmers learned too that firebreaks could also be created by planting thick evergreen vegetation at borders of coffee farms to prevent fire resulting from nearby land to enter coffee farms. During the course of the training, a farmer shared that he makes his firebreak at the border to his farm and all vegetation cleared is added to the contour and covered with soil and he plant sweet potatoes on this bed. He explained that, he does this clearing at October ending when the vegetation is still a little wet to allow for biodegradation. He preferred to make a contour bed to avoid keeping the vegetation loose for fire could still get into his farm when this piled vegetation is dry.

2.6)-THE FOREST GARDEN: A forest garden was presented as a sustainable agroforestry system that fulfills economic, social, and cultural needs of the individual farmers and provides biological conservation, carbon sequestration, and other valuable benefits to society. Farmers learned that agroforestry requires them to think both horizontally and vertically with a forest garden being a perfect example. Farmers learned a forest garden could go by many names including permaculture, stacked polyculture, analog forestry and ‘the perfect acre.’ Participants learned that system can give them products at different levels and time and that there are no specific designs or methodologies for a forest garden but there exist just a set of desirable characteristics and zones.

Major Characteristics of a forest garden

- It allows people to sustainably meet their needs and produce a marketable surplus, by making maximum use of the land
- It incorporates the symbiotic relationships among plants, animals and microbes
- It avoids the risk of economic dependence on one, or a very few crops
- It provides a continuing supply of food and other crops
- It allows nature to provide organic fertilizers and pest controls
- If properly managed, it produces fruits and vegetables of far higher quality than those produced through monocultures

With their ecological similarities to natural forest ecosystems, farmers learned that forest gardens act as insurance against pests and disease outbreaks. They also act as a buffer against deforestation of natural forests by providing an alternative source for goods and services that people would otherwise collect from natural forests. The multi-storied canopy structure is one

of the most distinguishing features of forest gardens, especially in humid tropical lowlands. About ten zones are distinguished in a typical forest garden.

Major Zones

Zone 1: The planting of fertilizer trees that are initially planted to protect and support a forest garden like *Leucaena*, *Calliandra*, *Sesbania*, *Cassia*, *Acacia sp.*, *Sesbania*, etc.

Zone 2: Ground crops that grow well in lower temperatures, higher humidity and partial shade. Examples include eggplant, wing beans, pepper, tomato, pineapple, etc.

Zone 3: Root crops that benefit from being planted close to the roots of the pioneer trees like ginger, yams, carrots, etc.

Zone 4: Vine/climbing crops. The trunks of the pioneer trees offer an ideal way to construct trellises for overhead crops such as partition fruits, pumpkin, water melon, etc.

Zone 5: Various fruit and nut trees: shade-grown coffee, bananas, papaya, oranges, lemon, pears, Kola nuts, plums, etc.

Zone 6: Hardwoods for long-term investment like *Prunus africana*, Mahogany, .

Zone 7: "Mini" livestock and poultry. Fodder from the garden can permit poultry and livestock (pigs, goats, cows, sheep, chickens, ducks, etc) rearing.

Zone 8: Marketable traditional medicinal plants grown in farms.

Zone 9: The production of biofuels, whether in shade-grown *Jatropha*, Coconut trees, Castor, or any other oil-producing plants. Though this is a new technology, such fuels and feedstock are being produced on a limited scale in many villages already.

Zone 10: Carbon credit market for carbon stored in these forests.

Farmers learned that a forest garden produces edible fruits, nuts, grain, rhizomes and tubers, leaves, and flowers, along with fodder, fuelwood, medicine, and construction materials. Forest gardens are also significant sources of minerals and nutrients contributing to food security. With forest gardening, a farmer will always have food every time from his/her farm and a farm product to sell to raise income to meet other family needs. Livestock rearing provide additional income to farmers. The farmer reduces expenditure, especially of buying chemical fertilizer for his/her farm and create jobs. Products from forest gardens usually are not contaminated by synthetic toxic chemicals and they can be more profitable.

SECTION 3

TRAINING REPORT ON AGROFORESTRY SYSTEMS APPLICATION IN COFFEE FARMS

This section of the training involved various realistic local application possibilities that coffee farmers could increase soil fertility, provide shade, prevent erosion and increase income from their coffee farms in ways that are ecologically, economically, socially, and culturally sustainable.

3.1)- IMPROVING SOIL FERTILITY IN COFFEE FARMS THROUGH NITROGEN FIXING TREES: Farmers learned that some trees help in fixing nitrogen in the soil. Nitrogen is one of the 3 essential elements that increase soil fertility. The other two elements are Phosphorus and Potassium. Some plants absorb nitrogen through their roots into root nodules and fix it to useful nitrogen for plants. Some organisms help these plants in fixing nitrogen like nitrogen fixing bacteria. These plants are leguminous plants, trainers said. When you uproot these plants from the soil you will find nodules on their roots. Examples of these plants are beans, Luecaena, Tephrosia, Calliandra, beans, Sesbania, etc. The leaves of these plants are very rich in nitrogen and it is for this reason that these leaves are harvested to feed animals because of their nutritive value. When the leaves are cut and placed on coffee crop floors they enrich the soil heavily with nutrients especially nitrogen. Most of these trees are used in Alley Cropping. Cultivation of beans in coffee farms can increase soil fertility. Farmers were called upon to plant these trees and shrubs in their farms.

3.2)- COMPOSTING FOR COFFEE FARM IMPROVEMENT: The trainers presented compost as a cheap and effective organic method that can be used instead of commercial fertilizers (that reduce farmer's income) to improve the soil. Composting is a process that transforms organic materials into humus. This in simple terms is allowing organic matter to rotten or biodegrade to ready-made-manure or humus for use in farms. Soil is composed of both organic and inorganic material. Humus is the organic matter component of soil. Many types of organic waste can be decomposed to create a valuable natural fertilizer that enhances the quality of your soil. Proper use of compost improves soil structure, texture and aeration, and increases the soil's water-holding capacity. It loosens clay soils and helps sandy soils retain water. Farmers learned that when compost is added to the soil it improves soil fertility and stimulates healthy root development in coffee. The organic matter provided in compost is further broken down by macro-organisms like earthworms, millipede, centipede, etc and microorganisms like bacteria and fungi in the soil, keeping the soil in a healthy, balanced condition. Farmers learned that it is with this reason that it is not a healthy practice to burn farms or use pesticides in farms because they kill even untargeted useful organisms in their farms. Adding compost to gardens, nurseries, and crop fields adds natural strength to soil in the form of nutrient-rich organic matter along with plenty of beneficial micro-organisms the trainers added. The trainers also told farmers that when organic matter biodegrades, nutrients (Nitrogen, Phosphorous, Potassium, Aluminum, Magnesium, etc) are release to the soil.

Adding chemical fertilizers is a short-term fix that actually causes long term problems, while adding compost to soil is a long term solution that causes no problems.

How to prepare Compost?

The trainers taught farmers how to make compost as follows:

- Proper composting relied on aerobic decomposition, which consists of: 1) carbon and nitrogen rich organic materials, 2) air, and 3) water said the trainer. Carbon-rich materials are old brown or yellow fibrous vegetation like stalks and dry leaves. Nitrogen-rich material includes green vegetation and fresh manure. You can put nearly any organic waste into compost; just be sure it does not have any pesticides or other chemicals on it. Anything green or brown can be added. Crop residues, weeds, peanut shells, grass clippings, weeds (the high temperatures and decomposition will kill the weed seeds so they are not distributed when you use your compost), tree leaves, animal manure, fruit peels, egg shells, coffee grounds, etc. You should also mix in soil and a little wood ash.
- Putting Compost Together: Farmers learned that compost begins decomposing more quickly if the materials you add are chopped into small pieces and mixed regularly to maintain adequate aeration and decomposition process or it will begin to smell badly. During rainy seasons, the compost can be arranged in a pile. During dry seasons, it is best to put it in a hole or pit to keep the moisture from evaporating.
- The Internal Processes: In the presence of air and water farmers learned that, various kinds of fungi and bacteria feed on organic material and convert them into humus. As this takes place, heat builds up in the pile/pit. Properly made compost will reach 65-70 °C in 2-4 days due to the processes caused by bacteria; then it will cool down. This heat will kill pathogens in the soil and weed seeds. Mix it after a couple of weeks and it will heat up in the interior again. Continue this process. You will know the compost is ready when it no longer heats up after being aerated. Finished compost is dark brown and earthy smelling.
- Things to Avoid in preparing compost manure: Farmers were advised not to let compost get too wet, do not add meat or bones; be sure it is mixed and gets enough oxygen and keep the compost out of full sunlight.

3.3)- HOUSEHOLD WASTE MANAGEMENT FOR IMPROVED COFFEE CULTIVATION: Trainers told farmers that household waste can play a big role to increase coffee production. House waste in rural communities like around Oku is made of organic matter like pilings of potatoes, beans, corn, etc and a very little of inorganic waste. Proper waste sorting in households can provide much organic waste that can be taken to coffee farms as manure, trainers told farmers. Food leftovers could also be recycled by feeding other animals like pigs and its dung collected and used in coffee farms as manure.

The trainers presented the case of crops around houses that do very well even when no chemical fertilizer is applied and said this is because there was continuous dumping of waste on empty land around homes that are later on farmed. This is done without knowing but the impact to food production is high. The trainers said this was also possible in coffee farms if made applicable.

3.4)- MANAGING VEGETATION IN FARMS TO INCREASE COFFEE PRODUCTION:

Clearing of weeds in coffee farms: Farmers learned that there is need to always clear coffee farms by cutting all grown weeds. The grass cut should be put directly under the stems of coffee (mulching) where it rot gradually releasing (manure) nutrients to the soil. The cut vegetation placed under the coffee stems helps reduce water evaporation from the soil and makes available much water to the coffee. The pruned banana, plantain, luecaena, Caliandra, Acacia branches are placed on the floor of coffee farms where the leaves fall and biodegrade to form manure for the farms. Luecaena and Caliandra are rich in nitrogen and good in soil improvement. Once the branches are dry, they can be used as firewood and this reduces dependency on the natural forest for firewood.

3.5)- IMPROVEMENT OF SHADE IN COFFEE FARMS: Farmers learned that shade is very important in coffee farms to have high coffee yields. Shades in coffee farms reduce water loss, reduce wind speed and increase humidity in coffee farms. To keep water, reduce wind speed and increase humidity in coffee farms must be stratified in the same way like natural forest. The coffee farms must have very tall trees, tall trees, shrubs, some climbers and under storey which is grass or herbaceous plants. This is the way a natural forest or forest garden occurs. Taking into consideration what farmers had learned in agroforestry these trees must have diverse uses to coffee, soil, animals and man. These canopies are made of trees or plants with different sunlight, humidity and wind speed needs that decreases to the underneath vegetation.

The farmers and trainers participated in building various tree canopies in the coffee farm as follows:

Very tall trees: These trees are those that reduce the sunlight intensity, wind and rainfall before it falls on the next tree canopy. Farmers agreed that these trees should be made of hard wood like black plumbs, pear trees, Mahogany, schefflera, Kolanuts, etc

Tall trees: these trees are those below very tall trees. They include Prunus, Accacia, plums

Fairly tall trees: Caliandra, luecaena,

3.6)- AGROFORESTRY AND COFFEE FOR LIVESTOCK MANAGEMENT: Farmers learned that an agroforestry practice is concerned with the management of trees, forage and livestock for the benefit of man and environment. Trainers helped coffee farmers understand that agroforestry seek to diversify their income from various products in their coffee while not destroying the environment. In the above mentioned agroforestry techniques like alley cropping, fencing, contour planting, wind breaks and fire breaks the aim is to protect crops like coffee, conserve the soil and give farmers food and additional income. Farmers were told that most of the trees used in these agroforestry techniques are good forages for various types of animals like goats, sheep, cattle, rabbits, etc kept to meet various needs depending on magnitude.

Considering that livestock rearing can increase farmers income and also considering that allowing animals to move around unconfined can destroy our coffee and other crops, farmers were called upon by trainers to manage livestock in such a way that forage in our farms could be used in feeding animals placed in enclosures. Rearing animals in enclosures is called zero-

grazing or cut-and-carry system. Animals are confined in a live or death fence and pasture harvested from coffee farms especially contours, alley cropping and live fences to feed them. Leaves of Luecaena, bananas, plantains and Caliandra used in alley cropping are rich in nutrients to feed animals. Elephant grass stem good in contour planting is good animal feed. Leaves of pear trees which are shade trees are good in feeding goats. The trainers called on farmers to use walls, thorny branches, poles, or living fences to keep the cows, sheep, or goats enclosed. This was to protect their animals from other people (thieves), pests, and diseases and avoid them from wandering. Because animals are not allowed to graze in open lands, forage must be brought to them. This gives the owner an opportunity to select the very best food for the animals. Animals confined will benefit from leaves and stems harvested to feed them. Farmers learned that they stand to benefit the following when they confine their animals:

- Animals will not waste energy moving around and therefore grow faster
- Animals will not contract diseases because they do not move from one place to another and even if disease outbreak occurs it will easily be identified and treated early enough
- Animals will not easily attacked by predators because they are in security
- Animal dung will easily be gathered for use as manure in coffee farms
- Time will be safe taking care of the animals than when they are astray
- Supplemental feeding like table salt can easily be given to animals to compensate for deficiency in micro-nutrients
- Community members will cultivate more crops even in the dry season without fear that stray animals will destroy them

Animal waste as manure in farms: Trainers indicated to farmers that animal waste (dung, urine and leftovers of forage) gotten from confinements can be taken back to the coffee farms to serve as manure to crops. This will go a long way to improve on coffee growth and conserve the soil.

Proper livestock management can provide economic returns while creating a sustainable system with many environmental benefits. Animal rearing in confinements can add more income to farmers and diversify income sources thereby reducing economic risk of depending on a single crop for sustenance. Rearing different animals of different weights helps farmers to solve their financial and food problems without waste or burden, the trainers said.

3.7)- CONTROLLING WATER RUNOFF IN COFFEE FARMS: The trainers told the farmers that water runoffs that occur after rainfall must be properly managed to prevent soil erosion in coffee farms. To manage water erosion through runoffs in coffee farms, farmers were asked to do terracing and contour planting where runoffs occur or could occur. Some farms are on hills and are prone to water soil erosion more than farms on flat land. Farmers were called upon to develop beds perpendicular to water runoffs and terracing done with contour planting. Trees and grass like elephant grass could be used to halt water runoffs and permit infiltration to the soil. Trainers asked farmers to control water runoffs when it is still outside of the farm than when it gets into the farms, for prevention was better than cure. Contour development with stones, huge beds, planted trees or grass at the border of the farm from the top part of the farm were presented as method that could prevent runoffs from

getting into farms. Trainers said some farmers prefer to create a part for water runoffs in farms and channel all water to this path. This was seen to be good practice but could be bad where soils are weak and the force of the water takes off the soil and create gullies in farms.

3.8)- DIVERSIFICATION OF COFFEE FARMERS INCOME: Trainers called on coffee farmers to develop their farms in a way that they will reduce dependency on income from coffee alone. They were called upon to grow other crops in their coffee farms that will not hinder the growth of coffee but improve on their livelihoods. Developing agroforestry systems in coffee farms take into account the diversification of farmers' income and increase variety of farmers' food for a healthy living, trainers said. We are going to look at various crops that can increase variety of food production

- Planting of fruit trees in coffee farms:
Shade trees: pears, oranges, plums, Kolanuts, etc
Alley cropping: Bananas,
- Planting of tubers in coffee farms like cocoa yams, Irish potatoes, yams, etc
- Planting of Climbers: partion fruit, pumpkin, etc
- Growing of vegetable: Huckleberry, bitterleaf, waterleaf, eggplant, etc
- Rearing of animals like rabbits, goats, pigs, fowls, apiculture, shep, etc
- Planting of medicinal plants like *Prunus africana*, Aloe vera, etc
- Planting of wood for timber: Mahogany,
- Carrying out bee keeping in hilly slopes where coffee cannot do well. The bees will help in coffee flower pollination and produce honey that can be sold or eaten by coffee farmers.

3.9)- REMOVAL OF COFFEE UNFRIENDLY TREES FROM COFFEE FARMS:

Some trees like Eucalyptus, Pine and Cypress are not good in coffee farms for many reasons. Eucalyptus trees grow rapidly into true trees at a wide range of elevations, soils, and climactic conditions. They sustainably produce fuelwood and timber suitable for many local construction needs, and they produce oil used in some medications and other products, **BUT Eucalyptus trees do not lead themselves to sustainable land management systems.** Many communities are suffering from the long term damage caused by massive Eucalyptus plantings. At first, most communities were contented with having a tree, which when harvested, grew back as two trees. These became four, and so forth. Throughout each coppicing, the root system, barely under the surface of the soil, continued to widen into fields where farmers once grew crops. Farmers quickly discovered that eucalyptus trees are causing problems with their roots by taking all available water and nutrients from neighboring trees and crops, and also with their leaves, which blanket the ground inhibiting new growth. Eucalyptus trees inhibit the growth of other vegetation. The lack of vegetation beneath these eucalyptus trees leads to soil erosion. Most plants and trees cannot grow in the understory of pine trees because of the blankets' of acidic pine needles exposing soils to erosion, and causing lakes and ground water to disappear with their aggressive roots. Pine trees which are planted throughout much of the world for their valuable timber present a similar problem. Beneath pine trees, you will rarely find a productive understory; you tend to find a blanket of acidic needles that inhibit the growth of everything. The needles are also a great fuel for forest

fires. **Pine trees do have their benefits, but like eucalyptus trees, they do not lend themselves to sustainable land management systems.** These trees can leave soils in much worse condition than when they were first planted. Trees for the Future encourage communities to plant multipurpose fast growing (MPFG) trees that not only produce useful products within a short time, but ALSO encourage the growth of field crops, vegetables, and other vegetation around them.

The following trees and crops were identified by farmers as unfriendly to coffee cultivation based on their experience. They include:

SN	Tree or Crop	Effects on Coffee crops identified by coffee farmer	Recommendations made by coffee farmers
A.	Sugarcane	It has a negative effect on coffee plants. The stems of coffee do not grow healthy but remain small and very tall. The coffee plants bear few berries.	Sugar cane should not be mixed with coffee crops.
B.	Guavas	Guava plants have a negative effect on coffee plants. The stems of coffee crops do not grow healthy. They remain small and can grow very tall. The coffee plants do not bear much. The leaves of guavas do not rot fast and makes the surrounding soil to be poor in nutrients. The available nutrients in the soil is used by the guava plant	Guava trees should be removed from coffee farms.
C.	Cassava	It has a negative effect on coffee plants. Coffee stems do not grow healthy. They are small and can grow very tall. The plants do not bear many berries. Cassava takes all the nutrients from the soil to build tubers.	Cassava should not be mixed with coffee. It should be removed.
D.	Corn	Corn is not good in coffee farms because it takes in much soil nutrients and deprive coffee crops of the needed nutrients.	Corn should not be grown in coffee farms
E.	Cypress	Cypress should not be used as a shed tree, wind break, or fire break in a coffee farm. It is highly flammable even when it is wet. The shade provided by the tree is very dense and the base of cypress trees is generally very dry. Coffee trees will not have sufficient water with cypress trees around them.	Cypress should be removed from farms. Those that have been erected as boundary or fire breaks should be cut off and replace with coffee friendly trees.
F.	Eucalyptus	This tree species is very economical to Oku farmers as a whole. It is not a good tree in a coffee farm because it has a deep tap root that absorbs a lot of water. A coffee farm in which there are many Eucalyptus trees will be very dry. Experience has shown that any farm cultivated besides eucalyptus trees do not produce good yields.	Eucalyptus trees should be removed from coffee farms. Other timber trees that are coffee friendly can be planted for wood purpose.

3.10)- NURSERY DEVELOPMENT FOR COFFEE CROPS OR AGROFORESTRY TREES: Farmers learned how to develop a nursery. This was done through workshop lessons. The trainers told farmers that in order to have a good coffee farm that is ecologically, socially and economically sound with a good agroforestry system, a good nursery for coffee and agroforestry trees must be developed. Improved coffee seeds and locally available agroforestry seeds could be nursed. A nursery is set with fertile soil. This could be a bare root or polythene pot nursery where seeds are nursed directly. In some cases seeds are nursed in bare root nursery and when they germinate they are transferred to polythene pots that are filled with fertile soil. The nursery needs to be fenced with a dead or live fence to prevent animal encroachment and must have a water source close to it to be used in watering. Weeding must be done regularly to prevent competition between nursed seeds and weeds. There are some agroforestry seeds that can only be nursery directly in farms because they cannot be transplanted. Trainers continued that compost manure is the preferred manure used in bare root nursery and fill polythene pots. Apart from receiving coffee seedlings from Oku Area Cooperative Union farmers could develop their own coffee nurseries. The OACU share coffee seedlings to farmers to promote coffee production. In the dry season, a nursery must have shade to reduce the amount of sunlight getting into the nursery and must be watered regularly depending on the intensity of the sun and type of soil. Material needed for the nursery development include: wheelbarrow, spade, cutlasses, rain boots, raincoats, watering cans, buckets, dig axe, polythene pots, record keeping book, etc.

3.11)- NUMBER OF FARMERS TRAINED

The number of coffee farmers trained were classified as follows:

SN	DATE	SOCIETY AND VENUE	PARTICIPANTS		
			WOME N	MEN	TOTAL
1	Monday 24 th November 2014	MBAM CPMS LTD at Mbam	10	29	39
2	Tuesday 25 th November 2014	NKWI CPMS LTD at Nkwi	5	18	23
3	Wednesday 26 th November 2014	OKU CENTRAL CPMS LTD at Elak	4	33	37
4	Thursday 27 th November 2014	IJIM CPMS LTD at Ngham	5	38	43
5	Friday 28 th November 2014	SHINGAAH CPMS LTD at Ngemsiba I	2	25	27
6	Saturday 29 th November 2014	ETUM CPMS at Mboh	8	32	40
			34	175	209

SECTION 4

LESSONS LEARNED, CONCLUSION AND RECOMMENDATIONS

4.1) LESSONS LEARNED

CAMGEW learned much from coffee farmers on other locally used agroforestry tree and shrubs in coffee farms. The scientific names of these trees and shrubs will be identified and added to our list of agroforestry trees. This demonstrated the rich indigenous knowledge of local people in agroforestry techniques application in farms.

CAMGEW also learned that much needs to be done to improve on coffee production using agroforestry systems. CAMGEW also discovered that many of those coffee farmers we trained had goats, sheep and pigs that were moving around unconfined. These animals destroyed crops like coffee, vegetables, bananas, plantains, etc and prevented other community members from engaging in gardening or crop cultivation especially in the dry season.

4.2) CONCLUSION

The training was greatly appreciated by coffee farmers. Many coffee farmers said the training made them see the need not to depend only on coffee crops in their farms for income but to increase sources of food and income from the same farms using agroforestry techniques. There was a general call from coffee farmers that this training should come on regularly. It was a perfect local partnership between CAMGEW and OACU Ltd that meet the needs of local people –coffee farmers.

4.3) RECOMMEDATIONS

CAMGEW had the following recommendations to make to Oku Area Cooperative Union Ltd:

1. This training should be offered to neighbouring villages like AKEH, Din and Djottin that sell their coffee to the OACU Ltd. Only coffee farmers in Oku benefited from the training although not all attended.
2. This training should be organized regularly because there are new persons joining coffee farmers either by starting a new farm or inheriting an existing farm due to death, age or ill health of the owners.
3. This training should be done for 2 days. The first day of training should involve theoretical training on the principles of agroforestry techniques as applied in coffee farms. The second day will involve practical training in coffee farms (demonstration) on planting of nitrogen fixing trees, knowledge sharing on best agroforestry techniques application in coffee farms, nursery development, etc.
4. Farmers should confine their goats, sheep, pigs and cattle. This will permit the application of agroforestry technologies in coffee farms. Community members will also benefit from animal confinement through development of gardens to fight poverty

and unemployment. The enclosed animals will also provide cheap and efficient manure to farmers.

5. Most of coffee plants are old. The OACU ltd should encourage its farmers to cut down the old coffee plants and plant new ones. New farmers especially youths should be encouraged to join coffee farming in order to increase coffee production in Oku.
6. Regular radio programmes should be organized by the OACU ltd on methods that coffee farmers can use to increase coffee production in a sustainable way. These programmes include the importance of agroforestry systems in coffee farms for increase output and livelihood improvement.
7. Coffee farmers in Oku should use contours in their farms to avoid erosion. Erosion is very common in Oku especially on slopes. Oku is very hilly and many coffee farms are on hills.
8. Coffee farmers should have access to agroforestry trees and shrubs. The OACU Ltd can facilitate the availability of these trees and shrubs to their farmers.

TRAINING OF COFFEE FARMERS IN ETUM CPMS



Field lessons given to Etum coffee farms beside a coffee farm with participatory approach



Common picture with all trained coffee farmers in Etum

TRAINING OF COFFEE FARMERS IN SHINGAAH CPMS



Lessons on agroforestry practices in coffee farms in class and field



Common picture of trained coffee farmers in Shingaah CPMS

TRAINING OF COFFEE FARMERS IN IJIM CPMS



Class lessons on agroforestry practices in coffee farms



Field lesson in a coffee farm



Coffee farmers trained on agroforestry practices in Coffee farms at Ijim CPMS

TRAINING OF COFFEE FARMERS IN OKU CENTRAL CPMS



Training lesson offered to coffee farmers on agroforestry practices



Trained coffee farmers in Oku Central CPMS

TRAINING OF COFFEE FARMERS IN NKWI CPMS



Nkwi coffee farmers receive lessons on agroforestry practices in coffee farms



Nkwi trained coffee farmers on agroforestry practices in coffee farms

TRAINING OF COFFEE FARMERS IN MBAM CPMS



Coffee farmers receive lessons on agroforestry practices in coffee farms



Sharing of knowledge in the field on best agroforestry practices in a coffee farm



Participants in agroforestry techniques application in coffee farms in Mbam CPMS

OKU AREA COOPERATIVE UNION LIMITED

KEYON OKU, P.O. BOX 12 ELAK

Ref: OACU/121/Vol. 11/210

17th Nov, 2014

The President/Manager,

CPMS Ltd.

Dear Sirs,

PROGRAMME OF AGROFORESTRY TRAINING BY THE CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW) AT CPMS AREAS

Find here below a programme of the training CAMGEW will carry out in our Union area. Note your date and venue and sensitize ALL Coffee farmers in your Society Area to come out that day on time to get the training which is very beneficial and free. Use all avenues like meeting places, churches, Manjong houses etc to invite farmers. We count very much on your cooperation please.

DATE	SOCIETY & VENUE	TIME
MONDAY (NSAMNEN) 24/11/2014	MBAM CPMS LTD FOR BOTH BOW AND MBAM FARMERS	9:00 A.M
TUESDAY (EYDINTUWY) 25/11/2014	NKW CPMS LTD FOR ALL COFFEE FARMERS AROUND NKWL LUM, SIMONKOH, NTOWE & NGVUNKEL I	9:00 A.M
WEDNESDAY (TUWYKAMPEN) 26/11/2014	OKU CENTRAL CPMS LTD FOR LEI, NGASHIE, FERING & MANCHOK FARMERS	9:00 A.M
THURSDAY (TUWYKFEY) 27/11/2014	UBM CPMS LTD NGHAM FOR MELEEM, IKHIM & NDUM COFFEE FARMERS	9:00 A.M
FRIDAY (NGOKSE) 28/11/2014	SHINGAAN CPMS LTD AT NGUMSIBA FOR LANG, MBOCKVU, IBAL AND NGVUNKEL I FARMERS	9:00 A.M
SATURDAY (EBKWEY) 29/11/2014	ETUM CPMS FOR MBOH, BYANE, AND IKIEM FARMERS	9:00 A.M

For OKU AREA COOP. UNION LIMITED

CC. CAMGEW Director
Manchok

CAMERDON GENDER AND ENVIRONMENT WATCH (CAMGEW)

MBAM CPMS

Date: 24th Dec 2014

Attendance List: Training on Agroforestry Practices in Coffee farms MBAM CPMS

No	Name	Contact	Signature
1	Wahinleke Wifred M.	Mkom	
2	Fingek Tante Japha	653264024	
3	Mukuna Peter Ganga	675277553	
4	Fui Victorine	676004723	
5	Geison Ebiny	679225612	
6	Mde Emmanuel Juri	696088572	
7	Ndifen Emmanuel M.	672291264	
8	Ndifen Annabel K.	670515714	
9	Nam Ryan Lawrence J.	678566202	
10	Mama D. Taryeah	—	
11	JAFF Gladys Teresa	94990786	
12	Wahinleke Emmanuel Nyumyon	76-76-89120	
13	Fordon George		
14	Nihom Samuel	693051201	
15	Tabor Mathew M.	678980394	
16	Mathiel Ngina		
17	Paulus Baachim		
18	Munda Eric Nfon	673425047	
19	Tongo Charles	653266202	

No	Name	MBAM CPMS	Contact	Signature
20	Mali Eugene		677589935	<i>[Signature]</i>
21	Shay Wilfred		678485094	<i>[Signature]</i>
22	Bailat Raymond		678483764	<i>[Signature]</i>
23	Ngum Gideon			<i>[Signature]</i>
24	Ngum Anna		6743580757	
25	Isaiah Dinse		691527116	<i>[Signature]</i>
26	Shay Emmanuel Wigen		670 643996	<i>[Signature]</i>
27	Fal Miteck		677602003	<i>[Signature]</i>
28	Fai Ngum Samuel		677023347	<i>[Signature]</i>
29	Ngok Raymond		676049383	<i>[Signature]</i>
30	Matthew Ngangwa		690077873	<i>[Signature]</i>
31	Ngoran Peter		699412038	<i>[Signature]</i>
32	Ngum Tai Raymond		672446348	<i>[Signature]</i>
33	Ngenge Daniel M			<i>[Signature]</i>
34	Ngokse Mabel J		675 78 66 M	<i>[Signature]</i>
35	Victorine Nickerle Yenger			<i>[Signature]</i>
36	Tafm Abel Nkaimbi			<i>[Signature]</i>
37	Efrida Yeafm			<i>[Signature]</i>
38	Vitalis Nkame			<i>[Signature]</i>
39	Ngok Felicitas			<i>[Signature]</i>
40	WIRSIY Emmanuel Binyuy			<i>[Signature]</i>



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° D00998/R21A/306/BAPP

Tel: (237) 0755184310, 007037417

Email: camgew@yahoo.com, camgew@gmail.com; P.O. Box 17, Oku, Cameroon

SHINGARH CPMS ATTENDANCE LIST

28th November 2004

ACTIVITY: Training on conducting Action research practices in coffee farms with
participation of Shingarh CPMS (Corporate of Producers and Marketing Society)
NGERIGAN I.

SN	NAME	CONTACT	SIGNATURE
1	Ngase, CHRISTOPHER	073139560	
2	Nwandoing Denis Baintlong	670044049	
3	Gwendoing Eric For	072575303	
4	Nwendoing John Nwom		
5	Nwendoing Chikidiy	654064438	
6	Nwendoing Florence	67268883	
7	Nwendoing Michael	672259196	
8	Nwendoing Glen	671473065	
9	Chuah Daniel	677990589	
10	Chuah William	67662028	
11	Nwendoing Emmanuel		
12	Kwendoing David Baku		
13	MURICA BONU	697639016	
14	Lwendoing Emmanuel	651941739	
15	Edwendoing Nchinda	690293838	
16	Francis Nwendoing	678629315	
17	NAPHTALI TEMISUNG TICHU	675926572	
18	Nwendoing Christopher	674464188	
19	NWENDOING CHARLES		
20	Kwendoing Cassien	679541613	
21	Nwendoing Elui	626707211	
22	Nwendoing Augustine Facha	673170353	
23	Nwendoing Frederick	626361408	
24	Nwendoing Mary Bangi		
25	Nwendoing Samuel Johnson	671172552	
26	Nwendoing Ephraim Nwendoing	670530003	
27	Nwendoing For	67123112	
28			
29			
30			



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° 000998/ROA/006/BAPP
Tel: (237) 675184310, 697037417

Email: camgew@yahoo.com; camgew@gmail.com; P.O. Box 17, Oka, Cameroon

NKWI CPMS

ATTENDANCE LIST

25th Nov 2014

ACTIVITY: Training on agroforestry Practices in Coffee
farmers in NKWI Cooperated Products and Marketing Society

SN	NAME	CONTACT	SIGNATURE
1	Intanyu Isaac Bafia	69669199	[Signature]
2	Physique Tackwa	-	[Signature]
3	Shimo Timothy Yomgo	652483421	[Signature]
4	Kintang Esidre	-	[Signature]
5	Gankady Ephraim Ngalla	94043541	[Signature]
6	Kokor Henry Fot	696782760	[Signature]
7	Math Gallowe Kiky	674609336	[Signature]
8	Mecady Andrew Fai	697040027	[Signature]
9	Isaiah Lemeh	670512723	[Signature]
10	Stanchina Fanyuy	-	[Signature]
11	Ngoua Frederik Laleh	679925554	[Signature]
12	Essay Patrick Fai	646849832	[Signature]
13	Francis Mumbek	-	[Signature]
14	Yanyi Teina Kumbina	653826292	[Signature]
15	Peter Kaa	673192729	[Signature]
16	Isidore Bonphaj	-	[Signature]
17	Isidore Kaa	-	[Signature]
18	Ngoua Peter Kumbina	679912038	[Signature]
19	KAAHWA Chuma F	695321002	[Signature]
20	Ngoua E. Raymond	672448663	[Signature]
21	Ngoua Camendeline	679138633	[Signature]
22	Ngoua Eugene Jantia	674732836	[Signature]
23	Ngoua J. Raymond	672448663	[Signature]
24	WIKSY Emmanuel Binyuy	67524310	[Signature]
25			
26			
27			
28			
29			
30			



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° 000798/RCA/208/SAPP

Tel: (237) 675184310, 607037417

Email: camgew@yahoo.com; camgew@gmail.com; P.O. Box 17, Obo, Cameroon

23rd Nov. 2014

ETUM CPMS ATTENDANCE LIST

ACTIVITY: Training of M. Representative Leaders in coffee farms.
Highlanders of Ekom Tupper's Indigenous and Extracting Society

SN	NAME	CONTACT	SIGNATURE
1	Kabuk Paul Bong	699228339	[Signature]
2	Chon Maseo	67754262	[Signature]
3	Nyaga Peter Kaelum	699912038	[Signature]
4	Ngazong Martin	697121802	[Signature]
5	Tanyi Emmanuel Njanga	670512045	[Signature]
6	Kabuk Marceline Achuk	670371484	[Signature]
7	Nyaga Samuel Kankoh	672829229	[Signature]
8	Shal Hales	677378383	[Signature]
9	Mbongo Mar Eyo	-	[Signature]
10	Kabuk Emmanuel	694945218	[Signature]
11	M. Sombeon Sordor	675922123	[Signature]
12	Tanau Augustine Tanyu	694933148	[Signature]
13	Nyaga Samuel Kankoh	676787277	[Signature]
14	Koniat John	694144745	[Signature]
15	Melika Joseph Ngeh	-	[Signature]
16	Nyaga Alfred Tanyu	699166562	[Signature]
17	Nyaga Elizabeth Bongalo	72050600	[Signature]
18	Mary Njanga	-	[Signature]
19	Tanyi Michael Kapum	695419544	[Signature]
20	Eyanga Eyo Wazaleh	692042008	[Signature]
21	Nyaga Joseph	694177622	[Signature]
22	Tanau Bellum Sanchia	-	[Signature]
23	Nyaga Nelson Njanga	-	[Signature]
24	Shy Njanga Njanga	676767763	[Signature]
25	Tanyi Joseph	675967227	[Signature]
26	Tanyi Njanga Boko	-	[Signature]
27	Nyaga Eyo Njanga	693117146	[Signature]
28	Eyo Njanga Njanga	-	[Signature]
29	Tanyi Samuel	671117828	[Signature]
30	Eyo Njanga Njanga	676767763	[Signature]



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° 200908/004/006/0407
Tel (237) 679284310, 687027827
Email camgew@camgew.org, camgew@camgew.org, P.O. Box 17, Douala, Cameroon

ETUM CPMS ATTENDANCE LIST 28th October

ACTIVITY: *Training on opportunity practices with in office
focus with focus of climate Dependent of business and
marketing strategy*

SN	NAME	CONTACT	SIGNATURE
1	<i>Esther Njomo Boko</i>		<i>[Signature]</i>
2	<i>Anna Njomo</i>	<i>67662489</i>	<i>[Signature]</i>
3	<i>David Chah</i>	<i>674581234</i>	<i>[Signature]</i>
4	<i>Angela Ekombe</i>	<i>67812345</i>	<i>[Signature]</i>
5	<i>Grace Njomo</i>	<i>67543210</i>	<i>[Signature]</i>
6	<i>Angela Ekombe</i>	<i>67543210</i>	<i>[Signature]</i>
7	<i>Grace Njomo</i>	<i>67543210</i>	<i>[Signature]</i>
8	<i>Esther Njomo</i>	<i>67543210</i>	<i>[Signature]</i>
9	<i>Anna Njomo</i>		<i>[Signature]</i>
10	<i>Esther Njomo</i>	<i>67543210</i>	<i>[Signature]</i>
11	<i>Anna Njomo</i>	<i>67543210</i>	<i>[Signature]</i>
12	<i>WILLY EMMANUEL BINGNY</i>	<i>675184310</i>	<i>[Signature]</i>
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° 000998/RDA/106/BAPP

Tel: (237) 675184310, 897037417

Email: camgew@yahoo.com; camgew@gmail.com; P.O. Box 17, Olu, Camerooun

27th NOV - 2014

JJIM CPMS

ATTENDANCE LIST

ACTIVITY: Training on agroforestry Practices in coffee farms with
focus on Agronomical Production and Marketing Policy

SN	NAME	CONTACT	SIGNATURE
1	Keng Montan Thaddeus	94025324	[Signature]
2	Tamara Salomon Ndyob	697625124	[Signature]
3	Pem Zaphir Dorniel		[Signature]
4	Chimie Richard Alouni	677746753	[Signature]
5	Naguan Comfort Nn		[Signature]
6	Evelynne Njoug	671022860	[Signature]
7	Belience Nding	65301529	[Signature]
8	Chief Kereb Ndos	674620116	[Signature]
9	William Njoug Ndiob	6786173185	[Signature]
10	Dr. Isail Ndiob	67827290	[Signature]
11	Nunchia Christopher	677354466	[Signature]
12	Samuel Njoug F		[Signature]
13	Njoug Ernest Ndiob	676736072	[Signature]
14	Michael Christopher	677000546	[Signature]
15	Njoug Ernest		[Signature]
16	Njoug Igayine Tala	67760549	[Signature]
17	Njoug Njoug Ndiob	677601415	[Signature]
18	Ernest Njoug Ndiob	67548251	[Signature]
19	Njoug Ndiob	676515541	[Signature]
20	Njoug Ndiob		[Signature]
21	Njoug Ndiob	67777980	[Signature]
22	Njoug Ndiob	67251091	[Signature]
23	Njoug Ndiob	67130415	[Signature]
24	Njoug Emmanuel	678979735	[Signature]
25	Njoug Michael		[Signature]
26	Njoug Fez Ndiob	67086111	[Signature]
27	Njoug Ndiob	67670174	[Signature]
28	Njoug Ndiob	67670174	[Signature]
29	Njoug Ndiob	67670174	[Signature]
30	Njoug Ndiob	67670174	[Signature]



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation n° 000998/RDA/JOE/BAPP
Tel: (237) 675184310, 697037437
Email: camgew@yahoo.com; camgew@gmail.com; P.O. Box 17, Oku, Cameroon

IJIM CPMS

ATTENDANCE LIST

27 Nov 2014

ACTIVITY: Training on agroforestry Practices
at coffee farms with farmers of Nkomo Coffee
Society

SN	NAME	CONTACT	SIGNATURE
1	Kangwa Eclair Njorochia	670547775	
2	Ndongo Nicolas Touch		
3	Ndongo Etienne		
4	Ndongo Pierre mol	67222665	
5	Ndongo Edouard		
6	Ndongo Samuel	674047933	
7	Ndongo Etienne	674192628	
8	Ndongo Peter Herdman	67412038	
9	Ndongo Michael	674512036	
10	Ndongo Hubert	674391995	
11	Ndongo Jean Raymond	672446348	
12	Ndongo Emmanuel Binyu	675184310	
13	Ndongo Eugene Lenta	674225676	
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° 000009/RDA/106/SAPP
Tel: (237) 675184310, 697857417

Email: camgew@yahoo.com; camgew@gmail.com; P.O. Box 17, Douala, Cameroon

OKU CENTRAL CPMS ATTENDANCE LIST

ACTIVITY: Training on appropriate Practices in Cotton Farming in
Oku Central Communal Production and Marketing Society (C.P.M.S.)

SN	NAME	CONTACT	SIGNATURE
1	Wilele Wilfred Kumbah	678210072	[Signature]
2	Wilele Chuma Kumbah	678210072	[Signature]
3	Lumle R. IV. IV	678210072	[Signature]
4	Wilele E. E. E. E. E.	678210072	[Signature]
5	Wilele E. E. E. E. E.	678210072	[Signature]
6	Wilele E. E. E. E. E.	678210072	[Signature]
7	Wilele E. E. E. E. E.	678210072	[Signature]
8	Wilele E. E. E. E. E.	678210072	[Signature]
9	Wilele E. E. E. E. E.	678210072	[Signature]
10	Wilele E. E. E. E. E.	678210072	[Signature]
11	Wilele E. E. E. E. E.	678210072	[Signature]
12	Wilele E. E. E. E. E.	678210072	[Signature]
13	Wilele E. E. E. E. E.	678210072	[Signature]
14	Wilele E. E. E. E. E.	678210072	[Signature]
15	Wilele E. E. E. E. E.	678210072	[Signature]
16	Wilele E. E. E. E. E.	678210072	[Signature]
17	Wilele E. E. E. E. E.	678210072	[Signature]
18	Wilele E. E. E. E. E.	678210072	[Signature]
19	Wilele E. E. E. E. E.	678210072	[Signature]
20	Wilele E. E. E. E. E.	678210072	[Signature]
21	Wilele E. E. E. E. E.	678210072	[Signature]
22	Wilele E. E. E. E. E.	678210072	[Signature]
23	Wilele E. E. E. E. E.	678210072	[Signature]
24	Wilele E. E. E. E. E.	678210072	[Signature]
25	Wilele E. E. E. E. E.	678210072	[Signature]
26	Wilele E. E. E. E. E.	678210072	[Signature]
27	Wilele E. E. E. E. E.	678210072	[Signature]
28	Wilele E. E. E. E. E.	678210072	[Signature]
29	Wilele E. E. E. E. E.	678210072	[Signature]
30	Wilele E. E. E. E. E.	678210072	[Signature]



CAMEROON GENDER AND ENVIRONMENT WATCH (CAMGEW)

Authorisation N° 000958/RDA/106/BAFP
Tel: (237) 675184310, 697037417
Email: camgew@yahoo.com; camgew@gmail.com P.O. Box 17, Oku, Cameroon

OKU CENTRAL CPMS ATTENDANCE LIST

ACTIVITY: Training on Participatory Budgeting in Local Authorities
Feb - 2013

SN	NAME	CONTACT	SIGNATURE
1	Ngacart Peter Kertum	699912036	
2	Ngambi Joseph Mch	694466072	
3	Lamellon Johnson Baye	696656830	
4	Ngueu Ferdinand Nguich	694687511	
5	Ngwen Emmanuel Nguich	624726785	
6	Ngwen Ferdinand Nguich	62446348	
7	Ngwen Jai Raymond	675164310	
8	Ngwen Emmanuel Binyuy		
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			