learning platform Report Tepa

Overview

The learning platform in Tepa was held on 6 July, 2017 at the District Assembly Conference Hall. It was held under the auspices of the consortium¹ of the Inclusive Value Chain Collaboration project, financed by NWO-Netherlands Organisation for Scientific Research, WOTRO Science for Global Development and the Lindt Cocoa Foundation.

The theme for the 2017 learning platform was "Landscape Changes, Challenges and Innovation". The platform specifically addressed issues and questions relating to landscape changes, climate change and others.

The learning platform is a local-level arena designed as a knowledge co-creation and collaborative learning process involving multiple disciplines and stakeholders who bring perspectives, experience and expertise together to identify, address, share ideas and provide possible solutions to numerous problems or issues that farmers are facing. The platform also seeks to combine scientific and local knowledge to undertake action and effect change.

The idea of the learning platform is meant to create opportunity for peer-to-peer learning through cross-level knowledge exchange that creates space for innovation in ways that enhance farmers' autonomy and empowerment.

The 2017 learning platform brought together stakeholders and experts from the University of Energy and Natural Resources (UENR), University of Amsterdam (UvA), Royal Tropical Institute (KIT), Forest Service Division (FSD), the Ministry of Food and Agriculture (MoFA), extension officers, the Cocoa Health Services Division (CHED) of the Ghana Cocoa Board (Cocobod), journalists, Licence Buying Companies for cocoa, farmers and others. This provided an excellent opportunity for networking and sharing experiences in the cocoa value chain and other food crops like rice and cabbage. The platform attracted participant registrations of 52 and 11 members forming the WOTRO team.

Words of Welcome

The programme started around 9:20 with an open prayer by Madam Comfort Asamoah from Tanokrom. The facilitator, Dr. Mercy Derkyi (UENR), welcomed all the participants to the 2017 learning platform. She asked the participants to introduce themselves by mentioning their respective names, lessons learned from the second learning platform and expectations for the day. The following were some lessons and expectations:

1. Gained more knowledge to progress my oil palm plantation.

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¹ The consortium consists of the University of Amsterdam and the Royal Tropical Institute from the Netherlands, the University of Energy and Natural Resources (UENR) and the Ghana Agricultural Associations Business and Information Centre (GAABIC) from Ghana, and the Agricultural Research Council (ARC) and University of Limpopo from South Africa.

- 2. Appreciated last year's learning platform and wants to learn more lessons to share with others.
- 3. I learned a lot last year and want to learn more and disseminate as well.
- 4. As a farmer, I was not realizing much profit from my farm, but through the learning platform from last year, I have taken the pains to evaluate everything relating to my farming and my yield has started increasing.
- 5. I was not present last year but Victor's (from AGL) knowledge gained from the learning platform last year and his own experience has really helped me to get more yields in cocoa and vegetable farming.
- 6. PC- I used the knowledge I gained during last year's learning platform and I have seen improvement in my farm. My colleagues are so happy about my farm and very soon, most of you will see me on TV and on radio news.

Expectations

- 1. I want to know about animal rearing this time.
- 2. I want to gain more insight into rice farming in addition to cocoa.
- 3. I want to be an entrepreneurial farmer and I am here to gain more knowledge in that respect.
- 4. I was a change maker last year and this year, I want to get new knowledge to help others.
- 5. I want more continuation of last year's knowledge for today as well.
- 6. As a rice cultivator, I want more knowledge and to share with others.
- 7. I am into cooperative saving and I want to know different dimensions of change this year.
- 8. I want to gain more knowledge and strengthens my relationship with others.
- 9. As the District Director of MOFA, I want to use this platform to educate the farmers more on agriculture because farming is a process if one step is not ordered well it affects the rest.
- 10. As a journalist I have realized that famers are eager to engage in farming activities but that they face several challenges. Therefore, I want to gain knowledge on how to address some of the problems that farmers face. I will also engage with some of the stakeholders in my programme in order to incorporate the knowledge gained to assist farmers.
- 11. Anna I want success and expect more contributions from the participants.
- 12. Mirjam I hope for the same spirit in knowledge sharing and learning as last year.
- 13. *Yves* I am delighted to be here and I want to learn from the farmers, take notes and use some for my research work.
- 14. *Extension officer Cocobod-* I will share the lessons gained among my colleagues and with the framers.
- 15. As a woman I want the other women to participate as well to be change makers in their homes.
- 16. I want to gain more knowledge in money saving

- 17. *District forest officer* I want farmers in particular to learn about their environment to reduce the rate of degradation within off- and on-forest reserve.
- 18. *Sellasie* (Agroeco Louis Bolk and World Cocoa Foundation) I want to learn more and share since my work is basically collaborating with farmers. I want to strengthen farmers' capacity in appreciating and dealing with climate change issues.
- 19. I want to learn more about animal rearing.
- 20. Female farmer: I never went to school so book and pen will not be valuable to me since I cannot read and write. I want assistance for night school in my community to help read and write.
- 21. Agro-Ecom I want to share and know more about climate change, its mitigation and how farmers can adapt to it.

Welcome Address

The facilitator called Prof. Daniel Obeng Ofori to give words of welcome on behalf of the consortium.

In his welcome address, he was very delighted to be part of this year's learning platform again. He stressed that we are all here to learn from each other. Therefore, the participants should not be intimated by people's position but feel free to voice their concerns and be ready to learn and share. He further said, introduction of innovations to get more improvement in what we are doing, is very important now because of the climate trends. He ended by saying that our aim should be to maintain the environment and at same time produce more yields resulting in increased income and better livelihoods.

Part 1: Introduction to the programme and focus of this learning platform.

Dr. Mirjam Ros-Tonen (the coordinator of the Inclusive VCC project) gave a brief overview in her introductory address of the learning platform organized last year. She said the theme for last year's platform was "Brokering for Innovation and Change Makers". Some individuals were identified as change makers and there was a live interview with change makers, including Victor from AGL, Georgina from Mfenibu who started the Susu saving group in her community and others. The participants jointly defined a change maker as "someone who brings new ideas that help change peoples' or farmers' life or someone who does something differently either in farming, in practices, or in dealing with farmers generally'. Kakraa had presented her research findings on agricultural policies for validation with the farmers. This helped her to answer her questions well. The participants had the opportunity to ask questions that bothered them concerning the research findings and agricultural policies in general. There was a presentation by Anna on the results of innovations from below and what impressed her most was a soap maker who transformed her soap to resemble Omo. Victor who works with Armajaro gave a presentation on his company's strategies and programmes for the farmers and their dealing with the farmers. This created an avenue for knowledge sharing and exchange which was the core

component of the LP. The farmers were finally asked to write down their take home messages, some of which have been mentioned by the farmers in their introductions. She said all the take home messages were taken into consideration, but what stood out most were the Susu group, networking and interaction. The farmers saw the learning platform as a unique opportunity for them to interact with institutions and stakeholders. Farmers asked for more support from the institutions particularly for cocoa farm rehabilitation. She said the farmers also had a couple of recommendations for the WOTRO team which have been addressed. One of the farmers' major concerns was issues relating to climate change and that is the reason behind the choice of the theme for the 2017 learning platform "Landscape Changes, Challenges and Innovations".

She said researchers are going to give a talk on landscape change and the shifting cocoa belt to address farmers' concern on the topic. She thanked the media for their presence for coverage of the platform for wider dissemination of the information to reach a wider audience. She added that, in order for the farmers and participants to keep record of the programme, a brochure will be given to the participants to remember and share the information with their community members and others who did not get the chance to attend the learning platform.

She said that this year's learning platform is not only concerned about their farms, but will go beyond their farms to cover the broader landscape. Among the reasons for doing so is that farmers do not depend only on their farms for their livelihood, but also on other benefits from the landscape such as water, non-timber forest products and others. Also, it is good to look at the landscape because farming and the expansion of tree crops affect the landscape. Landscape change can be a change for the better (e.g. more tree crops means higher income) or a change for the worse (e.g. landscape degradation and deforestation as a result of which there are less NTFPs). It is therefore important to look at how landscape changes affect farmers' livelihood.

She continued with the outline of the programme for the day including;

- Introduction
- Presentation by Kwabena on the results of his research in the Eastern Region on how the landscape has changed over there. She emphasized that it is not only climate change that brings changes in the landscape, but also deforestation, increase in population and its corresponding pressure on the use of resources.
- This will be followed by Sellase who works with Agroeco Louis Bolke and the World Cocoa Foundation to give a presentation on how climate change affects the zones where cocoa van be grown.
- There will be discussion with the audience after the presentation by Kwabena and Sellase.
- Then Andrea will present examples of innovations that she identified during her research in Tepa and Kade.
- There will be live interviews involving change makers.
- This will be followed by a panel discussion with the institutions.

• We will finally consider participants' take home messages and recommendations.

She thanked the participants for their attention.

Presentation by Kwabena Asubonteng on landscape change

He gave an overview of his findings on landscape changes in the Eastern Region of Ghana to find out whether similar changes had occurred in the Ahafo-Ano North District of the Ashanti Region. He stressed that whatever happens within our landscape has a direct impact – either negative or positive – on our environment and farm.

In his presentation he compared a satellite map from the 1980s with one from 2015, showing the changes that occurred in the meantime. The changes had been confirmed in the field with the elderly. The maps revealed expansion of oil palm and cocoa at the cost of land available for food cropping. Deforestation occurred throughout the region, but forest has remained intact in the government-protected forest reserve. He showed the participants how our land-cover used to be (farm, forest reserve, and off-reserve forest patches in our surroundings which provided access to NTFPs like mushroom and snails without going into the reserve forest. But currently this has been massively changed due to the expansion of cash crops. This has impacts on our environments and livelihoods, which shows the importance of paying attention to landscape management.

In conclusion he asked the participants whether the Tepa and Dunkwa landscapes are changing as well.

The participants all agreed that they have observed tremendous changes in their landscape.

The farmers from Dunkwa attributed the changes to agriculture. They said over 3,000 hectares of land was allocated for the Buabin Oil Palm Outgrowers Scheme which is now covered with oil palm plantation. The project was a tripartite agreement between Twifo Praso Oil Palm Plantation Company (TOPP), the Government of Ghana and the farmers. As a result, there has been a reduction of land for food crop cultivation as the remaining land is also used for cocoa farming. They further said that the youth who do not find any means of livelihood engage in mining activities (galamsey), as a result of which the majority of the water bodies such as the Offin River have been polluted and destroyed. No more lands for youth to farm has resulted in migration and social vices. They buy foodstuffs instead of having lands to cultivate.

The participants from the Tepa District said that there has been deforestation and landscape degradation. They cited an example of the forest reserve around the Subreso-Nkawie area which has been degraded by people through farming, deforestation and other illegal activities. For instance, someone farmed in the forest reserve and still won the best national farmer. Now the reserve is no more and you can see a lot of town settlements. They also mentioned population increase as another cause of landscape change for putting a lot of pressure on land resources.

They said they used to practice shifting cultivation but because of the increase in population and demand for food and other resources, they replaced this practice with continuous use of the land by family members each year. The Sefwi people are migrating because they have used all their lands for cocoa and oil palm plantation.

Question: Why are some people entering into the government forest reserve?

Response:

From the farmers' perspective one could get all livelihood stuffs without entering into forest reserve in the 1980s. Now these resources are more difficult to find and depend more on the natural environment (forest reserve) for their needs for NTFPs, so there is little that they can do but to enter the forest.

The FSD officer said they arrest people, but still there are many who manage to enter the forest reserves. He said, politics in Ghana sometimes does not help to properly manage forests.

Question: Does the modified taungya system exist in the Eastern region?

The FSD officer answered that, the modified taungya system (a reforestation scheme that allows farmers to interplant food crops) is not practiced everywhere in Ghana within the forest reserve, it is mostly done in degraded portions of forest reserve. He emphasized that tree crops like cocoa are not allowed be grown within the forest reserve and that only food crops (except cassava) are allowed in the modified taungya system.

Presentation by Selassie Gidglio on Climate Smart Cocoa

Before starting his presentation, he asked some questions to get the participants' attention; does it rain timely? When does it rain? Has the intensity of sunshine changed? He talked about impact of climate change on livelihoods and farming activities.

He made mention of the need of sustainable cocoa production, while at the same time protecting the environment. He noted that for Ghana cocoa to still have its quality and flavour, there is a need to get good seeds for planting from nurseries. He advised that farmers should not take seeds from people's farms. Now more labour force is needed to work in the farm because of climatic issues. Historically there was less work to be done in the farm but this has changed now. He gave a practical example under normal condition; 1 hectare used to give 16 bags of cocoa beans, but now 7 hectares gives 10 bags of cocoa beans.

He explained how cocoa suitability areas in Ghana are moving, and what will be the trends for the years to come.

Farmers expressed that climate trends is affecting them environmentally and in their livelihoods. Selasse advised farmers to look for other alternatives in order to live well in lean seasons.

Questions

The journalist asked the FSD why farmers do not patronize in the modified taungya system. He said, he did some survey and the farmers said if they plant the trees in their cocoa farm, the government and FSD will not allow them to own the trees, and that is why they are not interested in planting the trees.

The Forest Service Division officer responded that the ownership of planted trees is being addressed and this is done in collaboration with the UNDP. He stressed that all trees planted on farms solely belong to the farmer and not the government, who only has a mandate over naturally regenerated trees.

Question: we believe our lands are already destroyed and we cannot farm elsewhere, what should we do?

In response, the farmers were advised to consult extension officers for quality and drought-resistant seedlings. They were asked to practice mulching and were introduced to artificial pollination and irrigation as some new intervention to improve crop yield.

Presentation by Andrea, Samuel and Anna on changing landscapes and farmer innovations

According to Andrea, the starting point of the research was to understand how farmers' landscapes have changed in the past 10 years and what kind of opportunities and challenges these changes triggered for the farmers. Ultimately, she searched for innovations from the farmers themselves to deal with the opportunities and challenges associated with landscape changes. Her presentation provided an inventory of these farmer innovations. The identified innovations were divided into:

- Technical innovations: practical improvements to a new specific problem in existing livelihood activities;
- Livelihood innovations: engaging in new livelihood activities; and
- Organizational innovations: engaging in new forms of partnerships or collaborations

Innovation type one: Technical innovations

1. Water filtering

Using white ash or 'Alum' to filter dirty water when there is no access to clean water for washing and cooking.

2. Bird scare

Scaring the increasing number of birds from the fields with minimal effort.

3. Shallow water wells

Digging through three layers of earth to reach clean water and create a water well when there is no (clean) water nearby.

4. Roadside channels

To prevent flooding of roads because of the increased water runoff in the valleys, drivers dug roadside channels to divert the water from the road into the farmland.

5. Spacing maize

Planting the maize further away from each other makes it more resilient to the increasing wind storms.

6. Can protection

Using old cans as a cheap and easy way to protect the young palm trees against rodents.

Innovations type 2: engaging in new livelihood activities

1. Introduction of cabbage

Five - six years ago the first farmers in Mfenibu started growing cabbage near the river. The main factors that drove them into cabbage production were (1) land scarcity, (2) quick harvest, quick money, (3) suitable land near the river that allows for high profits during the dry season and (4) declined cocoa yields and profits.

2. Learning how to make soap

Assemblywoman Rose Sintim Asare invited her friend, soap maker and fellow assemblywoman Janet Nyako to the community and gives a workshop to the women of her community on how to make soap. Because of the increasing oil palm production in the community, all the ingredients are readily available to make soap. In this manner, Mrs. Asare wants to help the unemployed women to learn a trade and set up a business.

Innovations type 3: new organizations, partnerships and collaborations

1. Cabbage sponsorship system

This involves two people (within the community) working together on a new crop: cabbage. It provides (additional) income to (young) farmers without cocoa land or decreasing cocoa yields. The arrangement:

- One person provides all the land, inputs and resources but does not involve him or herself in the actual farming activities.
- The second person provides all physical labour.

• When they sell the harvest after three-four months, the profits are shared equally and the partnership ends.

2. Cabbage partnership

New form of collaboration between 2-3 people to work on the new cabbage crop.

The arrangement:

- they pool resources, knowledge and physical labour.
- Harvest after three-four months and divide profits according to time/effort put in.

This partnership allows for:

- farmers new to vegetable farming to learn from their partners,
- bigger investments and risk sharing,
- combining the work with other (farm) activities,
- no need to pay labourers

3. Emergency borehole fund

Initiated because the government does not pay for borehole maintenance and it breaks down often because there is more pressure on the borehole due to: (1) increased community size and (2) polluted / decreased water bodies.

Arrangement:

- Contribution of 10 GHS per month for all community members above 18 for borehole maintenance.
- Assembly man and Unit Committee man collect the money monthly and deposit it into the bank.
- When the borehole breaks down, they now have the resources to fix it immediately.

4. Community - AGL - Farmer Associations

New association consisting of cocoa farmers, chairman, treasurer and secretary. They pool resources (10 - 15 kgs of cocoa per year) to save for larger investments or inputs. The aim is to combat decreasing cocoa yields because of depleted soils, increased temperature, intense sunshine and erratic rainfall.

In addition, there are monthly meetings where members contribute 5 GHS used for social benefits such as funeral contributions to the member and direct family members and payments in case of hospitalization.

5. Rice partnerships

New partnership for an emerging crop: rice.

This partnership gives a growing population without land / resources (e.g. youth, women) the opportunity to get into rice farming. The arrangement:

- A rice processor or trader lends a (potential) rice producer the price of X amount of rice bags at lowest market price.
- After harvesting (3 4 months), the producer gives his/her sponsor X amount of actual rice bags.
- If the market price is now higher, the processor or trader receives an interest on the loan.

6. Women's credit groups

Access to formal microcredit because of increased population and community size and more 'cash' in the community.

The arrangement: Women form groups of 6-10 to apply for microcredit to set up or expand their businesses. Women with different businesses can join one group. These groups are united by the credit and interdependence for paying back the loan on a weekly basis.

In the long term the women felt that they became more independent from their husbands because of their own business.

7. LP 2016 spin- off: Teachers' credit union

Informal teachers union with currently 60 members in which members can save money and take out overdrafts with low interest rates (10%). Members need to contribute at least 10 GHS monthly and have a share in the interests of the loans of other members. Members meet every three months and have a WhatsApp group

Part 2: Landscape Innovations in practice

Four live interviews

With Chairman Adaboh, Mr. James Ataaning, Mfenibu Chief and Mr. Gyau Augustine Facilitators: Dr. Anna and Miss Asantewaa

Anna explained that the above individuals were identified as change makers for the 2017 learning platform and that there will another interview and discussion with personnel from some invited institutions like COCOBOD and MoFA and other after the change makers session.

The change makers were given the opportunity to introduce themselves and explain what they do and why they were identified as change makers.

1. Chairman Adaboh (Mfenibu Armajaro Farmers Association)

He is from Mfenibu and the chairman for the Mfenibu AGL farmers' association. He said, the farmers used to face problems with respect to access to resources and inputs for their cocoa farming activities at the beginning of the farming season. They were therefore advised to form an association which will help them to easily secure assistance from the financial institutions. They organized themselves with the help from Victor from Armajaro to form the association. They contribute 10 kg of cocoa beans every year at the beginning of the major cropping or harvesting season. They also pay 5 Ghana cedis as monthly dues. They have a bank account and save all their money in it. They have elected executives for the association of which he is their chairman.

2. Mr. James Ataaning (Headteacher-Bomaa R/C JHS, Chairman and initiator of Bomaa teachers' credit union):

He said he attended last year's learning platform and heard about Georgina's Susu Group. He got interested and inspired to start a similar group in the school he teaches with his teachers. The teachers in his school used to leave school during school hours to access loans from banks with high interest rate. They sometimes face a lot of challenges such as difficulties in finding guarantors. The idea he gained from the learning platform inspired him to convince his teachers to start the union. He called a meeting and told the teachers that the interest they pay to the financial institutions goes to the bank, but that they can benefit from such interest if it is paid to their union. The teachers got interested because each member gets interest based on his/her contribution. The teachers drafted their own constitution to guide the running of the credit union. Each member is required to contribute at least ten Ghana cedis each month. He said he used to have one teacher in the school who frequently take loan from the banks. The said teacher's slogan was "dig hole cover hole" which implies that he takes a loan from one bank to pay another loan he taken already to solve his problem. At the moment, anyone who wishes to join should be a monthly salary earner. They believe such people have the capacity to contribute their monthly dues and also repay any overdraft taken from the union. They are in the process of reviewing their constitution in order to create room for other non-monthly salary earners to join the union. Anyone who wishes to join purchases a registration form costing one Ghana cedi. He said he even got sixty-five Ghana cedis from his contribution as interest after the first quarter of the credit union (April 2017). They have a bank account where they save their monthly contribution after collecting from each member. He is the chairman because he brought the innovation. They have secretary and treasurer. Anyone who wants an overdraft seeks advice from the chairman and the secretary. S/he is then given a form to fill out indicating the amount he wants, names of two guarantors who are also members of the union. The guarantors are responsible for the repayment of the loan. If the person they guarantee for fails to pay, the guarantors will have to pay the money. The union has benefited the teachers because they no longer have to travel to the district capital to access loans from the banks. This helps to keep the

teachers in the classroom rather than going to access loans which sometimes comes with several challenges. He said the union has members from other schools outside the Bomaa township and even teachers from Senior High Schools. He encouraged all the participants to take up the idea and practice in their various work places.

3. Mfenibu Chief (Nana Appiah Kubi):

He said the government provided a borehole for the community, but the community was asked to repair the borehole whenever it breaks down. The chief, together with the queen mother and elders of the community, came up with a plan to raise money for maintenance. Initially, they agreed that each person above 18 years should pay five Ghana cedis each but the community members were reluctant to pay. This was because there was less pressure on the borehole as people could access potable water from the nearby river. Followingthe advent of mining (galamsey) activities in the community, the rivers got polluted and there was a lot of pressure on the borehole. This makes it to break down frequently and because there was no available money for quick maintenance, the community members used to face water crisis. The community members developed the habit of paying the amount to enhance quick maintenance of the borehole. The chief and his people established a committee to manage the money. They opened a bank account at the bank to save the contribution after collecting them from the community members. The committee consists of the chief, the Assemblyman and the Unit Committee. They have a secretary and treasurer who collect the contribution from the community members. After collection, they give it to the Assemblyman to save and when all the contributions have been collected, the Chairman together with the Assemblyman takes it to the bank for saving. He said they increased the contribution from five Ghana cedis to ten Ghana cedis to be paid every four months. The increase in the levy became necessary because the cost of maintenance and price of the parts of the borehole were too high.

4. Mr. Gyau Augustine (Rice farmer and sponsor):

He said they used to grow rice but because of poor farming practices, the yield was very low. However, rice farming has become very profitable to him after receiving training from extension officers and in-service training in inland rice farming programme in Kumasi in 2005. He said there was a rice plantation plot in their community and the government gave the field to a contractor to establish a rice plantation field. The contractor removed the top soil and because of the change of government, the project was abandoned by the succeeding government. Therefore, the rice field became very compact and hard and not suitable for cultivation. Following this development, they taught them to create pods on the rice field to conserve water for their cultivation. The farmers also nurse and transplant to the rice field, which creates a lot of jobs for school children and the youths in the community. He said he is able to detect the quality seeds of rice and preserve them for cultivation. This has made him the supplier of rice seeds for planting in Tanokrom, Bomaa and its environs. He has taught a lot of people how to grow the rice and now he knows ten people in Bomaa who are engaged in rice cultivation through his training.

Questions and discussions

Anna asked what is it about this district that there is such strong collaborative spirit.

Responses:

Gyau said: (1) the rice farmers need some financial resources for the rice farming, but it is very difficult as individuals to secure loans from the banks. However, it is very easy to access money from the financial institutions as a group. This is why there is togetherness and strong collaboration spirit among them. (2) The collaboration or forming of groups helps them as farmers to harvest their crops easily (through collective labour or Nnobua).

The Chief said it is difficult to get something from government as an individual but it is easy to access the needs from the government as a group. He also said that collaboration helps to reduce their dependence on the government because they are able to collectively help themselves by working together to provide their needs rather than relying on the government.

James said that group formation such as the nnobua is part of our culture and the district inherited it from their forefathers. He added that the teaching and training from extension officers such as Victor has motivated and contributed a lot to forming of groups in a collaborative manner among the farmers since they can fight for a common interest by doing so.

Adabo said that we as farmers face challenges when accessing financial support from the banks. We are able to easily access the financial assistance that we need from the financial institutions when in saving groups. We normally use our savings as collateral security for accessing loans from the banks.

What challenges are associated with the Emergency borehole Levy? What action does the committee take against those who fail to pay their levy?

The committee is in charge of the collection of the money from the community members. When someone fails to pay, the committee calls the person to inform and counsel him/her to pay. If s/he fails to pay, the person is made to pay a penalty on second appearance before the committee (15 cedis instead of 10 cedis). If s/he still doesn't pay, s/he is reported to the chief for appropriate sanctions. Sometimes the person is handed over to the police for the legal system to deal with him/her. This is because the person wants to bring division and problems in the community. For instance, when the said person drinks contaminated water and gets infected, it will affect the whole community. He said there has been an instance where someone failed to pay and even after all the counselling he refused to pay. He was handed over to the police and the law forced him to pay the money.

Do they have other uses for the money like other community-related issues?

He said the main purpose of the collected money is the maintenance of the borehole when it

breaks down, but in emergency situations concerning the community, for instance if they need roofing sheets for their school, the committee sits together and may agree to solve the situation with some of borehole money. He said it is sometimes difficult to get quick support from the District Assembly in such emergency situations like when storms destroy the roofing of a school building.

Comfort asked James Ataaning whether the teachers' credit union is opened to the others who are not teachers to join.

Ataaning responded that since there is interest to be paid on any amount that someone takes from the union, the teachers are able to at least pay at the end of the month. He said some women who are traders and seamstress have applied and they have set up a committee to review their application. This is because the union is very young (started after the 2016 learning platform) so, they are very careful with allowing people to join to avoid problems at the early stages of the union.

Why do they give the money to the Assemblyman to keep the borehole contribution?

Nana Appiah Kubi said, the money is only temporary given to the Assemblyman to be kept during the process of the collection, but after collecting the money from all community members, the Chairman together with the Assemblyman takes the money to the bank for safe keeping.

Mr. Williams added that the maintenance of the borehole is very expensive and it breaks down very often. Sometimes, they take the money to the bank and the next day, the borehole breaks. They are not allowed to withdraw money from the bank the day following the depositing of the money. This is why they sometimes give the money to the Assemblyman for safe keeping but when they realize tha, the money is more and the borehole has not developed any fault, they take it to the bank.

Victor asked Mr. James Ataaning: what is the highest amount that a member of their union can take as overdraft (loan)?

Mr. Ataaning responded that so far the highest overdraft is five hundred Ghana cedis (GHC 500). He said that they don't grant the exact amount requested by a member, but consider your contributions and ability to pay before granting the overdraft. A member can request for one thousand Ghana cedis but maybe granted less than GHC 1000 (say GHC 500).

He further explained that, the following is considered before granting the overdraft:

- Your total contribution and payment of dues;
- Repayment of loan if the person has ever taken any overdraft/loan from the union before;

• Aggregate of the two guarantor's contributions and whether it can be used to offset the granted amount of their guarantee if the person fails to pay.

He said they are very careful about how much they give to each person as overdraft to avoid repayment problems. No one complains about it because they have a constitution at the back of the passbook which details all the rules and regulations guiding the union.

Question to Gyau (rice farmer)

Can someone be a rice farmer and at the same time a cocoa famer?

Gyau responded that it is possible to cultivate rice and cocoa at the same time because the rice doesn't take much time to mature. The rice requires more attention during the planting, controlling birds when it starts tasselling and harvesting time. The farmer can therefore divide his time among both cocoa and rice farming. He further said the rice farm can even help the farmer to invest in other livelihood activities.

-Anna: how do you or can you share your knowledge gained as a change maker? Responses:

Gyau-he said because of the impacts of climate change such as reduced rainfall, he advices the rice farmers to create pods on their rice field especially those who are close to rivers. This will help them to supply water for their farming even in the season. Also, he encourages the rice farmers to use fertilizer to increase their yield. He encourages the youth to engage in rice cultivation if they need quick capital for any business. He teaches people in churches to motivate them to grow rice. He said he is always available to attend to the needs of people who wish to start rice cultivation.

Nana Appiah Kubi-the chief said his doors are open to any nearby community that is willing to initiate an emergency borehole fund like his town.

James Ataaning- he and his executives visit other schools within the Bomaa Township and its environs to advertise the credit union for other teachers to join. Through some of those visits, they now have some teachers from Bomaa Senior High School. He further encouraged other well-organised organisations and institutions such as churches, Forest Service Division, MoFA and others to form credit unions for their members rather than always going to the banks for loans with high interest rate. He emphasised that he will broadcast his initiative to other groups and individuals to start a similar initiative.

Chairman Adaboh- he said he will teach others when he goes to his community.

Anna concluded that she has no other questions to ask the change makers, but any participant who has further questions can see any of the WOTRO team members after the programme She further appealed to all participants to help the learning platorm to continue.

Institutional Discussions

The Forest Service Division's core mandate includes:

- 1. Establish forest plantations
- 2. Create public awareness and education
- 3. Ensure legal timber logging
- 4. Protection of forest reserves

He gave a brief overview of hectares of Ghana's forest reserves. What is currently available [in terms of forest resources] is not so encouraging and without proper management livelihoods will be at high risk. He said because of high demand of wood there is a deficit gap.

Intervention: The modified taungya system is really helping to reduce forest degradation.

Cocoa Extension and Health Division

Cocoa is Ghana and Ghana is Cocoa. There is a need for sustainable cocoa cultivation. About 4 years now, cocoa yield in Ghana has decreased; climate change is really having a great impact.

Observations by the participants:

There is a need for:

- 1. More extension officers
- 2. Human resource capacity building.
- 3. Incorporating tree planting in farming
- 4. Collaboration work with UNDP (community resource management scheme CREMA) here in Tepa.
- 5. Adapt to climate smart agriculture.
- 6. Disease and pest tolerant seedlings
- 7. Additional livelihood activities such as beekeeping
- 8. Award agronomist practices.

What would help is:

- 1. A liaison with more NGO to enhance sustainable cocoa production
- 2. Encourage plantain suckers tissue culture in cocoa.

MOFA

Teaching from research

Research_ mofa -farmers

Observations:

- 1. Form groups and train farmers with collaborations of (JICA, CARE, VSO), 70 percent being farmers.
- 2. Availability of pesticides and fertilizers
- 3. On-site training/ demonstration on farm
- 4. Group teaching and disseminating among other communities.
- 5. 'Planting for food for jobs' is a new government initiative to reduce unemployment among youths.

Bismark Appiah (ECOM- AGL)

Two main activities: buying cocoa from Cocobod and selling overseas. Out of 8,0000 farmers 1,200 are being trained by us.

He spoke of the main issues related to climate change. Most cocoa farmers are above 35-40 years. Cocobod has over 40 percent of dead cocoa plantations.

Measures / interventions:

- 1. Rehabilitation programme
- 2. Input credit scheme
- 3. Farm management programme

QUESTION S

- 1. If I have 10 arces of land how many tree seedlings do I need?
- 2. There has not been any mention of animal rearing.
- 3. Aside forest reserves is there any protection of other forest patches?
- 4. What criteria do you need to select trees to be planted on farms?
- 5. Can trees be harvested after 20 years and what criteria exist for that?
- 6. How do we get viable seeds for planting?
- 7. I think the taungya system has rather led to climate change.
- 8. Some of the swampy areas in Ghana can be used for forest reserves.
- 9. Question about cocoa seedlings and trees species

Answers Forestry Commission:

- 1. FSD officers can advise on tree planting.
- 2. Animal rearing is not under our jurisdiction.

- 3. The jurisdiction of the FC is forest reserves. small-scale plantations and naturally regenerated trees on farmland.
- 4. Criteria of size. The district FSD can advise.
- 7. Evidence has shown that the modified taungya system has helped boost livelihoods and landscape restoration as well as carbon sequestration.
- 8. Swampy areas are not under our jurisdiction; if we get approval from the Lands Commission we will do that.

AGRIC (MOFA)

1. We have a lack of extension agnets.

What implications for learning platform goals?

Oral take home messages

- The organisers should contact the cocoa buying companies for assistance. They should involve all the district farmers.
- Provide an alternative power source to take care of the frequent power outages.
- Invite doctors to give a health talk next time.
- I have been exposed to the likely future trends that can occur if climate change is not tackled.
- The National Commission for Civic Education (NCCE) and National Disaster Management Organisations (NADMO) should be invited for the 2018 learning platform.
- There is a need to educate farmers about the interventions to address landscape changes in our communities.
- The organisers should manage time well next time.
- More workshops should be organised for the farmers and the Dunkwa area should be intensified to arouse their interest and more. Handouts should be given to the participants after the workshop.
- The platform was successful and I got new ideas and knowledge especially on the Susu saving groups.
- More workshops should be organised to draw farmers attention to impacts of climate change and how to adapt to the effects.
- The platform is very good and interesting because we got new knowledge and experience.
- There is hope for Ghanaian farmers in future.
- I have gained a lot of knowledge for cocoa and food crop farming.
- I have learnt about rice cultivation.
- The platform was very useful for us as farmers.
- I have learnt about climate change.
- I learnt that farmers should intercrop shade trees in our cocoa farm.

- I have learnt about climate change and its effect on the environment and what can be done to sustain the environment.
- The talk on cocoa was good and i will adapt the practices they mentioned.
- I have learnt that climate change has caused the changing landscapes.
- I learnt that I have to get additional livelihood like animal rearing to my activities as the landscape keeps on changing.
- I have learnt about the importance of collaboration or grouping among farmers.
- I have learnt climate change can affect our crop production.
- The District Assembly should be involved and sponsor the learning platform next time.
- Poor weather conditions have declined the cocoa production.
- I learnt about water purification with ash, economic benefits of rice farming, importance of forest conservation and the need to combat climate change.
- Extend the meeting duration to two days next time.
- Research on sun cocoa-species of cocoa which can be grown in the savanna zone should be done.
- Need for additional livelihood activity apart from cocoa.
- Farmers can engage in rice production as additional livelihood activity.
- It is good and effective to work in groups.
- I learnt that cocoa production will decline in this area in the future so I have to plant cashew trees among the cocoa trees.
- I will try a mini susu collection in my community.
- I will become an innovator for others in my area to imitate.
- The causes of poor weather conditions in this country.
- I learnt about innovation in rice farming.
- I need help (money).
- Farmers should seek the services of agric extension officers more often.
- Banks can be invited to sponsor the programme.
- I learned that ECOM can help farmers to rehabilitate old or diseased cocoa farm.
- I have identified changes in the landscape and climate change has direct effects on farming and education and innovations should be enforced.
- The programme has helped me a lot, I am taking home to improve my farm. You promised to give handout to participants. Try to do so.
- Organisers should involve the District Assembly next time.
- The workshop has done well with participants and I wish to encourage the organisers to continue.
- The District Assembly is expected to be invited next year in order to bring their ideas on board because they govern the local areas.
- Landscape changes are real and the consequences are severe and dangerous. I have a responsibility to adapt to the changes
- I will share with other farmers about what I have learnt

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Closing remarks (Mirjam)

Prof. Mirjam ended the program by showing appreciation to all participants and stakeholders for their participation and a fruitful discussion.