



AERTCvc – Resilience of the Cocoa Value Chain in Ghana

Stakeholder Workshop in Kumasi, Ghana | 18th – 20th January 2017

Workshop Report

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Workshop participants	Vincent Akomeah, John Yaw Amoako, Thompson Anagbonu, Samuel Aning, Nana Agyemang Ansong, Samuel Apenteng, Sylvester Yaw Asiamah, Kebebew Assefa, Kenza Benabderrazik, Effah Emmanuel Benning, Evans Dawoe, Evelyn R. Debrah, Margaret Frimpong, Samuel Hauenstein, Jonas Joerin, Patrick Kaba, Pius Krütli, Ayerakwa Kwame, Dr. Ebenezer Malcalm, Eli Nyawunu, Isaac Opare, Samuel Boateng Oteng, Dr. Amos Quaye, Adam Sayuba, Albert Yankson
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As part of the project on “Assessing and Enhancing the Resilience of the Tef and Cocoa value chains” (AERTCvc) in Ethiopia and Ghana, a first stakeholder workshop was conducted at KNUST from 18th - 20th January 2017. The purpose of this workshop was to gather key stakeholders of the cocoa value chain in Ghana to establish a transdisciplinary process. In total, 24 people participated in the workshop, 17 stakeholders and seven scientists.

During this workshop, the participants shared the challenges, opportunities, needs and expectations of their ‘cocoa business’. Furthermore, they identified key effects of drought and heavy rainfall events on their activities and validated a draft survey. A field visit provided an opportunity to the workshop participants to see how cocoa is produced and processed into cocoa mass.

Key findings from this workshop include:

- Unexpected shocks in form of droughts, bushfires and pest and diseases outbreak pose direct challenges to input suppliers and farmers in the form of lower sales of inputs and cocoa yields. Actors higher up in the cocoa value chain, such as Licensed Buying Companies (LBCs) and

processors, suffer indirectly from these shocks in form of unstable supplies of high quality cocoa beans. This causes price fluctuations and insecurity in the cocoa value chain.

- Opportunities are seen in greater interaction between the value chain activities. For example, greater exchange of knowledge (communication) between farmers and extension officers may improve the management of farms to become more resilient to shocks.
- Overall, a greater diversification of all activities and improved communication between value chain actors is needed. This requires greater trust and a common vision on how to become more resilient to shocks.
- They expect that this project can help to protect their activities from shocks and also reveals ideas and interventions on how to increase their resilience.

The next stakeholder meeting is planned in June 2017 and the next stakeholder workshop is expected to take place in October 2017. Stakeholders committed their support to this project and are keen to participate in those planned events. Between those events, WhatsApp, phone calls and emails are used as tools to keep up the interaction between stakeholders and scientists.

Executive Summary

Overview

This research project on “Assessing and Enhancing the Resilience of the Tef and Cocoa value chains” (AERTCvc) in Ghana and Ethiopia is conducted in joint collaboration between the Kwame Nkrumah University of Science and Technology (KNUST), the Ethiopian Institute of Agricultural Research (EIAR) and ETH Zurich. The duration of this project is from June 2016 to May 2018.

The overall objectives of this project are:

- Measurement of the resilience of value chain activities (input supply, production, processing, retailing) of the tef and cocoa value chains:

- Identify relationships between resilience attributes and value chain activities
- Focus on key shocks: drought and heavy rainfall events
- Build strategies for enhancing the resilience of the tef and cocoa value chains – develop tailored action plans for resilience building
- Compare resilience patterns among the same value chain activities between a food security crop (tef) versus a cash crop (cocoa)
- Contribute directly to the scientific understanding of what determines resilience in food systems.

To achieve these goals, we establish a transdisciplinary process for each value chain in Ethiopia and Ghana. Through a close collaboration between scientists and stakeholders, we will jointly create knowledge and build resilience.

Stakeholder workshop in Kumasi

From 18th to 20th January, a stakeholder workshop was held at KNUST in Kumasi. Invited participants included actors from all activities of the cocoa value chain in Ghana, detailed participants’ information

is available in Annex 1. This workshop marked the start of a transdisciplinary research project on the resilience of the cocoa value chain in Ghana.



Figure 1
Workshop participants at KNUST, Ghana

The objectives of this first stakeholder workshop were the following:

- Establishing a transdisciplinary (TD) process with key stakeholders of the cocoa value chain
- Report on the challenges and opportunities, needs and expectations of each value chain activity
- Identify key shocks and scenarios
- Validate the questionnaire
- Enable the stakeholders to take ownership and participate actively throughout the project

The activities of the morning session consisted of establishing a Transdisciplinary (TD) process, identifying challenges and opportunities, needs and expectations both of the respective sectors and the whole value chain. As this project adopts a transdisciplinary research approach, knowledge, expectations and interests of the participating stakeholders were collected to meet the needs of both science and practice in understanding the specific 'problem'. Individually and in groups separated by value chain activities, the participants performed two tasks during this session.

1. Stakeholders Input I: Opportunities and Challenges of "cocoa business"

→ Outlining the current situation, the opportunities and challenges for each value chain activity, through a 'Rich picture approach' (drawings)

2. Stakeholders Input II: Expectations and needs to enhance resilience of "cocoa business"

→ Identifying needs and expectations by 'Outcome space technique'

Day 1:
19th January 2017

Input suppliers (IS) have to ensure that farmers have the best practices and inputs for a sustainable and adapted production. This requires them to be more adaptable in face of changing climatic conditions, or major diseases, by developing and supplying more suitable products, such as improved seedlings. One of the challenges is then to make sure that farmers actually apply them. Therefore, there is a need to align with training efforts of extension officers to support farmers appropriately. Another way to build capacities is to operate with lead farmers to develop more long term visions and good practices, such as appropriate fertilizer and pesticides application, pruning, shading and soil conservation. Ultimately, those lead farmers will encourage their peers for a similar sustainable production.

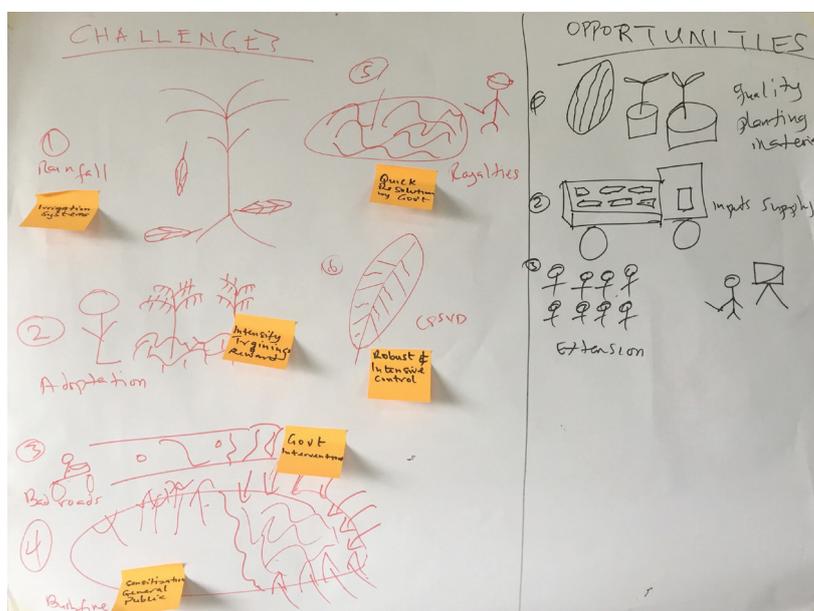


Figure 2
Input suppliers' 'rich picture', expectations and needs

In the case of the Seed Producers (SPDs), they are challenged by land tenure issues. The production of the seedlings still depends on rain-fed installations that are under the threat of bush fires. In an effort to address water management issues, SPDs are gradually equipping most of their facilities with irrigations networks. SPDs have the opportunity to provide the farmers with appropriate and quality planting material (Figure 2).

Farmers highlighted that their main challenges on the production are (Figure 3) occasional late arrival of inputs (fertiliser, seedlings or pesticides), pest and dis-

eases, drought and fire outbreaks. On the other hand, they also have to deal with expensive machinery and the threat of illegal (galamsey) gold mining activities on their land. As the 'rich picture' (Figure 3) indicates, farmers suggested various options for each challenge. For the challenge input supply and use, they emphasized the need to get the right type of inputs, for instance, improved seeds and disease resistant varieties and an improved network to receive these inputs on time. Farmers expect to get more assistance from the extension officers and the input suppliers. They see a great opportunity to build capacities through trained extension officers who can inform them about improved management of potential pest and diseases, shading practices and fire management (fire belts). Another opportunity is the possibility to subscribe to insurances to receive protection from the negative impacts of climate change and plant diseases. Finally, farmers urge the government to intervene and end illegal mining activities and support them through providing more subsidies.

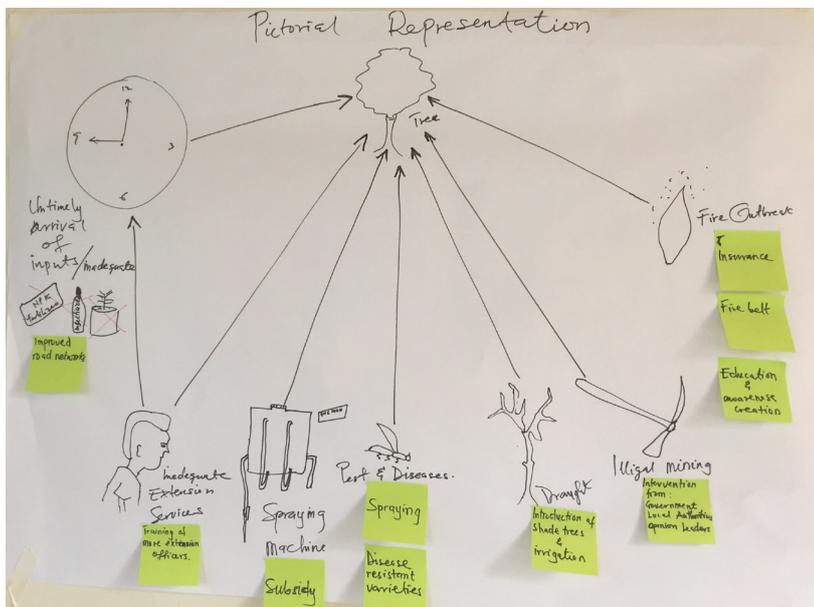


Figure 3
Farmers' 'rich picture', expectations and needs

Licensed Buying Companies (LBCs) are the intermediary between the farmers and the processors. At the farm gate, LBCs have to face various challenges related to meeting high standards of quality and quantity of cocoa beans. There can be issues related to improperly dried co-

coa beans and cocoa beans with poor fermentation quality. Because of the close connection to farmers, LBCs recommend more support and education to farmers in order to improve the quality of the cocoa beans.

LBCs also collaborate with the quality control in order to meet expectations of the processors (Figure 3). Thus, the existence of more than 40 LBCs puts them into a position where they have to compete among each other to get a sufficient share of the internal cocoa market to run their business profitable. Cocoa transportation activities are also handled by LBCs and are often susceptible to accidents and delays due to poor road conditions and other unexpected problems. A potential opportunity to solve some of these issues and lower the financial implications is to have insurance protection. Given the fact that LBCs are the intermediary for all the purchasing activities, the opportunities they identify are: a better financial support for their transactions from national and international institutions. LBCs expect more foreign financial support, provision of credits at lower costs and banks to facilitate the funding. Information and Communication Technology (ICT) systems for real time information would also allow a better management.

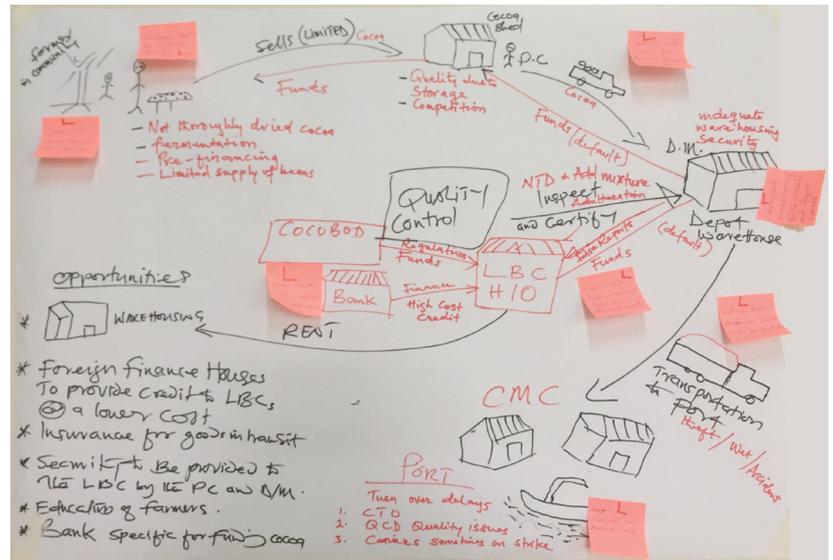


Figure 4
LBC's 'rich picture', expectations and needs

Processors' challenges are inadequate cocoa bean supply, high power supply charges, price fluctuations, and equipment downtimes (Figure 5). Overall, their key challenge is cocoa price fluctuations which can result in sometimes very expensive supply of cocoa beans. A limited access to low cost credits from banks are aggravating this challenge and make it difficult for processors to expand their business activities. Furthermore, they stressed the need to have policies to encourage more local cocoa consumption. They see a great potential for gaining added value with a fin-

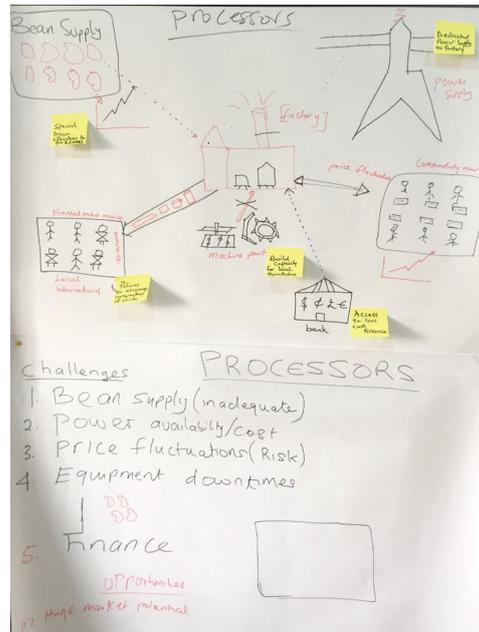


Figure 5
Processors' rich picture, expectations and needs

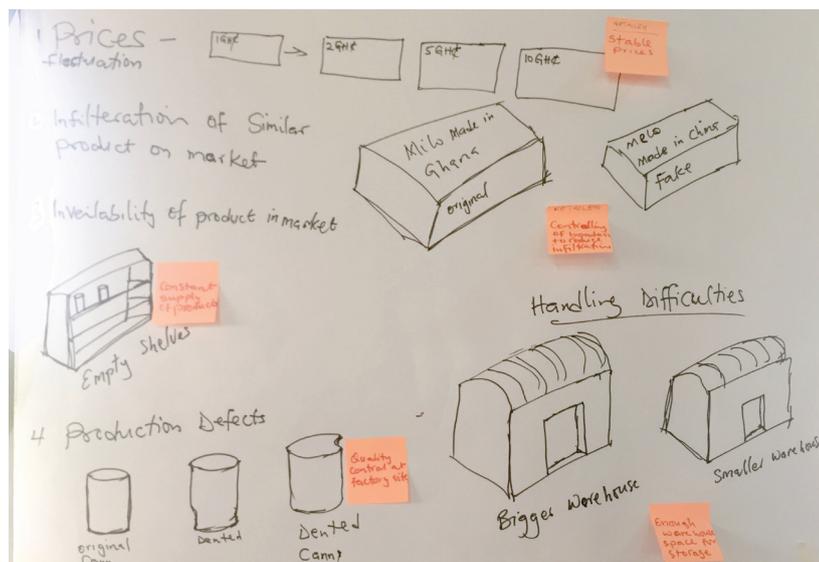


Figure 6
Retailers' rich picture, expectations and needs

ished product (chocolate) rather than only producing semi-finished products, such as cocoa butter, powder or liquor. This would also mean to build capacities for local manufacturers of cocoa products. On the other hand, the huge difference between high national taxes and only marginal export taxes for cocoa products do not attract local manufacturers to develop. This issue should be addressed by the government to allow the development of a local market. Finally, processors are urging the government to get more stable power supply for their factories in order to avoid interruptions of their business operations.

Retailers are challenged by cocoa price fluctuations that lead to a shortage of affected products. They also face manufacturing errors that are caused by material losses and inadequate storage conditions in their warehouses. Furthermore, retailers are facing the infiltration of fake/imitated cheaper cocoa products into the market, such as "Melo", a cocoa powder made in China, which is competing with the actual "Milo" made in Ghana by Nestlé. They demand a better control of the borders to reduce the infiltration of fake products in order to avoid market distortions. Retailers pointed out a need for more financial support from banks and government to lower the financial risks of their business operations, including potential investments into expanding and improving storage capacities (warehouses) which would allow a constant supply of their products.

From a **research** perspective, the challenges are to improve the communication and knowledge sharing between scientists and farmers, eventually with the support and the training of extension officers. Given the nature and variety of issues, all along the value chain, more universities have to be involved to tackle these challenges. For this purpose, researchers emphasized on the need for more funding that could lead to more capacity building and suitable equipment in research labs. Another opportunity for researchers is to develop collaborations with international research institutes and universities. By mentioning the need to develop partnerships and networks all along the value chain, researchers support the relevance of the AERTCvc project and expect it to be a 'model' on how to build strong collaborations between all stakeholders.

Field excursion

In the afternoon, a field excursion took place to visit a processing company and a cocoa farm. Olam Cocoa Processing is a fully integrated cocoa processor which supplies cocoa products (butter, powder, and liquor) and other ingredients to the confectionery industry. In Abenase near Ejisu, John Yaw Amaoko received the workshop participants at his farm where he presented some of the best management practices, such as pruning, shade and weed control measures, in order to ensure the production of high quality cocoa beans.

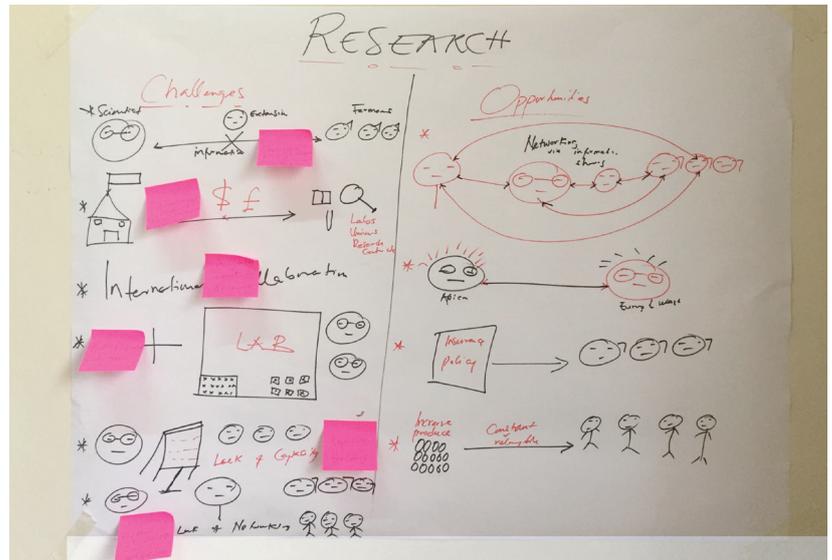


Figure 7
Researchers' 'rich picture', expectations and needs



Figure 8
Visit of cocoa farm in Abenase near Ejisu

Day 2: 20th January 2017

The activities of the second day focused on identifying key shock scenarios, validating our resilience measurement tool (questionnaire) and discussing the next steps of the project.

3. Stakeholder input III: Resilience attributes identification, shock identification exercise and survey validation. Key shocks included heavy rainfall events and drought

→ Based on the stakeholders' feedback (validation) the questionnaires were revised. The survey team is now conducting the survey among more than 800 stakeholders in the Ashanti and Western regions.

4. Stakeholder Input IV: Prioritization of challenges, outlook

The first exercise in the morning session included the identification of effects caused by drought and heavy rainfall events. The paragraphs below summarise the findings from posters for each value chain activity and group discussions, more detailed information is available in Annex 2.

The effects of a **drought** have an impact on the entire value chain. Input suppliers have higher seedling demand, but the demand for pesticides and fungicides decline drastically. In terms of production, farmers face delays in planting the cocoa seedlings and reduced fruiting of cocoa pods. During severe drought events, fire outbreaks are likely. This leads to lower cocoa production and thus, a limited supply of cocoa beans for LBCs. The beans are also smaller and need to be reconditioned, implying higher processing costs. Subsequently, processors suffer from high pric-

es of cocoa beans while product demand is usually unchanged. Moreover, at the scale of the manufacturing plant, drought is also affecting water and hydropower supply, rampant bush fires may also destroy public and private infrastructures. Despite the rising prices of cocoa, retailers still have to sell their products at a fixed price.

In case of **heavy rainfall events**, input suppliers have to meet the need for increased demand for fungicides. During such events, the market is often flooded with fake agrochemical products to meet increased demand from farmers, causing significant damages on the farm environment (soil, yield, water, etc.). At the farm level, more diseases (e.g. black pod), flower abortion, high maintenance costs and nutrients leaching occur. In an environment, difficult to cultivate, farmers cannot dry their beans efficiently and the quality (e.g. mouldy beans) of the beans

decrease. LBCs need then to intensify the re-conditioning of cocoa beans at sheds and depots, leading to higher cost of maintenance. Overall, the entire value chain suffers from impacts of heavy rainfall events on public infrastructures, such as poor road conditions, unreliable energy supply, etc. For example, blocked roads cause delays on distributing cocoa beans to processors and processed cocoa prod-

ucts to retailers. Finally, researchers are also affected by not being able to conduct field experiments according to planned schedules.

Following this exercise, a draft questionnaire for a resilience assessment among organisations of various activities of the cocoa value chain was discussed and validated in groups.

In a final session, workshop participants were asked about their feedback on the workshop and the way forward was discussed. The workshop was seen as an excellent opportunity to have intensive exchanges, sharing of ideas, and outlining visions for a more resilient cocoa value chain in Ghana. This project launch was a success, as it allowed the following achievements:

- Initiated a transdisciplinary process and made its idea and benefits clear to all participants
- Built trust among all participants
- Identified opportunities, challenges, needs and expectations for each value chain activity

- Delivered a better understanding of the whole cocoa value chain in Ghana
- Validated measurement tools – resilience survey
- Found a way to organize the project and to keep momentum; WhatsApp has been determined (apart from email and phone calls) as the main communication tool between the workshop participants and workshop organisers; regular meetings of local partners in addition to workshops are planned

Next meeting is planned in June 2017; the research team will share the first survey results for the participants to validate them. It will be the occasion to interact with all the participants and develop first ideas for building (more) resilience.

Outlook and Timeline

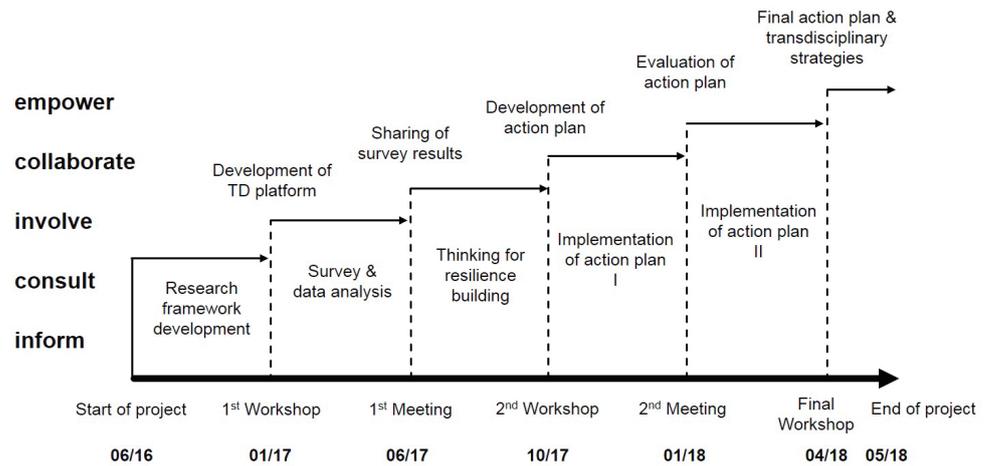


Figure 9
Time schedule of the project

The succession of regular interactions in form of joint workshops and meetings is meant to serve the exchange of knowledge/experience and to intensify the collabora-

tion. This should create and strengthen the 'ownership' of the participating stakeholders and support the process of building resilience in the cocoa value chain.

Annex 1 – List of workshop participants

Name	Organisation	E-mai	Phone
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Annex 2 – Effects of shocks

Examples of the effects of 2 Climate Change events: Drought and Heavy rainfall

	Drought	Heavy rainfall
SPDs and CHED	<ul style="list-style-type: none"> • Less demand for pesticides because farmers only need it during rainy season • Most of the farmers don't need fungicides • Higher seedling demand 	<ul style="list-style-type: none"> • More demand for fungicides • Fake agrochemical because demand is increasing • Operational work on farm is higher and so income decrease for the households • Problem with the roads and infrastructure especially for those close to rivers
Farmers	<ul style="list-style-type: none"> • Dying cocoa trees • Low production • Delays fruiting • Delays planting period • Fire outbreak • Cut down on labor forces • Low income 	<ul style="list-style-type: none"> • Disease outbreak (blackpod) • Flower abortion • High maintenance cost • Nutrients leaching • Dying trees • Difficulty in cultivating the land
LBCs	<ul style="list-style-type: none"> • Limited supply of cocoa beans • Beans size becomes smaller – problems with all mixtures • Relatively low weight beans • Quality – high reconditioning cost • Affects revenue • Low profit 	<ul style="list-style-type: none"> • Difficulty in drying by farmers – intensified re-conditioning at sheds and depots • Quality of beans is affected - High cost of reconditioning • Primary and secondary evacuation suffers from the quality of roads – Cocoa beans get wet
Processors	<ul style="list-style-type: none"> • Inadequate supply of coca beans / poor bean quality • High price of the commodity • Product demand unchanged • Prices will be high due to low supply • Shortage of water • Shortage hydropower • Rampant bush fires destroying infrastructures 	<ul style="list-style-type: none"> • Low quality due to diseases - mouldy beans • The beans become black and they have to dry it again at the factory
Retailers	<ul style="list-style-type: none"> • Rising prices of the product but retailers 'inability to increase the price if they are selling to big companies (Nestle, Cadbury, etc.) 	<ul style="list-style-type: none"> • Delays in distribution - Delivery time may take longer • Tired employees • Warehouse management
Research	<ul style="list-style-type: none"> • Breakage of equipment/tools • poor accuracy and precision • Unexpected events will be introduced into experiments • Losses of planting material 	<ul style="list-style-type: none"> • Rusting of tools • Failure of experiments/tools • Wetting of field of work • Submergence of experiment field • Inaccessibility's to research fields/plots

