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AFRICAN COCOA INITIATIVE LEARNINGS REPORT

Delle Kpebesaan (OD & Development Consultant)

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**World Cocoa
Foundation**

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Acronyms

ACI	Africa Cocoa Initiative
ANADER	Agence Nationa d'Appui au Development Rural
BBC	British Broadcasting Corporation
CDI	Cote d'Ivoire
EAs	Extension Agents
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
CRIG	Cocoa Research Institute of Ghana
Hi-Tech	High Technology
Kg/HA	kilogramme per hectare
USAID	United State Agency for International Development
WCF	World Cocoa Foundation

Executive Summary

The implementation of the ACI theory of change for increased cocoa productivity has been described by stakeholders as finding inclusive value chain solutions to the inherent problems in the West African cocoa value chain. First of all, this description is seen in the efforts made to set out to help value chain actors to understand these value chain dynamics and how to address them jointly. And secondly, by investing and integrating inclusive interventions such as knowledge based products, partnership development, market linkages, farmer training services, access to finance and sustainability, at all levels of the cocoa value chain. ACI focused on innovative solutions that addressed *people*, *planet* and profit and the endemic issues undermining cocoa scalability, sustainability and household income.

ACI is fully aware of the important structural barriers or constraints, which characterize the cocoa eco-system in West Africa and which must be addressed holistically, through inclusive value chain approaches.

Also, it has been found out that there is a strong and vibrant community of strategic cocoa stakeholders, along the entire cocoa value chain in West Africa, willing to pool resources towards cocoa scalability. And ACI has been able to find its niche in this important value chain, as a strategic partner and ally.

From the analyses of the studies and reports, ACI interventions have been strategically positioned in the cocoa value chain in West Africa. It has successfully facilitated a West African cocoa architecture, which is providing strategic, inclusive value chain solutions, to the inherent value chain problems, in the cocoa sector in Ghana, CDI, Nigeria and Cameroon.

By facilitating inclusive value chain approaches, the ACI has largely been successful, in giving greater autonomy and representation to cocoa farmers in West Africa, in gaining greater control over the resources they require to achieve higher productivity, profitability and sustainability. This farmer autonomy can be practically linked to the satisfaction of the key value chain actors in gaining greater access to:

- Quality Information and Knowledge.
- Better planting materials, agro-chemicals, credit facilities and training.
- Accessibility of these planting materials, agro-chemicals and credit (as they relate to physical accessibility, social accessibility, gender and economic accessibility).

And above all, there is a greater willingness among cocoa farmers to utilize available services and products facilitated under the ACI.

While cocoa production still remains a loyal means of income and livelihood among many farmers, recent studies/developments show that diversification to other crops, such as rubber and oil palm, is on the ascendency in West Africa. A major driver behind this is price volatility, although cocoa prices appear less volatile in recent times. Crop diversification would have an important effect on national and international scalability interventions in the region and therefore, needs to be carefully analyzed and strategies devised to address it.

The type of technology developed and adopted by farmers, has a corresponding effect on yields and profitability. And the movement from one technology to another, may lead to increases in yields and therefore, profitability. However, at same time, it may give rise to increased labour cost "... since the labour requirements for maintenance, harvesting and on-farm processing, rise, in direct proportion to yield...". The LMC study has identified 3 levels of technology and grouped them into t1, t2 and t3, with a cost-benefit analysis, which is very useful for educating farmers to inform them to make appropriate economic decisions and investments on cocoa their farms.

Land tenure security, land ownership and labour costs, are important decision making factors considered by farmers, before deciding to adopt cocoa hi-tech and uptake of other technologies, especially, under the 'abunu' or 'abusa' land tenure arrangements in Ghana.

An inclusive and efficient architecture for village based cocoa value chain operations has emerged, through the technical facilitation of the Market Driven Input Services by CropLife and Input Credit System by Technoserve. A major breakthrough of this process is that Technoserve was able to form partnerships with financial institutions and exporters that resulted in the disbursement of significant amounts of money to farmers. One significant finding from the implementation of the input credit system is that it has helped "to address the issue of lack of cash flow to purchase agro-chemicals..." (WCF/ACI Outcome Assessment Report, 2014) and farmers patronizing it have reportedly noticed significant changes on the fruiting of pods on their farms. This is a sign that suggests that there would be crop yield increases shortly among ACI beneficiaries.

Farmers utilizing the services of SPPs consider the model as an important bridging mechanism over similar services provided by government agents. The WCF/ACI outcome assessment for March-April 2014 showed that in Ghana "... the frequency of mass spraying has reduced from four times to only two times per year and the supply of pesticides in the past year was woefully inadequate..." Similar cases were reported for Nigeria and Cameroun.

Stakeholders opine that ACI still has a greater potential to upscale its interventions to achieve greater cocoa productivity in West Africa. Accordingly, this makes ACI a relevant sector leader and player.

Introduction

Cocoa sustainability, has significant economic and transformational impacts, for the economies of the major producing countries in West Africa such as Ghana, Cote d’Ivoire (CDI), Nigeria and Cameroon. It is a major source of income security and livelihood for many households. The commodity contributes not less than 5% to the Gross Domestic Product (GDP) of the 4 major producing countries. Currently, a number of factors inhibit its full scale or optimal production capacity or scalability.

The World Cocoa Foundation (WCF), is therefore, implementing the Africa Cocoa Initiative (ACI) to contribute to West Africa cocoa scalability and sustainability, through inclusive value chain approaches, by enhancing greater access to cocoa hi-tech, knowledge, planting materials, agro-chemicals, credit facilities, strengthening of farmer groups, markets and institutional linkages.

ACI has been working to achieve its goal in four strategic ways:

- i. Strengthening National Partnership Platforms investing in Agriculture and cocoa.
- ii. Improving cocoa productivity through better planting materials.
- iii. Enhancing public private sector and farmer training services.
- iv. Forster market-driven farming input supply services.

This report is the outcome of reviewing and assessing studies and reports, commissioned by the WCF, to aid or facilitate effective and efficient implementation of the ACI being implemented in Ghana, Nigeria, Cameroon and CDI. Principally, the review of the studies focused mainly on identifying:

- Key Learnings from project implementation and interventions.
- Implementation Gaps, Challenges, Constraints or Concerns.
- Give Feedback or Recommendations (where appropriate).

Methodology

Two main approaches were adopted in arriving at the conclusions of this report. Firstly, there was a thorough desktop review of all the major studies and reports undertaken, followed by telephone interviews and discussions with selected stakeholders. The latter was done through extension agents, spray service providers (SSPs), farmers and staff of companies, directly involved in training and field supervision. In all, 15 studies and reports covering Ghana, Nigeria, Cameroon and CDI, were reviewed.

These covered assessments of studies mainly on:

- i. Comparative Economic Benefits of Cocoa and Incentives of Cocoa As A Cash Crop relative To Other Cash Crops and the Comparative Impact of these Commodities on Small Household Incomes;
- ii. Market-Driven Farm Input Services;
- iii. Provision of credit schemes;
- iv. Agro-chemical Input Delivery;
- v. Evaluations and Assessments of Input Credit Delivery;
- vi. Soil Fertility Management;
- vii. Assessment of Land Tenure-Related Constraints to Cocoa Productivity in Ghana;
- viii. Genetic Analysis for Cocoa Planting Material Materials in West Africa;

Limitations

Field visits were not possible. As well, on site validation of important field logistics and triangulation of important sources of information could not be carried out. The major constraint was time and duration for the assignment. Also, no study on beneficiary satisfaction was available, to help assess the extent to which direct project beneficiaries feel about the ACI interventions and whether it is benefiting them or not and at what opportunity cost.

Key Findings and Learnings

The conceptual and analytical framework for presenting the key findings of the studies and reports is divided into two categories *i.e. (i) General Findings and (ii) Specific Findings*. General findings refer to those overviews, which do not relate directly, to any current, specific ACI implementation intervention but *highlight* important trends in the local cocoa economy or discourse, with a *bearing* or capable of *influencing* cocoa policy, scalability and productivity in West Africa (e.g. LMC, 2014). On the other hand, *the Specific findings, highlight* project *focused* interventions based on the original 4 ACI objectives, presented in the studies and reports.

While presenting the findings as lessons and learning opportunities for the ACI team, it is also imperative to link them to basic issues cocoa farmers encounter daily and how they would like to have them addressed, to optimize their cocoa scalability and profitability. The learnings from the key findings would therefore, be linked to the extent to these basic issues fundamentally relate to:

- Information and Knowledge;
- Availability of planting materials, agro-chemicals, credit facilities and training;

- Accessibility of these planting materials, agro-chemicals and credit (as they relate to physical accessibility, social accessibility, gender and economic accessibility);
- Utilization by farmers of these facilities and inputs;
- Beneficiary satisfaction or
- What Benefit & Impact and at what cost?

A) General Findings and Learnings

1. The implementation of the ACI theory of change for increased cocoa productivity has been described by stakeholders as finding inclusive value chain solutions to the inherent problems in the West African cocoa value chain. First of all, this description is seen in the efforts made to set out to help value chain actors to understand these value chain dynamics and how to address them jointly. And secondly, by investing and integrating inclusive interventions such as knowledge based products, partnership development, market linkages, farmer training services, access to finance and sustainability, at all levels of the cocoa value chain. ACI focused on innovative solutions that addressed *people, planet* and profit and the endemic issues undermining cocoa scalability, sustainability and household income;
2. Through this approach, local actors have become economically aware that the regional, national and local cocoa economies, are intrinsically, linked to a global cocoa economy and emerging marketing trends. This therefore, requires a network of value chain actors across the board, to optimize production and profitability, through inclusive scalability interventions. There is no longer an “island cocoa kingdom”. Cocoa is now become an integrated global commodity, regardless of the local conditions of production. Its commercial importance today, is largely affected by global market trends and consumption. Farmers produce locally for international markets and must be fully made aware of such market trends and realities, through responsible Good Agricultural Practice (GAP);
3. A burgeoning rubber and oil palm market architecture competes at times, with cocoa scalability and sustainability in West Africa. Nearly 9% of cocoa lands in CDI, have been planted with rubber. Though the percentage appears lower in Ghana and Nigeria, nonetheless, the threat persists. However, farmers still consider cocoa production as a reliable source of household income security and collateral. Many farmers still prefer cocoa cultivation because its price is the least volatile, compared to rubber and oil palm (LMC International 2014). Also, overall global demand for cocoa would support

cocoa productivity (*ibid*) and hence makes ACI interventions relevant and competitive.

4. The type of technology developed and adopted by farmers, has a corresponding effect on yields and profitability. And the movement from one technology to another, may lead to increases in yields and therefore, profitability. However, at same time, it may give rise to increased labor cost “.... since the labour requirements for maintenance, harvesting and on-farm processing rise in direct proportion to yield....”. The LMC study has identified 3 levels of technology and grouped them into t1, t2 and t3, with a cost-benefit analysis, which is very useful for educating farms to inform them to make appropriate economic decision and investments on their farms.
5. Farmers are now making important economic analyses of the profitability of a crop or commodity and its economics of scale, before venturing into cultivation. Such a development in itself, is a positive indication of how farmers are beginning to understand and apply business concepts from farmer field schools to farmer school businesses. It therefore means that the transactional cost of cocoa hi-tech and other scalability interventions must be made affordable and competitive at all times. Farmers who diversify their crops, are fully aware of the economic benefits of their decisions and the contributions they bring or value to be added to the overall family income. But through extension education, the learning question should always be 'at what opportunity cost to farmers or country?
6. The rationale from shifting from cocoa to oil palm or rubber cultivation, revolves around the transactional costs or cost of production, commodity pricing, regularity of income and the sheer existence of choice. Farmers in CDI, Ghana and Nigeria consider the transactional cost of cocoa to be higher than rubber. Except Ghana, the transactional cost of oil palm in CDI and Nigeria is cheaper than cocoa. The current pricing structure of cocoa, coupled with its transactional costs, are becoming worrying nightmares for farmers and the recipe for conversion of cocoa lands for the cultivation of other crops. In February 2017, CDI farmers embarked on a nationwide strike, over a 20% increase in cocoa tax (BBC News). There is a real threat that the aggrieved farmers could shift to rubber cultivation or oil palm or do not take advantage of scalability interventions offered by programmes such as the ACI. Excessive withholding of cocoa income from farmers by national governments would affect cocoa scalability and sustainability. Crop

diversification is a real threat to cocoa sustainability. There is evidence of greater crop diversification on cocoa farms. For example, farms producing cocoa only fell from 30% to 16% from 2010 to 2012 in Ghana alone.

- 7. Land tenure security, land ownership and labour costs, are important decision making factors considered by farmers, before deciding to adopt cocoa hi-tech and uptake of other technologies, especially, under the 'abunu' or 'abusa' land tenure arrangements in Ghana (WCF/USAID Assessment, 2015). These arrangements are usually management arrangements between tenant farmers and indigenous landowners operating under a sharecropping regime. Tenant farmers are disinterested or less inclined in adopting technologies which would increase their transactional cost, including labour cost, for lack of proper legal title or for fear that landowners may dispossess them of the farms they have toiled to improve.**

In the general scheme of things, the absentee farmer or landlord must always be considered as an important value chain actor, whose authority is required, before their tenant farmers can commit them to decisions on their farming investments such as the introduction of cocoa hi-techs. Without this tacit approval or consent, tenant farmers may not have the authority to invest in new technologies, for the desired impacts of scalability interventions. EAs therefore, have crucial roles to play, in making sure that such power brokers as absentee farmers or landlords, are effectively targeted.

- 8. An important lesson for ACI is to recognize the effect of small-scale mining and logging on cocoa production and household incomes (LMC) and through this, build strategic alliances for policy advocacy and land use reforms in the cocoa sector in Ghana in particular and West Africa in general.**

The LMC study has identified that this impact should be analyzed from three main angles namely: (1) the selling of cocoa farms by farmers or landlords to mining concessions; (2) cocoa farmers themselves moving into small-scale mining and (3) the effects of dug pits and land use on cocoa farms and production;

The mining effect presents an opportunity for ACI to work with its critical stakeholders in the region, to design effective extension delivery packages and communication tools to raise awareness among farmers and also, support farmers to continue to cultivate the crop.

B) Specific Findings and Learnings Based on four ACI objectives and linked to availability, access, utilization, beneficiary satisfaction and impact-learnings

- i. **Strengthening national public private partnership investing in agriculture and cocoa.**

From stakeholders, there is a strong and vibrant community of strategic cocoa stakeholders, along the entire cocoa value chain in West Africa, willing to pool resources towards cocoa scalability. ACI has found its niche in this important value chain, as a strategic partner and an ally. Although not much of this was found in the studies reviewed and through interviews, it is clear that developing genuine and responsive public private partnerships, is a long term process and one that requires long-term investments and willingness of both parties to support the effort. It is important to re-articulate this view more solidly, as part of the learning architecture of ACI, from other sources.

- ii. **Improving cocoa productivity through better planting materials**

One major finding from the WCF- ACI ‘Genetic Analysis for Cocoa Planting Materials in West Africa’ is the tactfulness needed in the seed and bud wood gardens to ensuring that the right genetic finger-prints are sampled properly and well protected throughout the seed distribution system.

This is important because the genetic diversity across the region is too narrow and any biotec stress that would break resistance or tolerance levels, could have dire effects on the supply of cocoa from a region that supplies over 70% world cocoa (ibid).

Cocoa farmers need the correct and high yielding planting materials to increase their productivity and profitability and in the long term, cocoa sustainability. On their own however, they do not have the capacity in plant propagation and breeding and therefore rely solely on genotypes, developed by professional breeders.

West Africa has proven cocoa planting materials that can yield as high as 1,000kg/ha (WCF-ACI Success Story) but scientific technology is required to identify the true-to type genotypes for effective breeding and utilization. Breeders and regulators play an important role in making available good planting materials. Therefore, they must be vigilant in making sure that cocoa farmers get the right true-to-type cocoa clones to plant. Studies conducted by ACI show that

wrong labeling of planting materials, can lead to giving farmers inferior planting materials, which would in turn produce low yields, further eroding the confidence of farmers in national seed distribution systems.

From the deployment of the ACI state-of-the art molecular biology technology, mislabeling of trees were detected in the seed and bud wood gardens, as well as a very low diversity in the genotypes used across the sub-region, in a biomass sample of only 3% - 5% of the existing biomass.

A wider biomass sample could reveal that the source of planting materials is less predictable and houses less true-to type genotypes and therefore, the need to intensify accurate genetic finger-printing. The genetic diversity across the region is too narrow and any biotec stress that would break resistance or tolerance levels, could have dire effects on the supply of cocoa from a region that supplies over 70% world cocoa.

Mislabeled trees (WCF-ACI Success Story) could lead to giving farmers wrong genotypes and thus compromising productivity and expensive scalability efforts. When farmers detect this, they would lose complete trust and future extension delivery would be endangered.

Extension delivery messages should have in mind that the cocoa being produced should fit into a chocolate recipe of manufacturers and the changing tastes of consumers. Therefore, EAs and Concepts, should be periodically upgraded.

The Flavor Analysis carried out in Ghana by ACI reveals that flavor is important to both manufacturers and consumer satisfaction (WCF-ACI Success Story: Flavor Analysis Starts for Cocoa in Ghana). The Ghana cocoa bean is globally acknowledged for its distinctive flavor and taste. In other words, scalability interventions must not compromise or be achieved at the expense of consumers' satisfaction.

The ACI has built a national laboratory in Ghana at the Cocoa Research Institute of Ghana (CRIG) to "ensure that prized flavor characteristics are not lost in the quest to breed for higher yields and disease tolerance" (WCF Success Story). This facility serves as a value addition by ACI in building national institutional capacity to champion and maintain strategic interests of value chain actors, such as consumers and producers simultaneously.

iii. Enhancing public private sector and farmer training services

An inclusive and efficient architecture for village - based cocoa value chain operations has emerged, through the technical facilitation of the Market Driven Input Services by CropLife and Input Credit System by Technoserve. This architecture is providing strategic inclusive value chain solutions to value chain problems, in the cocoa sector in Ghana, CDI, Nigeria and Cameroon. A major breakthrough of this process is that Technoserve was able to form partnerships with financial institutions and exporters that resulted in the disbursement of significant amounts of money towards increased cocoa productivity.

ACI successfully piloted an input credit system with the view to doubling productivity on 100,000 cocoa farms through public private partnerships. **After nearly years of operations, mid-term reports show that farmers who utilized the facility posted incremental revenues estimated at \$ 210,000.00 (Ibrahim et al, 2015) and saw positive results on their yields. These farmers were willing to utilize the input credit to invest in high quality inputs and technical/advisory services. Farmers who utilized the facility were also able to pay back. The recovery rate is between 98% and 100% in Nigeria and CDI respectively.**

One significant finding from the implementation of the input credit system is that it has helped “to address the issue of lack of cash flow to purchase agro-chemicals...” (WCF/ACI Outcome Assessment Report, 2014) and farmers patronizing it have reportedly noticed significant changes on the fruiting of pods on their farms.

Private input distributors and micro finance institutions were willing to partner ACI to pool their resources to participate in the effective and efficient roll-out and actual implementation of the input credit system. **This is an important learning for ACI because it demonstrates that effective public private partnerships properly negotiated works and can give tangible benefits to farmers and all stakeholders.**

Another learning from the evaluation of the input credit system is that micro finance institutions have better hands-on experience in efficiently running such schemes than commercial banks because the former have the capacity to accompany the process from the beginning to its logical end.

Due to its multi-stakeholder nature and the vested interested of the parties, facilitation of input credit systems such as the one being implemented by ACI, should also include a stakeholder analysis, which helps to map out all the strategic interests and risks and strategies/plans devised, to mitigate risks and deepen common interests of all the parties. This is very important to win support for project continuation and sustainability (Ibrahim et al, 2015).

An important lesson from this is that such “... strategies used to multiply access to credit among poor farmers should also help such stakeholders to achieve scale and sustainability ...” Every stakeholder who comes into contact with the farmer, has an opportunity to deliver a message or train. This has led to the harmonization of training manuals in the 4 countries for extension staff and farmers.

Private sector actors have also developed their own capacity and capacity of farmers and farmer groups to influence cocoa scalability interventions, profitability and sustainability along the cocoa value chain. Locally driven cocoa initiatives can now be performed by community – based value chain actors such as SSPs, extensions agents (EAs), farmers and Village Input Shops/Centres.

Through enhancing public- private sector and farmer training services approaches and partnership, cocoa farmers now have better access to inputs, extension technology and credit, to address inefficiencies in cocoa production and value chain operations. This is crucial because the needs of the chocolate manufacturers and consumers of chocolate evolve as science and technology evolve. Therefore, it is imperative to have enough hands on the ground to train and upgrade farmers at best practices. Communication skills, use of technology to reach the critical masses becomes as important as the knowledge in all aspects of GAPs.

Without aligning these interests, inclusive cocoa value chain would be illusive at community levels. It also means that methodologies used in facilitating community based value chain approaches with farmers, must be simplified and harmonized to the extent that farmers are not confused by the messages from different stakeholders on the common aspects of GAPs.

The Programme has innovated and successfully integrated the SSP approach into the cocoa value chain in Ghana, Nigeria, Cameroon and Cote d’Ivoire, by identifying and training about 3,615 SSPs. Out of this, 3109 SSPs have passed all tests and certified to provide spraying services to cocoa farmers. This will significantly improve access to agro-inputs and responsible use of pesticides. This approach has been adopted to catalyze and increase the productivity of cocoa farmers. Within two years of its implementation, more than 50,000 cocoa farmers actually utilized the services of SSPs, signifying acceptance and adoption of the model. In the long term, it would have an important positive impact on cocoa productivity in West Africa.

Farmers utilizing the services of SPPs consider the model as an important bridging mechanism over similar services provided by government agents. The WCF/ACI outcome assessment for March-April 2014 showed that in Ghana “... the frequency of mass spraying has reduced from four times to only two times per year and the

supply of pesticides in the past year was woefully inadequate...” Similar cases were reported for Nigeria and Cameroun.

As a major lesson, by identifying farmers to be trained as spray service providers, empowering them to actually become providers of services, linking them to input credit and establishing the framework for enterprise or farmer school business, the SSP approach has laid the foundation for sustainable endogenous cocoa scalability. SSPs interviewed revealed that they make extra income from the spraying services they provide and use the returns to purchase additional inputs for sale to interested farmers. **More importantly, market linkages have been established with certified input and agro-chemical suppliers and companies, to ensure availability and accessibility of inputs.** According to them, without this important market linkage, substandard and uncertified (illegal) products would proliferate their value chain and contaminate (undermine) crop resilience and profitability.

Farmers are satisfied with the model. According to one farmer at Loum “... after removing dead branches and diseased pods, yield has increased and my neighbours think I’m using juju snake to draw pods from their farm. Now all my neighbours are learning from me...” (Outcome Assessment Report, 2014)

Through this approach, farmers have found a reliable vehicle to be used to drive home farmers’ needs, without traveling longer distances to cities/towns to procure inputs or materials, which may turn out to be fake or substandard and therefore cause significant loss of income. What is a significant learning about this approach is about **its community adoption, proximity of service, responsiveness and utilization by farmers and potential for private sector based delivery.** The chain is made up of village actors of mainly cocoa farmers, trained to operate independently for years, with little external support. They have built their work ethos, around the fundamental issues which cocoa farmers face daily and institutionalized systems in meeting such strategic needs, through direct provision of services to fellow farmers. One farmer describes his own learning of all ACI interventions as “Cocoa Last Stop” (“wo be nya biribia” meaning in Twi or this is where you buy all your cocoa essentials).

In addition, **they have built strategic market linkages (quasi-partnerships) with bonafide agro-chemical suppliers and micro financial institutions,** from whom they can obtain all agro-chemical needs for integrated pest management. The adoption of the SSP model is key to the sustainability of the ACI and its accessibility and utilization must be closely monitored. **However, the success of the model depends on its scalability. In all the countries, there are a limited number of SSPs to reach out to farmers who actually need to be serviced.**

The selection criteria for potential SPPs need to be re-considered, especially, the criterion based on literacy. Practical ways must be found to conduct the training in a manner that facilitates adult learning and assimilation, rather than written tests. To make it inclusive, more practicums and demonstrations, must be integrated into the training. More than half of the current cocoa farmers are illiterate. Nonetheless, the conventional approach being current adopted, would tend to support the premise that the ability to follow the applications, instructions and dosage of the manufacturer, minimizes risks of contamination.

The current SSP approach needs to be made more inclusive and gender sensitive. The approach is also not entirely gender responsive. More than 30% cocoa farmers in Ghana are female but they are excluded from taking part in the training. The precautionary approach to exclude women due to pregnancy related issues is understandable but women do not get pregnant all their lives and not all women get pregnant. Excluding women from the economic advantage of the model increases their transactional cost.

All the extension capacity assessments concluded that the EA-Farmer Ratio was inadequate, inefficient and covered fewer farmers (ANADER 2012, Batro & Co 2013). This phenomenon greatly influenced or contributed to productivity. They were also all found to be general practitioners-for all crops-including oil palm, rubber and cocoa. Farmers were also found to be interested in having their understanding of the cocoa farming system or indigenous knowledge, integrated into extension training and delivery.

Based on the outcomes of the extension capacity assessment studies including ANADER, **the need emerged for the convergence of curricula, as a blueprint for all cocoa extension training and delivery.** This is important to ensure that all EAs will communicate similar messages to farmers in the application of knowledge on GAPs, to avoid confusing farmers. To achieve this convergence, successful partnerships were established with all relevant national cocoa institutions in Ghana, Nigeria, Cameroon and Cote d'Ivoire and private sector farmer – based training organisations including ANADER and CropLife International. **The output of this partnership is the development of a common GAP Training Manual for training of EAs.**

ACI has complemented national cocoa extension training and delivery efforts, by investing in research, training and actual delivery in the 4 countries. Through this effort, there is a robust and responsive extension architecture in the cocoa ecosystem and value chain. This leading role is very much recognized by the governments and strategic cocoa stakeholders.

iv. Forster market-driven farming input supply services

Dynamics for an emergent, well-grounded market driven model for cocoa input supply services under ACI appear delicate at this stage but are evolving. It is currently anchored around SSPs, input credit facilitation and direct utilization and patronage of SSPs by farmers.

An actual market niche has evolved for supply of inputs and provision of services through the SSPs and most farmers are willing to pay directly or through the input credit. Farmers see a direct link between the availability, accessibility and utilization of products and farm productivity. This is a good stimulus to sustain this current market niche. Another value for patronage is the insurance it gives to farmers to get only certified products from certified sources and therefore saving of income from buying fake products that contribute to lower productivity.

However, there are inherent challenges in this market. **SSPs interviewed in Ghana indicate that some farmers do not pay for services rendered them.** This disincentivizes them. Ghana could learn from experience from other countries, where farmers pay for such services, using other crops at harvesting. **There is also a creeping tendency to buy cheaper products from the open markets and ask SSPs just to come and spray for a fee.**

A market-driven farming input supply system is an important cocoa value chain. It must also be resilient and responsive to strategic needs of its patrons. It needs to be predictable and reliable and privatized, so farmers can get access to the full complement of inputs they need at all correct times, at affordable rates. Otherwise, they would lose confidence and resort to the open markets. This would undermine ACI objectives. Complaints are rife about costs and unavailability of critical inputs at critical times from the outcomes assessments of the SSPs and Input Credit. **The current input credit system is reaching many farmers and affording them opportunities to procure inputs for their farms but the transactional cost is high and may drive away people.** It may also affect the scalability of the model.

The current partnerships established with micro finance institutions and agro-chemical suppliers, is an important leverage to strengthen the finance architecture of this value chain. Banks and microfinance institutions (e.g. LAPO in Nigeria) are replicating the Input Credit System as a model for agricultural lending on cocoa and other crops.

Gaps Constraints and Challenges

- i. Though the recovery of loans under the Input Credit System is reportedly high, poor farmers find the corresponding transactional cost to be high. For example 20% down payment and 17% interest rate are considered as a disincentive for participation. This trend can potentially limit the scalability of the model and weaken the value chain.
- ii. The selection criteria for SSPs, using literacy, exclude significant numbers of farmers from benefiting from the model for increased productivity and profitability. Many cocoa farmers in West Africa are already illiterate. However, overall farm safety and environmental implications/stewardship favor use of literacy. The criteria also not gender responsive as women are not allowed to participate due to reproductive health reasons.
- iii. Farmers are still buying agro-chemicals from the open market and tasking SSPs to spray for them. The implication is that adulterated or sub-standard or fake chemicals could well their way back to many cocoa farms.
- iv. Complaints are rife about costs and unavailability of critical inputs at critical times from the outcomes assessments of the SSPs and Input Credit.

Conclusion

The implementation of ACI, is seen to be contributing to consolidating a robust cocoa value chain in Ghana, Nigeria, Cote d'Ivoire and Cameroun through market access, input delivery, credit facilitation, deployment of cocoa hi-tech and capacity building. Also, there is a positive sense of stakeholders' satisfaction and willingness to utilize services and interventions of ACI across the region.

Scalability of some of the interventions, however, still require close monitoring and in some cases review of approaches. Notwithstanding the high recovery of the input credit among farmers, its transactional cost and interest rate payment, have been identified as challenges, which could impede the full scalability of this particular intervention. While farmers tout the SSP model, it has also emerged that the numbers are not enough to go round to every farmer. It is important therefore, to collaborate with local training and farmer services organizations, to expand the training of more SSPs, in collaboration with the relevant state actors.

One lesson to note is that developing genuine and responsive public private partnerships is a long term process and one that requires long-term investments and willingness of both parties to support the effort. Dynamics for an emergent market driven model for cocoa input supply services under ACI appear delicate at this stage but are evolving. It is absolutely important to continue to accompany such processes, until

they are well-grounded to operate effectively, efficiently and independently. This view needs to be re-articulated more solidly, as part of the learning architecture of ACI, from time to time, with all major stakeholders, throughout ACI life span.

Finally, if it has not been done already, a complete beneficiary satisfaction assessment could be under taken further, to gauge how direct project beneficiaries feel about the entire programme and the lessons learnt, used to guide future project implementation. Such an assessment would be useful and add value to the end of project evaluation.

Recommendations

- i. Replicate ACI contribution to the cocoa sector in West Africa as a cocoa value chain model or approach for learning and knowledge management.
- ii. There is the need to review the 20% down payment by farmers before they can access input credit.
- iii. National Governments must intervene, alongside private companies, with robust infrastructures and policies, to avert loss of interest in cocoa production and dwindling of national and household income due to competing interests among farmers to cultivate or crops or shift completely.
- iv. Raise awareness among financial institutions about the investment opportunities along the cocoa value chain and help map out investment entry point for them and collaborate with other institutions delivering this capacity building such as GIZ.
- v. Expand the selection criteria for SSPs to include non-literates and integrate practicums/demonstrations for such entrants and make curricula gender sensitive.
- vi. An important lesson for ACI is to recognize the effect of small-scale mining and logging on cocoa production and household incomes (LMC) and through this, build strategic alliances for policy advocacy and land use reforms in the cocoa sector in Ghana in particular and West Africa in general.
- vii. Integrate the effects of mining and logging on cocoa productivity into extension delivery.

Annex 1: List of studies and reports reviewed

1. ANADER Extension Capacity Assessment
2. Cameroun Extension Capacity Assessment
3. CDI Input Coverage Assessment
4. Ghana Input Delivery Assessment
5. LMC Cocoa Comparative Household Economy Study
6. Nigeria Cocoa Extension Capacity Assessment

7. Nigeria Input Delivery Coverage Assessment
8. CropLife SSP Program Final Report
9. CropLife SSP Program Impact Assessment
10. Technoserve Input Credit Scheme Final Report
11. Technoserve Input Credit Scheme Impact Assessment
12. WCI/ACI Semi Annual and Annual Reports
13. Cocobod CocoaLink Transition Capacity Assessment
14. Regional Soil Fertility Workshop Report
15. Ghana Land Tenure Report

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Annex 10: WCF/ACI Learnings Study