KAYIN STATE CARDAMOM VALUE CHAIN ANALYSIS REPORT

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Conducted By:

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ABBREVIATIONS

CCI	Chamber of Commerce and Industry
CDN	Consortium of Dutch NGOs
CFs	Community Facilitators
CSO	Civil Society Organizations
DOA	Department of Agriculture
DOF	Department of Forest
FGD	Focus Group Discussions
IDP	Internally Displaced People
LIFT	Livelihoods and Food Security Trust Fund
MFI	Micro-Finance Institutions
MSP	Multi-Stakeholder Platform
NGO	Non-government Organizations
NTFP	Non-Timber Forest Products
NRM	Natural Resource Management
ODA	Overseas Development Assistance
SGM	Simplified Gross Margin
SNV	Netherlands Development Organization
UMFCCFI	Union of Myanmar Federation of Chamber of Commerce and Industry
VC	Value Chain
VCA	Value Chain Analysis

EXECUTIVE SUMMARY

This Cardamom Value Chain Analysis was conducted as part of the technical support of SNV Netherlands Development Organization (SNV) to the Consortium of Dutch NGOs (CDN) in the framework "Improving the Incomes and Nutrition Outcomes of Rural Poor in Northern Kayin State" project. The study was undertaken from March to May 2017 and covered the assessment of the production and trade in selected townships in Kayin State. The downstream markets have been assessed from the product source to the regional trading hub in Taunggoo and import/export points on the Myanmar-China border. As part of the analysis, stakeholders and actors involved in the value chain activities have been identified and a value chain map prepared to illustrate the relationships between the various actors. Opportunities and constraints have been identified with respect to production and marketing, to the policy and the enabling environment, to the various organizations involved and to and the related technology. Potential solutions to the identified constraints have been identified and recommendations included in a proposed intervention plan.

The analysis revealed that cardamom is a complicated value chain involving a considerable number of stakeholders: farmer producers, several layers of traders (village, township), transporters, regional traders/exporters, importers from China and processors/distributors. These stakeholders play distinct roles varying from input supply, production, post-harvest handling, transport, trading, export and import, and finally processing and distribution. Generally, the cardamom produced in the northern and eastern Kayin state is sold to village and township traders in the area and consolidated by regional traders in Taunggoo in Bago state. The product is exported directly to the border with China through Mandalay and Shan states. Chinese importers located in the border buy and sell it to processors in China. Reportedly small quantities of cardamom used to be sold to Korea, but that recently has been stopped. In terms of the governance of the cardamom value chain, the regional traders are the ones that control the chain when it comes to logistics and financing. The regional traders are the only ones that have access to market information from importers although they are not aware of how prices are set.

The bulk of the cardamom transactions take place at the village level as farmers sell their produce individually; they get a gross margin of approximately 70%. This margin seems quite high but in monetary terms farmers get only a very low income as the quantities produced are very small due to the small land holdings (average of 12 acres per family). Among the traders, the gross margin of the regional traders is estimated at to be 15% while the village and townships traders get a gross margin of respectively 13% and 11%. Based on anecdotal information, importers are selling cardamom processors in China at 6 times the amount they pay to regional traders. A more tangible information needs to be obtained of the China market to study further its dynamics and design a marketing strategy that can optimize benefits from accessing this market.

Several opportunities and constraints in the assessment of the cardamom value chain could be identified. Firstly, most farmers have access to land that is very conducive for cardamom production. Moreover, there is a steady market for the product. Sufficient traders are present from the village up to the regional level. Technologies for production and processing are readily available. On the other hand, several constraints have been identified as well such as the fragmented production and marketing that results in farmers not being able to negotiate better prices, the low quality of produce due to improper drying and post-harvest handling, the unwillingness of traders to pay premium price for good quality, the lack of access to up-to-date market information, too much facilitation fees being paid by farmers and traders to government authorities i.e. road personnel, customs office, Department of Forestry, in order to speed up transport and obtaining of required shipment and transport documents. This can also be attributed to poor cardamom trade and export policies and ineffective implementation.

Potential solutions to address the above constraints in the value chain are suggested including the organization of multi-stakeholder platforms to start addressing VC concerns, alternative financing to address the problem of producers being indebted and dependent on unscrupulous traders, support to farmer-households to instill/strengthen appropriate production, budgeting and financial management skills, the identification of champions to explore inclusive business models for cardamom and a policy review and related advocacy agenda for reforms.

It is highly recommended to seriously consider the start of development initiatives at various levels focusing on:

- Organizing of Multi-Stakeholder Platform
- Alternative financing for resource-poor cardamom farmers
- Organizing and strengthening farmers organization
- Inclusive Business Model for Cardamom Value Chain Development
- Policy reforms to support transparent and equitable cardamom business
- Cardamom quality improvement and bulking to enhance access to sustainable markets
- End market assessments and developing alternative markets

The recommended value chain interventions should be implemented in phases. The first phase should focus on a quick win activity for cardamom farmers such as piloting a quality improvement and bulking of product towards accessing sustainable markets. Introduction of proper drying technology to minimize post-harvest losses and to improve product quality are essential component of the pilot. Trader-members of Multi-Stakeholder Platform (MSP) should be encouraged to support and initiate market intelligence on the Chinese markets vis-à-vis working and collaborating with Chinese importers. The pilot activity should be based on simple participatory business planning with farmers to determine the viability of the project. During the first phase, multi-stakeholder platform (to be established) should start analyzing the existing policy frameworks and start advocating policy reform. The services of the policy makers will be engaged to facilitate the enactment of pertinent laws and policies. Organizing and strengthening of farmers organization will also be done under the first phase. The Multi-Stakeholder Platform (MSP) should be strengthened and capacitated to support and initiate market intelligence on the Chinese markets vis-à-vis extensively collaborating with the importers The second phase of the interventions is the introduction of alternative finance for farmers and setting up inclusive business models, preceded a comprehensive assessment of existing producer budgeting and financing the second phase could start in the third year of the project.

I. INTRODUCTION

The Consortium of Dutch NGOs (CDN) composed of ZOA, CORDAID and World Concern, is implementing a project titled “Improving the Incomes and Nutrition Outcomes of Rural Poor in Northern Kayin State”. This initiative is funded by the Livelihoods and Food Security Trust Fund (LIFT). The project envisions a high-level outcome that is “improved economic status and nutritional outcomes of poor rural people in Myanmar with increased income and stable access to and utilization of food for vulnerable households". This outcome is broken down as follows: 1) Rural households (including IDPs returnee households) have improved nutritional outcomes; 2) Smallholder farmers (including IDP returnees) achieve increased farm production and economic returns by an improved position in the value chain, and 3) Rural households (including IDP returnee households) are less vulnerable to shocks and stresses. To achieve the stated outcomes, the project focuses on four of the LIFT’s Uplands Program Framework components that include (1) Farm advisory services and Producer Groups; (2) Nutrition; and (3) Social protection and access to collective / public services and (4) sustainable natural resource management (NRM) as a cross-cutting issue within the intervention. Gender is also considered as a cross-cutting issue as women are typically underrepresented in CSOs and local decision-making processes.

Under high level outcome 2, that is “Smallholder farmers achieve increased farm production and economic returns by an improved position in the value chain”, one of the planned outputs is “Farm advisory services and equipment and input suppliers deliver services appropriate for uplands contexts to smallholder farmers (including IDP returnees)”. The activities lined up under the above-mentioned output include: 1) Training project and implementation partner staff on value chain development so that project staff, including 23 community facilitators, have increased knowledge on value chain development, potentially benefiting all project beneficiaries (5,000 HHs or 25,000 people). 2) Value chain analyses where knowledge gained during the analyses will be used directly to improve and fine-tune the value chain project component and LIFT and its partners, and other supporting agencies can use the knowledge gained from the studies to improve their future interventions in the area 3) Stakeholder and validation workshops where planning on value chain interventions will benefit project staff, extension workers, direct beneficiaries and knowledge from the VC studies are shared and feedback obtained, 4) Planning supply of production and demand in business linkages targeting 1,200 farmers (from core or non-core villages) to benefit from supply arrangements. 5) Integration of services, inputs and equipment in business relationships where 1,200 services linkages established directly benefiting 1,200 HHs from core or non-core villages 6) Build specific capacities of agribusiness and service providers where 150 agribusinesses and service providers are directly benefiting from improved capacities and indirectly benefits at least 1,200 farmers from core or non-core villages, 7) Co-investments for improved cardamom and other supportive value chain production where 850 farmers (from core or non-core villages) will be provided with small equipment. When proven to work, others will follow with their own investments. The involvement of financial institutions is sought to increase loans for similar investments. In the end, all producer group members (2,000 HHs) will increase their knowledge on certain equipment and possibly follow with their own investments.

Training of project and implementing partner's staff on value chain analysis was conducted to develop their knowledge and capacity on the subject and effectively support and participate in actual value chain study, from field data gathering to analysis. Involvement of the consortium and implementing partners in the conduct of the study was sought to maximize the use of existing available data and information and speed up data gathering and analysis and writing of reports. The study was undertaken in close coordination with the CDN and SNV has taken full responsibility in managing and implementing the various activities and processes required of the study including the reporting.

Implementation of the above activities was sub-contracted by the CDN to the SNV Netherlands Development Organization (SNV), a Dutch-based development organization that has vast technical and field-level experience on delivering value chain development facilitation services.

A. Background of the Study

As mentioned above, SNV Netherlands Development Organization is facilitating the implementation of the different activities that will contribute to the achievement of high level outcome 2 i.e. "Smallholder farmers achieve increased farm production and economic returns by an improved position in the value chain". One of the initial critical activities that SNV had to undertake is the value chain analysis for cardamom and other crops, hence this study on cardamom.

Cardamom has been pre-selected as a priority value chain along with coffee, rice and vegetables. Cardamom was overwhelmingly the most popular crop grown, with 86.2% of all farmers listing it as their most, second most or third most important crop[1]. Coffee and betel nut were popular choices for farmers, as their second and third most important crops. Overall, more than a quarter of farmers grew coffee, and just under a quarter grew betel nut. Moreover, cardamom is the top most on-farm income earner compared to coffee, betel nut and other crops. The cardamom value chain seems to be simple as it is but overall, the dynamics of the trade are quite complicated. On the other hand, there is immense potential for farmer-producers to capture more value from their production with appropriate value-adding interventions. In this regard, a careful and extensive value chain analysis is necessary to determine the opportunities and constraints that affects the development of the value chain and identify most viable and sustainable interventions that will benefit the target smallholder producers.

B. Objectives of the Study

The cardamom value chain analysis was conducted to understand the overall dynamics of the value chain and determine potentials for development. Specifically, the analysis envisioned to:

[1] Baseline Report_LIFT_Economic and Nutritional Outcomes Project, Mekong Economics Myanmar, April 2017

- analyze the functions/roles of relevant actors/participants involved in the value chain, prepare a value chain map to show relationships between and among actors, and identify existing marketing channels
- identify opportunities and constraints in the value chain
- determine promising areas for interventions/appropriate business solutions
- identify potential providers of services/business solutions
- facilitate the formulation and designing of appropriate program intervention/plan for commercially viable solutions

II. STUDY METHODOLOGY

A. Study Team and Methodology

SNV facilitated the study under the guidance of Mr. Frank Tolentino, the SNV Consultant to the project. Mr. Saw Lahlah, the SNV Value Chain Advisor in Myanmar, was responsible in secondary and primary data gathering and administering surveys and interviews. The Project Communinity Facilitators (CFs) were utilized in the field surveys at the farmers/community level. Other CDN staff were consulted and provided relevant information available.

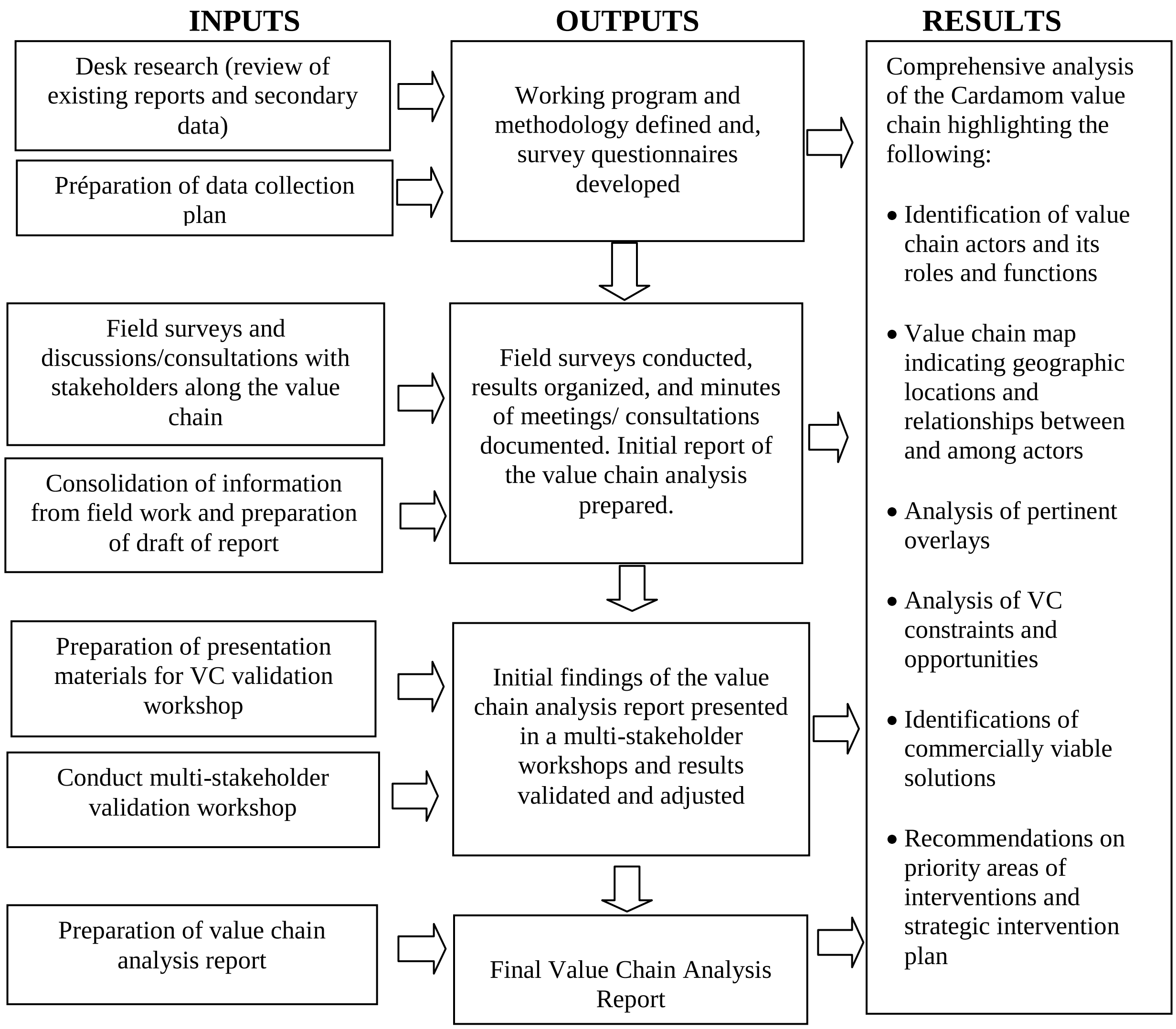
Considered part of the methodology, a four-day training on Value Chain Analysis and Market Assessment was undertaken . The training was intended to provide knowledge to the CFs and other training participants on the methodologies and tools of value chain analysis. As part of the CFs learning process (by way of a practicum), the CFs were tasked to administer the upstream survey of randomly selected cardamom farmers from the project sites. The survey focused on gathering information on input supply, production, and community trading of cardamom. One-on-one interviews, key informant interviews and focus group discussions (FGDs) were adopted during the surveys. A guide questionnaire was developed and used in the survey.

Figure 1: Community Facilitator Interviewing Cardamom Producers at the village

While conducting the field survey, secondary data gathering was undertaken at the same time. Review of existing reports, literature, and publications was undertaken. Secondary data gathered were validated and supplemented by information from downstream stakeholders such as township and regional traders, exporters, and support institutions such as the Department of Agriculture, Department of Forest, the Chamber of Commerce, research institutes and universities, among others. The data have been validated in discussions with the stakeholders, through individual and key informant interviews, and in focus group discussions. Guide questions were formulated and used in the process.

All primary & secondary data have been organized and m systematically analyzed following a defined cardamom value chain analysis framework.

B. Value Chain Analysis Framework



III. SCOPE AND LIMITATIONS OF THE STUDY

This cardamom value chain analysis was conducted in the Kayin State primarily. It focused on the assessment of the production areas, of local processing, and of domestic trading. However, the study also covered to some extent other areas outside of the Kayin State to trace the flow of the commodity (to identify market various channels) from the source until the final markets. To that effect stakeholders in the regional trading hubs (Taunggoo and Mandalay), traders and exporters in the Myanmar-China border, government staff at the customs office at the border and importers in nearby China province have also been contacted.

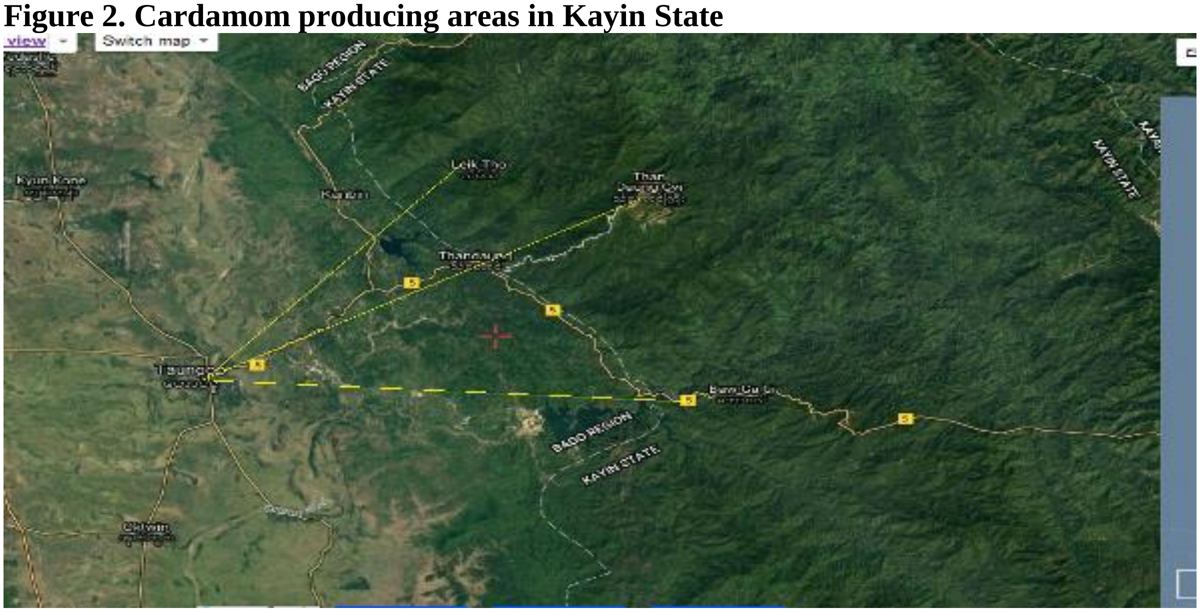
Due to time and resources constraints, the assessment of the final markets was limited only to a small part of China. In-depth assessments of other known cardamom markets such as Korea, Japan, Vietnam, India was not done. Review of existing market survey reports and literatures was conducted instead.

Some stakeholders revealed sensitive information; they requested not to be quoted or reported. In this study, their contributions are treated with caution; some may need further verification. Data outside of the study area were also gathered directly with stakeholders and were double checked through a triangulation process. However, there are instances where interviewees are less open in terms of providing financial information as they are worried they may be charged additional levies and taxes or are afraid that their strategies will be adopted by competitors.

IV. FINDINGS AND RESULTS OF THE STUDY

A. Value Chain Geographic Locations

Figure 2. Cardamom producing areas in Kayin State



In Kayin State, identified cardamom production areas include the township of Thandaunggyi and sub-townships of Lake Tho, Than Daug Gwi, and Baw Ga Li. The production areas are mostly in the upland villages and accessibility is mostly by trails though some areas can be reached through poorly paved dirt roads. The main trading post is in Taunggoo . It serves as the consolidation area of the product coming from the various townships before it is finally exported to China via Mandalay or Shan state border. Previously, very limited cardamom quantities are reported to be exported from Taunggoo to Korea, but this seemed to have stopped lately.

Figure 3. Product flow from source to consolidation point (Taunggoo)

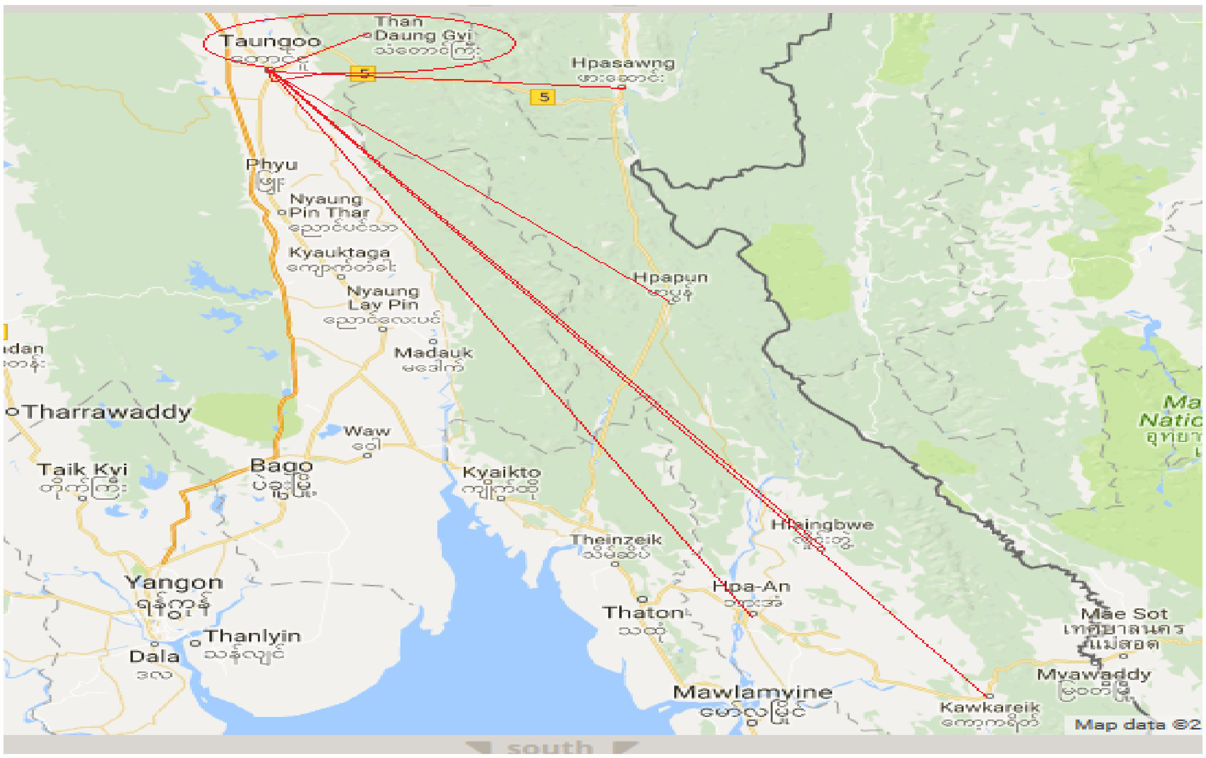


Figure 4. Product transit points (Bago, Mandalay and Shan state)

B. Description of the Value Chain

Cardamom is the name used for herbs that fall within two genera of the ginger family, Elettaria (small cardamom) and Amomum (large cardamom). The pods of the two varieties are characterized as small, triangular in cross-section and spindle shaped, with a thin papery outer shell and small black seeds. Pods of the Elettaria species are light green in color, while Amomum pods are larger and dark brown[2].

Figure 5: Botanical Information of Villous Amomum Fruit[3]

Order: Zingiberales
Family: Zingiberaceae
Genus: Amomum
Species: Amomum Villosum
Official Latin Name: Amomum Villosum Lour.
Common Names: Villous Amomum Fruit, Cocklebur-like Amomum Fruit, Fruit of Villous Amomum, Fructus Amomi
Pin Yin Names: Sha Ren
Botanical Origin:1.Amomum Villosum Lour (Yang Chun Sha Ren); 2.Amomum Villosum Lour. var. xanthioides (Wall.ex Baker) T.L.Wu et Senjen [A.xanthioides Wall.ex Baker](Lv Ke Sha Ren);3.Amomum longiligulare T.L.Wu.(Hai Nan Sha Ren)

According to the report of Thanglaw Kee titled "Hakha, Chin State Farming System of Cardamom" published in academia.edu website, cardamom in Myanmar is mostly grown in the Kayin State and it's only the green cardamom variety that is farmed. The local or Myanmar name for this green cardamom is Chin paung fer lar (or) Fer Lar[4]. While the report mentioned that its green cardamom, this claim is a bit misleading as the variety being grown in the area is the amomum variety (amomum villosum) where pods are usually brown when dried. In Kayin State, production areas are concentrated in the Thandaunggyi townships and border areas of neighboring townships. Thandaunggyi is one of the upland townships in Northern Kayin State that is hilly and mountainous and largely covered with dense forest. The elevation ranges from 200 meters (600 ft.) to 1,500 meters (4,500 ft.) above sea level. In the past several decades, people in the area started collecting cardamom from the wild and selling it in Taunggoo. In the last two decades, the demand grew, and people started growing cardamom. In the baseline survey conducted for the project, it was reported that 78% of the population in the project area considered cardamom as most important source of income.[5]

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[2] The World Market for Cardamom, Market Survey #2 for the USAID/ACCESSO project. www.usaid-accesso.org; accesso@fintrac.org. November 2011.

[3] The article and literature was edited by herbalist of MDidea Extracts Professional.It runs a range of online descriptions about the titled herb and related phytochemicals including comprehensive information related, summarized updating discoveries from findings of herbalists and clinical scientists from this field. The electronic data information published at the official website www.mdidea.com and www.mdidea.net, was last edited June 21st, 2016 at 14:30

[4] Thanglaw Kee, Hakha, Chin State Farming System of Cardamom. www.academia.edu; January 2017

[5] Mekong Economics Myanmar, Baseline Report_LIFT_Economic and Nutritional Outcomes Project, April 2017

The main market of Myanmar cardamom is China and there are reports that it is also marketed in small quantities in Korea. China is a ready and growing market for cardamom. There are several levels of traders before the product reaches the final market. Villagers normally sell their produce to traders in the town who in turn sell it to regional traders in Taunggoo and onward to border traders or exporters. Nowadays, some Chinese traders buy directly from the villagers and the product is transported directly to China. This new trading scheme has been proven disadvantageous to the township and regional traders as these Chinese traders operate illegally without any business permit and do not pay fees and charges. As such, Chinese traders can offer relatively higher price compared to local traders.

There exist strong producer-trader relationships such that traders particularly those that provide cash advances, hold power of the trade and easily fix the price of cardamom. Many of the villagers' pre-sell their cardamom to their 'patron' traders. Trade restrictions and heavy taxation are issues that limit both farmers and traders to generate higher income. For instance, traders must obtain certificate of origin from the Department of Forest and pay officers illegally (unreceipted) some amounts to facilitate processing of documents. Traders also must pay forest charges at different trading points (in Taunggoo and Mandalay) and the amounts are not the same (see rates below). High transport cost due to poor road infrastructures also results to lower profit margins for both farmers and traders.

B.1 Value Chain Actors and Roles

The cardamom value chain involves input suppliers, farmer and farm workers, transporters, village traders and agents, township traders, regional traders/exporters, Chinese importers, and processors/distributors. There are various facilitators and supporters of the chain namely the Department of Forest, Chamber of Commerce, Customs office, and to a lesser extent, credit institutions that provide small short-term credits to traders and producers. Cardamom production in Myanmar is generally organic as farmers do not use chemicals and fertilizer. On the other note, extension services to farmers is almost nil. Below is the list of actors and summary of roles they perform in the value chain.

Table 1: Value chain actors and roles

Actors	Roles
Farmers/Workers	• Establish and manage plantations • Collect and produce seedling themselves • Use planting materials produced from their own farms for plantation expansion, and remove weeds once a year. • Does harvesting (Sept. to Nov.), drying, and transporting of pods to home • Dry the pods in local dryers, remove capsule's tail partly by pressing with hand and do packing on Jute sack, transport to home and store in a dry place for few days • Farmers transport and sell their product to local traders

Department of Forestry	• Issues certificate of origin to traders to transport products • Collects forest chargers from traders at varying rates (250 Kyats per viss in Thandaunggyi and 100 Kyats/viss in Mandalay, traders should pay a total of 350 Kyats/viss)
Union of Myanmar Federation of Chamber of Commerce and Industries (UMFCCIs) representing the chamber, industrial and traders groups	• Advocates in favor of member trader in business promotion • Advocates for reformulation of policies • As per request of Chamber group in Taunggoo, is now assisting traders in facilitating cardamom business. • Business counseling
Input suppliers	• Provide inputs to farmers such as tools and packaging materials
Village traders/brokers/agents	• Collect cardamom from the farmers, store, transport and sell to district level traders • Provide advances to farmers
Township traders	• Collect cardamom from the village level traders as well as from the farmers • Store, transport and finally sell to regional level traders in bulk • Payment of trading and business tax to the revenue office and unofficial fees (unreceipted) to the Department of Forestry to facilitate obtaining transport documents
Regional traders/Exporters	• Buy cardamom from the village and district level traders. • Collect, store, dry, remove tail, perform grading and branding, and transport to finally sell to Chinese importers. • Payment of trading and revenue tax including forest charges to the different offices of Department of Forestry and customs duties.
Transporters	• Most of the transport services are provided by the farmers, village and township traders themselves. They transport products from the villages to the township and from the ownership to the regional hub in Taunggoo. Regional traders take care of transport from Taunggoo to the China border with Myanmar. • There are also private individuals that provide transport services to the traders to transport cardamom • Transporters pay regular shipment fees, but some indicated that they also must pay grease money along the way to facilitate transport and avoid inconvenience. • Transporters also obtain necessary transport documents as required
Importers (mostly Chinese)	• Chinese importers are on the border and do t business directly with Burmese regional exporters and traders • Maintain warehouses where they store cardamom and other products bought from Myanmar • Sell and deliver products to processors who are mostly manufacturers of traditional medicines in China

Chinese processors	• Source out cardamom from importers and provide specifications they required • Cardamom is commonly sourced from Myanmar to fill in the additional volume requirement not supplied by Chinese traders and Chinese producers • Cardamom is processed as part or ingredient of traditional medicinal concoctions
Customs Office	• Checks products and issues license for trading of Cardamom • Collects revenue from the traded commodities. It also keeps records of the transaction.

B.2. Value Chain Process Flow

The cardamom value chain follows a very simple process flow that starts from provision of inputs supply, production and post-harvest handling, trading and exporting, importing and processing/distribution. In general, the actors involve are input suppliers, farmers and farm workers, traders and exporters, importers and processors. Details of the individual actor roles are specified in Figure 4. The actors engage and utilize multitude of services ranging from input use and application demonstration, costing and farm planning, improve farm practices, technology transfer, transport services, financial services, improve drying, packaging & storage techniques, and quality control, market information systems, market assessments, delivery and logistics services, ordering schedules, processing and formulation, product distribution and promotion. Detailed information and pertinent overlays are provided in Table 2.

B.3 Market Channels

The results of the study show that there are four market channels in the value chain. The most dominant and common channel in the study area is a long channel where the product passes through several actors located in different geographic points i.e. from the farmers – village traders/agents - township traders -regional traders/exporters- importers – processors and distributors until it reaches the consumers (See Channel 1 Figure 5). The other channels are much shorter. In Channel 2, farmers bypass village brokers and agents and sell directly to village traders. In Channel 3, farmers sell directly to regional traders bypassing the village and township traders. Channel 4 which is the shortest is the new emerging channel where Chinese traders operate in the villages and buy cardamom directly from the farmers and transport the product directly to importers in the border. As mentioned earlier, this trading activity by the Chinese is illegal as they don’t have business licenses to operate in Myanmar. These Chinese traders make good money as they don’t pay the required fees and charges. Many local traders are affected by the Chinese operations, but they just remain silent and don’t complain. On the other hand, the operation is favorable to many farmers as they get much higher price for their cardamom from these Chinese traders. No exact amount was disclosed as to the price difference being offered by the Chinese buyers but apparently its becoming recognized by the farmers.

B.4 Value Chain Map

The cardamom value chain map in Figure 5 illustrates the functions and roles of the various actors in the value chain. It also depicts how each actor relates to one another as the cardamom product passes through them from production to final markets. This simply is shown by the arrows that connect between and among actors. In the map, cardamom in Myanmar has two markets, the Chinese processors which is the major one and small buyers from other countries. There is no reported use of Cardamom locally hence no local market was identified.

The roles of the support and facilitating organizations are also indicated in the map such as Department of Forestry and Agriculture, Customs office, local and national government, Chamber of Commerce, among others. Their roles are mostly in terms of providing support services such as licensing, collection of fees and charges, policy support, and research and development. The role of formal financing institutions has not been highlighted as financing of the various value chain activities is only informally arranged for by traders who are providing advances to smallholder producers. Among traders at various levels, credits are usually provided or supplied by traders higher up. There are few traders that obtain financing from informal sources such as relatives and friends.
In terms of governance of the chain, locally it's the regional traders that control the value chain in terms of logistics and financing. Pricing-wise however, it is still the Chinese importers that dictate and announce the price the basis of which kept unknown to local traders and buyers.

So far there are policies identified that constraint the development of the value chain and affect business operations of some stakeholders. The value chain map shows institutions that are involved in policy making. Currently more and more stakeholders have become active in airing their grievances on policies that affect them.

Figure 6. Value Chain Process Flow Chart

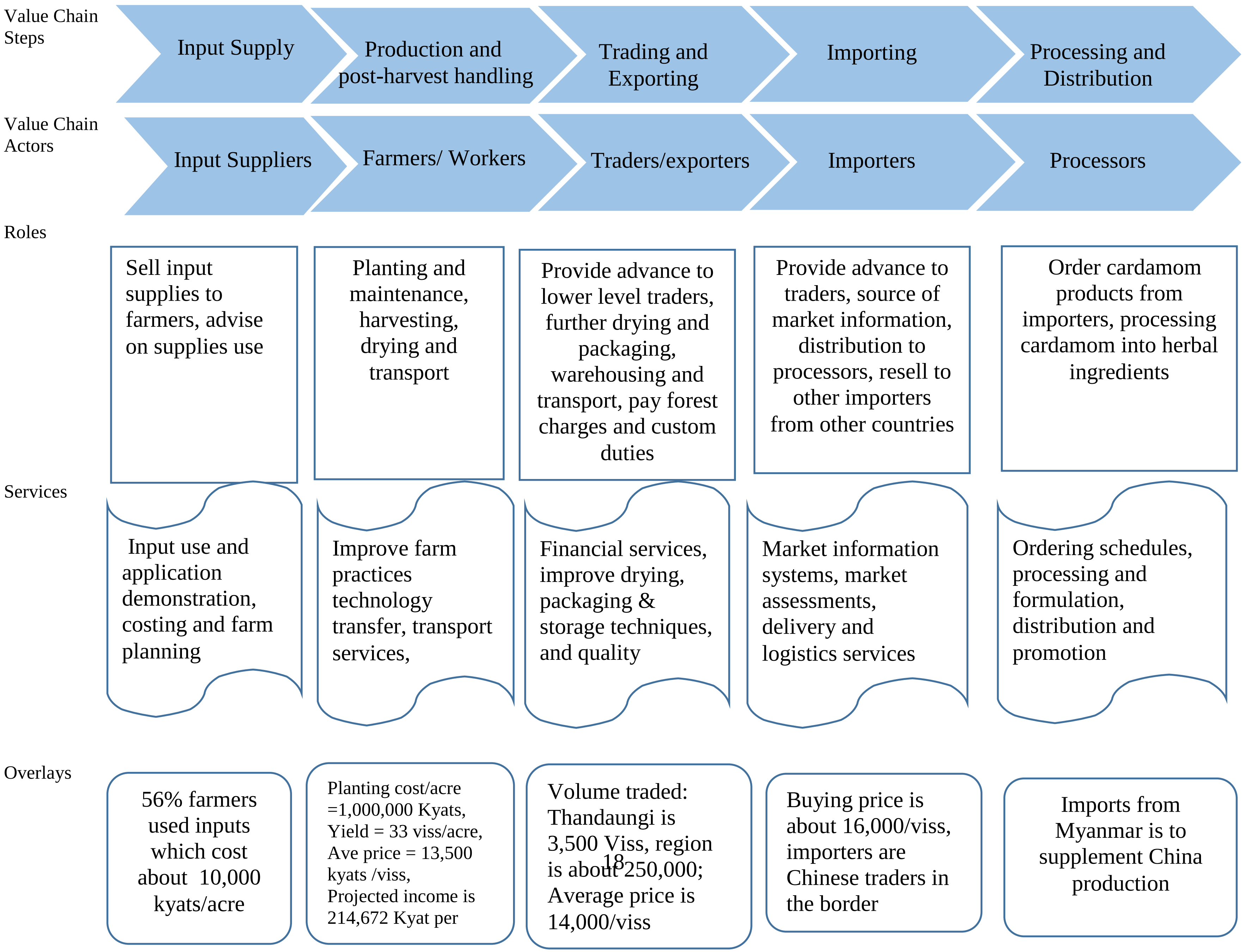


Figure 7. Market Channels

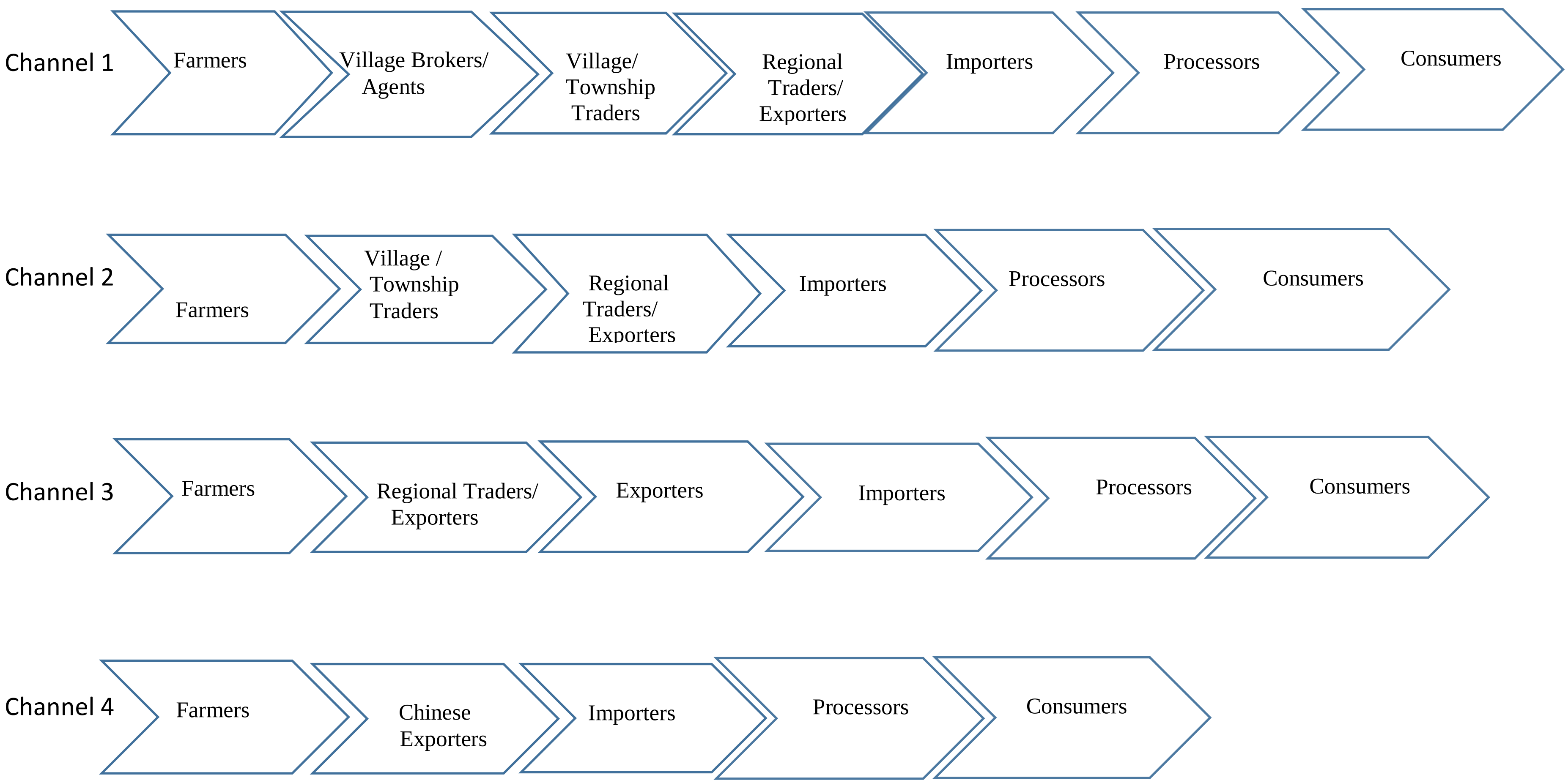
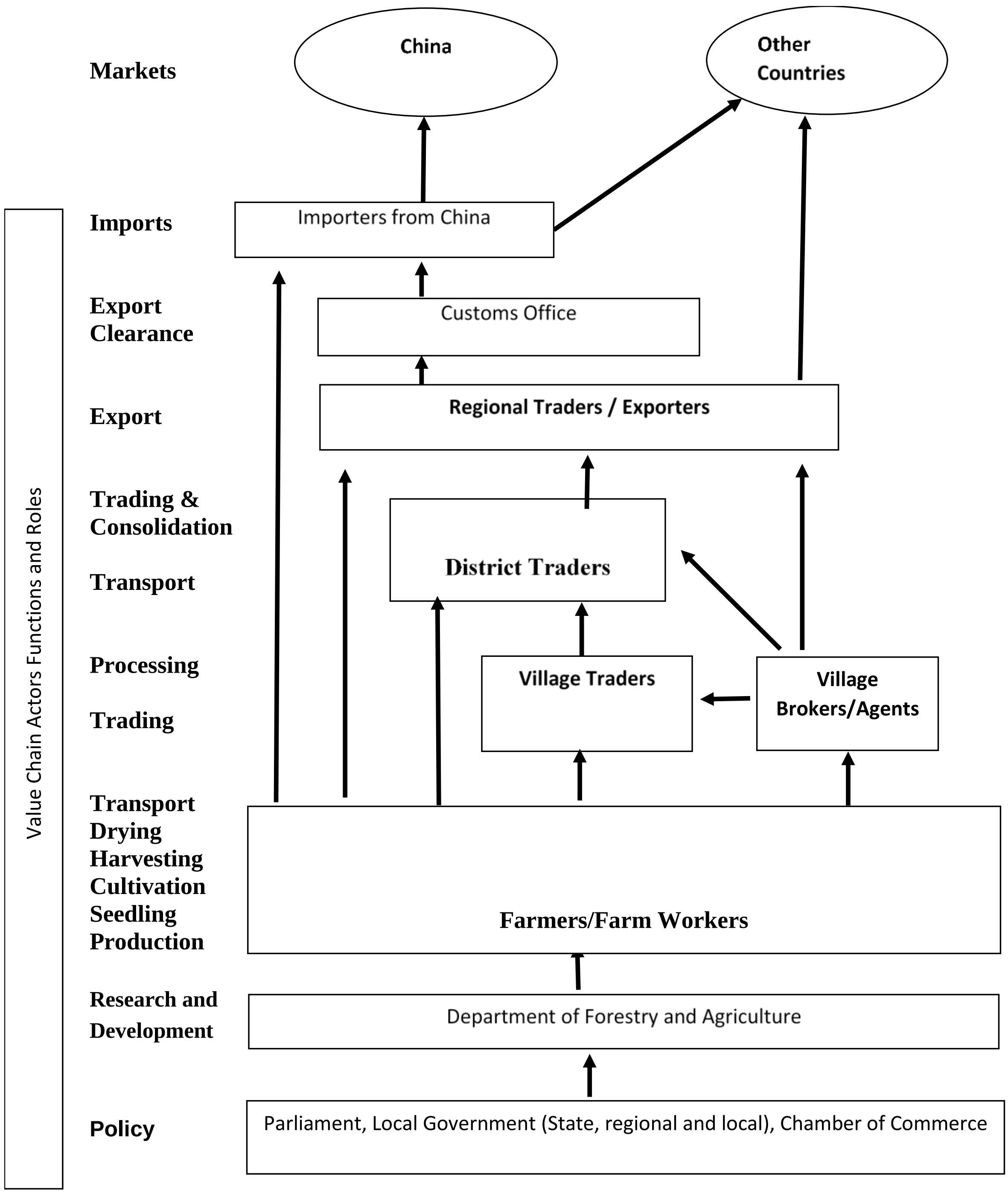


Figure 8. Value Chain Map



B.5 Overlays

As presented in Figure 3.7, there are about 5,400 farmers involved in the production of cardamom in the study area While the average land holding of farmers surveyed is estimated at 12 acres, 43% owns less than 5 acres and 27% owns between 5-10 acres. Only 10% of the farmers surveyed owns more than 20 acres These farmers hired or are assisted by more than 37,000 farm workers in plantation establishment, maintenance and harvesting including post-harvest handling. Total production area is estimated at 65,000 acres (average of 12 acres/farmer) with a production volume of 2,145,000 viss. The bulk of trade transactions takes place the regional s level. This is logical as bulking and accumulation of the product is done by the regional traders prior to shipment for export.

Table 2: Land ownership of farmers

Land size range (in acres)	# of farmers	Percentage
0-5	57	43.00 %
6-10	36	27.07%
11-15	14	10.00%
16-20	14	10.00%
21-25	3	2.26%
26-10	5	3.00%
36-40	2	1.50%
46-50	1	0.75%
56-60	1	0.75%
76-80	1	0.75%
86-90	1	0.75%

In terms of simplified gross margin, it appears that the farmers are making the biggest margin. This is because farmers don't invest too much in production and normally don't maintain their crop. In fact, it was reported that there are farmers that visit their farms only during harvest time. Percentage wise, the gross margin for farmers is high but in monetary terms the farmers get low or minimal income as their production area is quite small. Among the traders, it's the regional traders that gets better margin of about 15% compared to village traders and township traders that get 13% and 11% respectively. No data has been obtained about to simplified gross margin that importers get but anecdotal information revealed that Chinese importers sell cardamom six times the price of what they are paying to regional traders. The cardamom trading business is dominated by the regional traders comprised of between 50 to 100 individuals/businesses.

Table 3. Pertinent overlays in the cardamom value chain study area

Chain Activity	Actors/ Stakeholders	Volume of Production/ Transaction *	Simplified Gross Margin (%)	Number of Actors
Production and harvesting	Farmers Farm workers	2.145,000 viss	72%	5416 37,912
Village trading	Village Traders	3895 viss	13%	10 (Thandaunggyi)
Township Trading	Township Traders	250,000 viss	11%	15 (Thandaunggi)
Regional	Regional	590,000	15%	50-100

Trading/Export	traders/exporters			
4Import	Importers	No data yet	Importers sell cardamom 6x the amount that they pay traders	No available data
Processing/Re-export	Processors/ exporters	Needs further study (market intelligence survey is needed)		

*Note: Total production volume/transaction does not tally with the total volume traded as some traders underreported their volume of transactions

B.6 Opportunities and Constraints

As part of the analysis, opportunities and constraints in the cardamom value chain were identified and analyzed. The table below summarizes the various constraints as well as opportunities in production, marketing, policy and enabling environment, organizations and institutions and technology of production and processing. With respect to production, the key issue is low productivity resulting in low income. Based on production data obtained from the field, there are farms that can produce higher yields when properly managed (maximum of 200 viss per acre) and that losses are minimized when proper drying is observed.

Results of the survey showed that cardamom production is an important income generating activity among the population but 67.9 % of surveyed respondents indicated that its contribution to household income is less than 50%. Only about 32% of households mentioned that income from cardamom contributes between 60%-100% to household income. This indicates that cardamom production remains as a side activity and not the main income source of the farmers. As such, many farmers, the small ones, don’t pay much attention to improving productivity. These farmers showed no high interest in expanding production areas, do not care much on improving the quality of their product, and are highly indebted to traders. Other factors that affect the productivity is the occurrence of pest and diseases, unorganized production, high cost of transport due to poor infrastructure, no access to good market or price information, and inability to negotiate for better prices.

Table 4. Percentage of farmers indicating cardamom contributed to household income

Percentage contribution	# of farmers	Percentage
0-10%	25	18.66%
11-20%	6	4.48%
21-30%	10	7.46%
31-40%	13	9.70%
41-50%	37	27.61%
51-60%	7	5.22%
61-70%	4	2.99%
71-80%	20	14.93%
81-90%	9	6.72%
91-100%	3	2.24%

On the other hand, farmers still have opportunities to capitalize on if they would like to see viable cardamom enterprise in the future. Cardamom has a steady export market and is reported to increase by 2.5% from 2017-2022[6], the area is technically suitable for production, financing could be made available, farmers can be organized to strengthen their bargaining position and there could be room for a quality based payment system.

However, there are several constraints that beset cardamom marketing. Access to price information by stakeholders from the village level up to regional level traders is very limited. Even the regional traders are very much dependent on the price that the Chinese importers tell them. Price fluctuates very rapidly during the harvesting season. There is no price structure that traders use as no product classification is being followed. Traders are not willing to pay extra for good quality product hence producers get no incentive in improving product quality. The main reason given by traders why they don't pay premium is that majority of farmers sell poor quality products and when they get small quantities of good cardamom they must mix everything altogether ending up selling at the same price as the poor-quality ones. Selling of good quality cardamom needs to be promoted in the border and to Chinese traders to change the pricing practices. Product grading or classification would therefore be very necessary.

Figure 9: Drying of the Cardamom in the village using fire wood and bamboo shelf.

1. [6] Global Cardamom Market 2017-2022: PR Newswire, NEW YORK, Aug. 7, 2017. http://www.reportliinker.com/p05028436/Global-Cardamom -Market.html

Despite the above marketing constraints, producers still can sell their produce. Traders abound everywhere, from the village, townships, regional and even Chinese traders penetrate villages during harvest season for cardamom trade. Demand for cardamom as an ingredient for traditional medicine appears to be increasing as demand for them is increasing. No certification is required for cardamom in the Chinese markets hence export process is relatively simple and straightforward.

Several issues related to policy and enabling environment were identified during the study and confirmed during the multi-stakeholder validation workshop. Cardamom up to now is still being declared as Non-Timber Forest Products (NTFP) thus traders are required to get permit to transport from the Forestry Department despite the fact there was already a law passed to declare the crop as agriculture crop. There is a problem with the implementation of the new law. As such, traders still required to get a permit to transport and must pay forest charges which vary from one province or region to another. Another big issue raised by some traders during the study was the payment of facilitation fees to the Department of Forest that is pegged at 20 million Kyats per trader per year. This fee is fixed regardless of volume that the traders sell in a year. The traders interviewed requested that this information be treated confidential as they are very apprehensive that the government authorities involved might make their business operations more difficult or even bar them from doing business. Another facilitation fee mentioned by transporters was the payment at several check points that they pass to reach the border. Payments are made under the table with no receipts. Traders believe that collection of these facilitation fees greatly reduces their business profitability.

The proliferation of Chinese traders entering villages to directly buy cardamom from farmers affects local traders. Their operation is illegal as they don't have business permits and don't pay taxes and fees required. This kind of trading operations directly compete with local traders in an unfair manner.

These policy issues are persistent and need to be addressed. A positive development though is that policy makers are now aware of the issues and have signaled their interest in resolving them.

At the farmer's level, cardamom production and marketing are highly fragmented. Each small holder farmer produces and markets only a small quantity of the product and each individual farmer does business with his own preferred trader or buyer. As such farmers mostly resort to pre-selling their cardamom and most traders take advantage of this scheme as they can pressure farmers to sell at the price they want. Farmers basically have no leverage in dealing with traders and bargain for a better price. There is a need for farmers to consolidate/bulk their produce increases their bargaining power with traders and get a better price for their product. There seems to be a good opportunity for famers to address the issue. In the study area, farmers have shown an interest in organizing themselves to increase their leverage in marketing and quite a number civil society organization (CSOs) and non-government organizations (NGOs) are now providing services to organize them.

Another major constraint besetting cardamom farmers is their interest in adopting appropriate technologies to improve productivity. Cardamom farmers tend to be labelled as 'lazy farmers' as many of them don't explore ways to increase their productivity or quality. Farmers just rely and wait for what their farms will produce. The need to encourage farmers to adopt appropriate production and processing technologies is a precondition for increasing productivity and profitability. One way of encouraging farmers to adopt technologies is to demonstrate the cost and benefits of doing it. Farmers need to see the benefits and incentives of working more on improving production and quality. Farmers lack of access to extension services contributes to farmers limited knowledge and disinterest on improving productivity and quality.

Below is the summary of constraints and opportunities identified in the cardamom value chain.

Table 5. Summary of Opportunities and Constraints

Opportunities	Constraints
Production	
• Cardamom suited to the area • Area available for production expansion • Traders can provide advance to farmers • Product quality improvement possible with corresponding increase in price • Farmers can be organized to increase their bargaining capacity, consolidate production and adopt VC improvement	• Occurrence of pest and diseases resulting to loss of income to the farmers • Declining interest of farmers to expand production due to low historical annual returns realized • Unorganized production and low quality of produce adversely affecting profitability to the farmers • Majority of smallholder farmers are indebted (many farmers have presold their cardamom) to traders thereby losing their position to negotiate or bargain for better prices • Market information not readily available causing less bargaining power to the farmers and traders • High cost of transport due to poor infrastructure making the product less competitive for the traders. • Improper drying and poor product packaging resulting to short product life and losses to farmers
Marketing	
• Traders exist in the village, township and regional level • Villagers can directly access Chinese importers and able to negotiate for better prices • Traders have good access to warehousing and transport services	• Traders up to the regional level have limited access to market information leading to a situation that prices being dictated by importers and exporters Traders unwilling to pay extra due to poor quality of products being supplied resulting to loss additional income

• The demand for traditional medicine is increasing thus demand for cardamom as ingredient for herbal medicine is also increasing • No product certification is required to export the product to China	opportunity to farmers • Regional traders seem to control the trade and dictate the price as forced upon by importers and exporters leaving less chances to upstream actors (village and township traders and producers) to obtain better prices • Cardamom price fluctuates or decreases rapidly during the harvesting season resulting to lower profitability to both farmers and local traders who are not able to store their product and wait for prices to increase • Local and regional traders losing money as they pay substantial unofficial charges to the Department of Forest and Customs offices to facilitate the trade operations Cardamom (Villous amomum) trade in Myanmar is a high-risk investment as it is highly dependent on traditional medicine manufacturers in China as the main markets. Due to lack of product quality standard, no price structure can be established and used as basis for pricing making it convenient for big traders and exporters to manipulate or dictate prices.
Policy and Enabling Environment	
• Union and State level parliament willing to institute reform to improve the chain	• Cardamom is still being declared as Non-Timber Forest Products (NTFPs) thus traders are required to get permit to transport from the Forestry Department where payment of unofficial charges need to be made by traders • Forest charges of varying rates must be paid in each region or province where the cardamom product must pass through • Traders also loss money as substantial amount of money being is paid illegally to road checkpoints • Some Chinese traders operate illegally (without operations permit and not paying taxes) making local traders unable to compete
Organization and Institutions	
• Farmers have shown interest in organizing themselves to increase their	• Due to lack of organization, farmers are not able to organize production and

marketing position • Services to organize farmers are available from CSOs and NGOs	marketing (bulk selling) that could improve their bargaining power or position with buyers.
Technology for production and processing	
• Appropriate technologies for production and processing available and adoptable • There are potential economic benefits in improved production and processing through use of appropriate technologies	• Majority of farmers are not adopting improved production and drying technologies resulting to low productivity and high post-harvest losses • Lack of access to extension services and limited understanding of the benefits of adopting improved technologies are hindering farmers interest on improve productivity

V. RECOMMENDATIONS

A. Proposed Market-Based Solutions to Identified Constraints and Potential Service Providers

In the table below, market-based solutions are proposed for each identified constraint. Potential service providers are also identified including the constraints to the provision and use of the solutions. Project interventions to address the constraints are highlighted.

B. Recommended Interventions

With the array of and interrelatedness of constraints identified in the value chain, it would not be logical and effective to propose stand-alone interventions to specific constraints to develop a vibrant and sustainable cardamom value chain. A more encompassing and integrated approach is necessary. The interventions should be packaged into project or program that will address multiple and interrelated constraints and issues. Below are the key and priority interventions recommended for implementation.

<u>Organizing of Multi-Stakeholder Platform</u>

A project developed or implemented to respond to the identified constraints can be a good starting point in the development of the value chain. However, this approach may not sustainable and be able to address constraints and issues continuously. Once the project ends, interventions will most likely stop as well. To this end, organizing of multi-stakeholders' platform composed of willing and socially conscious stakeholders to continue working on identified constraints after the project is recommended. The platform will be a venue for which concerned stakeholders will be able to discuss, prioritize, and act on issues and concerns on the value chains and mobilize resource themselves. The project should provide support in capacitating the platform in areas of organizational functioning, service delivery, resource mobilization, and strategic planning for it to become sustainable.

Table 6. Proposed market-based solutions to identified constraints

Constraints/Opportunities	Market-based solutions	Potential provider	Constraints to the provision and use of the solutions	Project Interventions to address these constraints
Production				
Occurrence of pest and diseases resulting to loss of income to the farmers	Provision of extension services to farmers to adopt appropriate pest control measures	Government extensions agents Private input suppliers Traders	Lack of capacity of government extensions agents and service providers on pest control	Train service providers on biological pest control measures
Declining interest of farmers to expand production due to low historical annual returns realized	Educate farmers on the potential of increasing income by expanding production	Government extension agents CSOs, NGOs, training institutions	Lack of capacity of service providers on business planning and training and limited financial resources	Mobilize training resources and train service providers on business and farm planning
Unorganized production and low quality of produce adversely affecting profitability to the farmers	Organize farmers towards product bulking and improving quality	CSO, NGOs, and private companies	Lack on interest of farmers to organize if no direct benefits are eminent i.e. price premium for good quality products	Organization and strengthening of producer groups
Majority of smallholder farmers are indebted (many farmers have presold their cardamom) to traders thereby losing their position to negotiate or bargain for better prices	Provide access to alternative, low-cost and affordable financing to smallholder farmers	Micro-finance institutions, local development banks, social conscious traders	Small holder cardamom farmers are not attractive and bankable to the financial institutions	Facilitate organization of farmers to get access to group loan from financial institutions and promote self-help financing
Market information not readily available causing less bargaining power to the	Develop market information systems (MIS) and make it	Union of Myanmar Federation of Chamber of Commerce &	Developing and operating an MIS may not be financially viable	Encourage participation of as many stakeholders as possible to contribute

farmers and traders	accessible to traders and producers	Industries Ministry of Industry Traders and exporters CSOs and NGOs	and sustainable	to the financing of the systems.
Improper drying and poor product packaging resulting to short product life and losses to farmers	Promote use of low-cost and efficient dryers, proper quality control practices including packaging among farmers	Government extension agents Department of Agriculture CSOs and NGOs, and private companies	Low-acceptance of appropriate drying methods by farmers vis-a-vis benefits that farmers will realize	Ensure that good quality production fetches premium price and educate farmers of the amount of losses that can be minimized thru proper drying
		Marketing		
Regional traders seem to control the trade and dictate the price as forced upon by importers and exporters leaving less chances to upstream actors (village and township traders and producers) to obtain better prices	Improve transparency of the trade by providing all stakeholders access to price information	Union of Myanmar Federation of Chamber of Commerce & Industries Ministry of Industry Traders and exporters CSOs and NGOs	Gathering and timely dissemination of price information can be costly and logistically difficult	Promote strong coordination among stakeholders (government, CSOs, NGOs and private companies) to support MIS
Traders unwilling to pay extra due to poor quality of products being supplied resulting to loss income opportunity to farmers	Organize quality production and link to responsible traders and buyers willing to pay premium price	Selected socially responsible traders and importers CSOs and NGOs	Accumulating economically profitable volume of quality product difficult including promotion of socially responsible trading	Promote inclusive business approach
Cardamom price fluctuates or decreases rapidly during the harvesting season resulting to lower	Provide farmers and traders access to post-harvest facilities and access to alternative	Traders and private companies Financing institutions	Implementing micro-financing or any financing scheme in remote areas may not	Implement a group approach to savings and lending activities

profitability to both farmers and local traders who are not able to store their product and wait for prices to increase	financing so that farmers will have cash while waiting for the right time when their product can be marketed		be logistically feasible	
Local and regional traders losing money as they pay substantial unofficial charges to the Department of Forest and Customs offices to facilitate the trade operations.	Policy reform and effective implementation and monitoring	Parliament Concerned government departments Private sector	Politically sensitive issues difficult to tackle and changing the practices takes time	Organize and strengthen multi-stakeholder platform to facilitate policy implementation and ensure larger participation of stakeholders
Cardamom (Villous amomum) trade in Myanmar is a high-risk investment as it is highly dependent on traditional medicine manufacturers in China as the main markets	Explore alternative markets	Union of Myanmar Federation of Chamber of Commerce & Industries Ministry of Industry Traders and exporters CSOs and NGOs	Assessment of alternative markets is costly and time consuming	Mobilize the UMFCCI, exporters and government industry department to facilitate conduct of end market assessments
Due to lack of product quality standard, no price structure can be established and used as basis for pricing making it convenient for big traders and exporters to manipulate or dictate prices.	Implement and adopt cardamom product classification and standards	Ministry of Industry Union of Myanmar Federation of Chamber of Commerce & Industries	Lack of political will of the government to adopt and implement product classification, standards, and certification	Advocate and lobby for the adoption of product classification, standards and certification to make cardamom competitive in the international markets
Policy and Enabling environment				
Cardamom is still being declared as Non-Timber Forest Products (NTFPs) thus traders are required to	Policy reform and advocacy for enabling business environment	Parliament Department of Forestry Department of Trade and Industry	It takes time to pass laws and policies	Organize and support creation of multi-stakeholder platform or technical working

get permit to transport from the Forestry Department where payment of unofficial charges need to be made by traders		Chamber of Commerce		groups to work on policy reforms
Forest charges of varying rates must be paid in each region where the cardamom product must pass through	Rationalize the law on forest charges to make it equitable	Parliament Department of Forestry Department of Trade and Industry Chamber of Commerce	It takes time to pass laws and policies	Organize and support creation of multi-stakeholder platform or technical working groups to work on policy reforms
Traders also loss money as substantial amount of money being is paid illegally to road checkpoints	Stop illegal collection of grease money on road checkpoint	Chamber of Commerce Concerned government agencies	Need for a strong political will to implement local laws	Utilize the multi-stakeholder platform to work on the issue
Some Chinese traders operate illegally (without operations permit and not paying taxes) making local traders unable to compete	Stop illegal cardamom trading operations	Tax Department Trade and industry Department Local government	Strict policing and monitoring is needed	Utilize the multi-stakeholder platform to work on the issue
Organizations and Institutions				
Due to lack of organization, farmers are not able to organize production and marketing (bulk selling) that could improve their bargaining power or position with buyers.	Organize the farmers into producer groups	Government extension agents CSOs, NGOs and development organization	Farmers' interest to organize may be low if no immediate benefits are seen by them	Organizing and strengthening of producer groups towards social and economic development
Technology for Production and Processing				
Majority of farmers are not adopting improved	Promote improved production and post-	Government extension agents	Adoption of technologies may be	Training and demonstration of

production and drying technologies resulting to low productivity and high post-harvest losses	harvest technologies	Private companies and traders CSOs, NGOs	slow due to lack of financial resources and economic incentives	economically-beneficial technologies to farmers
Lack of access to extension services and limited understanding of the benefits of adopting improved technologies are hindering farmers interest on improve productivity	Improve provision of extension services to farmers	Government extension agents Private companies CSOs, NGOs	Delivery of extension services may be hindered by lack of financial resources from the government	Private sector delivery of extension services and support to the government

Alternative financing for resource-poor cardamom farmers

Majority of the cardamom farmers pre-sell their produce and are dependent on traders for cash advances needed for their day-to-day subsistence and other households needs. This is the main source of credit of the farmers which has serious implication in terms of getting the maximum benefits from their cardamom production. It can be noted that farmers are not able to negotiate for better prices as their future production is already committed to traders at a price that the traders dictate. As such, many of them cannot get out of the cycle of indebtedness to traders. There is a need to study the budgeting practices of the farmers and design a financing scheme that will help them pay for the advances or debt and release them from being beholden to the traders. The scheme should consider financing their other household needs to completely veer away from unscrupulous traders for credit. While directing the farmers to a new alternative financing, the project should strive to work on improving farm productivity and income. It is assumed that when farmers are bailed out from the traders then they will be able to look for other traders whom they can demand for a better price for their cardamom.

Organizing and strengthening farmers organization

The organization and strengthening of farmers is the very starting point of effectively implementing village level interventions aiming at a more sustainable cardamom value chain development. Whenever fragmented production and marketing exists, bargaining capacity of the small-scale cardamom producers will hardly improve and remain weak. The only way to resolve fragmentation is to adopt product bulking which can easily be done if producers are organized. Organizing is a long and ongoing process but facilitators can work around common issues and concerns as an entry point. It is usually effective to start an organization once the producers and traders have been sensitized and see the benefits of organizing them towards achieving common goals and objectives. When people's organizations exist in the target area, community facilitators can work on strengthening them and include cardamom interventions in the group's priority activities. The community facilitators should see to it that proposed cardamom interventions are self-sustaining and commercially viable.

Organizing of farmers will help facilitate delivery of services such as training, technical assistance, etc. When farmers are organized, they can have a common voice in bargaining negotiate effectively with buyers. Implementation of actions or projects will become more efficient through a strong and capable farmers organization as well. In this respect, it is suggested that farmers should be organized or if already organized, be strengthened and capacitated to develop in self-reliant groups. To become truly sustainable and recognized as a constructive partner by both the private and the public sector, the organization should be formalized and obtain a legal status. The assistance of NGOs in organizing and capacity building would be necessary until such time that the groups can function on their own.

Inclusive Business Model for Cardamom Value Chain Development

To structurally improve the market position of the small holder farmers, they need to be integrated in the commercial export markets and linked to other stakeholders downstream. As such an inclusive business model, in which producer groups (smallholder farmers) and buyers work together to achieve a mutually beneficial business partnership is thought to be potentially powerful. There is a need to identify and nurture potential buyers with the conviction that fair prices, improved product quality and a structural relationship will strengthen their market position and hence be beneficial to all parties included. A mutually attractive price will have to be offered by the buyers to the participating producer groups develop such a relationship and sustain their position in the international market. The benefit of this scheme to the buyers is that they will have a sustained supply of quality products. In return, the producers will ensure that they will participate in the business undertaking by adopting appropriate technology and good agricultural practices, and ultimately delivering the required volume of products according to the agreed timetable and quality specifications.

Other than developing mutually beneficial business partnerships between farmers and processors/buyers or traders the model also works on building trust and confidence between and among business partners and imploring transparency in all transactions. This model is anchored in successfully implementing other interventions such as organizing of farmers towards quality improvement and product bulking, providing access to farmers/producers on alternative financing, and supportive policy and enabling environment. A detailed inclusive business proposal will be developed once the champions are identified and commitments to perform its desired business roles and functions are agreed.

<u>Policy reforms to support transparent and equitable cardamom business</u>

This intervention aims at reforming policies towards are more transparent governance of the cardamom value chain, developing a more equitable and business-friendly environment for stakeholders. There are four stages envisioned 1) review and analysis of current laws and regulations on cardamom production and trade, 2) Preparation of policy brief and position paper to advocate for policy changes and reforms, 3) Coordination with policy makers to revise and pass appropriate laws and regulations, 4) Monitor implementation/enforcement of approved or enacted laws and regulations

The multi-stakeholder platform will serve as a venue for policy review and advocacy for reform. A comprehensive review of obstructive policies that currently contribute to inefficiencies in the value chain and to an unfavourable business environment will be undertaken. A policy brief will be prepared and through proper representation, submitted to policy makers for action. The platform will develop an advocacy mechanism to influence policy makers to support and enact appropriate and effective laws and ordinances. Policy issues and concerns identified include declaring cardamom an agriculture product to avoid too much red tape in securing licenses and permits to transport, payment of unnecessary facilitation fees during product transport, getting certification and clearance from the customs office, levelling the playing field among traders by ensuring that all of them operate legally with required business and operations permits and pay due taxes.

Cardamom quality improvement and bulking to enhance access to sustainable markets

Inferior quality of cardamom product and individual selling by farmers result in a poor bargaining position of the farmers in terms of getting better prices. By consolidating/bulking the produce, it would be easier to improve the quality and make the transaction more efficient thus giving farmers the opportunity to leverage a better price. The CDN-LIFT project will pilot this solution by identifying farmers interested in adopting quality improvements and product bulking. Technical support will be provided to enhance processing achieving certain quality standards and to assist in product storage. Improved drying facilities can be introduced p to the farmers to ensure that the cardamom is dried immediately after harvest at the desired moisture content and good physical appearance. Marketing assistance will likewise be facilitated by project for farmers to access sustainable market.

End market assessments and developing alternative markets

Special attentions should be given to conducting end market assessments for both China and other alternative markets. Relying only on China market is risky to the industry and among investors. It is therefore recommended that alternative markets are assessed and determine the best strategies to access these markets. Support from the Union of Myanmar Federation of Chamber of Commerce and Industry, the Trade and Industry Department and other business associations should be tapped to facilitate the assessment and identifying and establishing market connections and linkages.

C. Identified Service Providers to Work on Market-Based Solutions

Implementation of the suggested solutions needs services and support from various agencies. The CDN-LIFT project should initially assist the farmers groups, the multi-stakeholder platform and other value chain stakeholders in obtaining the services needed. Delivery of the services should be made commercially viable to ensure sustainability of the assistance. The following institutions and organizations were identified as potential service providers.

- Chamber of Commerce and Industry
- Parliament and Local Government
- Civil Society Organizations (CSOs)
- Financial institutions such as Micro-Finance Institutions (MFIs), Overseas Development Assistance (ODAs) and commercial and development banks,
- Non-governmental organizations (NGOs)
- Private companies (traders and exporters)
- Certifying bodies
- Government line agencies
- Research & training institutions and universities

D. Proposed Intervention Plan/Strategies

The recommended value chain interventions, though need to be integrated, can be implemented in phases. The first phase should focus on quick wins activity for cardamom farmers and that is piloting a quality improvement and product consolidation towards accessing sustainable markets. This activity will conduct simple participatory business planning with farmers to determine the viability of the project. This will entail identifying interested farmer-participants and designing a product quality improvement and consolidation plan. Support to installing drying facilities and storage will be considered as part of the quality control improvement. Technical training and marketing assistance will also be provided. Close coordination with traders will be undertaken to convince them to pay premium price for excellent quality product.

Simultaneously during the first phase, the work on policy advocacy and reform will be facilitated through the multi-stakeholder platform. The services of the policy makers will be engaged to facilitate the enactment of pertinent laws and policies. Organizing and strengthening of farmers organization will also be done under the first phase.

The second phase of the interventions is implementing alternative financing for farmers and inclusive business model. A comprehensive assessment of producer budgeting and appropriate alternative financing will be facilitated and business plans for inclusive business model will be prepared. The second phase can be started in the third year of the project.

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VII. ANNEXES

A. List of People and Institutions Interviewed

- Mr. Roshan Ranawake, Managing Director, Control Union, Rm 413/A, 4th Floor, Pagoda Road, Dagon Township Yangon, Myanmar
- Ye Min Aung, Vice Chairman, The Republic of the Union of Myanmar Federation of Chamber of Commerce, No 29, Min Ke Kyaw Swar Street, Lamadaw Township, Yangon, Myanmar
- Kyo Myint Aung Warehouse, Taunggo Chamber of Commerce, Yakar Thar Street, Taungoo, Myanmar
- Zayar Paing Soe, Private Sector Development Coordinator, Women Economic Opportunities, Mennonites Economic Development Associates (MEDA), No. 58/E Inya Road, Kamayut Township, Yangon, Myanmar
- Kyi Nyein Chan, Program Officer, Livelihoods and Food Security Trust (LIFT), 12 (0) Pyi Thu Lane, 7 Mile, Mayangone Township, Yangon, Myanmar
- 2 staff from Department of Forestry in Taunggo and Mandalay
- Department of Agriculture
- Custom and Revenue Office
- Different Level of Parliament
- Eight (8) individual traders in Thandaunggyi township
- 160 farmers in Thandaunggyi township

B. Cardamom VCA Validation Workshop Agenda (May 19, 2017)

Objectives of the workshop

1. Validate the VCA results on cardamom with key stakeholders
2. Agree on strategic intervention areas for VCD
3. Prepare action plan for the implementation of agreed interventions
4. Steer up the formation of Multi-Stakeholder Platform (MSP)

Agenda

Time	Programs	Responsible Person
8.30-09.00 am	*Registration*	*Logistics person*
09.00-09.15 am	*Introduction of participants*	*Facilitator*
09.15-09.25 am	*Opening Remarks*	*Ex-Minister of Agriculture*
09.25-09.40 am	*Briefing on LIFT CDN Project*	*Eh Law Saw (CDN)*
9:40 – 10:00 am	*Presentation workshop objectives*	*Frank Tolentino*
10:00-10.30 am		**Tea Break**
10.30-11.30 am	*Presentation of results of the Cardamom VCA*	*Frank Tolentino and* Saw Lahlah
11.30-12.30 am	*Validation of the findings of the analysis (open forum)*	*Facilitator*
12.30am-01.30 pm		**Lunch**
01.30-02.00 pm	*Presentation of recommendations and proposed intervention areas for VCD*	*Frank Tolentino*

02.00-03.00 pm	*Discussions and agreement on key interventions areas for VCD*	*Eh Law Saw*
03.00-03.30		**Tea break**
3.30-04.00	*Action planning for the implementation of agreed VCD interventions*	*Participants*
4.00-05.00	*Organization of MSP*	*Saw Lahlah/ Facilitator*

C. List of Participants to the VCA Validation Workshop

Sr	Name	Gender	Represent Org	Remark
1	U Saw Kee Doh	M	Cardamom Farmer	
2	U Saw Christopher	M	Former Agri Minister	
3	Rev. Saw Bo Tha	M	Cardamom Farmer	
4	U Thein Htaik Min	M	TDG Agri Dep Officer	
5	Ko Kyi Nyein Chan	M	LIFT	
6	Daw Myat Su Win	F	LIFT	
7	Saw Eh Law Hsaw	M	CDN	
8	Saw Thura Chit	M	KMSS	
9	Saw George Gabrial Htoo	M	KMSS	
10	Saw Presly Sein	M	PABA	
11	Saw Silber Maung	M	KKBA	
12	Saw Doh Soe Htoo	M	BMB	
13	Naw Eh Ka Nyaw Paw	F	Logistic	
14	Naw Klay Paw	F	Cardamom Farmer	
15	Naw Mie Mie	F	Cardamom Farmer	
16	Saw Palae Saw	M	Cardamom Farmer	
17	Saw Maung Bwe	M	Cardamom Farmer	
18	Saw Hla Win	M	Cardamom Farmer	
19	Saw Tabin Shwe Htee	M	Cardamom Farmer	
20	Saw Tamalar Say	M	Cardamom Farmer	
21	Saw Kar Mi Lo	M	Cardamom Farmer	
22	Saw Htoo Htoo	M	Cardamom Farmer	
23	Saw Poe Mya Htoo	M	Cardamom Farmer	
24	Saw Doh Htoo	M	Cardamom Farmer	
25	Saw Bwe May Htoo	M	Cardamom Farmer	
26	Saw Hsar Gay Htoo	M	Cardamom Farmer	
27	Naw Hser Khu	M	Cardamom Farmer	
28	U Kyaw Thint	M	R Trader	
29	U Than Lwin	M	R Trader	
30	U That Swe	M	R Trader	
31	U Saw Thein Aung	M	Trader	
32	U Saw Robert	M	Trader	

33	Sai Myo Win	M	CSO	
34	Saw Hla Htoo	M	CSO	
35	Saw Thar Yae	M	Cardamom Farmer	
36	Saw Wai Lin	M	Cardamom Farmer	
37	Saw Naung Naung Oo	M	Cardamom Farmer	

D. Cardamom Baseline Data Questionnaire

1. Production level (farmers) = 500 farmers from 100 villages + 15 farmers from 3 villages (from 3 townships) outside of project area
   - How many farmers are involved in cardamom production?
   - How many people (family member___ and outsiders____) help in cardamom farming?
   - How much is the cost of planting one hectare or acre of cardamom
   - Who supplies the farming inputs?
   - What are the farming inputs required?
   - How much the inputs cost?
   - How much is the cost of land plantation maintenance, harvesting drying, transport and packaging?
   - How do you finance your plantation development and harvesting costs? What are your sources of financing?
   - What is the average land area allotted for cardamom production?
   - What is average yield per hectare or acre?
   - How do you maintain quality of cardamom?
   - Do you practice product sorting or grading?
   - Are there differences in the price depending on product grades?
   - What is the average price does the farmer gets per kilo or per vizz of dried cardamom
   - Whom or where does the farmer sell the cardamom product?
   - What are the payment terms; cash on delivery, advance payment, credit, etc.?
   - What is the total sales the farmer gets in one cropping season/cycle?
   - What percentage does income from cardamom contributes to household income?
   - What are the major constraints and opportunities in the production of cardamom?

2. Village Traders (all villages traders in all villages in project area and outside project area)
   - How many village traders are involved in cardamom trading in the village?
   - Are the traders organized?
   - On the average, how many people are employed by each trader?

- How many days in the year the workers/employees are engaged by the trader?
- What is the daily wage each worker is paid?
- What facilities are used by the traders in their trading operations i.e. trucks, dryers, sorting machine, sieve, etc.?
- What outside support services do you need for your operations i.e. accounting services, business planning, etc.?
- How much capital have you put up for your trading business? How do you finance your trading operations? What are your sources of financing?
- What is the average volume of cardamom are traded per season/cycle or per year?
- Where do the traders get their supply of cardamom?
- What is the average buying price of cardamom from the suppliers/farmers?
- Who pays for the transport of cardamom from the source to the traders? Is the cardamom delivered by farmers to the traders or pick up by the traders from the farmers?
- How much is the costs of re-drying cardamom, cleaning and sorting, bagging, transport?
- What are the other costs that the traders are paying for as part of their operations?
- Where or to whom does the traders sell their products?
- What is the prevailing selling price of cardamom this season?
- How much were the selling price in the last five years?
- On the average, how much is the trader's profit per kilo of cardamom.
- What are the major constraints and opportunities in the village level trading cardamom?

3. Township Level Traders - 10% of existing traders in all townships and sub-townships covered by the project and 10% of traders in the 3 townships outside the project area)
    - How many township level traders are involved in cardamom trading in the township?
    - Are the township traders organized?
    - On the average, how many people are employed by each trader?
    - How many days in the year the workers/employees are engaged by the trader?
    - What is the daily wage each worker is paid?
    - How much capital have you put up for your trading business? How do you finance your trading operations? What are your sources of financing?
    - What facilities are used by the traders in their trading operations i.e. trucks, dryers, sorting machine, sieve, etc.?
    - What outside support services do you need for your operations i.e. accounting services, business planning, etc.?

- What is the average volume of cardamom are traded per season/cycle or per year?
- Where do the traders get their supply of cardamom?
- What is the average buying price of cardamom from the suppliers/farmers?
- Who pays for the transport of cardamom from the source to the traders? Is the cardamom delivered by farmers or village trader to the township traders or pick up by the township traders?
- How much is the costs of re-drying cardamom, cleaning and sorting, bagging, transport?
- What are the other costs that the traders are paying for as part of their operations?
- Where or to whom does the traders sell their products?
- What is the prevailing selling price of cardamom this season?
- How much were the selling price in the last five years?
- On the average, what is the estimated profit per kilo from cardamom the township traders get?
- What are the major constraints and opportunities in the township level trading cardamom?

4. Regional Traders/Exporters (all traders in Taungoo)
    - How many regional traders are involved in cardamom trading in Kayin state or region?
    - Are the regional traders organized?
    - On the average, how many people are employed by each trader?
    - How many days in the year the workers/employees are engaged by the trader?
    - What is the daily wage each worker is paid?
    - How much capital have you put up for your trading business? How do you finance your trading operations? What are your sources of financing?
    - What facilities are used by the traders in their trading operations i.e. trucks, dryers, sorting machine, sieve, etc.?
    - What outside support services do you need for your operations i.e. accounting services, business planning, etc.?
    - What is the average volume of cardamom are traded per season/cycle or per year?
    - Where do the traders get their supply of cardamom?
    - What is the average buying price of cardamom from the suppliers/farmers?
    - Who pays for the transport of cardamom from the source to the traders? Is the cardamom delivered by farmers or village trader to the township traders or pick up by the township traders?
    - How much is the costs of re-drying cardamom, cleaning and sorting, bagging, transport?
    - What are the other costs that the traders are paying for as part of their operations?

- Where or to whom does the traders sell their products?
- What is the prevailing selling price of cardamom this season?
- How much were the selling price in the last five years?
- On the average, what is the estimated profit per kilo from cardamom do the regional traders get?
- What are the major constraints and opportunities in the regional trading and exporting of cardamom?

5. Border Traders and Importers (sample of at least 10% of border traders (
    - How many border traders/importers are involved in cardamom trading in Kayin-China border?
    - Are the border traders/importers organized?
    - On the average, how many people are employed by each trader?
    - How many days in the year the workers/employees are engaged by the trader?
    - What is the daily wage each worker is paid?
    - How much capital have you put up for your trading business? How do you finance your trading operations? What are your sources of financing?
    - What facilities are used by the traders in their trading operations i.e. trucks, dryers, sorting machine, sieve, etc.?
    - What outside support services do you need for your operations i.e. accounting services, business planning, etc.?
    - What is the average volume of cardamom are traded per season/cycle or per year?
    - Where do the traders get their supply of cardamom?
    - What is the average buying price of cardamom from the suppliers/farmers?
    - Who pays for the transport of cardamom from the source to the traders? Is the cardamom delivered by farmers or village trader to the township traders or pick up by the township traders?
    - How much is the costs of re-drying cardamom, cleaning and sorting, bagging, transport?
    - What are the other costs that the traders are paying for as part of their operations?
    - Where or to whom does the traders sell their products?
    - Do your product differentiation and are the products sold in several types of markets i.e. spice market, medicine manufacturers as buyers, etc.?
    - What is the prevailing selling price of cardamom this season?
    - How much were the selling price in the last five years?
    - On the average, what is the estimated profit per kilo from cardamom do the border traders get?
    - What are the major constraints and opportunities in the border trading and importing of cardamom?

6. Transporters (100% of all transporters)
   - What specifically are your role in the cardamom value chain as transporter?
   - What type of services do you provide and who are your clients from among the cardamom value chain actors?
   - What facilities, equipment, machineries, etc. do you use for operations?
   - How much is your investment in your transport business?
   - How much is your operations costs in relation to cardamom transports?
   - How much do you charge for your services?
   - How much profit do you get on cardamom transport?
   - Where are you located? What is your coverage area of operations?
   - What are the major constraints and opportunities in your operations related to cardamom transport business?

7. Warehouse operators (100% of those using warehouse for cardamom)
   - What specifically are your role in the cardamom value chain as warehouse operator?
   - What type of services do you provide and who are your clients from among the cardamom value chain actors?
   - What facilities, equipment, machineries, etc. do you use for operations?
   - How much is your investment in your warehousing business?
   - How much is your operations costs in relation to cardamom transports?
   - How much do you charge for your services?
   - How much profit do you get on cardamom storage?
   - Where are you located? What is your coverage area of operations?
   - What are the major constraints and opportunities in your operations related to cardamom warehousing and storage business?

8. Department of Forest
   - What role do you perform in the cardamom value chain?
   - What type of services do you provide to your cardamom clients?
   - How much fees are charge to your clients?
   - What constraints do you see in delivering services to your cardamom clients?
   - What do you see about prospects of cardamom industry in the future?

9. Customs office (2 offices in Taungoo and one in 105 Miles)
   - What role do you perform in the cardamom value chain?
   - What type of services do you provide to your cardamom clients?
   - How much fees are charge to your clients?

- What constraints do you see in delivering services to your cardamom clients?
- What prospects do you see in the cardamom industry in the future?

10. Chamber of commerce and industry (one office)
    - What role do you perform in the cardamom value chain?
    - What type of services do you provide to your cardamom clients?
    - How much fees are charge to your clients?
    - What constraints do you see in delivering services to your cardamom clients?
    - What prospects do you see in the cardamom industry in the future?

11. Research Institutions and Universities
    - What role do you perform in the cardamom value chain?
    - What type of services do you provide to your cardamom clients?
    - How much fees are charge to your clients?
    - What constraints do you see in delivering services to your cardamom clients?
    - What prospects do you see in the cardamom industry in the future?

12. Department of Agriculture (one office)
    - What role do you perform in the cardamom value chain?
    - What type of services do you provide to your cardamom clients?
    - How much fees are charge to your clients?
    - What constraints do you see in delivering services to your cardamom clients?
    - What prospects do you see in the cardamom industry in the future?

13. Financing Institutions i.e. banks, cooperatives, micro-finance institutions, self-help groups?
    - What products and services (loans/credit, business support services, etc.) do you provide to the cardamom value chain businesses such as?
      a) inputs suppliers
      b) farmers/producers,
      c) traders (village, township, regional and border traders)
      d) warehousing
      e) Transporters
      f) exporters

    - What are your requirements from prospective clients to qualify and can avail your products and services? If you provide financial services, i.e. loans and credits, what are the terms and conditions?

    - What are the terms and conditions for other services, i.e. non-financial services?

a) Technical assistance
b) Business planning
c) Consultancy services
d) Others

- How do you see the cardamom business going in the next few years?
- Based on your experiences dealing with cardamom producers, processors, traders, wholesalers, and exporter, what can you recommend improving cardamom-based related business?

14. Other actors i.e. police, civil society organizations, NGOs, parliament, local government
    - What role do you perform in the cardamom value chain?
    - What type of services do you provide to your cardamom clients?
    - How much fees are charge to your clients?
    - What constraints do you see in delivering services to your cardamom clients?
    - What prospects do you see in the cardamom industry in the future?

E. Baseline Assessment Guide

- Develop and administer baseline survey instruments and collect baseline information at each node of the value chain to enable the project to measure progress, outcomes and impact.
- Quantify the value chain actors and service providers, particularly producers, processors and traders.
- Quantify production volume, productivity, sales, added value, gross margins, actual benefits and income generated at various levels of the value chain.
- Generate data on infrastructure facilitating production and marketing.
- Calculate the contribution of the cardamom value chain to household income, job creation, and other social, economic and environmental impacts.
- Analyze power relations to understand forms and causes of exclusion at various levels of the value chain, including traders and farmers; landowner and tenant farmers, and farmers and seasonal labor.
- Estimate volume of trade at key market hubs and current value additions and product diversification possibilities; flow of market information; access to information, etc.
- Analyze access to finance, inputs, extension services and market, including distance.
- Analyze comparative advantage, constraints and opportunities at each level of the value chain, including loss in production and post-harvest, existing farming situation, harvesting and management technology, and varieties/breed.

- Generate relevant statistic on demographic and socio-economic fears of the targeted beneficiaries (gender disaggregated) related to the cardamom value chain in the project intervention areas.
- Disaggregate gender of the value chain actors and the extent of inclusion of socially and economically excluded groups in all steps of the value chain. Identify the needs and interests of women and excluded groups at various levels and their access to services offered by public and private service providers.

VIII. List of Table

IX. List of Figures:

X. Cardamom Related Photographs

Drying of the Cardamom in the village using fire wood and bamboo shelf.


Transporting of Cardamom from Farm to Village by Motorbike.


Harvesting of Cardamom in Cardamom Farm

XI. Attachments

A. Cardamom Baseline Data (see attached worksheet)