

CARDAMOM END-MARKET STUDY REPORT

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Conducted By:

SNV NETHERLANDS DEVELOPMENT ORGANIZATION

(Saw Lawlah Min and Frank Tolentino)

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Acronyms

CDN	Consortium of Dutch NGOs
LIFT	Livelihoods and Food Security Trust Fund
MSP	Multi-Stakeholder Platform
MFVP	Myanmar Fruit and Vegetable Producer and Exporter Association
TCM	Traditional Chinese Medicine
SNV	Netherlands Development Organization
CDN	Consortium of Dutch NGOs
CTM	Chinese Traditional Medicine
CNY	China Currency Yuan ¥

I. Introduction

The Netherlands Development Organization (SNV) provides technical assistance to the Consortium of Dutch NGOs (CDN) for the implementation of the “Improving the Incomes and Nutrition Outcomes of Rural Poor in Northern Kayin State” project in Myanmar. As part of the technical assistance, an end-market assessment for cardamom has been conducted to supplement the findings of the cardamom value chain analysis.

Since over ninety percent of cardamom produced from Myanmar is exported to China, the study considered China as the most relevant country to collect the data along the market chain and determine/identify the end-users of the product. Thus, this study focuses on selected Chinese markets.

Cardamom production and trading in Thandaunggyi and Eastern Bago region area had been going on since early 1970’s, but people in the Kayin areas did not know where cardamom is going to, where the end market is, who the end users are, and for what the product looked like. It was only in 2016, when the project was launched, that farmers and traders had the opportunity to meet with buyers from outside the country and started to understand that most of Myanmar’s cardamom is marketed in China. However, not much information about the market situation in China is available, hence this study was planned.

This end-market study was conducted from June 19 to 21, 2018 and its assessment covered various market channels, demand and supply, quality requirements and description of the end-buyers in China, trade policies and the enabling environment. However, lack of reliable data in the public domain as well as lack of reliable information on China as the main market for Burmese cardamom limit us to qualitative and rather anecdotal information.ⁱ

The aim of this study is to understand better the conditions and the dynamics that rule the identified cardamom end markets in China. Findings of the study will serve as an input in developing an effective marketing strategy that can be adopted by the producer groups including traders and exporters to access better markets and facilitate business linkages with potential buyers from China.

II. Objectives of the study

The study aims to achieve the following objective:

- Understand the market demands, policies, and other regulatory requirements for further penetration of cardamom markets in China.
- Identify constraints and opportunities for accessing the China market
- Explore buyer preferences, quality requirements, price trends, future market demands, and trading mechanisms to reach more buyers.ⁱⁱ
- On basis of the findings, provide recommendations for more effective marketing strategies that will benefit Myanmar cardamom stakeholders such as farmers, traders and exporters.

III. Methodology

This study was conducted using mostly qualitative methods. It mainly focuses on assessing supply and demand, competition, pricing and stakeholder relations. Individual interviews, key informant interviews and focus group discussions were used to collect data. Guiding questions were developed beforehand and used for data collection. Online research was used for analysing global market trends regarding cardamom, which helped putting Myanmar cardamom trade into perspective.

The market assessment was undertaken in four locations in China i.e. Shweli, Kunming, Bozhou and Anguo. Bozhou and Anguo were chosen because the largest Chinese traditional medicine centers can be found here. These areas are also known as the heart of production of traditional medicines and a trading hub for their ingredients (including cardamom). Kunming was chosen as the third research area as a cardamom trading event took place during the time of research, providing the opportunity to talk to many stakeholders. Fourth, Shwe Li was chosen as a border town where a large warehouse for cardamom is located and most of cross border trading is taking place.

Mr. Saw Lahlah Min, Value Chain Advisor of SNV for LIFT undertook the market assessment in the field. Mr. Aung Kyaw Oo, a trader and consultant for MFVP, volunteered as an interpreter during the interview and surveys. Two traders from Taungoo, who are also representatives of the Myanmar Cardamom Group, joined the trip to explore new business linkages, but also assisted in the study.

IV. Limitations of the study

A challenge during this study was a lack of reliable data on international cardamom trade in the public domain. Moreover, as Myanmar is a small player in the international cardamom market, it does not feature in the few statistics and reports that are available in the public domain. Finally, there is very scant information on Myanmar production, processing and trade trends in Myanmar itself as well. The lack of reliable data on Myanmar's cardamom production and developments of its main market (China) unfortunately limits us to qualitative and rather anecdotal information.

This anecdotal information was collected in only three provinces in China, but it provides a solid view representative of the country's market demands and quality requirements. In addition to the interviews with relevant stakeholders, literature and existing market surveys were analyzed to complement the anecdotal information. But as Myanmar cardamom is of low quality and therefore unqualified for legal import into China. Most of it 'disappears' in an informal circuit and hence, it was a challenge to collect the reliable information on the trade between Myanmar and China. For the same reason, the interviewees also requested not to be quoted or reported.

V. Findings of the study

1. General overview of the cardamom international market

Cardamom (or cardamom) is a tropical plant of the ginger family Zingiberaceae. The spice refers to a range of plants in the *Elettaria* (small cardamom) and *Amomum* (large cardamom) genera. The *Elettaria* (small or green cardamom) is most consumed and therefore also most traded globally. *Amomum Villosum/Villous* (large or black cardamom) is the genera produced in Myanmar. Unfortunately, most resources are about *Elettaria* cardamom (as is most of the analysis under this heading) and much less is known about international trade of *Amomum*. The below information is however still helpful as background information and serves to position Myanmar production vis-a-vis the global market.

Generally, the cardamom pods of the different genera are graded according to their size and color. Importers and processors have different preferences regarding the grade of the cardamom, but in general, the deeper the green color and the larger the capsule, the higher the grade is.ⁱⁱⁱ Being the third-most expensive spice in the world (after saffron and vanilla), cardamom is used mostly by upper middle-class and high-income population segments.^{iv}

Geographically, the Asia Pacific is the biggest region in terms of global cardamom production, as it held a 40% market share in 2016 and is expected to grow from a USD 26.02 billion in market value to USD 35.24 billion (35% increase) by 2024.^v The global cardamom market is highly concentrated, as over 60% of the global production of this spice is accounted by two major producing countries: Guatemala and India, who produce both small and large cardamom. They are also the main exporters. Due to specific climate conditions, cardamom is produced the year round in Guatemala, which gives it a comparative advantage in the export market.^{vi} Additionally, Guatemalan prices are significantly lower compared to India. This is because Guatemala produces mostly for export, while India has a very large domestic consumption that dictates its prices.^{vii} There is also a difference in quality: Guatemala produces green cardamom, while Indian cardamom is yellow. At the same time, the strong market concentration means that available supplies depend heavily on production conditions in Guatemala. But Guatemalan production has not always been stable due to problems with unfavorable weather conditions and pests. This situation opens opportunities for exporters from other developing countries.











Global production of cardamom is estimated at 55 thousand tons per year. Since 2015, the global production of cardamom has decreased due to unfavorable weather conditions in most producing regions. This situation influenced the harvests in 2016, 2017 and in the beginning of 2018.^{viii} A shift in the weather system from 2017 means that weather conditions in producing countries are expected to improve and that the worldwide supply of cardamom is expected to increase. This development will affect the prices of cardamom in the upcoming years.

Table 1. Production volume and market share of *Elettaria* by country (source: Tridge 2018)

Rank	Country	Production Volume in 2016 Metric Ton	Market Shares %
1	India	38,000	31.11%
2	Guatemala	35,475	29.04%
3	Indonesia	31,039	25.41%
4	Nepal	6,439	5.27%
5	Laos	3,115	2.55%
6	Bhutan	2,596	2.13%
7	Grenada	2,540	2.08%
8	Tanzania	764	0.63%
9	Sri Lanka	563	0.46%
10	Honduras	482	0.39%

Consumption of cardamom has sharply increased throughout the world during the last two decades. The major consuming countries of cardamom are the Middle Eastern countries, India, Pakistan, European countries, the US, and Japan. Middle Eastern countries such as Saudi Arabia and the United Arab Emirates, and South Asian countries such as India account for more than 60% of the world's consumption.^{ix} The population in these countries generally consume more products that contain cardamom, such as concoction drink and cardamom oil. Accordingly, Saudi Arabia is the biggest importer of cardamom in the world, followed by the UAE and India. Cardamom is mainly imported and consumed in whole form, however, crushed cardamom is increasingly being bought by the food processing industry in for example Europe. Like production, the concentration of the import market is relatively high.^x

Table 2. Top importing countries of Elettaria cardamom – Saudi Arabia not included (source: Tridge 2018)

Rank	Country	Import Value in 2016 USD	Shares in Import USD
1	 India	\$46.5M	16.78%
2	 United Arab Emirates	\$44.4M	16.04%
3	 Bangladesh	\$20.1M	7.24%
4	 Pakistan	\$16.8M	6.06%
5	 Egypt	\$9.6M	3.48%
6	 United States	\$9.6M	3.47%
7	 Kuwait	\$9M	3.27%
8	 Iraq	\$8.9M	3.21%
9	 Sri Lanka	\$6.8M	2.46%
10	 China	\$6.6M	2.38%

Forecasts estimate that the worldwide cardamom market will increase with a compound annual growth rate of approximately 2.5% between 2016 and 2024. In terms of market value, growth is expected from USD 67.4 billion in 2016 to USD 87.21 billion in 2024.^{xi} There are several arguments for this expected growth. First, global demand for exotic spices in general is increasing due to new taste preferences among consumers worldwide. This also results in initiatives taken by governments to set up spice boards that regulate export and import and help to improve quality and infrastructure. Since no spice board is known to exist in Myanmar, organizing one could be advocated with the government. Secondly, there is a growing middle class in developing countries in the Middle East, Africa, Latin America and South East Asia. Growth is expected because cardamom is popular in these countries, but a growing middle class also means that more people can afford it. Third, cardamom is increasingly used in herbal health supplements due to increased awareness of cardamom's health benefits.^{xii} In this market assessment conducted in China, cardamom was found to be extensively used as ingredient for traditional medicine, This market segment is even expected to dominate the global cardamom market with a total value of USD 39.02 billion (45% market share) by 2024. Last, key vendors^{xiii} are increasingly making use of online retailing, which improves worldwide availability and easier access for consumers of cardamom products.^{xiv}

Table 3. Annual import trend in value (USD) and quantity (metric ton) (source: Tridge 2018)



Key challenges that restrain global market growth for cardamom is the high fluctuation of price rates,^{xv} as well as shortages in labor, volatile content, climate change hampering favorable growth conditions and the high use of pesticides.^{xvi}

Quality and food safety requirements differ across markets, depending on what local spice associations prescribe. Quality requirements in Europe are for example prescribed by the European Spice Association (ESA). In terms of cleanliness specifications, both the US and European market apply the American Spice Trade Association (ASTA) Cleanliness Specifications^{xvii} for spices, seeds and herbs which describes maximum levels of natural or unavoidable defects in food for human use.

Whole insects dead	Excreta Mammalian	Excreta Other	Mold	Insect defiled/infested	Extraneous foreign Matter
By count	By mg./lb	By mg./lb	% by wt.	% by wgt.	% by wgt.
4	3	1	1	1	0.5

Figure: US Cleanliness specifications for cardamom (ASTA 2017)

Worldwide, quality grading systems also differ.^{xviii} In general, the weight in grams per liter and the color are decisive in determining quality. The proportion of burst fruit pods ("open pods") also determines quality, as do color (green or yellow) and the drying method (mechanical or sun). Internationally accepted and most commercially imported varieties of cardamom are Malabar Cardamom, Sri Lankan Cardamom and Cambodian Cardamom.^{xix}

Although awareness on sustainability is on the rise, particularly Europe and the US, organic/fair trade certified cardamom is still a niche market. In the European market for example, it only represents a small section of the total European market. In addition, most buyers in the mainstream market are unwilling to pay more for certified products. There is no specific data available on share of organic production, fair trade and other certification labels regarding cardamom specifically.^{xx}

2. Myanmar cardamom exports

For the value chain analysis conducted in 2017, SNV made an estimation of Myanmar cardamom annual production and export (see table below). As can be seen in the table, cardamom is mostly exported (and limited to) China and Korea. Most of the cardamom is exported to China (96%) and a very small fraction (4%) sold to Korea. This means that Myanmar is very much dependent on demand from China. Considering that Myanmar cardamom is of low quality, especially compared to the cardamom from nearby countries such as Laos and Vietnam, there is little opportunity for Myanmar traders to engage in and influence price negotiations. If quality is low and there is no competitive demand from other countries, Chinese traders are in the position to set the price.

Table 4: Myanmar cardamom annual production and exports^{xxi}

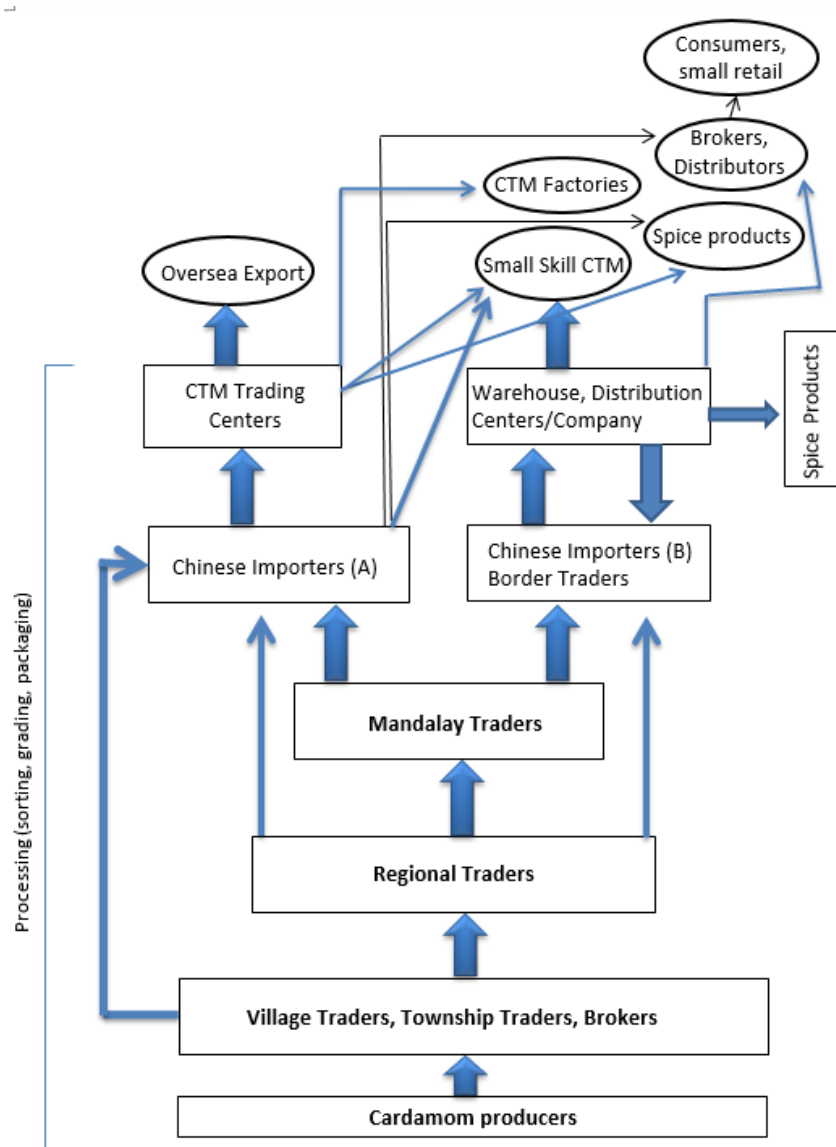
Description	Volume	unit	%
Annual cardamom production in Myanmar (as estimated by SNV)	3,200	tons	100%
2017 total volume of cardamom exported to China	3,056	tons	96%
2017 total volume of cardamom exported to other countries (mainly Korea)	144	tons	4%

2.1. The value chain map for cardamom exports from Myanmar

As mentioned, the major market for Myanmar cardamom is China, next to a very small fraction that goes to Korea and Japan. Myanmar cardamom has different export routes. Most cardamom passes through quite several traders: starting from village/township traders, to regional traders, followed by Mandalay traders up to Chinese importers who sell directly to Chinese Traditional Medicine (CTM) trading centers or export the product to Korea or Japan. Another export route goes through Mandalay traders who sell to Chinese importers at the Myanmar-China border, who then sell the cardamom to Chinese warehouses and distribution companies (who in turn distribute the cardamom to CTM trading centers or directly sell it through retail). This latter route comprises most of the Myanmar cardamom trade, although no official figures on the exact volume is available.

The figure below presents the various marketing channels of cardamom from Myanmar to its end markets. The actors involved are illustrated in the map.

Figure 1: Value Chain Map of Myanmar Cardamom Exports to China^{xxiixxiii}



2.2 Actors and Roles

Below the actors involved in the export trade of cardamom to China and their roles in the export routes are described:

Village Traders, Township Traders and Brokers: Traders collect cardamom from farmers, stock it temporarily if necessary, and transport and sell the cardamom to regional traders. This group takes loans from regional traders and provides advances to farmers. Some sell directly to Chinese importers. The traders pay taxes to both the armed groups and the government. The brokers on the other hand, linked farmers to traders and get commission based on the volume of cardamom traded.

Regional Traders: collect or buy cardamom from farmers and village and township traders. They often re-dry the stock and are involved in bulking and labeling. These traders often rent warehouse spaces near the Myanmar-China border as storage facilities. From there, they sell cardamom to Chinese importers and sometimes to Mandalay traders. Some of them directly export to South Korea. Regional traders provide cash advances to lower level traders. They must pay trading tax to the government revenue office.

Mandalay Traders: collect cardamom from regional traders (especially Taungoo traders) and sell it to Chinese importers located in the China border town of Shwe Li in the Yunan province. They pay commercial taxes to the government customs office on the Myanmar side.

Chinese Importers (B): buy cardamom from Mandalay traders and regional traders in Taungoo and sell it to Chinese importers in the Myanmar-Chinese border. Most regional traders sell their stocks on credit and are paid only once the goods are sold by the importers. All Chinese importers (B) have a license to import. This import license prescribes an import quota of 500 tons of cardamom per annum from Myanmar, but in practice they usually bring in more volume than is officially allowed.

These Chinese importers (B) are part of a company (Jinxing Group) that owns a huge warehouse in Shwe Li, just across the border in China. From the warehouse, cardamom is distributed to markets for spice products, small-scale CTMs (Chinese Traditional Medicine), distributors in several provinces of China and directly to consumers.

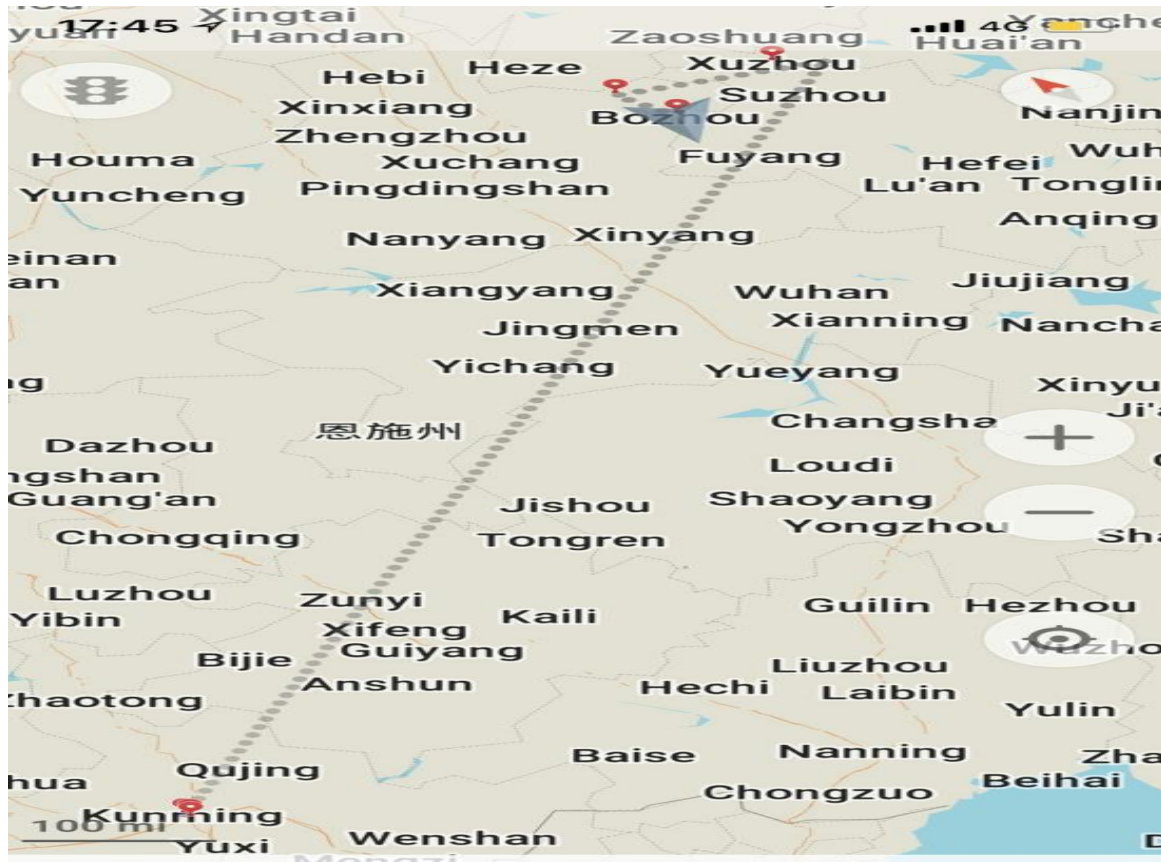
Chinese Importers (A): this group of importers buys cardamom from Mandalay traders, regional traders in Taungoo or directly from village and township traders through brokers. According to informal sources, these traders work for one person who collects the cardamom and has the direct linkage to buyers in China. These traders sell their stock to CTM trading centers, CTM factories and to distributors in China. Those interviewed in the Anguo market indicated that some cardamom is also exported overseas, but there are no figures on the exact volume.

CTM Trading Centers: CTM trading centers sell cardamom both to wholesale and retail. These centers are not only involved in trading cardamom but also sell other raw materials. While cardamom from China, Laos and Vietnam was visibly being sold in these centers, cardamom from Myanmar seems to be absent. Traders indicated that they not publicly sell cardamom from Myanmar to circumvent restrictions imposed by the Chinese government because of the low quality of Myanmar production. Customers interested in Myanmar cardamom are usually small-scale spice sellers or factories who place orders at the CTM traders.

End users: Cardamom is mainly consumed in China as a spice in meals and as an ingredient in traditional medicines (see also chapter 3 for more detail). Most end users of cardamom from Myanmar are therefore small-scale CTM (Chinese Traditional Medicine) factories, and CTM and spice sellers.

3. Main findings of the end market assessment

The study team visited four market locations in China to observe and gather more detailed information on the end market for cardamom. The areas visited include Shwe Li, Bozhou, Anguo and Kunming. The observations have been summarized into main characteristics of the end market:



Map of market places in China visited by the study team.

3.1 Market segments and product specifications

The Chinese market for cardamom consists of two major market segments; the industrial segment (comprised mostly of traditional medicine manufacturers) and the spice segment. In the industrial segment, cardamom is mostly used as an ingredient for traditional medicines. Approximately 15% of the ingredients used for traditional medicine manufacturing consists of cardamom. The traders of the CTM trading centers estimate that the total cardamom market comprises for 80% of the industrial segment, and 20% is traded for spice purposes with buyers mostly consisting of small shops and households. Overall demand by the CTM production is estimated at 2,000 metric tons annually. However, as always mentioned by traders in the centers, very small fraction of Myanmar cardamom is sold as ingredient for traditional

medicine and it can only be sold when mixed with cardamom from other places like Laos and cardamom-producing provinces within China.

In Chinese markets, cardamom is differentiated by country of origin, variety and physical appearance. Generally, cardamom produced in China, Laos and Vietnam is considered of better quality than cardamom from Myanmar. Quality is especially important when cardamom is used as an ingredient for medicines. For that purpose, the varieties in highest demand are the Guangdong cardamom from China and Parksong from Laos. The Myanmar cardamom is a green and wild variety.^{xxiv} Generally, in the Chinese market it is considered as low-quality cardamom because of its physical appearance, and because the product often contains impurities and chemical content.

In the Bouzhou Kangmei Medicine City Trading Center, the prices of cardamom vary from 43 ¥ (\$ 6) per kilogram up to 400 ¥ (\$ 58) per kilogram^{xxv}, depending on variety and level of quality. As mentioned, the Guangdong variety is in highest demand and is sold for the highest price, while the wild variety from Myanmar is usually in the lowest pricing segment. Price is also determined by the product being shelled or unshelled. Naturally, unshelled cardamom prices are a bit higher than shelled. However, there is more demand for shelled cardamom as cardamom is better preserved in their shells. In case of direct sales, traders often remove shells themselves.

Below, an overview of varieties and their average price is given. The price indications refer to cardamom sold for medicine manufacturing.^{xxvi}

Table 5: Cardamom prices (shelled) in the Bouzhou Kangmei Medicine City Trading Center

Types/Grade/Season	Price per kg	Specifications	Sources
Guangdong cardamom from China	¥ 400 / \$ 58	Round Red color Properly dried Does not contain chemicals	Xixuan, Xishuangbanna, Guanxi and Yunan
Guangdong cardamom from Laos	¥ 400 / \$ 58	Round Red color Properly dried Does not contain chemicals	Laos through Guanxi and Guangzhou
Guangdong cardamom from Laos	¥ 380 / \$ 55 ¥ 340 / \$ 49 ¥ 330 / \$ 48 ¥ 230 / \$ 33	Round Red color Bulk consists of cardamom of different size and different drying processes have been used Does not contain chemicals	Laos through Guanxi and Guangzhou
Parksong cardamom from Laos	¥ 43 / \$ 6	Properly dried No mold	Laos
Green cardamom/ wild cardamom from Myanmar	Between ¥ 40 to ¥ 45 / \$ 6-6.5	No specification determined, as cardamom from Myanmar is officially restricted for import	Myanmar through Shweli/ Yunan province

3.2 Policy environment

The Chinese government has set a few policies that impact the cardamom trade. For Myanmar cardamom, prescribing quality standards had significant impact on trading opportunities. First, strict quality standards are set for cardamom especially for medicine manufacturing, hence making it difficult for Myanmar cardamom to penetrate this industrial market. Secondly, because Myanmar cardamom does not often pass the Chinese quality standards the Chinese government had to set a limit on the import quota of 500 tons per annum to Myanmar.

However, Chinese cardamom traders have found ‘innovative’ ways (which are not always allowed) to still buy Myanmar cardamom beyond the quota, as its low price still attracts quite number of buyers and traders. Myanmar cardamom is often mixed with better quality cardamom from Laos and Vietnam. Quite a few traders ignore the import quota and sell Myanmar cardamom under the counter.

3.3 Supply and demand and customer preferences

The Chinese market prefers cardamom varieties that have a round shape, such as the Guangdong cardamom from China and Laos. As the most effective variety, the ‘Amomum Villosum L’ is most often used as an ingredient for Chinese herbal medicines. The average annual market demand from China for this variety exceeds 2000 tons per year. It is mostly produced in the Guantong, Yunnan, Guanxi and Fuxin provinces. However, production has been decreasing in the past years as tree productivity is declining, thus price rose from 38 ¥ (\$ 5.5) per kg in 2005 to 400 ¥ per kg (\$ 58) in 2016. Clearly, there is a significant demand and a need for increased production of this variety.^{xxvii}

The most produced variety in Myanmar is however an elongated (rather than round) and wild variety. This means that although the Chinese demand for certain varieties of cardamom is high, this demand does not match with Myanmar’s supply. This results that part of the yearly import of Myanmar cardamom is kept in stock, as not the entire volume can be sold in the same year. Similarly, our study found that traders in Shwe Li also keep cardamom in their warehouses, sometimes up to three years before it is traded. It indicates an imbalance between cardamom supply from Myanmar and demand from the Chinese market.^{xxviii} While the Taungoo traders knew about this, they are not bothered as they can still sell their stock though at a much lower price.

If cardamom production in Myanmar continues to be of low quality and non-preferred varieties and the Chinese government is not supportive of the cardamom trade with Myanmar; trade will remain restricted. This leads to trade ‘under the counter’ and Chinese traders being able to dictate the price and to manipulate the market. Shown below is the difference between the Guangdong variety and the wild variety from Myanmar, mostly produced around Leik Tho in Kayin State.



Guangdong cardamom



the wild variety from Leik Tho in Myanmar

3.4 Current position of cardamom from Myanmar in the China market

The current position of Myanmar cardamom on the China market can be summarized as follows:

1. Myanmar cardamom is often mixed with other varieties and sold as either a Chinese or a Lao product. In this case, the identity of Myanmar cardamom is basically lost once it reaches the Chinese market
2. Cardamom from Myanmar is considered/ perceived as not meeting the quality requirements set by Chinese government for traditional medicine
3. However, laboratory analysis of Myanmar cardamom is lacking; there is no information available to verify whether the Myanmar product really does not meet the norms. Hence, the bulk of Myanmar cardamom ends up on the spice market and serves consumption.
4. No advocacy and/or support is being provided by the Myanmar government to strengthen the position of Myanmar cardamom in the Chinese markets. Mutually beneficial agreements between China and Myanmar need to be forged. The Myanmar government could play an important role in representing the Myanmar cardamom industry and its interests towards the China government
5. Myanmar Cardamom does not follow a product quality standard and lacks certification that could be useful in promoting the product on the China markets.
6. Because of its low quality, it is difficult to compete with cardamom from Laos and Vietnam. Hence, traders from Myanmar have a weak position in price negotiations with Chinese importers.

3.5 Opportunities and barriers for market entry

1. As China is actively promoting their traditional medicines in the global market, the demand for cardamom is expected to also grow. For Myanmar to be able to take advantage of this expected demand, improving the quality of the cardamom at all levels (from planting, growing, harvesting and processing to trading) needs urgent attention.
2. To improve the market position of Myanmar cardamom in China, the government should support the industry by taking the initiative to develop a mutually beneficial agreement with Chinese government on the cardamom trade. The Multi Stakeholder Platform as established by the project can be utilized to support building this relationship.
3. According to information from China traders, some of cardamom is further exported to North and South Korea. Traders from Myanmar should explore these countries as alternative routes for direct export.

4. Explore the potential and feasibility of setting-up a co-investment scheme for cardamom processing and export that supports improved quality production and marketing. The project can co-invest traders in setting-up of a drying and warehousing facility while trader, who will be responsible on cardamom export business will invest the necessary operating capital.
5. There is a perceived manipulation of Myanmar cardamom trading (monopolized by a limited number of traders from both China and Myanmar). The government and the MSP should institutionalize regulations that would open the trade to avoid cartels and monopoly.

VI. Recommendations

1. General recommendations to improve the value chain

These general recommendations focus on the improvement of the entire Myanmar cardamom value chain. Improvement and development of the value chain requires multiple and integrated approaches that need active support of many stakeholders and industry players. Short and long-term actions are necessary to ensure that development of the value chain is commercially viable and sustainable.

Product Improvement and Development

Myanmar cardamom faces a lot of obstacles in penetrating markets, particularly those in China. As a demand-driven product, improving the product quality to meet market preferences is a way forward to develop the industry. As such, interventions at the lower level of the value chain need to include a shift from the traditional cardamom varieties to the more market preferred Guangdong variety. This will take time, but actions need to be started soon to keep interest from China. So as not to disrupt the livelihoods of the farmers and producers, a proper phasing of the activity needs to be designed. While undergoing variety replacement, current production should also be improved through sensitization of producers and traders on the importance of adopting improved post-harvest practices such proper collection, improved drying, sorting, grading and packaging. Specifically, the following activities are recommended:

1. Farmers and traders must segregate the cardamom according to pre-determined sizes, color, texture and overall appearance and traders should introduce a price structure for different product categories.
2. Remove and replace unqualified or unacceptable varieties from the cardamom farm.
3. Ash, carbon dioxide, Sulphur dioxide and toxic coal content should be checked to ensure that these chemicals are not present in the cardamom products. Although this is usually something that traders do before they buy produce, in this particular context where there is currently low motivation to pay higher prices for quality, we recommend that the extension services of the DoA can take up the task of laboratory analysis (until there is more general awareness on the need for quality).
4. Use of chemical fertilizer and pesticide in cardamom farming should be avoided.
5. Proper moisture content should be controlled and maintained: farmers must dry their products properly.
6. Molds should be avoided at all costs: proper drying, cleaning and storage of cardamom are very important to avoid the containment of mold.
7. Proper drying systems should be installed and to avoid burning of cardamom capsules, the cardamom drying process should be monitored meticulously.

8. Develop and protect the good name of Myanmar cardamom: avoid mixing with the low-quality cardamom/ tampering quality prescription. It easily destroys any position built up in the market.

Producing Myanmar cardamom that qualifies and passes market quality standards is the only way to position the product in China markets. Implementation of these activities would need concerted efforts and support from the government (policy makers, research and development institutions, and academics), private sector (i.e. traders, exporters and producers), non-government institutions, and relevant service providers.

Market Development and Diversification

There is no doubt that further development of the markets is crucial to improving the sustainability and viability of the cardamom industry in Myanmar. As Myanmar cardamom's main market is China, access to both traditional medicine manufacturers and spice markets should be prioritized. Given the quality requirements of these market segments, efforts should be directed towards exporters' compliance to China market standards. Product quality improvement strategies discussed above should be strictly followed and implemented. A quality control system should be developed to ensure that Myanmar cardamom exports adhere to China policies on quality requirements for cardamom. Product certification and labelling in terms of quality and where the produce comes from will form part of the quality control systems to be developed. Taking advantage of the quota allowed (500 tons per annum) by China for Myanmar cardamom exports, Myanmar should reposition itself in the China markets and improve its reputation and credibility as supplier of good quality cardamom. This strategy is more easily said than done but it is the only way to enhance entry of Myanmar cardamom into China and gain a better position in the markets. These strategies should be pursued until Myanmar cardamom is fully mainstreamed in the China market and alternative markets can be accessed.

As a way of market diversification, potential markets in other countries such as Korea and Japan should be studied and explored. This may require another market study of alternative markets for cardamom.

Policy Advocacy and Enabling Environment

Government support in terms of promulgating favorable trade policies on cardamom and creating an enabling business environment is crucial in development of the cardamom industry. Policies that are needed include 1) development of quality standards for cardamom for export, 2) control systems to monitor and check compliance of exporters to quality standards, 3) adoption of certification systems for exported cardamom. At the production level, the government should initiate the provision of technical assistance and extension services to cardamom farmers, the regulation of the use of fertilizers and chemicals, and facilitate financing for quality and trade improvement initiatives.

The government in coordination with the private sector should promote transparency and good governance in the cardamom trade. This is necessary to avoid price manipulations by ignorant industry players such as exporters and traders and deter monopolizing the industry by a few parties. The Multi-Stakeholder Platform (MSP) in coordination with the Union of the Myanmar Federation of Chamber of Commerce and Industry should be tapped to take a lead in creating a level playing field and enabling business environment in the cardamom industry. Moreover,

the MSP and UMFCCI should take the initiative to advise the government to talk with the Chinese government for developing mutually beneficial trade agreements on cardamom. In the long run, the MSP together with the UMFCCI could advocate for a government spice board that specifically looks at laws, regulations and policies to improve the enabling environment for spice production and trade.

2. Recommendations specific to the LIFT-CDN project

The recommendations below are specific to the project and are formulated while taking the conditions in the project area, the time remaining for the project, and resources available into consideration. The following actions are short term activities that the project can implement at short notice.

- a. Conduct an information campaign to sensitize farmers and traders on the critical importance of improving quality of cardamom production as required by the markets.

It is time that the local industry players are informed of the threatening situation of Myanmar cardamom in the international markets, particularly in China. The project, through the MSP, should design a motivating campaign that will inform producers and traders about the importance of improving quality of cardamom as demanded by the markets. Farmers groups should be strengthened, trained and encouraged to adopt good production and post-harvest practices to produce a good quality product.

- b. Expand the coverage of the pilot for improved drying and trading activities started by SNV to reach out to more farmer groups and establish more functional market linkages.

This activity should be facilitated by the MSP in coordination with the local implementing partners as service providers to the project. Extension agents from the Department of Agriculture should be mobilized and capacitated to support the implementation of the activity. A co-investment approach (whereby a donor-funded project or the government provides financial support to farmer groups to jointly invest in machinery, for example on a 50%-50% basis) on the dryers as initiated by the project should be expanded to reach out to more farmer groups. Similarly, a co-investment scheme with traders to try out bulking and selling of good quality cardamom could be set-up. The dryer management committee, farmer groups, and selected socially responsible traders should be involved in this pilot of selling of good quality cardamom, preferably set up in coordination with interested Chinese buyers. The purpose of the project co-investing in this pilot is to absorb possible financial risks that the farmers and traders might incur in the trading operations. A participatory business planning needs to be done by the players involved.

- c. Develop and design a variety replacement program for the farmers

The market study indicates that currently the cardamom variety prevalent in Myanmar is not preferred by and acceptable to end-users in China markets, especially if it is to be sold as ingredient for traditional medicine. Introduction of the Guangdong variety or any improved variety that is demanded by the markets should be started immediately but phased, so as not to disrupt the income flows of the farmers. Technical experts from

the Department of Agriculture or other experts should be tapped to support planning this activity. Careful farm planning at farmer level should be initiated and supported. Releasing the current cardamom varieties might impact incomes of the farmers up to 10 years.^{xxix} The project may consider supporting the farmers financially to bridge the gap (partially). Identification of other partners that could complement this financial support might be an additional activity.

- d. Capacity building of MSP and networking towards effective policy advocacy and partnership building.

The MSP has been identified as a sustainable platform, but it needs to be capacitated to continue as a service provider to the various actors/players in the industry. As such, a program for developing its capacity on policy advocacy, networking, partnership building and business/enterprise development needs to be developed and implemented. Facilitating partnership building between farmers groups, government, and private sector, especially traders should be part of the capacity building plan of the MSP. The MSP should also strengthen its networking role with local traders, UMFCCI, Myanmar government and international/Chinese importers and traders. The purpose of this networking activity is to boost good business and trading relations between Myanmar industry players and international markets actors.

- e. Facilitate farmers' and traders' access to finance.

Both farmers and traders as actors at the lower end of the value chain need financial support to be able to participate effectively and actively in the cardamom quality improvement program. Financial assistance to them may be considered to help them out of the situation of being dependent on cash advances and pre-selling of products. This way, they will have the option of holding on to their produce and sell at the time and price that is attractive to them. For instance, farmers may be provided short-term financing to bail them out of their advances from the traders and have control of their produce. It should be soft-financing (loans on 'soft' conditions, long repayment periods and no or low interests) so farmers can repay easily. Likewise, traders need access to better financial sources to gain good bargaining power at the township level. Currently, most local traders rely primarily on regional traders for financing. This situation forces local traders to sell back to the regional traders that provided them advances, giving them no choice but to accept whatever price the regional traders impose.

VII. References

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- ⁱ Additional study trips to China are recommended to keep track of new developments and explore the market in more depth.
- ⁱⁱ As most of the cardamom is exported to China, the China market was the focus of this assessment. To a lesser extent, information on other markets was also collected when it came to the fore during interviews. Some first exploratory findings will be provided in this assessment as well.
- ⁱⁱⁱ CBI 2018
- ^{iv} Technavio 2017
- ^v Goldstein Research 2017
- ^{vi} Technavio 2017
- ^{vii} CBI 2018
- ^{viii} CBI 2018
- ^{ix} MCX India 2016. For unknown reasons, no statistics from China have been found in these researches.
- ^x The concentration of the import market is 34.02% on the Herfindahl Hirschman (HH) Index, which is graded as high. This index is defined as the sum of the squares of the market shares of the firms within the industry (Tridge 2018)
- ^{xi} Goldstein Research 2017
- ^{xii} Technavio 2017
- ^{xiii} Key vendors include Cardex, MAS Enterprises, DS Group, McCormick & Company, Everest Spice, IMEXA, Kautilya Commodities and N.C. Bhojraj & Company (Goldstein Research 2017)
- ^{xiv} Goldstein Research 2017
- ^{xv} Technavio 2017
- ^{xvi} Goldstein Research 2017
- ^{xvii} ASTA, 2017
- ^{xviii} For example, in Guatemala, cardamom is graded Jumbo Green/Imperial Best Green/Fancy Green Extra/Fancy Green/Imperial Mixed Green/Mixed Green/Mixed Green Split/Yellow Mixed/Mixed Yellow Quality/Seeds. While in India, the use a grading of Bold/Super Bold/Extra Bold/Bulk/Small/Open Splits/Seeds/Fruits
- ^{xix} e-PG Pathshala, 2017
- ^{xx} CBI 2018
- ^{xxi} Estimates based on the cardamom value chain analysis in Kayin state conducted by SNV in 2017
- ^{xxii} In contrast to traders, brokers do not buy production from farmers, they only link farmers and traders as a service (for a commission fee).
- ^{xxiii} Processing activities are not clearly organized; different stakeholders are involved in different processing activities (for example, sometimes traders sort and grade the cardamom, sometimes the Chinese importers, sometimes the trading centers). This is unlike more organized value chains where usually one or a number of companies have a clear role in processing production.
- ^{xxiv} In practice, cardamom in Myanmar is sometimes referred to as green cardamom and sometimes as wild cardamom, but there is no clear distinction in physical appearance.
- ^{xxv} Throughout this document, an exchange rate of 1 Chinese Yuan (¥) \approx 0,15 USD is applied (following the exchange rate on 7 Dec 2018)
- ^{xxvi} As the study locations were CTM trading centers, it was much more difficult to figure out the cardamom prices for the spice market. But as estimations are that 80% of the total volume of cardamom traded in China is for medicine manufacturing purposes, it is assumed that this market segment dictates the overall price for cardamom in the Chinese market.
- ^{xxvii} Mentioned in the Chinese Legal Pharmacy Book published in 2015 from sections translated in English in August 2018.
- ^{xxviii} This information was provided by the traders at Taungoo, Myanmar during the interview by the LIFT focal person, CDN and SNV in August 2018. Non-MSP traders interviewed also mentioned huge volume of cardamom are stocked in one of the traders' warehouse in Shwe Li.
- ^{xxix} Cardamom cross-pollinates between different varieties. This makes a phased approach for variety replacement difficult; new varieties can only be planted in soil where cardamom has not grown for some time, and at a certain distance from other varieties. Small steps and careful planning are needed.