Discussion Paper Series

Subsector Analysis and Design Intervention
The Case of Flores Cocoa

Provide by:
Adi Lagur

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swisscontact

LEDNTT

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List of Terms and Acronyms

ASKINDO	Indonesia Cocoa Association
BDS	Business Development Services
CPB	Cocoa Pod Borer
BPS	Badan Pusat Statistik
BPTP	Badan Pengkajian Teknology Pertanian
BPSMP	Balai Pengujian dan Seleksi Mutu Produk
DISBUN	*Dinas Perkebunan,* Ministry of Forestry, Division of Estate Crops
FOB	Free On Board
GoI	Government of Indonesia
ICCI	International Cocoa Organization
ICCRI	Indonesia Cocoa and Coffee Research Institute
SC LED	Swisscontact Local Economic Development
MSE	Micro and Small Enterprises
NTT	Nusa Tenggara Timur
PTPs	The government owner estate
SNI	Indonesia Standard National
VAT	Value Added Tax

CHAPTER I

DESCRIPTION OF THE SUBSECTOR TRAINING

1. Background

The value chain approach is a powerful tool for designing interventions. An intervention strategy must start with an understanding of the threats and opportunities for participants in a market; in other words, the strategy must start with a competitive analysis of the market(s) targeted. The Value Chain Approach assesses the constraints to and opportunities for enhancing an industry's competitiveness[1] through a diagnostic framework that includes five elements: (1) End Market Opportunities, (2) Enabling Environment (international and national), (3) Inter-firm Cooperation: Vertical Linkages Inter-firm Cooperation: Horizontal Linkages, (4) Supporting markets (sector-specific and non-sector specific services, including financial services, (5) Firm-level Upgrading (product and process upgrading).

1.1. End Markets

End markets determine the characteristics of the final product or service generated. The demands of the end market drive quality and standards. They are important because of demand information, learning and benefit flows from the final buyer. Analysis of end markets needs to demonstrate the potential for competitiveness. The Value Chain Approach assesses the opportunities in all the possible markets into which products and services flow.

1.2. Enabling Environment (Local, National, and Global)

International trade agreements and standards tremendously affect the constraints and opportunities for industries' growth. Both present opportunities for market expansion, but both, especially standards, can be extremely expensive for firms, especially SME, and can easily preclude a developing country from being competitive in a market.

The *national policy and regulatory environment* is critical to the functioning of markets and enterprises; it should create incentives for private sector growth and involvement in the

[1] **Competitiveness** is the ability of a firm or industry to develop and maintain an edge over market rivals. This edge can be achieved by increasing efficiency, quality, product differentiation or influencing demand.

policy process. Moreover, poor local government operations and poor enforcement of legal and regulatory regimes increase transactions costs, informality and the risk that contracted suppliers or producers will not deliver, limiting investments in relationships and upgrading. Conversely, conducive local and regional policies can provide opportunities for rapid improvement of the enabling environment.

1.3. Inter-firm Cooperation: Vertical Linkages

Cooperation between firms through vertical or horizontal relationships are critical to transferring skills and reducing transaction costs. Vertical linkages are the relationships among firms between the input supply and distribution to the final market. Vertical linkages are critical for getting a product from inception to the market and for transferring learning and embedded financial and business (skills and know-how) services from firms up the chain to firms down the chain or vice versa. More efficient transactions among firms that are vertically related in a value chain increase the competitiveness of the entire industry.

1.4. Inter-firm Cooperation Horizontal Linkages

Horizontal linkages among producers / artisans are needed to reduce the transaction costs – for exporters or local buyers – of working with many small suppliers. By allowing for buying in bulk or meeting large orders, horizontal linkages can help small firms to generate economies of scale, which can contribute to their competitiveness and bargaining power. Horizontal linkages among SME can take the form of informal or formal groupings of SME, as well as networks of SME that are managed through a third party (e.g., lead firm, broker, trader, etc.).

Fostering win-win relationships among firms can result in the kind of vertical and horizontal cooperation needed among firms to reduce transaction costs, achieve scale, and create incentives for the adoption of more value-added functions or activities. Win-win relationships among vertically related firms can improve SME access to new markets, new skills, and a wide range of services. They can also reduce market risk by securing future sales.

1.5. Supporting Markets

Supporting markets are key to firm-level upgrading and include sector specific markets (e.g. input and equipment providers), financial services, business management services (e.g. auditors, lawyers, etc.), and information technology (particularly as it pertains to market information access and dissemination). Where these services are needed over the

long run, they must be provided commercially or by markets. These markets can include services provided by actors in the chain, or they can be provided by stand-alone providers. Services provided by actors in the chain – such as input suppliers – tend to be embedded, such that the cost of the service (the input) is embedded in the mark-up on a product sold (i.e. the input). New technologies or technical services can have a substantial effect on the competitiveness of the industry and can even change the competitive dynamic in certain markets.

1.6. Firm-level Upgrading

Individual enterprises improve their competitiveness in one of two ways. First, enterprises can produce their product more efficiently through improved techniques or processes that allow the enterprise to produce more quickly and/or at lower cost. Or, second, enterprises can improve the product's quality so that it is differentiated from competitors' products.

Continual upgrading of the product and process allows the enterprise to meet the market's constant demand for innovation. This upgrading requires access to capital, technology and information. Within a value chain, learning and innovation are closely tied to the incentives that encourage or discourage the transfer of new knowledge or skills. In order for firms and value chains to constantly innovate, internal or external learning mechanisms are needed to push new skills and know-how from where it is located within the chain to where it is needed. Value chains that institutionalize these learning mechanisms are the most competitive.

Box 1: Terminology of the Value Chain

Value chains encompass the full range of activities and services required to bring a product or service from its conception to its end use and beyond. Value chains include the final markets into which a product or service is sold, whether that market is local, national, regional or global.

2. Training Program Objectives

The **Objectives of the training** were mainly two fold:

a. Strengthen the capacity of local staff of Swisscontact LED-NTT in market development approach. Due to the young team of LED NTT in sector component approach, Management of Swisscontact have been discussed and contacted KATALYS-

Bangladesh to provide some training and backstopping to the team in Flores NTT during 2006. Title of Training is: **Value Chain Analysis and Intervention Design.**

The idea of the training program in LED NTT is very hands-on: The project staff and Partners of Swisscontact in NTT should learn; how to analyze a sector, how to select a sector, how to design intervention in a sector, how to do monitoring of the interventions.

b. To assist the participants in assessment of subsector, intervention identification, design and implementation in light of market the cocoa subsector in Flores, NTT. As the participating group was diverse in its background, the roles of different market players and also facilitator and provider were discussed. The specific objectives of the training were to make the participants:

- ✓ Understand the basics of market development approach.
- ✓ Able to analyse the cocoa subsector/value chain.
- ✓ Understand probable solution (BDS) for identified constraints and sustainable strategy for services.
- ✓ Able to formulate market (subsector) vision and strategy
- ✓ Identify and assess different types of potential partners (facilitating and intervention) for the program.
- ✓ Able to design and know the implementation techniques of different interventions with potential partners.
- ✓ Able to differentiate the role of facilitator and service provider.

3. Methodology of the training

The training followed a participatory approach. Each topic was discussed using power point presentation and there were sample opportunity for the participants to discuss and comment on issues.

4. Detail of Training and Assessment Activities

The training model divided in two phase. The first phase training objective focus on: provide the team practical background on subsector analysis and to understand the steps in subsector analysis and trying to selection and analyzing a subsector potential in Flores. The second phase training objective focus on: Assessment of Business services and Intervention Design.

The first phase training was conducted by LED NTT in March, 03 to 08 2006 and the second phase training regarding assessment of business service and design intervention has been done in September, 01 to 12 2006.

The core team of these training and assessment activities consisted of Sadruddin Imran and Saifuddin Khalled (Senior consultant of Katalys – Swisscontact Bangladesh), Additional support such as translation and technical input was provided by Swisscontact staff from Jakarta and local staff of LED NTT.

The training was conducted in English with translation in Bahasa Indonesia for easy understanding of all the participants.

Figure 1 is delivering and re-sourcing different function of the market, these the basic of market development approach that was covered in the previous training in March 2006 was revisited to take all the participants in the same level of understanding.

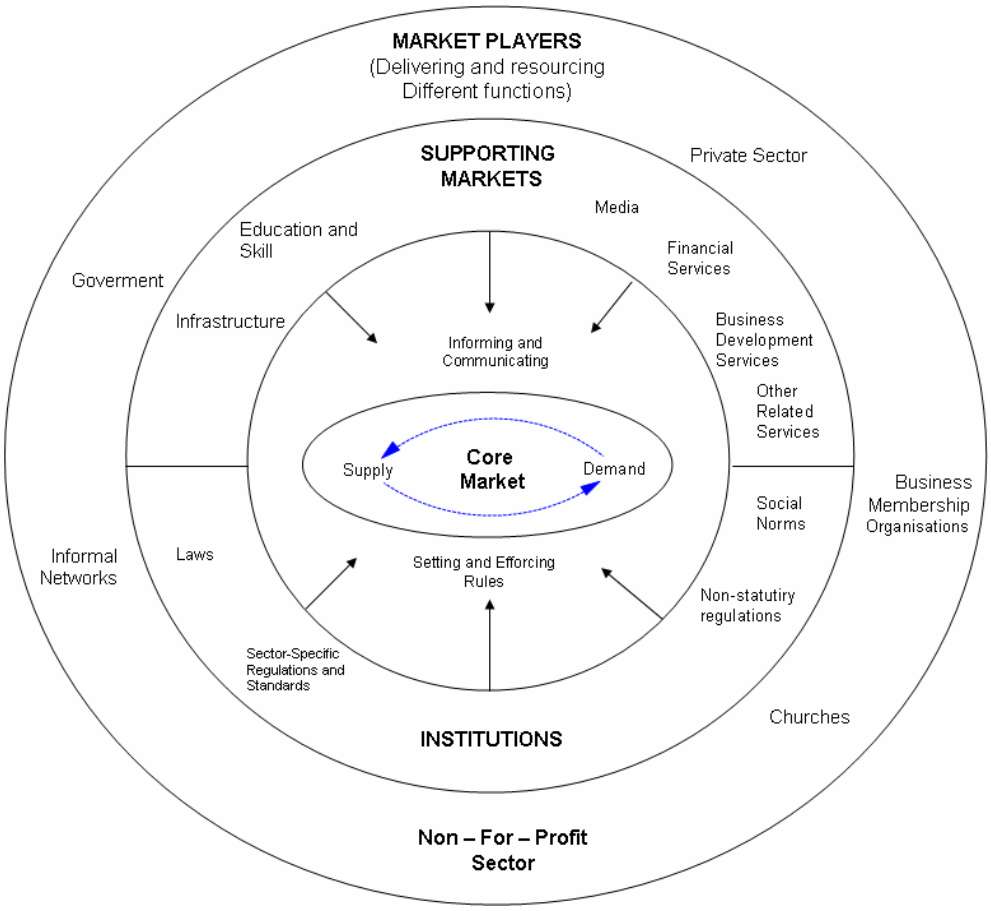

Figure 1: Market Development Approach

5. Subsector Selection

During this section, participants review techniques for identifying promising subsector/value chains. To selection the subsector potential, the participants used the criteria which are: Potential in income, growth potential of the subsector, potential number of people who will benefit, government and local government interest, presence of service providers, gender perspective, etc. Since the limited of time, the participants decided to chose two main criteria to select the potential subsector, which are: **Potential in income generation and Employment**, and **growth potential of the subsector**.

Based on the existing and available of data and the secondary information provided by BPS of NTT in particular the regencies of Flores, the participants was contribute to filed up the matrix and have made decision to select possible subsector potential for Flores. Attractiveness matrix shows are **cocoa and ginger a**s the result of the selection (See Appendix-1, Attractiveness Matrix).

Taking these criteria in to account, LED NTT considered the cocoa and ginger subsector as a promising subsector to work in.
In the follow up support, the consultant (Mr. Khalled and Mr. Imran) were helped the team of LED NTT to finalizing the subsector study and market brief, and continue to assist the LED NTT staffs to Identifying services and design intervention as well as monitoring of the activities related interventions.

6. Subsector Analysis

The team study of cocoa and ginger subsector, understood of how to analyze market trends and industry dynamics including value chain participants, their roles and inter-relationships.

Consider insufficient capacity of the LED NTT staff and other issues related management, the team study decided that cocoa subsector is one priority to work in rapidly which are reason behind of the Flores cocoa subsector seriously in crisis due to widespread infestation of pest and disease. Meanwhile, the ginger subsector assessment should be continuing to work in the few coming months.

Discussion was made in detail about the market situation and constraints & opportunity in cocoa subsector in Flores, NTT to identify related solutions and services.
The team study of cocoa subsector was discussed how value chain map of cocoa can graphically. Based on the initial findings of the cocoa subsector map, the team study

conducted interviews with market participants and key informants to identify major constraints and opportunities in the areas of market access, in particularly actors on four regencies of Flores are Ngada, Ende, Sikka, and Flores Timur (taking areas of Swisscontact-LED NTT), and also national processors and exporters outside of Flores as well as Bali, Surabaya (Java) and Makasar (Sulawesi).

A second phase field trip to conduct service assessment for possible interventions with analysis of potential service providers of all range was organized in the district of Sikka and Ende.

The objective of cocoa subsector analysis was identified are: (1) Identify final sales markets and market the cocoa subsector, (2) Identify market channels and trends within the cocoa subsector, (3) Identify the primary actors in the cocoa subsector, (4) Identify constraints and opportunities they are holding back and competitiveness in the cocoa subsector, (5) Identify business service that can address cocoa subsector constraints. The value chain context is shown in Figure 2 bellow.

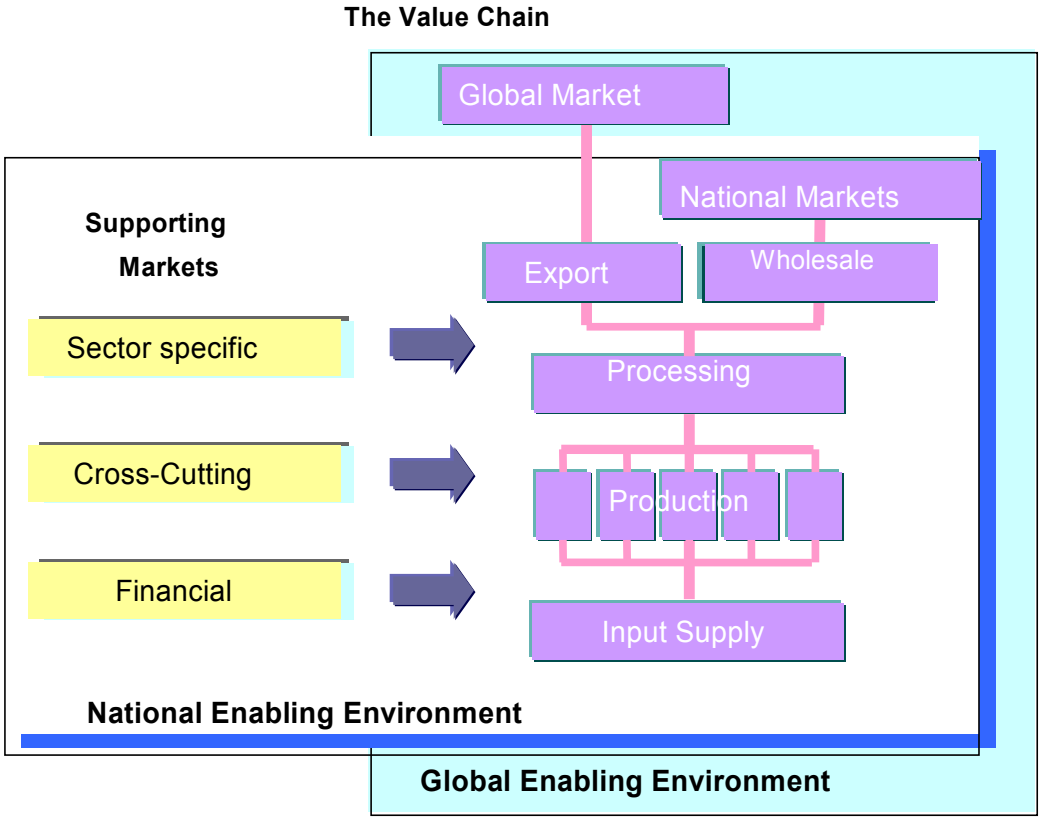

Figure 2: Common Value Chain Flows

Finally discussions were made with the findings of the fieldwork to identify and design interventions. Implementation techniques to make interventions successful were also

discussed using practical examples. Group work was done in finalizing the subsector constraints, formulating the market vision & market logic and in design of intervention.

7. Tools used for Subsector Analysis.

Consultant as a facilitator of the training has been designed interview guide used in undertaking subsector/value chain analysis. This interview guide, "**Interview Guide for Subsector – or Value Chain Analysis"** is conducted with subsector participants at all levels of the supply chain, and is designed to: identify the primary actors in the subsector, their roles, and interrelationships, identify market channels and trends within the subsector, identify constraints and opportunities that are holding back growth and competitiveness, explore value chain governance structures, inter-firm cooperation, and global positioning of the industry (when appropriate). See Appendix 2, Interview guide for subsector/value chain analysis.

The types of tools used during the study were: (i) Semi-structure and unstructured questionnaire for subsector assessment, (ii) service assessment, (iii) key informants, (iv) group interview, (v) validation and dissemination workshop, (vi) focus group discussion, (vii) secondary information, (Viii) publications, (ix) reports, (x) internet and also (xi) field observation.

A summary of research approach taken during the assessment is described bellow and a description of Flores cocoa role in the global value chain, general Characteristics of the Flores cocoa value chain, overall findings of the Flores Cocoa value chain assessment, illustration strategies and proposed recommendations are present in the next chapter.

8. Cocoa Value Chain Participant Interview

The assessment took place over a six month period, with in-country fieldwork from March 10 to September 11, 2006. Interview value chain participants were conducted in Flores (March 3 to 8) and in Bali and Surabaya (March 23 to 27), In Makasar (March, 28 to April 2). More then 100 respondents a long cocoa value chain were assessed. The details are given in **Table 1**. Interview for service providers were conducted from September 5 to 8, 2006 in Flores. A list of the companies and agencies interviewed is presented in the Table 1 below:

Table 1: Value Chain Participant Interviewed

Value Chain Participation	Companies/Agencies
Government of Indonesia (GoI) Agencies	Dinas Perkebunan (Disbun) in Ende and Sikka, BPSMP (Balai Pengujian dan Seleksi Mutu Produk) in Makasar. Balai Pengkajian Tekhnology Pertanian in Sikka
Input Suppliers	UD. Sahabat Tani in Ende, UD. Dirgahayu in Maumere, Pt. ACI in Makasar
Farmers	Farmer Group in Ohe-Sikka, Woloraru-Ende and Nangapanda – Ende,
Brokers/Collectors/Traders:	Traders in Geliting – Sikka, local collector in Ende and at the village level.
Exporters	PT. Cargil, PT. Firma Litha, PT. Comextra, PT. Olam, PT. Effem, etc. in Makasar.
Processors	PT. Effem in Makasar, PT. Cocoa Industries in Surabaya
Associations	ASKINDO in Surabaya and ASKINDO in Makasar
Financial Institutions	BK3D in Ende and Sikka, BRI, and Cooperative
Others	Church, Media (Radio station) and Newspaper agencies, Local NGOs, in Ende and Sikka, Key personals

Two validation workshop with key value chain participants of the Flores cocoa subsector were conducted in Ende May 27, 2006 and in Maumere June 28, 2006.

9. Research Approach

This assessment was conducted using the value chain approach to: Identify key constraints to growth and competitiveness of the Flores cocoa value chain, Identify and assess possible commercially viable solutions to these constraints, and develop initial strategies to facilitate support of a few selected solutions.

The assessment approach is shown in Figure 3 bellow. Specific activities conducted during the assessment are described in the Appendix 3.

Figure 3: Value Chain Research Approach

In additional to understanding the broad context for the systemic constraints and opportunities for cocoa in Flores, the value chain approach provided useful insights on the inter-relationships of participant, general distribution of returns (margins), and structural dynamics of cocoa in Flores.

CHAPTER II

SYSTEM DESCRIPTION OF FLORES COCOA

1. Overview

Flores is an island in the most eastern province of East Tenggara Timur (NTT), which is part of Indonesia's archipelago.[2]

The system of Flores Cocoa – more specific the four regencies Ngada, Ende, Sikka and Flores Timur – is embedded in the larger system of the Indonesian cocoa as well as in the huge system of world cocoa production. Flores share of the world cocoa production is not significant, even though, the production of cocoa is one of the main sources of income among farmers on Flores.

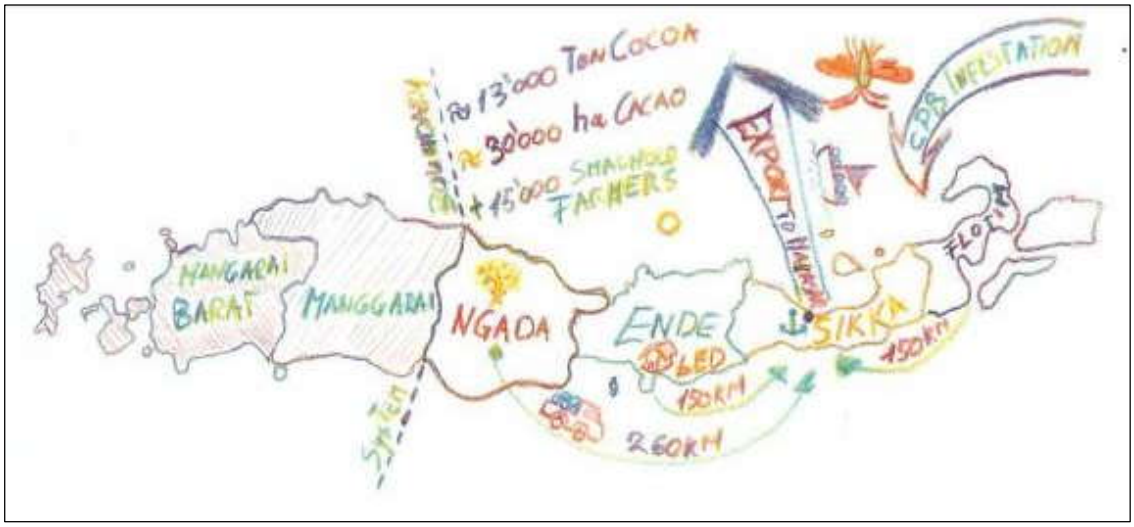

Figure 4: System Illustration of the Region Assessment

The main problem in the system of Flores cocoa subsector is the **low productivity**. Like most of Indonesia's cacao production, Flores cacao trees have a high infestation of the Cocoa Pod Borer (CPB) pest. Beside the problems arising because of CPB, the cocoa subsector in Flores is suffering more problems caused by a **large lack of farming knowledge**.

Figure 5 show the average annual productivity of all Indonesia compared to the productivity of NTT farmers, which most are located in Flores. The data for 2006 reflect to the farmers

[2] For more information about the region of study see Appendix

assumption in Flores. Almost every farmer, contacted by the team survey, claims a huge decrease in cocoa production compared to the last two years.

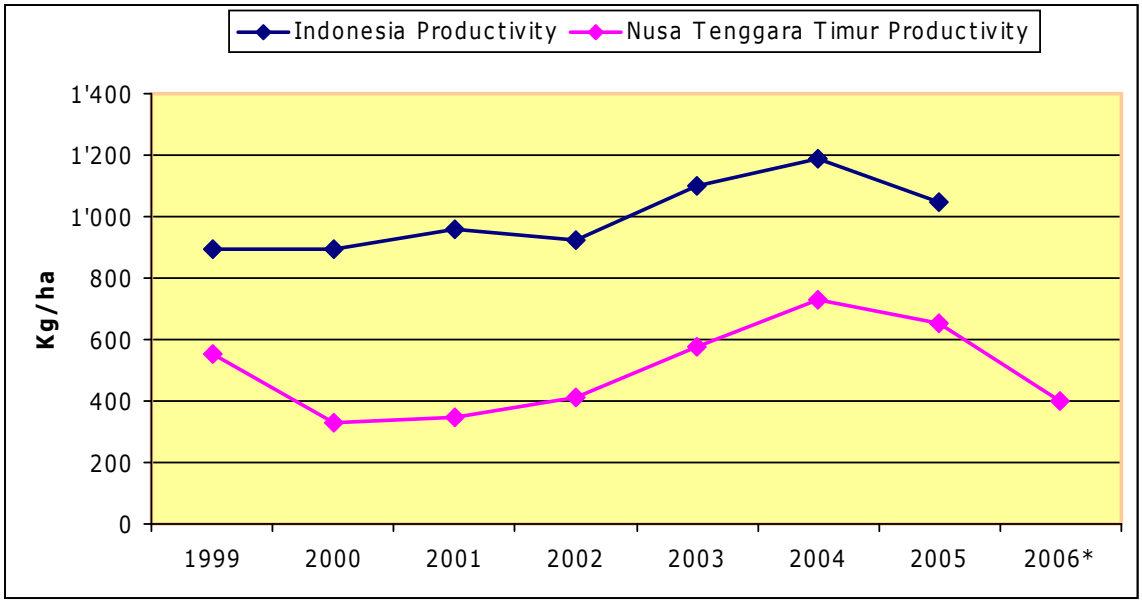

Figure 5: Cocoa productivity comparison in Indonesia (cf. Deptan, 2006[3])

The identified problem symptom is the low productivity among cacao farmers in Flores, because of the lack of knowledge and the inability to gain know how immediately, farmers are looking for a fast symptom correcting process. Such a quick fix is the application of extensive inputs like pesticide, insecticide, fungicide and hormones. Meanwhile, it is widely known that it needs a more fundamental solution to receive a sustainable solution for the source of the problem. But the corrective action – increase the level of farming and crop management know how – would take much longer, so it has less effect on the problem symptom. However, in the long term, it will be a better way to fight against pests and diseases.

By fighting only against the problems symptom the farmer create "fixes that backfire", because of the addictive side effect. The farmer gets accustomed to the use of inputs and therefore, he does not need to care about further know how development. Gradually, the farmer becomes addicted to apply inputs, creating a financial crisis at the expense of making fundamental long-term changes.

2. Cash Flow bottleneck

Another problem symptom is the constant shortage of cash among smallholder cacao farmer. Widespread quick fixes for this problem are first and common, selling the cocoa

[3] Department Pertanian Republik Indonesia; http://www.deptan.go.id

beans for a fixed price to the collector even before they are harvested to get the money immediately, and deliver them later. Second quick fix is the selling of not yet dried or only partially dried cocoa beans to get the money a few days earlier than for fully dried beans. Figure 6 shows this particular pattern in a classic shifting the burden archetype with two unintended side effects with both reinforcing impact.

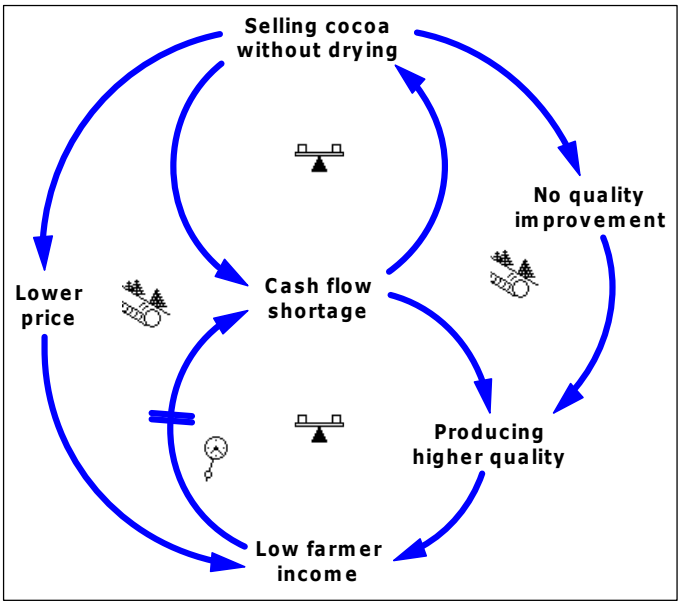

Figure 6: Cash flow Shortage Archetypes

The farmers mostly do not dry the beans out of three reasons, firstly they need the money immediately, secondly, they hope for a higher yield because the weight of the beans is higher as if they were when dried, and thirdly they do not have the capacity to dry them.

The habit, to sell the beans un-dried triggers a lower price. The farmers manoeuvre themselves into bargaining positions where they can not negotiate a proper price. Often the farmers get only half of the official farm gate price for their not dried beans. If they do not break out of this addiction, they are not able to fix the fundamental problem of the permanent cash shortage and their income gets even lower.

If the farmers are not willing or able to produce a higher quality because of the constant shortage in cash, they confine themselves in the long-term with no quality improvement.

The lack of knowledge, combined with the limited capacity of the farmers suppresses a fundamental solution – a corrective action like producing higher quality for a better farm gate price – to lift the farmers' income to a desired level.

CHAPTER III

COCOA BEAN VALUE CHAIN CONTEXT

1. Cocoa Production and The Value Chain

As cocoa moves from the farm gate to the port for export and then on to the final consumer, it goes through both a process of handling (i.e., grading of output, packaging, domestic transport, paperwork, trade finance, etc) and actual physical processing, which consists at the earliest stage at the earliest stage (usually carried out by the grower himself) of drying the fruit and pre pairing the beans, and later of producing the finished product, usually in the form of chocolate.

Talbot (2002) provides a stylized sketch of the value chain for cocoa as follows:
Cocoa pods → rest → remove seeds → fermented → dry → cocoa beans → roast → shell → cocoa nibs → grind → chocolate liquor → press → cocoa butter and powder → chocolate (along with the input of sugar and milk).

Basically, the commodity moves from the grower to a collector or a village-level trader after having been dried and fermented. The commodity is then acquired by a national trader, which could be a state marketing authority, who does the grading and quality control before its being exported. The product is then either taken over by an international trader or processor, who typically has long-term arrangements with established large chocolate confectioners, or gets traded in the world commodity market. It is the chocolate manufacture who arranges the retailing of the finished product.

Smallholder cocoa farmers must sell what they produce at pretty much the price they can get. They depend on village traders for temporary finance, and there are usually no more than one or two traders that they can go to. As the product moves to the port for export, it goes through various handlers, none of which operates in a competitive environment. As the intermediate product move to its final destination in the consuming countries, the market structure is characterized by high corporate concentration.

In short, the cocoa value chain is held to be "buyer-driven", i.e., it is the buyer – the international trader, typically a transnational – who decides where to purchase and process the raw material (Raikes et al., 2000; Talbot, 2002). Talbot JM (2002).

2. Indonesia's Position in the Global Value Chain

Cocoa is among important commodities exported by developing countries, with a world total of about $ 2.5 billion in recent years. Although the plant came originally from the American's, the principal producers of cocoa, since its rise as a major export over the past century, have been in West Africa. Four countries – Ivory Coast, Ghana, Nigeria, and Cameroon– account for about two-thirds of world production, and three-quarters of world exports of cocoa beans (see Figure 7).

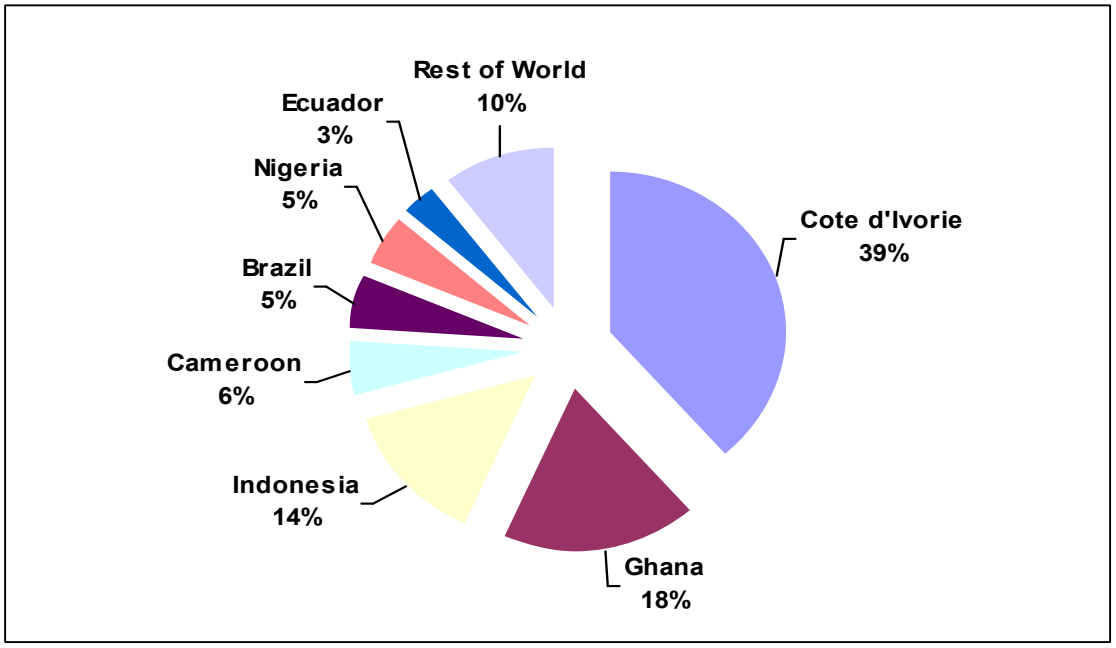

Figure 7: World Cocoa Production Share (Cf. ICCO 2004/2005)

Starting virtually from nothing in Figure 7 shows Indonesia rank in 2003 as the third largest producer of cocoa in the world after Ghana and the Ivory Coast. Other major producers are Brazil and Malaysia, accounting together for a little more than 10 per cent of the world output.

Cocoa producers are rather diverse group. Brazil and Malaysia are relatively high-income developing countries, while Ghana, Nigeria, and Indonesia are among the lower-income countries. Ivory Coast and Cameroon fall somewhere in the middle. Four countries – Cameroon, Ivory Coast, Ghana, and Malaysia – have rather small populations, ranging between 10 – 20 million, while the other three major producers have populations falling within the range of 100 – 200 million.

The structure of production – how production is organized – also differs among countries. While production in West Africa is heavily concentrated in very small farms, cocoa farms in Brazil tend to be bigger (ranging between 10 to 100 hectares), while Malaysia has mostly large estates. Indonesia constraints both large plantations (some privately owned, some owned by state) and smallholder producers (Bedford et al, 2001)

2.1. Major market Segment for Indonesia Cocoa

Indonesia's cocoa producers can be classified in to three categories: (1) smallholders, private estate, and government-owned estates (PTPs)[4] About 80% percent of the incremental production in the last 20 years came from the smallholders. As a result, over 572.640 metric tons (MT) of cocoa beans produced in 2004. Their share in the total production in 2004 is 512.215 MT produced by smallholders. 26.079 MT produced by private estates, and 34.310 produced by government-owned estates. *(Source: Directorat Jendral Bina Produksi Perkebunan, 2004)*. Figure 8 are shows the annual average export import. Although Indonesia is the third largest producer of cocoa in the world after Ghana and Ivory Coast, Indonesia import cocoa from the other producer countries is grown up

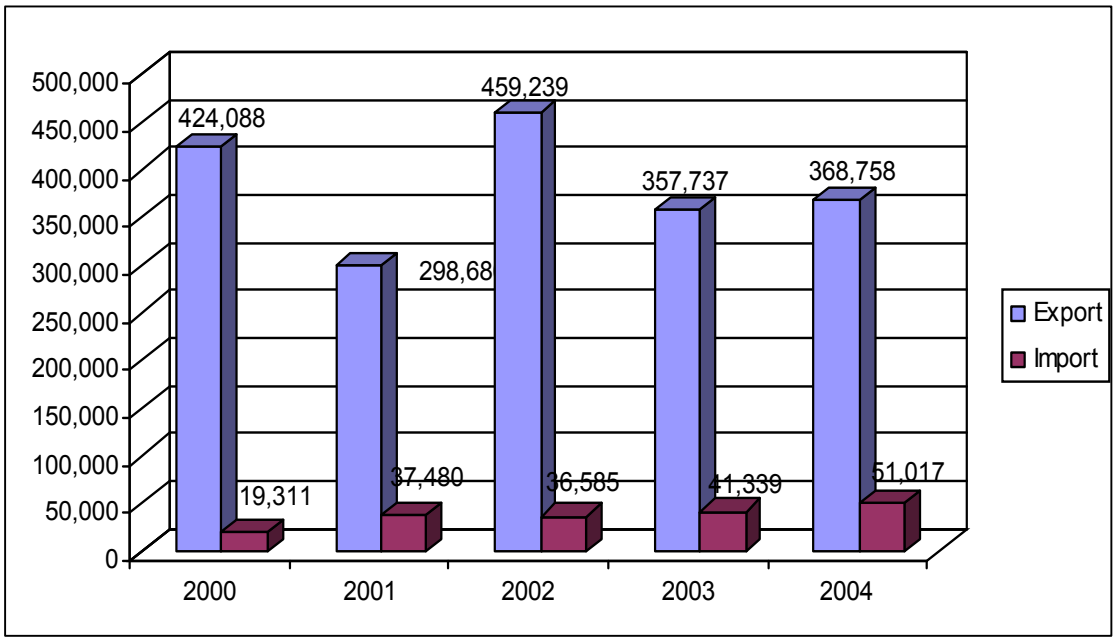

Figure 8: Volume Export-Import Cocoa Indonesia 2000 – 2004

Although PTP's are state-owned and hence their production and marketing are controlled by Government of Indonesia (GoI), the smallholder's production and marketing systems are

[4] In contrast to the smallholder sector, Government interventions in PTP's production and marketing practices are considered to be heavy. This appears to be major reason for PTP's inefficiency.

essentially free from government interventions. Most cocoa beans, approximately 80% in recent years are exported and the rest are sold to local grinders or industries.

East Nusa Tenggara is the ninth largest producer of Indonesia's cocoa after: South Sulawesi, South East Sulawesi, Central Sulawesi, North Sumatra, East Kalimantan, Irian Jaya, East Java, and North Maluku (see Figure 9). In 2005, total area of cocoa plantation in NTT is 34,379.86 ha.

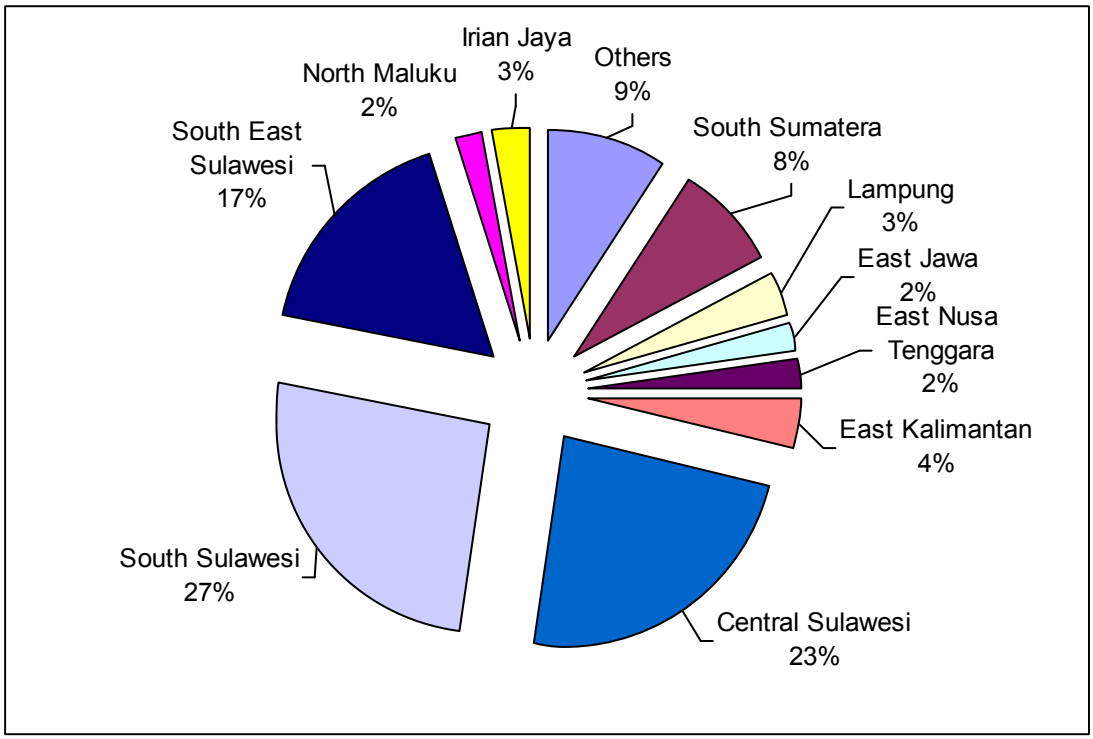

Figure 9: Cocoa Bean Production by Province, 2004/2005

2.2. Structure Changes in the Indonesia Cocoa Market

The recent behaviour of international cocoa prices, which seems to break with the historical trends, can be explained to a large extent by these developments. The change in the market structure had in particular two consequences for the formation of cocoa price: (i) there was an evident decline in the level of cocoa stocks needed to carry on the processing and chocolate manufacturing activities in the European countries (the principal market) but also elsewhere and (ii) the world market price appears to have become rather less sensitive to the forces of supply and demand.

The significance of the stocks-to-grindings ratio is its inverse relation to price, so that when it is high, prices are low and vice versa. Following the drastic decline in world production in 2004/25 and the consequent reduction in the stocks-to-grindings ratio, the average price of cocoa increased from US$1,534 in 2003/04 to US $1,571 per tonne in 2004/2005.(See

Figure 10). Price movement during 2004/2005 was characterized by a large degree of volatility (ICCO, 2006).

Figure 10: World Price and Production of Cocoa (From 1971/72 to 2005/06 (cf. ICCO, 2006)

Overall, the Indonesian cocoa value chain can be characterized as having a market-based governance structure with a low degree of open coordination. In other words, there are no players or entities exerting dominant control over the cocoa value chain. Since product specifications are relatively simple, most transaction between buyers and sellers take place at "arm's length', base on supply and demand. The costs of switching to new partners are low for both parties.[5]

The world price of Indonesian cocoa beans, determined by the NY terminal market, is a key driven for many participants in the value chain. In late 2002 and early 2003, when the cocoa prices were at an 18-year high, many exporters and traders entered the market. But when the global cocoa price fell from $2,375/MT to $ 1,374/MT in 2003/2004 – a 43% drop over a ten month period. Many short-term speculators and new entrants in the cocoa trade suffered substantial losses. Over the past year, global cocoa bean prices have remained relatively stable (trading between $ 1,380 and $ 1,725 per MT this season) which has led to future consolidation of exporters in Indonesia. Approximately 80% of total Indonesian cocoa bean exports are now handled by the five largest exporters based in Sulawesi, all of whom are local affiliates or subsidiaries of multinational companies.

[5] Consideration and classification of value chain governance was based on factors described in " The Governance of Global Value Chain" by G. Gereffi, J. Humphrey, and T. Sturgeon; November 4, 2003.

2.3. Market-base governance

As discussion before that the Indonesia cocoa value chain characteristic as having a market-base governance structure. However, does not reflect equal power relationships in the value chain. While spot market price information is widely available and efficiently transferred, the flow of other product information (i.e. quality and quantity specifications) from global buyers to exporters, intermediaries, and producers is not a transparent. Free Air/Fair Average Quality (FAQ) is an international trading term for standard quality of bulk, unfermented, raw cocoa beans. Although some global buyers have expressed frustration with the inconsistency Indonesia's beans meeting standard FAQ, most of them continue to buy after applying discounts for the poor quality. As a result, confusing market signals are sent and provide differing incentives for value chain participants at different levels in Indonesia.

CHAPTER IV

CHARACTERISTIC OF FLORES COCOA

1. Flores Cocoa Producers and The Value Chain

1.1. Producer

Cocoa plants were introduced to Flores by the local government in early 1980s. Like most parts of Indonesia's, following the high world cocoa prices in the late 1970s and early 1980s promoted by a sharp reduction in output from West Africa, the mid 1980s sow a phenomena expansion in cocoa acreage and production by Indonesians smallholders. Although smallholder cocoa was produced in Maluku, Sulawesi and other islands, the total production was only 1,058 tons in 1980 (Akhiyama and Nishio, 1996). In additional, migrant Indonesian's working on cocoa farms in Malaysia, they not only acquired the know how to grow cocoa very efficiently, but also acquired some capital. The number of those who returned to Sulawesi and started cocoa farming is considered to be small. However the dissemination of know-how and remittance of capital from Malaysia to Sulawesi are considered to have had a great impact on the expansion of cocoa in Sulawesi. Also the smallholders probably have benefited from the supply of seeds from PTP's and private plantations, which started expansion of cocoa production in the late 1970s and early 1980s, many of which were under the Government's estate crop projects. According to Pater Bollen, SVD who is retired of church, mentioned that abut 3 -4 cocoa trees was planted by small farmers since 1964. At that same time the production only 70 kg. In 1980 the cocoa plants move and expansion from Sulawesi to be small in Flores. The fermentation process of the Flores cocoa beans using the banana leaf in the past decades is introduced by Pater Bolen. On production side, the church intervention has been greater social impact in particular helping the farmer to access market which is small volume cocoa beans. In additional, in 1980 the local government of Sikka were supported the cocoa subsector to seedling and growing on the smallholders farmers in Sikka regency. Since the cocoa market already been open in Flores by Chinese traders, the smallholder farmers in Sikka and other parts of Flores as well as Flores Timur, Ende, Ngada and Manggarai expansion to growing

cocoa on their suitable land. Mostly the seedling was growing by them self from their related or neighbour farmer.

In 2000 to 2005 the cocoa production is growing up and plants areas were rapidly wide (Figure 5). Flores Cocoa is typically produced through smallholder or family subsistence farming. Trend of cocoa in NTT are shows in the Figure 5 bellow:

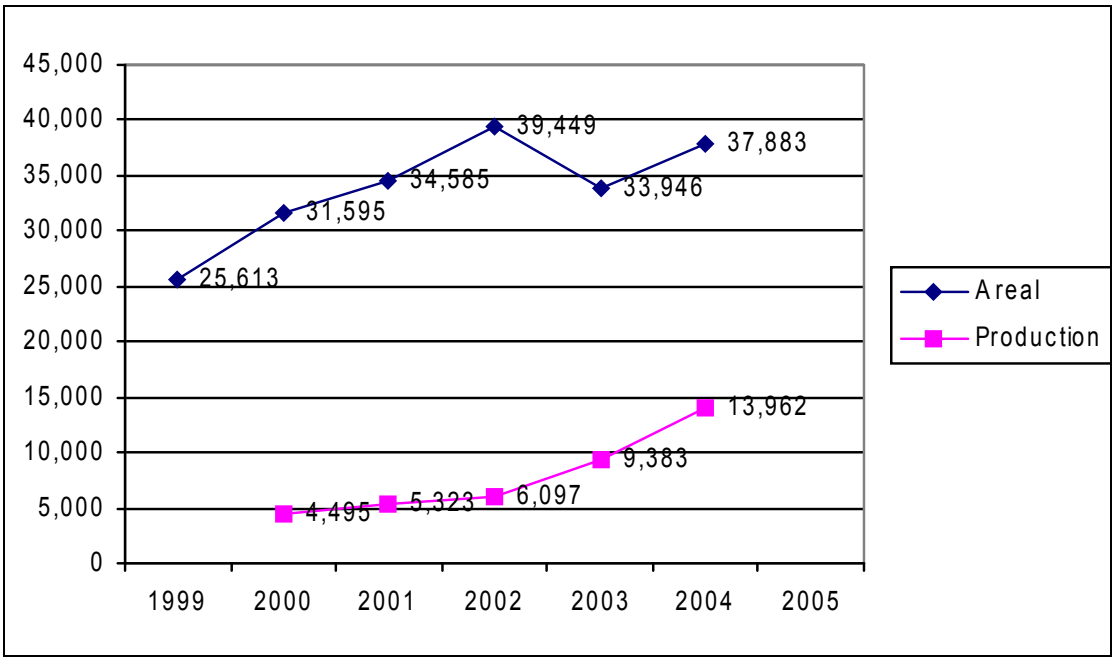

Figure 11: Trend of Cocoa in NTT

There are three major different species of cocoa tree growing in Flores. Today, there distinct varieties of cocoa are recognized: *Criollo, Forastero, Trinitario*. (Young, 1994 : 42). On the island of Flores, smallholders working on the plots ranging 0,5 to 1,5 hectares. Majority cocoa trees of Flores were planted in rows, spaced of about 3 meters, giving a plant density of around 700 to 1330 trees/ha depending on soil fertility and slope area.

Normally, temporary and permanent shade trees should be carried out in the first half of the rainy season to give it enough time to establish before the next dry season. Although cocoa is mature 24 month after the initial planting, cocoa trees become productive about five years after planting. Yield peak at the eighth to tenth year, but acceptable yields are produced for several decades. Local tress yield between 300 and 500 kg/ha per year, under normal circumstances. Hybrids present higher yield, above 1000 kg/h. *(source: UNCTAD-based on the data from ICCO)*

The Forastero is a species of cocoa tree is dominantly cultivated by smallholders widely of NTT, in particularly Flores such as Ngada, Ende, Sikka and Flores Timur.

The cocoa tree flower in two cycles of 6 months the whole year round. In most Indonesian provinces such as Flores, the main harvest lasts from **April to June** and the interim harvest from **September to November.**

Most of the farmer in Flores-NTT produce unfermented bulk bean for export, while those farmers as a village collectors partial fermented their cocoa bean. Especially, the small farmer groups in Hokeng – Flores Timur is organized by PT. Lelolara (church state-owner) fermented their cocoa beans with full dry beans using their own drying service facility. The volume of beans was produced about 20 ton per year. The group sell beans directly to the private buyer in Bali (who interested buying the cocoa beans with more high quality). The different price compared with the common channels is 10% high.

With over 90% of cocoa beans export from NTT is produced by smallholder farmers of Flores. In recent years, even thought the production of cocoa is one of the main sources of income among farmers of Flores, only 2% of NTT cocoa beans (compared to the other regencies) contribute to the national stock. In 2005, total area plantation of cocoa in Flores is 34,379.86 ha or 91% of total area in NTT, whose respective: Sikka (51%), Ende (15%), Flores Timur (10%) Manggarai (6%), Ngada (5%), Manggarai Barat (4%) and the rest (9%) of NTT cacao plantation takes place in West Sumba, Kupang, TTS, TTU, Belu, Alor, and Lembata.

Approximately 30.000 ha area of Flores cocoa with over 13,000 metric ton (MT) cocoa beans produced in 2004, provide the main source of income and livelihood for ± 15.000 smallholder farmers and their families. Cocoa production share by regencies are shows in Figure 12 bellow.

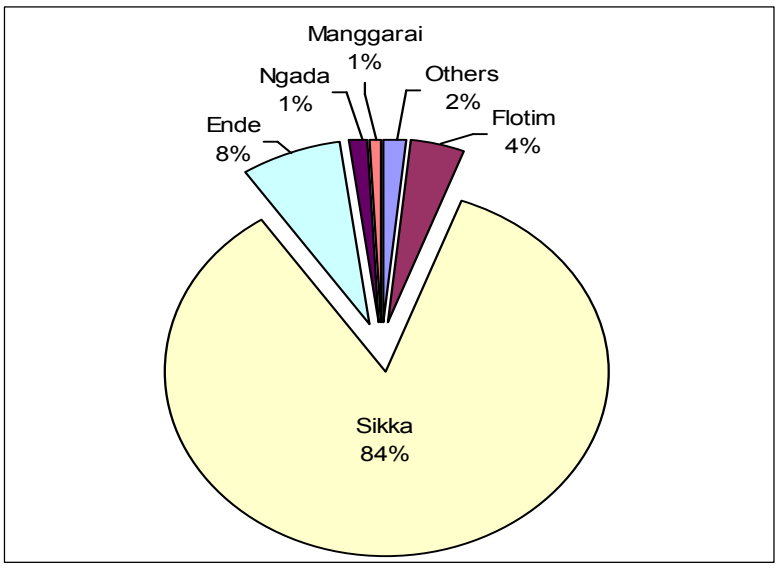

Figure 12: Cocoa Production by Regencies in NTT 2000 – 2004

Flores share of cocoa production is not significant. There is no large estate grown cocoa in Flores (only the church cocoa farm is working on the plots ranging 15 to 20 ha).

Supply increase of Flores cocoa at the household level has been modest; most of the increased output has been due to an expansion of area as population has risen.

The soil quality of different farms is believed to cause important variations in the effect of farm size on agricultural production (Berry, et al. (1979); Lamb (2003).
Most cocoa is produced on smallholding within farming communities that cultivate a mix of food and cash crops (crops produced for sale to raise cash rather than for consumption within the community). Most labor on cocoa farm in Flores is provided by family members. They are also growing rice, maize, and other food crops. These other crops–particular rice–have greater social importance that the cocoa and farmers often spent more time on these crops and less on cocoa. There are few commercially managed, which is cultivating the cocoa more than 2 ha hired labor from outside.

On the production side, average yield of cocoa farm in 2003/2004, varies from 400 to 700 kg per hectare. While in 2005/2006, harvested of Flores cocoa has declined by 55% up to 70%. Cocoa is one commodity after cashew nuts, coconuts, and coffee the fourth largest (measured by foreign exchange earnings) cash crop cultivated in Flores. Cocoa is the primary cash crop for most farmers in Sikka regency and as secondary cash crop for the other parts of Flores.

In 2003/2004, Flores cocoa beans exports are valued at approximately 11,313 MT (≈ US $ 15,2 millions) per year and provide the main source of income and livelihood for over ±15.000 smallholder farmers and their family members. Over the past year, global cocoa beans prices have remained relatively stable (trading between $ 1,380 and $ 1,725 per MT). During years 2004 till 2006, Flores cocoa are currently dropping from high production of about 600 kg/ha to the current levels of about 50 – 150 kg/ha. This combined with the other factors, such as the high cost and limited availability of inputs and due to the number of causes including: widespread infestation of pest and disease (primarily the CPB and Heliopeltis), age and variety of existing tree stock, poor soil nutrition and drought. This results in decreased productivity and income potential for smallholder farmers.

1. 2. Marketing and Distribution System of Cocoa Flores

There are basically three generic issues that arise in the context of primary commodities: the world market volatility, the declining trend in commodity prices, and the relatively small

share of primary producers in the "value chain"[6]. They arise out of the way primary commodity markets are structured, function, and behave.

Indonesia has a basically free marketing and pricing system. The free-market system, as Dunchan and Jones (1993) discusses, is considerably more efficient than the market board system, such as those in Ghana and Ivory Coast.

Smallholder farmers of Flores cocoa sell their beans either to village collector (pengumpul), middlemen (pedagang), cooperatives and town traders.

Flores cocoa is traded on the global market as an unfermented. Cocoa farmers on some other areas in Flores (e.g.: Hokeng) do fermented their beans, but their production is quite small and is mainly sold to agent for local processors in Surabaya rather than exported to Makasar. Fermentation of cocoa beans[7] can help bring out their inherent flavour, but is not generally down in Flores-NTT.

The global demand for these unfermented bulk beans has become relatively inelastic and not significantly affected by changes in price.

The farmers of Flores have a little storage capacity and will sell their cocoa beans while still wet, for immediate cash, rather than wait for them to be properly dried (or fermented some cases).

2. Value Chain Analysis Of Flores Cocoa

Approximately 90 % of total Flores cocoa beans were sent to the exporters in Makasar (Sulawesi) by biggest local traders based in Geliting (Maumere). The remainder tonnes of NTT beans ± 10 export to Bali and Java. The in-land transportation from the farmers to the major traders in Maumere is organized by collectors and town traders with cars and trucks on road. The flow of cocoa through the marketing channels is given as a simple flow in Figure 13

[6] "Value chain" basically refers to the chain of value added as a commodity moves and gets processed from the farm gate to the final consumer.

[7] Fermenting is a simple 'yeasting" process in which the sugars contained in the beans are converted to acid. This is done after the pods are harvested, heaped, and covered. Fermented lasts from three to nine days-removing the raw bitter taste of cocoa to develop a more characteristic chocolate flavor when the beans are roasted.

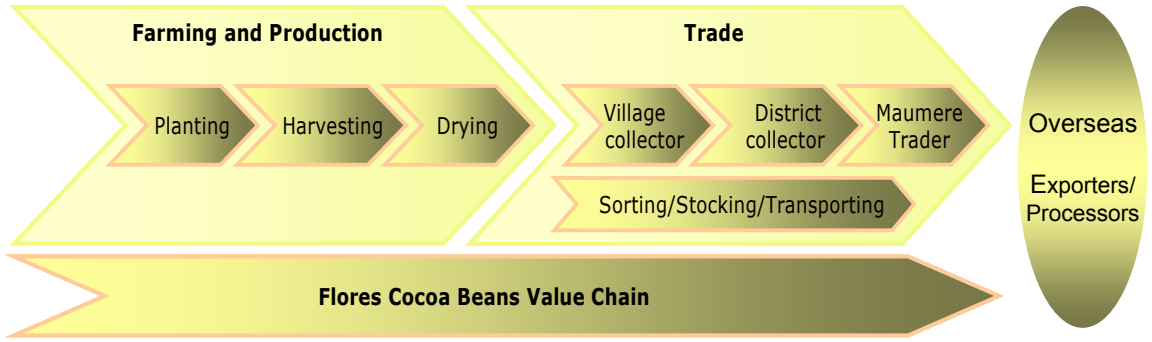

Figure 13: Cocoa bean Production Value Chain in Flores

Like a most of Indonesian, collectors and middlemen do not licenses or permits for their business. Most of the village collectors are themselves cocoa farmers, and collect cocoa from other cocoa farmers in the same village to sell to middlemen.

Middlemen are generally merchants often engaged in other businesses, such as managing general retail shops in town and in villages. They buy cocoa from farmers and collectors, arranges with transport operators to move the cocoa to major ports, and delivery it to exporters.

Competition among collectors and middlemen is considered to be fierce. Farmers often sell to several collectors, and change collectors depending on prices offered. Similarly, collectors often change the middlemen they sell to, and middlemen change exporters.

Virtually approximately 90% cocoa produced in Flores is shipped to Makasar because there are more than 50 exporters. Almost all of them belong to ASKINDO.

The flow of money is the reverse of the physical flow of cocoa; exporters and bank usually provide the credits to middlemen, who use cash to pay collectors and farmers.

Price information is made widely available. Information on prices in the New York Exchange is transmitted through Fax and Internet facilities to all exporters, who in turn transmit them to middlemen and collectors. The local Government of Flores transmit the daily commodity prices include cocoa prevailing in Flores via regular radio bulletins. Mostly the farmers have received the price information through collectors.

The major functions and participants in Flores are shown graphically in the market channel map bellow (see Figure 14). Detailed of all the research area cocoa value chain are described in Appendix –4:

2.1. Marker Channels

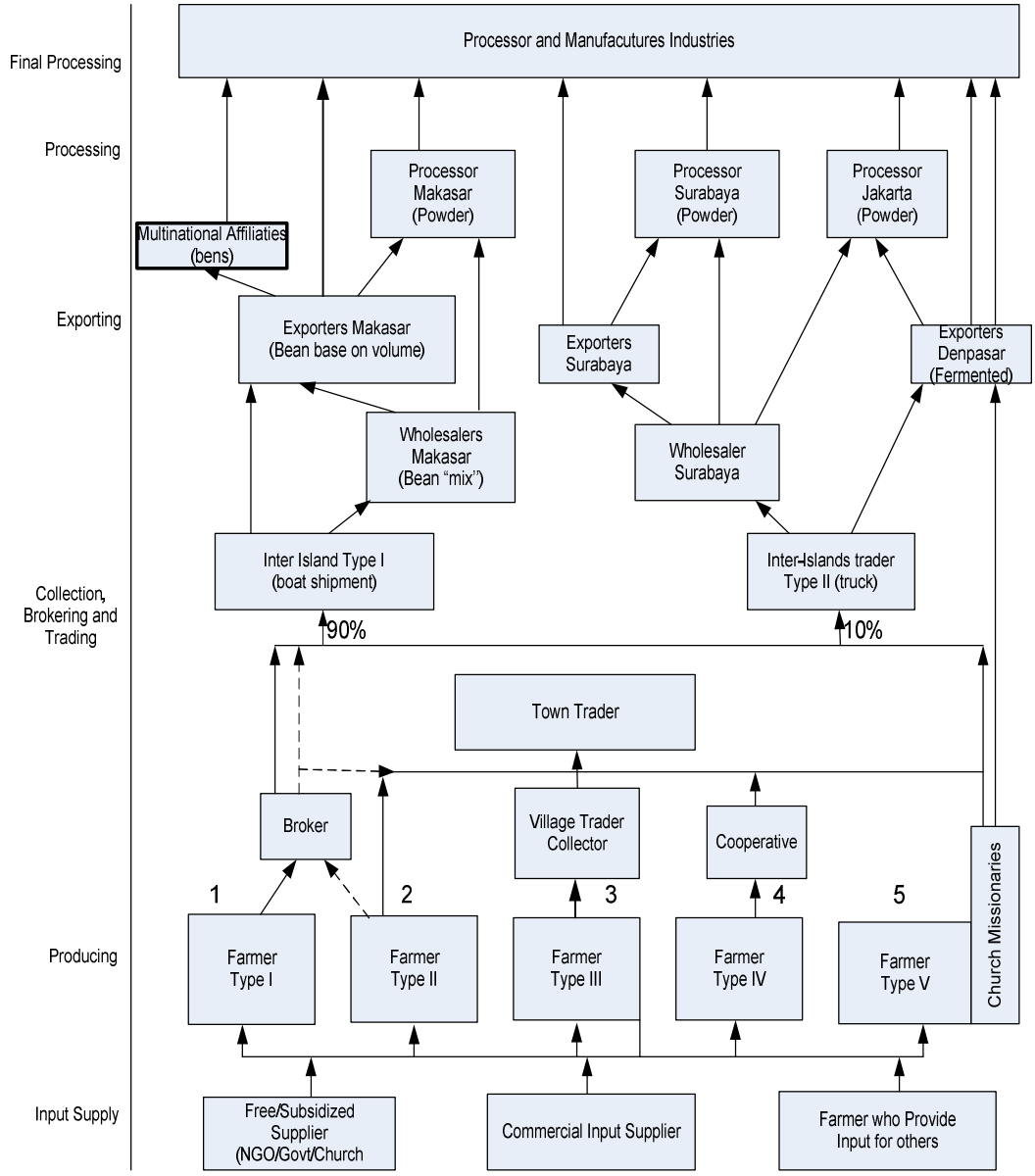

Figure 14: Flowchart Market Channels of Flores Cocoa Beans

2.2. Volume and Cash-driven Transaction.

Without incentives for exporters, intermediaries, or farmers to differentiate their bean and invest in quality improvement they continue to be driven by volume-based transactions. For some farmers and village collectors, mixing good quality beans with waste material or poor quality beans is a standard practice to maximize volume and income.

While farmers are producing a greater quality of cocoa, and consequently earning more income for it, they complain that they are not getting any price differentials from collectors and traders for improve quality beans.

The use of inappropriate weights and measures by a few collectors or traders has also heightened the level of mistrust of intermediaries among some farmers of Flores. But this practice of volume manipulation will be difficult to discourage or change without adequate commercial sanctions (or incentive) dictated by global processors and manufactures at the top of the value chain.

Some processor and exporter based in Makasar, Bali and Surabaya, have attempted to offer price differentials, up to 10%, for beans that can consistently meet higher quality specifications. For more detailed related the SNI[8]

Transaction between cocoa farmers and market intermediaries and between intermediaries and the exporters or processors are primarily conducted on a cash and carry basis. Smallholder farmers of cocoa in Flores have the option to selling to large number of local collectors or buyers known as town traders in Bajawa, Ende, Hokeng as well as Geliting (Maumere) but most will sell their cocoa soon after harvest (often without being adequately dried) for immediate cash.

The collectors and the traders in Geliting-Maumere rely on advance from private bank (BNI and BRI) to finance these frequent cash purchases.

1. 3. Margins and the Distribution of Returns

Indonesia cocoa farmers receive on average high percentage of the international price. The farm-gate price for Sulawesi bean can range between 75 to 85 percent of the New York Terminal exchange price. While in West Africa cocoa farmers a little as 50 to 63 percentages of the final FOB price[9].Comparison farm gate price of Sulawesi and the New York terminal price are shown in Figure 15.

[8] SNI (Standard National Indonesia) in Indonesia's Quality Standard of Cocoa Beans
[9] Indonesia's Cocoa Value Chain, Henry and Mayer, USAID Micro Enterprise Development Division, 2004

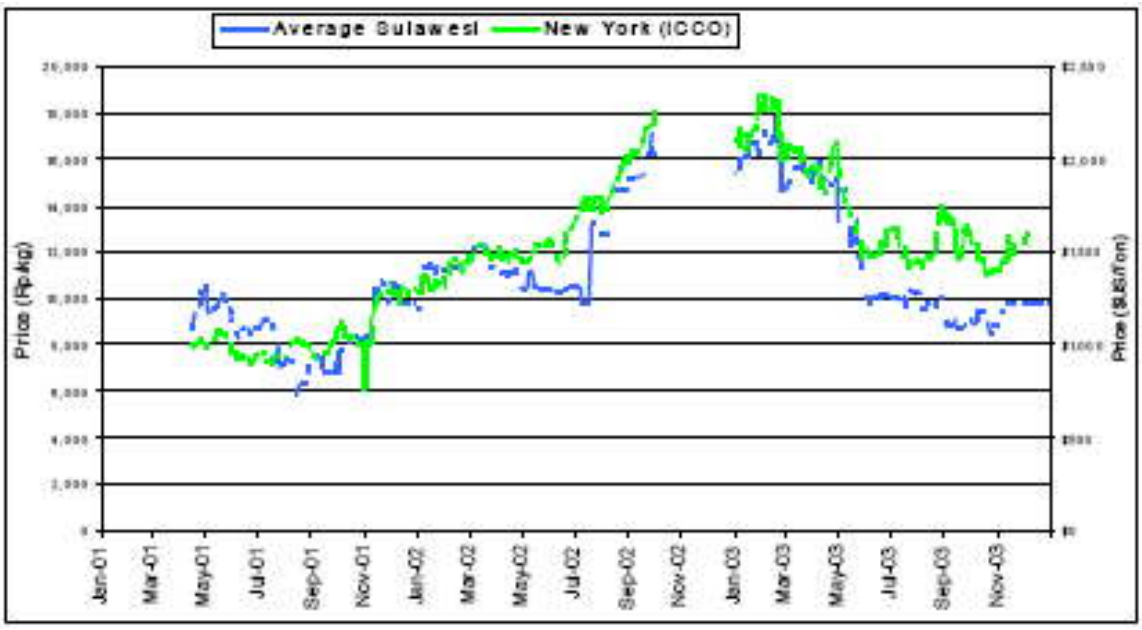

Figure 15: Comparison of Sulawesi and New York (ICCO) cocoa price: 2001–2003

Flores cocoa farm-gate price also receive on average the same percentage of the Sulawesi price. The farm-gate price of Flores beans is daily updated by the biggest local traders located in Maumere. However, discount amount based transaction for delivery expenses or shipping cost and quality standard remind to be applied by the traders approximately Rp.500 –700/kg. Sometimes, the local traders buying station (known as speculator) offering farm-gate price more highest than Sulawesi, but mostly this passed to the collectors who provide the dry beans which are follows the standard (at least 7% moisture content). In short, the farm-gate price for Flores beans can be ranging 75% – 85% of the FOB price, the small remaining balance is shared among the many other participants in the value chain. According to one source trader in Maumere, the margin between the FOB price and the farm gate price in Flores can be broke down into marketing and logistical costs (10 – 15%), overseas trading margin (2 – 3%), Given the slim margins, the large number of local collectors and traders in the value chain depend on quick turnover and high volume transactions.

The prices that market intermediaries pay are based primarily on a “discounting” process. The daily global price for Flores cocoa is widely known by all participants through the value chain, and serves as the basis for an initial price offer. Once an initial price is established, collectors and traders (as well as exporters based in Sulawesi) will then engage in a discounting process to reduce the initial price base on certain quality parameters. The net price is the multiplied by the volume of beans sold determine the seller’s revenue.

Box 2: Calculating Net Price for Cocoa Beans

Initial Price (based on NY Sulawesi FAQ)
LESS: Discount (base on quality specs)
= Net Price
X Volume
= Income

The basic quality parameters include moisture content, bean count (i.e. number of beans per 100 grams), and percentage of waste, mouldiness, and clumped or flat beans (See SNI Quality Specific of Cocoa Bean in Appendix– 5,).

Recently, the farm gate price of dried cocoa bean is average Rp 7000/kg, In Maumere the terminal price of Flores, town trader give the price 10.000/kg. while in Ende the town trader gives the price Rp.9,500/kg, village trader Rp.9,000/kg, broker takes the fee about Rp 100 – 200/kg, farmer receive the gate price 8,000/kg dried bean. Approximately 3,000 farmers to live nearby Geliting town in Sikka regency have a better price of Rp 10,000 since they send dried beans directly to warehouse of the traders in Geliting

Farm gate price at the local farmers and collector level in Flores, moisture content and general appearance are the most important factors consider in the discount process. Currently only Rp 100 – 200/kg the price difference between fermented bean and unfermented beans. However, the fermented bean gives a good smell of the bean and its colour is more attractive.

Since volume is a key driver in the cocoa value chain, as stated above, some market intermediaries will attempt to sell cocoa bean mixed with poorer quality beans or actual waste material (e.g. shells, foreign matter) to increase the volume.

CHAPTER V

ISSUE ON THE SUBSECTOR COCOA IN FLORES

As discussion in the previous chapters, Flores cocoa subsector expanded very rapidly during the last several years. However, the subsector faces several issues that need to be addressed in order for it to maintain healthy growth.

The issue examined here are productivity decreasing and inconsistency of quality, the adding-up problem, the value added tax, risk of pest damage (by Cocoa Pod Borer), export marketing, research, retribution, local processing and the environment.

1. Productivity decreasing:

Cocoa farm productivity in Flores is decreasing due to a number of causes including: widespread infestation of pests and diseases (primarily the Cocoa Pod Borer CPB[10], time harvesting, age and variety of existing tree stock, less managing on cocoa farm, poor soil nutrition, and drought. Flores cocoa farmer currently produce an average of 400 – 700 kg/ha. Compared to a potential yield of 1 – 1.5 MT/ha. (ICCO) CPB infestation alone is estimated to reduce cocoa production by 50% – 70%.

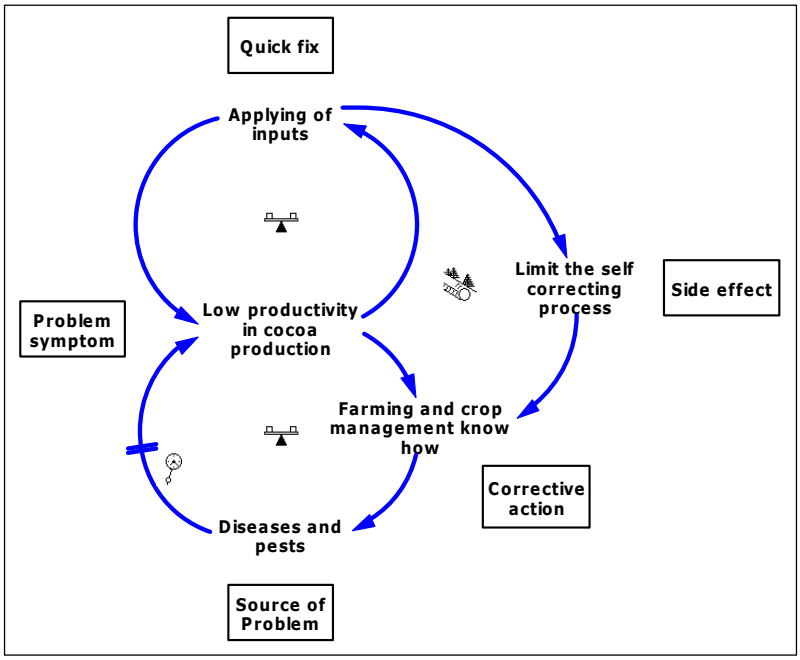

Figure 16: Low Production Archetype

On the island of Flores the aging of cocoa trees are over 20 years old and reaching (or surpasses) the peak of their potential productivity.

[10] See appendix For more information related CPB

"*Cocoa tree replacement and/or rehabilitation are critical to the long term sustainability of Flores cocoa production*"

2. Quality

Generally, quality of Indonesia cocoa in particularly that produced by smallholders, is an issue considered to be important by ASKINDO (Associate of cocoa Indonesia) and GoI. A large portion of cocoa produced by smallholders in Flores is unfermented or partially fermented cocoa (fermented for 1 – 2 days) instead of the days needed to achieve the high quality typical of cocoa from Ghana and some other countries. Although there is a certain market for unfermented and partially fermented cocoa, it sells at a discount would become larger when Indonesia's production of unfermented.

In short, market acceptability and demand for Flores cocoa beans of various qualities is still high but does not provide incentives for farmers to invest in improving farm productivity or bean quality. While farmers are producing a greater quality of cocoa, and consequently earning more income for it, they complain that they are not getting any price differential from collectors and traders for improved quality beans.

There is a demand for fermented beans from local processors but their requirements are not currently large enough, nor is there sufficient differentiated pricing.

Farmer has little storage capacity and will sell their cocoa beans while still wet, for immediate cash, rather than wait for them to be properly dried (or fermented in some cases). These result in decreased productivity and income potential for smallholder farmers.

3. Managing on Cocoa Farm

Most of all Flores cocoa is produced by small-holders on farm less 1.5 Ha in size and there are a lot of workers producing cacao (±15.000 farmers) are in Flores. The methods used are those that have been relied on for more than a century, simple technology and manual labour. The cacao tree can produce for 25 years and new seedlings can produce after 3-5 years, if the land is well prepared. The major constraint faces by the smallholder farmers in Flores has been identified: (i) limited capacity (laziness) to clear the area beneath of the trees and weeded regularly to promote a healthy tree and good crop, (ii) poor management (know how) includes pruning, inspection or replanting tress, and possibly the additional of fertilizer and spraying pests.

4. Cocoa Pod Borers

The main reason for decline or stagnancy in Indonesia's cocoa subsector in the early 20th century was the cocoa pod borer, an insect pest that reduces yield drastically.

Currently, the cocoa pod borer is found widely of Flores, but it has possibility of spreading to major producing areas such as Sikka, Ende and Flores Timur.

The local government (Disbun and BPTP[11]), NGO's, and Church located in Flores are aware to this problem. BPTP have been undertaking research to devise better control methods, but at the moment the problem is not yet addressed.

Biological control and application of certain chemicals has some effects in Sulawesi and Malaysia. However, this is very expensive and needs to be done in wide area for maximum effects. As it can potentially destroy the cocoa subsector, it is importance to identify means to combat this pest.

5. Research

Agronomic research in cocoa is undertaken by the coffee and cocoa research institute in Jember (east Jave), while economic and marketing studies on cocoa are carried out at the Agribusiness Studies and Development Centre in Jakarta. The funding of the research comes from the Ministry of Agriculture (Agency for Agricultural Research and Development) and money raised by the Research Institute through selling planting materials.

One of problems is that these research institutes have only limited contact with the local government in Flores or the government just linkage to the research institution is only to require the new clone of cocoa seedling rather than to support the research institution to tackle as a matter of priority such as pest and disease. This make difficult for the research institute to tackle issues such as quality improvement and the adding-up problem.

However, during 2006, the local government collaboration with BPTP NTT were contacted the Research Institution to introduce the side grafting method in several area in Ende. The objective of the research is to be addressed the aging trees which are low production.

6. Transportation

The issue availability of good transport infrastructure has played a critical role in smallholder cocoa development; as can be seen from the fact that most major producing areas in Flores have not good road or mostly in the remote area.

The variation in transport cost, based on differences in both distance and road quality, plays a part in determining farm-gate price. For instance, the difference in distance is reflected in the farm gate price differential between Ngada, Nangapenda, Ende, and Wolowaru. The regencies situated going western from Maumere, whose respective Ende and Ngada are 140 km and 248 km away from Maumere by main road of Flores. Farm-gate price in Ende have been generally higher than cocoa price in Ngada. The difference price ranging between 5%

[11] BPTP (Balai Pengkajian Technology Pertanian)

to 10% in 2005/06. However the transport cost appears to be only of numerous factors that determine farm-gate price

CHAPTER VI

ILUSTRATIVE PROGRAM STRATEGIES

1. Identification of Major Constraints and Opportunities

In order to develop possible strategies for continued support of the Flores cocoa value chain, the team study first identified the major constraints and opportunities to its continued competitiveness and to further integration of SME in the value chain. Base on interview guide developed by consultant of KATALYS-Bangladesh, a generic classification of constraint types were used to explore possible value chain issue in categories including:

(1) Policy and Regulatory Environment, (2) Organization and Management, (3) Inter-firm Cooperation & Governance, (4) Market Access, (5) Technology and Product Development, (6) Input Supply, (7) Infrastructure, (8) Finance.

The major problem facing by Flores Cocoa industry is: **low productivity** and infestation of CPB (Cocoa Pod Borer) and diseases, and **low bean quality**. With regard to overcome the problems of low productivity, CPB and other diseases, and low quality, the local government of Sikka, Ngada and Ende has been conducted to expand the area of cocoa farmers by develop superior clones.

The team study of Swisscontact LED NTT has been identified the underlying constraint and opportunities of the Flores Cocoa subsector. For detailed descriptions of the major constraints and opportunities are presented in Table 2 below.

Table 2: Underlying Constraints and Opportunity of Flores Cocoa

No	Constraints / Opportunity	Constraints / Opportunity	Description of Constraints / Opportunity	Possible Solution (BDS)
1	Lack of knowledge of farmers about the benefits of using appropriate inputs (insecticide, pesticide, fungicide, hormones) leads to poor farm management that results in lower productivity of Cocoa.	Lack of knowledge of farmers about the benefits of using appropriate inputs (insecticide, pesticide, fungicide, hormones) leads to poor farm management that results in lower productivity of Cocoa.	Cocoa farm productivity in Flores is decreasing due to a number of causes including: widespread infestation of pests and diseases (primarily the Cocoa Pod Borer – CPB), ageing of trees. Specialized research and development for cocoa does not currently exist in Flores. As a result, there is limited availability of appropriate and improved planting materials, soil analysis for cocoa production, and other specific research to improve cocoa productivity. Farmers lack information on appropriate usage of different inputs from possible sources like government extension service, NGOs, and private input suppliers & traders.	Increasing the knowledge of the farmers about the benefits of using appropriate inputs by: – Awareness Raising Program (Movie show, radio program, newspaper article, farmers meetings, demonstration, folk song etc.) – Training for knowledge and skill development
2	Lack of knowledge of Farmers about the soil content leads to inappropriate use if fertilizer that results in lower productivity.	Lack of knowledge of Farmers about the soil content leads to inappropriate use if fertilizer that results in lower productivity.	Poor soil nutrition is hampering the growth of the Cocoa trees in Flores. Many farmers lack understanding of cost benefit of fertilizer and therefore do not use it or use it minimally. This decreases their productivity and income potential.	– Awareness raising about the benefit of soil testing services –Introduce and promote private. sector soil testing services –Capacity building of soil–tester/soil collectors by training

3	Insufficient supply of appropriate inputs (fertilizer, insecticide, pesticide, fungicide, hormone) to the smallholder farmers leads to insufficient and / or inappropriate use of inputs that results in lower productivity of Cocoa	Insufficient supply of appropriate inputs (fertilizer, insecticide, pesticide, fungicide, hormone) to the smallholder farmers leads to insufficient and / or inappropriate use of inputs that results in lower productivity of Cocoa	- Distribution network of Input companies is poor and does not reach rural and per-urban areas. Some farmers need to travel 10 to 15 km to purchase inputs - Input traders and others who are involved in input business don't get products from input companies directly. So they don't get any product information or training on product usage. They only disseminate the information that they find in the labels of the product.	- Informing the input companies about the existing market size with potential demand - Assisting the input companies in strengthening the distribution channel/network
4	Lack of knowledge about the potential benefit of drying leads farmers sell wet or poorly dried cocoa beans that results in lower price and profit.	Lack of knowledge about the potential benefit of drying leads farmers sell wet or poorly dried cocoa beans that results in lower price and profit.	Farmers and traders depend on sun drying mainly. Moisture content (maximum 7%) cannot be maintained to the optimum / appropriate level by sun drying. During the rainy season, drying becomes a bigger problem.	-Awareness raising on the benefit of drying - Improving the skill for drying - Introduce appropriate technology for drying

5	Lack of knowledge of farmers about the profitability and benefits of supplying high quality beans leads to produce/supply poor quality Cocoa that limits the opportunity to enter high-end market.	Lack of knowledge of farmers about the profitability and benefits of supplying high quality beans leads to produce/supply poor quality Cocoa that limits the opportunity to enter high-end market.	The exporters of Indonesia and final buyers in US or Europe demands better products that meet quality standards consistently. At the same time, the lower quality products can be sold in the market as it also has its demand and farmers don't get much price difference for improved quality product. Direct buyers (local traders and wholesalers) from the farmers are not that quality conscious and don't encourage farmers to grow better quality products. The international market acceptability and demand for Indonesian cocoa beans of various qualities does not provide incentives for farmers to invest in improving farm productivity or bean quality. Some local processors also have demand for consistent supply of quality Cocoa beans. Due to the inconsistency of quality beans, a few local processors have started to explore direct up-country buying stations to supplement their conventional suppliers. They are interested in buying directly from farmers in order to source more consistent quality rather than buying from traders.	- **Promoting Contract farming** in collaboration with local processors / exporters / wholesalers / - Assisting some progressive farmer groups in providing higher quality Cocoa beans - Establishing market linkage between the farmers and higher end market buyers

6	Farmers miss opportunity of getting higher price for selling unfermented Cocoa beans. Note: Same as constraint 5.	Farmers miss opportunity of getting higher price for selling unfermented Cocoa beans. Note: Same as constraint 5.	The demand for Cocoa of Flores is mostly for unfermented bulk beans. There is a demand for fermented beans from local processor but their requirements are not currently large enough. Some processors and a few exporters have attempted to offer price differentials, up to 10%, for beans that can consistently meet higher quality specifications.	– **Promoting Contract farming** in collaboration with local processors / exporters / wholesalers / – Assisting some progressive farmer groups in providing higher quality Cocoa beans – Establishing market linkage between the farmers and higher end market buyers
7	Insufficient labor force for field management leads to poor farm management that causes low productivity in farmer level.	Insufficient labor force for field management leads to poor farm management that causes low productivity in farmer level.	Farmers collectively try to do farm related activities to solve the shortage of labor problem Young people are not too much interested in going to agricultural sector work Farmers grow different types of commodities, so they need a lot of labours to manage their farm. Family labor is not properly utilized	– Introducing new technology to reduce need of farm labor – Increase farm management capacity of farmers – Develop private companies that can manufacture products of appropriate technology (embedded service about the new technology with sale of product) – Farmer group / cooperative will act as agents for promotion of appropriate technology

8	Improved policy and business environment (land registration procedure, farmer group and cooperative formation, quality standards, coordinated research & extension service) can boost the Cocoa sector growth in Flores.	Improved policy and business environment (land registration procedure, farmer group and cooperative formation, quality standards, coordinated research & extension service) can boost the Cocoa sector growth in Flores.	Land certification is still not done by a lot of farmers and they lack access to capital from formal financial institutions for this. The official registration options for rural businesses, including farmer groups, are limited. This restricts their ability to engage in formal commercial activities or transactions. Current Indonesian law makes it difficult for farmers groups specifically, and rural enterprises in general, to legally register as entities other than cooperatives or associations. Extension of services from research findings is not available to all the farmers in all areas. International buyers do not recognize Indonesian standards.	– Advocacy / lobbying by cooperatives and business chambers to local government – Using media to pick up and disseminate advocacy related issues
9	Lack of knowledge of farmers / traders on maximization of financial resources from Cocoa production	Lack of knowledge of farmers / traders on maximization of financial resources from Cocoa production	Cocoa is usually not the only commodity that farmers produce. Farmers sell Cocoa beans frequently in small quantity, but they use the money that they get in other activities instead of increasing farm production. Hence they miss the opportunity to get higher profit from Cocoa production.	– Capacity building on profit maximization, financial management, and managing capital (through training, information sharing, advice etc.)

10	Insufficient amount of money leads farmers not to buy and use appropriate inputs or do further investment that results in un-optimized production.	Insufficient amount of money leads farmers not to buy and use appropriate inputs or do further investment that results in un-optimized production.	Farmers require weekly cash on delivery when selling Cocoa. Some collectors / traders provide cash advance (pre financing) to farmers while most traders cannot lend to farmers as they also lack money. Smallholder farmers lack access to acceptable collateral for financial institution. The only collateral accepted for the farmers is land certification that a lot of farmers do not possess.	- Credit Facility / Access to finance, - Information about the need / benefit of savings through media, financial institutions, cooperative

2. Identification of Possible Service Providers.

2.1. Service Assessment and Service Providers' Profile:

Base on constraints and possible solution (see Appendix 7) the team identified possible service provider to address these constraints. These potential solutions to ensure greater competitiveness of SME's in to the value chain. The process used to prioritize and short list service providers existing in Flores.

Interviews were conducted in the district of Ende and Sikka. A total of 48, both demand and supply-side were assessed. The details are given below:

Table 3: Short list of possible and potential Service Providers

Actor / Service Provider	Description
Government departments	This related agriculture agency intervention, and all the farming concerning government activities.
Farmers	This related demand side of services. (See Table-5)
Cooperatives / Credit Unions	This related financial institution intervention. Financial institutions are determined as the actors in the value chain which provide the necessary cash for every actor in the system itself.
Input Supplier / Distributor	This related action/support. Input supplier are all actors in the value chain ahead of the cocoa farmer, which provide inputs, seedling and tools for effective cocoa farming.
Collector / Local trader	This represents all the actors in the value chain between farmer and wholesaler in Maumere-Sikka
Wholesalers	This represents all the actors in the value chain who buying the cocoa from collectors/traders with the big volume and usually they don't go to the farmers directly. They arranges transport and sell to processors or exporters in other parts of Indonesia (Makasar, Surabaya, Denpasar)
Farmer Agents	Providing, distributing and selling the MLM products (Super ACI fertilizers) They provide information on appropriate use of fertilizer at the farmer level.
Resource Farmers	Related having better skills and knowledge than other farmers, and have better network/information source from government or input company, NGOs and Church
Agricultural Clinic	Related service established by the local government to provide agriculture information to the farmer. its mean for all crops.
Church	Churches motivate people for better farming practice in addition to their religious message. But the information is mostly generic in nature. Some divisions of some churches are engaged in agribusiness.
Radio Station	This represents general information, Wide outreach for broadcast program irregularly related to the farmers and agriculture programs and can disseminate information

	directly to the farmers, broadcast
Newspaper	provide information through the inputs' advertisements & provide price information,
NGO	Have extension worker who stay in the village and give consultancy to the farmers. Provide training on specific things.

Illustrative facilitation activities to support the value chain were identified. Table 4 shown below is the potential services to address the constraints. Detail profile of different government departments, NGOs, Church, media and private sector as service providers including their roles is developed and described below:

Table 4: Possible Service Providers to Key Value Chain Constraints

No	Service Provider	Constraints Related COCOA subsector	Services	Service Type & Delivery mechanism	Strengths	Weaknesses
1.	Department of forestry and cash crops (Dishutbun) A government agency in Kabupaten (regency) level for the forest and cash crops development under the ministry of forestry. Staff = consist of government officers ▪ Number of trained extension officers (20 in Sikka, 6 officer in Ende) ▪ 200+ extension workers in cooperation with agricultural extension in Ende Sources of fund =	1,2,4,5,6, 7	▪ Socialize on how to use production inputs & crop management ▪ Training on: → Crop management (maintenance, fertilizer use, pest & disease management & harvest) → Post harvest handling (sorting, fermentation, drying) ▪ Provide information on how to use new technology (example: trip irrigation, glass pruning system, etc) ▪ Provide information related to the quality standards ▪ Certify the prime–trees ▪ Initiate the cocoa farmers' association	▪ Public services ▪ Provided information to the farmer groups through radio ▪ Extension officers ▪ Demonstration plots ▪ Farmers' meeting in the field & farmer agents come in the Dishutbun office to discuss	▪ Can reach all the parts of the district potentially, even sub district offices are available ▪ On hand trained extension officers (in partnership with PT EFFEM Indonesia in Sikka only)	▪ Limited operational funds and transportation facility and for that Trained officers are not available in the field to disseminate information frequently ▪ Limited frequency of training to the extension officers and the farmers (sometimes none in a year, and if it takes place, it happens only once in a year) because of lack of fund ▪ Inadequate coordination among stakeholders on dissemination of information about inputs & farming technique that results in farmers lack of trust

	general and specific allocation funds (DAU & DAK from central government), local government (kabupaten & provincial level) funds (APBD I & II)					▪ Not so strong network, covering only 20 farmer groups in 2 sub-districts, infrequent visit to the farmers field
2.	Input Suppliers (UD. Dirgahayu, UD. Sahabat Tani, Koperasi Pama Imu, kios Dhagalahu, UD Gonsalu) Most of the input suppliers sell different types of products in a departmental store, not only agricultural inputs. In agricultural inputs also, cocoa related products are insignificant.	1, 3,	▪ Provide production inputs ▪ Provide information on how to use inputs	▪ Embedded Service ▪ Distribution to kiosk in the remote place to sell to farmers who cannot come to buy inputs in the district level ▪ But most of the farmers come to buy inputs directly from the input suppliers ▪	▪ A few of suppliers have a good network both to the companies and the kiosks / retailers, but most don't have it. They sell products and give advice only when farmers come to their shop. ▪ Interested to work for the development of Cocoa sector and Willingness to visit the farmers	▪ Lack of knowledge of the staffs on appropriate use of fertilizers, insecticides, pesticides etc. for cocoa because of lack of information support from Input Companies ▪ Lack of initiative of the staffs to increase the awareness to the farmers on the benefit of using fertilizers & other inputs at this moment ▪ Limited availability of specific types of inputs (cocoa fruits hormone and helopeltis pesticide) ▪ Inappropriate

						promotion through newspapers and radios
3.	Cooperative & credit union (Koperasi Kobekolo, Kopdit Obor Mas, Koperasi BK3D, Primkopabri, Kopdit Remaja) They work as savings union. Members save money and can get loans if needed. Cooperative also give the members training on different aspects of savings, credit, management and entrepreneurship. Some cooperatives are engaged in selling and buying of agricultural products.	1, 3, 4, 5, 6, 9, 10	▪ Saving & lending ▪ Trading & other businesses (agriculture commodities, transportation, technical assistance/training, kiosk, etc) ▪ Agribusiness credit for farmers' member ▪ Conduct / organize agribusiness training & business/ financial management	▪ Embedded service ▪ Financial service to members, farmer groups & SMEs as well as non member communities, members can get loan and dividend, but non members cannot. Non members can sell their products and save money only. ▪ Potentially can increase the number of the members in short time	▪ Licensed/accredited by the government ▪ Strong network with farmers and wide area coverage (over 30000 members for one cooperative) ▪ Simple lending procedures ▪ Yearly profit (SHU: dividend & service) for the members ▪ Several training programs on savings, credit, leadership, management, entrepreneurship for the members. ▪ Willingness to work for the farmers to solve agriculture related things, increasing knowledge about farming, new technology introduction, availability of inputs and selling of final	▪ Lack of knowledge and skills of the staffs to provide training on agribusiness ▪ Inappropriate credit scheme (lack of proper monitoring system of the utilization of money)

					product. ▪ Management is flexible to change cooperative policy for the benefit of their members and farmers	
4.	Wholesalers (UD. Nirmala, UD. Nusa Permai, Toko Fajar, CV. Fajar Timur Wholesalers trade large volume of products, buy from local traders or from farmers directly and sell to processors and exporters. The volume is on average 10 (off season) – 20 (peak season) tons per month. One wholesaler approximately has 15–20 local traders / collectors.	4,5	▪ Buying cocoa from collectors and or farmers ▪ Selling cocoa to the exporters in Ujung pandang (Makasar) – 90% , Surabaya and Jakarta ▪ Provide information about quality standard (mainly related to the moisture content)	▪ Embedded services ▪ Disseminate information through traders/ collectors who sell products to them	▪ Strong network with traders/collectors as well as exporters ▪ Good accessibility to finance ▪ The set the price in the market and farmers get price for their products accordingly ▪ Availability of moisture content tester and drying facility ▪ High accessibility to updated international price information ▪ Good transportation facility that is used to send the products for shipment and also to collect the products from distant places	▪ They focused mainly on volume of products for larger profit. ▪ They seldom take initiative to improve the product quality of the farmers ▪ Farmers don't feel they get right price from the wholesalers, although wholesalers usually give good price which is determined by world cocoa price.

5.	Local & international NGO (Yayasan Tananua, Yayasan Tani Membangun, Yayasan Pengembangan Masyarakat Flores, Plan International) Have extension worker who stay in the village and give consultancy to the farmers. Provide training on specific things twice a year for the last 5 years	1, 3, 4, 5, 6, 8, 9, 10	▪ Tananua: provide training on land & water conservation, cacao cultivation management, post harvest handling (fermentation) ▪ Tananua: provide expert for cocoa in the establishment of field school (Wolosoko & Nualise, Ende) ▪ Provide polybag for cocoa seeding ▪ Provide training on the organic fertilizers and pesticides ▪ Provide specific training & monitoring to the cocoa farmers ▪ Capacity building to the local partners on financial management ▪ Provide fund for several cocoa farmer groups to increase cocoa plantation	▪ Public benefit service ▪ Through the partnership with other NGOs, farmers & farmer groups, cooperatives, and government agencies	▪ Strong network with other parties (local & international) ▪ Trusted by stakeholders ▪ Cocoa related programs are available (for several NGO, like Tananua) ▪ Expertise on financial management & crops management are available	▪ Donor dependency on financial aspect ▪ Limited number of technical staffs ▪ Limitation on cocoa related knowledge of the technical staffs
6.	Church (Kebun misi Boanawa, Gereja MBC Watublapi, PT. Lelorala	1, 3, 4, 5, 6, 8, 9, 10	▪ Mediator between farmers and government ▪ Kebun misi:	▪ Mix services (some are fee based, some are embedded and others are public	▪ Good connection with government & the grassroots level ▪ Church is in almost	▪ There is no special staffs to address the cocoa problems for most of the churches

	Keuskupan Larantuka) Churches motivate people for better farming practice in addition to their religious message. But the information is mostly generic in nature. Some divisions of some churches are engaged in agribusiness.		production of organic fertilizers (bokasi) and sell it to the consumers ▪ As agent for multi level marketing of fertilizers ▪ PT. Lelorala: buyer, producer & processor of fermented cocoa and provide facility for fermentation and drying	benefit/voluntary services) ▪ Delivery services to the farmers and farmer groups as well as cooperatives directly.	all the districts and sub districts	(Exception: PT. Lelorala)
7.	Mass media (Flores Pos, RRI, RSPD Ende, RSPD Sikka, Sonia FM)	1, 2, 4, 5, 6, 8, 9	▪ Provide general information (news & advertisement) ▪ RRI: broadcast program irregularly related to the farmers and agriculture programs ▪ Flores Pos: provide information through the inputs' advertisements & provide price information	▪ Fee based service (Third party payment) ▪ Mechanism delivery: Can disseminate information directly to the farmers	▪ AM typed radio: Wide outreach for broadcasting information ▪ As a strong source of information especially about updated price information	▪ FM typed radio: limited outreach ▪ Newspaper: limited distribution & circulation ▪ Limited program and or news/information packet related to the agriculture issues ▪ The price of time slots is not affordable leads to limitation of agriculture related programs ▪ Information packet is not interesting for the target people

						▪ Limitation in marketing their program ▪ Lack of reliable and regular information source for agricultural programs
8.	Cocoa farmers' association	No activity yet				
9.	Agriculture Clinic (Nduaria, Ende)	No activity related cocoa	Provide agriculture information	▪ Public benefit service ▪ Visited by or visit to the farmers	▪ Potential to be duplicated to the cocoa area (by BPTP)	▪ The existing agriculture clinic is only for vegetable issues since the working area is dominated by vegetable & not suitable with cocoa
10.	Resource farmers (Thomas Siu – Nangapanda, Jhon Joka – Wolosoko, Bertholemeus ML – Nita)	1, 3, 5, 6, 7, 8, 9	Provide information related to the cocoa cropping	▪ Voluntary service ▪ Mechanism: actively provide information to the farmer group and farmers	▪ Having own field which can be an example for other farmers (demo plot) ▪ Having better skills and knowledge than other farmers ▪ Have better network / information source from government / input company / NGOs	▪ Limited outreach of the service as an individual resource farmer ▪ Information is not up to date ▪ There is no monetary incentive for his service ▪ Don't have capacity to develop market linkage for the farmers

11.	Agent farmers (Yudas Tadheus, Fattah, Salim) Multi level Marketing for organic fertilizer only	1, 3	Providing, distributing and selling the MLM products (Super ACI fertilizers) They provide information on appropriate use of fertilizer	▪ Embedded service ▪ Mechanism: provide information to the farmers and demonstrating their products on the farmer fields	Good network to cocoa farmers is available	▪ Multi level agents don't promote their products actively to the farmers and a lot of farmers are not informed about the advantages of the Super ACI fertilizers ▪ Limitation on the marketing strategy of the product
12.	BPTP (Research Agency for Agriculture Technology)	2, 7, 10	Providing agriculture technology on specific area	Public service benefit and fee based service (for soil content test)	▪ Having specific knowledge and specific solution (appropriate technology) ▪ Provide facility to soil content test ▪ Wide partnership networking with other parties, govt. planning division, agriculture extension, NGOs, farmer groups	▪ Lab for soil content test is not available in Flores ▪ Ratio of the expert staffs compare with the working area is still limited
13.	Planning Agency (BAPPEDA)		▪ Development and budget planning ▪ Area planning	▪ Public service benefit	▪ Having access to fund ▪ Accommodate program planning of crops department from priority scale	▪ Only as planning agency ▪ Budget change is not flexible

14.	Trade & Industry Department (DEPERINDAG)	4, 5, 6	▪ Balancing machine test ▪ Facilitation training on cocoa processing ▪ Inform the commodity price ▪ Registration of the private sector ▪ Facilitating access to market	▪ Public service benefit, in some cases provide fee based services ▪ Delivery mechanism: balancing machine test to trader and cooperative ▪ Inform the price and quality issues through media	Having partnership network with mass media (radio and newspaper)	▪ Inaccurate price data & information (staffs collect price information from local market once a week) ▪ Limited frequency of balancing machine test

The needs and satisfaction level of the farmers are also assessed as part of the service assessment:

Table 5: Demand side of Services

Demand Side	Services needed	Type of service and delivery mechanism
Farmers	▪ Information on cultivation techniques, farm management and post harvest handling (quality standard) ▪ Information on appropriate inputs with right application, source of suppliers ▪ Technical assistance (minimal in farmer group level) ▪ Linkage with alternative buyers for higher/consistent price ▪ Access to appropriate technology (including soil content test, pest management) ▪ Access to credit for their cocoa business ▪ Accessible demonstration plot (schooling in agriculture) ▪ Training on financial management	▪ Usually farmers prefer to get embedded or public benefit services based on specific constraints. But in some cases, they may even pay for fee based services (soil testing, other improved technologies and skill enhancement). ▪ Delivery mechanism and satisfaction: Most of the farmers are not happy with the existing (Private and public) service providers. Either they are not reaching the farmers or the quality of the services are poor and also not in time delivery. Although, farmers still prefer to receive the services from the actors with whom have most effective and regular contact, the actors who are located in nearby places

CHAPTER VII

POSSIBLE INTERVENTIONS

1. Vision

On the basis of discussion and identified constraints, the participants formulated **market vision and strategy** for Cocoa subsector in NTT. The **vision** of the Flores Cocoa subsector is:

Box 3: Market Vision and Strategy of Flores Cocoa

Small farmers continue **to improve their productivity** in the cocoa subsector with an increased availability of and awareness in good quality inputs and improved farming knowledge on cultivation practices.

Increased production of quality beans creates opportunity to enter the higher segment of market with a higher profitability. Cocoa subsector contributes significantly in the increasing of the farmers' income and generation of further employment.

To achieve the vision stated above, Swisscontact will adopt five broad strategies and undertake a number of interventions .The interventions, however, are suggested by analysing present market situation.

The consultants, in discussion with the team identified a number of interventions that are required for the development of Cocoa subsector in Flores Island.

1.1. Intervention/s under strategy 1 and 2:

1.1.1. Improving knowledge of farmers about better farming practice (appropriate dozes of inputs – fertilizers, insecticides, pesticides, fungicides, hormones etc.) for increased production

- Awareness raising activities for the demand side
- Training and capacity building of the supply side

1.1.2. Improving the soil content by promoting private soil testing services for increased productivity

- Awareness raising activities for the demand side

- Training and capacity building of the supply side

1.1.3. Improving the availability of inputs by assisting the input companies in strengthening the distribution channel

1.1.4. Introducing and promoting new technology to decrease the need to farm labor

1. 2. Intervention/s under strategy 3:

1.2.1. Promoting contract farming for improving quality of cocoa bean to access higher market segment

1.2.2. Awareness raising on the benefit of higher quality beans

1.2.3. Increase knowledge and skill on drying and fermentation

1.2.4. Linkage building with buyers of high-end markets

1. 3. Intervention/s under strategy 4:

1.3.1. Facilitate in accessing to finance

1.3.2. Improving the knowledge on financial / wealth management

1. 4. Intervention/s under strategy 5:

1.4.1. Facilitate the formation of common body and to make them capable for lobbying and advocacy

1.4.2. Improving the policy and business environment in association with appropriate market actors (Cooperatives and media can also be involved)

Since, market situation changes and market development approach is flexible in its nature, the interventions and strategies may also change in time to comply with the changes. New interventions may come up and at the same time, some proposed interventions might drop down.

2. Design of Selected intervention:

The participants, with guidance from the consultants designed one intervention to address some key constraints of the Cocoa subsector in Flores Island. This was part of the exercise and based on this experience, Swisscontact LED-NTT is expected to comprehensively design further interventions in future.

2. 1. Title of the intervention

Box 4: Title of the Intervention

Provision of and access to, affordable and recommended inputs to the farmers to ensure better farm practice (appropriate application of technology and inputs)

2. 2. Which constraint(s) the intervention will address?

1. **Constraints-1**: Lack of knowledge of farmers about the benefits of using appropriate inputs (insecticide, pesticide, fungicide, hormones) leads to poor farm management that results in lower productivity of Cocoa
2. **Constraints-2**: Lack of knowledge of Farmers about the soil content leads to inappropriate use if fertilizer that results in lower productivity.
3. **Constraints-3**: Insufficient supply of appropriate inputs (fertilizer, insecticide, pesticide, fungicide, hormone) to the smallholder farmers leads to insufficient and/or inappropriate use of inputs that results in lower productivity of Cocoa
4. **Contraints-7**: Improved policy and business environment (land registration procedure, farmer group and cooperative formation, quality standards, coordinated research & extension service) can boost the Cocoa sector growth in Flores.
5. **Contraints-9**: Insufficient amount of money leads farmers not to buy and use appropriate inputs or do further investment that results in un-optimized production.
6. **Contraints-10**: Insufficient labor force for field management leads to poor farm management that causes low productivity in farmer level.

2. 3. Related Service(s)

1. Information on cultivation management and post harvest handling (quality standard)
2. Information on production inputs, suppliers (technical assistance minimal in farmer group level)
3. Access to appropriate technology (including soil content test)
4. Access to credit for their cocoa business
5. Accessible demonstration plot
6. Training on financial management

2. 4. Design of the intervention (Draft)

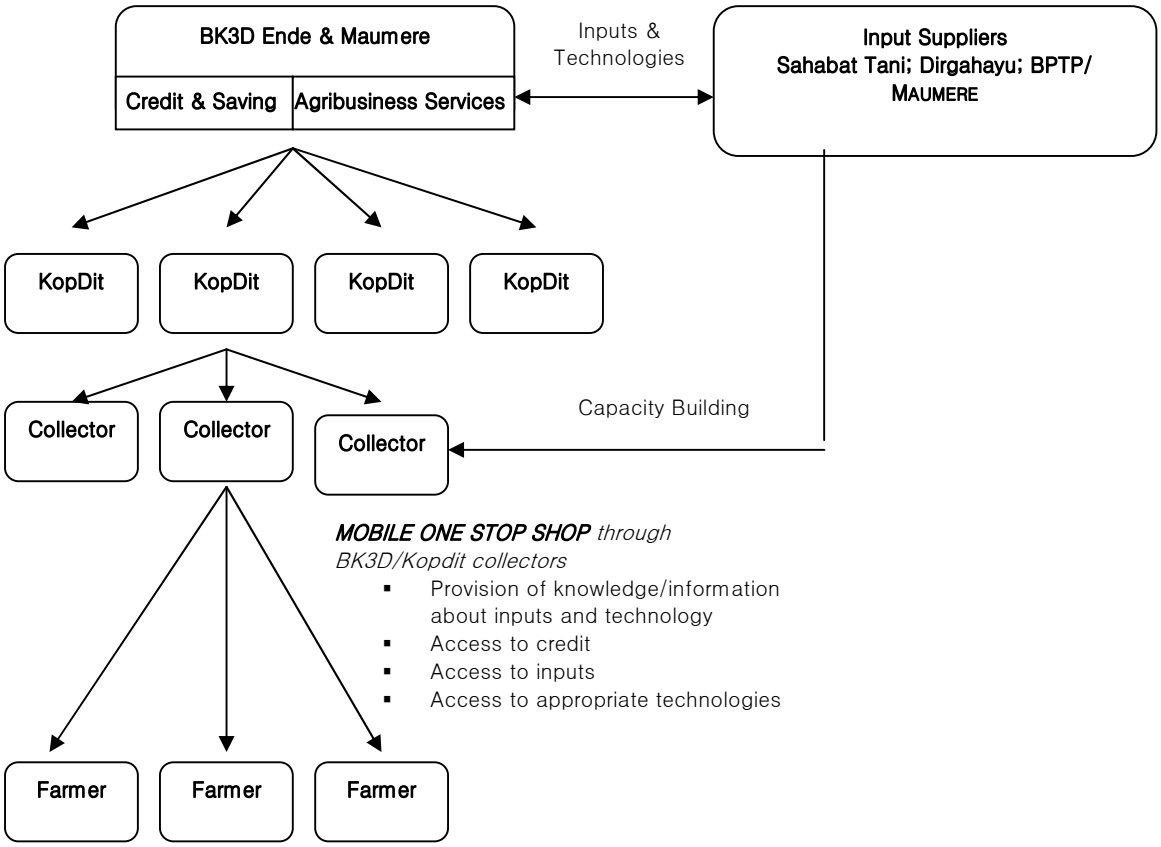

Figure 17: Flowchart Intervention Model

2. 5. Probable Intervention partner(s)

Main partner:

1. BK3D In Maumere and Ende

Supporting partners:

2. Input company – providing input supply to Input Supply in Flores
3. Input Retailers: In Ende with Sahabat Tani and In Maumere Toko Dirgahayu
4. BPTP Maumere

2. 6. Reason behind choosing the partners

The reasons to select partners for this intervention are:

2. 6.1. Saving and loan cooperatives (BK3D and Kopdit) as most potential partners for future interventions, with reason:

- Coverage area and available Kopdit in every sub-district (Ende=25, Ngada=28, and Sikka=71)
- Licensed/accredited by the government
- Strong network with farmers (collectors have contact in daily basis with farmers)
- Simple lending procedures
- Yearly profit (SHU: dividend & service) for the members
- Several training program for the members
- Willingness to have partnership with project in cocoa subsector development

2. 7.1. Input supplies are in cooperation with Toko Sahabat Tani and with Toko Dirgahayu in Maumere:

- Have a good network both to the companies and the kiosks/retailers, but some are not.
- Main fertilizers for cocoa are available
- Willingness to have partnership with project in cocoa subsector development

2. 8.1. Technologies will cooperation with BPTP by KPRI in Maumere.

- Having specific knowledge and specific solution (appropriate technology)
- Willingness to have partnership with project in cocoa subsector development

2. 7. Impact logic related to intervention

The impact logic for "Mobile One Stop Shop" through collectors of BK3D is given below:

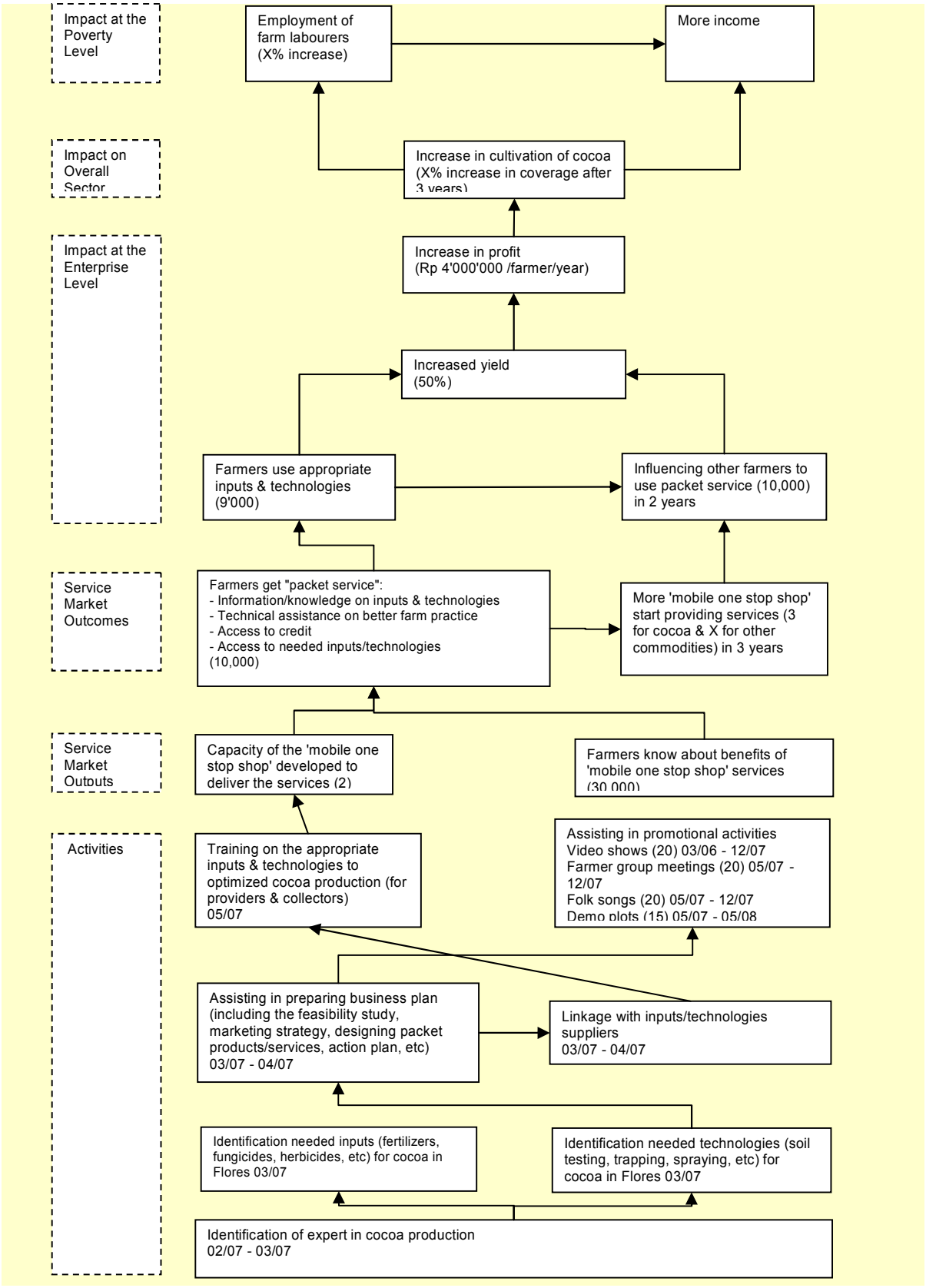

Figure 18: Impact Logic Flow chart of the Intervention

3. Location of Intervention

Location of the project is in selected sub-districts Maumere and Ende with requirements such as: Cocoa production minimum 100 ton per-years and there is Kopdit.

In Ende will cover 9 sub-district (Nangapenda, Wolowaru, Ende, Lio Timur, Kota Baru, Wewaria, Maurole, Wolojita, Ndori). Ngada will cover 3 sub-district in Ngada (Bowae, Mauponggo, Golewa), and 5 sub-districts in Maumere (Kewapante, Talibura, Bola, Mego and Nita) and Flores Timur will cover Hokeng.

4. Recommendations:

3.1 Implementation/Intervention Strategy:

- Swisscontact LED-NTT should not start working in the whole of Flores initially; it needs to identify pilot areas for work that is potential for better result. Then replication/expansion in other areas is needed.
- The project needs to identify co-facilitator / implementing partner for the areas where Swisscontact has no human resource available. Co-facilitator ideally needs experience in working in Cocoa subsector or have good knowledge about the subsector, willingness to adopt market development approach and should have required manpower. Co-facilitators might need orientation and training on market development approach by Swisscontact.
- LED-NTT may utilize the change agents for awareness building and behavioural changes of the farmers to adopt better farm practice and quality improvement. Change agents include; Church, Opinion leaders / village heads etc.
- LED-NTT needs to select **partners for intervention** that has greater outreach. The project also should try to involve different types of service providers those who have direct contact with the farmers (e.g. cooperatives, input suppliers etc.).
- Appropriate government departments (department of agricultural extension, agricultural research) and private sector participation needs to be ensured by the project. For example, government department can play a significant role in awareness campaigns; govt. experts can be utilized for trainings and providing state of the art technology in private sector interventions etc.
- Local media, credit union and farmer clinics need to be utilized in awareness building activities.
- A platform needs to be created and nurtured by the project to improve favourable policy and business environment. These stakeholders can include relevant government offices (planning, agricultural extension, research etc.), input distributor and sellers, Church, Cooperatives / Credit Union, Chamber of Commerce, media etc.

3.2 Staffs Involvement

- Staffs sometimes lack information about the market dynamics and market problems. Staffs should be more involved with the market and market actors

to get updated information about the happenings in the market. This will make them more confident for better implementation of the program.

- Internal coordination and communication need to be streamlined for smooth flow of information among the staffs. It is observed that information flow is weak and hence different and sometimes-conflicting information comes from different staffs.
- Staffs need mentoring on private sectors participation to adopt market development approach as it is observed that they still think in a conventional way.
- Should keep contacts with the consultants for helping in proper designing, deal making and better implementation of the interventions, as they still don't feel confident enough to do these under market development approach.
- If possible, staffs should be exposed to successful implementation of interventions in other areas of Indonesia or in other countries.

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Appendix