



CBI Food Ingredient survey Philippines



February 2012



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Acknowledgement

On behalf of the Royal Tropical Institute I would like to express our appreciation for being granted the opportunity of assisting the CBI by conducting this Survey on Food Ingredient Value Chains in S.E. Asia. As of February 15th 2012, we have completed all services as described in the Terms of Reference underlying this assignment. The aim of the assignment was to provide the CBI with quality and customised information upon which the centre will be able to select and support most promising value chains through an integrated regional programme on food ingredients in South East Asia.

The research was done through a multi-pronged approach, combining desk-research, expert interviews, field level value chain surveys and multi-stakeholder validation workshops at national level. The assignment has been an exploratory experience. We want to express our sincere words of appreciation to our colleague consultants who carried out the field level value chain studies Mr. Larry Ybanez and his team in the Philippines. They worked under intense time pressure and delivered results in short time-spans. We also want to express our appreciation for the workshop host: PhilExport in the Philippines.

The final report contains three sections. The first section describes the research methodology and a summary of the results of the desk study conducted. The second and main section of the report presents the results of nine value chain studies conducted in the three target countries. The last section translates the results, findings and recommendations into a consistent CBI business case.

It has been a privilege to work with the CBI and this research has also helped us understand contemporary opportunities and challenges of selected value chains, and their actors, in the this southeast Asian country.

We look forward to continuing our relationship.

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Management Summary

The Centre for Promotion of Imports from Developing Countries (CBI) has the intention to further support the food ingredient sector in a selected number of South East Asian countries through targeted CBI support programmes. Tentatively these support programmes will focus at the Philippines.

In order to maximise the chance on success of intended country programmes in terms of impacting export volumes and overall turnover, the CBI has contracted the Sustainable Economic Development (SED) department of the Royal Tropical Institute (KIT) to lead the conduction of elaborated sector analysis. The analysis include comprehensive analysis of selected value chains that led into recommendations for possible intervention areas matching CBI's core fields of expertise and services. The fieldwork was conducted in November 2011 and was finalised through in-country validation workshops organised early December 2011. Major findings and recommendations of the survey were captured in a CBI business Case that is forwarded to the CBI Board for their consideration and approval.

As a result of the external analysis conducted, the CBI will be able to target most promising value chains through integrated country programmes. The selection will be based on; (1) opportunities to unleash export potential based on current figures and future trends in the market, (2) the ability of CBI to tackle bottlenecks in the export value chain, (3) the demand for CBI products by value chain actors and (4) the possible significant contribution of the programme to sustainable economic development.

The international market for food ingredients is growing and at the same time becoming increasingly demanding and competitive, particularly when looking at EU import markets. SMEs in targeted country are at risk of not being able to step up against increasing demands and compliance requirements. This would result in losing part of their current market share thus not being able to contribute to sustainable economic development in the agricultural sector. In order to stay competitive, particularly against bigger market players, SMEs in the food ingredient sector have to step up their efforts to effectively coordinate and align trans-actions in the value chain and enhance their own functioning and performance. They will not be able to do this at own force but will require external support and assistance in doing so.

Based on analysis done (desk studies, value chain assessments, validation conferences) this business case proposes the funding of an **integrated, regional programme on food ingredients in S.E. Asia**, focusing on the following sub-sectors:

Pilot programmes (market orientation / training / limited MI assistance):

- Processed fruits in the Philippines¹
- Oils and fats: coco oil in Philippines

For all studied export value chain, various bottlenecks that hamper the efficient chain performance were found all along the chain with a concentration at production and supply level. Most government programmes, as well as donor supported programmes, in the targeted sub-sectors, address constraints in the production part of the value chains and work directly with producers and producer

¹ Pilot programme including basic training programmes (Business Planning and Development, MI modules)

groups. The CBI adds value to these efforts by bringing in a complementary pull factor through working with processors - exporters at the upper part of the chain on the facilitation of export linkages and increasing export volumes.

The business case implies the implementation of integrated programmes, conditioning CBI's engagement in the sub-sectors to the opportunities for alignment with programmes/projects addressing constraints faced by downward chain actors. Partners can include national as well as inter-national agencies. Key CBI partners for the core sub-sectors are:

Cacao, coffee, tea: UTZ certification, Rain Forest Alliance, Solidaridad, Tropical Commodity Coalition,
Spices and herbs: UNCTAD, IDH, Fair Trade.

For both targeted sub-sectors, the EU market are moving towards an increasing demand for certified sustainable products. Social and labour criteria are increasingly added (Fair Trade certification). Another emerging market trend in the coffee and tea sub-sectors, is an increasing product diversification, feeding the demand for specialty coffee and tea (pers. comm. importer).

The proposed programme takes the above market trends as starting point. In terms of market segmentation the programme will focus on specialised product-market combinations, targeting specialty (niche-) markets rather than targeting (bulk oriented) commodity markets. Distinct product features and/or qualities can be obtained through certification (organic, Fair Trade, UTZ, RF Alliance) and/or intrinsic quality features (taste, appearance, functional qualities like health benefits). Quality enhancement and traceability will be key elements in moving towards certified sustainable products.

For the selected chains one or two geographical target areas are defined per country, allowing for concentrated, effective and well aligned programme implementation, including provision of CBI modules. Tentatively the selected focus areas are: Davao (coco oil, fruits) in the Philippines.

A detailed programme planning will have to be further elaborated per sub-sector and country but would include i) export coaching to targeted exporters (initiated with approximately 70 enterprises), ii) Market Intelligence and iii) Strengthening of Business Support (4 BSOD trajectories) and iv) facilitation of Public-Private-Partnerships at the level of defined target areas.

Programme title	Regional Programme " Export Development Food Ingredients Value Chains of S.E. Asia "
Expected Outcome	Increase EU export volumes for 4 selected sub-sectors by an average 30% with an approximately annual value of 8 million Euros by 2015. ² Direct outputs:

² Given estimates of percentage and total value of expected increase in export are based upon earlier experiences in the food ingredients sector and results of conducted value chain surveys. Final figures will depend on number of companies participating, average size (export volume, turn-over) at intake and price development / inflation (see annex 6).

	<ul style="list-style-type: none"> - A minimum of 10 SMEs increase export to EU - Another 20 SMEs strengthened in business planning & business performance - 4 BSO have the capacity to support SME in EU export trajectories - 4 -6 private sector led commodity association render customised market intelligence to members - 4 informal multi-stakeholder coordination mechanisms render aligned support to the targeted sub-sectors <p>Indirect outputs:</p> <ul style="list-style-type: none"> - SMEs have access to service providers (certification bodies, financial services etc.) - At least two new institutional CBI partnerships established / piloted (UNCTAD, IDH, and others)
Country(s) of Implementation	Philippines
Sector(s) of Implementation	<p>Food ingredients:</p> <ol style="list-style-type: none"> 1)) 2) Processed fruits (Philippines,) 3) Oils and fats (coconut oil, Philippines)
Major Stakeholders	<p>Direct stakeholders: Selected SME level processors / exporters, BSOs (PhilExport, a.o.), Commodity based private sector associations / federations</p> <p>In-direct stakeholders: related government agencies (focussing on sub-national level), banks, research institutes</p> <p>Partners: Development organisations and programmes active in the targeted sub-sectors: UNCTAD, HDI, Embassies, INGOs, bi-laterals</p>



Abbreviations or term of

ACBI	Association of Coconut Brokers Inc.
AFIME	Association of Food Industries Manufacturers & Exporters
Exporters	
Armajaro	US Importer company
APCD	Association of Philippine Coconut Desicators
ARMM	Autonomous Region of Muslim Mindanao
BA	Bureau of Agricultural Statistics
BFAD	Bureau of Food And Drugs
BIR	Bureau of Internal Revenue
BOC	Bureau of Customs
BOI	Board of Investments
BSO	Business Support Organization
BSP	Banko Sentral ng Pilipinas (or Central Bank of the Philippines)
CAR	Cordillera Administrative Region
CAPE	Consultancy for Agricultural Products Enhancement
CDA	Cooperative Development Agency
CNO	Crude Coco Nut Oil
COCOFED	Philippine Coconut Producers Federation
CORA	Coconut Oil Refiners Association
CSR	Corporate Social Responsibility
Dana Bergulir	Funds granted and returned for selected receivers in a certain period
DisHutbun	Government Organization of Forestry
DiskopUKM	Government Organization of SMEC
DA	Department of Agriculture (Philippines)
DBP	Development Bank of the Philippines
DENR	Department of Environment and Natural Resources
DENR-EMB	Dept of Environment and Natural Resources – Environmental Management Bureau
DOE	Department of Energy
DOH	Department of Health
DOLE	Department of Labor & Employment
DOST	Department of Science and Technology
DOST-ITDI	Department of Science and Technology – Industrial Technology Development Institute
DTI	Department of Trade and Industry
DTI-RODG	Dept of Trade and Industry – Regional Operations Development Group
DTI-PITC	Dept of Trade & Industry – Philippine International Trading Corp.
ECC	Environmental Compliance Certificate
EPP	Export Pathway Program

ETP	Ethical Tea Partnership
FDA	Food and Drugs Administration (formerly BFAD)
FFJ	Fermented Fruit Juice
GAP	Good Agricultural Practices
GMP	Good Manufacturing Practices
HACCP	Hazard Analysis Critical Control Points
HVCC	High Value Commercial Crops
HCC	Horti Chain Centre
LBP	Land Bank of the Philippines
LGU	Local Government Units
MAO	Municipal Agriculturist Office
MPEX	Manufacturing Productivity Extension Program
MT	Metric Ton
NCR	National Capital Region
NICCEP	National Industry Cluster Capacity Enhancement Program
PAO	Provincial Agriculturist Office
PCA	Philippine Coconut Authority
PCOPA	Philippine Coconut Oil Producers Association
PCRDF	Philippine Coconut Research and Development Foundation, Inc.
PHILEXPORT or PEX	Philippine Exporters Confederation, Inc.
PHILFOODEX	Phil. Food Processors and Exporters Org., Inc.
PHP	Philippine Pesos
PNS / BAFPS	Philippines National Standards / Bureau of Agriculture and Fisheries Product Standards
POMA	Philippine Oleochemical Manufacturers Association
Q Grader	Person who can value the taste of a certain product
RBD	Refined Bleached Deodorized
RFU	Regional Field Unit
ROI	Return of Investment
SMEC	Small Medium Enterprise and Cooperatives
SET-UP	Program - Small Enterprise Technology Upgrading Program
TESDA	Technical Education and Skills Development Authority
TEU	Twenty Equivalent Units
TSP	Technical Support Program
UCAP	United Coconut Associations of the Philippines, Inc.
UCPB	United Coconut Planters Bank
UNPAS	Universitas Pasundan (Pasundan University)
UPLB	University of the Philippines Los Banos
USAID – GEM	United States Agency for International Development – Growth with Equity in Mindanao
VC	Value Chain
VCO	Virgin Coconut Oil
PVCOTA	Philippines – Virgin Coconut Oil Producers and Traders Association of the Philippines
VISCA	Visayas State College of Agriculture
VECO	Vredes Eilanden, Belgium INGO active in rural development

1. Prioritisation of sub-sectors

1.1. Introduction

Starting point for the study were the 10 food ingredient sub-sectors listed by the CBI:

- Fruits (dried fruit, pulps, puree, juices, concentrates, jams etc.)
- Vegetables (preserved, pastes, stir-fry kits etc.)
- Edible nuts (oils, butter etc.)
- Grains, pulses and seeds (cereals, oils etc.)
- Herbs and spices (sauces, oils, oleoresins)
- Coffee, tea and cocoa (green beans, powder, paste, liquor, butter)
- Honey (wax, pollen, royal jelly, etc.)
- (Cane) sugar and syrups
- Oils and fats (coconut, palm oil etc.)
- Essential oils, oleoresins, plant extracts, natural food colours,

The term food ingredients can be confusing. During the course of the study and in the report the following classification is used as guideline:

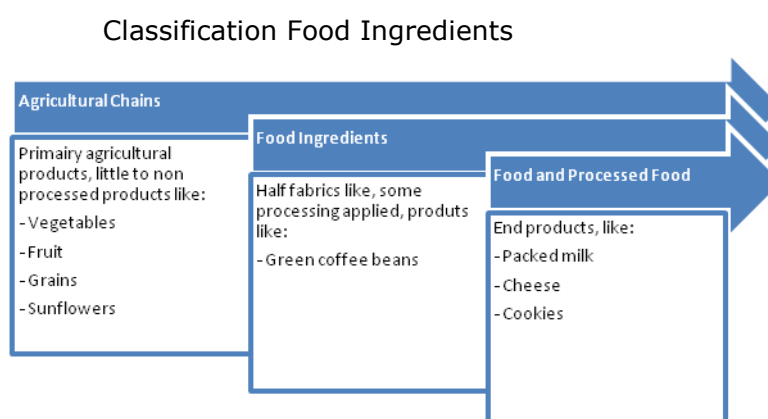


Figure 1 Classification of food ingredients by the CBI

In literature and in main data sources export and import data and figures are mostly provided at commodity level (primary, half-processed produce) and final processing purpose and/or destination is hardly mentioned. We therefore, refer in the report to major commodities, coffee, tea, cashew, palm oil etc. without specifying or distinguishing the type or category of end-products these products will be used in.

1.2. Methodology and Approach

The research was carried out in a sequence of connected phases:

- Desk study and short-listing sub-sectors per target country
- Field Work / data collection of 3 selected value chain per target country
- In-country multi-stakeholder workshops validation workshops

1.2.1. Desk-study

The desk study included a comparative country level assessment followed by sub-sector analysis of the 10 initially listed sub-sectors that led to the short-listing of 3-5 priority sub-sectors per country. The justification and prioritisation made was thereafter discussed with internal CBI and external experts. The long list of the 10 initial sub-sectors is given in annex 1 to this report.

In the comparative country analysis the following parameters were included:

- i) **Overall export figures** and competitiveness of the agricultural sector, its importance to the national economy and its contribution to overall EU27 imports
- ii) The enabling **trade environment**
- iii) Engagement of **SMEs and smallholders**

The indicators mapped provide a comparative analysis at national level of the suitability and potential impact of a support programmes focusing on the export oriented agricultural sector. The results of the country level comparative assessment is given in annex 2.

Thereafter, we zoomed in on the food ingredients sub-sectors as listed by the CBI. The justification for the short-listing of three target sub-sector per country is based upon a mixture of quantitative data and qualitative judgments of the features of the sub-sector per country.

For 3 specific features of the sub-sectors indicators were defined that are found crucial in the prioritisation of sub-sectors.

- i) **Overall economic value and export potential of the sub-sector**, providing an indication of the potential economic scale, outreach and leverage of CBI interventions in the sub-sector
- ii) **Sustainability**, providing an indication of the sustainability dimensions (socio-economic and environmental) of the sub-sector
- iii) **Local economic potential**, providing an indication of the potential for generating economic growth at local levels (involvement of SME's, smallholders)

Per distinguished category, quantitative (if available / accessible) and qualitative indicators are defined that provide indications about the performance of the sub-sector against the defined feature. The indicators per category are:

- 1) Economic value and export potential
 - i) Total export (global)
 - ii) Volume of export to EU (and market trend)
 - iii) Export volume as percentage of overall import of concerned produce to EU³
 - iv) Trends in prices
- 2) Sustainability
 - i) Sustainability (accreditation schemes)
- 3) Local leverage
 - i) Number of smallholders involved (in case no data qualitative indications are used)

³ Percentage of EU imports from single country as against total imports to EU together with trend in volume imported from the concerned country provide an indication of the competitiveness of the sub-sector regarding EU import markets.

- ii) SMEs involved (again if no data qualitative indications are provided)
- iii) Potential for local or in-country value adding (qualitative indications)

In the final decision making about prioritisation of sub-sectors per country, the first category; “*overall economic value and import potential*”, is leading. This means that, after having mapped the indicators reflecting the economic importance of the sub-sector and its EU27 export potential (category i) indicators), we have made a short list of 3-5 prioritised sub-sectors per country. Further analysis on the other two categories (sustainability, local economic potential / leverage) was carried out extensively for the short-listed sub-sectors.

The results of the assessment and justification for the prioritisation of three sub-sectors per country is given in annex 3.⁴ A summary of the overall results of the desk-study is provided in chapter one of this report.

1.2.2. Field level value chain analysis

For the field level value chain surveys local consultants were recruited. The surveys consisted out of closed and open interviews.

The value chain approach was leading in the field surveys, mapping value chain actors, their relations, product-, financial- and information flows. Conducted value chain analysis include the identification of constraints in the functioning and performance of the concerned value chain. Although the focus of the survey was on direct chain actors, particularly targeting SME level enterprises (processors / exporters), also chain supporters and influencers like related government agencies (agriculture, trade and investment etc.), commodity based associations, research institutes and other relevant stakeholders were interviewed.

The gathered information and analysis, derived conclusions and recommendations from the value chain analysis form the core part of this report and are described in part two of this report.

1.2.3. Validation conferences

Three national level conferences were organised in Cebu City, The Philippines. The conferences were important events in the overall survey’s process aiming at sharing, validating and extrapolating the outcomes and results of field-level surveys and linking validated result to potential CBI propositions.

Objectives of the Conferences

- Share, discuss and validate the major results and findings of the value chain surveys conducted with the participants.
- Participants know what are and agree upon the bottlenecks within the relevant sub-sector;
- Consensus among the stakeholders what can be done to solve the bottlenecks and optimise export of (sustainable) products within the relevant sub-sector;
- Link the proposition of the CBI in terms of support services with the identified opportunities and constraints in a demand driven, context specific and responsive way.
- Provide specific and quantitative inputs to feed the formulation of a business case regarding CBI support to the food ingredients sector in SE Asia.

In the Philippines a total of 50 participants engaged in discussion and validation of results.

⁴ Not for all sub-sectors data were found against mentioned parameters.

During the workshop it was also tried to get feed-back from participants on their needs and preferences in terms of training and coaching services (modules) the CBI could potentially offer in the framework of a future programme on food ingredients. Responses were however scattered and cannot be regarded as representative indications.

The initial ambition to extrapolate the results of the individual value chain analysis to the broader sub-sector during the workshops did not materialise. As a result the extrapolation of the results of individual chains to aggregated levels is not included in the findings, conclusions or recommendations.

1.2.4. Final recommendations

In order to move from the results of the 9 different value chain studies to a comparative analysis that can feed the decision making of CBI in terms of future investments (or not) in the food ingredient sector in SE Asia, it was tried to again judge and rank the results of the value chain studies according to the same set of criteria used in the initial short-listing:

1) Economic value and export potential

- v) Total export (global)
- vi) Volume of export to EU (and market trend)
- vii) Trends in prices

2) Sustainability

- ii) Sustainability (environmental and social accreditation schemes)

3) Local leverage

- iv) Number of smallholders involved
- v) SMEs involved
- vi) Potential for local or in-country value adding

Moreover, the additionality of the CBI interventions is judged as a fourth dimension for judgment

4) Additionality of CBI interventions:

- i) Potential partnerships
- ii) Availability of local BSOs
- iii) Attribution CBI interventions

For the ranking quantitative judgments are provided to each of the mentioned categories as follows:

1 = low; 2 = moderate; 3 = good / high.

In the total score the judgment for category 1, *economic value and export potential* is given higher importance by doubling the score.

The final scores are the backing the decisions as captured in the recommendations and business case provided in chapter 3 to this report.

Value chain - Country

<i>Criteria</i>	<i>indication</i>	<i>comments</i>	<i>Judgment (1to 3)</i>
Potential EU export			(x 2)
Sustainability			
Local leverage			
Presence of			

SMEs			
Partnerships			
BSOs			
Attribution			
Other issues			No score

End score: (max 8 X 3 = 24, minimum 8 X 1 = 8)

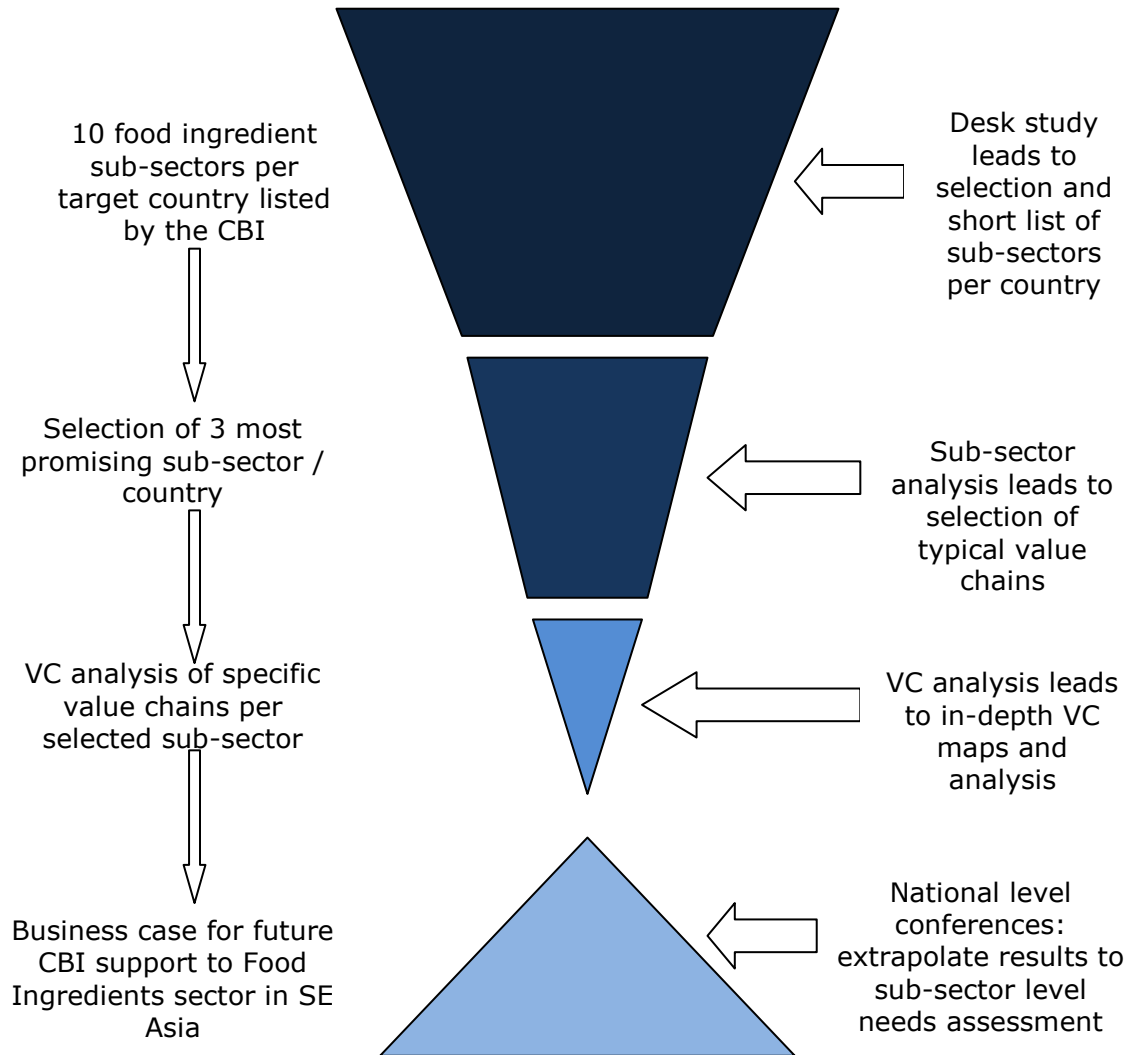


Table 1 Validation process

1.3. Rationale for CBI support to the Food Ingredient sector in S.E. Asia

There is an increasing consensus about the importance of private sector development in fostering sustainable economic development. For targeted country the Philippines, SMEs are the motor of the economy and of utmost importance in the generation of employment, local value adding and as a resilience factor in economic downfalls. The Philippines is an important EU sourcing destination for agricultural products as shown in table 1 below.

<i>Global ranking (based on value imports in Euro)</i>	<i>Total import to EU27</i>	<i>Import agricultural products to EU27</i>
Philippines	# 41	# 34

Table 2 Global ranking EU27 imports (EuroStat, 2011)

Philippines is listed as recommended target country for the CBI Export Development Programme (feasibility study EDP, 2005).

1.3.1. Rationale for CBI support to the agricultural sector

For targeted country the agricultural sector is still of major importance in both aspects, its contribution to the overall economy and GDP, as well as regarding its importance in securing livelihoods. The agricultural sector is also still by far the largest provider of employment opportunities in the country (WB, country reports 2010).

The agricultural sector in the Philippines appears to be less competitive in the International market arena. Limited arable land and fertility and a still unfinished process of land reform, relative higher labour costs, limited investment by the government and not at least climatic disasters, have put the Philippines back in terms of international competitiveness of its agricultural sector.

The Philippines is characterised by high percentages of smallholder farmers. In the Philippines (traditionally) big land holdings / commercial estates are common. Large commercial estates are increasingly competing for resources (land, water) but also for market shares, with smallholder farmers.

SMEs are the motor of the economy and of utmost importance in the generation of employment, local value adding and as a resilience factor in economic downfalls. Micro, small and medium enterprises are being heralded as the backbone of the Philippine economy. They comprise about 99.6% of all registered firms in the country and employ 69.9 percent of the country's total labour force.

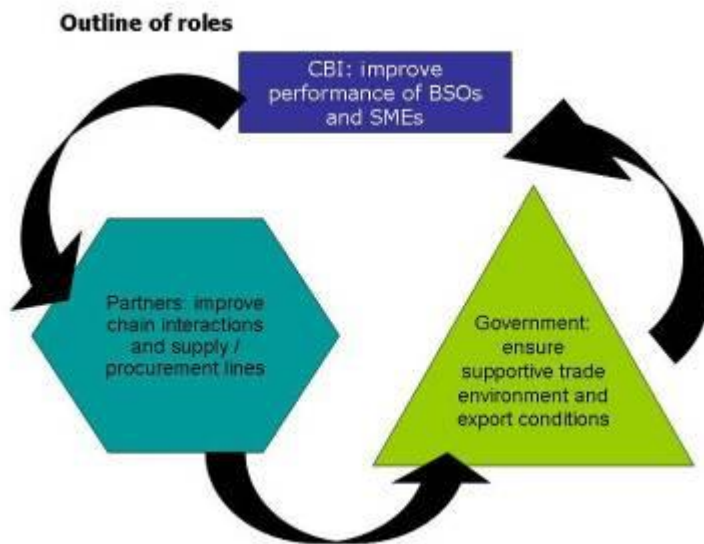
			Philippines
Total agricultural export to EU27 in million US \$			776
Annual growth overall export to EU27 in % (2005-2010)			-6,4
Agriculture as percentage of overall export to EU27			14,4
Agriculture as percentage of GDP			11,3

Table 3 EU Export figures/overall economic importance of the agric. sector (EuroStat, 2011)

1.3.2. Rationale for CBI support to the Food Ingredients sector

The international food ingredients sector is growing and at the same time becoming increasingly demanding and competitive, particularly when looking at EU import markets. SMEs in targeted country are at risk not being able to step up against increasing demands and compliance requirements. This would mean that they would lose part of their current market share which would hamper sustainable economic growth and its contribution to sustaining and improving livelihoods. Targeted support is required to keep the sector competitive. Such support should cover the entire value chain from producers to exporters as it is the functioning and performance of the entire chain that determines competitiveness.

For this reason an integrated approach is required in which CBI aligns support to its core actors (exporters, BSOs etc.) in the value chain with the support other organisations render to other actors (producers, financial institutes etc.) in the same chain. The opportunities for such complementarities are present in the studied sub-sectors.



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Figure 2 Outline of roles

1.3.3. Sustainability dimensions

Amongst the long-listed sub-sectors some are 'cleaner' and others more contaminating or polluting in environmental terms. Also the characteristics of production models in some sub-sectors are more disruptive in terms of environmental sustainability than others (resins in the Philippines). But it is exactly in the most polluting sectors that most gains can be achieved through the introduction of more environmentally friendly production systems.

For this reason this study accepted the presence and level of application of accreditation schemes focusing on environmental and social sustainability as lead indicator for sustainability of the chain. The accreditation through such schemes assures concrete and tangible gains in terms of sustainability.

External certification schemes regulating and assuring socio-economic (Fair Trade) and/or environmental sustainability (organic, UTZ certification, Rain Forest Alliance) are typically applied for the major commercial commodities (coffee, cacao, bananas) or at the complete other end of the spectrum, at the level of niche products (essential oils, honey, herbs).

Also sector-led (private certification) schemes are typically developed for major commercial commodities (palm oil, coffee). Some private sector initiatives are responding to the negative publicity in press and negative public perception of the sector like the Round Table on Sustainable Palm Oil.

It is however important to realise that for all types of certification schemes described, the percentage of certified produce as against overall production and traded volumes is (still) limited in the Philippines. This counts overall for certified products. Illustrative is that for coffee the most prominent crop amongst the certified commodities, exports of organic coffee in 2008 are estimated at just over 1.6 million bags of which 41 % went to Europe (or 0,64 million bags) as against of a total of almost 50 million bags of EU imports of coffee. Similarly, a 2010 study by ITC puts 2009 organic coffee imports at around 1.7 million bags or not quite 1.4% of the 126 million bags of 2009 world gross imports.

Label		Philippines	
Organic		Vegetables & fruits (banana, mango, papaya), essential oils, herbs, coffee, honey, jams and juices, species and herbs, nuts, coco oils	
Fair Trade (FLO certified)		Rice, fruits & vegetables, essential oils, herbs, sugar cane, jams and juices	
National "green" certification schemes / IPM			
Sector driven schemes - IDH ⁵ , RSPO			
UTZ Certified			
Rain Forest Alliance		Banana, pineapple	

Table 4 Certification Schemes per country and sub-sector/commodity

1.4. Ranking and prioritisation of sub-sectors

Based on the desk research an initial prioritisation of three sub-sectors per country was made. The initial choice was based on quantitative figures combined with qualitative rankings. In order to validate and check assumptions the tentative prioritisation and reasoning behind was discussed with CBI experts and in-country experts. In some cases these consultation rounds did result in changes in terms of prioritisation of sub-sectors. It is important to note that the ranking of sub-sector is an arbitrary judgment and has a relative value only.

⁵ IDH does not accredit sustainability but promotes existing certification schemes according to preferences of participating enterprises.

In order to compare the different sectors and justify prioritisation we weighed the different categories of indicators according to their importance to the CBI. Economic potential and export volumes are the leading indicator group, and we assigned a comparative weight of 60% to this category. Sustainability (the potential for an improvement / increase in sustainability features) and the potential for local economic development are the two other categories which we weight equally at 20% each. (annex 3)

This qualitative judgment was complemented with comments and suggestions from CBI experts and in-country resource persons approached, including the selected national consultants.

Qualitative ranking of sub-sectors

Sub-sector	End score⁶	Rank	Judgment experts CBI	Judgment in-country partners
Philippines				
Oils and fats	8,2	1	No comments	
Processed fruits	7,2	2	No comments	
Gums and resins	6,2	3	No comments	
Edible nuts	6,8	4	No comments	
Processed vegetables	5,8	5	No comments	
Sugar (cane) syrups	4	8		
Coffee, tea, cocoa	4	9	Not interesting as not competitive on world market	
Pulses, grains	4	7		
Essential oils	4,4	6		
Honey	3,2	10		

Table 5 Qualitative ranking of sub-sectors

⁶ Based on qualitative ranking of sub-sectors per country as provided in annex 3

1.5. Final selection of sub-sectors per country

In the final selection of sub-sectors, the expert consultation led to a shift away from some of the economically dominant sub-sectors. Reasoning was found in a combination of arguments related to the nature of the concerned sub-sector: i) sub-sector is dominated by merely large players with little room for SMEs and ii) sub-sector with little scope for in-country value adding or leverage to local economic development iii) sub-sector has a reputation for sub-optimal governance (human rights, un-fair labour conditions) and/or as a source of pollution.

Moreover, interfering in commodity markets goes beyond the mandate and aspirations of the CBI.

Philippines: Selected food ingredients export chains

Product	Import value in \$US to EU 27	% of total import to EU 27 from the world (\$US)	Comments
Coconut oil SITC 4223	\$505,528,013	77% \$658,006,023	
Fruit, preserved and fruit preparations (SITC053)	\$62,057,354	0,1% \$4,809,868,655	Banana, (particularly banana chips), mango and pineapple
Fruit & vegetable juices, unfermented (SITC0535)	\$9,033,332	0.4 % \$2,208,811,185	\$8,046,272 Pineapple juice

Table 6 Import value per sub-sectors

Source: Comtrade UN, data 2010 <http://comtrade.un.org/db/dqQuickQuery.aspx>

After prioritising sub-sectors the final selection of value chains to be studied was taken in close consultation with the local consultant(s). This led occasionally to changes (dried mango instead of juices in the Philippines etc.).

This resulted in the following choices in terms of value chains targeted during the field level value chain analysis.

Philippines:

1. Sub-sector oils and fats, with the recommendation to target the coco oil value chain as field level study case.
2. Sub-sector fruits and vegetables with the recommendation to target the processed fruits value chain (dried banana chips) and dried mango value chain as field level study cases.

1.6. Limitation of the methodology and discussion

Limitations

The followed sequence of methodological steps did result in some constraints in terms of planning. For one, the time-frame was very short. In the end this resulted in the field level surveys being carried out in extreme short time spans. This clearly affected the completeness and depth of the value chain analysis, thus final results as captured in this report.

Secondly, the number of sources used varied broadly and did provide us with non-matching and sometimes even conflicting information and data. At the level of personal interviews, personal views, preferences and interest did sometimes colour the information provided. Structural cross-checking was however not carried out.

Thirdly, this was the first collaboration between the KIT and the CBI of this kind, during which both sides had to learn and adjust. The foreseen extrapolation of specific value chain analysis to sub-sector level turned out to be too much to ask for during the workshops and was pursued in the end.

Framing the results & recommendations

The sub-sector analysis and derived ranking and prioritisation is arbitrary and has a relative value only. Contextual factor play a role in determining the outcomes of future investments in the sub-sectors and value chains at various levels: international / global, national and local.

External conditions that cannot be predicted or foreseen, including economic developments at global and or national levels and not the least, climatic conditions and the occurrence of climate related disasters, will in reality strongly influence the success factor of any investment in any country or sub-sector. Also the specific local context and enabling environment will influence the potential for export growth and the success of any effort to nurture exports.

Predictions and expectations on export increases and expected return on investments, should, although justified by quantitative figures and/or qualitative judgments, not be over-valued and be seen as what they are; predictions rather than forecasts.

The strategic focus of the CBI to give priority to commercially most prominent sub-sectors, instead of for example prioritising sub-sectors having less economic importance but being frontrunners in terms of sustainability or leveraging local economic development, has led the researchers automatically to the most evident commodities. Would the CBI let go its focus on volume and overall economic turn-over and instead focus more stringently on for example, sustainability, a complete different ranking would have occurred.

The prioritised commodity based sub-sectors do however have segmented markets too. In this sense, the recommendation regarding CBI investments point towards high-end, specialty market segments, looking for promising product - EU market combinations.



Value Chain Analysis

2. Philippines

2.1 Introduction

Coco-oil is by far the most prominent value chain of the three in terms of overall volume and value. However, while the banana chips and dried mango sector are typical SME based sub-sectors the coco-subsector is dominated by larger exporters and bulk, low added value export produce. The processed fruit sub-sector is characterised by a few big international players (canned pineapple) and scattered small to medium size enterprises engaging in among other dried bananas and mangos.

Region	BANANA CHIP COMPANIES (As per DTI)	COCO-OIL COMPANIES (As per PCA)	DRIED MANGOES COMPANIES (As per DTI)
TOTAL	80	76	35

Table 7 Number of companies per sub-sectors

Product	Import value in \$US to EU 27	% of total import to EU 27 from the world (\$US)	Comment
Coconut oil SITC 4223	\$505,528,013	77% \$658,006,023	
Fruit, preserved and fruit preparations (SITC053)	\$62,057,354	0,1% \$4,809,868,655	Banana, (particularly banana chips), mango and pineapple
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Table 8 Import Value to EU27

Trends in EU export figures

Year	2008	2009	2010	Notes
Coco	659,798,780	401,643,956	970,452,784	Quantity and Value of Agricultural Exports: 2007- 2010 [Quantity in kilogram; FOB Values in US Dollars]
Dried mango	7,478,246	8,824,338	28,617,472	
Banana chips	49,126,329	35,464,939	40,274,066	

Table 9 Imports trends to the EU

While exports to the EU for coco and dried mango have grown substantially, the exports of banana chips are at a more stable level.

Base line figures

	Coco oil	Banana	Dried Mango
Current production area		449442.9 Ha of banana plantation	
Current export volume	1 056 035 059 (kg)	28,084,566	3,619,962
Current export value (estimates 2010)	970452784 (FOB)\$	40,274,066	28,617,472
Growth export value (2001/2010)			
Number of SMEs active in the chain (estimate)	80	76	35
Percentage of export market share by combined SME sector	15%	Merely SMEs	Merely SMEs

Table 10 Baseline figures Philippines

Potential partners

	Coco oil	Banana chips	Dried Mango
Business Support			
Export trade support offices	UPAC and member organisations	Philfoodex	
Services rendered by those offices (vision, mandate, portfolio of services)	Primary purposes to unite all elements of the coconut industry and work for their common good; (b) promote harmonious coordination among the various sectors of the industry for the common benefit of the producing, trading, processing and consuming public; (c) to inculcate and preserve high standards of honour and integrity among its members and to promote just and equitable principles and practices of trade; (d) to serve as a centre of information about the coconut and related subjects; and (e) to provide a forum for discussion of problems, issues affecting the coconut industry and/or any of its sectors..	<p>Trainings and Seminars – PHILFOODEX conducts trainings and seminars aimed at improving, enhancing productivity and marketing/promotion, among others</p> <p>Business matching – PHILFOODEX assists members in securing better strategic raw materials and supplies from local or international sources</p> <p>Fairs and promotions – PHILFOODEX actively participates in local and international trade fairs, missions and expositions to promote Philippine food products.</p> <p>Policy Research and Advocacy – PHILFOODEX advocates export-oriented government policies and</p>	<p>Trainings and Seminars – PHILFOODEX conducts trainings and seminars aimed at improving, enhancing productivity and marketing/promotion, among others</p> <p>Business matching – PHILFOODEX assists members in securing better strategic raw materials and supplies from local or international sources</p> <p>Fairs and promotions – PHILFOODEX actively participates in local and international trade fairs, missions and expositions to promote Philippine food products.</p> <p>Policy Research and Advocacy – PHILFOODEX advocates export-oriented government policies and</p>

		closely coordinates with both government and other private institutions towards this end.	closely coordinates with both government and other private institutions towards this end.
Potential partners			
Other sub-sector / chain support organisations and projects / programmes	Certification: TUV-Rheinland and SGS Philippines: certifying bodies operating in the country. Government: promotion of sustainable agriculture, sustainable procurement. Davao Phil export Mindanao export		
Intervention level, scope and activities of those support projects	Certification standards include GMP/HACCP/HALAL/Kosher Export promotion, market information, trainings – they could be recipient of trainings as well.	Certification standards include GMP/HACCP/HALAL/Kosher Export promotion, market information, trainings – they could be recipient of trainings as well.	Certification standards include GMP/HACCP/HALAL/Kosher Export promotion, market information, trainings – they could be recipient of trainings as well.
Opportunities for synergy with future CBI export promotion programme	Market linkage, support to producers in sustainable production Capacity building for UPAC in international trading and promotion	Capacity building for international trading and promotion	Capacity building for international trading and promotion

Table 11 Potential partners Philippines

The coco-sector by far the most prominent and established export sector of all three and attracts many support programmes and development partners. On the contrary, the processed fruit sector is not supported intensively by external organisations.

Coconut Oil Philippines



1.3. Coconut oil - Philippines

1.3.1. Economic importance - Baseline

Coco oil is by far the most important food sector in the Philippines in terms of volumes but also revenues. The biggest importer in EU are The Netherlands and imports have been constantly increasing the in the past 5 years. The Philippines export about 80% of their coconut oil output. Most farmers are linked to the coconut industries and do not cultivate much more that 5 ha. Mindanao accounts for 60% of the production of coconuts and industries seems to be based in Calabarzon.

The number of coconut farmers for the last five years has remained the same as of to date at 3.5 M coconut farmers and farm workers across the country.

Volume of Production (2005 – 2010)

Year	Volume of Prod (Nut Terms, MT)
2005	14,824,585
2006	14,957,910
2007	14,852,927
2008	15,319,527
2009	15,667,566
2010	15,540,142

Table 12 Volume of production Nuts MT (2005-2010)

Year	Projected Vol. Of Prod (Nut Terms, MT)
2011	14,855,000
2012	15,250,000
2013	15,645,000
2014	16,040,000
2015	16,450,000
2016	16,860,000

Table 13 Projected volume of production Nuts MT (2011-2012)

Demand for coconut oil on the global market is high and stable. In the past coconut oil was neglected and substituted by higher yielding palm oil and to some extent by soy oil. Although demand is high, this does only marginally lead to increased prices as coconut oil competes with other vegetable oils, acting as substitutes.

The export sector is dominated by big companies with SME-size companies operating in their shadow. Profit margins are thin, the sector is volatile and competition with other vegetable oils keeps prices at a low level. SMEs are competing with bigger companies for supply of raw material and for a market share in the export markets. Farmers increasingly alter their coconut oil plantations for alternative use. Although it is illegal cut down of trees at large scale, the Government has issued legislation to prevent farmers to further cut down trees but that may be a short term solution. Long term solutions have to be found in increasing profitability for coconut farmers.

On the promotion side, the government is implementing the national coconut planting programme, facilitating availability of high yielding varieties (HYV) of coconut seedlings.

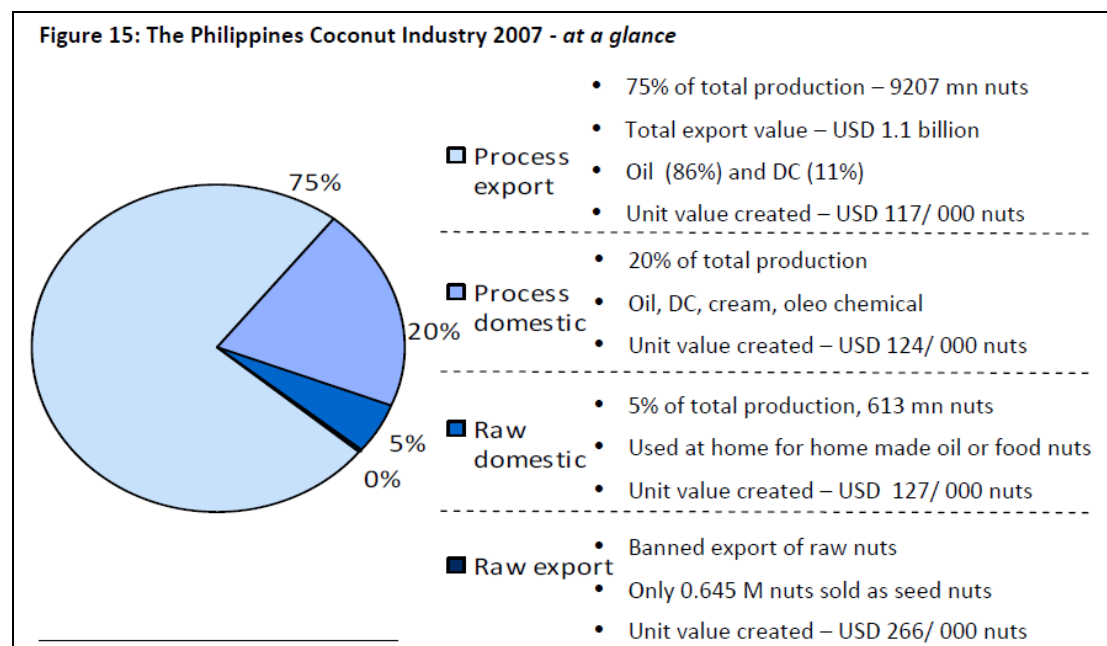


Figure 3 Coconut industry⁷

Most companies are situated in the region Calabarzon (IV-A) accounting for a third of all coco-based industries. While production seems assured by small scale farmers, processing and imports seems to be driven by a mix of industries. The smaller processors are selling their products to larger companies such as Wilmar for international export. Smaller companies do not seem to have tapped in the EU market yet and are still looking for a niche market like organic, Virgin Coconut oil and biodiesel. Most successful small holders have diversified their product range and do not only trade and process coco oil. It has proven difficult for smallholders to tap into the EU market as it is rather uncertain and unproven so far. (Prosperity imitative)

Region	Coconut oil COMPANIES (As per PCA)
NCR	4
CAR	0
I	0
II	0
III	0
IV-A	24
IV-B	1
V	4
VI	1
VII	5
VIII	9
IX	4
X	10
XI	11
XII	1
CARAGA	1
ARMM	1
TOTAL	76

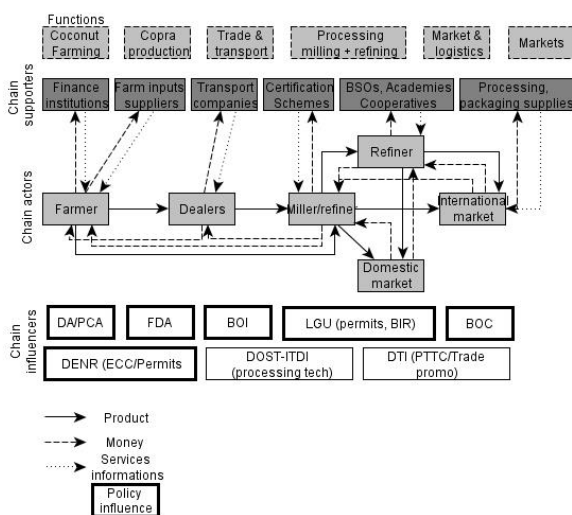
Table 14 Coconut oil companies per region

⁷ Nigel Smith, Nguyen My Ha, Vien Kim Cuong, Hoang Thi Thu Dong, Nguyen Truc Son, Bob Baulch, Nguyen Thi Le Thuy (2009) "Coconuts in the Mekong delta: an assessment of competitiveness and industry potential" Prosperity Initiative: Coconuts.

On the CNO international market, most of the volumes are being sold to brokers based in Netherlands who buys CNO or RBD in bulk and on ex-tank payment terms. These buyers send their vessels to pick up and consolidate its orders from different oil processing plants in the country. Some oil exporters are also selling directly to importers or wholesalers but they end up incurring important costs in terms of logistics since shipping via container directly to these importers/wholesalers entails higher costs than selling to brokers at ex-tank payment terms basis even if FOB price of a broker is lower than the FOB price of an importer/wholesaler. This then discourages the exporter.

1.3.2. Value chain

Most relevant stakeholders in the framework of CBIs mandate are the refiner-exporters and miller refiner. They would be the actors who would benefit the most of CBI's support. Indirectly, an involvement of coco organisation could influence procurement of the raw material, stronger organisation of the sector and facilitate the acquisition of certifications. Smaller oil millers and refiners have an interest in addressing bottlenecks on copra supply and EU market access. Bigger refiners and wholesalers are often working with larger companies, brokers to ship their stocks to the EU market. Therefore, they are strongly dependant on their purchasing power and prices offered.



Value Chain 1 Coconut oil Philippines

1.3.3. Chain actors and their functions

Farmers: Coconut farms are usually operated by either the farm's owner or farmers renting the land. According to the Philippine Coconut Authority (PCA), the productivity level is at an average of 35 nuts per tree per year and 4-5 nuts would produce 1 kilo of copra, which would translates into 7 to 9 kilograms of copra per tree per year. The average coconut is a 100 trees per hectare. The copra yield per hectare is then calculated to be at 700 to 900 kilograms of copra per hectare per year.

The farmers sell their copra to middlemen at an average price of PHP 18-25 per kilogram. This means that farmers earn at the range of PHP 13T to 23T per hectare per year.

Traders: there are traders at municipal level and at provincial level selling purchased copra to processing plants. Some processing plants also buy copra

directly from farmers, but are imposing a minimum volume of 20-35 sacks to give-in to the traders' request for protecting their business role in the chain.

The trading and transporting of copra is usually undertaken by the middlemen at and they deliver the copra to the plant at a price of PHP 30-35/kg. The price is fluctuating due both supply and demand driven factors. The terms of payment by the seller and the buyer is generally on a cash basis. Some copra suppliers would ask for advance payments or deposit schemes. The former refers to the oil miller paying in advance an amount to assure supply of copra at an agreed price and volume. The latter refers to the delivery of copra by the traders regardless of the volume with a price that both seller and buyer agree upon at a later stage after the delivery date, regardless of prices fluctuations. The copra trader can decide any time after the delivery date when to liquidate his copra deposit at the current copra price. Such deposit scheme are in use during period uncertainty and speculation.

Millers: upon delivery of copra at oil millers facilities, it is first examined by the millers' in-house laboratory in presence of the trader's representative to test the desired 6% to 8% copra moisture content. Other quality components are checked for compliance. PCA has established a quality standards checklist for copra and any deviation on the quality requirements would mean discounts on the delivered total copra weight; hence, the more violations, the more discounts and the lesser is the selling price of the copra.

Some millers only do the oil processing, while some others also refine the oil. Although some are only selling on the domestic market, others also sell for export or exclusively for the international market. As per interview with processors, the oil refining process (or commonly known as "Cochin") from CNO state to RBD (refined-bleached-deodorised) would cost an average of PHP 2,500 - 3,000 per MT (USD 60 - 70.00 per MT) with an average systems loss of 2-3%. The average selling prices of RBD at ex-tank basis is at USD 1,450/metric ton for export while domestic market selling prices is at PHP 65,000/metric ton. As per PCA, their studies shows other potential by products after CNO & RBD processing which will add more value to the chain. These potential products include coconut sap sugar, VCO and coconut flour with high nutritional value for the consumers.

Buyers: For the CNO international market, most volumes are sold to brokers in Netherlands who buy CNO, RB or RBD by bulk and on ex-tank incoterms basis. These buyers send their vessels to pick up and consolidate orders from different oil processing plants in the country.

For the seafreight shipping costs, the domestic shipping would cost on average PHP 2,400 per cubic meter and PHP 3,500 per cubic meter for seaport-to-seaport and door-to-door mode of shipments respectively. At 28 cubic meter per TEU (twenty equivalent unit) container equivalent, shipping costs would average PHP 58,000 and PHP 85,000 for port to port and door to door mode of shipments respectively. The international shipping from the Philippines to the key EU countries (Netherlands, Germany, Belgium, France, Italy, UK) would cost an average of USD 800.00 per TEU (twenty equivalent units) on a seaport to seaport basis plus Philippine trucking cost of USD 100.00 per TEU and EU trucking cost within its base port of USD 200.00 per TEU. For computation purposes, approximately one (1) metric ton of coconut oil is one (1) cubic meter. The shipping costs that are indicated are based on today's average rates in the light of very low load factor from Philippines to EU shipments. Seafreight international shipping costs may vary from time to time depending on its load factor Ex-Asia to EU.

Cost & Profit Analysis - Coconut Oil (in Php)	100MT of Copra
Raw Materials (5 nuts = 1kg copra, 100,000kilos of copra needs 500,000nuts @ Php 5/nut = Php 2,500,000 farmgate price. Middlemen/Trader sells at Php 35/kg copra landed mill gate to cover inventory carrying cost + transport cost + profit)	2,800,000.00
Freight	700,000.00
Processing (ave P1/kg processing cost copra to CNO as per R10 processor)	100,000.00
Total	3,600,000.00
Recovery (at recovery rate of 65% 65MT is recovered from 100MT)	65.00
CNO Cost per MT	55,384.62
FOB Price CNO per MT	58,000.00
Margin (Php) per MT of CNO	2,615.38
GPRatio (CNO)	5%
Processing costs from CNO to RBD (ave P3/kg processing cost due to 2%3%systems losses as per R10 processor)	3,000.00
RBD Cost per MT	58,384.62
FOB Price RBD	63,000.00
Margin (Php) per MT of RBD	4,615.38
GPRatio (RBD)	7%

Table 15 Cost profit analysis Coconut oil

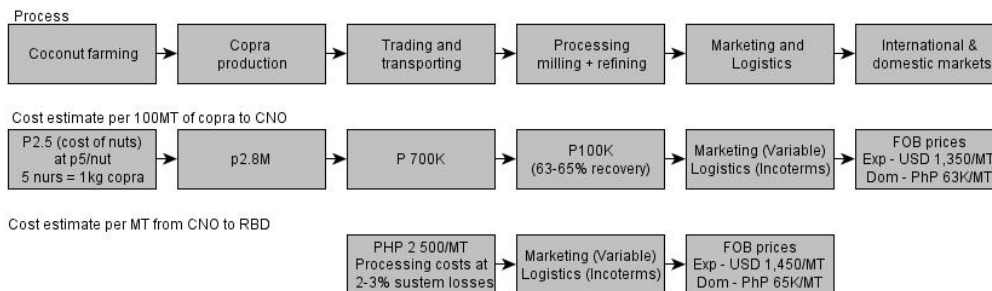


Figure 4 Value adding coconut oil⁸

1.3.4. Chain supporters and their functions

Financial Service Provider: financial services are offered by specific institutions as well as on a more informal basis by individuals. Financial services as supporting the purchase of inputs, labour costs for the maintenance of coconut farms as well as harvesting matured nuts and copra production. Individuals usually offer funds to farmers in exchange of a copra sharing scheme with varying percentages owed to the fund provider.

Financial institutions also extend their financial services to oil millers and refiners for their processing operations. Some oil processors have applied for loans to acquire or upgrade their oil processing machines, construction of new infrastructures and renovation, and even for the purchase of a fleet. Some have standby credit facility with these financier institutions.

Inputs suppliers provide a wide range of products, from fertilisers to pesticide and fungicides. As for transport, although some copra traders operates their own trucking fleet, transport companies also provide transport services to copra traders such as the pickup of the copra from the different locations and deliver the product in their warehouse. They also provide transport services from copra traders' warehouse to the processors' facilities. Shipping companies also provide

⁸ See also annex 20 - From the above illustration, the FOB Prices for CNO and RBD is at USD 1,350 and USD 1,450 respectively for export. For domestic market pricing, FOB Prices is at PHP 63,000 and PHP 65,000 per MT respectively.

shipping services from the processing facilities to the port for domestic or international sales.

Certifying bodies: there are at least two certifying bodies operating in the country, the TUV-Rheinland and SGS Philippines. Certification standards include GMP, HACCP, HALAL, Kosher, ISO22000 among others. Certification costs vary from one standard to the other; from one coverage to another; and from one coverage period to another.

BSOs: there are several Business Support Organisations (BSO) related to the coconut industry. There is United Coconut Associations of the Philippines, Inc.⁹ (UCAP) inaugurated in 1966 with the primary purpose (i) to unite all elements of the coconut industry and work for their common good; (ii) promote harmonious coordination among the various sectors of the industry for the common benefit of the production, trade, processing and consumers (iii) to inculcate and preserve high standards of honour and integrity among its members and to promote just and equitable principles and practices of trade; (iv) to serve as a centre of information about coconut and other related subjects; finally (v) to provide a forum for discussion of problems, issues affecting the coconut industry and/or any of its sectors. UCAP have federated members, who are operating in the country namely the ACBI, APCD, CORA, PCOPA, COCOFED, PCRDF, POMA, UCPB, VCO-Philippines, and several associates.

In region 11, Philexport Davao chapter, is also collaborating with different BSO/trade organisations such as Mindanao trade expo. It is also advocating for social entrepreneurship and provision of industry knowledge and information. It aims to further develop itself as an organisation for further development and institutionalisation, to be able to support exporters in terms of technologies and export competences.

Farmer organisations: there are farmers and processors cooperatives or organisation operating in some regions of the country. In Region 11, the coconut oil processor organised the "Davao Region Coconut Industry Cluster, Inc." whose responsibility is to build capacities of the local communities to be self-sufficient by promoting sustainable entrepreneurship with the use of coco-based raw materials for production. Although it is still on at an infant stage, the members are dominant players in the region. Visayas Inter Coop Training Organisation (VICTO) is a confederation of more than 200 cooperatives operating primarily in Visayas-Mindanao. It primarily offers finance and capacity building services to its cooperatives members. Capacity building efforts range from coop management, to human resource management, to strategic thinking, financial management and many more.

Of course, all kind of suppliers are involved in supporting the chain such as packaging material suppliers as well as for power supply, electricity and telecommunication services. Services are more or less stable in all regions of the countries. Some regions have more stable power supply than others, with higher costs than other regions. The power cost would range from PHP 7.00 – 8.00 per kilowatt-hour incurred by processing plants.

1.3.5. Chain influencers and their functions

Department of Agriculture (DA) / Philippine coconut authority (PCA)

The DA and its attached agency PCA, are the lead agencies mandated for the coconut production improvement. As per interview with PCA, its mandate also covers improvement on the quality of life of the local communities in terms of

⁹ <http://www.ucap.org.ph/Frameset-ACBI.html>

economic benefits in the trade of coco-based products and its sustainability. It also spearheads the implementation of policies on the trade of coco-based products in the country.

Cooperative development authority (CDA) :

As per interview with CDA, their mandate is legitimise all cooperatives organised in the country. Its mandate also includes the development and building of capacity for these cooperatives in terms of management, strategic planning, human resource development, training, coop management skills. Stronger cooperatives can facilitate capacity building when required, as well as easing the bulking process.

Department of health (DOH) and the Food and Drug Administration (FDA) are entities. They are supervising all food sector companies and are not only involved in regulating the coconut industry. Under DOH, FDA is mandated primarily for the following:

1. Develops plans policies, programs and strategies for regulating processed foods, drugs and other related product
2. Provides technical, consultative and advisory services to and develops capability of field offices on licensing and enforcement of laws, rules and regulations pertaining to processed foods, drugs and other related products.
3. Monitors, evaluates and ensures compliance of manufacturers, distributors, advertisers and retailers of processed foods, drugs and other related products to health rules and regulations and standards of quality.

All processing plants secure FDA permits for every product line manufactured or processed. Some of the processing plants experienced delays in the application process for FDA permits, sometimes taking over one year. Several factors influence the application period such as compliance to the requirements by processing plants and government bureaucracy.

Department of Trade and Industry (DTI) and Board of Investment (BOI):

The Philippine Board of Investments (BOI), an attached agency of Department of Trade and Industry (DTI), is the lead government agency responsible for the promotion of investments in the Philippines.

- Taking the lead in the promotion of investments, BOI assists Filipino and foreign investors to venture and prosper in desirable areas of economic activities
- The processing plants applies for tax incentives for the establishment of processing facilities and machines. Such incentives includes tax holidays and exemptions from duties.

The local government units (from the office of the barangay captain to mayor's / governor's office) also plays regulatory functions in the chain. Processing plants are required to secure building permits, business permits, sanitary permits for their processing activities in the country.

The Bureau of Internal Revenue (BIR) whose mandate is to assess and collect all internal revenue taxes, fees and charges, and to enforce all forfeitures, penalties and fines connected therewith, including the execution of judgements in all cases decided in its favour by the Court of Tax Appeals and the ordinary courts (Sec. 2 of the National Internal Revenue Code of 1997). All processing plants are then required to submit its income tax statements every year to the agency as a

compliance to the agency requirement. Non-compliance would mean penalties to be imposed to the processing plants.

1.3.6. Bottlenecks of the value chain

Identified constraints in the value chain as given in the figure below, are within reach of improvements on the short/medium term and some clearly lay within the reach of the CBI, current BSOs and other services providers of the country. It is expected that CBI support could contribute to improve the functioning of the export chain and lead to a tangible increase of the export of coconut oil by smaller industries having difficulties tapping in the EU market. Market information, market linkages, compliance with EU norms and standards are clearly CBI's scope of activities as access to the raw material and fluctuating prices for copra are out of reach for CBI and would need to be addressed by different supporting bodies.

The main issues raised are quality standards compliance, especially with HACCP norms as well as a lack of knowledge of other requirements to tap in the EU market and a lack of strong linkages with EU buyers. Furthermore it would be desirable to have a stronger sector association with more leverage and more proactive. Of course the fluctuating prices of the raw material as well as CNO on the international market make it difficult for smaller actors to compete on the international market.

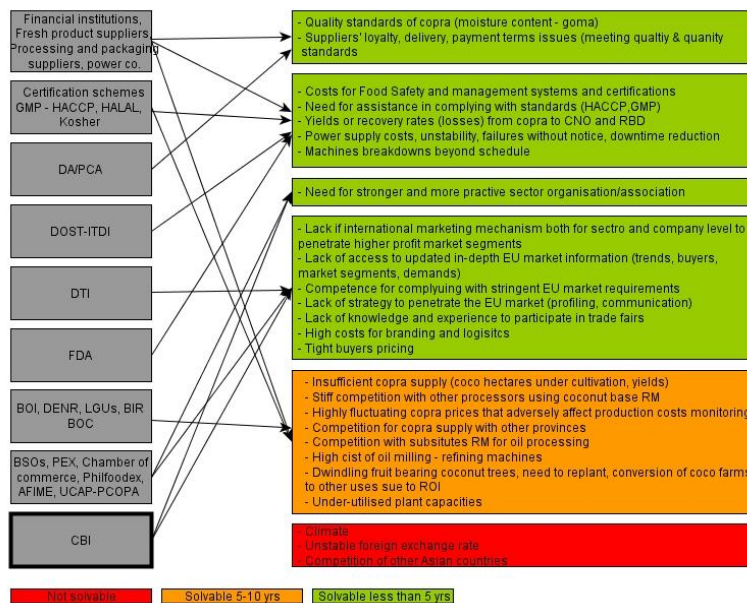


Figure 5 Constraints mapping Coconut oil

Stakeholder interest may appear to be low to medium due to lack of alignment of priorities between government interventions and private sector needs. There is an obvious need to align government interventions to the support of supply of raw matured nuts for the production oils. The lack of raw material seems to be a general concern in the sector. An assessment of potential companies with whom collaboration could be established resulted in a total of 76 companies (DTI-Regional Operations Development Group – Manila office).

Supply & input-related bottlenecks can be influenced through the interventions of copra traders and the copra producers (the farm owners and farmers) for the quality standards compliances, loyalty, delivery and payment terms issues.

Quality issues can be attributed to GAP (Good Agricultural Practices) compliances in coconut farming and copra production functions.

The processing-related bottlenecks can be influenced through the interventions of DOST / FDA and certification bodies for resolution of bottlenecks on costs for food safety , management systems certifications and capacity building interventions for the exporters to achieve GMP/HACCP standards compliances; DOST-ITDI for interventions on R&D to address issues on recovery rates , losses, or yields from copra to CNO/RBD. Power companies can also influenced on the power supply issues. DOST also provides technical trainings on production & preventive maintenance scheduling.

There is a need for a strengthened industry or sector association which could be supported by both Business Support Organisations such as AFIME, Philfoodex, UCAP and its federated members, Philexport for handholding and benchmarking purposes, and CBI through its BSOD module.

The market-related bottlenecks can be influenced by DTI through its Export Pathway Program (EPP), BSOs through networking in terms of market information and linkages, and CBI for its MI & ECP modules. The majority of CNO and RBD exports are sold through brokers and not much on direct to importers and wholesalers in the EU. As per interview with oil processor, this leaves them with huge demand from the brokers to meet for the supply of CNO and RBD.

1.2.7. Opportunities in the chain & Proposed Interventions :

As the value chain is mapped and analysed, several opportunities (annex 11) can be identified such as:

- Local / national government intervention to increase coconut production to support copra production for coco-oil processing & export requirements.
- Empowerment of local communities to get involved in the export value chain
- Establishment and provision of business support organisational development programmes for a strong business support organisation to do :
 - comprehensive fresh / matured nuts sourcing program such as identification of suitable area for coconut farm establishment, database of existing coconut growers /farmers and their farm location on a per regional location basis for contract growing arrangements with local growers farmers and oil processors,
 - Liaison functions with relevant influencers from farming to delivery to processing plants such as on variety selections, provision of continuous coconut farm trainings to achieve farming productivity up to harvesting then to transporting / handling then to delivery to processing plants. Liaison functions also includes information campaigns by the BSO to other stakeholders such as the DA, PCA, Coconut growers /farmers association, copra producers & traders association, and other supporter stakeholders, collaboration with

relevant government agencies, coconut growers/producers, copra producers, coconut oil processors on agreement/consensus on industry standardisation. (PCA can take lead in standardisation setting, implementation, and compliances)

- Market Intelligence Program for improved access in the EU market through conduct of continuous updating on relevant market developments through market research and analysis to be provided to its members (growers/producers, traders, and processors).
 - Sector or company level export coaching programs to increase export readiness / competitiveness and maximise market potentials of EU, collaborations for processing practices and workers development programs towards compliance to EU Market access requirements, market entry strategizing and establishing sustainability mechanisms in the exporting activities.
 - Continuous Building of capability for market expansion and compliances to changing market access requirements such as on food safety standards, quality, traceability, fair trade, packaging designs and quality standards, and all legislative and non-legislative market requirements.
 - Advocacy for CSR Principles to be implemented throughout the entire chain on People – Planet – Profit Pillars. This includes compliance to human rights, labour-related laws, and employees welfare development. For Planet, this includes environmental preservation and replenishment initiatives, waste management. For profit, this includes allocation for people, planet compliances and sustainable development.
- Development of high value products for specific niche markets. These include coconut sap sugar, VCO and coconut flour which is 60% fibre + 22% protein and gluten free. However, detailed information as to its production, processing costs including the critical control points for its quality standards may be available on a later date.

Identified bottlenecks	Critical ? (y/n)	Risk for bottleneck non-removal on short term ? (H=hi, M=med, L=low)	REMARKS :
1. Quality standards of copra (moisture content - goma)	Y	L	Can be addressed if the industry organises themselves to agree on standards.
2. Supplier loyalty & delivery, payment terms issues (assurance for delivery in terms of quality + quantity)	Y	M	Value formation training may have to be injected after industry organisation
3. Costs for Food Safety & Management Systems Certifications	Y	M	Sector may have to unite themselves for a shared certification costs scheme
4. Need for Competence to assist exporters on GMP/HACCP standards compliance	Y	L	This can be addressed through training and coaching
5. Yields or recovery rates (losses) from copra to CNO to RBD	Y	M	Contributing Factors may be beyond training but machine-related
6. Power supply costs, instability, failures without prior notice → downtimes	Y	M to H	This affects production downtimes
7. Machine breakdowns beyond schedule	Y	M	
8. Need for Stronger and more proactive / institutionalised Industry sector Association	Y	L to M	The sector themselves need to realise the importance of organising themselves and synergise efforts.
9. Lack of international marketing mechanism both for sector and company level to penetrate higher yield market segments	Y	L to M	Sustainability should be in placed once capacity is addressed.
10. Lack of access to updated in-depth EU Market Info (trends, buyers, market requirements)	Y	L	This can be addressed through market research and analysis training.

11. Competence for Compliances to Stringent EU Market Access Requirements	Y	L to M	Can be achieved through company coaching.
12. EU Market Penetration (entry strategies, prospect buyers profiling & communication)	Y	L	Can be addressed through sectorial or company level export marketing planning and value networking
13. Knowledge on/ lack of experience on / High cost of EU Trade Fair Part.	Y	L	Can be resolved through market research and analysis training
14. High costs for branding & logistics	Y	M	This may require to come up with sector branding and marketing and market branded products rather than just OEM
15. Tight buyers' pricing	Y	M to H	Will have to address through product costing and process efficiency training.

Table 16 Bottlenecks in the coconut value chain

1.3.7. Conclusions Coconut oil

The main constraints in the value chain are concentrated around the production and supply of raw material. Old stands need to be re-planted or rehabilitated with higher yielding varieties. With a time to production of five years this will take time before any change can be noticed after action.

Marketing is currently not the real problem, rather supply related problems hamper growth of the export sector. However, the sector is bulk oriented with limited value adding, branding or niche marketing occurring. The demand for bulk quantities of coconut oil (merely crude oil) are merely found in China, USA and Europe.

Emerging high-value products based on coco like functional foods having a health benefit could be an interesting segment to explore. Specialising on alternative product development could potentially be a way out of the vicious cycle of thin margins and bulk production. Coconut oil has a potential in terms of functional foods because of its health benefits: coco flour is gluten free, coco sugar contains high levels of protein and micro-nutrients.

Institutional alignment using an integrated value chain approach, has been addressed through the formation of industry clusters. A model cluster is piloted in one of the major production areas in Davao Province.

A targeted approach by region would be the most efficient way to provide support to the sector. Aligning projects and mandate with Philexport Davao, who is already involved in the sector should be considered. Davao Region Coconut Industry Cluster, Inc. whose trust is to build capacity for the local communities to be self-sufficient by promoting sustainable entrepreneurship with the use of coconut based raw material for production. Although, it is still at infant stage, the members are dominant players in the region. Moreover, many exporting companies are situated in Calabarzon. The whole region of Mindanao should be targeted at a different level, rather focusing on production and quality standards in order to facilitate the procurement of coconut to the processing companies

around the country. Furthermore, interest must be maintained at the BSO level by introducing programs that would address members' bottlenecks on supply and market information access in a way that services provided by the BSOs are strengthened and adapted to the needs of the industries. Unravelling the market for virgin coconut oil is imperative as it could be an interesting niche market for Filipinos companies as well as giving support in certification schemes.

Sector or company level export coaching programs to increase export readiness / competitiveness and maximise market potentials of EU, collaborations for processing practices and workers development programs towards compliance to EU Market access requirements, market entry strategizing and establishing sustainability mechanisms in the exporting activities.

Continuous Building of capability for market expansion and compliances to changing market access requirements such as on food safety standards, quality, traceability, fair trade, packaging designs and quality standards, and all legislative and non-legislative market requirements.

Three linked sub-projects are suggested:

- 1) A geographically targeted pilot in Davao, linking to the Davao coco-industry cluster. Philexport Davao has already established linkages with the cluster. The cluster is a multi-stakeholder initiative yet private sector – led. Focus should be on strengthening SME level exporters in the Davao area through targeted coaching and training and enhancement further collaboration on institutional level.
- 2) Conduction of an in-depth EU market study on coconut oil based functional food ingredients that will feed into the conduction of a strategic sector planning exercise for the export oriented SME coco oil sector.
- 3) Strengthening of two local BSO organisations in Davao Province with a specialisation on the SME based coco-oil sub-sector.

Possible partnerships and alignment strategies

The United Coconut Associations of the Philippines (UCAP) is an evident partner in all three trajectories. They have a number of federated sub-organisations across the countries which could be used as knowledge and training platforms.

ACBI, APCD, CORA, PCOPA, COCOFED, PCRDF, POMA, UCPB, VCO-Philippines Philexport Davao, working in collaboration with DTI-Region 11. The Department of Agriculture (DA) as well as the Philippine coconut authority (PCA) are also key actors to involve, especially when thinking or production and procurement challenges. At the more general level the Cooperative development authority (CDA), the Department of Health, and the Food and Drug Administration (FDA) should be involved when thinking of functional food production.

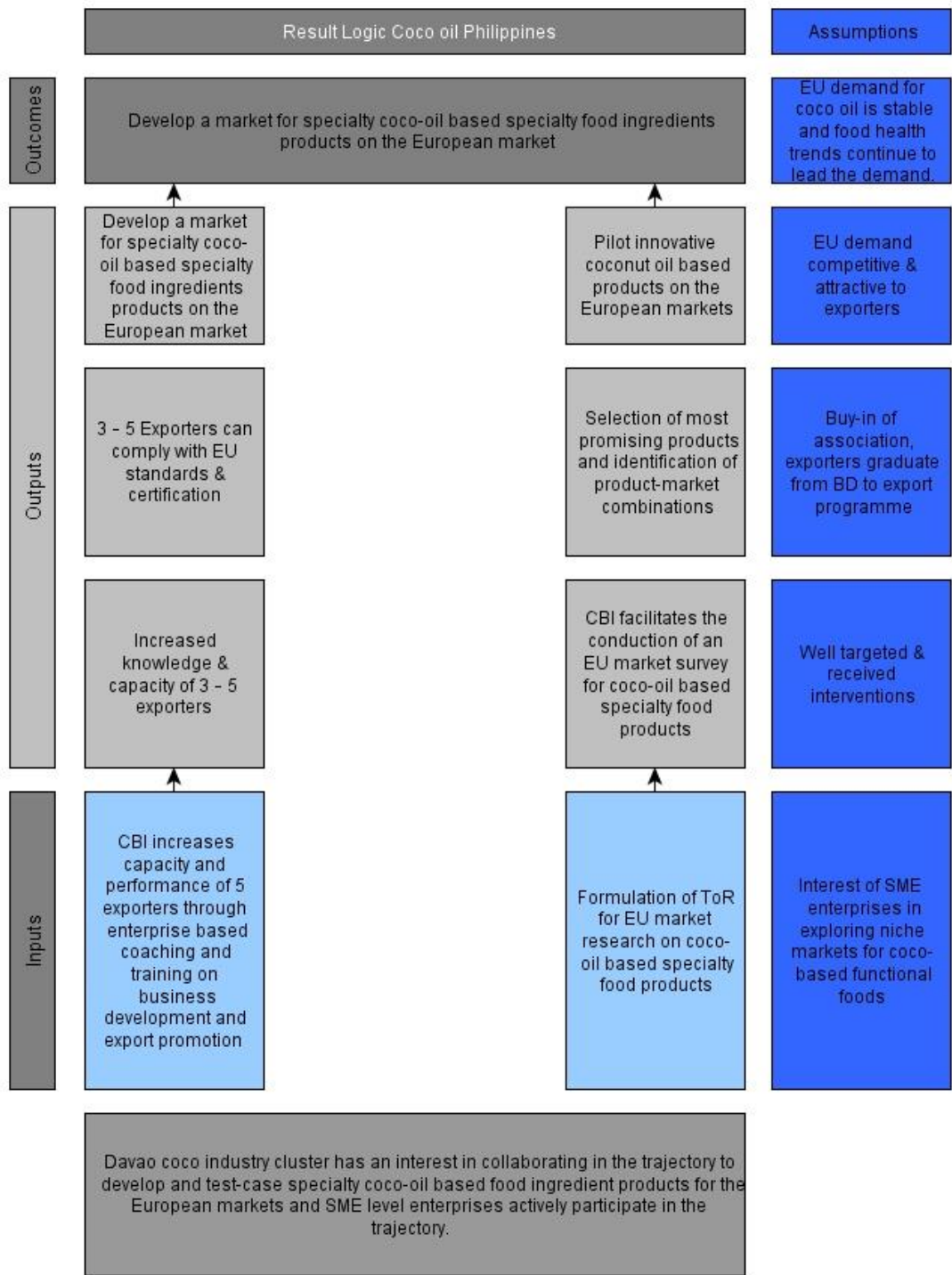
Coconut oil - Philippines

Criteria	indication	Comments	Ranking
Potential EU export	Reasonable on short/mid term	The coconut oil sector is large in volumes, but profitability of the export sector is low. Competition in world market comes from alternative vegetable oils. Competitive sector with increasing EU export figures.	2
Sustainability	Reasonable	Old stands are being cut down as a result of low profitability	2
Local leverage	Low	Typical smallholder crop, profitability is however low as compared to other commercial crops. Emerging tendency to move to upgraded specialty products.	1-2
Presence of	Average	SMEs operate next to bigger companies. Access	2

SMEs		to input is constraining profitability for SMEs	
Partnerships	Good	Piloted multi-stakeholder alliances (industry clusters) at district level form an ideal basis for partnerships.	2-3
Attribution	Moderate / low	For major bulk sector attribution is low, however for identifying and developing innovative/high-end niche markets for functional ingredients attribution may be high	2
Other issues		Merely bulk oriented sector with emerging tendency towards higher-end specialty products	

Total: 14

Table 17 Chain evaluation



Result Logic 1 Coconut Philippines

Dried Mango Philippines



2.3. Dried Mango - Philippines

2.3.1. Economic importance – Baseline

Looking at the figures presented below a clear threefold increase in both revenues and volumes exported demonstrate the popularity and the potential of this product. Processed fruits and vegetables exports from the Philippines have shown an increasing trend with an overall yearly growth of about 9% for the period 2003 to 2008. Based on these trends, we can assume the sector will continue to grow as the Philippines are a major tropical food producer, with some crops harvested all year long in certain region of the country. Furthermore, there is a worldwide growing appetite for snacks produced from fruits; especially natural products considered as healthier, particularly on the European market.

The Philippines mainly export Fresh Mango on grade A and B, standards developed by the Philippine National Standard (PNS/BAFPS 13:2004/ICS65.020.20), which sets the classification for fresh mangoes and its quality standards, tolerances, marking and labelling, and pest management. As an industry practice, Class A fresh mangoes (export quality) are sold to exporters to be exported as fresh mangoes while the Class B fresh mangoes are those for domestic market to be sold as fresh mangoes in wholesale and retail. The Class C are known as the processing grade which are then sold to fruit processors at PHP 25-30 per kilogram which is a landed price at fruit processing plant. Farm gate prices are usually between PHP 10-20.

Year	2008	2009	2010	Notes
Dried mango Value	\$7,478,246	\$8,824,338	\$28,617,472	Quantity and Value of Agricultural Exports: 2007- 2010[Quantity in kilogram; FOB Values in US Dollars]
Dried mango volumes	1,027,235kg	1,049,919kg	3,619,962kg	Quantity and Value of Agricultural Exports: 2007- 2010[Quantity in kilogram; FOB Values in US Dollars]

Table 18 Export of dried mango Philippines

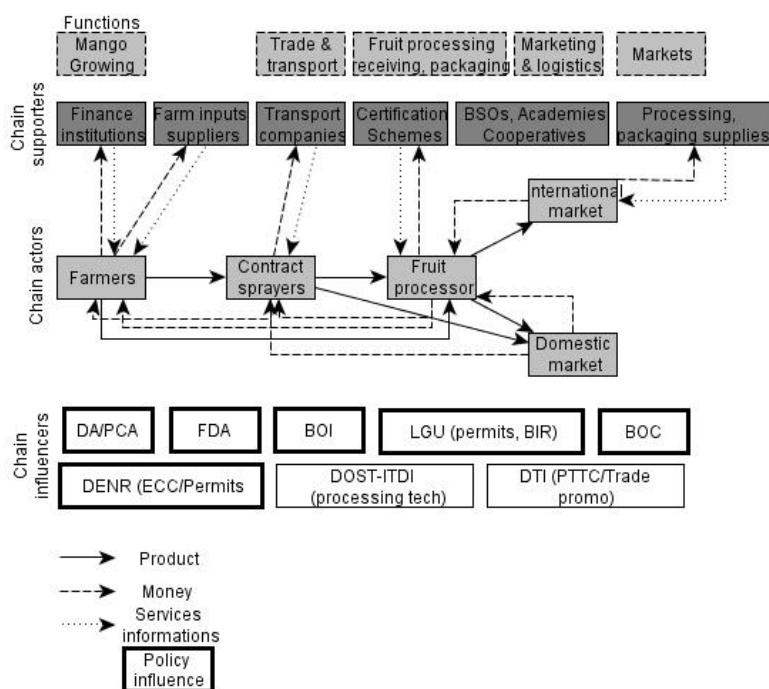
At least 35 SME level companies are producing dried mango at the country level and they are usually also processing mangoes, pineapple and calamansi in diverse produces such as jams, purees, juices, etc. Very few of them were able to tap in the European market and most are selling their produces on the national and Asian markets where the taste of mango is already well appreciated by consumers. Proximity and greater knowledge of these markets also favours the growth of export towards these markets. Standards and requirements are less stringent; trade shows are cheaper and it is easier to participate.

Region	DRIED MANGO COMPANIES (As per DTI)
NCR	2
CAR	2
I	0
II	2
III	2
IV-A	0
IV-B	0
V	0
VI	5
VII	15
VIII	1
IX	2

X	0
XI	4
XII	0
CARAGA	0
ARMM	0
TOTAL	35

Table 19 Dried mango companies per region Philippines

2.3.2. Value chain



Value Chain 2 Dried Mango Philippines

2.3.3. Chain actors and their functions

Farmers: the chain starts at mango farming being operated by either the orchard owners or farmers who are renting the land. As per analysis of gathered data from BAS (Bureau of Agricultural Statistics), for 2010:

The average yield per tree is at 100kilograms of fresh mangoes per tree.
The average yield per hectare is at 4,500 kilograms of fresh mangoes per hectare
On the economics side, The average revenue per hectare is at PHP 95,000 and the average revenue per ton is at PHP 20,000.00
On the average, farm gate prices would range from PHP 15-20 per kilo.

Generally, the orchard's owner or the farmer contracts the mango sprayer to do the spraying until harvesting. The mango sprayer will then shoulder the expenses for the chemicals (chemical costs at the range of PHP 500.00 to PHP 2,000.00 per tree depending on the tree's maturity) for flower induction and pests control. Upon harvest, a sharing scheme between the two parties will be the form of compensation to the mango sprayer. Usually the sharing scheme would range from 60% - 70% share for the sprayer while 30%-40% remains for the orchard's

owner or the farmer. The farming and spraying functions are generally male gender dominated at an average of 90%.

Upon harvest, the sprayer usually has already scoped a potential market, whether they are traders or wholesalers. The quality of the mango will influence its price and destination on the market.

The fruit processing function starts on reception of the fruits where the sorting process for compliance to quality standards is achieved by the fruit processor. The fruit processing standards are based on size, texture and maturity of the mangoes. For the size requirement, 150 grams per mango fruit is desired, and the maturity requirement is at 110 DAFI (days after flower induction) for green mango processing while it is set at 115-120 DAFI for yellow/ripped mango processing. Fruit are purchased at PHP 25-30 per kilo by the industries

The fruit processing costs for dried green mango would range from PHP 350-450 per kilo while the dried yellow/ripped mango processing costs would average at PHP 350 per kilo. Higher cost of green mango processing is primarily attributed to sour taste extraction process and sugar addition cost component. These approximate processing costs already incur packaging costs. Mangoes failing to meet the dried mango processing requirements would be processed into liquid state such as purees and juices.

The marketing of dried mangoes is usually done by the fruit processors themselves who are at the same time exporters as well. The current market FOB price for the dried yellow/ripe mangoes and dried green mangoes for exporting is at USD 9 -10 / kilogram and USD 10 – 11 / kilogram respectively. The domestic market pricing range for yellow dried mangoes is at PHP 600 per kilogram. These are channelled through wholesalers, supermarkets/groceries, retailers or at delicacies shops. Generally, terms of payments are at 50% DP and the 50% balance to be paid before or upon shipment date. Mode of transmittal is generally through telegraphic transfer.

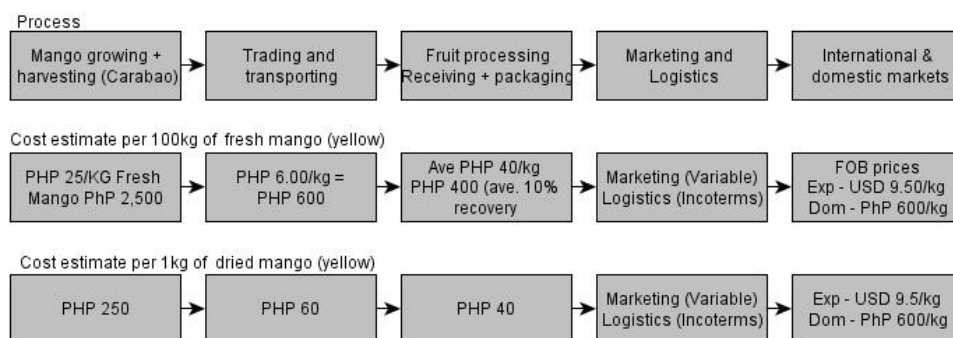


Figure 6 Cost price dried mango Philippines¹⁰

2.3.4. Chain supporters and their functions

Financial service providers: Financial services usually offer credits in order to purchase fertilisers, other inputs, and cover the labour costs for the maintenance of mango orchards and mango spraying activities from flower induction to harvesting.

¹⁰ See also annex 20 - Figures were approximated by the team of local consultants and could not be validated.

For the mango processing, institutions offers financing for the purchase of fruit processing machines, technology upgrades, research and development, renovation or construction of processing facilities and even for the purchase of pick-up / delivery vans or vehicles. Some of the processors have standby credit facility with these financial institutions. Most finance institutions are the commercial and rural banks, which are lending to companies or individuals. Few 'private' independents are offering credit on an ad hoc basis.

Transporters: transport is key to mango processing. Many processors have their own fleet of trucks to diminish transit time and reduce costs. Between islands sea freight and air freight are of the used but rather costly; the same goes for the international market.

Certification bodies: TUV-Rheinland, SGS Philippines, Bureau Veritas are also in the certification of processed mango, mostly on norms related to HACCP/HALAL/ Kosher/ISO 22000 Food Safety Management Systems (FSMS) among others.

2.3.5. Chain influencers and their functions

Similar to the coconut oil chain see chapter 3.2.5.

2.3.6. Bottlenecks of the value chain

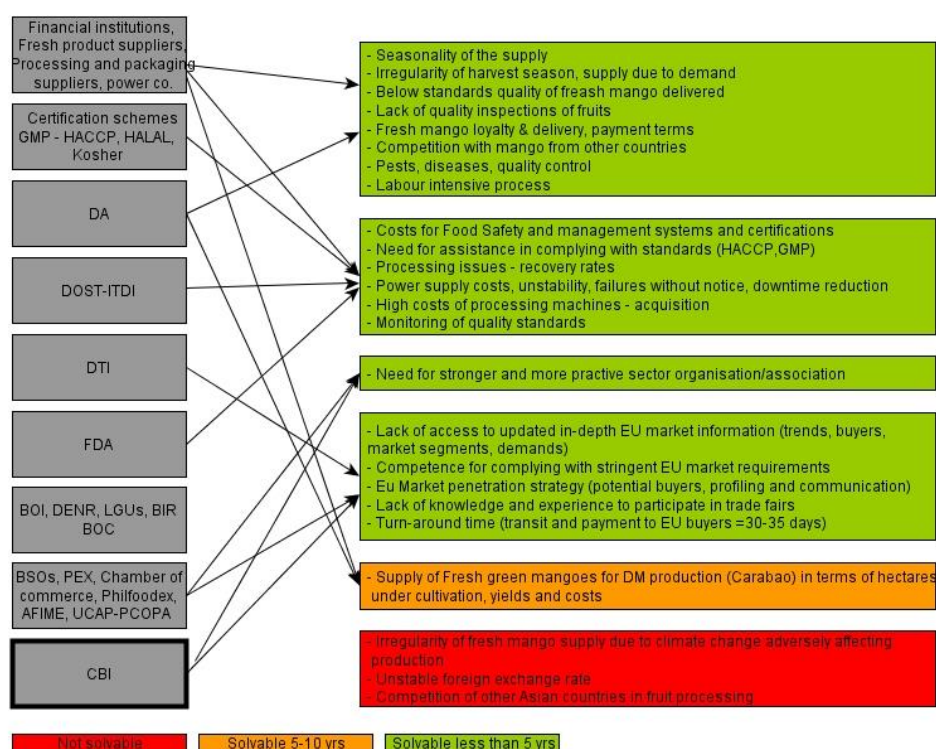


Figure 7 Constraints mapping Dried Mango

Identified bottlenecks	Critical ? (y/n)	Risk for bottleneck non-removal on short term ? (H=hi, M=med,	REMARKS :

		L=low)	
16. Seasonality of the supply of fresh green mangoes / irregularity of harvest season and supply due to demand for it.	Y	M	Severely affected by climate change. Availability of supply becomes less projectable.
17. Substandard quality of fresh mangoes being delivered (bumps, pests, cracks) – Lack of Quality Inspection capability	Y	L	Chances of resolution becomes higher by building capability for the company through government interventions
18. Supplier loyalty, delivery, and payment issues	Y	L	To ensure supply of raw materials to meet growing demand
19. Competition with the demand for fresh mango in the neighboring provinces and country	Y	L	This can be manageable as most mango processors offer better pricing to the traders/sprayers just to get the supply
20. Pests, Diseases, Quality (maturity, size, ripening) issues for fresh mangoes supply	Y	M	Pests and diseases need intervention from DA whose priority might be directed to other crops.
21. Labour intensiveness of the processes	Y	M	Fruit peeling really needs to be mechanised to increase efficiency and hygiene.
22. Costs for Food Safety & Management Systems (FSMS) / Organic Farming (min. hectare requirement) Certifications	Y	M	Alignment and certification to FSMS entails investment. Small to medium companies might find the resources needed difficult.
23. Need for Competence to assist exporters	Y	L	

on GMP/HACCP standards compliance			
24. Processing issues (recovery rates)	Y	L to M	This can be resolved through DOST-ITDI intervention and continuous R&D of the company
25. Development and Monitoring of quality standards & Process optimisation	Y	L	
26. High costs of food processing machines acquisition	Y	M	This can be resolved through DOST-ITDI intervention
27. Power supply insufficiency and costs	Y	M	This can be mitigated through energy management systems in place (alignment to ISO 50001)
28. Need for Strong / institutionalised Industry sector Association	Y	L	BSO development programs can help mitigate to include market oriented services for its members.
29. Lack of Access to updated in-depth EU Market Info (trends, buyers, market requirements)	Y	L	
30. Competence for Compliances to Stringent EU Market Access Requirements	Y	L	
31. EU Market Penetration (entry strategies, prospect buyers profiling & communication)	Y	L	
32. Knowledge on/ lack of experience on / High cost of EU Trade Fair Part.	Y	L	

33. Turn-around time (transit and payments of EU buyers = 30-35 days)	Y	M	Cost efficiency measures / management + Risk management are needed.

Table 20 Bottlenecks dried mango value chain

The main constraint processors are facing is access to supply of mango in bad climatic years; depending of region, some regions being more affected than others. On the other hand, some region can source mangos all year long, a favourable environment for production. Most processing companies are unable to function at their full capacity due to a 'lack' of mango and or lack of power in critical processing periods.

The main bottlenecks identified in the chain for export are a general lack of information on the requirements to tap into the EU market. Importers are providing little information on certification and standards required. Furthermore, it seems that few Filipinos organisations are able to provide the processors with this type of information. Customers' preferences and market segmentation are not known information to the processors/exporters.

The industry has quality norms established by the National Philippine Nation Standard - bureau of agriculture and fisheries product standards. Industries have admitted not knowing these norms and are thus processing with a set of different standards. Furthermore, national set norms are often not sufficient for export to the European market. HACCP certification is increasingly required for food export; audits and evaluation are required to obtain any other certification.

Politicised clusters and associations in the mango industry do not favour collaboration among actors, capacity building and representation of the stakeholders' interests. There is a need for the creation of an organisation through which stakeholders could find support, through which capacity building training can be channelled, where market information is gathered and could serve as a basis for dissemination of market knowledge.

2.3.7. Conclusions Dried Mango

At the sub-sector level, processed fruits would be an interesting choice. The interesting factor with the dried mango industry of the Philippines is that most processors do not only concentrate their activities on dried mango production, but also on processing other fruits, as well as manufacturing different product type such as juices, jellies and purees; commodity also commonly traded with the Netherlands.

The Filipino processed fruit sector and more particularly the dried mango sub-sector would clearly benefit from the support of the CBI. Marketing and exporting issues encountered by the processors/exporters could clearly be integrated in the scope of work CBI for further development of a sustainable export oriented production. Market research will be critical in order to tap in the right market with the right product. Sugar content of the Filipino dried mango and processing techniques might need to be reviewed to reach the EU market. The industry has the ability and resilience to adapt its production techniques and is already marketing a wide range of products.

The advantage lies largely in the impact a well-targeted CBI support programme could have on the processed fruits sector as a whole. As an emerging sector, trade linkages are progressively established and taste for exotic and tropical flavours is increasingly developed in Europe and elsewhere. Like for coconut and banana chips, some procurement issues were mentioned, but could be tackled with greater alignment of the government's policies such as reducing national transport costs; therefore reducing procurement costs. The opportunity to contribute to, and guide the further sub-sector development is significant larger than in an already well-established sub-sector in which standard, quality benchmarks and (market) linkages are already set. Furthermore, a trickle-down effect should be expected to other produce from processed fruits.

The most evident direct beneficiaries of a CBI's program would be the processors-exporters, as well as exporting companies. Very often, the role of 'exporter' is also the responsibility of processing industries which are accountable for the marketing and the sale of their products.

A number of these industries are situated in Cebu, with a number of brands available on the local market and identified as 'export quality' mainly oriented towards the Asian market. No large industry is involved in mango processing; small and medium enterprises form the bulk of the processors/exporters. They diversified their offer by manufacturing a variety of products: mixed dry fruits, mango and coconut balls, mango & tamarind, dried green mango, etc. Thus, SMEs are supplying the entirety of the market. Moreover, most industries are not operating at full capacity and could easily produce more if a regular flow in mango procurement and export linkages could be established.

Priorities of business involved in the dry mango sector:

- i) ECP: Business and CSR Audit. Since many of those who attended the conference have already experienced domestically in terms of production and market development, it would be best if they can start with this intervention in order for them to prepare a plan of action.
- ii) ECP: Business Development. In order to professionalise the business to make it committed and responsible to sustained demands of the market.
- iii) MI: Understanding market access requirements and the EU market to better prepare the exporter in this direction.
- iv) HRD Training on Market Research and Analysis, Website Development and Promotion, food safety, etc...
- v) ECP: Export Capacity Building, Certification, and market entry in order to prepare them to the requirements of the business

A sector or company level export coaching program should be launched to increase export readiness in terms of standards compliance, audit, and certification to improve competitiveness and maximise market potentials of the EU. Improved processing practices and workers development programs towards compliance to EU market should be developed and could be channelled through an empowered organisation representing mango processing stakeholders. Market access requirements, market entry strategizing and establishing sustainability in the exporting activity are top priorities for the sector.

There is definitely a continuous and strong need for capacity building in order to expand market access which is currently mostly limited to the national and sub-regional area. Furthermore, assistance is required in order to comply with changing market's access requirements such as food safety standards, quality, traceability, fair trade, adapted and attractive packaging and quality standards control.

Of course, buy-in of the government, to a certain level, is desirable to assure the supply of the raw material. For the government, it would be possible to diminish the costs of transportation of the fresh mango within the country to facilitate the procurement process which is currently costly for the industries. Moreover, it seems that the information the government has in hands is not always disseminated widely or easily accessible by the producers. With improved dissemination mechanism, producers would be more informed on the government's strategy. Need of buy in of the government for export promotion, sharing and dissemination of information. Reducing costs of national transportation for cheaper access to the raw material

Dried mango - Philippines

Criteria	indication	Comments	Ranking
Potential EU export	Low at short term, moderate at mid term	The dried mango sector is not yet equipped to supply EU markets nor has it the required capacities. Dried mango is at this moment merely an iconic product, more suited to the "gift-sector" than to mainstream food ingredients sector.	1-2
Sustainability	Good	No major constraints reported	2-3
Local leverage	Reasonable / good	Typical smallholder crop, local drying and packaging provides additional jobs/income.	3
Presence of SMEs	Good	SMEs dominated sector suiting CBIs mandate and target clientele.	3
Partnerships	Low	Besides regulatory government agencies no other major actors are supporting the sub-sector	1
BSO	good	Philexport Cebu is well capacitated to support the mango chain actors particularly the exporters	2-3
Attribution	Low-moderate	Constraints in the supply chain are competitive (domestic) fresh fruit market and overall supply limitations. Pull factors have limited influence.	1-2
Other issues		Market research connected to product development and innovation are necessary to tap into European markets.	

Total: 15

Table 21 Chain evaluation

Dried bananas – Philippines



1.4. Dried Bananas - Philippines

1.4.1. Economic Importance - Baseline Data

For the baseline data, the study used the figures provided by Agricultural Marketing Assistance Service in Manila for the exporting country perspective and Exporhelp data for the importing EU-countries' perspective. This is done to balance the different perspectives given by both sources. Below is the baseline data.

Quantity (kg), value (USD), price (USD) of agricultural exports (2008-2009)

Banana Chips or crackers	2008	2009	2010
Quantity	33 397 680	28 092 759	28 084 566
FOB Value	49 126 329	35 464 939	40 274 066
FOB price	1.47	1.26	1.43

Table 22 Agricultural export Banana Chips Philippines
Source: BAS-AMAS-Manila

PHILIPPINES	2006	2007	2008	2009	2010	2012	2013	2014	2015	2016
Banana	6,794,564	7,484,073	8,687,624	9,013,186	9,101,341	9,936,844	10,234,950	10,541,998	10,858,258	11,184,006
Banana Cavendish	2,810,985	3,323,072	4,328,989	4,497,722	4,600,617	5,022,953	5,173,642	5,328,851	5,488,717	5,653,378
Banana Saba	2,285,809	2,385,614	2,526,835	2,636,342	2,632,692	2,874,373	2,960,605	3,049,423	3,140,905	3,235,132

Table 23 Banana production/forecast Philippines (Dept. of Agriculture)

The above baseline data shows agricultural export performance for the years 2008 to 2010 in terms of volume of exports in kilograms and FOB Value in terms of USD and the estimated average FOB Price of banana chips in USD. For the three (3) year period, the average export volume is about 29.8Million kilograms, the average FOB Value is at USD 41.6Million, and the average FOB price per kilogram of exported banana chips is at USD 1.40.¹¹

Indicators	Import Value (1000 EURO)	Import Value (1000 EURO)	Import Value (1000 EURO)	Import Value (1000 EURO)	Import Value (1000 EURO)	Import Qty (1000 kg)	Import Qty (1000 kg)	Import Qty (1000 kg)	Import Qty (1000 kg)	Import Qty (1000 kg)
Reporters	EUR27	EUR27	EUR27	EUR27	EUR27	EUR27	EUR27	EUR27	EUR27	EUR27
Years	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Partners										
Philippines	308.53	360.44	423.2	227.61	232.99	293	335.3	303.1	193	166.2
Import Prices :						1.05	1.07	1.40	1.18	1.40

source :
http://exporthelp.europa.eu/thdapp/comext/ComextServlet?action=output&viewName=eur_partners&simDate=20100101&languageId=en&ahscode1=08030090&cb_repor ters=EUR27&cb_partners=0708&list_years=2010&list_years=2009&list_years=2008&list_years=2007&list_years=2006&measureList=iv&measureList=iq

The above baseline data shows performance for the past 5 years from 2006 – 2010 in terms of import value and import quantity. As reported, for the past 5 years, EU27 have an average import value of Euro 310,000 and average of import quantity of 258tons from the Philippines. This further shows an average import price of Euro 1.22 per kilogram of banana chips.

¹¹ Further details of BAS-AMAS data showing the Philippines export performance to other countries from the year 2008 to 2010 in terms of both quantity and FOB Value

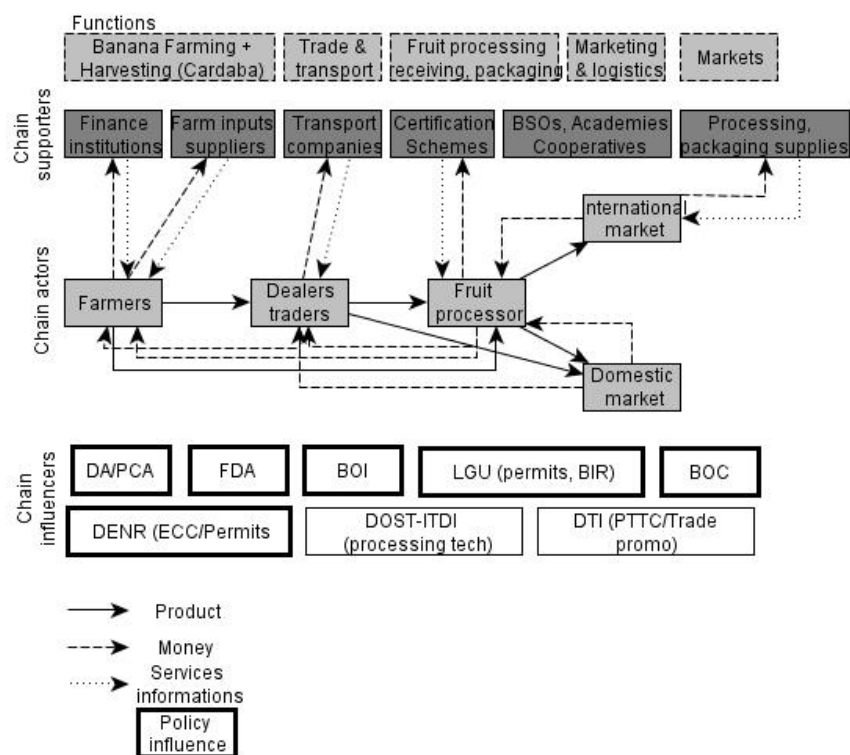
A large number of companies are transforming bananas in chips with about 80 SMES at the national level with a larger concentration of processors in Davao (XI) region of Mindanao (25 SMEs). The gender balance at the different stages of fruit processing varies from 60%-70% for women and 30%-40% for men.

Region	BANANA CHIP COMPANIES (As per DTI)
NCR	1
CAR	5
I	1
II	13
III	4
IV-A	1
IV-B	0
V	0
VI	10
VII	4
VIII	0
IX	0
X	13
XI	25
XII	2
CARAGA	0
ARMM	1
TOTAL	80

Table 24 Banana chips companies across regions

2.4.2. Value Chain

The VC map as shown below illustrates the industry structure for the banana chips. Primarily, it involves functions from banana farming, harvesting, trading and transporting, fruit processing from receiving to packaging, marketing and logistics and then to market distribution.



Value Chain 3 Banana Chips Philippines

Philippine National Standard (PNS/BAFPS 08:2004/ICS65.020.20) for cooking bananas like 'Saba' and 'Cardaba' sets the classification for fresh bananas and its quality standards, tolerances, packaging & handling, marking and labelling, and pest management. Cardaba bananas are the preferred type for cooking and banana chips production. Bananas are widely grown in the Philippines, but are mainly traded as a 'fresh product'. A decline is observed in the below trade statistics in 2009 with stable quantities traded in 2010 but at a higher price than in 2009.

2.4.3. Chain actors and their functions

Farmers: The chain starts at banana farming being acted by either the landowners themselves or farmers who are tenants in the land. The industry's mode of financing for this function is either through self-financing for those landowners or farmers with sufficient funds, bank loans, and other financial arrangement such as contract growing which is the most common. In contract growing, the financier who is either the trader/agent or the processor finances the farming inputs which vary from one contract growing arrangement to another. However, for contract growing arrangements, farm gate prices which the financier will buy from the banana farmer is set at pre-agreed price ranging from PHP 5-8 per kilo¹².

On the productivity aspect of the fresh banana, as per analysis of gathered data from BAS (Bureau of Agricultural Statistics), for 2010:

- The average yield per banana plant per year is at 34 kilograms,
- The average yield per hectare per year is at 14MT,
- The average revenue per hectare is at PHP84K,

¹² No information was secured on the cost of farming inputs for contract growing during the study

- On the average, farm gate prices would range from PHP 5-7 per kilo.

It is also interesting to note that some provinces are reaping about 40MT or more per hectare annually like Lanao Del Norte (41mt), Davao Del Sur (41MT), North Cotabato (41MT) and Saranggani (39MT). The variances from the national averages can be attributed to the soil fertility level, climate, farming technologies and practices.

Upon harvesting fresh bananas are sold by the farm owners or farmers to their financiers who are usually the traders/agents. For those without contract growing arrangements, after harvesting, fresh bananas are then sold either to the traders/agents or directly to processors. There are also banana farmers who formed cooperatives. These cooperatives also buy from member farmers and sell collectively in bulk to traders/agents and to processors.

Traders and processors

Fresh bananas that are of acceptable quality to the processors are subject to banana chips production while those that fail the minimum requirement set by the processors are either sold to localities at a bargain price to be cooked as 'banana cue' and sold in the local neighbourhood or as animal feed. 'Banana cues' are sold at a price ranging from PHP 8-12 per stick with 2 pieces of deep-fried sugar-coated banana per stick.

Processors quality standards for banana chips production are generally based on maturity (should be 110-115 days matured), size (length of at least 3"), texture, and level of ripeness.

Processors buying prices at landed plant range from PHP 8 to 10 per kilogram of bananas. Mode of payment is generally on cash on delivery and for some processors in mutual agreement with the farmers, they extend advance payment to the banana farmers to secure future supply at a pre-agreed price.

The fruit processing function starts at receiving and sorting to check for quality standards compliance. This function is done by the fruit processor. The processing function covers from receiving until packaging.

The processing cost is primarily composed of fresh banana cost, cooking oil + sugar inputs and processes involved in terms of technologies and manpower. As per interview with processors, the cooking oil cost would range from PHP 65 per kilo for the regular RBD (refined-bleached-deodorised) grade up to PHP 95 per kilo for high grade RBD. The sugar costs would range from PHP 55-60 per kilo on the retail and at PHP 45-50 on the wholesale basis¹³. As per analysis from gathered data, it turned out that the fruit processing cost is at the range of PHP 10-25 per kilo¹⁴. The gender mix of the different stages of fruit processing functions from receiving, to sorting, to peeling, to washing, slicing, frying, draining, cooling, flavouring to metal detection and packaging varies considerably.

Exporters: The marketing of banana chips is usually being done by the fruit processors themselves who are at the same time generally the exporters as well. The current market FOB price for the banana chips for exporting is at the range of USD 1.50 – 2.00 per kilogram of banana chips and these are channelled through

¹³ For the cost of processes in terms of technologies and manpower, none of the interviewees disclosed such figure either due to trade secrecy or its inability to do production costing and analysis.

¹⁴ See excel sheet on "Cost Estimate for VC – 08 Dec 2011)

importers. The domestic market pricing for banana chips is on the average of PHP 200.00 per kilogram and market channel is through wholesalers and supermarkets.

Generally, terms of payments are at 50% DP and the 50% balance to be paid before or upon shipment date. Mode of transmittal is generally through telegraphic transfers. For some exporters for their EU bound exports, mode of payment for the 50% balance is on CAD (Cash Against Document).

For the sea freight shipping costs, the domestic shipping costs are on average PHP 2,400 per cubic meter and PHP 3,500 per cubic meter for seaport-to-seaport and door-to-door mode of shipments respectively. The international shipping from the Philippines to the key EU countries (Netherlands, Germany, Belgium, France, Italy, UK) costs on average USD 800.00 per twenty equivalent units (TEU) on a seaport to seaport basis plus Philippine trucking cost of USD 100.00 per TEU and EU trucking cost within its base port of USD 200.00 per TEU. For computation purposes, one (1) TEU is equivalent to 28 cubic meter approx. and one (1) cubic meter (cbm) is equivalent to approximately one (1) ton of fresh & processed fruits. The shipping costs that are indicated are based on November 2011 rates in the light of very low load factor from Philippines to EU shipments. Sea freight international shipping costs may vary from time to time and with more dynamics than the airfreight international shipping costs.

For the airfreight shipping costs, the published rates for domestic shipping would average at PHP 35.00 per kilo and PHP 80.00 per kilo for airport to airport and door to door delivery mode of shipments respectively. The published rates for international shipping costs would average at USD 5.00 per kilogram, USD 7.00 per kilogram and USD 9.00 per kilogram for Asia, USA and EU-destined shipments respectively. These domestic and international shipping rates are for 21 kilogram to 100 kilogram weight breaks, lower rates can be availed for higher weight breaks or exporter’s arrangement with courier companies.

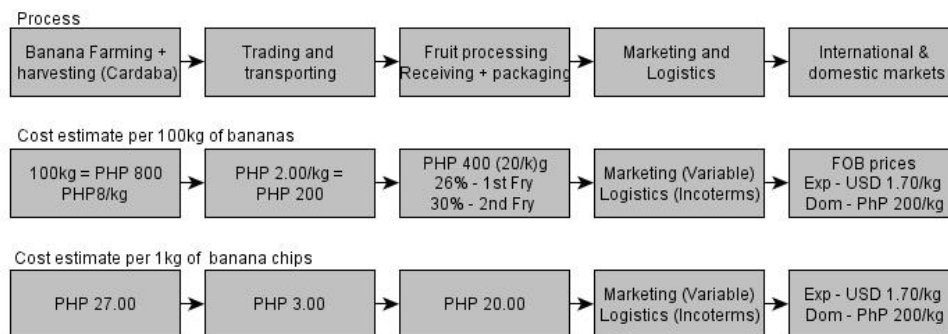


Figure 8 Cost estimate banana chips production¹⁵

- From the above illustration, the Ex-factory per kilogram cost for Banana chips would average from PHP 50-60 per kilogram (USD 1.20 – 1.5 per kilogram at today’s average foreign exchange) which are then sold at an average of USD 1.60 – 1.80 per kilogram) in the international markets, earning at an average of 20% - 30% margin. The domestic market pricing which is at PHP 200 / kilo would earn the processor a gross profit of 200%. Most processors used cost-plus pricing structure for their pricing strategy.

2.4.4. Chain supporters and their functions

¹⁵ See also annex 20

Financing agencies

On the banana farming to harvesting, they extend financial services to the farmers' financiers such as the traders/agents on the purchase of fertilisation inputs and labour costs for the maintenance of banana farms until harvesting.

On the banana chips production, they extend financial services to the processors on the purchase of fruit processing machines, technology upgrades in terms of processes, research and development, renovation or construction of processing facilities and even for the purchase of pick-up / delivery vans or vehicles. Some of the processors have standby credit facility with these financier institutions.

These financiers are either institutions or individuals who extend financial assistance in the form of loans to the banana farm owners or famers, contract growers, and fruit processors. These financier institutions are the commercial and rural banks, lending companies and for individuals, these are enterprising individuals through informal lending services.

Transport companies: After harvesting, from the banana farm, it is usually being transported either by land if it is to be delivered within the same province or location, by sea if it is to be delivered to another province, location or island.

For the export of banana chips, it is primarily being moved via containerised sea freight movement or loose cargo airfreight movement, same goes with domestic market.

On land movements, some fruit processors do the transporting themselves specifically on picking up of fresh bananas straight from the farm or for processors located in another island from the banana farm, they use their own transport fleet to pick up the bananas from the ports.

Certifying bodies: As certifications are being required by buyers or as required by the importing countries, the services of these organisations are also involved. There are certifying bodies operating in the country such as the TUV-Rheinland, SGS Philippines, Bureau Veritas which are some of the big certifying bodies operating in the country. Certification standards include HACCP/HALAL/Kosher/ISO 22000 Food Safety Management Systems (FSMS) among others. Certification costs would vary from one standards to another, from one coverage to another, and from one coverage period to another and on a per facility or site basis.

BSO: There are several business support organisations (BSO) that covers the banana chips industry. Such BSOs include AFIME , Philfoodex, Chambers of Commerce & Industries, and Philexport.

Association of Food Industries, Manufacturers and Exporters Inc. (AFIME) – Cebu Chapter is one of the sector members under Philexport Cebu umbrella¹⁶ which aims to organise and strengthen the food sector in Cebu.

PHILFOODEX (Philippine Food Processors and Exporters Organisation, Inc. is a non-stock, non-profit organisation composed of micro, small, medium and large scale food manufacturers and exporters in the Philippines. Established in 1986, PHILFOODEX is the leading food association in the country with around 300 members. One of its mandates is to promote closer coordination among farmers, processors, exporters and other stakeholders to achieve increased exports of food.

¹⁶<http://www.philexportcebu.org/index.php/Members-Directory-Sectoral-Members.html>

As for the cooperatives, there are farmers' and processors' cooperatives or organisation operating in some of the regions. VICTO (Visayas Inter Coop Training Organisation) is a confederation of more than 200 cooperatives operating primarily in Visayas-Mindanao. It primarily operates on financing and capacity building services to its cooperatives-members. These capacity building would range from coop management, human resource management, strategic thinking, financial management and many more.

There also packaging suppliers in the area that supplies quality and EU standards compliant packaging materials for the fruit processor. These packaging supplies come either in plastic pouches or packs, secondary and tertiary packaging materials of export standards. The average packaging cost computation which includes costs for primary, secondary and tertiary packaging material is at PHP 2.00 - 3.00 per kilogram.

A utilities company refers to companies supplying power (electricity), water, telecommunication services. All regions practically have available services although at different levels in terms of standards, service quality and costs. There are regions with more stable power supply than the others, with higher costs than the other regions. The power cost would range from PHP 7.00 – 8.00 per kilowatt-hour being incurred by processing plants.

2.4.5. Chain influencers and their functions

Department of Agriculture (DA)

The DA is the lead agency mandated for the banana production improvement. As per interview with DA, banana is one of the prioritised crops in the country. DA have HVCC (High Value Commercial Crops) department per region that covers banana as one of its priority crops.

Cooperative development authority (CDA)

As per interview with CDA, their mandate is to legitimatise all cooperatives organised in the country. Its mandate also includes the development and building of capacity for these cooperatives in terms of management, strategic planning, human resource development, training, coop management skills.

For other influencers please refer to chapter 3.2.5.

2.4.6. Bottlenecks of the chain

Interviews and data analysis, allowed the identification of the main bottlenecks hindering exports along the export value chain. These were categorised according to their solvability possibilities and clustered considering supply, processing, organisational, and market-related.

Potential supporters were also clustered and matched with related bottlenecks to draft possible interventions to ensure synergies between actors and efficient operation of the value chains.

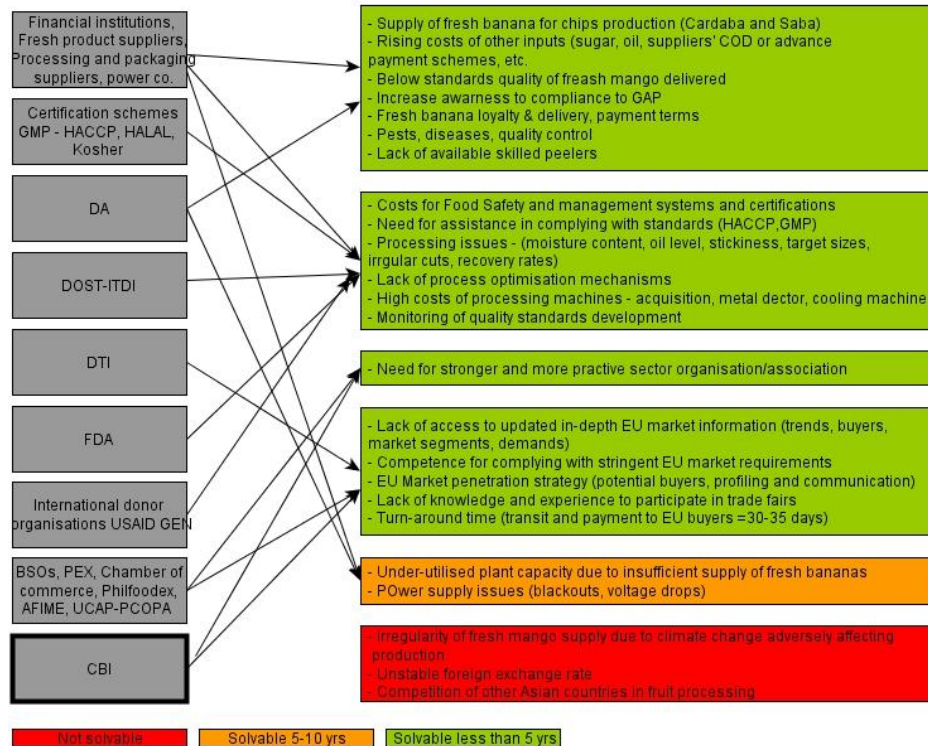


Figure 9 Constraints mapping Banana Chips

During interviews with relevant stakeholders, the bottlenecks solvable on short term period were then identified and clustered according to its relation to the value chain.

Problems related to supply, production, costs of inputs and disease control could be managed through interventions at the suppliers' level by local organisations and government bodies. Trust relationships between farmers and traders need to be addressed for a more efficient supply chain. This is not where CBI can have a substantial impact, neither it is the core of their knowledge. The Department of Science & Technology could provide support with regards to complying to GAP, HACCP and Food safety awareness standards at production level. The Department of Science and Technologies (DOST) and the Food & Drug Administration (FDA) could provide capacity building on GMP/HACCP/Food Safety & Management Systems compliances. DOST can also intervene to address processing issues through its ITDI agency, development and monitoring of quality standards, development of process optimisation mechanisms, and costs issues for acquisition of processing machines through its SET-UP Program¹⁷.

The strengthening of the industry or sector association can be influenced by both Business Support Organisations such as Philexport, AFIME, & Philfoodex for handholding and benchmarking purposes, and CBI through its BSO modules. The market-related bottlenecks identified can be influenced by DTI through its Export

¹⁷ "The Department of Science and Technology (DOST) launched the Small Enterprise Technology Upgrading Program (SET-UP) in response to the call for more focused programs of assistance for small and medium enterprises (SMEs). SET-UP is a nationwide strategy to encourage and assist SMEs to adopt technological innovations to improve their operations and thus boost their productivity and competitiveness. The program enables firms to address their technical problems through technology transfer and technological interventions to improve productivity through better product quality, human resources development, cost minimization and waste management, and other operation related activities." Source: <http://webgis.dost.gov.ph/>

Pathway Program (EPP), BSOs through networking in terms of market information and linkages, and CBI for its MI & ECP modules.

On the medium term, As for the supply of fresh mango, banana supply to processors is not constant and insufficient. The Department of Agriculture (DA) is the stakeholder the most likely to influence the supply of fresh bananas through policies and incentives.

Some bottlenecks such as the climate or the instability of the foreign exchanges rates can be mitigated through increase resilience of the stakeholders and improved efficiency in the chain. Competition with Asian countries can be improved by increasing market knowledge mechanisms and monitoring.

Identified bottlenecks	Critical ? (y/n)	Risk for bottleneck non-removal on short term ? (H=hi, M=med, L=low)	REMARKS :
1. High Costs of food safety and management systems	Y	M	DTI can spearhead in collaboration with DOST programs to build capacity for the sectors on safety management systems.
2. Need of competence on GMP/HACCP Compliance assistance	Y	L	
3. Processing issues	Y	L	DOST interventions on continuous improvements on processing technology is crucial. - Private consultants can also be tapped.
4. Development and monitoring of quality standards	Y	L	
5. Lack of process optimisation measurement mechanisms	Y	L	
6. High costs of processing machines acquisition	Y	M	- DOST-SET-UP Program can also tapped to address.
7. Need of strong institutionalised industry sector association	Y	M to H	- The sector or its members should first organised themselves, then, external help can come in. - CBI can extend its expertise on institutional development and

			strengthening.
8. Lack of access to updated and in-depth EU market info	Y	L	- CBI can extend its market related services such as on market intelligence, company level export coaching, matchmaking facilities, sectorial export coaching, company profiling, market research and analysis trainings, market entry strategising, and other specific company level training needs on process optimisation, productivity, safety, packaging, etc.
9. Competence for compliance to the stringent EU market access requirements	Y	M to H	
10. EU Market penetration (entry strategies, potential buyer profiling and communication)	Y	M to H	
11. High costs of EU Trade fair participation	Y	M	
12. Transit and payment turnaround time for EU buyers	Y	M to H	
13. Supply of fresh bananas	Y	M to H	
14. Under-utilised plant capacity due to insufficient supply of fresh bananas	Y	M to H	

During the December 5 workshop, a breakout session was conducted to validate the above identified bottlenecks and draw specific swot strategies, to propose interventions, to envision the outcome/output from the proposed interventions, to identify which bottlenecks and interventions can be solved by CBI modules, and to do prioritisation on the proposed interventions to ensure focus, risk management and project manageability. The complete and comprehensive output report for the breakout session is attached to this main report (annex 13)

The waste of banana peelings has various opportunities for processing which could be commercially interesting (see annex 19). Furthermore, banana leaves can also be commercialised.

2.4.7. Conclusions Dried Banana

To alleviate the identified bottlenecks, the sectors should first strengthen its organisation and create synergy under the leadership or mentoring of a lead umbrella BSO which has the credentials for export development and promotion of projects. Therefore, working on market access information and strengthening of Typical CBI-BSO support should include:

- Market Intelligence Program for improved access to the EU market through continuous updating on relevant market developments through market research and analysis to be provided to its members - both fresh bananas producers and to processors.
- Sector or company level export coaching programs to increase export readiness, competitiveness and maximise EU market potential. Collaboration for processing practices and workers development programs towards compliance to EU Market access requirements, market entry strategizing and establishing sustainability in exporting activities could also be desirable programs.
- Continuous capability building for market expansion and compliance to changing market access requirements such as food safety standards, quality, traceability, fair trade, packaging design and all legislative and non-legislative market requirements.
- Advocacy for CSR principles to be implemented throughout the entire chain on People – Planet – Profit Pillars. This includes compliance to human rights, labour-related laws, and employees’ welfare development.

All of the interviewed exporters as a representative sample have spare capacities since current operation is at an average 60-70% from its full capacity due to supply issues and for some, lack of market. Most of the interviewees have the willingness to expand capacity as the market expresses signs of growth. Meanwhile, supply issues need be address by the appropriate organisations.

Dried banana - Philippines

Criteria	Indication	Comments	Ranking
Potential EU export	Low on short / moderate on mid-term	The dried banana sector is not yet equipped to supply EU markets nor has it the required capacities. Dried banana chips is at this moment merely an iconic product, more suited to the "gift-sector" then to mainstream food ingredients sector.	1
Sustainability	Good	No major constraints reported	2-3
Local leverage	Reasonable / good	Typical smallholder crop, local drying and packaging provides additional jobs/income.	3
Presence of SMEs	Good	SMEs dominated sector	3
Partnerships	Low	Besides concerned government agencies no other major actors are supporting the sub-sector	1
BSO	Good	Philexport Cebu is well capacitated to support the banana chain actors particularly the exporters	2
Attribution	Low-moderate	Besides constraints in secure supply, compliance with export and identifying promising product-market combinations is required.	2
Other issues		Market research connected to product development and innovation are necessary to tap into European markets.	

Total: 15

Table 25 Chain evaluation

2.5. Conclusions Philippines

Coconut production is a smallholder crop. Farmers own typically 1 to 1,5 hectares of coco plantation only.

Demand for coconut oil and the global market is high and stable. In past coco oil was neglected and substituted by higher yielding palm oil and to extend soy oil. Although demand is high this does only marginally lead to increased prices as in price setting coco oil again competes with the use of other vegetable oils.

Main constraints in the value chain concentrate around the production and supply of raw material. Old stands need to be re-planted or rehabilitated with higher yielding varieties. With a time to production of five years this will take time.

The export sector is dominated by big companies with SME-size companies operating in their shadow. Profit margins are thin and the sector is volatile and competition with other vegetable oils keeps prices at a low level. SMEs are competing with bigger companies for supply of raw material and for a market share in the export markets.

Marketing is currently not the real problem, rather supply related problems hamper growth of the export sector. However, the sector is bulk oriented with limited value adding, branding or niche marketing occurring. The demand for bulk quantities of coco-oil (merely crude oil) are merely found in China and USA. Profitability is however low along the entire chain.

A way out could be offered by specialising on alternative product development. Coco oil has a potential in terms of functional foods because of its health benefits: coco flower is gluten free, coco sugar contains high levels of protein and micro-nutrients.

We recommend the CBI to refrain from engaging in the mainstream coco-oil sector and rather deploy some initial pilot activities around emerging high-value products based on coco like functional foods having a health benefit for example coco sugar.

Three linked sub-projects are suggested:

- A geographically targeted pilot in Davao, linking to the Davao coco-industry cluster. PhilExport Davao has already established linkages with the cluster. The cluster is a multi-stakeholder initiative yet private sector – led. Focus should be on strengthening SME level exporters in the Davao area through targeted coaching and training and enhancement further collaboration on institutional level.
- Conduction of an in-depth EU market study on coco-oil based functional food ingredients that will feed into the conduction of a strategic sector planning exercise for the export oriented SME coco oil sector.
- Strengthening of two local BSO organisations in Davao Province with a specialisation on the SME based coco-oil sub-sector.

The United Coconut Associations of the Philippines (UCAP) is an evident partner in all three trajectories.

Dried fruits (banana, mango)

The results of the value chain analysis show a reasonable but not very exciting future export prospect for dried bananas and dried mango. Both are almost iconic products to the Philippines having a promotional rather than a real economic value.



3. Recommendations

From value chain analysis to formulation of a business case

1.5. Summary Recommendations

The international market for food ingredients is growing and at the same time becoming increasingly demanding and competitive, particularly when looking at EU import markets. SMEs in targeted country are at risk of not being able to step up against increasing demands and compliance requirements. This would result in losing part of their current market share thus not being able to contribute to sustainable economic development in the agricultural sector.

Based on analysis done (desk studies, value chain assessments, validation conferences) this business case proposes an integrated, regional programme on food ingredients in S.E. Asia, focusing on the following sub-sectors:

Pilot programmes (market orientation / training / limited MI assistance):

- Processed fruits (Philippines)¹⁸
- Oils and fats (coco oil, Philippines)¹⁹

The business case implies the implementation of integrated programmes, conditioning CBI's engagement in the sub-sectors to the opportunities for alignment with programmes/projects addressing downward chain actors and activities. Partners can include national as well as inter-national agencies. Most obvious CBI partners for the core sub-sectors are:

Cacao, coffee, tea: UTZ certification, Solidaridad, Tropical Commodity Coalition,
Spices and herbs: UNCTAD, IDH, Fair Trade,.

For both sub-sectors the EU market are moving towards an increasing demand for certified sustainable standards. Social and labour criteria are increasingly added (Fair Trade certification). Another emerging market trend in the coffee and tea sub-sectors is the urge towards product diversification feeding a demand for specialty coffee and tea. (KIT, 2010)

The proposed programme takes the above market trends as starting point. In terms of market segmentation the programme will focus on specialised product-market combinations, targeting specialty (niche-) markets rather than targeting (bulk oriented) commodity markets. Distinct product features and/or qualities can be obtained through certification (organic, Fair Trade, UTZ, RF Alliance) and/or intrinsic quality features (taste, appearance, functional qualities like health benefits).

Most government programmes, as well as donor supported programmes in the targeted sub-sectors, address constraints in the production / supply part of the value chains. The CBI adds value to these efforts by bringing in a complementary pull factor through the facilitation of export linkages and increased export volumes.

¹⁸ Pilot programme including basic training programmes (Business Planning and Development, MI modules)

¹⁹ Tailored Market Intelligence for specialty coco-oil products only

A detailed programme planning will have to be further elaborated per sub-sector and country but would include i) export coaching to targeted exporters (initiated with approximately 70 enterprises), ii) Market Intelligence and iii) Strengthening of Business Support (4 BSOD trajectories) and iv) facilitation of Public-Private-Partnerships. One or two geographical target areas are defined per country, allowing for concentrated, effective and well aligned programme implementation including provision of CBI modules. Tentatively the selected focus areas are: Davao (coconut oil, processed fruits) in the Philippines.

1.6. Ranking value chains

Overall results of the quantitative indications per chain and ranking are as follows:

Value Chain	Overall result quantitative judgment
Coco-oil Philippines	14
Dried mango Philippines	15
Dried banana Philippines	15

Table 26 Overall Chains evaluation

Dried fruits (mango and banana) in the Philippines. Coco-oil in the Philippines close the rank.

In translating the above ranking into concrete recommendations for future CBI programme investments another factor was taken into account. In cases where a value chain was judged as contributing low on a certain aspect / criteria (marked as a 1), it was judged whether or not, such low qualification could possibly be overcome through taking specific measures or through adapting the programme design. In cases where this was not found feasible we recommend the CBI not to invest in the concerned sub-chain, although the overall score may be comparatively good.

This is the case for:

- Dried mango and dried banana in the Philippines, scoring the lowest score (1) on potential partnerships.

This sectors have limited economic (export) importance and hence do not attract a lot of attention from other development partners nor of government agencies. However, it is judged that once the CBI could through limited yet targeted support prove the potential of both products at EU level, other partners can be interested to invest in both chains. As a result we recommend to design a limited support programme focusing on further identifying product-market combinations holding future potential.

The results of the comparative analysis feed into the recommendations as described in the chapters below.

1.7. Proposed strategy

1.7.1. Need for integrated approach

In all targeted sub-sectors constraints in the value chain are not confined to marketing constraints only but concentrate to certain extent in down-ward linkages. Reliability of supply lines is core to successful market development.

For reasons of complementarities an integrated approach is recommended in which CBI aligns support to its core actors (exporters, BSOs etc.) in the value chain / sub-sector with the support other organisations render to other actors (producers, financial institutes etc.) in the same chain or sub-sector (see figure 1 below).

Multiple support dimensions

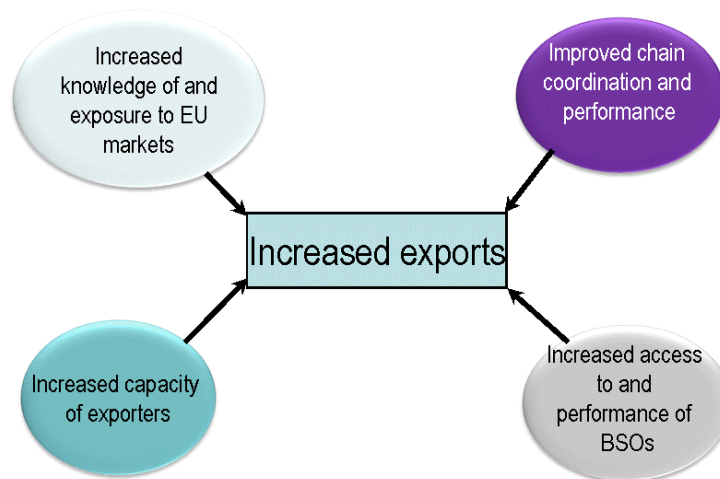


Figure 10 Multiple support dimensions

Direct programme partners to the CBI will be: selected SME-level processor/exporters, selected BSOs and private sector commodity based associations or federations. Indirect partners will include: government agencies, development organisations and financial service providers.

Direct objectives for the CBI programme are:

- Increase knowledge of and exposure to EU markets (participation in trade fairs, business visits, trade missions, MIS systems etc.) for targeted enterprises
- Improve chain coordination and chain performance through partnering with other support organisations to ensure support to the entire chain
- Increased capacities of the targeted enterprises in complying with EU trade conditions and market demands through customised capacity building trajectories on enterprise level and generic training packages for targeted enterprises
- Increase the access to and performance of local BSO and BDS service providers through training and coaching trajectories

Moreover, efforts to improve the policy environment for export oriented trade are required. This tasks lies largely with government agencies as mentioned before. Private sector associations can fulfil however an important advisory role towards the government and can engage in advocacy to promote favourable trade conditions. In the Philippines such private sector associations are operational, generally organised around main commercial commodities. An effective dialogue and inter-action between these bodies and policy makers should be stimulated.

Observed constraints in the value chain	Critical constraints? (Y/N)	Solvable in short time (Y/N)	If a solution yet provided? If yes, CBI or others?	Risk that it be effectively solved (high/low)
Quantity and quality of supply and reliable procurement modules	Y	Y (within 5 years period)	Mostly government led programmes supported by development partners are addressing supply constraints	Medium
EU export market readiness of processor / exporters	Y	Y (within 5 years period)	No, CBI has unique proposition in this	low
BSO – BDS support to SME sector	Y	Y (within 5 years period)	To certain extend but at insufficient scope	Low

Table 27 Value chain constraints analysis

1.7.2. Need for an area focus

To ensure effectiveness of the CBI interventions vis-à-vis interventions of other support organisations an area based approach is proposed. The core concept is an area confined and sub-sector or value chain based Public Private Partnership (PPP). Scope of interventions combines Value Chain Development with Local Economic Development (LED) at sub-national (mainly Provincial) level. Targeted Provinces are selected upon:

- i) Being major production areas
- ii) Characterised by significant presence of SME level processors / exporters engaging in targeted sub-sectors
- iii) Priority areas for public investment in concerned chains/sub-sectors (alignment with policies)
- iv) Presence of partners and potential or complementarities and synergy (integrated programme) and/or multi-stakeholder initiatives around the targeted sub-sectors
- v) Concentration of various sub-sectors targeted by the CBI Food Ingredients programme in one geographical area.

Based upon the above criteria the selected focus areas are: Davao (coco oil, fruits) in the Philippines.

It is expected that buy-in and commitment of required programme partners and effective functioning of the sub-sector PPP's can be achieved more easily at sub-national level. Successful PPPs could thereafter be up-scaled / rolled-out to other Provinces.

1.7.3. Push – pull linkages

Intervention areas do respond to identified constraints in the (export) value chain in an integrated manner (see table 56 above). The parallel increase of sub-sector linkages and sub-sector coordination with increased capacity of exporters and an improved service environment due to capacitated BSOs will create synergy as interventions and their results will mutually re-enforce each other. The complementarities between production oriented support intervention (push factors) by partners and the pull marketing brought in through the CBI support will be complementary and increase effectiveness, efficiency and leverage.

The precise mixture and targeting of the various CBI modules has to be finalised in a customised way based on the specific characteristics of the country, the targeted sub-sector and the capacities of participating exporters and BSOs. Regarding the generally low capacities of most exporters, a clear graduation sequence has been regarded in the design of the Export Coaching trajectories; participation in business development modules will be required prior to engagement in export oriented coaching modules, certification and market entry.

1.7.4. Safeguarding social dimensions

The SME sector is typically the back-bone of the economy in the Philippines, providing the majority of the income and jobs for both men and women. In the food ingredients export sector SME level processors/ exporters are competing with bigger companies. In case not assisted they will not be able to stay on even competitive levels losing out market shares which would lead to the loss of much needed jobs and income. The proposed programme will strengthen the resilience of the SME food ingredients sector, increase competitiveness, market penetration and export potential, leading to sustained employment creation and income generation. Moreover, the promotion and adaptation of certification schemes focusing on sustainable and fair production and trade (RF Alliance, IDH, organic etc.) and CSR concepts will lead to tangible improvements in terms of sustainability (People, Planet, Profit);

People: generate employment and income for the (rural) poor under fair conditions, promote gender balance and ban child labour, promote Fair Trade certification.

Planet: strive for sustainable production methods and promote / facilitate certification (organic, RF Alliance, IDH)

Profit: contribute to sustainable economic development in the agricultural sector through employment and income generation, in-country value adding.

1.8. Sustainability of the programme (results)

As the programme results and impact are grounded in increased capacities and linkages (within the value chain and import-export) which are in nature irreversible, results and impact will sustain beyond the programme duration.

Targeted support is required to keep the sector competitive. Such support should cover the entire value chain from producers to exporters as it is the functioning and performance of the entire chain that determines competitiveness.

For this reason an integrated approach is required in which CBI aligns support to its core actors (exporters, BSOs etc.) in the value chain with the support other organisations render to other actors (producers, financial institutes etc.) in the same chain. The opportunities for such complementarities are present in the studied sub-sectors.

Solution design

Constraints	Why does this prohibit exports?	How can this problem be solved?	Can this be achieved through a CBI module
Quantity and quality of supply and reliable procurement modules	Unreliable exports, low responsiveness to market dynamics and demands	Production enhancement, increased value chain coordination	No
Export readiness	Low compliance with	Capacity building	Yes, through

exporters 1); Exporters are not aware of requirements and / or lack capacities to comply	EU market requirements, lack of certification (HACCP, GAP etc.)	trajectories for selected exporters	Export coaching modules: audit, BD, export capacity, certification
Access to EU market intelligence	No forecasting nor product-market differentiation and low competitiveness	Access to tailored EU market Intelligence	Yes, MI modules
Access and quality of BSO and BDS	Lack of guidance and advice hampers (EU) market direction and compliance	Strengthening of BSO and increased access to services	Yes, BSO modules
Market linkages			Yes, Market entry modules

Table 28 Solution design

1.9. Result framework

Programme: Export Development Food Ingredient Value Chains S.E. Asia			
Goal	Contribute to sustainable economic growth in the target country through employment and income generation in the food ingredients sector.		
Objective	Increase the export capacity of 50-60 SMEs and improve the enabling environment for EU export through strengthened BSOs, accessible Market Intelligence and improved sector coordination.		
Project 1	Increase export capacity for 50-60 SMEs across four sub-sectors		
Output 1	Increased business planning and performance for 70 SMEs	Activities: (Export coaching modules) - Business audit (70) - Business Planning Development (70)	Un-intended result:
Output 2	Increased export capacities, compliance with EU import requirements and certification (50-60 SMEs)	Activities: (export coaching modules) - Export Capacity Building - Certification	Un-intended results:
Output 3	Increased linkages to EU markets and Import-Export linkages (50 SMEs)	Activities: (Export Coaching Modules) - Market entry regional and EU (50)	Un-intended results:
Project 2	Improved service environment for SME export through		

	customised and accessible business support services and market intelligence		
Output 4	4 BSOs have the capacity to respond to business support needs of SMEs	Activities: (BSOD and MI modules) <ul style="list-style-type: none"> - BSO diagnoses (6) - Market intelligence (4) - Export Development and promotion (4) 	Un-intended results: Disturb BSO market due to un-equal competition. Mitigation: open tender for participation
Output 5	Market Intelligence is accessible to SMEs through commodity based private sector associations (4-6 associations)	Activities: (MI modules) <ul style="list-style-type: none"> - Market Intelligence - Tailored Intelligence (coco-oil niche products, processed fruits) - Export intelligence 	Un-intended results:
Project 3	Improved sub-sector coordination through (informal) Public Private Partnerships around targeted sub-sectors development.		
Output 6	Improved coordination and alignment in 2 core sub-sectors	Activities: <ul style="list-style-type: none"> - Advocate for / facilitate (informal) PPP mechanism 	Un-intended results:
Output 7	Improved access to other service providers like financial services, certification / accreditation agencies etc.	Activities: <ul style="list-style-type: none"> - engage with stakeholders from start - Inception workshop 	Un-intended results:

Table 29 Result framework

See the figure below for the detailed result chain.

Regarding the attribution of results and outcome and impact, precise estimates can typically not be forecasted for integrated programmes in which capacity enhancement is the major driver for change.

We are however able to judge the attribution of the CBI investment to outputs and outcomes as follows:

Attribution level 1	Development would not occur without mentioned interventions
Attribution level 2	Development would occur without mentioned interventions but at a slower pace
Attribution level 3	Development would occur without mentioned interventions

We characterise attribution as follows for the different result levels:

Output level: 1 (would not occur without CBI intervention)

Outcome level: 1 (would not occur without CBI intervention)

Impact level: 1-2 (would not occur or occur at a slower pace without CBI interventions)

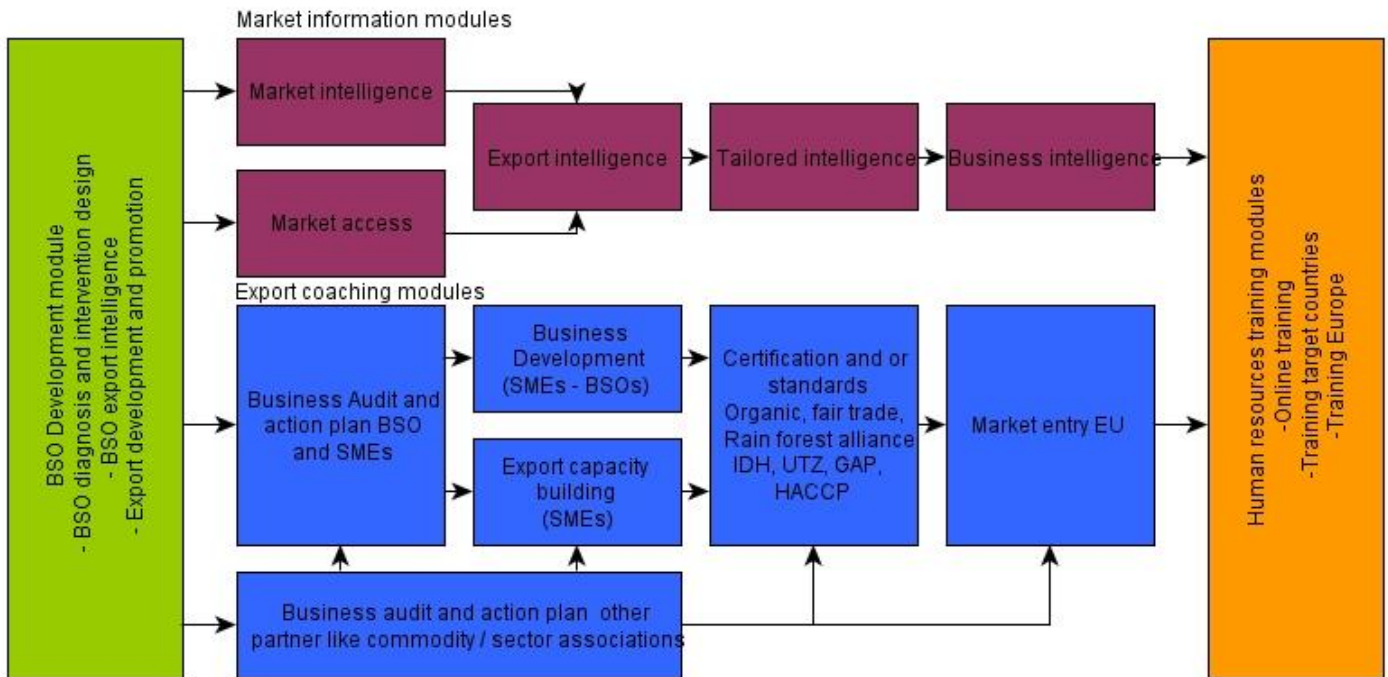
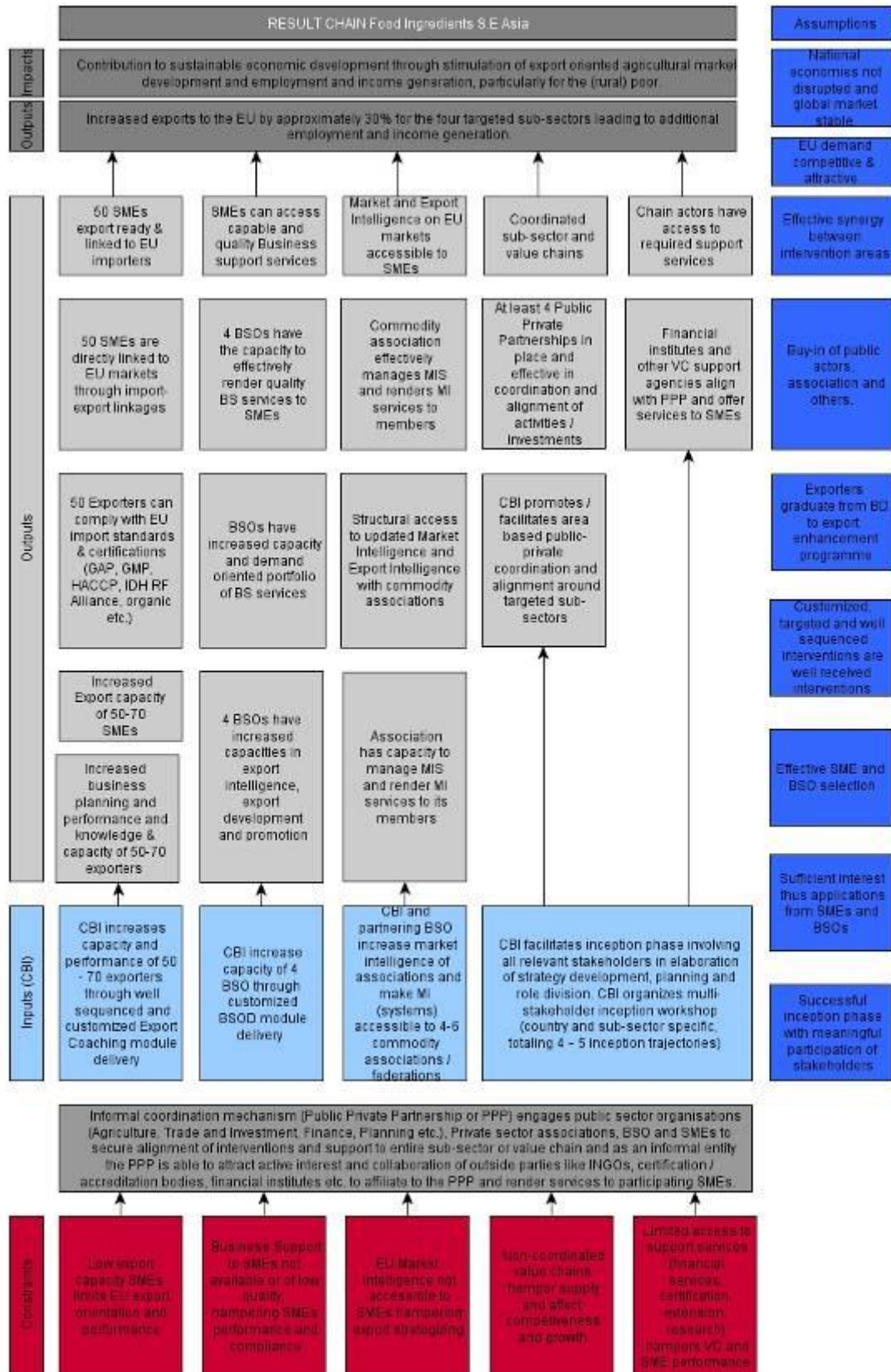


Figure 11 Modules sequencing

Result Chain CBI programme Food Ingredient South East Asia



Result Logic 2 CBI programme Food Ingredient South East Asia

1.10. Risk assessment

Risk assessment and mitigation

Risk event	Potential impact(s) on proposed CBI interventions	L	I	Risk mitigation measures
Risks on Programme (strategic and planning) level				
The programme cannot identify promising businesses and/or high potential businesses do not show an interest in the programme offer	Sub-optimal client selection leading to lower results and impact	1	5	Use existing networks, linkages and CBI partners to identify, select and communicate with potential target businesses. Formulate a clear proposition regarding CBIs offer to be disseminated amongst potential clients.
No suited / capable local BSO partners can be located and interested to collaborate.	Hampering sustainability and outreach of the interventions.	1	4	In the early phase BSO are actively approaches and invited to engage in the process of developing the programme.
Wrong match between the CBI service offer and real challenges / demand of businesses involved	Non effective / efficient programme implementation leading to sub-optimum results	2	4	In-depth participatory analysis of constraints and challenges in the chains and sub-sectors taking into account perspectives of all relevant stakeholders. Cross-checking of findings is necessary.
Averse economic developments at EU side hampers exports to EU	Foreseen impact in terms of increasing export figures are threatened	3	4	A flexible programme design led by a due monitoring system that allows for a timely response to changing external market conditions
Averse changes in the in-country policy environment relating to trade and exports of agricultural products	Foreseen impact in terms of increasing export figures are threatened	2	3	Including sector organisation with a strong lobby / advocacy agenda in the programme design and implementation.
No / limited government buy-in	Government agencies do not engage / support and parallel structures prevail, losing out on synergy.	2	3	Public stakeholders are approaches and invited to be part of the design process of the programme from the very beginning.
Challenges encountered in target value chains and sub-sectors are too big to handle for CBI or not relating to CBI's support offer.	CBI interventions are not targeting real challenges and constraints resulting in foreseen impact being threatened	3	4	Due value chain analysis and involvement of other support programmes / initiatives that are complementary to the CBI programme in terms of VCD. CBI interventions should also focus on building linkages and improved coordination within the sub-sectors and targeted VCs.
Development "fatigue" of SMEs / private sector due to large number of external	SMEs / private sector loses interest in partnerships and	4	4	Coordination and alignment between different external sector project and programmes is an absolute necessity. CBI should from the beginning look for synergy

interventions	collaboration with support initiatives			and complementarities and not act in isolation.
Emergence of a negative "competitive" culture and attitude amongst SMEs threatens joint agenda setting on behalf of the sub-sector.	Unwillingness to coordinate and collaborate leading to in-efficient / in-effective collective agenda setting and action on behalf of the sector and SMEs	3	2	Ensure inclusiveness of the CBI support with clear eligibility criteria. Balance specific support to SMEs with support to the sector as a whole.
Interventions of CBI are not well aligned thus not complementary	Foreseen synergy between various intervention levels is not happening hampering effectiveness and overall results	3	4	Align and sequence interventions well. Refrain from isolated interventions and strive for a complete support package addressing all constraints identified in the chain and in the chain environment
Interventions and results of interventions are not sustainable	Results will fade after CBI interventions	2	4	Adopt from the off-set a strategy of empowering local support providers through improving the capacities of local BSOs and BDS service deliverers. Fee for services programmes should be promoted.
Foreseen Public Private partnerships are not functional	Supportive context and leverage potential is missing, supply problems can hamper targeted exports.	3	3	Invest in buy-in of concerned governments and other partners. Ensure clarity about objectives and expected roles through multi-stakeholder inception workshop prior to programme initiation.

Table 30 Risk assessment and mitigation

Key

L = Likelihood	(5 = Almost certain, 4 = Likely, 3 = Possible, 2 = Unlikely, 1 = Rare)
I = Impact / Consequences	(5 = Severe, 4 = Major, 3 = Moderate, 2 = Minor, 1 = Negligible)
High likelihood ranking plus high Impact ranking (L x I) indicates high risk level (max risk 5x5 = 25 versus min. risk 1x1 = 1)	



CBI
Ministry of Foreign Affairs

Annexes

Annex 1 Initial long-list of eligible food ingredients sub-sectors

The CBI listed 10 sub-sectors in the food ingredient sector as follows:

- Fruits (dried fruit, pulps, puree, juices, concentrates, jams etc.)
- Vegetables (preserved, pastes, stir-fry kits etc.)
- Edible nuts (oils, butter etc.)
- Grains, pulses and seeds (cereals, oils etc.)
- Herbs and spices (sauces, oils, oleoresins)
- Coffee, tea and cocoa (green beans, powder, paste, liquor, butter)
- Honey (wax, pollen, royal jelly etc.)
- (Cane) sugar and syrups
- Oils and fats (coconut, palm oil etc.)
- Essential oils, oleoresins, plant extracts, natural food colors,

Annex 2 Country level indicators

Criteria	Indicators	Philippines	
		Absolute quantity or score	Relative score: 1-3
Export general ²⁰	Total current export (in US \$)	51,039,381,879	3
	% export growth (last 5 years)	1.65	3
	Average annual growth of exports towards EU	-6.40	3
	Growth of export to EC (in %) average 2001-2009		3
	Percentage agro-sector in total export to EU27 (in %)	14,4	3
	Percentage of agro-sector in overall GDP (in %)	11,3	3
	FDI (in million US \$)	1713.00	3
Score	SUB TOTAL SCORE		3
Enabling Trade Environment ²¹	Doing business (ranking)	148	3

²⁰ Data derived from DG Trade 2011 and EUROSTAT. Please note that some figures are provided in US\$ while other are mentioned in Euro.

²¹ Data derived from WB at <http://data.worldbank.org/data-catalog> and <http://www.ciesin.org/IC/wbank/sid-home.html> and <http://www.photius.com/rankings/> (Photius) and <https://www.cia.gov/library/publications/the-world-factbook/> (CIA)

	Cross-border Trade (ranking)	61	2
	Enforcing contracts (ranking)	118	2
	Lead time to export (median case – days)	20	3
Score			2,5
	SUB TOTAL SCORE		5,5
SME sector ²²	Total number of MSMEs	780,469	3
	Income equality: Gini Coeficient	44,5	3
Score			3
	TOTAL SCORE		8,5

²² Data derived from UNDP, FAO, WB
http://en.wikipedia.org/wiki/List_of_countries_by_income_equality
<https://www.cia.gov/library/publications/the-world-factbook/> and <http://faostat.fao.org/> and
<http://www.fao.org/economic/>

Annex 3 Qualitative Ranking of sub-sectors per country

Qualitative ranking sub-sectors²³

<i>Sub-sector</i>	<i>Economic potential and export volume to EU</i>	<i>Potential to improve sustainability dimension of the sub-sector</i>	<i>Local leverage (SME, added value and smallholders)</i>	<i>End score</i>	<i>Rank</i>
	Weighing factor 60%	Weighing factor 20%	Weighing factor 20%	Total 100% (maximum score = 10)	
Philippines					
Oils and fats	10	6	5	8,2	1
Processed fruits	6	8	7	7,2	2
Gums and resins	6	3	7	6,2	3
Edible nuts	7	6	7	6,8	4
Processed vegetables	5	7	7	5,8	5
Sugar (cane) syrups	3	4	7	4	8
Coffee, tea, cocoa	3	7	4	4	9
Pulses, grains	4	4	4	4	7
Essential oils	4	3	7	4,4	6
Honey	2	3	7	3,2	10

²³ The absolute numbers given are arbitrary and based on indicative judgments of the sector against indicator groups. The weighing factor is based on priorities as indicated by the CBI.

Annex 4 Assumptions in calculating increase in export value

Predicting the outcomes of CBI investments in terms of additional export volumes and value of such increase in exports is challenging. We are talking about highly volatile markets, at unstable economic times.

Uncertainties do not only exist at production level due to increasingly unpredictable weather conditions and ecological hazards that can change product flows dramatically from one year to another, but also due to rapid changes at the demand side. International trade and particularly international trade in luxury and/or high-end products depend highly on the overall economic developments at the importers side. Additionally, consumer preferences experience unprecedented dynamics in terms of quality, taste, appearance etc.

And again, changing consumer preferences and overall economic performances are strongly inter-linked.

Destinations and trade directions can switch easily as a result of recessions / low economic growth in one part of the world and/or fast economic growth in other parts.

In short, in order to predict future outcomes of any CBI investment, many variables have to be taken into account and assumptions have to be made.

The attached business case takes investments in 3 sub-sectors and 8 value chains as a starting point. The base-line of participating SMEs in terms of current export capacities vary greatly per value chain. Moreover, great differentiation between SMEs exists in size and export figures within one value chain. It is impossible to define a "typical" SME in the food ingredient sector in terms of export capacities, volumes and values, so estimates are based upon estimated averages of a diverse array of SMEs interviewed during the study.

The overall estimates in terms of prognosis increased in export volumes (percentage) and overall value of such increase should be seen in the light of the above.

Three main assumptions are key:

i) Number of SMEs participating:

Figures are based upon a total of 50 to 70 selected SMEs participating in a 4-years programme. The precise numbers of SMEs participating per sub-sector and country will largely depend on real interest and current capacities of SMEs.

ii) Increase in export volumes / value per enterprise

Furthermore we estimated an average of 30% increase in export volumes per participating SME enterprise that have engaged in the entire support trajectory offered by the CBI. Also this figure varies widely per value chain (from an estimated 300% increase for cacao to an estimated 5-10% increase for coco oil products).

iii) base-lines of SME enterprises at times of intake.

Again this figure varies widely per chain. Current export volumes / values will be relatively large for coco-oil in Philippines. Also based on the experience CBI gained in former support interventions in the food ingredient industry an average of 100,000 to 150,000 Euro increase in export value per SME enterprise is estimated. This implies an average export value of participating SME enterprises at times of intake ranging from 300,000 to 500,000 Euro.

Minimum scenario: 50 enterprises X 100,000 Euro increase in export value = 5,000,000 Euro

Optimum scenario: 70 enterprises X 150,000 Euro increase in export value = 10,500,000 Euro

<i>Sub-sector</i>	<i>End score²⁴</i>	<i>Rank</i>	<i>Judgment experts CBI</i>	<i>Judgment in-country partners</i>
Philippines				
Oils and fats	8,2	1	No comments	
Processed fruits	7,2	2	No comments	
Gums and resins	6,2	3	No comments	
Edible nuts	6,8	4	No comments	
Processed vegetables	5,8	5	No comments	
Sugar (cane) syrups	4	8		
Coffee, tea, cocoa	4	9	Not interesting as not competitive on world market	
Pulses, grains	4	7		
Essential oils	4,4	6		
Honey	3,2	10		

²⁴ Based on qualitative ranking of sub-sectors per country as provided in annex 3

Annex 8 List of interviews Philippines

Name of Organisation / Address	Contact Person / Position / Contact info	VC Stakeholder Classification	Remarks :
BANANA CHIPS ACTORS :			
Magic Melt (http://www.magicmelt.com/) Lapulapu City, Cebu	Ms Carolyne L. Go / CEO / +6332 495 8621 / 8903	Actor - Banana Chips	
Montano Foods Corp (http://montanofood.otopphilippines.org/) Dipolog City	Mr. Stephen Montano / Owner / +63920 9098375	Actor - Banana Chips	
BAPCO (Best Agri Products Processing Cooperative) Cagayan de Oro City	Ms. Flora T. Garcia / Officer Incharge / Tel. +63 919 209 3126	Actor - Banana Chips	
NM Food Products Bukidnon	Mr. Nestor O. Manuel / General Manager / +63 926 795 5667	Actor - Banana Chips	
CJ UNIWORLD CORP Davao City	Mr Robert D. Go / President / +6382 236 0465 or 66	Actor - Banana Chips	
EL COCO MFG CORP (http://www.elcoco.com.ph/) Plant site : Libungon, North Cotabato Sales office : San Pablo City, Laguna and Ayala Avenue, Makati City GS COMMODITIES General Santos City GSL FOOD ENTS. Sta. Cruz, Davao del Sur TAGUM COMMODITIES Tagum City , Davao del Norte	Mr. Dandy Estrellado / +6349 562 2733 (Laguna), +632 520 6008 (Makati), Managing Director for Production /	Actor - Banana Chips	
KF NUTRI-FOODS INT'L. (http://www.kfnutrifoods.com/home.php) Davao City	Ms. Marilou S. Fernandez / Director -sales and marketing / +6382-300 5494	Actor - Banana Chips	
FOUR SEASONS FRUITS CORP (www.fourseasonsfruits.com) Tagum City	Mr. Pitz O. De Gorio / Vice President - GM / +6384 2186778	Actor - Banana Chips	
COCONUT OIL ACTORS :			
Legaspi Oil / Davao City	Engr. Winnie Ladrero / +6382 234 0817	Coconut Oil Actor	
New Asia Oil Inc./Asia Pacific Oil Mfg. Corp./Far East Fresh Oil, Inc. / Davao City	Mr. Dennis T. Hao / Manager / Tel +6382 235 1697 /	Coconut Oil Actor	

	234 0692		
Davao Region Coconut Industry Cluster, Inc. / Davao City	Mr. Dennis T. Hao / Manager / Tel. +6382 293 0114	Coconut Oil Actor	
Wilmar Edible Oil Phils Inc. / Zamboanga del Norte	Mr. Hernani Sevilla / Officer In charge / Tel. +63 918 940 1064	Coconut Oil Actor	
Dipolog City Oil Mills / Zamboanga del Norte	Mr. Bobby Barrameda / Manager / +63 919 411 2809	Coconut Oil Actor	
AD Gothong Manufacturing Corp / Mandaue City	Mr. Dennis L. Tan / Exec Vice President and COO / Tel. +6332 3465212	Coconut Oil Actor	
Freyvonne Milling Services / Davao City	Engr. Antonio Sanglay / President and GM / Tel. +6382 291 1831	Coconut Oil Actor	
Limketkai Manufacturing Corp. / Cagayan de Oro City	Mr. Glenn Limketkai / General Manager / Tel. +6388 856 2221	Coconut Oil Actor	
DRIED MANGOES ACTORS :			
Itable Agri Industrial Corp. / Tubigon, Bohol	Mr. Dodie Itable - General Manager	Actor - Dried Mangoes	
M Lhuillier Food Products, Inc. / Mandaue City	Mr. Perry Ong / General Manager / Tel.+6332 422 1100 , 422 2762	Actor - Dried Mangoes	
Jojo's Food Products/ Cebu City	Mr. Eugene Co / Manager / Tel. +6332 346 9572	Actor - Dried Mangoes	
AEO International Food Corporation / Talisay City	Mr. Angel T. Ong / President & GM / Tel. +6332 272 6217 or 18	Actor - Dried Mangoes	
POLYFRUITS, Inc. / Dipolog City	Ms. Rosalina Salaveria / General Manaer / +63917 8375841	Actor - Dried Mangoes	
POMS Ventures Corporation / ECJ Farms Marketing Inc. / Roxas . Sales office: Makati City. Plant : Dipolog City, Zamboanga del Norte	Mr. William James D. Santos - Production Head / Tel. +6365 908 0251	Actor - Dried Mangoes	
SUPPORTERS :			
Development Bank of the Philippines (DBP), Cebu City	Rosa Celeste Alera - Pieras / Bank Executive Officer 1 / +6332 255 6314	Supporter - Banana Chips, Coconut Oil,	

		Dried Mangoes	
Philippine Business for Social Progress (PBSP), Cebu City	Maria Rocelyn Bernabe / Manager for Business Advisory Program / +6332 527 7741 to 48	Supporter - Banana Chips, Coconut Oil, Dried Mangoes	
Confederation of Philippine Exporters Foundation, Region 10 Chapter, Inc. (Philexport Region 10) , Cagayan de Oro City	Mr. Michael Joseph Ignacio / Executive Director / +63 8822 710610	Supporter - Banana Chips, Coconut Oil, Dried Mangoes	
Confederation of Philippine Exporters Foundation, Region 11 Chapter, Inc. (Philexport Region 11) , Davao City	Ms. Angel Abella / Staff	Supporter - Banana Chips, Coconut Oil, Dried Mangoes	
INFLUENCERS :			
Department of Trade and Industry (DTI) Region 7 / Cebu City	Ms. Asteria Caberte / Regional Director	Banana Chips, Coconut Oil, Dried Mangoes	
Department of Trade and Industry (DTI) Region 10 / Cagayan de Oro City	Tel. +63 88 857 4034	Banana Chips, Coconut Oil, Dried Mangoes	
Department of Trade and Industry (DTI) Region 11 / Davao City	Ms. Marizon S. Loreto / Regional Director / +6382 224 0511	Banana Chips, Coconut Oil, Dried Mangoes	
Department of Trade and Industry (DTI) Region 11 / Davao City	Atty. Lucky Siegfred Balleque / Chief, Investment and Industry Development Division / +63 82 224 0511	Banana Chips, Coconut Oil, Dried Mangoes	
Department of Trade and Industry (DTI) Zamboanga del Norte Provincial Office / Dipolog City	Ms. Raymunda Biolango / +63 65 212 2944	Banana Chips, Coconut Oil, Dried Mangoes	
Department of Science and Technology (DOST) - Industrial Technology Development Institute (ITDI) / Metro Manila	Ms. Teresita Palomares / Supervising Science Research Specialist / +632 837 2071	Banana Chips, Coconut Oil, Dried Mangoes	
Department of Agriculture (DA) -	Ms. Everjoy	Banana	

Office of Undersecretary for Special Concerns / Metro Manila	Galang / Tel. +632 920 1750	Chips, Coconut Oil, Dried Mangoes	
Department of Agriculture (DA) Regional Office Region 8 / Tacloban City	Mr. Antonio G. Gerundio / Regional Executive Director / Tel. +63 53 325 7242	Banana Chips, Coconut Oil, Dried Mangoes	Designatee : Ms. Jenny Almeria
Department of Agriculture (DA) – Agricultural Marketing Assistance Division (AMAD) Region 7 / Mandaue City	Mr. Christopher Lucero / Regional Agribusiness Head / +6332 268 2313	Banana Chips, Dried Mangoes	
Agricultural Marketing Assistance Services (AMAS) / Metro Manila	Ms. Tess Redundo / Officer / +63 2 920 2216	Banana Chips, Dried Mangoes	
Cooperative Development Authority (CDA) / Cebu City	Atty. Alexander C. Patac / OIC Regional Director / +6332 268 2851 or 49	Banana Chips, Coconut Oil, Dried Mangoes	
Philippine Coconut Authority (PCA) Region 7 / Mandaue City	Atty. Ravelo / Regional Manager / +6332 345 0009 / 420 1877	Coconut Oil	
Philippine Coconut Authority (PCA) Region 7 / Mandaue City	Ms. Auring Lantino / Technical Staff / +6332 345 0009 / 420 1877	Coconut Oil	
Philippine Coconut Authority (PCA) Region 11 / Davao City	Mr. Lornito U. Orillaneda, CESO V / Regional Manager III / +6382 293 0114	Coconut Oil	
Philippine Coconut Authority (PCA) Region 10 / Cagayan de Oro City	Mr. Luis G. Cruz / Regional manager / Tel. + 63 88 857 3707	Coconut Oil	
Philippine Coconut Authority (PCA) Caraga Region / Butuan City	Mr. Roberto Manlumas / Officer In charge / Tel. +6385 342 2687	Coconut Oil	
Philippine Coconut Authority (PCA) Market Development Division / Manila office	Ms. Alice Fontecha / Manager / Tel. +632 928 4501 to 09	Coconut Oil	
All other actors + supporters + influencers who participated in the FI VC workshop last Dec 5-6, 2011 are in the attached attendance list.			

Description of influencers : Philippines

Department of Agriculture (DA) :

- The DA is the lead agency mandated for agricultural production improvement.
-

Cooperative development authority (CDA) :

- As per interview with CDA, their mandate is to legitimatise all cooperatives being organised in the country. Its mandate also include the development and building of capacity for these cooperatives in terms of management, strategic planning, human resource development, training, coop management skills.

Department of health (DOH) / Food and Drug Administration (FDA). See <http://dev1.doh.gov.ph/bfad/orgchart>

- Under DOH, FDA is mandated primarily for the following:
 - 6 Develops plans policies, programs and strategies for regulating processed foods, drugs and other related products
 - 7 Provides technical, consultative and advisory services to and develops capability of field offices on licensing and enforcement of laws, rules and regulations pertaining to processed foods, drugs and other related products.
 - 8 Monitors, evaluates and ensures compliance of manufacturers, distributors, advertisers and retailers of processed foods, drugs and other related products to health rules and regulations and standards of quality.
- All processing plants secures FDA permits for every product line that is being manufactured or processed. Some of the processing plants experienced delays in the processing which would range to even more than a year of application for a FDA Permit. Several factors affect such delay from processing plants' compliance to requirements and government bureaucracy as reported by some processors.

Department of Trade and Industry (DTI) and Board of Investment (BOI) : see <http://www.boi.gov.ph/aboutboi.html>

- The Philippine Board of Investments (BOI), an attached agency of Department of Trade and Industry (DTI), is the lead government agency responsible for the promotion of investments in the Philippines.
- Taking the lead in the promotion of investments, BOI assists Filipino and foreign investors to venture and prosper in desirable areas of economic activities
- The processing plants applies for tax incentives for the establishment of processing facilities and machines. Such incentives includes tax holidays and exemptions from duties for their importation of capital equipment for processing.

LGUs / Bureau of Internal Revenue (BIR), see <http://www.bir.gov.ph/about/mandate.htm>.

The local governmentt units (from the office of the barangay captain to mayor's / governor's office) also plays regulatory functions in the chain. Processing plants are required to secure building permits, business permits, sanitary permits for their processing activities in the specific localities that their facilities are located.

BIR whose mandate is to assess and collect all internal revenue taxes, fees and charges, and to enforce all forfeitures, penalties and fines connected therewith, including the execution of judgements in all cases decided in its favour by the Court of Tax Appeals and the ordinary courts (Sec. 2 of the National Internal Revenue Code of 1997). All processing plants are then required to submit its income tax statements every year to the agency as a compliance to the agency requirement. Non-compliance would mean penalties to be imposed to the processing plants.

DENR (Department of environment and natural resources), see <http://www.denr.gov.ph/index.php/about-us/mission-vision.html>

DENR is tasked to formulate and implement policies, guidelines, rules and regulations relating to environmental management and pollution prevention and control.

All processing plants in the country are required to secure ECC (Environmental Compliance Certificate) for every operation and production processes being set up that may be a potential source of pollution. On the waste management, all discharges from the processing plants' operations ranging from water discharges, air and solid waste discharges are required to secure appropriate permits prior to disposal. Violations of such would mean penalties ranging from established fines and up to the closure of its operation causing the pollution.

Department of Science and Technology (DOST) / Industrial Technology Development Institute (ITDI): see http://itdibiz.com/index.php?option=com_content&task=view&id=12&Itemid=50

- The Industrial Technology Development Institute or ITDI is one of the research and development institutes (RDIs) under the Department of Science and Technology (DOST). By virtue of Executive Order No. 128 dated January 30, 1987, ITDI is mandated to render a variety of services to local industries. It is the flagship agency of the Department, generating a large pool of technologies while providing technical services to industry.
- DOST provides training for food related industries such as on food processing technology, compliances to certification standards on food safety, and even provision of loans for machine acquisition and technical assistances on the technology upgrade.

BOC (Bureau of Customs): <http://www.customs.gov.ph/index.php>

- BOC is the lead agency for the customs clearance of imported fruit processing equipment and export clearance.

Annex 10 Results break-out session Banana chips Philippines

Agency/Institution:	Intervention/Programs:	Intervention / Programs Synthesis :	Current State:
Dept of Agriculture (DA)	High Value Crops Devt Program	See link : http://www.da.gov.ph/n_sub.php?pass=programs/hvcdp/contents.html	Already running
	Kasagingan sa Kaniyogan Development Program (Intercropping of Banana with Coconut Development Program)		proposed
	Agricultural & Fisheries Modernisation Act 1998	<ul style="list-style-type: none"> • Pillars for this intervention are: market orientation, value chain approach, poverty alleviation, infrastructure role and support, ICT enabled agri-business marketing services (AFMIS) • DA will be an infrastructure + info support with its core function on: research, regulation, policy + planning, trading infrastructures, climate change mitigation. 	Already running
Philippine Business for Social Progress (PBSP) – a non-government organisation	Business Advisory Programs	<ul style="list-style-type: none"> • Priority sectors are on: <ul style="list-style-type: none"> ◦ agribusiness (off farm production and trading), ◦ food processing including fruits, vegetables, meat, fish, ◦ small manufacturing – gifts , toys, housewares, decors, wearable ◦ tourism 	Existing
Dept of Science and Technology	Food Safety Fundamentals campaign program in partnership with BSO per region	<ul style="list-style-type: none"> • Components are awareness to : food safety, food safety hazards, biological hazards, microorganisms, bacterial growth, physical/chemical/hazards and allergens, control points and control measures, pre-requisite programs for GMP/HACCP/ISO22000, food safety tools and standards and employee training 	Already running per region basis
	SciTech Hub Program in collaboration with CCCI	<ul style="list-style-type: none"> • Supports SMEs in terms of new technologies, technical manpower training, access to capital, access to markets, product standards and testing facilities, packaging and labelling, sustainable raw material supply, access to information, transport facilities efficiencies. 	Already running in Cebu
	Manufacturing Productivity Extension Program (MPEX)	<p>These programs are on nationwide strategy:</p> <ol style="list-style-type: none"> 1) to encourage and assist MSMEs to adopt scientific and technological innovations to improve their operations and thus boost their productivity and competitiveness. 2) To enable firms address their technical problems through technology transfer and technological interventions to improve productivity through better product quality, HR development, cost minimisation, and waste management and other operation related activities. <p>Sectors covered are food processing, furniture, GTH, agriculture, metals and engineering among others.</p>	Existing
	Small Enterprise Technology Upgrading Program (SET-UP Prog)		
	Science and Technology Experts Volunteer Pool Program		
	Academe Technology based Enterprises Devt		
	Consultancy for Agricultural Products Enhancement (CAPE)		
	Laboratory services		
	Energy Audit (Energy Management Systems ISO 50001 Capacity Building)		
Regional Centre on			

	Packaging Technology Transfer & Services		
	Testing and calibration services		
Department of Trade & Industry	Industry clustering program for priority industries	<ul style="list-style-type: none"> • Includes banana, mango, coconut among others. • Each industry cluster team is led by competent agency or individual. • Championed by Region 11 but being rolled out nationwide • From cluster formation and development to project development to investment promotions, integration to national and global supply chain and then to export growth! 	Existing
	Export Pathway Program	<ul style="list-style-type: none"> • Framework covers from start-up stage, export awareness stage, export readiness , market readiness, market entry stage, export sustainability stage 	Existing
	National Industry Cluster Capacity Enhancement Program (NICCEP)	<ul style="list-style-type: none"> • Philippine - JICA (Japan Int'l Cooperation Agency) joint project from 2012-2014 	To be launched soon
Bangko Sentral ng Pilipinas (BSP) or Central Bank of the Philippines	Credit Surety Fund Facility	<ul style="list-style-type: none"> • credit enhancement program aims to give MSMEs access to credit from banks even without collateral by way of a surety cover issued jointly by the parties of the CSF in favor of the creditor bank. • It likewise aims to increase the flow of credit in the countryside. 	Existing

Annex 11 SWOT: Outcomes break out coconut oil

SWOT	STRATEGIES	POSSIBLE INTERVENTION	OUTPUT/OUTCOME	ASSISTANCE FROM	PRIORITY?
<p><u>STRENGTHS:</u></p> <ul style="list-style-type: none"> - Phil capacity and potential to produce coconuts with good quality copra and coconut oil - Country image as a tropical country source for coconut oil - Copra have better CNO yield versus regional competition - Phil is the biggest exporter of coconut-based products 	<p>Increase production of coconut of new and improved variety in terms of hectareage and yields</p>	<p>National coconut planting program:</p> <ul style="list-style-type: none"> – replanting the old senile trees and improve tree productivity, using improved variety (make the program worked, strong implementation and compliance by a collaborative implementation by all relevant influencers, education of farmers on the value of coconut tree & its products. 	<ul style="list-style-type: none"> - Improved production of fresh coconuts and with improved productivity level per hectare. - increased level of involvement of local communities in the agricultural production and productivity improvement, achieve higher level of collaboration among stakeholders 	<p>PCA + LGU+Private Sectors</p>	
		<p>Increase compliance to existing legislation on coco industry (i.e. prohibition on the cutting of productive coconuts, regulation of coco tree cutting)</p>	<ul style="list-style-type: none"> - protection of coconut trees population and increased awareness of local communities for its protection 	<p>PCA + LGUs + Private Sectors</p>	
		<p>Sufficient & high-yield variety (HYV) of seednut supply (PCA)</p>	<ul style="list-style-type: none"> - encouragement for private sector on coconut farming to increase supply - increased yield per tree or per hectare on copra production and coco oil recovery levels 	<p>PCA</p>	
		<p>Fertilisation/rehab program</p>	<ul style="list-style-type: none"> - increased productivity level of existing coconuts per hectare, 	<p>PCA</p>	

	Organise the sector players and strengthen the organisation to do collective market driven approaches.		- capacitated business support organisation to carry out export development programs and market driven initiatives such as value networking towards increased export performance		
	Build competence for the sector or on company level to do market research and analysis.	strengthening of BSO / trade support organisation and building its capacity for market research for the sector	- increased proactive perspectives for BSO to support export development and promotions '- as the sector develops capacity, it can build company-level market research competence to make its members more sustainable in doing market research, finding new buyers	CBI/PEX	1 - 2
	Come up with a sectorial branding to get out of purely price-driven competition	campaign for product differentiation (branding) of coco products capitalising on the health benefits intensive research and development and involvement of private sector	- diversification of products - more defined product positioning in the EU market - value additions to the entire value chains - greater collaboration for sector branding campaign - differentiation of sector level branded products from a commodity level product categorisation in the market	CBI/PEX/PCA/DOST	1-2
<u>WEAKNESSES :</u>					
Need for tree replacement programs for old trees being cut	Keep product competitiveness high by increasing efficiencies, compliance levels to market requirements and food safety	Improve copra quality through appropriate drying facilities (kukum dryers through indirect heating...) - make it more affordable / accessible / available to farmers	- greater compliance to environmental standards and requirements - more involvement from small entrepreneurs in the value chain to produce copra	PCA+COOPERATIVE	

<p>Power supply insufficiency that disrupts milling / refining operations</p> <p>Need for increased competence to: 1) access updated and in-depth EU Market info + requirements, 2) strategize towards target EU market</p> <p>Further alignment of government intervention for export growth for Crude + refined coco oil</p> <p>Need for more synergy among industry players (collaborations)</p> <p>Need for increased compliance level in the established industry quality and processing standards</p>			<ul style="list-style-type: none"> - increased compliance level to food safety in terms of aflatoxins and other contamination controls - increased level of copra yield through a more environmental friendly processes 		
		<p>programs for improved international quality standards compliance level of SMEs</p>	<ul style="list-style-type: none"> - increased awareness of the private sector across the chain on quality standards and food safety - higher level of compliances in terms of EU standards on products, processes, and certifications 	<p>dti , pex, pca, DOST on copra quality and gmp/haccp for other coconut food products,</p> <p>industry cluster teams (to be provided by dti r11), collaboration with cbi</p>	<p>1-2</p>
		<p>Integrated pest management (ipm) compliance</p>	<ul style="list-style-type: none"> - cost efficiencies on pest controls and management practices, - healthier coconuts with better yields and resistance to diseases '- more controlled pesticides residue levels, prevention of contamination 	<p>PCA</p>	

<p>OPPORTUNITIES :</p> <p>Growing demand for crude + refined coco oil for industrial and food applications</p> <p>Growing consumer health-consciousness for naturally produced products</p> <p>Growing preference to source such health foods from tropical countries</p>	<p>Further align gov't interventions on coconut production to meet export demand of CNO + refined coco oil in terms of both quantity and quality.</p> <p>Build sector capacity and competence on the sector level market entry strategizing and market research and analysis.</p>	<p>Industry / regional clustering of coco VC chain involving multi-stakeholders (as explained by DTI-R11) , strategy for regional convergence (framework to be sent by DTI-R11) – roll out from Davao r11 to other region</p>	<ul style="list-style-type: none"> - increased collaboration among stakeholders - resolution of industry bottlenecks through consultative and collaborative approaches 	DTI	1-2
		<p>Export pathway program further enhancement through joint project</p>	<ul style="list-style-type: none"> - more involvement and improved performance of SMEs in the export chain through the program - optimisation of the program 	with CBI in partnership with pex/dti	1-2
		<p>intensive market research and customised market info for the sector</p>	<ul style="list-style-type: none"> - more market-responsive R & D in terms of product designs, and effective market entry strategies, - increased over-all competitiveness of the sector versus regional competition - establishment of long-term buyer relationship 	DTI/PEX/CBI	1-2

<p><u>THREATS:</u></p> <p>Conversion of coco farms to other crop farm or applications due to ROI issues</p> <p>Stronger gov't support of competitor countries to their food processors/ exporters</p> <p>Climate change that affects quality of copra being produced</p> <p>FOREX fluctuation</p> <p>Growing trend on substitution for coconut oil</p> <p>Growing competition on the acquisition of coconut-based RM with other industrial users in the country</p>	<p>Go for lucrative markets instead which offers better yields by doing comprehensive market research and analysis (avoid primarily price-driven low-yield markets).</p>	<p>value added product offering and intensive marketing to the EU (ex. RBD, Coco sap sugar, Vco--> coconut flour with 60% fiber + 22% protein, gluten free)</p>	<ul style="list-style-type: none"> - better revenue or profit yield for the sector - increased product differentiation to the eu market - access to higher niche market such as markets with higher health consciousness than just pricing - better health benefits to be availed by EU consumers from the Phil products - promotion of Phil brand as Asia's producer of quality coconut-based products 	<p>PCA/DTI/DOST/CBI/PEX</p>	<p>1-2</p>
<p>Note: - indicated priorities above only shows those for with CBI interventions.</p>					

Annex 12 SWOT: Outcomes break out Dried Mango

SWOT	Strategies	Possible Intervention/s	Output / Outcome	Assistance From
STRENGTHS				
<p>1. Phil capacity and potential to produce quality fresh mangoes for high-quality dried mangoes production versus regional competition</p> <p>2. Distinct quality of Phil Mangoes</p> <p>3. Country image as a tropical country dried mangoes producer in the orient seas</p> <p>4. Availability of manpower to support labour requirements</p>	<ul style="list-style-type: none"> • Increase production of fresh mangoes in terms of both hectares and yields. • Organise the sector players and strengthen the organisation to do collective market driven approaches. • Build competence for the sector or on company level to do market research and analysis. 	<p>Financial support for the technologies</p> <p>Create an association between farmers and processor / Organisation of a sector wide union</p> <p>Provide training on market research, prices, volumes, segments, certifications required</p>	<p>Increase production and technology transfer</p> <p>Greater opportunities for the farmers, greater leverage, permits easier targeting, channelling and dissemination of knowledge, allows for greater collaboration</p> <p>Access information on the market, how to deal on international market, segments, certification</p>	<p>DA and DOST Financial institutions, governments, banks</p> <p>CDA, DA, DTI,</p> <p>CBI, philexport, BFAD, DTI, DA, SGS, third party, INTEREC</p>
WEAKNESSES				

SWOT	Strategies	Possible Intervention/s	Output / Outcome	Assistance From
<ol style="list-style-type: none"> 1. Current Insufficiency of fresh mango supply (carabao variety) 2. Need for increased competence to access updated and in-depth EU Market info and requirements and market entry strategies 3. Further alignment of government intervention to support export growth for dried mangoes 4. Lack of synergy among industry players (individualism) 5. Need to establish industry quality and processing standards 	<ul style="list-style-type: none"> • Keep product competitiveness high by increasing efficiencies, compliance levels to market requirements and food safety. • Marketing and branding strategies e.g. Manila Mango • Certification of mango products and processes • Quality control 	<ol style="list-style-type: none"> 1. Government on production techniques, for greater efficiency 2. Support in market research: to the processing industries (certification, segments, prices and volumes) 3. Support for writing a business plan for export 4. Support for the creation of an association to represent actors across the chain 5. Greater dissemination and manage implementation of norms which are in place 6. monitor quality techniques and trainings 7. Support to understand certification schemes and their requirements 	<p>Mainstreaming quality</p> <p>Diversification of products, increase market share</p> <p>Greater compliance to standards required by the EU market, adaptation of practices as well a product and its marketing</p> <p>Through a business plan, it is possible to target new clients, project oneself in the future and access financial support</p>	<p>DTI and DA IPO</p>

		8. Trade show participation (national and international)		
OPPORTUNITIES				
<ol style="list-style-type: none"> 1. Growing demand for dried mangoes worldwide as a food ingredient and delicacy 2. Growing consumer health-consciousness for naturally produced products. 3. Growing preference to source such health foods from tropical countries 	<ul style="list-style-type: none"> • Further align gov't interventions on fresh mangoes (carabao variety) production to meet export demand of dried mangoes. • Build sector capacity and competence on the sector level market entry strategising and market research and analysis. 	<p>New flavours on the market Labelling and branding of Filipino mango</p> <p>Increasing dissemination of information</p> <p>Technology transfer through an education/research centre (through a partnership with a university?)</p>	<p>Increase market</p> <p>New products development</p> <p>Knowledge transfer through a research centre, acquisition of new knowledge</p>	<p>RND: support to diversify to green mango</p> <p>DA, DTI, WTO, GEM, Philfoodex CITEM DOST</p> <p>UPLB USAID: growth with equity WTC</p>
SWOT	Strategies	Possible Intervention/s	Output / Outcome	Assistance From
THREATS				

<ol style="list-style-type: none"> 1. Stronger government support of competitor countries to their food processors/ exporters 2. Climate change that affects quality of fresh mangoes and production processes 3. Insufficient / costly Power supply and other inputs (sugar) to support production 4. Forex fluctuation 5. Interest of younger generation on mango processing industry due to labour intensiveness 	<ul style="list-style-type: none"> • Go for lucrative markets instead which offers better yields by doing comprehensive market research and analysis (avoid primarily price-driven low-yield markets) 	<p>Proactive intervention of the gov't on the needs of food processors (power needs, internal transportation costs)</p> <p>Constant quality for competitiveness, prices, and consistency of supply</p> <p>Capacity enhancement</p> <p>Research on product development: new type of processing, technologies, packaging, etc.</p> <p>Participation in fairs</p>	<p>Better adapted product to the market, greater adaptability</p> <p>Possible increased market</p> <p>More efficient production and marketing</p> <p>Define the product's position on the market</p> <p>Establishment of long terms relationship with buyers</p>	<p>Internal competence that should be developed at the organisation level.</p> <p>External support could also be provided from DTI, DA, DEPED</p>
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Annex 13 SWOT: Outcomes break out Banana chips

SWOT	Strategies	Possible Intervention/s	Output / Outcome	Assistance From	Timelime	Rank
Bottlenecks						
Agri-cultural Support	LGU Involvement Farmers' Awareness Tissue Culture	GAP Disease Control Sustainability	Stable and Good Quality supply	DA/DOST/LGU Involvement	Short-Term	1
Access to Capital	CBI leverage to assist in securing contracts for loan purposes	CBI Leverage (LBP,DBP), Donor Org	Access	CBI	Short-Term	2
Marketing	Local - small Export - huge	EU market preferences	Stable Market	CBI - EU market preferences	Short-Term	3
Local Certification	CBI to help in establishing a local certifying body for banana chips processor	BFAD/HACCAP/BPI - Bureau of Plant & Industry	Local certification recognised abroad	DA/DOST - if BFAD/FDA can act as certifying body CBI	Short-Term	4

Annex 14 Potential participating companies Coconut oil

Region No.	Name of Company	Experience in exporting	Quality Levels	Interest in exporting to the EU
7	A.D. Gothong Manufacturing Corp.	<ul style="list-style-type: none"> 98% of production is for domestic while 2% is for exporting. Only exporting products with value additions which are by-product export products to Asia / china 	<ul style="list-style-type: none"> Company have been maintaining the brand (Bambi) for years already with established domestic market 	<ul style="list-style-type: none"> Would pursue EU exports only for products with value-added offerings. Considered the supply of copra as the main bottleneck that hampers the industry to export to EU
9	Wilmar Edible Oil Phils, Inc	<ul style="list-style-type: none"> Current capacity is at 550mt/day but only doing 100mt/day due to supply of copra 	<p>Their company has 300+ facilities worldwide. Each facility processes different oils depending on the strong supply of raw mats in the location of milling or refining operation.</p>	<ul style="list-style-type: none"> Their facility is only producing and shipping upon the order of wilmar-Singapore
	Dipolog City Oil Mills			
11	Freyvonne Milling Services	<ul style="list-style-type: none"> Started oil milling since 1993 producing cno for legaspi oil. Capacity of 30 tons/day for cno and 100MT/month for VCO 	GMP/HACCP on June 2011/HALAL Certified	Interested to expand to EU Market for both CNO and VCO
	1. Asia Pacific Oil	<ul style="list-style-type: none"> Asia pacific oil since 1980s. 	GMP / HACCP / KOSHER	Interested to export but the

	<p>Mfg. Corp</p> <p>2. New Asia Oil Inc.</p> <p>3. Far East Fresh Oil, Inc.</p>	<p>New asia oil since 1990s. far east fresh oil since 2008.</p> <ul style="list-style-type: none"> Exporting to eu already through broker in Rotterdam. Rated Capacity of 200mt/day for oil milling and 50mt/day for oil refining 	Certified	<p>supply of copra remained a big challenge. Exporting directly to an importer or wholesaler in eu costs them much on logistics cost.</p>
	Legaspi Oil	<ul style="list-style-type: none"> Rated capacity of 500mt/day for oil milling and 300mt/day for oil refining 	GMP / HACCP / HALAL/Kosher	<p>They have a dedicated trading and operations dept. in manila to do the marketing worldwide.</p>
	Limketkai Mfg.	<ul style="list-style-type: none"> Into Coconut Oil (150MT daily), Corn Oil and Palm Oil Has facilities for export in CDO, pipe ready for bulk load in CDO Port 	GMP	<p>Can produce more if copra supply improves and facility is ready or prepared for export bulk load</p>
TOTAL	9			

Annex 15 Stakeholder analysis coconut oil

Stakeholder	Stakeholder Influence Level	Stakeholder Interest Level	Assessment / Remarks
Coconut farm owners / farmers	high	L to M	Key players need strong buy-in. the coconut farm owners / farmers need to have visibility of the entire value chain instead of just looking at selling their coconuts / matured nuts to traders at the end of the day. They should be included in the industry association to be institutionalised.
Copra Traders	High	L to m	Key players need strong buy-in. similar to coconut farm owners/farmers should also look at the coconut oil industry as a whole and not just selling copra to processors. They should also be included in the industry association to be institutionalised.
Oil Millers + Refiners	high	M to H	Interest must be maintained by addressing bottlenecks primarily on copra supply and eu market access. Paradigm shift may also be necessary to explore possibilities of searching for new and emerging markets.
BSOs + NGOs	M	M to H	Interest must be maintained by introducing programs that would address members' bottlenecks on supply + market access.
Gov't agencies	High	Low to Med	Key players such as gov't agencies need to have strong buy-in to the program. There is an obvious need to align government interventions on the supply of matured nuts + copra to the processor sector since all of the interviewed coconut oil processors raised concerns on insufficient

			supply of copra to produce CNO + RBD. Stakeholder interest may appear to be low to medium due to lack of alignment of priorities between govt interventions and private sector needs.
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Annex 16 Potential participating companies Dried Mango

Region No.	No of companies	Name of companies	Assessment of experience with exporting, level of quality standards, interest in exporting.
7	3	AEO International Food Corp. (www.aeointernational.com)	<ul style="list-style-type: none"> Established since 1992 Exporting at an average of 2 TEUs / month
		MLhuillier Food Products, Inc. (www.mlfood.com)	<ul style="list-style-type: none"> Exporting since 1989 to HKG, Taiwan Exporting volume at 80-100 tons / year of dried mangoes To Work on HACCP certification by early 2012 Applying for Kosher cert. HALAL Certified Interested to find partners in EU
		Jojo's Food Products	<ul style="list-style-type: none"> Started operations since 1972 as part of R&M Group, exporting to SEA and US Capacity is at 30 MT / month but currently at running at 50% Interested to penetrate EU market with spare capacity to deliver order
9	2	POMS Ventures (ECJ Farms Marketing, Inc)	<ul style="list-style-type: none"> Started 2008 Capacity to process 70-80 MT / month of fresh mangoes producing 14 MT / month of dried green mangoes HALAL Certified Interested in expanding its market to other regions such as in EU. They have also hired international marketing personnel to focus on international markets.
		Polyfruits, Inc.	<ul style="list-style-type: none"> Started 2006 Currently exporting to China and Taihiti Capacity to produce is at 350kg /month but currently adding more machine through DOST technical and financial assistance. Will pursue HALAL Certification by 2012 through DTI intervention and pursue HACCP certification through USAID/GEM intervention

			<ul style="list-style-type: none"> • Has been attending international trade fairs on food products to expand market share
7	1	Itable Agri-Industrial Corp.	<ul style="list-style-type: none"> • BFAD permit approved July 2011 • Capacity to produce is at 30 tons / drying cycle but operating below capacity due to fresh mango supply while searching for export market
Total	6		

Annex 17 Stakeholder analysis Dried Mango

Stakeholder	Stakeholder Influence Level	Stakeholder Interest Level	Assessment / Remarks
Dried Mango exporters	high	high	Active consultation is needed to keep interest high. Consultation should cover programs to address bottlenecks on: 1) production of fresh mango (carabao variety) to support dried mangoes production, 2) access to updated and in-depth EU market information and access requirements, 3) market entry strategies.
Business support organisations	High	high	Active consultation in parallel to dried mangoes exporters. Programs should be channelled on a sector and company level to ensure higher chances of sustainability.
Gov't agencies	High	Low to Med	Key players such as gov't agencies need to have strong buy-in to the program. There is an obvious need to align gov't interventions on the supply of fresh mangoes (carabao variety) to the private sector since all of the interviewed private sectors raised concerns on insufficient supply of quality fresh mangoes for dried mangoes production. Stakeholder interest may appear to be low to medium due to non-alignment of priorities between gov't interventions and private sector needs.

Annex 18 Potential participating companies Banana chips

Regions	No of companies	Name of companies	Assessment of experience with exporting, level of quality standards, interest in exporting.
7	1	Magic Melt (http://www.magicmelt.com/)	<ul style="list-style-type: none"> - For their pastries/delicacies, been exporting since 2005 to USA with GMP certification, HACCP Compliance, HALAL Certification, membership with Philexportcebu and Philfoodex. - Invested on putting up new processing facility duly compliant to international standards on food processing - Currently have more than 100 employees working in the factory
9	1	Montano Foods Corp (http://montanofood.otoppilippines.org/)	<ul style="list-style-type: none"> - For their "sardines in glass jars" business, have been in the business since 70's. expanded to banana chips this year on domestic market only to save employees from losing jobs due to the fishing ban which affected sardines business. - GMP-Certified / HACCP Aligned already - Would invest on acquiring machines for banana chips production both for domestic and international market
10	2	BAPCO (Best Agri Products Processing Cooperative)	<ul style="list-style-type: none"> - Used to be a Women's Coop 50 members - No exporting experience to EU yet - Supplies to Slers (local food chain) using customer's packaging) - To upgrade facilities, will secure BFAD/FDA permits, make access to credits and open new markets
		NM Foods	<ul style="list-style-type: none"> - Single Proprietorship - family managed, DTI, DA assisted - Assisted by PUMS of Netherlands - Product Dev, - Positive and looking to

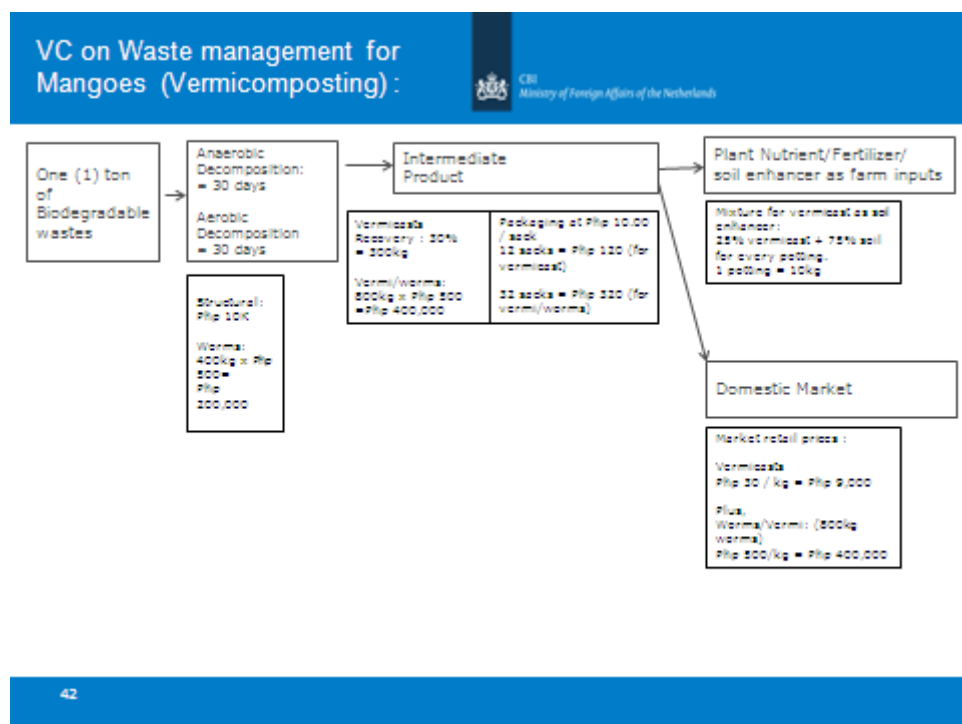
			export once capacity is increased, plus BFAD, FDA licences are secured
11	7	CJ UNIWORLD CORP	<ul style="list-style-type: none"> - Started exporting 1994 as Tropical Synergy Industries and later renamed to CJ Uniworld by 2009 - GMP/HACCP certified by 2011 - Has just established its 2nd factory few meters from the first factory to expand operations and market coverage. - Capacity to deliver 1Million lbs / month of banana chips but currently operating at 50-70% of its capacity due to insufficiency of fresh banana supply.
		EL COCO MFG CORP (http://www.elcoco.com.ph/) GS COMMODITIES GSL FOOD ENTS. TAGUM COMMODITIES	<ul style="list-style-type: none"> - All of these companies are under the same management and have been in the business since 1985. - GMP, Kosher , HACCP Certified - Combined Current capacity is at 90 x 40' containers per month - Currently acquiring 2 more plants to increase capacity and meet market demands
		KF NUTRI-FOODS INT'L. (http://www.kfnutrifoods.com/home.php)	KF NUTRI-FOODS INT'L <ul style="list-style-type: none"> - Started operations on 1997 as KOKI Food International - Current capacity is at 500MT per month - GMP / HACCP / Kosher Certified - Interested to acquire state of the art processing equipment to increase market share
		FOUR SEASONS FRUITS CORP (www.fourseasonsfruits.com)	<ul style="list-style-type: none"> - Established since June 2001 - GMP/HACCP Certified - With full capacity at 120MT/day but currently producing 80MT/day and exporting 25 x 40' containers/month from their 2 plants - Have a standby plant #3 to serve growing markets.

TOTAL	11		
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Annex 19 Potential uses for Banana and Mango wastes

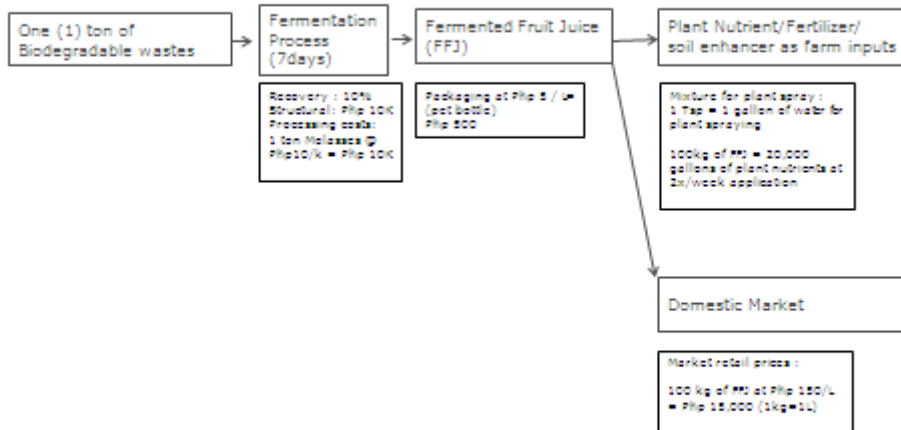
- Conversion of biodegradable wastes such as banana peelings, trunks and stalks into valuable resources. One (1) ton of banana biodegradable wastes can be converted into organic soil enhancer and plant fertiliser either in the form of fermented fruit juice (FFJ), vermicompost, or takakura compost. Please see below the process flow for every waste conversion and its economic benefits. The illustration below shows conversion of one (1) ton biodegradable waste generated into 100% organic farm inputs products.

Fermented Fruit Juice (FFJ):



VC on Waste management for Bananas (Fermentation) :

CBI
Ministry of Foreign Affairs of the Netherlands



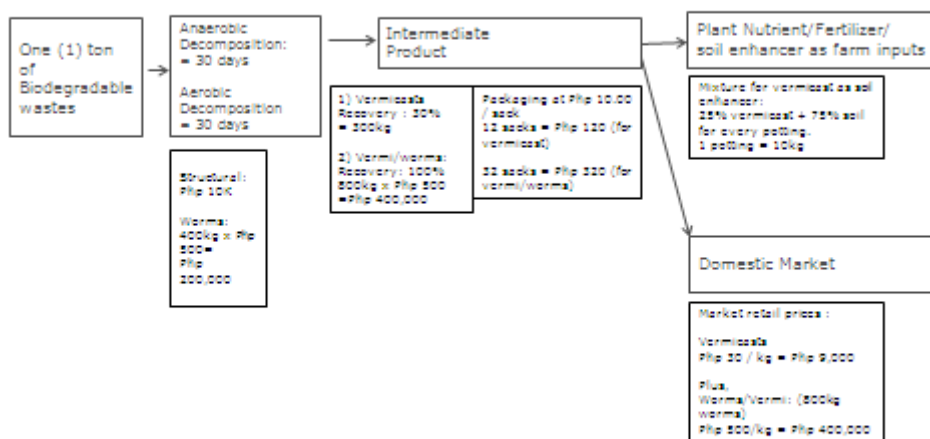
42

For fermented fruit juice (FFJ) processing, it would give 10% recovery after fermentation process. The cost for processing would be at the average of PHP 10,500 including the packaging but excluding the structural costs which can be recovered after 3 cycles. The recovered FFJ can be diluted in water to produce 20,000 gallons of plant spray as its fertiliser and food nutrient or as a soil enhancer. For the domestic market potential, the domestic pricing for FFJ is being sold at PHP 150 per litre.

Vermi-composting:

VC on Waste management for Bananas (Vermicomposting) :

CBI
Ministry of Foreign Affairs of the Netherlands

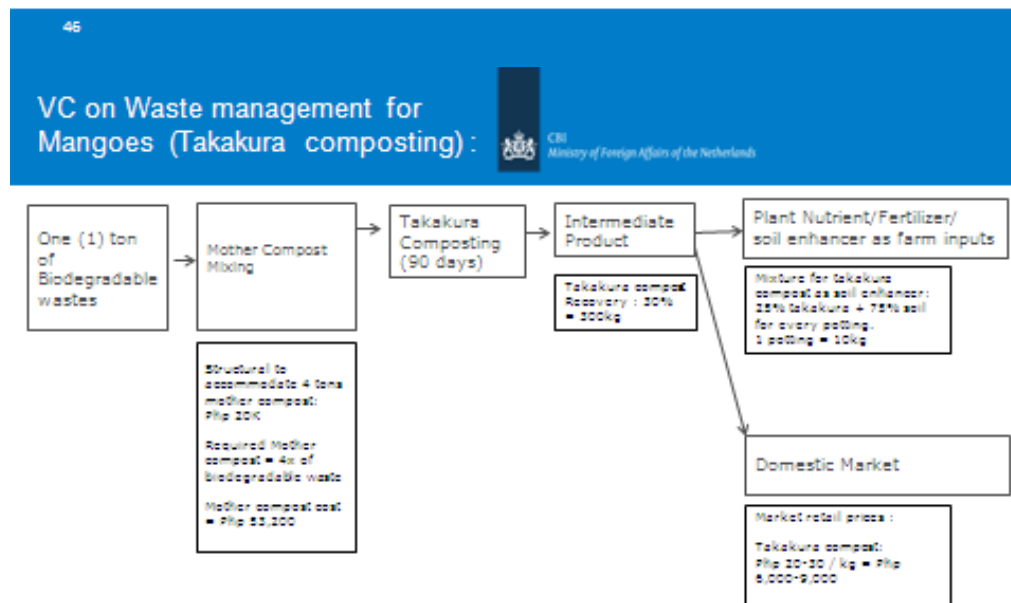
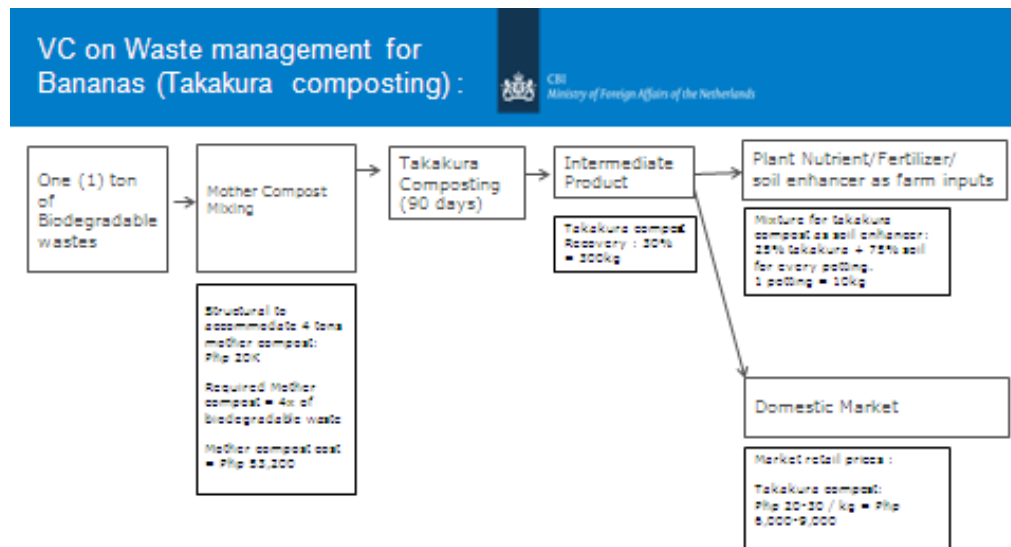


44

For vermi-composting, it would give 30% after composting process. The cost for processing would be at PHP 200k for the cost of the worms (African night crawlers or Red Wigglers varieties) including the packaging but excluding the structural

costs which can be recovered after 1 cycle. The recovered vermicast is at 30% recovery rate while the worms recovery is at 100%. The domestic market pricing for the vermin-compost is at PHP 30/kg and PHP 500/kg for the worms.

Takakura Composting:



43

For takakura composting, it would give 30% after composting process. The cost for mother compost mixing is at PHP 53,200. The first cycle of takakura composting would recover 30% with domestic market pricing of takakura compost at PHP 20-30 per kilogram.

Annex 20 Processing costs Philippines

Amounts in Php			
		100kg Fresh Banana	Per Kg of Chips
Raw Materials	8	800.00	26.67
Freight/Trading	2	100.00	3.33
CNO		150.00	5.00
Sugar		150.00	5.00
Processing		300.00	10.00
Total	10	1,500.00	50.00
Recovery		30.00	30.00
FOB Price		75.00	75.00
Margin (Php)		25.00	25.00
GPRatio		33%	33%
Amounts in Php - Dried Mango			
		100kg Fresh Mango	Per Kg of Dried Mango
Raw Materials	25	2,500.00	250.00
Freight	6	600.00	60.00
Processing		400.00	40.00
Total	31	3,500.00	350.00
Recovery		10.00	10.00
Cost per kg		350.00	
FOB Price		408.00	408.00
Margin (Php)		58.00	58.00
GPRatio		14%	14%
Amounts in Php - Coconut Oil			
		100MT of Copra	Per MT of CNO
Raw Materials	1	2,800,000.00	43,076.92
Freight	1	700,000.00	10,769.23
Processing		100,000.00	1,538.46
Total	2	3,600,000.00	55,384.62
Recovery		65.00	65.00
Cost per MT		55,384.62	852.07
FOB Price		58,000.00	63,000.00
Margin (Php)		2,615.38	7,615.38
GPRatio		5%	12%
		500.00	
		5.00	
		2,500.00	
Amounts in Php - Banana & Mango Waste			
		1MT of Banana/Mango Waste	
Raw Material - FJ	1MT	1,000.00	
Recovery @ 10%	.1MT	100.00	
Mollases	1MT	10,000.00	
Labor		1,000.00	
Freight		1,000.00	
Total Cost		12,000.00	
Recovery @ 10%		1,100.00	
Cost per KG of Fertilizer		10.91	