



Value Chain Analysis
CBI Integrated Country Programme

Final Report

Specialty coffee and cocoa

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1. Introduction

In the first research phase a pre-assessment of the Peruvian coffee and cocoa sector has been done and due to existing market opportunities the decision taken to conduct a Value Chain Analysis (VCA). The main results of the pre-assessment are summarized in an inception report.

CBI¹ asked explicitly not to include mainstream coffee and cocoa in the assessment but to focus on speciality coffee and cocoa, single origins and with one of the market relevant certifications (organic, UTZ certified, Fair Trade, Rainforest Alliance). The Peruvian cocoa and speciality coffee sector experienced not only a positive development in the past decade but also contributes significantly to the overall income generated by agro-business exports. Nevertheless, CBI decided to consider further on including both sectors into the integrated country programme 2013-2017 setting a clear focus on quality production and stepwise increase of value added products. On the basis of the present VCA a final decision will be taken.

The VCA has been conducted by Petra Heid with support from Thomas Sporrer and Udo Censkowsky. The VCA has been reviewed after the realization of the validation workshop in Lima (17th of April 2013). New information gained as well as results of the workshop discussion have been integrated.

What is a “specialty coffee”?

The term “specialty coffee” originated in the United States. It was initially used to describe the range of coffee products sold in dedicated coffee shops, in order to differentiate these coffees from mainstream coffee generally available through supermarkets and other retail outlets. Now it refers to a wider range which includes higher quality coffees, both single origin and blends, certified or verified coffees, such as organic, Fair Trade, UTZ Certified, Rainforest Alliance, 4C, bird friendly, etc., and unconventional coffees such as flavoured coffees and coffees with an unusual background or story behind them. Today “specialty coffee” has become a generic label covering a range of different coffees, which either command a premium price over other coffees or are perceived by consumers as being different from the widely available mainstream brands coffee. The term has become so broad that there is no or not a universally accepted definition of what constitutes “specialty coffee”, and it frequently means different things to different people. Therefore, it is not possible to accurately quantify how much is produced, or how much is consumed. The general consensus appears to be that specialty coffee in all its different forms may account for more than 10% of the world consumption.

¹ CBI (Centre for the Promotion of Imports from developing countries) is an Agency of the Netherlands Ministry of Foreign Affairs.

2. Market demand in the European Union

2.1. Global situation and European imports

Worldwide demand of **coffee** and **cocoa** beans has grown steadily at around 2.5% annually in recent years. Growth is fastest in emerging economies, such as those in Eastern Europe and Asia. There has been very little growth in coffee and cocoa consumption in Europe over the last five years. In these established markets shifting preferences towards quality, origin and an increasing interest in the economic, social and environmental aspects of coffee and cocoa production can be observed and determines buying behavior.

Estimations based on these trends show, that approx. 25 million of additional bags of **coffee** and approx. 1 million additional tonnes of **cocoa** will be needed to keep pace with the demand by 2020. An expansion of coffee and cocoa farmland is only possible at the expense of the remaining tropical rainforest, which is not an option. This leads to the conclusion that either productivity on existing farmland must increase significantly or the coffee and cocoa sector will suffer considerable supply constraints, market disruptions, and price fluctuations.

In 2010 world **coffee** consumption was 134.000.000 bags. 40% of the coffee was consumed in Europe. 12 million bags, which is equivalent to 9% of the world coffee consumption was sold as sustainable coffee, complying with at least one of the different certification schemes, such as UTZ certified, Rainforest Alliance (RA), organic, Fair Trade, the Common Code for the Coffee Community (4C) or Starbucks Coffee Practices. In the United States, gourmet or premium coffee has increased its market share from 1% to 20% in the last 25 years².

Estimates of world **cocoa** bean consumption (grindings) according to International Cocoa Organization (ICCO)³ statistics were in 2010 around 3.9 million tons. Of these cocoa beans 1.615 million tons, equivalent to 41%, was grinded in Europe. The majority of these beans - about 0.5 million tons -, were grinded in the Netherlands. Germany occupies the second place with 0.4 million tons of the grinding volume. Nearly 10% of the total cocoa production is certified⁴. Most important certification schemes in the last years were organic and Fair Trade, but Rainforest Alliance and above all UTZ certified cocoa volumes are catching up rapidly. According to Rainforest Alliance the certified cocoa production has quadrupled up to 405,608 tons in 2012 (this would be equivalent to 10% of the world cocoa production in 2012 and would make Rainforest Alliance to the leading sustainability label in cocoa markets).

According to TCC Coffee and TCC Cocoa Barometer 2012⁵, demand for sustainable coffee and cocoa in the future will increase and growth rate will be much faster than in conventional coffee and cocoa. Consumed volumes of the most important European **coffee** consumer countries for sustainable coffee are listed in the TCC Coffee Barometer 2012. Table 1 shows that sustainability certification schemes are varying from country to country

² Specialty Coffee Association of America www.scaa.org

³ International Cocoa Organization www.icco.org

⁴ Report Cocoa 2012 Swiss Economic Cooperation (SECO)

⁵ TCC = Tropical Commodity Coalition www.teacoffeecocoa.org/tcc

in Europe. The figures do not reflect that many producer organizations count on various certifications in order to have access to more than one market segment.

Table 1: Relevance of coffee sustainability schemes⁶

Coffee import in selected European countries and share of sustainability schemes			
Country	Volumes in tons/coffee bags	thereof in % all	Share of certification scheme
Germany	525.000/8,7 Mio	3-7 %	90% organic, 10% RA
Italy	348.000/5,8 Mio	1%	50% organic, 50% FLO
UK	193.000/3,2 Mio	20%	90% FLO, 10% RA
The Netherlands	120.000/2,0 Mio	38%	90% UTZ, 10% FLO

The demand for specialty coffees is growing whereas the total market volumes are stagnating in most of the traditional European markets. The relevance for filter coffee is still high but declines year by year in particular in Germany, Europe's largest coffee market⁷. Coffee market drivers are

- Coffee pads/capsule market which is still growing
- Instant coffee is growing
- Sales of roasted full beans is growing (e.g. freshly prepared espresso beans is seen a strong trend in future)⁸
- Single origin coffees
- Share of sustainable coffee is growing (FLO, Rainforest Alliance, Organic)⁹

The demand for **cocoa** is growing and especially the demand for certified cocoa is expected to continue to grow in Europe over the next years. Consumption trends in consolidated European markets remain stable and on high level with no or only a slight increase on the total volume. The following shift on consumer trends can be observed:

- Trend towards "high end chocolate products"
- Trend towards bitter/darker premium chocolate with a higher percentage of cocoa content for consumers who appreciate high quality, health aspects and an exquisite taste often, which is related to a certain live style.
- Trend towards "sustainable" (certified) chocolate products. Cocoa bean production complies with social, environmental and economic aspects and the whole process is successfully certified by a third party.
- Trend towards authentic ingredients and single origin cocoa products.

Consumption in emerging European markets is developing differently. These markets grow rapidly on volume and the following consumer trends can be observed:

⁶ Only the organic market is based on a legal regulation. All other labels are private label initiatives.

⁷ German consumer drink 149 litre per capita and year (30% above the European average); In total Germany consumes 402,000 tons of roasted coffee and 12,800 tons of instant coffee;

⁸ Goes hand in hand with strong sales in espresso/coffee machine;

⁹ In Germany 3% market share in 2011; in 2012 4% market share with a clear trend to grow further.

- Rapid increase of cheap chocolate products (low cocoa mass/cocoa butter content)
- Trend to small package units to satisfy consumers with less buying power
- Much lower importance of sustainability certification for coffee and cocoa production in emerging European markets

Due to increased consumer awareness of issues surrounding sustainable cocoa production several European countries, like the Netherlands, Germany and Belgium have started to implement national roundtables aiming to support awareness building within the consumers and to increase national consumption of sustainably produced cocoa and chocolate products¹⁰.

Parallel to country initiatives, various industry initiatives on sustainability in **coffee** and **cocoa** have been launched in the past few years. Big industry players have committed to buy a certain volume of coffee or cocoa beans produced under certain conditions. Therefore, the demand of “certified” coffee and cocoa beans, which often is seen as synonymous with “sustainable”, is increasing rapidly. The following Table 2 list industry purchasing commitments in “sustainably” produced coffee and cocoa volumes for the near future

Table 2: Buyers commitments to buy from sustainable sources (Source TCC Coffee, Cocoa Barometer 2012)

Commitments to buy from certified sustainable sources					
		Per label in tons (RA, FT, 4C, UTZ; no organic)*			
Company	Commitment in tons	By 2015	By 2020	In % of total	
Coffee	Nestlé	870.000	180.000 (4C)	90.000 (RA)	26%
	Mondelez	700.000	210.000 (RA, FT, 4C)		100% in EU; 30% global
	Sara Lee	450.000	90.000 (UTZ)		20%
	Tchibo	173.000	42.000 (4C and others)		25%
	Starbucks	135.000	130.000 (Starbucks, FT and others)		approx. 100%
Cocoa	Traders, grinders				
	Cargill	600.000	150.000		25%
	Armajaro	252.000	88.000		35%
	Ecom	235.000	45.000		19%
	Chocolate Manufacturers				
	Mondelez	450.000	50.000		11%
	Nestlé	400.000	90.000		23%
	Mars	390.000	180.000	390.000	46%/100%
	Ferrero	120.000	48.000	48.000	40%/100%
	Retailers				
Ahold	100% sustainably sourced by 2020				

*RA=Rainforest Alliance, 4C=Common Code for the Coffee Community, FT=Fair Trade, UTZ= UTZ certified

¹⁰ www.giz.de/de/downloads/giz2012-en-forum-sustainable-cocoa-factsheet.pdf

Both commodity markets are highly concentrated. Only a handful of companies dominate the import of coffee and cocoa beans (and/or cocoa derivatives) and the concentration process is still going on. Very recently the world's leading buyer of cocoa beans Barry Callebaut¹¹ has bought the largest cocoa supplier in Asia Petra Foods.

The leading import and trading groups are important channels to develop the European/EFTA markets. However, in particular in the confectionary industry many SME's companies are actively looking for alternatives to the leading confectionary brands offered in the normal retail trade. Therefore, they are a key target group for Peruvian exporters of specialty cocoa. Those smaller companies have a specific interest in high-quality products, sustainability and "stories around the product". The latter is used for marketing and promotion.¹²

Opportunities for Peruvian coffee exporters

Coffee is by far the most important product in terms of export values within the traditional agricultural export sector. Export values have increased from 887 million US-\$ in 2010 to over 1.5 billion in 2011¹³. Peru was in 2011 the world's sixth largest coffee exporter with a total export volume of 4.7 Mio bags (60 kg), which represent US\$ 1.581 Mio. This has been a growth of 78% in comparison to the year 2010 due to world market price increase. Export of specialty coffee was only 1 Mio bags. Nevertheless, Peru is the world's leading exporter of organic coffee. In 2011 0.5 Mio bags of organic certified green coffee and 0.1 Mio bags of Rainforest Alliance certified green coffee were exported.

About 75 percent of Peruvian **coffee** - which is exclusively Arabica coffee - is grown throughout the eastern slopes of the Andes in more than 405.000 ha between 1.000 and 1.800 meters above sea level and provides therefore the best pre-conditions for a high quality premium coffee with a good aroma and flavor. In 2010, special Peruvian coffee was chosen among the best at the SCAA conference¹⁴. Due to its long lasting history in growing coffee under diverse shade together with other crops and the tradition to be organized in smallholder producer groups, makes Peru an excellent origin for specialty coffee in the sense of meeting high quality standards, but also complying easily with different certification or verification schemes, such as organic, Fair Trade, UTZ certified, Rainforest Alliance, Bird friendly coffee or 4C.

European export destinations of organic coffee are as follows:

Germany	28 %
Belgium	15 %
Sweden	9 %
UK	7 %
Denmark	1 %
Norway	1 %

¹¹ Barry Callebaut has partner organisations in important supplying countries like BioPartenaire in Ivory Coast (UTZ certified and Rainforest Alliance certified). In Peru Barry Callebaut has no own purchase company but cooperates with the Swiss Pronatec in order to supply cocoa for „Alto El Sol chocolate confectionary line“.

¹² For more details on EU trends in coffee and cocoa markets please refer also to the presentation of the validation workshop, 17th April in Lima.

¹³ The increase of global coffee market prices is the main reason for this increase and not an increase in volumes. Prices declined from 2011 to 2012 by about 70 US-\$ per bag. In 2010 about 5 million coffee bags (QQ or 46kg) have been exported. In 2011 6.8 million coffee bags have been harvested due to the high price situation.

¹⁴ USDA Gain Report 2010: Peruvian Coffee Sector

Increasing demand in Europe for specialty coffee provides Peru a great economic opportunity by shifting from the conventional commodity market to the niche market and pull out from this niche market by further expanding the production and supply of specialty coffee. This would improve coffee farmers' incomes and living conditions.

Unlike in Europe the export of finished coffee products to countries like China is a realistic option for Peruvian exporters. In high-end supermarkets for example in Beijing and Shanghai single origin coffees are offered already but imported from roasters in Europe.

Opportunities for Peruvian cocoa exporters

From the 29.4 Mio inhabitants it is estimated that more than 33'000 Peruvian families cultivate cocoa and more than 150'000 are indirectly involved in cocoa production. Nowadays, close to 90% of cocoa production is exported; in 2011 64% of the total production was exported as beans, 18% was exported as butter and 9% as powder. Cocoa production and export increased dramatically in the last ten years from 8.5 million USD in 2001 to 118 million USD in 2011. Export volumes between 2007 and 2012 tripled from 13'000 tons to more than 50'000 tons and cocoa production in Peru grew around 16% only in 2012. This growth was due to successful cooperation between smallholder producer groups, national and international development agencies and the private cocoa business. In 2011 43% of the exported cocoa was produced by farmer organizations and companies which received support from USAID PERU PDA (Programa Desarrollo Alternativa). More than 80% of the total of the Peruvian cocoa export volume was sent to the following European countries (2011):

Country	Participation	FOB USD
Belgium	22 %	13'779'190
Italy	16 %	9'890'580
Netherlands	16 %	9'837'220
Switzerland	8 %	4'894'910
Germany	3 %	2'033'080
Spain	1 %	646'400

Shifting consumer trends in Europe towards more sustainable and certified chocolate products and dark chocolates with denomination of origin built a perfect match with the increasing production interests in Peru and opens for Peruvian cocoa producer groups and exporters a great opportunity to step into the gap. The cocoa tradition and culture with its origin in the rain forest at the source of the Amazon and Orinoco Rivers as well as cocoa tree genotypes with a special flavor and aroma profile provides unique selling propositions.

Unlike in Europe the export of finished cocoa (or chocolate) products to countries like China is a realistic option for Peruvian exporters. In high-end supermarkets for example in Beijing and Shanghai a large variety of European chocolates are offered already.

For cocoa and coffee European importers see the following competitive advantages for Peruvian coffee exporters:

- **Experiences in certification:** Peru has since decades experiences with the production of certified coffee and more recently with certified cocoa for niche markets and has gained a strong reputation as the world's leading organic coffee

and as the second largest organic cocoa exporter. Peru is the second largest exporter of Fair Trade certified coffee. In addition, other certification and verification schemes like UTZ certified, Rainforest Alliance, 4C and UEBT as well as related actors (accredited certification bodies) are present in Peru.

- **Consistent quality and exquisite aroma profiles:** Quality of specialty coffee and cocoa beans is good and the taste and aroma profiles are special. For example cocoa beans from Ecuador, which have a similar quality and taste profile, are much more expensive, while beans from the Dominican Republic are competitive in price but are not reaching the same exquisite flavor.
- **Solid smallholder farmer organizations:** 80% of the coffee farmers and more than 95% of the cocoa farmers are cultivating their products on small scale farms of 3 hectares or less. About 25% of the farmers are organized in cooperatives structures, which are the base of Fair Trade certification and others. The higher prices in combination with support from development agencies have contributed a lot to the supply chain development.
- **Strong and professional exporters with social and ecological responsibility:** In the search of certified coffee and cocoa, Peruvian exporters started to build up strong relationships with small scale farmers who were not organized in cooperatives in order to group them into associations and undergo the certification process. After organic certification, UTZ certified, Rainforest Alliance and 4C certification are realized. Within this process these exporters are providing services such as training, planting material, loans, tools, administration and accounting support, etc.; to their farmers which can be compared with a good functioning cooperative and most of the times are officially registered as associations.
- **High degree of professionalism on exporter level:** The competitive advantage of Peruvian exporters lies in their ability to react quickly to new market developments, whether it is a cooperative or a private exporter. They are already professional enough to provide the market with a good product in consistent quality and produced in a sustainable way.
- **Increasing interest in specialty coffee and cocoa in European markets:** high product quality in combination with a credible sustainability certification meets the interest of European processors to develop single origin, high-quality and sustainable products in order to differentiate in a stagnating European market. The given situation implies also that companies European/EFTA countries have a higher interest in developing sustainable supply chain projects as part of their marketing story¹⁵.
- **Good perspectives for co-operation:** Peruvian stakeholder organizations as well as international donor organizations and Non-Governmental Organizations are engaged in the development of smallholder supply chains. This offers a good potential to develop export market oriented co-operation projects between CBI/ECP participants, international donor and Peruvian stakeholder organizations.

¹⁵ Please, see example of wild cocoa from the German processor Hachez <http://www.hachez.de/von-den-besten-cacaobohnen-zu-den-feinsten-chocoladen/news/artikel/artikel/capitalwildes-verlangen.html>

2.2. Domestic market trends in Peru

The domestic market for coffee and cocoa will not compete for raw material with export markets in short to midterm. For example coffee consumption in Peru is low with 500 grams per capita in 2011. The hot drink market is still dominated by the traditional and most consumed hot drink called “Emoliente”¹⁶. However, in the larger cities coffee consumption is growing rapidly, but on a low level (per capita consumption of coffee in Lima is > 1 kg already).

In the context of the CBI sector interventions it is also interesting to see that more finished cocoa and coffee products are emerging in the domestic market. With a growing domestic market not only the competence in processing of finished products will increase but also the number of companies involved.

Different events and activities have been organized throughout the year by relevant sector players, such as the National Coffee Association (Junta Nacional del Café, JNC) and international donor organizations such as USAID, in order to increase domestic coffee demand. In October 2011, for the first time, the fair EXPOCAFE was organized in Lima concluding in a final national competition of high quality specialty coffees.

The national consumption of **cocoa** is also still very low in Peru with an average of 0.2 kg per person. Several activities are on-going to promote the local consumption: such as the annual event “Salon del cacao y chocolate”, held for the third time in 2012 in Lima and organized in cooperation with the well-known event in Paris. In addition, in 2012, cocoa producers with finished products, for the 1st time, were included in the annual public food fair Mistura.

Furthermore, cocoa production is strongly supported by national and international donor organizations to produce high quality raw material and finished products, especially as cocoa serves as a good example to overcome the illegal coca plantations and is excellent to fight rural poverty; the so-called “Milagro de San Martín”. Such an example is the recently formed company “Consorcio Cacao Amazonico SAC” that groups together 4 associations from the region San Martín and has developed 4 high quality chocolates with financial support and technical assistance through Agriterria; the chocolate is to be launched this year 2013 in the national market aiming at export in the future.

¹⁶ *Emoliente* is a typical Peruvian hot drink made out of a number of plant ingredients: toasted barley, flax seeds, dried horse tail herb, dried grass, and plantain leaf. Other herbs are added like for example aniseed, boldo, lemon verbena, lemongrass, and cat’s claw.

2.3. EU import requirements

In the following some main standards and legal import requirements have been mentioned but without following the intention to give a full picture on all relevant import requirements. Detailed information on specific requirements for the European Union but also for some EFTA countries are presented on the CBI website¹⁷. In addition some business risks (Ochratoxin A and Cadmium level in chocolate products) have been highlighted which CBI and partner organizations in Peru should take into consideration. First of all when working with export companies but also as potential field of action for the BSOs related to the coffee and/or cocoa sector.

EU does not levy any import duties on green **coffee** imports nor on **cocoa** beans.

Value added tax (VAT) is levied on both roasted and soluble **coffee** sales by most European countries with the percentage ranging from 3% in Luxemburg to 25% in Denmark and Hungary (paid by importer).

Other **cocoa** products enter the EU under the following tariff codes:

- beans (and nibs, raw or roasted): 1801 0000
(free of duty)
- mass, not defatted 1803 1000 and mass, defatted 1803 2000
(6.1% reduced import duty)
- cocoa butter 1804 000
(4.2% reduced import duty)
- cocoa powder 1805 0000
(2.8% reduced import duty)

Organic coffee and cocoa (Regulation (EC) No 834/2007)

For the import of organic coffee and cocoa beans and derivatives into European and EFTA countries certain conditions have to be met. No coffee or cocoa product may be brought to the marketplace and labelled organic unless it is proved to conform to the regulations. That means that coffee and cocoa products can be marketed as organic only when they are certified as such by an accredited certification body, based on regular inspection of all stages of production, processing, transporting and processing of the coffee or cocoa. In the European Union, the market for certified organic food is regulated by Council Regulation (EC) No. 834/2007 and subsequent amendments thereto¹⁸.

Peruvian exporters and BSOs count on long year experiences in organic product certification. No principle bottleneck is seen by the authors in regard to organic certification.

Pesticides (Regulation (EC) No 396/2005)

On 2 September 2008 European Union Regulation (EC) No. 396/2005 came into force for a large number of commodities, including green coffee and cocoa beans. (Visit www.eur-lex.europa.eu for further information).

A maximum residue level (MRLs) for pesticides is provided on

http://ec.europa.eu/sanco_pesticides/public/index.cfm?event=commodity.resultat

Discussion on cadmium maximum level for chocolate products within the EU (Regulation (EC) No 1881/2006)

¹⁷ http://www.cbi.eu/marketintel_platform/Coffee-Tea-and-Cocoa-/177417

¹⁸ Visit www.eur-lex.europa.eu

Chocolate is among the foodstuffs in which the highest cadmium concentrations were detected. Maximum cadmium residue levels exist for a number of foods, but still there are none set for chocolate. The EU plans to amend Regulation (EC) No 1881/2006 in order to set a maximum cadmium residue level in chocolate, out of concerns that the heavy metal causes kidney failure and increases the risk of cancer.

Cadmium in chocolate is linked to the total dry cocoa solids in cocoa beans. Cocoa beans naturally take cadmium up from the soil, therefore cadmium levels are different in cocoa beans grown in different geographic areas due to different cadmium levels in the soil. Soil pH level influences cadmium mobility in soil solutions, which has a direct impact on the uptake by the plants. The higher the pH level in the soil solution is, the more cadmium is fixed and less will be taken up by the plant. Cadmium up-take by the cocoa plant varies also according to the cocoa genotypes.

Peru is one of the countries where cadmium is naturally present in high quantities in the soil of cocoa plantations, and therefore, it can be detected in Peruvian cocoa beans and in chocolate products made from these beans. From interviews with different chocolate manufacturers it became clear that cadmium levels even from the same producer group vary a lot, so that a correlation between different geographical areas is difficult to determine.

At the moment different cadmium MRLs are in discussion amongst different stakeholder groups, taking into account the different impacts of various cocoa products, for example: dark chocolate, with a high cocoa content, tends to be consumed in small quantities by adults, whereas children prefer milk chocolate with a low cocoa content, but is consumed in high quantities. While the German Institute for Risk Assessment (Bundesinstitut für Risikobewertung) suggests for milk chocolate a maximum residue level of 0.1 mg/kg cadmium and for dark chocolate 0.3 mg/kg, the Association of Chocolate, Biscuit and Confectionery Industries of the European Union (CAOBISCO) suggested in their recent statement to use levels of 0.6 and 0.8 mg/kg respectively.

Cadmium content in chocolate made from single origin Peruvian cocoa beans may range above the suggested mentioned levels, and therefore, threatens their marketability towards the EU at the moment the MRLs amendment of the existing EU regulation will come into force.

How seriously this problem is taken into consideration by the European chocolate industry depends on what role Peruvian cocoa plays in their chocolate production process. The cadmium content in chocolate products, using Peruvian cocoa beans in a blend with other low cadmium contaminated beans, will range far below the above mentioned MRLs, and thus, the manufacturers of these products do not see any problems nor need of any counteractions when the amendment will come into effect. Whereas, European chocolate producers who are promoting premium, dark or even single origin Peruvian chocolates will have to ensure that the cadmium level is below the set MRL in order to fulfill the legal requirements. These actions will cause considerable additional costs because it will require regular tests to ensure the fulfillment of the cadmium MRLs and the implementation of necessary counteractions in case MRLs are exceeded; which may lead to costs such as the destruction of whole container loads or demanding tests before shipment, thus, even increasing the production costs of Peruvian exporters.

This circumstance may have the consequence that premium chocolate manufacturer are looking for alternative beans with less risk and cost implications. This situation puts in

danger the positive development of the Peruvian cocoa sector seeking for added value marketing opportunities for the specialty cocoa market. As a counteraction to the cadmium MRLs amendment and the on-going discussion in the EU, the countries Cameroon, Colombia, Ecuador, Ghana, Mexico, Nicaragua and Peru have started a campaign, arguing that the amendment will threaten their exports and the livelihoods of small scale cocoa farmers.

The EU is listening to these concerns, particularly regarding the impact on small scale farmers, and is planning a transition period for producers to adjust to the new amendment. A possible amendment of the existing EU regulation, at the earliest, could be adopted by the end of 2013.

Ochratoxin A (OTA)

In recent years mould in **coffee** has increasingly become associated with concerns over the presence in food and beverages of OTA. The toxicological status of OTA has not yet been settled but most major importing countries are nevertheless paying increasing attention to its occurrence in coffee and other agricultural products, and are requiring preventative measures.

In the European Union the following maximum limits apply to finished coffee products, effective 1 March 2007: roasted coffee – 5 ppb (parts per billion); soluble coffee – 10 ppb. No limit has been set for green coffee but green coffee remains under review; and there is a provision for annual reporting of the occurrence of OTA and prevention measures.

In the meantime, a number of individual European countries (Czech Republic, Finland, Greece, Hungary, Italy, Portugal, Spain and Switzerland) have their own legislation or customs regulations in place that also set (varying) maximum limits on green coffee. Italy has limits on finished coffee products while in some countries (e.g. the Netherlands) internal instructions for food safety inspectors are in place. Germany, Europe's largest importer, applies the EU limits.

Codex Alimentarius

FAO/Codex Alimentarius¹⁹ provides following standards for governmental and private standard developing organisations as well as for the definition of precise trade specifications covering coffee and cocoa:

- i. CAC/RCP 69-2009: Code of practices for the prevention and reduction of Ochratoxin A contamination in coffee
- ii. CAC/RCP 67-2009: Code of practice for the reduction of acrylamide in foods
- iii. CODEX STAN 141-1983 Standard for cocoa mass (cocoa/chocolate liquor) and Cocoa Cake
- iv. CODEX STAN 105-1981 Standard for cocoa powders (cocoas) and dry mixtures of cocoa and sugars
- v. CODEX STAN 86-1981 Standard for cocoa butter
- vi. CODEX STAN 87-1981 Standard for chocolate

¹⁹ <http://www.codexalimentarius.org/standards/list-of-standards/en/>

3. Coffee & cacao value chain analysis

3.1. Governance of the coffee and cocoa sector

The Peruvian government (Ministry of Agriculture) has supported the coffee sector in the last years significantly. In particular the governmental organisation DEVIDA (Comisión Nacional para el Desarrollo y Vida sin Drogas)²⁰ has coordinated many coffee related projects co-financed by international donor organizations.

Nearly 100% of the Peruvian coffee production is in hand of smallholders who are organized in smallholder producer groups. Peruvian coffee smallholders are represented by the National Coffee Board (Junta Nacional de Café)²¹. Private sector companies (producers, processors and exporters) are organized in the Camara Peruana de Café y Cacao²².

Currently, the National Coffee Board conducts an assessment to create a greater economic and environmental sustainability of coffee production in Peru. This project has started and is financed by the Inter-American Development Bank²³.

Like for coffee cocoa production falls also under the responsibility of the Ministry for Agriculture and likewise DEVIDA is coordinating cocoa related projects in the context of anti-drug programmes. Smallholder producers and/or cocoa smallholder producer groups are organized in APPCACAO²⁴.

Within the country the following laws are relevant for coffee and cocoa marketing:

- Decreto Legislativo No. 1062, Ley de Inocuidad de los Alimentos
- Decreto Supremo No. 034-2008-AG, Reglamento de Inocuidad Agroalimentaria
- Decreto Legislativo No. 1062, Ley de Inocuidad de los Alimentos
- Decreto Supremo No. 034-2008-AG, Reglamento de Inocuidad Agroalimentaria

At INDECOPI (Instituto Nacional e Defensa de la Competencia y de la Proteccion de la Propiedad Intellectual) the following guidelines and standards are registered as guidance in order to comply with the increasing quality demand of the international market:

- Normas Técnicas Peruanas, ICS 67.140.20 Café y sustitutos del café
- Normas Técnicas Peruana ICS 67.140.30 Cacao
- Café Verde, NTP 209.027
- Cafés Especiales, NTP 209.311
- Café. Buena prácticas para prevenir la formacion de mohos, NTP 209.312

²⁰ www.devida.gob.pe

²¹ www.juntadelcafe.org.pe

²² www.camcafeperu.com

²³ http://www.iadb.org/en/projects/project-description-title_1303.html?id=PE-M1082

²⁴ www.appcacao.org

3.2. Status-Quo production and trends

Coffee came to Peru in the 1700s. Peru's coffee exports accounted three percent of all merchandise in 2011 which was 1'581 million USD and 0.88 percent of the GDP (Gross Domestic Product). Coffee production has reached over 7 million bags of green coffee in 2011 due the high market price in 2011 but declined to 5.5 million bags in 2012. The latter decline can be described by a number of factors: lower world market prices, heavy rainfall during the harvest season and a lack of workers during the harvest time as well as unproductive and old coffee plantations. Harvest 2013 has been forecasted with more than 7 million bags. But the severe outbreak of coffee rust (*Hemileia vastatrix*) on about 130.000 ha from over 400.000 ha of coffee plantations in particular in San Martin, Junin, Cajamarca and Amazonas will lead to a lower coffee harvest of about 6 million bags.

There are more than 165.000 coffee grower families in Peru, most of them are indigenous to these landscapes and speak Spanish as a second language. 80 percent of these families live on two or three hectares, hours away from the comforts of electricity and running water. With no personal warehouse space and only unreliable, expensive collective storage in town, farmers generally have no option but to accept the purchase price offered to them from the next buyer. The more remote the farms, the more times the coffees are mixed and traded before they arrive at the coast. Once there, the coffee is dry-milled and prepared for export. This unorganized trading system and isolation has caused farmers to become disconnected from markets.

Graph 1: Coffee growing regions in Peru



An estimated 15 – 25 percent of Peru's smallholder farmers now belong to cooperative organizations. These cooperatives have linked with international Fair Trade and organic networks to stimulate their growth. Working in partnership with different private industry partners, development agencies and the Fair Trade and organic movement, Peruvian

smallholder producer groups quickly became the second largest suppliers of Fair Trade certified coffee after Mexico and the largest organic producers. The higher prices offered through these certified and specialty markets have strengthened cooperatives and offered at least some price premiums to farmers. The more direct market access has also helped four Fair Trade certified cooperatives establish themselves among Peru's largest coffee and cocoa exporters.

Although, only 1 million bags have been sold as specialty **coffee** in 2011, which is 21% of the total volume, the production of specialty coffee is much higher. In 2010 organic coffee production was already more than 1.5 million bags, while export volumes were only 1 Mio bags. The fact, that 75% of Peruvian coffee is grown in 1.000 or more meters above sea level in a shaded environment and 80% from smallholder farmers, shows the potential to produce significant volumes of different kinds of specialty coffee (high grown, Fair Trade, UTZ, RA, 4C, bird friendly certified). The different coffees can be characterized by their different growing regions as follows:

Region	Areas	Altitude	Cup characteristic	Of total production area
Northern (49%)	Piura	900 - 1'200m	Full body, medium acidity, strong aroma, sweet flavour	2%
	Cajamarca	1'000 - 1'800m	Mild body, medium acidity, good aroma, sweet flavour	18%
	Amazonas	900 – 1'800m	Medium body, good acidity, strong aroma and flavour	13%
	San Martin	800 - 1'500m	Very good body, medium acidity, good aroma, flavour mild and sweet	16%
Central (28%)	Pasco	1'000 - 1'800m	Medium body, high acidity, mild aroma, good flavour	2%
	Huanuco	900 - 1'500m	Medium body, good acidity, mild aroma, good flavour	1%
	Junin-Chanchamayo	900 - 1'500m	Very good body, medium acidity, good aroma, delicious flavour	25%
	Junin-Satipo	1'000 - 1'400m	Good body, low acidity, medium aroma, good flavour	
Southern (22%)	Cuzco	900 - 1'600m	Light body, medium acidity, aroma and flavour very good	17%
	Puno	1'000 - 1'650m	Very good body, high acidity, aroma and flavour good	3%
	Ayacucho	800 – 1'600m	Light body, medium acidity, aroma good, characteristic flavour	2%

The northern region is the biggest, but also the newest coffee growing region with the highest number of uneducated coffee producers and traders. The central region has the longest tradition in using sustainable coffee producing techniques, such as shade, organic fertilizer and weed control. Most famous coffee farms are in Villa Rica and La Merced. Peak harvest is a few months apart, which gives this region a selling advantage in the coffee market. In the southern region, near Cuzco a coffee with the most consistently balanced coffee is grown, with fruity acidity.

Cocoa production and export increased dramatically in the last ten years from 8.5 million USD in 2001 to 118 million USD in 2011. Export volumes increased significantly from 13'000 tons to more than 56'000 tons between 2007 and 2011. Export volumes for specialty chocolate production are with 13% lower than in specialty coffee, but with a potential to grow.

In 2011 56'600 tons of cocoa have been produced by 33'000 cocoa farmers, most of them small holder farmers. The increase of Peruvian cacao production in the last years is due to several reasons. Cocoa production was promoted very intensively on national and international level as alternative crop to coca. Furthermore, cocoa is seen by the rural population as an attractive cash crop with promising income perspectives for young people and adults interested in agriculture in the tropical zones of Peru.

Falling production in the world's four largest cacao growing nations, as well as growing expectations of consumer countries for Andean cacao have opened Peruvian cacao a window of opportunity that Peru is efficiently tapping. Peruvian government officials supported by international cooperation agencies like SECO from Switzerland, GIZ from Germany or USAID as well as producer organizations represented by APPCACAO have launched a vast program to standardize Peruvian cacao by identifying quality beans from various cacao growing areas, achieve organic or other sustainable certification, such as UTZ Certified, Rainforest Alliance and Fair Trade, and to homogenize and improve production processes, in particular in the post-harvest stage when the fruit's aroma and taste develops. The country is now the world's second largest producer of organic cocoa.

Therefore, Peru has in the last years quickly built a global reputation for producing traditionally cultivated, shade grown, high quality coffee and cocoa beans. Many development aid programs are currently ending their support and therefore withdrawing financial and human resources from cooperatives and other key players and institutions of the coffee and cocoa industry.

If sustainable structures are in place a slow run down of the aid programs will cause no negative impact. In cases, where sustainable structures are lacking, a weakening or even breakdown of these structures could happen. This instance will put in danger some achievements gained in the last decades. The negative impact would then hit worst the most vulnerable actors of the supply chain, which would be smallholder coffee and cocoa farmers.

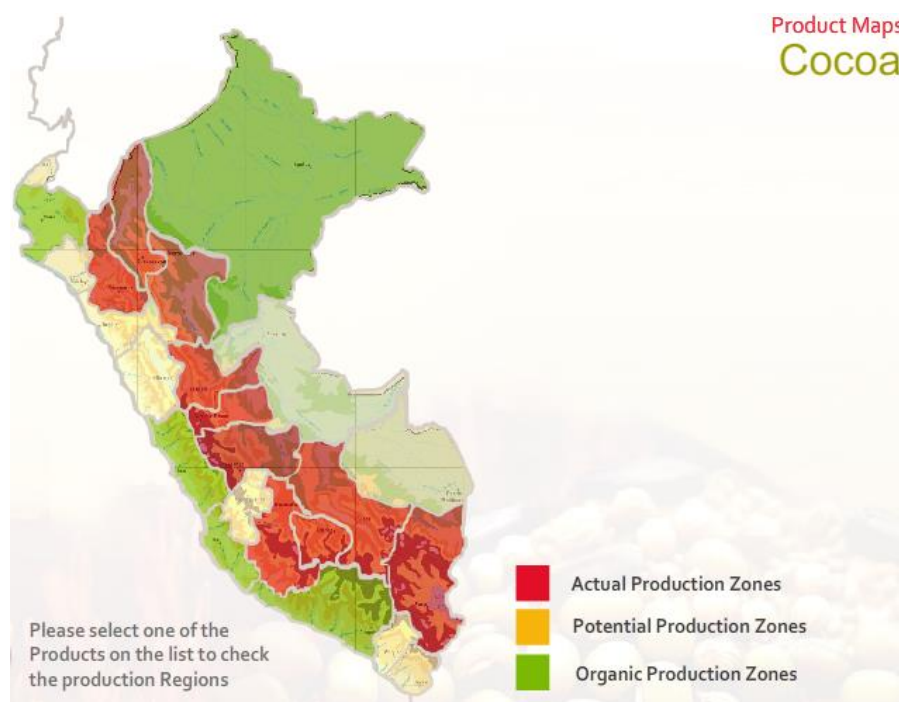
CBI and co-operating BSOs recommended to select the most dynamic and well organized producer organizations in order to avoid severe setbacks. Thus CBI can contribute to consolidate producer organizations (export) business formerly supported by value chain developing donor organizations.

Cocoa production has a long lasting history in Peru. For Peru the main local and native species are Porcelana and Chuncho. These two species belong to the generic group Forastero Alto Amazonas, Raza nativa Piura and Cusco. Criollo trees can only be found in very scattered patterns. The cross between Criollo and Forastero is called Trinitario.

60% of the cocoa producing area is planted with the traditional varieties which include the national cocoa Porcelana in the North and Chuncho in the south east of Amazonia. The exquisite Peruvian aromatic cocoa is of high quality resulting from greater fat content. 37%

is planted with the variety CCN-51²⁵ and the remaining 3% is planted with Trinitario clones such as ICS-1 or Forastero clones such as IMC-67. Development aid programs focused in the San Martin region with the cultivation of CCN-51 and production rose in the last ten years 11 times.

Graph 2: Cocoa production regions in Peru



Region	Production areas	Area in ha (2010)	Production in tons (2010)	Yield kg/ha	% of total area
Northern (49%)	Piura	265	189	713	0.4 %
	Cajamarca	1.590	994	625	2.2 %
	Amazonas	6.318	2.749	435	6.2 %
	San Martin	24.623	18.764	762	42.3 %
	Lambayeque	32	27	844	0.1 %
	Loreto	178	128	717	0.3 %
	La Libertad	45	52	1.160	0.1 %
	Tumbes	218	311	1.428	0.7 %
Central (28%)	Pasco	262	253	966	0.6 %
	Huanuco	3.837	1.840	480	4.1 %
	Ucayali	1.134	1.032	910	2.3 %
	Junin	8.555	4.440	519	10.0 %
Southern (22%)	Cuzco	36.408	7.192	198	16.2 %
	Puno	89	67	753	0.2 %
	Madre de Dios	55	37	674	0,1 %
	Ayacucho	8.851	6.263	708	14.1 %
TOTAL	16 regions	92'460	44'338		

²⁵ In the United States effort on the war against drugs, the U.S. Agency for International Development (USAID) introduced a high-yielding but acidic CCN-51 Trinitario cocoa hybrid to Peruvian farmers in 2002 as an alternative to planting coca. The pure native cocoa has lower yields and is more susceptible to disease than CCN-51.

3.3. Value Chain Analysis

The Peruvian coffee and cocoa sector are facing similar bottlenecks. The major bottlenecks of the Value Chains in question are presented in graph 1.

Low productivity and profitability in existing coffee and cocoa farms

In some regions old coffee/cocoa plants (about 20 years old) or unproductive trees in younger farms are not replaced at time with good planting material and causing crop shortfall. Unsustainable production methods and inadequate use of pesticides and fertilizer, monoculture and lack of farm management are causing erosion and soil depletion which also result in yield depressions. Especially, new established cocoa farms are set up with high productive trees in monoculture and put into risk farm sustainability.

To improve productivity and profitability in existing coffee and cocoa farms requires a dedicated and intensive training in different training blocks where farmers and farmers' trainers have the opportunity to learn and will be coached and professionally accompanied when they implement the lessons learned in their farms. To provide farmers with good planting material, nurseries have to be set up and seeds of good quality have to be provided. For all these different activities huge investment and the willingness to cooperate amongst different NGOs and sector organization is required.

If this bottleneck will not be removed farms remain unprofitable and farmers will not be motivated to invest in their farms and young people will be not attracted. If productivity remains low, volume increase can only be realized the expansion of cultivation area; in the worst case at the expense of primary forests. The success to remove this bottleneck depends on the ability of the different sector players to work closely together and the provision of funds in order to finance the above mentioned activities.

Low product quality

Harvest of the beans not in the optimal moment of their ripeness and inadequate post-harvest processing such as insufficient fermentation and drying methods are reducing coffee/cocoa bean quality drastically.

Farmer and farmer group training in best harvest, post-harvest (fermentation & drying) and storage practices in order to achieve maximum quality results for specialty coffee and cocoa is required. Investments in infrastructure for de-pulping (for coffee) and for an optimal fermentation and drying process of coffee and cocoa beans is indispensable for a good product quality. Finance strategies depend on how the market rewards the better quality achieved. In the optimal case, farmers would get access to credits for investments in infrastructure.

As coffee and cocoa buyers develop higher quality standards for specialty coffee- such as SCAA points, and for coffee and cocoa good agricultural practices, good processing practices, HACCP, – coffee and cocoa producers will need regular training to be able to comply in the future with the international demand.

If this bottleneck would not be removed the market will not require higher volumes of Peruvian specialty coffee and good quality cocoa and/or prices will be less attractive. The success to remove this bottleneck depends on the success of training and awareness building for coffee and cocoa quality, on the availability of funds for investments, and on the market to reward better quality.

Missing capacity building

The problems of low farm productivity and profitability, weak farmer organizations, uneducated or not professional farmers persist in regions where national research activities and extension services for farmer, technicians and cooperative staff are missing.

Increase in volumes and product quality goes hand in hand with a professional promotion and positioning of Peruvian specialty coffee and cocoa towards the international market. Only if interested customers are well informed and convinced that the product they are buying is of highest quality and produced in an economically sound and socially responsible way, they are willing to support, invest or sign long term contracts directly with cooperatives and smallholder organizations.

If the bottleneck will not be removed the demand for Peruvian specialty coffee and cocoa is not growing at its maximum speed and other countries, such as Colombia, Guatemala and Bolivia for coffee and such as Dominican Republic and Ecuador for cocoa are gaining on market share. The success to remove this bottleneck depends on the professionalism of the responsible promoting organization and the money provided for campaigns.

Lack of professionalism in cooperatives and farmer organizations

Weak farmer organization or even the absence of any and missing leadership are causing inefficiency and economic failure and make small farmers and their farmer groups vulnerable and less competitive. Still a huge number of farmers are not organized and therefore have no access to capacity building and markets.

Training of cooperative management staff and the promotion of setting up new farmer organizations is crucial. Only professional cooperatives and farmer organizations are able to attract individual farmers and provide them with a service which optimizes coffee and cocoa production, processing, certification and marketing and enhance rural development and increase long term farmers' income. It is necessary to conduct training in organization management, bookkeeping and administration topics in cooperatives with the responsible staff. New structures and initiatives where individual farmers are grouped and organized have to be supported. These smallholder farmer groups are also in need to establish more contacts with international buyers to secure new clients for the increase in their harvest and to reduce their dependency from only few buyers.

If the bottleneck would not be removed, weak farmer organizations are subject of inefficiency and vulnerability. This would weaken the whole Peruvian coffee and cocoa sector. The success to remove this bottleneck depends on the support of development agencies and the private sector.

Missing traceability hamper certification and denomination of origin

Too many intermediaries are causing a complex and in-transparent product flow and additional costs. Documentation is difficult.

Complex product flow systems are not traceable and certification of the process is not possible or very difficult. The better farmers are organized the easier supply chain processes can be traced back and documented and serve for any kind of certification or denomination of single origin coffees or cocoa. This helps to increase volumes of specialty

coffee and certified cocoa²⁶. If the bottleneck will not be removed, certification and denomination of origin of specialty coffee and certified cocoa in order to increase volumes will be complicated and costly. The success to remove this bottleneck depends on the one hand on the private sector to support certification and denomination of origin initiatives and on the other hand on the market that should reward with higher prices or premiums for single origin or certified cocoa and coffees.

Complex commercialization channels of coffee and cocoa

Too many intermediaries are reducing negotiation power of farmers and are responsible for low farm gate prices.

Individual farmers in remote areas depend a lot on intermediaries. To cluster and organize farmers geographically and provide them with services, like training, post-harvest infrastructure, storage facilities and logistics would strengthen these farmers and would make them less vulnerable.

If the bottleneck would not be removed a lot of smallholder farmers will remain in a less powerful position which hamper their development and hence the development of the whole Peruvian coffee and cocoa sector. The success to remove this bottleneck depends on how farmers can be clustered and can develop better business and management skills. This activity will require especially financial and operational support of the private industry, development agencies and other sector players.

Lack of investment

Missing of attractive credit lines for farmer groups and access to micro credits for farmers hamper investments in training, new plantations, roads and infrastructure. The principle bottleneck is that small farmers very often have no land titles. Without land titling banks are not granting loans and small farmers rely on informal lenders and/or coffee buyers.

Apart of capacity building, investments in infrastructure, roads, farming inputs and tools are necessary in order to boost the Peruvian specialty coffee and cocoa sector. Some of the existing smallholder farmer groups already receive support by national and/or international donor organization and/or are supported by the international buyer or finance institutions such as Sustainability International, Oikocredit, Rabobank, to finance their internal production and harvest collection.

If this bottleneck would not be removed, development and improvement processes will be hampered. This delay causes less professionalism and competitiveness in the international market. The success to remove this bottleneck depends on the ability of value chain influencers to strongly promote and financial support the sector and make sure that finance and micro credit institutes are finding a perfect and trustful business environment for their investments.

Poor national and international promotion for specialty coffee and sustainable cocoa

Although various national events in the coffee and cocoa sector have been realized in the last years, more should be done, especially on international level. Visit of international fairs should be supported.

Increase in volumes and product quality goes hand in hand with a professional promotion and positioning of Peruvian specialty coffee and cocoa towards the international market. Only if interested customers are well informed and convinced that the product they are

²⁶ Sustainability schemes for cocoa such as Rainforest Alliance and Organic require full traceability. Other schemes such as UTZ Certified allow for mixing of certified and non-certified products which reduces the need to set up traceability systems.

buying is of highest quality and produced in an economically sound and socially responsible way, they are willing to support, invest or sign long term contracts directly with cooperatives and exporters.

If the bottleneck would not be removed the demand for Peruvian specialty coffee and cocoa will not grow at its maximum speed and other countries, such as Colombia, Guatemala and Bolivia for coffee and such as Dominican Republic and Ecuador for cocoa are gaining market share. The success to remove this bottleneck depends on the professionalism of the responsible promoting organization and the money provided for campaigns.

Missing preparative actions regarding future maximum levels for cadmium in chocolate products

No or not sufficient preliminary action is taken in order to reduce the negative marketing impact of Peruvian cocoa beans at the moment when maximum levels for cadmium will be set by the EU commission.

In the moment the amendment of the EU regulation for maximum levels on cadmium in chocolate products comes in force the country should have a strategy in place how to tackle with this issue. Due to the fact that cadmium level in cocoa beans depends on different factors, such as the pH level of the soil solution, the cocoa plant genotypes and the cocoa growing region, a detailed soil map should be elaborated in order to determine and assess the risk of high cadmium contents in the beans.

In general, farmers should learn how to increase pH levels in their cocoa plantations in a sustainable way, in order to hamper cadmium uptake by the plants, e.g. by increasing biodiversity in the production system which leads to increased levels of biomass and humus. Some farmers have already started to apply calcium carbonate fertilizer to raise the pH. Because of the additional costs and other negative impacts on the soil, the sustainability of this method is questionable and should be subject of further investigations. It should be realized to better understand how cadmium levels could be sustainably reduced in Peruvian cocoa beans.

If this bottleneck would not be removed, the country runs into the risk that high quality and hence premium cocoa products from Peru which would be used for the single origin or dark chocolate production will lose their market and will be neglected by the European customers. The success to remove this bottleneck depends not only on the success of the realization of the above mentioned activities but also on further investigation results on how cadmium can be reduced in Peruvian cocoa beans.

Competitors for Peruvian coffee and cocoa exporters

Export volumes of Peruvian specialty **coffee** are steadily growing. Peruvian specialty coffee is often used in premium blends and less used as single origin coffee. Quality of Peruvian specialty coffee is considered from the market as 'very good' to 'good' with a consistent quality. Nevertheless, the country has not yet gained the same reputation for premium single origin coffees like other countries, e.g. Kenya, Guatemala, Colombia or Costa Rica, but is on its way.

The majority of the Peruvian **cocoa** beans are used in conventional chocolate mass production where they are replacing West African beans when they are cheaper and therefore economically more attractive for the chocolate industry. These beans will be processed to liquor or butter and powder and will then be mixed together with beans from other provenances for the production of industrial chocolate. Rather low quality beans are processed in Peru into butter and liquor and are then exported because the cheapest

beans will make the deal. Peruvian cocoa beans which are foreseen for industry chocolate production are in constant competition with West African beans with the risk to lose the gained market again.

However, Peru has developed a strong position in the organic market. In the coffee market Peru is the largest supplier of organic green coffee. In 2010 a turnover of more than 100 million US-\$ has been achieved. In the cocoa market Peru is the second biggest supplier of organic cocoa beans. In 2010 a turnover of more than 27 million US-\$ has been achieved. In addition Peru is a larger supplier of UTZ certified cocoa beans (about 16' – 19'000 tons from the total cocoa beans production of 56'000 tons in 2011).

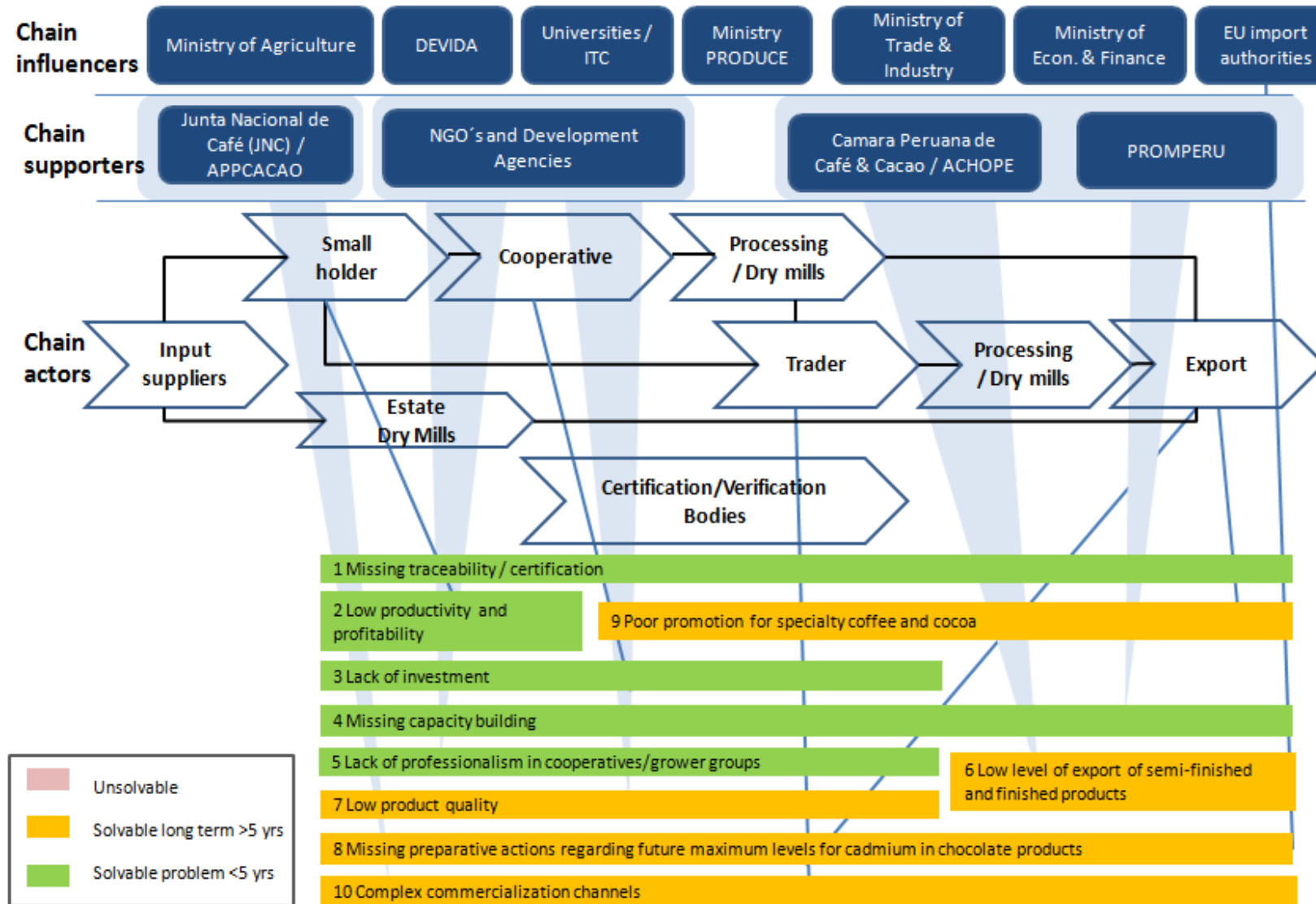
Peru was able to position itself in the world market as a provider of specialty cocoa, fine aroma with organic and/or fair trade certification and, furthermore, applying single origin. All interviewed chocolate producing companies confirmed, that their Peruvian exporter are able to provide them with beans of a good and consistent quality and taste. Peru is in competition with other Latin American fine flavor provenances, such as Ecuador and the Dominican Republic.

Low level of exports of semi-finished and finished coffee and cocoa products

Only a few companies and producer organizations are involved in the export of finished cocoa and coffee products. A strong European import, processing and retailing structure as well as a handful of dominating commodity traders control larger parts of the coffee and cocoa product markets in Europe. This structure cannot be changed and will dominate the mainstream market further on. Nevertheless, the trend towards single origins, sustainability coffee and cocoa products as well as the need of smaller European companies for differentiation in the market provide opportunities for Peruvian exporters (and processing companies)²⁷.

²⁷ Currently, the Peruvian cocoa processing industry has a slight over capacity.

Graph 3: Value Chain Bottlenecks Specialty coffee and cocoa Peru



4. Number of Peruvian companies

More than 100 Peruvian companies are exporting coffee. The five leading exporters of green coffee represent a share of more than 57% of total export values (2011). 20 companies export coffee worth more than 1.4 billion US-\$ or nearly 90% of the total export value²⁸. Among the 20 companies 5 are belonging to smallholder cooperatives, standing for less than 10% of total export values. The largest exporter in this sub-group is Central de Cooperativas Cocola Ltda.. The current trend goes into the direction of further concentration processes in the sector. Among the exporting companies are also international buying groups running their own purchase and exporting companies (e.g. Coinca belonging to the German Neumann Coffee Group). In regard to roasted coffee the number of companies is by far smaller, and the concentration even higher. The leading exporters are Cafe Inca del Peru SAC and Cafe Britt Peru SAC. The total number of exporters of roasted coffee is about 10 to 15 companies. About 30 producer groups and/or exporters are engaged in speciality coffees²⁹.

More than fifty companies are exporting cocoa. The five leading exporters of cocoa (and its derivatives) represent a share of 59% (2011). Unlike in the coffee sector two of the leading companies are owned by smallholder organizations. Twenty companies export cocoa and its derivatives worth more than 107 million US-\$ or nearly 59% of the total export value³⁰. Among the twenty companies six are belonging to smallholder cooperatives, standing for nearly 25% of the total export value (26.3 million US-\$).

About ten to fifteen Peruvian companies export cocoa derivatives such as cocoa butter, and cocoa powder. In 2010 the export value of all cocoa derivatives has reached around 40.5 million US-\$. Nearly 80% of this business is in hand of two companies (Machu Picchu Trading and Exportadora Romex). Two cooperatives are engaged in the export business of processed cocoa products (Cooperativa Agraria Industrial Naranjillo und Asociacion Central Piurana de Cafetaleros).

During the validation workshop it has been underlined that a sufficient number of companies and producer organizations are available. Also, a number of coffee and cocoa exporters (including producer organizations) have already entered the Ruta Exportadora scheme. Most likely CBI will be able to select pre-qualified applicants for the ECP programme as the number of potential candidates will be much higher than the maximal number CBI can approve finally.

²⁸ See list of the 20 leading coffee export companies in annex 1

²⁹ See list of speciality coffee producers/exporters in annex 2

³⁰ See list of the 20 leading cocoa export companies in annex 4

5. Risk assessment and opportunities

Identified risks and bottlenecks have been described at length already (in chapter 3.3.). Table 3 gives a summary of the principle risks which are similar in both value chains. The Peruvian stakeholders are aware of the identified bottlenecks. Nevertheless, the government in co-operation with stakeholder organisations and private sector companies have not been able to solve the problems principally. Fertilization and re-planting programmes have been set up to ensure declining harvests in some regions. However, a national strategy and/or an action plan are still missing. Therefore, the authors see a high risk that the situation will not change significantly within the next years. And, solutions cannot or only in parts provided by CBI. However, CBI's direct intervention shall focus on export marketing. Export of more certified coffee and cocoa quantities, export organized by producer organizations directly and last but not least export of semi-finished and finished products does not automatically require an increase in production.

Table 3: Value chain constraints analysis

Observed constraints in value chain	Critical constraint? (Y/N)	Solvable in short term (Y/N)	Could a solution be provided? If yes, by CBI or other organisation	Likelihood that it will be effectively solved (high/low)
Certification				
1 Missing traceability/certification	Y	Y	CBI, BSOs	High
Production				
2 Low productivity and profitability	Y	Partly	CBI, BSOs, MINAG, INIA, ICT and universities, Extension bodies, Consultants, NGOs	Medium
3 Lack of investment	Y	Partly	CBI, Agroideas, Rabobank, Oikokredit and others, Microfinance Institutes, Ministry of Agriculture	High
4 Missing capacity building	Y	Y	CBI, BSOs, MINAG, universities, Extension bodies, JNC, Consultants, NGOs	Medium
5 Lack of professionalism in grower groups	Y	Partly	CBI, DEVIDA, Extension bodies, JNC, Consultants, NGOs	Medium
Processing				
6 Low level of export of semi-finished and finished products	Y	No	CBI, selected ECP participants, BSOs, ACHOPE, DEVIDA, Agroideas	High
Quality assurance				
7 Low product quality	Y	Partly	CBI, BSOs, MINAG, universities, ICT, Extension bodies, Consultants, NGOs	High
8 Missing preparative actions regarding future maximum levels for cadmium in chocolate products	Y	Partly	CBI with EU buyers, BSOs, MINAG, Research Institutes, Consultants	Medium
Export issues				
9 Poor promotion of specialty coffee and cocoa	Y	Y	CBI, Promperu, MEF, JNC, MINAG/INIA, ICT, Camera Peruana Café&Cacao	High
10 Complex commercialization channels	Y	Partly	CBI, BSOs	Medium

In the following table 4 solutions are presented. Most of the sector solutions need to be developed by Peruvian stakeholder organizations. The role of CBI is mainly seen as a

facilitator initiating needed actions in cooperation with BSO, governmental organizations and international donor programmes. Only within the ECP module working with concrete coffee and/or cocoa producer organizations CBI can contribute to the realization of solutions directly.

**Results from the validation workshop Lima, 17.04.2013
(see also complete workshop wall notes in table 4)**

In comparison to the recommendations given before the workshop, some new aspects were identified and especially a deepening of the understanding of the Peruvian sector bottlenecks and potential solutions was achieved.

Table 4: Solution Design

Workshop wall notes

Constraint	Why does this facilitate exports?	How can the constraint be solved/ addressed?	Can it be addressed by a CBI module?	Sector	Problem	Solution
Certification						
1 Missing traceability/certification	Traceability as a precondition for certification	Promote verification and certification processes with exporters / cooperatives, provide BSO training in certification/verification	Yes: Certification, BSOD	C&C	Knowledge on market requirements	Anticipate what the market asks for.
		National norm in preparation should fulfil a standard with market relevance	Partly: Selection of fitting standard	Cacao	National norm of production in preparation	Trainings regarding sustainable nurseries, pruning, nutrition required
Production						
2 Low productivity and profitability	Generate more attractiveness of the crop for smallholder farmers	Training and coaching of farmers and, provision of good planting material, and farming tools	Indirectly: Certification	C&C	Low productivity per ha	Offer of technical assistance / solutions has priority in comparison to augmentation of the planted acreage.
			Others like MINAG, INIA, ICT and universities	Cacao	Quality seeds required	Adapted to regional zone, altitude quality and productivity
3 Lack of investment	Direct investments in farms (planting material, tools, etc.) and infrastructure (dryers, warehouses, etc.)	Training on available micro credits for sustainable farm investments, credits for certification and infrastructure after the approval of a sound business plan, round table with stakeholders to discuss land titling issue	Partly: CSR module and Business Development	C&C	Solutions to boost productivity need to be adapted to the local conditions.	There are national programmes e.g. Agroideas ³¹
4 Missing capacity building	Capacity building of all relevant chain actors in order of a sustainable development of the sector	Training of exporters and BSO trainers in sustainable agriculture practices, best social and economic practices, agroforestry, diversification, etc. Connecting small farmers to markets should be implemented in the Ruta Exportadora (small farmer training module)	Partly: Export capacity building and BSOD	C&C	Lack of access to production knowledge of farmers	Pilot plots are suitable for dissemination among farmers, technicians, cooperative staff.

³¹ NOTE: SNIP = “Sistema de la Inversion Publica” (Public Investment System of Peru was mentioned in the WS but at the moment cannot be used to finance aspects of production but is used to finance the construction of missing infrastructure

Constraint	Why does this facilitate exports?	How can the constraint be solved/ addressed?	Can it be addressed by a CBI module?	Sector	Problem	Solution
Production (continued)						
			Others like MINAG and universities	Coffee	Incident of rust (roya) hit most in the Peruvian north and centre due to lack of soil nutrition and foliar nutrition of plants	Understand sustainable solutions: organic farms where affected to a considerably lower degree. There are funds available for inputs (should be focused on organic inputs).
			Others like MINAG and universities	Coffee	The real impact of the rust incident will be visible in 2014. Year by year the disease is more aggressive.	Solutions have to be integrated, including seeds and nurseries.
5 Lack of professionalism in cooperatives/grower groups	Strengthen reliability of grower groups as business partners; Provides a solution for individual farmers creating access to capacity building and to the market	Cooperative management and administration training, training of coop staff; promote formation of new farmer groups and/or enlarge existing groups;	Partly: Business Development	Cacao	Still a high number of producers are not yet associated	Positive examples can motivate others to follow. ³²
Processing						
6 Low level of export of semi-finished and finished products	Utilization of currently good perspectives of processed chocolate products in combination with certification of food safety standards	A) EU market study finished products (possibly together with DEVIDA) and B) Training in IFS / BRC / GFSI certification	Yes A) MI B) Certification	Cacao	Value adding	Currently is carried out by Colombia – buying large quantities from Peru, selling processed products
			Yes: BSOD	Cacao	Semi-finished products	To cluster the Peruvian offer of processed products
			Network partner for potential participants	Cacao	Asociación de Chocolateros del Perú - Achope	This association for finished confectionary-chocolate products exists since 1 year and some members already export. The association supports in certain aspects of company management

³² Inform interested producer groups about the benefits and show examples that work. Biggest exporters: Naranjillo, Acopagro, etc. Example: Asociacion KALLPA Asociación de productores agropecuarios de cacao, promoting technical assistance and market development in the Cuenca del Huallaga and the Valle del Monzón with products like chocolate, fruit juices and fruits in syrup.

Constraint	Why does this facilitate exports?	How can the constraint be solved/ addressed?	Can it be addressed by a CBI module?	Sector		
				Problem	Solution	
Processing (continued)			Network partner for potential participants	Cacao	A new type of Peruvian companies is on the rise	Achope-members produce for the premium segment of the national market Some of them export chocolate couvertures (e.g. from Cajamarca and San Ignacio) Some are mature enough for export
			Provides synergies	Cacao	Investments in cacao processing	Agroideas is a suitable program
			PmP, ADEX, CCL	Cacao	Lack of processing knowledge	Technological missions
			PmP, ADEX, CCL	Cacao	Capacities in quality manufacturing of chocolate confectionary for native varieties	Support by Belgium/French experienced retired expert programs
			Yes: ECP for processors	Cacao	40% of processing capacities are not utilized	<ul style="list-style-type: none"> Laboratories to savour³³ (catación) Capacity building Adapt rapidly to the market Traceability
			Yes: European Market Entry	Cacao	Value adding	Fermented & roasted cacao nibs ³⁴
			Yes: Certification	Cacao	Lack of trust between producers and processors / processing associations	<ul style="list-style-type: none"> Transparency in associations Disconnect from individual persons Strengthening³⁵

³³ For savouring (catación) no laboratory is needed, the instrument is the guillotine and focused are variety aspects such as flavour, colour, odour are trained in specific courses to be carried out in the field.

³⁴ Nibs are exported as semi-processed product with final consumer and gastronomy packaging – Increasing demand is noted since the last two years.

³⁵ Through certifications that embrace the value chain, such as fair trade/ organic, the trust can be achieved.

Constraint	Why does this facilitate exports?	How can the constraint be solved/ addressed?	Can it be addressed by a CBI module?	Sector		
				Problem	Solution	
Quality assurance						
7 Low product quality	Consistent high quality is a precondition for clients	Training and coaching of farmer organizations in harvest and post-harvest management practices, provision of infrastructure (dryers)	Partly: Certification	C&C	Post harvest treatment	Key for development of qualities
			Others like MINAG, universities, ICT	C&C	Lack of coordination between public and private actors	More precision on regional issues required
			PmP, ADEX, CCL and others	Coffee	Loss of quality in storing	Due to humidity while storing; can be prevented e.g. by proper packaging material (membranes which don't let pass humidity and oxygen). ³⁶
			Partly: Business Development	Cacao	Lack of knowledge dissemination in fermentation	Post harvest / fermentation needs to be carried out different depending on variety.
			Partly: BSOD	Cacao	Savour (catación)	According to final market (capacities need to be harmonized)
8 Missing preparative actions regarding future maximum levels for cadmium in chocolate products	If amendment of EU regulation will come in force: prevent high Cd level in cocoa beans in order to prevent loss of market shares	Setting up an action plan (elaboration of a soil Cd map, trials with organic matter to increase pH, kick off intensive research and extension activities to reduce Cd in cocoa beans)	Partly by lobbying with EU buyers			

³⁶ The problem of humidity can be solved by storing in appropriate conditions such as is done currently by national buyers: storage of C&C in higher dry areas in Peru (Andes) before final shipment to coast and export.

Constraint	Why does this facilitate exports?	How can the constraint be solved/ addressed?	Can it be addressed by a CBI module?	Sector		
				Problem	Solution	
Export issues						
9 Poor promotion for specialty coffee and cocoa	Increase awareness and therewith demand of the already existing offer of high quality specialty coffee and cocoa	Participation in international trade shows, continuing with "ExpoCafé", "CoffeeTalk", Salón del "Cacao y Chocolate" and others	Partly: BSOD	C&C	Range of flavours underutilized	To promote better the various unique flavors.
			Others like ICT	Cacao	Only 6 main varieties in Peru are classified by INIA	Classification is done by their aroma. They are not genetically pure anymore. ³⁷
			Partly: To be considered in BSOD and Business Development	Cacao	Lack of differentiation: quality of beans vs. quality of chocolate	Important to find fitting solutions.
			Partly: inform MEF about what CBI covers	C&C	Strategic public & private plan – including int. cooperation	MEF (Ministerio de economía y finanzas) is involved to develop a plan considering short, mid and long term targets.
			Yes: BSOD	C&C	Peruvian technical and regional desks	The market requires systematized information. A visible web site is missing to support dissemination of info.
			Provides synergies	Cacao	Development of the domestic market	Brings synergies with export with regard to experience and costs.
10 Complex commercialization channels	Shorten the value chain by direct contacts to enable quality control and documentation	Strengthening of cooperatives /grower groups who take over the role of intermediaries	Partly: Business Development	C&C	Added value	Alliances between international brands and producer associations could bring solutions for the domestic, Latin-American and European market
			Partly: BD	Cacao	Lack of producer associations	To export is easier than to organize producers' associations ³⁸

³⁷ No database of varieties suitable for specific production regions (soil, climate change adaptation etc) exists. There are more genetically pure cocoa species in Peru, many exist, at least 80 to 100 have been identified. The private Institute ICT-Instituto de Cultivos Tropicales is the leader in investigation regarding coffee and cocoa. Research carried out already: Diversidad genética de cacao Criollo "porcelana" en base a marcadores AFLP; Diversidad genética de genotipos nativos de cacao en base a marcadores SSR y AFLP; Análisis de la diversidad genética de 45 Genotipos de cacao de las cuencas de los ríos Santiago y Morona usando marcadores RAPD; see: <http://www.ict-peru.org/> and select LABORATORIO DE BIOTECNOLOGIA .

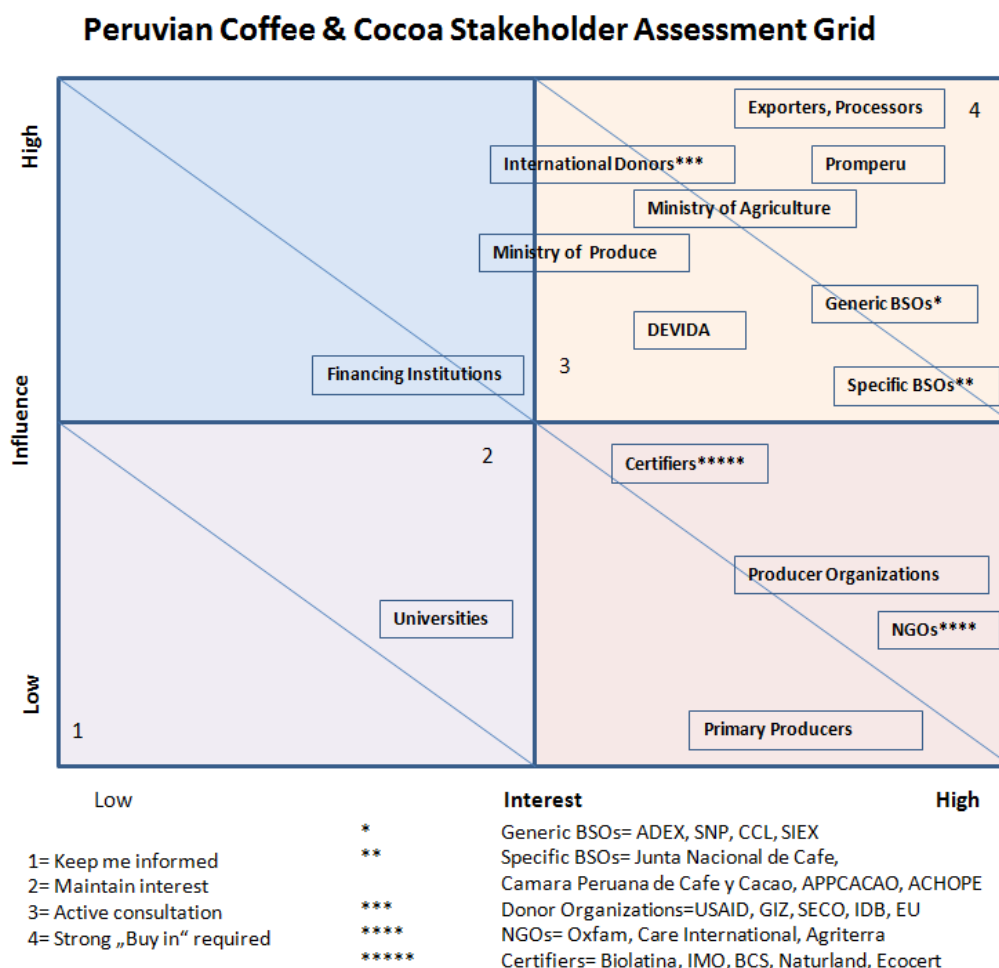
³⁸ Cooperation with producer associations should be formed up to the target market, successful examples are the existing associations like Acopagro and Naranjillo that work directly and with Peruvian exporters in cooperation with buyers in European markets

6. Role of stakeholders in a CBI country programme

The coffee/cocoa sector is readily comprehensible. The lion's share of production is in hand of producer organizations (cooperatives etc.). The latter are recommended to play a particular role in the CBI country programme (in general). Thus the representatives of the producer organizations are important stakeholders and need to be included.

From the governmental side the Ministry of Agriculture (and in parts the Ministry of Production) are governing the sector. Co-operation with international donor organization in order to discuss realization of presented solutions and to create win-win situations should involve DEVIDA. The latter organization is strongly involved with many programmes in the coca production region. Last but not least the private sector bodies Camara Peruana de Cafe y Cacao and the ADEX are involved. Some private sector companies have engaged a lot in regard to development of producer organisations and/or active co-operation within international donor programmes in the coffee and cocoa sector³⁹.

Graph 4: Stakeholders in the Peruvian coffee and cocoa sector



³⁹ Examples are the Swiss Pronatec and Sumaqaq. The latter has also set up an NGO offering consulting services for producer organizations.

Besides Promperu as the main co-operation partner of CBI in Peru the following BSOs shall be taken into consideration:

- ADEX in regard to export of finished and semi-finished products. ADEX should involve the Peruvian BSOs Achope⁴⁰ (semi-finished and finished chocolate products) and Camara de Café y Cacao.
- SIEX and Junta Nacional de Café in regard to identify appropriate ECP participants from the coffee and cocoa sector. SIEX could get involved via CCL as they work together in projects of other sectors already (coffee and cocoa and dehydrated Physalis covered with chocolate). In the involvement of SIEX all export-related issues should be directed to the partner CCL (or the partner of CBI's choice) and SIEX could identify organisations ready for the market as participants and provide solutions for problems related to the production.
- DEVIDA in regard to solve sector problems (should be done by Promperu where needed)

It is recommended to set up a sector specific steering committee for the coffee and cocoa in order to integrate the activities of all involved stakeholder organizations.

⁴⁰ Asociación de Chocolateros del Perú – Achope: This association for finished confectionary-chocolate products exists since 1 year and some members already export. The association supports certain aspects of company management.

7. Corporate Social Responsibility (CSR) in the value chain

In Peru more than 165.000 coffee and 33.000 cocoa smallholder families are growing their cash crop on a two or three hectares and are directly dependent on coffee or cocoa for their livelihood. As a result, declining and volatile coffee and cocoa prices can have a direct impact on access to education, housing, food, medical services and other basic necessities.

Table 5: CSR aspects in the Peruvian coffee and cocoa sector

CSR aspects	Impact	Sustainable practices
Environmental		
1.1 Climate change	Changing temperatures and water regimes have negative impact on coffee and cocoa yields, pest and diseases, and soil fertility	<ul style="list-style-type: none"> • Promotion of sustainable production methods, e.g. diversification, agro forestry, • Introduction of organic and other sustainable certification systems • Introduction of food crops in association with coffee/cocoa plants • Rejuvenation of farms: replacement of old non-productive coffee/cocoa plants with young high productive ones • Intensive farmer and trainer training and coaching to ensure implementation of the above mentioned measurements
1.2 Inadequate use of fertilizer and pesticides	Pollution of the environment, health risk for uneducated farmers when managing farm inputs	
1.3 Soil degradation	Inadequate farming techniques and use of fertilizer causes the loss of organic matter and humus, provoke soil erosion and reduces soil fertility and hence productivity of the farm	
1.4 Monoculture	Monoculture in coffee and cocoa production causes a loss in biodiversity and on long term problems with pests and diseases, soil erosion and depletion and raises production costs. Lack of food crops in the plantation can cause food shortages of the farmer family.	
1.5 Waste water (relevant only for coffee)	Wet processing techniques which are common in Peru everywhere do need high volumes of fresh water and generate waste water of a high Biological Oxygen Demand	Recycling of water in the de-pulping and bean washing processes.
Social and Human Rights		
2.1 Worst forms of Child Labor (WFCL)	Declining yields and productivity on coffee and cocoa farms causes income decrease. Families start to use their children as cheap labour in their farms doing work which is hazardous or harmful for their health and safety and do not send them anymore to school.	All measurements from No. 1 plus: <ul style="list-style-type: none"> • Implementation of sensitization programs against WFCL • Promotion of school programs • Construction of additional schools • Promotion and implementation of social standards, such as Fair Trade, UTZ Certified, Rainforest Alliance, 4C Verification to reinforce children, workers and women
2.2 Discrimination of woman	The role of women in household decision-making is often disproportionate to the work they devote to actual coffee or cocoa production.	
2.3 Labor rights	Poverty causes inhuman hiring practices, working and housing conditions for workers in the Peruvian coffee and cocoa sectors.	

Child labour is seen as the most critical CSR aspect in coffee and cocoa supply chains. The difficult economic situation (particular in periods of low world market prices) the younger farmers leave the rural areas which will increase the shortage of workers in rural areas (above all during harvest time). However, in comparison to Africa the risk is seen as significantly lower and no argument against an intervention of CBI in the sector. On the

contrary, when focussing on sustainability certification as well as increasing value adding and income generation CBI supports solutions for the child labour problem. Also, sustainability certification takes into consideration fair operating practices. Either ECP participants count already on a market relevant certification or are seriously working on a certification.

8. Result chain

A theoretical estimation of the economic export value generated by the CBI sector programme comes up to 13.8 million € (18 million US-\$) for coffee and cocoa (representing about 1% of the total coffee and cocoa exports in 2011)⁴¹. The lion's share of the export value will be generated with non-processed coffee beans and/or cocoa beans. With a maximum of 10 ECP participants each participants will generate export values of about 1.8 million US-\$ over four years.

Within a four year programme exports may start from the second year on. The mentioned export value needs to be divided by the number of years. Export value generation can be expected by

- enabling producer organisations to start and/or enlarge direct export of cocoa and/or coffee from certified sustainable supply chains to EU/EFTA countries
- enlarging the farmers base of selected producer organizations and converting farmers to sustainable practices
- enabling processors/exporters to start and/or enlarge export of roasted coffee (finished product single origin and/or from certified sustainable) to EU/EFTA countries
- enabling processors/exporters to start and/or enlarge exports of cocoa derivatives and chocolates (finished product) to EU/EFTA countries

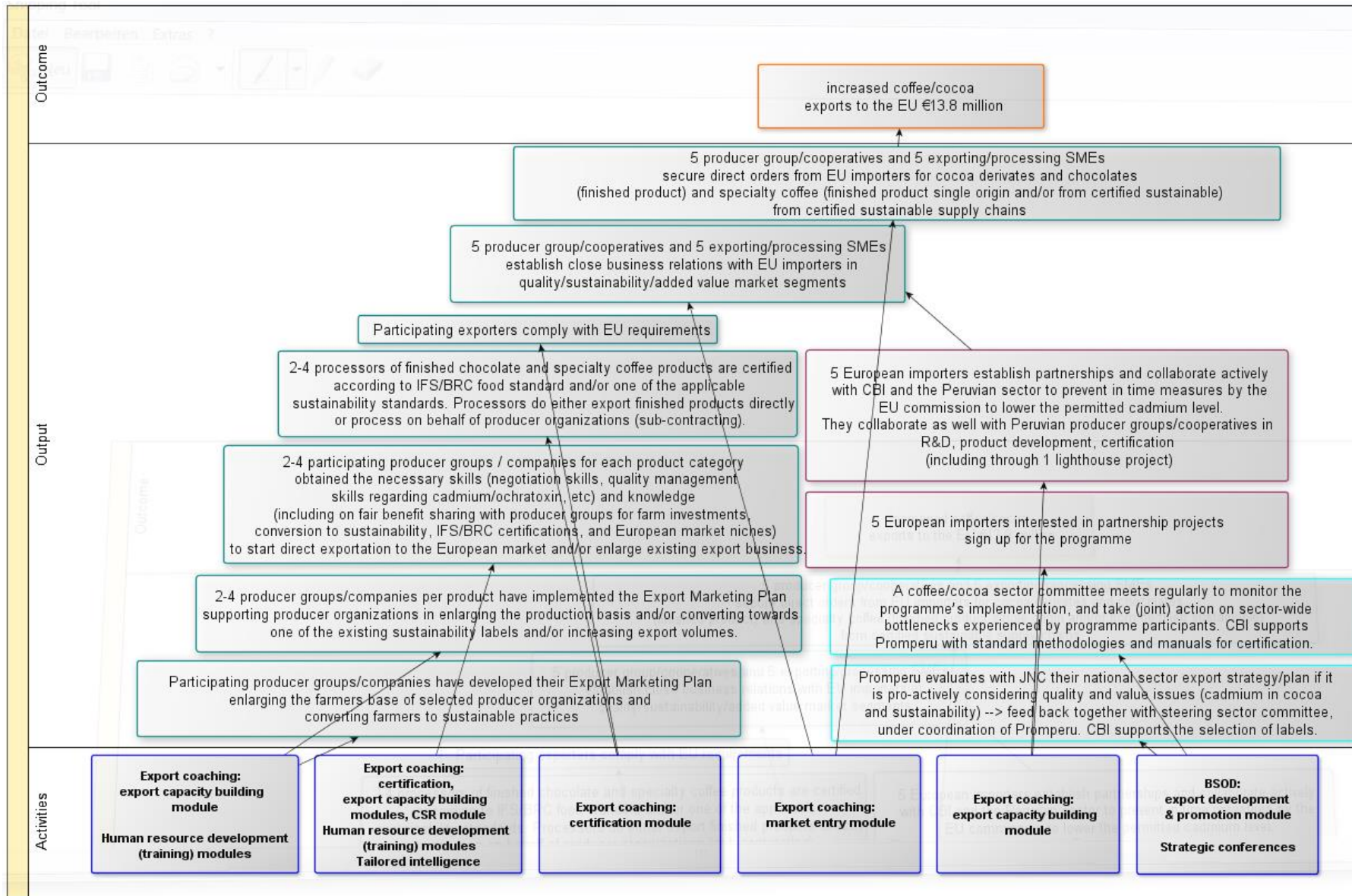
2-4 processors of finished chocolate and coffee products are certified according to IFS/BRC food standard and/or one of the applicable sustainability standards. Processors do either export finished products directly or process on behalf of producer organizations (sub-contracting).

2-4 producer groups for each product category have been qualified to start direct exportation and/or enlarge existing export business and/or convert production towards any of the sustainability schemes.

2-4 exporters have been qualified to support producer organizations in enlarging the production basis and/or converting towards one of the existing sustainability labels and/or increasing export volumes.

41 Coffee is foreseen with 12 million US-\$ and cocoa with 6 million US-\$.

Graph 5: Result Chain



9. Recommendations and conclusions

This chapter summarizes recommendations on three different levels. **Macro Level** = Activities to improve framework conditions for the sector in Peru and sector development. **BSO Level** = Capacity building activities, development of tailor-made services and support of sector development initiatives. **Micro Level** = Support of companies in Peru (ECP) and acquisition of European partner companies (buyers, investors).

The following recommendations start with a {number} which indicates the reference to the solution design in table 4.

Recommendations at Macro Level

Fields of action for CBI, BSOs and further organisations:

- {8, (1)} Currently there are starting new national alliances and the construction of national strategies for coffee & cacao (which incorporate quality and value issues and aim to develop solutions for issues such as cadmium levels in chocolate). Peru (in coordination with other countries like Ecuador and Colombia) is making lobbying efforts aiming that the new EU norm lowering the permitted cadmium level comes into effect later than planned. MINAG, Promperu and others see the need to conduct a profound study to find out the real correlation between involved factors of the problem in Peru in order to develop a pro-active national strategy.

CBI should support approaching the European Commission, e.g. by bringing together European importers and Latin American exporters as a lowering of the permitted cadmium level affects both - European importers and Peruvian SMEs.

- {9} **CBI** in cooperation with BSOs is recommended to initiate a strategic conference with major stakeholders of the sector, Ministry of Economy and Finance (MEF), Ministry of Agriculture (MINAG), DEVIDA, Business Support Organizations and international donor organizations (USAID, GIZ). The conference should aim at discussing strategies to develop export business hand in hand with value addition in coffee/cocoa supply chains, identify win-win situation between the CBI sector programme and export oriented activities of the national strategies (MEF) and international donor organizations as well as connecting ECP participants with programmes of donor organizations (e.g. to enlarge the production base for speciality coffee /cocoa).
- {1, 2, 7} Large buyers of coffee and cocoa define targets and deadlines for sourcing a specific percentage of coffee/cocoa from sustainable sources. Peru as an important producer of coffee and cocoa could include in the national strategy (MEF) defining proactively steps to convert the complete coffee and cocoa production towards one of the less challenging sustainability schemes (e.g. in coffee 4C or in cocoa UTZ certified). Following this target would not only help to improve the value chain management but also support the export marketing of Peruvian coffee/cocoa products. **CBI** together with Promperu could launch the idea and - as and when required – support in the selection of a fitting standard.

- {9} Integration of the coffee/cocoa sector into the national marketing plan for products from Peru highlighting: Social competence (“products from smallholders”), environmental competence (“certified sustainability quality”) and value addition (“processing of value added, finished products for export markets”). Peru will be the host of the SCAA⁴² in 2014. **CBI** together with Promperu could give recommendations on Peru’s participation. The Consejo Nacional de Café (in particular the Junta Nacional de Café) is leading the effort. Consejo Nacional de Café consists of Junta Nacional de Café, Camara Peruana de Café y Cacao, Promperu, y MINAG.⁴³

Recommendations at BSO Level

Fields of action for CBI and BSOs:

- {4, 5, 1} In co-operation with PmP, ADEX and CCL the existing capacity building tools of Ruta Exportadora should be assessed in regard to the main bottlenecks identified in this VCA. In particular tailor made training and capacity tools for producer organisations in the small farmer training module are seen as crucial especially if there are producer organisations that participate in the ECP, **CBI** could support these groups to achieve suitable certifications and
 - a) to improve export management skills of larger producer organizations,
 - b) to enable producer organizations in developing export business,
 - c) to develop export oriented consortia of various smaller producer organizations.⁴⁴
- {3, (2, 7)} In co-operation with Promperu, ADEX and CCL the existing capacity building tools of Ruta Exportadora should be assessed in regard to tailor made training and capacity tools for exporters interested to develop fair benefit sharing models with producer organisations. Without an increase of the economic benefit for producers needed re-investments in plantations cannot be realized. Solutions for pre-financing production are crucial. **CBI** should train exporters directly in benefit sharing with producers in the CSR component of the programme and inform about a range of available financing tools during Business Development.
- {6} A) In order to develop a range of finished Peruvian cocoa and coffee products for export to EU/EFTA markets a joint action of food processing sector, coffee and cocoa producers as well as related BSOs is recommended. Besides launching the idea CBI is recommended to develop tailor made capacity building activities for sector organizations as well as for ECP participants. The output of these activities should be an increase of IFS/BRC certified food processors in Peru. A precondition to export finished products to EU/EFTA markets (but also to other markets for example United States). Besides food safety issues trainings and know-how-transfer in regard to organic certification of food processing plants is recommended. Most of the organic food products exported from Peru are commodities⁴⁵. Synergies are seen as Promperu has resources to support certification and packaging. **CBI** focus could thus be directed to support the ECP participants in selecting the certification that is best for them (through export capacity building modules).

⁴² <http://www.scaa.org/?page=events>

⁴³ Some actors (ACDI/VOCA/PMP) doubt that direct support of export issues at CNC would be efficient.

⁴⁴ This tool can be applied for other sectors too as most of the supply chains rely on producer groups.

⁴⁵ This capacity building activities can be combined with other sectors except for garments.

Support for Promperu could focus to develop standard methodologies and manuals for certification within the BSOD module.

- {6} B) **CBI** should support BSOs through specific and tailor made market intelligence in the European market with regard to the specific markets for finished cocoa/coffee products, that Promperu can include in their SICEX system (and other BSOs in their MI system). DEVIDA has funds to commission tailor made studies and was advised to connect their efforts with the CBI program. Besides import tax information and food regulations it is important to understand the dynamic trends in product presentation of competitors in the European/EFTA markets (size of the products, packaging material, claims on the product packages etc.). In addition, market information on specific taste preferences is crucial⁴⁶.
- {4, (2, 7)} Currently, Junta Nacional de Cafe (JNC) implements a project financed by the Interamerican Development Bank aiming at developing strategies to make the coffee value chain economically and environmentally more sustainable. **CBI** through Promperu should contact JNC in order to understand which strategies are seen as helpful to further develop the export business. CBI, Promperu and ECP participants could benefit from results of this investigation which will be finished and present results from 2014 on.

Recommendations at Micro Level

Fields of action for CBI and BSOs:

- {10, (1)} **CBI** together with Promperu (CCL, ADEX, (SIEX)) should identify and acquire SMEs and/or coffee/cocoa producer groups for the ECP module with reliable certified production in specialty coffee/cocoa production regions, potential to include new small farmers and first experiences in export business and/or strongly interested in development of export business. A tailor made capacity building tool for export business development should be part of the ECP module.
- {1, 6} **CBI** should identify and acquire SMEs and/or coffee/cocoa producer groups for the ECP module with reliable certified production in specialty coffee/cocoa production regions and finished products (either produced in own or sub-contracted processing plants)⁴⁷.
- {6} **CBI** should identify and acquire Peruvian coffee roasters and processors of semi-finished and finished cocoa products either interested to offer processing services for producer organisations and other export companies or interested to develop an own export business for semi-finished or finished coffee/cocoa products.

⁴⁶ This market intelligence service can be combined with other sectors.

⁴⁷ For example the authors have identified a consortium of 4 grower groups called „Consortio Cacao Amazónico“. With the help of Agriterro they have developed a line of four chocolate bars, produced by „Bombonería di Perugia SAC“ in Lima. The development process has been accompanied by Jeroen Krufft, one of the CBI experts in Peru). The raw material has various certifications (organic, UTZ certified and Fair Trade). Consortio Cacao Amazónico could be supported on the way to get a certification for the finished product as well as IFS certification for the sub-contracted processing plant.

- {7} **CBI** should train coffee exporters participating in the ECP in preventive strategies to reduce and/or avoid the risk of Ochratoxin contamination of green coffee⁴⁸.

a) Fields of action for BSOs and other organisations:

- {8} Cocoa and/or chocolate exporters participating in the ECP module should be trained in preventive strategies to reduce the risk of exceeding MRL's for cadmium in cocoa products as soon as clear strategies are available.⁴⁹

Fields of action for CBI:

- {10} **CBI** is recommended to identify and acquire EU/EFTA companies not only interested in coffee/cocoa from sustainable supply chains in Peru but also in partnership projects⁵⁰.

Conclusions for the planning of the CBI programme:

The authors recommend to integrate the coffee and cocoa sector into the CBI country programme. CBI interventions in this sector as described earlier will have a direct and positive impact on marginalized small farmers in Peru. All sector organizations which have attended the CBI validation workshop have shown clear interest in active participation in the CBI programme. Also, Promperu sees good opportunities in this sector and has already registered export companies in the Ruta Exportadora system. Acquisition of a sufficient number of companies is not seen as a challenge in this sector. Also, no non-tolerable CSR risks exist and could have a negative impact on a CBI export coaching programme.

When selecting ECP participants CBI should take the following sector specific selection criteria into consideration:

- Give preference to companies which already developed finished products for the domestic premium market as well as Peruvian coffee roasters and processors of semi-finished and finished cocoa products either interested to offer processing services for producer organisations and other export companies or interested to develop an own export business for semi-finished or finished coffee/cocoa products.
- Give preference to SMEs and/or coffee/cocoa producer organizations for the ECP module
 - with reliable certified production of specialty coffee/cocoa
 - with potential to include new small farmers and
 - with first experiences in export business of export business

⁴⁸ A sector crossing CBI module offered to ECP participants in product quality assurance along the supply chain is recommended. Either Ochratoxins in coffee, heavy metals in cocoa, heavy metals in maca or virus problems in bivalve mollusks, companies need to understand how to deal with the problems, how to develop quality monitoring and traceability systems and how to alert customers in time.

⁴⁹ There are positive experiences through highly diversified agroforestry systems including certain palm varieties; scientific research is still needed to understand the underlying processes.

⁵⁰ For example members of round tables for sustainable cocoa production in some European countries can be easily identified.

- and finished products (either produced in own or sub-contracted processing plants)

In general CBI should aim at three major objectives

- Preferably work with producer organisations interested in starting and/or enlarging direct export business.
- Preferably work with producer organizations (and related processing companies) developing the market for finished and semi-finished coffee and/or cocoa products.
- Preferably work with producer organizations and exporters pushing sustainability certification.

Short term/immediately after programme approval:

1. In collaboration with Promperu (inviting DEVIDA), ADEX (inviting ACHOPE), CCL, Sierra Exportadora (via CCL) and Cámara de Café y Cacao open a call for 'export coaching' to SMEs and producer groups, inviting particularly:
 - Exporters and producer groups as well as involved processors of specialty coffees and semi-finished/finished cocoa products (either produced in own or sub-contracted processing plants).⁵¹
 - Producers of added value products and those that focus on the quality / sustainability (organic / fair trade, etc) high-end market segments (they should be awarded a higher score in the selection process)
 - Cooperatives and producer groups (they should be given a higher score in the selection process, on selection criteria like 'social/development impact', or 'from rural areas')
2. Open a call-up for interested European companies interested in building direct sourcing partnership projects with Peruvian suppliers, focusing particularly on products like finished single origin organic chocolate and single origin organic coffee.
3. Establish a steering sector committee, led by Promperu and consisting of at least ADEX, LCC, Sierra Exportadora, ACHOPE and DEVIDA to promote, and support the programme's implementation.

⁵¹ The invitation to organic producer organisations of coffee and cocoa should mention as well natural ingredients and grains, pulses, nuts as they have potential to diversify their product range rapidly on already certified fields.

Medium term/After & depending on company selection:

1. In the export coaching & training for participating SMEs/producer groups, give special attention to:
 - Coaching in acquiring relevant standardized product- quality, -safety, and -sustainability (organic as well for processing plants, fair trade, etc) certifications (ISO 9001, HACCP, IFS/BRC etc) (certifications / packing issues to be financially supported by Promperu)
 - Training in negotiation skills for producer groups
 - Training in management skills for producer groups
2. Develop and support 1 or 2 lighthouse projects in the coffee / cocoa sector, in collaboration with EU importers and producer groups selected for the coaching (for more ideas on lighthouse projects see country programme).
3. Develop Tailored Market Intelligence for processed food participants (finished chocolate products)
4. Use the sector committee on specific bottlenecks that the participating SMEs/producer groups will experience (expected bottlenecks: EU commission lowering permitted cadmium level, national sustainability strategy, added value products, pre-financing tools for primary production, product quality, investment into cleaning/sorting/processing facilities).
5. Initialise strategic conferences with Promperu with other stakeholders (MINAG, DEVIDA, MEF, int. donors) to contribute with market insights and fitting standards to the national strategy/marketing plan (currently in development by MEF).

CBI modules supporting this result	Result (to be inserted in result chain)
Export coaching: Market entry module	5 producer group/cooperatives and 5 exporting/processing SMEs secure direct orders from EU importers for cocoa derivatives and chocolates (finished product) and specialty/roasted coffee (finished product single origin and/or from certified sustainable) from certified sustainable supply chains 5 producer group/cooperatives and 5 exporting/processing SMEs establish close business relations with EU importers in quality/sustainability/added value market segments
Export coaching: certification module	2-4 processors of finished chocolate and specialty coffee products are certified according to IFS/BRC food standard and/or one of the applicable sustainability standards. Processors do either export finished products directly or process on behalf of producer organizations (sub-contracting).
Export coaching: certification, export capacity building modules, CSR module Human resource development (training) modules Tailored Intelligence	2-4 participating producer groups / companies for each product category have obtained the necessary skills (negotiation skills, quality management skills regarding cadmium/ochratoxin, etc) and knowledge (including on fair benefit sharing with producer groups for farm investments, conversion to sustainability, IFS/BRC certifications, and European market niches) to start direct exportation to the European market and/or enlarge existing export business.
Export coaching: export capacity building module Human Resource Development (training) modules	2-4 producer groups/companies have implemented the Export Marketing Plan supporting producer organizations in enlarging the production basis and/or converting towards one of the existing sustainability labels and/or increasing export volumes. Participating producer groups/companies have developed their Export Marketing Plan enlarging the farmers base of selected producer organizations and converting farmers to sustainable practices
Export coaching: Export capacity building module	5 European importers establish partnerships and collaborate actively with CBI and the Peruvian sector to prevent rash measures by the EU commission to lower the permitted cadmium level. They collaborate as well with Peruvian producer groups/cooperatives in R&D, product development, certification (including through 1 lighthouse project) 5 European importers interested in partnership projects sign up for the programme
BSOD: Export development & promotion module Strategic conferences	A coffee/cocoa sector committee meets regularly to monitor the programme's implementation, and take (joint) action on sector-wide bottlenecks experienced by programme participants. CBI supports Promperu with standard methodologies and manuals for certification. Promperu meets with JNC to evaluate if their national sector export strategy/plan is pro-active (considering quality and value issues like cadmium level in cocoa and sustainability) and gives JNC feedback together the steering sector committee, under coordination of Promperu. CBI supports the selection of labels during the implementation of the strategy/plan.

10. Annexes

10.1. Annex 1: Leading green coffee exporters in 2011

e) Ranking of exporters companies 2011

Nº	Ranking of exporters companies 2011	US\$ FOB Millions 2010	US\$ FOB Millions 2011	% Var.
01	PERALES HUANCARUNA S.A.C.	214.0	404.1	89%
02	COMERCIO & CIA S.A	103.9	171.8	65%
03	CIA.INTERNACIONAL DEL CAFE S.A.C.	89.9	137.6	53%
04	OUTSPAN PERU S.A.C.	48.3	106.0	120%
05	PROCESADORA DEL SUR S.A.	53.3	93.8	76%
06	EXPORTADORA ROMEX S.A.	29.9	69.7	133%
07	LOUIS DREYFUS PERU S.A.	32.7	66.3	103%
08	CENT DE COOP AGRAR CAFET COCLA LTDA 281	38.1	60.6	59%
09	CAFETALERA AMAZONICA S.A.C.	42.6	56.3	32%
10	MACHU PICCHU COFFEE TRADING S.A.C.	18.1	44.8	148%
11	H.V.C. EXPORTACIONES S.A.C.	18.0	42.6	136%
12	PRONATUR E.I.R.L.	18.0	24.2	34%
13	CENTRAL FRONTERIZA NORTE CAFETALEROS	10.0	20.9	109%
14	COOPERATIVA AGRARIA CAFETALERA LA FLORID	19.3	19.9	3%
15	CORPORACION DE PRODUCTORES CAFE PERU SAC	10.5	17.9	71%
16	EMPRESA DE EXPORTACIONES & IMPORTACIONES JRJ EMPRESA INDIVIDUAL DE RESPONSABILIDAD LIMITADA	3.0	16.1	432%
17	AGROINDUSTRIAL Y COMERCIAL ARRIOLA E HIJ	11.3	13.0	15%
18	CENT.DE COOP.AGR. CAF.VALLES SANDIA LTDA	7.7	12.5	63%
19	EXPORT IMPORT CANDRES S.A.C.	3.1	11.6	276%
20	AROHMAR'S INTERNATIONAL SOCIEDAD ANONIM	8.8	10.3	18%
	Others	102.2	186.0	82%
	TOTAL	882.7	1586.1	80%

Source: Peruvian Customs
 Design: Agriexport Department - ADEX

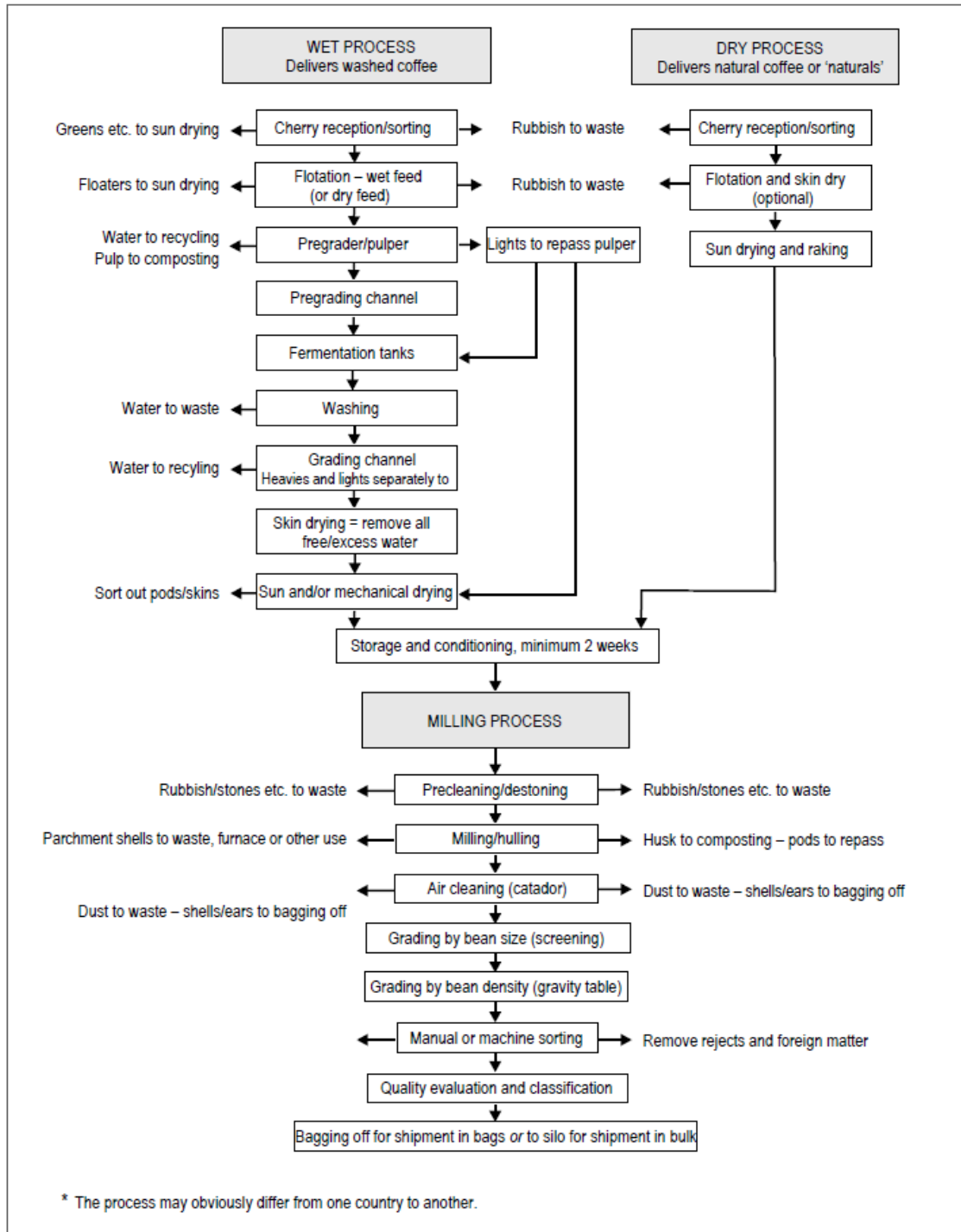
10.2. Annex 2: Speciality coffee chain actors

Chain Actors	
Specialty coffee producers/exporters (alphabetical)	
Accion Agraria	Producer of organic coffee
AGRIND	Exporter gourmet green coffee
Asociación de Productores Agropecuarios del Valle AltoMayo - APAVAM	Producer specialty coffee
Asociación Central Productores de Café Pichanaki	Producer specialty coffee
Cooperativa Agraria Cafetalera Valle Río Apurímac	Producer and exporter specialty coffee
Cooperativa Agraria Cafetalera Valle de Incahuasi "CACVI"	Producer specialty coffee
Cooperativa Bagua Grande	Producer organic/origin coffee
BYR PACIFIC TRADING	Exporter of specialty coffee
CACE Valle Santa Cruz – Rio Tambo	Producer specialty coffee
Café Montana	Producer high grown premium quality coffee
CEPICAFE	Producers and exporters of organic and premium coffee
COCLA	Producers and exporters of gourmet, high grown, origin, organic coffee
Central Coicafe	Producer of specialty coffee
COINCA	Exporter of Neumann Kaffeegruppe
Cooperativa La Florida	Producer and exporter of specialty coffee
Cooperativa Agraria Cafetalera La Divisoria	Producer and exporter of specialty coffee
Copaevin Association	Producer strictly high grown coffee, excellent flavour and aroma
Cooperativa Agraria Sangareni	Producer specialty coffee
Corporacion de productores de Peru SAC	Producer and exporter of specialty coffee
El Palomar Ecomusa	Producer strictly high grown coffee, excellent aroma and flavour
Ecologic Origin´s Chanchamayo	Export of specialty coffee
KUELAP Organic Coffee	Export of high grown, gourmet, organic coffee
Cooperativa Naranjillo	Producer and exporter of alternative coffee
Negociación Rivas S.A. NEGRISA	Processor and exporter of specialty coffee of Villa Rica, Chanchamayo, Divisoria and Inka Huasi
Cooperativa Oro Verde	Producer organic coffee, UN programm support, indian ethnic coffee
Pangoa Cooperative	Producer high grown coffee, good aroma, balanced flavour
Perhusa	Big exporter gourmet, organic, premiums coffee, Northern Peru, National Provider (brand: Altomayo) excellent flavour, good acidity
PeruNorTrading	Exporter excellent high grown, Jean origin, typical variety coffees
Promotora de Agricultura Natural – Pronatur	Producer and exporter of organic and specialty coffee
PUNO Coffee SAC	Producer and exporter of high grown, excellent quality, specialty coffee
Cooperativa San Juan del Oro	Producer origin Puno, organic coffee
SIAT	Producer organic coffee
Typica Coffee	Producer and exporter high grown, excellent quality, specialty coffee, origin San Juan del Oro

UN Alternative Project	Producer organic, alternative coffees from Cusco and Ayacucho, good flavour and aroma
Unión de Cafetaleros Ecológicos – Unicafec	Producer organic coffee
Cooperativa Agraria Cafetalera Sostenible Valle Ubiriki	Producer specialty coffee
Vier Association	Producer origin Villa Rica, good flavour, strictly high grown coffee
Villa Rica Highland S.A.	Producers high grown coffee
Certification bodies	
IMO Peru SAC	Inspection for organic, UTZ certified, Rainforest Alliance, 4C (most experienced)
Biolatina Peru	Inspection for organic and other certification schemes
Control Union Peru	Inspection for organic and other certification schemes
Chain supporters	
Junta Nacional de Café JNC	Coalition of coffee producing cooperatives and associations
Camara Peruana de Café y Cacao	Association of private coffee businesses (producers, exporters and coffee industry)
Promperu	Peruvian Export and Tourism Promotion Organization
Chain influencers	
Ministry of Agriculture	
DEVIDA	Peruvian anti-drug organization

10.3. Annex 3: Coffee processing

The following chart shows the processing of coffee cherries and green coffee beans (Coffee Guide 2012):



Green washed coffee beans

There are two main primary processing methods: the unwashed or dry process, which produces naturals, and the washed or wet process, which produces washed coffees. In Peru mostly washed coffees are produced. In the dry process the ripe cherries are dried in their entirety after which they are mechanically decorticated to produce the green bean. In the washed or wet process the ripe cherries are pulped and fermented to remove the sticky sugary coating called mucilage that adheres to the beans (this can also be done mechanically), and the beans are then washed and dried.

There is a third process in which the ripe cherry is pulped and dried 'as is' with the mucilage still adhering to the parchment skin. Originally called semi-washed in Africa, this process is gaining considerable importance in Brazil where it occupies a place in-between the dry and wet processes and is simply called 'pulped natural'. In other countries, for example in the Great Lakes region of Central Africa, semi washed coffee has been laboriously produced for many decades using small hand pulpers. In all procedures the parchment skin is later removed mechanically after drying.

10.4. Annex 4: Leading cocoa exporters in 2011

e) Ranking of exporters companies 2011

Nº	Ranking of exporters companies 2011	US\$ FOB Millions 2010	US\$ FOB Millions 2011	% Var.
01	MACHU PICCHU COFFEE TRADING S.A.C.	23.9	22.1	-8%
02	EXPORTADORA ROMEX S.A.	9.1	13.1	43%
03	COOPERATIVA AGRARIA CACAOTERA ACOPAGRO	5.6	9.6	71%
04	SUMAQAO SOCIEDAD ANONIMA CERRADA	4.2	9.5	125%
05	COOPERATIVA AGRARIA INDUSTRIAL NARANJILL	8.7	8.9	3%
06	AMAZONAS TRADING PERU S.A.C.	2.4	7.7	214%
07	COMPAÑIA NACIONAL DE CHOCOLATES DE PERU	4.1	7.0	71%
08	COOP AGRARIA CAFETALERA EL QUINACHO L 78	4.0	4.0	-1%
09	RAINFOREST TRADING S.A.C.	0.1	2.1	2633%
10	CONSERVAS Y ALIMENTOS S.A.	2.2	1.9	-12%
11	ECOANDINO S.A.C.	1.2	1.6	34%
12	CENT DE COOP AGRAR CAFET COCLA LTDA 281	1.3	1.6	21%
13	AGROINDUSTRIAS BAUTISTA S.A.C.	0.0	1.5	-
14	FLP DEL PERU SOCIEDAD ANONIMA CERRADA	0.0	1.4	-
15	OPERADORES COMERCIALES Y LOGISTICOS LIMAR S.A.C.	0.0	1.4	-
16	NULL	0.0	1.4	-
17	ASOCIACION DE PRODUCTORES CACAO VRAE	4.7	1.2	-74%
18	AGROINDUSTRIAS NAUN SAC	0.0	1.1	-
19	ASOC CENTRAL PIURANA DE CAFETALEROS	0.7	1.0	53%
20	RAINFOREST HERBAL PRODUCTS SOCIEDAD ANONIMA CERRADA	0.4	1.0	168%
	Others	5.4	7.9	47%
	TOTAL	78.0	107.1	37%

Fuente: Aduana Peruana

Elaboración: Área de Agroexportaciones – ADEX

10.5. Annex 5: Cocoa value chain actors

Chain Actors	
Cocoa producers/exporters (alphabetical)	
<i>See annex 4</i>	
Certification bodies	
IMO Peru SAC	Inspection for organic, UTZ certified, Rainforest Alliance, 4C
Biolatina Peru	Inspection for organic and other certification schemes
Control Union Peru	Inspection for organic and other certification schemes
Chain Supporters	
APPCACAO	Peruvian Cocoa Farmers Association
Camara Peruana de Café y Cacao	Association of private coffee businesses (producers, exporters and coffee/cocoa industry)
Promperu	Peruvian Export and Tourism Promotion Organization
Fundación Amazonia Viva	NGO for capacity building in the Amazonas region related to environmental and social aspects
Chain influencers	
Ministry of Agriculture	
DEVIDA	Peruvian anti-drug organization

10.6. Annex 6: Cocoa processing

Summary of the process of transforming cocoa beans into chocolate

The fermented and dried cocoa beans are cleaned to remove all extraneous material. To bring out the chocolate flavour and colour, the beans are roasted. The temperature, time and degree of moisture involved in roasting depend on the type of beans used and the sort of chocolate or product required from the process.

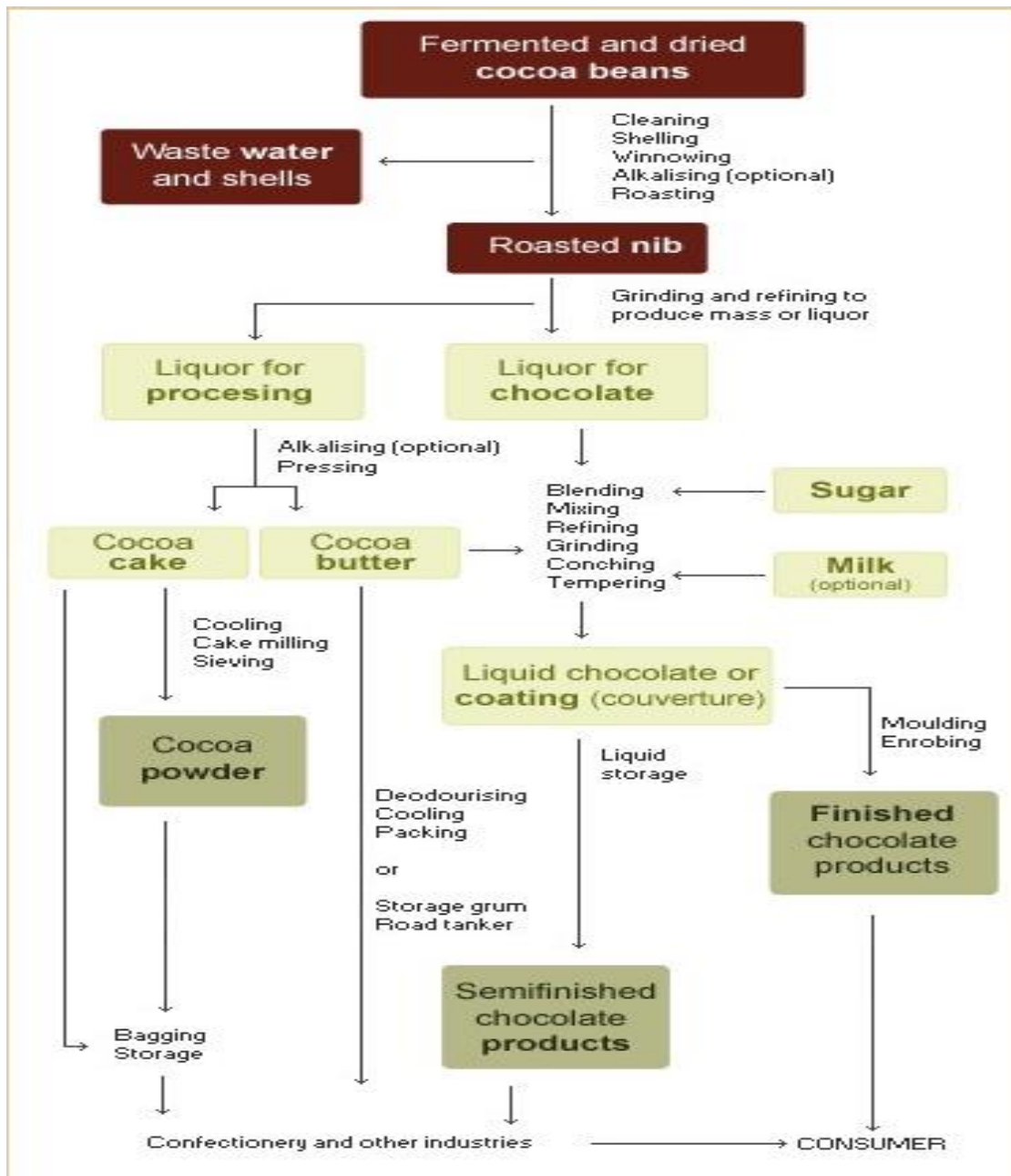
A winnowing machine is used to remove the shells from the beans to leave just the cocoa nibs. The cocoa nibs undergo alkalisation, usually with potassium carbonate, to develop the flavour and colour. The nibs are then milled to create cocoa liquor (cocoa particles suspended in cocoa butter). The temperature and degree of milling varies according to the type of nib used and the product required.

Manufacturers generally use more than one type of bean in their products and therefore the different beans have to be blended together to the required formula. The cocoa liquor is pressed to extract the cocoa butter, leaving a solid mass called cocoa press cake. The amount of butter extracted from the liquor is controlled by the manufacturer to produce press cake with different proportions of fat.

The processing now takes two different directions. The cocoa butter is used in the manufacture of chocolate. The cocoa press cake is broken into small pieces to form kibbled press cake, which is then pulverised to form cocoa powder. Cocoa liquor is used to produce chocolate through the addition of cocoa butter. Other ingredients such as sugar, milk, emulsifying agents and cocoa butter equivalents are also added and mixed. The proportions of the different ingredients depend on the type of chocolate being made.

The mixture then undergoes a refining process by travelling through a series of rollers until a smooth paste is formed. Refining improves the texture of the chocolate. The next process, conching, further develops flavour and texture. Conching is a kneading or smoothing process. The speed, duration and temperature of the kneading affect the flavour.

An alternative to conching is an emulsifying process using a machine that works like an egg beater. The mixture is then tempered or passed through a heating, cooling and reheating process. This prevents discolouration and fat bloom in the product by preventing certain crystalline formations of cocoa butter developing. The mixture is then put into moulds or used for enrobing fillings and cooled in a cooling chamber. The chocolate is then packaged for distribution to retail outlets.



10.7. Annex 7: Is cocoa certification beneficial for farmers?

certification & accreditation

Is cocoa certification beneficial for farmers?

A report on the costs, advantages and disadvantages of organic certification, with a specific emphasis on the producers.

In 2012 the International Cocoa Organization (ICCO) commissioned a consultancy agency, KPMG Advisory N.V., to conduct a study on the costs, advantages and disadvantages of cocoa certification, with an emphasis on the farmers. The objective of the study was to bring more clarity to the debate on the value of certification, where some stakeholders consider complying with sustainability requirements and improving the living standards of cocoa farmers an adequate reason for certification, while others are less optimistic on the benefits of certification.

The study was concluded by the end of the year and its findings published. The report points out that despite individual opinions on the role played by certification, it is important to understand that certification is a tool that establishes requirements to facilitate the sustainable production of commodities. It is an intervention that should complement other interventions taken by the private sector, governments and NGOs and should not be seen as an end in itself.

The report focuses on two West African countries, Ivory Coast and Ghana, where about 60% of the world's cocoa is produced. The findings of the report produced by this study, however, are relevant worldwide. The study compared the two countries, which are very different regarding the cocoa trade – in Ghana it is under government control, while in Ivory Coast the cocoa trade is privatised with no government interven-

tion. This difference influences the farm gate price of cocoa, which is lower in Ivory Coast than in Ghana.

A common finding for both countries is that investments at farm level are low and this has a direct impact on the quality and yield of the cacao bean.

The report concludes that it is unlikely future demand will be met unless there are interventions in the sector now aimed at improving productivity and output quality.

Currently there are several initiatives worldwide aimed at increasing the sustainability of cocoa production. These initiatives consider all points of view, including social aspects, especially the issues that are typically associated with cocoa production in some countries, such as slavery and child labour. Several governments, such as the Dutch and the German Governments, as well as many of the big players from within the cocoa industry, are involved. Some of these

initiatives are aiming for 100% sustainable cocoa sourced by 2020.

One result of these commitments is that demand for certified cocoa is increasing and that private sector actors are establishing strategic partnerships with other players in the value chain – such as processors, NGOs, certification schemes and development agencies – in an effort to secure their supply.

Cocoa certification schemes

The report analysed the four main certification schemes for cocoa, which are organic and fairtrade schemes from several different operators, and specific schemes offered by the Rainforest Alliance and UTZ Certified. It is estimated that in 2011 the total volume of certified cocoa was about 6% of total global cocoa production, double that in 2010.

The ICCO report states that 'the organic label had an estimated market share of 15% in 2010; however as it addresses a niche market, organic certified cocoa is expected to grow at lower rates than the other schemes. Due to its lower representativeness in terms of market share, a wide variety of (sub) schemes and a different agricultural approach we have opted for not analysing the economics of

Volume of certified cocoa (tonnes)

Certification scheme	2010	2010 share of certified cocoa ¹	2011
Fairtrade schemes	106,400	39%	150,000
Rainforest Alliance	56,000	20%	98,400
UTZ Certified	70,000	25%	214,000
Organic schemes	42,000	15%	n/a

¹ Numbers do not add up to 100%, discrepancy probably due to data coming from different sources.

certification & accreditation

organic label and focus our efforts on the largest three schemes: fairtrade, Rainforest Alliance and UTZ Certified.’

The comparison concludes that the ‘certification schemes operate in similar ways and have as key objective to promote sustainable practices in the cocoa supply chain and improve the livelihoods of farmers in producing countries. Even though similar in the way the certification process is structured, certification schemes differ in their specific focus and requirements. These differences in requirements can have a direct impact on the costs and benefits at farm level. They can also impact certification schemes’ attrac-

tiveness for actors in the value chain.’

The study analyses many different factors, reviews literature, conducts a cost-benefits analysis and carries out a detailed comparison of the different schemes in the two countries that are the focus of the study. Some of its interesting conclusions are:

- The advantages and disadvantages of certification at the farm, cooperative and community level shows that the number of benefits of certification exceeds the number of disadvantages or shortcomings.
- The net benefit to farmers is on the provision that certain conditions are met.

- While certification can provide a net benefit to farmers, the magnitude of benefits differs per country.
- Some farmers benefit from certification more than others. In particular farmers with a large plot of cocoa trees benefit more than farmers with small plots. ■

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The report ‘Cocoa Certification. Study of costs, advantages and disadvantages of cocoa certification’, commissioned by The International Cocoa Organization (ICCO) is available at the ICCO website: www.icco.org/component/search/?searchword=Certification&searchphrase=all&Itemid=189

Comparison of the three certification schemes’ requirements

Payment to scheme

Fairtrade: No fee per volume. Entry fee for small producers.

Rainforest Alliance: Fee per volume for exporter but no entry fee.

UTZ Certified: Fee per volume for first buyer and fees through supply chain.

Rainforest Alliance: Minimum % of dry weight end-product. At least 30% to bear RAC seal. Encouraged to scale up to 100%.

UTZ Certified: Minimum content will increase gradually up to 95% in 2014.

ment practices on greenhouse gases (GHG) and renewable energy.

Rainforest Alliance: Requirement to plant and/or maintain trees. Farmers need to carry out plan on renewable energy and GHG savings.

UTZ Certified: Requirement to plant and/or maintain trees. No requirement about GHG savings.

Premium received by farmer/crop

Fairtrade: Fixed premium + minimum price paid to coop.

Rainforest Alliance: Premium determined by market paid to coop.

UTZ Certified: Premium determined by market paid to certificate holder.

Mass balance

Fairtrade: Mass balance allowed up to 2014.

Rainforest Alliance: No mass balance allowed.

UTZ Certified: Mass balance allowed.

Waste disposal

Fairtrade: Farmer responsible after 2014. Burning of waste allowed in absence of disposal system.

Rainforest Alliance: Farmer responsible. Burning of waste in open air not allowed.

UTZ Certified: Farmer has limited responsibility for organisation waste disposal system.

Audit

Fairtrade: Fixed fee per year.

Rainforest Alliance: Fee per year determined by market.

UTZ Certified: Fee per year determined by market.

Wage level

Fairtrade: Following local legislation or regional average whichever is the higher.

Rainforest Alliance: Higher than regional average.

UTZ Certified: Following local legislation and equal payment.

GMO

Fairtrade: No GMOs.

Rainforest Alliance: No GMOs.

UTZ Certified: Subject not addressed in standards.

Certified content

Fairtrade: 100% or minimum % of total weight composite product.

Biodiversity and climate change

Fairtrade: No requirements regarding shade trees. Farmer needs to docu-

10.8. Annex 7: Validation workshop

Aspects mentioned during the validation workshop:

Certification

- For coffee and cocoa anticipation about market requirements with regard to certification is required.
- A national cocoa norm of production is in preparation which will cause trainings regarding sustainable nurseries, pruning and plant nutrition.

Production

- For coffee and cocoa dissemination of locally adapted best practices is crucial prior to expansion of planted acreage. A significant change is the increasing labour cost in producing areas – this soon will lead to a comparative advantage for small producers who manage labour with a minimum of hired workers.

Processing: Cocoa⁵²

- ACHOPE should be contacted as a network partner for recruiting of participants as some members already export chocolate couvertures (e.g. from Cajamarca and San Ignacio) others are mature to export. The association supports members in certain aspects of company management.
- Investment in cacao processing: Agroideas is a suitable national program financing farmer associations, (not individual companies). Several companies/associations have already benefited through the financing program <http://www.innovateperu.pe/> such as eg: Naranjillo.

Quality assurance

- Savouring capacities (cocoa) need to be harmonized in the country according to final markets.
- Cocoa fermentation needs to be carried out according to the variety.

Export issues: Coffee and Cocoa:

- Essentially prevailing national strategic public and private sector plans (including international cooperation) are missing. MEF (Ministerio de economía y finanzas) is currently involved to develop a plan considering short, mid and long term targets. A link-up to tasks covered by CBI modules should be communicated by CBI and Promperu soon. Recommendations for the national strategy plan are:
 - Development of a market-driven visible web site with systematized information about the available Peruvian offer (including cluster of processed products)
 - Technical and regional sector desks
 - For cocoa: Differentiation between quality of cocoa beans and quality of chocolate has to be considered more in the sector.
- The development of the local market brings synergies with export with regard to experience and costs. It is going on well and pushed by various int. & nat. organizations through events, promotion, sale stores, etc. Part of this development was the creation of the association ACHOPE (chocolate confectionary producers association) launched during the Salon de Cacao y Chocolate Lima in 2012.
- To establish alliances between international brands and producer associations could bring solutions for the domestic, Latin-American and European market with regard to added value, the connection to the sales market and directly to buyers⁵³.

⁵² no processing aspects for coffee were mentioned → green beans will continue to be the most important presentation

⁵³ Establishing alliances will support the development in Peru and help existing producer associations to connect successfully – An international example is the project that was carried out in Indonesia with Mars Inc. and several actors involved in the VC