

Assessing the Poverty Impact of Sustainability Standards: Ecuadorian Cocoa



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Disclaimer

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Acronyms

AECID	Spanish Agency for International Development Cooperation
ANECACAO	<i>Nacional</i> Association of Cocoa Exporters
AVSF	Agronomists & Veterinarians without Borders
BCI	Better Cotton Initiative
BMP	Better Management Practices
C&D	Conservation & Development
CADERS	Agricultural Competitiveness and Sustainable Rural Development
CCN51	(Cocoa) clone 51 from the Castro Naranjo Collection
CEFODI	Corporacion Financiera para la Formacion y el Desarrollo Integral
CLAC	Latin American & Caribbean Coordinator for Smallholder Fair Trade
EFTA	European Fair Trade Association
ESPA	Survey of agricultural area and production
ESR	Equality, Solidarity and Responsibility
FAO	Food & Agriculture Organization of the United Nations
FAPECAFES	Regional Federation of Association of Ecological Small Coffee Producers in Southern Ecuador
FINE	Fairtrade Labelling Organizations, International Federation for Alternative Trade, Network of European World Shops and European FairTrade Association
FLO	Fair Trade Labelling Organization
FTO	Fair Trade Organization
FUNDEPPO	Foundation of Organized, Smallholder Producers
FUNDES	Corporation for Development and Creative Production
GIZ	German International Cooperation (formerly GTZ)
IFAT	International Federation for Alternative Trade
IICA	Inter-American Institute for Cooperation on Agriculture
ILO	International Labour Organization
IMO	Institute for Market Ecology
INEC	<i>Nacional</i> Institute for Statistics and the Census
INIAP	<i>Nacional</i> Institute for Agriculture Research
ILABEL	International Social and Environmental Accreditation and Labelling Alliance
JAS	Japanese Agricultural Standard
MAGAP	Ministry for Agriculture, Livestock, Aquaculture & Fisheries
NEWS	Network of World Shops
NGO	Non-governmental Organization
NOP	<i>Nacional</i> Organic Program of the USDA
RA	Rainforest Alliance
RSPO	Round Table for Sustainable Palm Oil
SAN	Sustainable Agriculture Network
SFC	Sustainable Farm Certification
SPP	Symbol for Smallholder Producers
UNCTAD	United Nations Conference on Trade and Development
UPA	Unit of Agricultural Production
UROCAL	Regional Union of Coastal Small Farmer Organisations
WFTO	World Fair Trade Organization

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Executive Summary

Introduction

This report presents the findings for Ecuador of a study on the poverty impact of sustainability standards. The main questions explored were - *Do voluntary standards have an impact on the poverty and livelihoods of smallholders, outgrowers and hired labourers and their organisations? If so what kind? Are voluntary standards effective mechanisms for tackling poverty?* Cocoa was chosen as an important global beverage for which there were few rigorous impact studies at the time of selection. Ecuador was chosen as the primary producer of fine, aromatic cocoa and because of its Latin American location (Ghanaian bulk ordinary cocoa was another case in the overall study).

The primary research question was to understand the impact of standards on cocoa producing smallholders, outgrowers, hired labourers and their organisations, and also to investigate whether and how standards have an impact (and by what mechanism or impact pathway). The overall approach was theory-based evaluation of cases, with standardized questions and analytical techniques to facilitate comparative analysis. The design incorporated 'counterfactual' cases which allowed the comparison of 'with certification' and 'without certification' scenarios. The Ecuador study is one of four country case oriented, comparative studies, which seek to generate evidence on the impact of sustainability standards to inform policy and practice.

In Ecuador, study organisations were selected based on specific criteria (holding Rainforest, or Fairtrade, or organic certification) and representing major agro-ecological zones (e.g. Central Amazona and coastal region). At the start of the study (late 2009-early 2010) there were ten FLO certified organisations in Ecuador of which six were producer organisations and four were trader organisations. There were also two Rainforest Alliance (RA) certified producer organisations, 6 RA verified exporter organisations and one that both certified and verified. Rainforest Alliance, in collaboration with an Ecuadorian NGO, Conservacion y Desarrollo (C&D), and with donor support and in alliance with Kraft Foods, has been active in Ecuador since 1997. In addition, there was one Ecocert certified cocoa organisation, two Utz certified organisations (Nestle Ecuador and Transmar) and various organic certified groups, including the most common BCS or BCS OKO-GARANTIE GMBH. The Symbol of Small Producers (SPP) standard, established by the Latin American and Caribbean Coordination for Smallholder Fair Trade (CLAC), is beginning to become established.

The study methodology

The study was designed to allow comparisons between those farmers with certification and those without and a comparison of changes over time. Using the theory of change as the basis of the evaluation also allows for evidence to be pieced together to establish within each case a robust analysis of impact. The analysis of the comparison 'with certification' and 'without certification' scenarios was based data collected in the baseline survey in 2010, (and some 'recall data' from two years prior to certification, and a final survey in 2012.

The study combined quantitative and qualitative methods, including a survey covering a sample of farmers in both certified and non-certified groups. For the baseline in 2010, four certified producer organisations were included for detailed study. One of these (RAO/AE) was located in Esmeraldas Province, North Coast and one (RAO/KN) was in Napo province Central Amazona region, both with Rainforest Alliance and organic certification. Two organisations (FTO/FM and FTO/NO) with Fairtrade plus organic certification and under the umbrella organisation UROCAL, were selected in Manabi (central coast) and El Oro provinces (south Coast) respectively. Data was collected from 576 farmers; 329 certified farmers and a 'counterfactual' sample of 247 farmers without certification. The organic

and organic/RA certified farmers were selected from the certified members of RAO/AE and RAO/KN and from other organic producer organisations in Manabi and El Oro Provinces. The sample of Fairtrade/Fairtrade plus organic certified farmers was selected from FTO/FM and FTO/NO. The counterfactual non-certified sample was chosen from non-certified members of RAO/KN and UROCAL, (which was possible because organic farmers are certified individually), or from among non-certified cocoa farmers in the same areas (for RAO/AE) and from a non-certified producer organisation, (NC/PM) in the same province as FTO/FM.

By the time of the final survey in 2012, the organisations with Rainforest Alliance had dropped this certification and continued concentrating on organic certification alone. A total of 415 farmers were interviewed, 290 certified and 125 non-certified. The now solely organic farmers were selected from RAO/AE and RAO/KN, while a further sample of organic farmers was drawn from a producer organisation, O/UCO (in El Oro Province). As in 2010, the Fairtrade plus organic certified farmers were selected from FTO/FM and FTO/NO. The counterfactual non-certified sample was from non-certified members of the producer organisations, members of another non-certified organisation (NC/PM), or non-certified farmers in the same provinces.

This dynamism in the standards landscape is not particular to this country and commodity, but has been experienced across the four study countries. In some cases, separate counterfactual organisations in a nearby or similar geographical region did not exist – hence groups within the same umbrella organisation (with and without certification) were chosen. However, this also complicates the analysis as some of the umbrella organisation features (e.g. approach to pricing and marketing or provision of training and technical advice) may be similar for both the treatment and counterfactual groups. The non-certified organisation, NC/PM, had previously been certified for a year, then had lost its certification. A further issue was that the data analysis of 2010 relied on individual farmers' definition of their certification status, while in 2012 this was verified with the status of the producer organisation (where existing). It was not possible to clearly distinguish farmers with just Fairtrade certification from those who were Fairtrade and organic. Further, some of the non-certified farmers may have been in transition to organic certification and some may have dropped earlier organic certification. These factors complicated the definition of certification status.

A series of producer organisation management workshops and interviews were conducted at each organisation in both the baseline and final surveys. Twenty seven focus group discussions were held with farmers and key informant interviews were conducted. Cost of production data were gathered through interviews with field technicians, followed by detailed case study interviews with farmers (16 at baseline and 16 at final survey). Gross revenue was then calculated by multiplying yield by average sale price and profits established by subtracting maintenance costs from gross revenue.

The producer organisations and the standards

RAO/AE certified and non-certified: RAO/AE is a union of farmer organisations and independent producers from Atacames. It buys cocoa from farmers, conducts cocoa processing and provides support on cocoa plantation improvement, marketing and socio-economic improvement. RAO/AE and partners have a total of 195 farmers of which 140 are organic certified. Some are in transition. The majority of their farmers are smallholders with less than 3 ha of land; just 21 people in their organisation have larger farms of more than 10 ha in size. Livestock rearing is the primary land use, but cocoa is the main crop for producers in the area, followed by plantains and tropical fruits and timber.

RAO/KN certified and non-certified: RAO/KN is somewhat larger in size with approximately 500 members, who are either organically certified or are in transition. RAO/KN was established initially to promote arts and craft based community development in communities along the Napo River and

included health and education projects as well as environmental conservation with support from Fundacion Jatun. 366 members are already certified and most have small farms of under 3ha in size. There are both full members who have a voice and voting rights and commercial members who can sell cocoa to the PO but who do not share these rights. All of the RAO/KN farmers follow the environmentally friendly (nutrient recycling) traditional agrosilvopastoral farming system called *chacra* farming. RAO/KN provides technical assistance and training to members, have seed collection centres and offices and produce a value added product – chocolate bars. Cocoa is an important crop for these farmers, followed by plantains, maize, yucca, fruit trees and timber. Other crops are particularly important during parts of the year when cocoa yields are low. Many RAO/KN household incomes are supplemented by other activities, with the poorest seeking off-farm waged labour and better-off households working in gold washing, construction and teaching. All farmers have been encouraged by higher market prices to grow more cocoa.

Both RAO/AE and RAO/KN held Rainforest Alliance certifications at the time of the baseline, but then dropped this certification, continuing with organic certification. RAO/KN is keen to market its products based on their own '*chacra*' standards, which would mean they could drop organic certification, but this would require building up market recognition and assumes demand. Amongst the RAO/AE and certified RAO/KN farmers there was a reported shift away from production using agrochemicals and towards more environmentally friendly methods. This was particularly the case amongst RAO/AE farmers; RAO/KN farming systems were already fairly environmentally friendly and did not rely on substantial pesticide use, and certification is therefore reaffirming existing practices.

UROCAL is a regional umbrella association, with many links to external organisations. It seeks to build farmer capacity, develop communities and improve cocoa production, harvesting and marketing. There are 6 member groups at the lower level, of which **FTO/NO** (Fairtrade and organic certification) has 102 members and **O/UCO** has 59 (organic certification). In 2009 UROCAL participated in a large economic development in border zones project (ACDI-VOCA), which included financing of two technicians, capacity building, field trips, clonal gardens, literacy training and equipment for a seed collection station. Most of the FTO/NO farmers have farms of more than 10 ha in size, as do those in O/UCO (average farm size 15 ha). Bananas are the most important crop amongst FTO/NO farmers, followed by cocoa, yucca, maize, tropical fruits and timber. This influences how much they are able to seek off-farm work, as banana cultivation requires more constant maintenance than cocoa cultivation. For O/UCO farmers, cocoa is their primary crop, as well as other mixed crops, timber and livestock – as a result they are more likely to work on others' farms (e.g. as temporary or permanent labourers in banana plantations or other non-agricultural sectors).

FTO/FM: La Corporacion Fortaleza del Valle is an umbrella organisation formed by smallholder farmer organisations, a government research institute and a donor (GIZ), aimed at farmers in an irrigated region and with a current total membership of 908 members and holding organic and Fairtrade certification. Within this umbrella organisation is the lower tier organisation FTO/FM with 250 members – which was included in this study. Most of the members (61%) have farms of 3 ha or less and average farm size is 3 ha. Most members have diversified farms, although a few grow cocoa as a monoculture. Their primary crop is cocoa, but they also grow various other crops and keep livestock. Mostly they work on their own farms, but some also conduct seasonal and permanent work elsewhere.

The non-certified group, NC/PM, was founded in 2005 by an ACDI-VOCA project that conducted training and established farmer field schools, and has since received further support from other external agencies. It is also an umbrella group with seven lower tier member groups. They have cocoa drying and storage facilities as well as speciality equipment for value added products made

from cocoa. They have sold products to Nestle but reported that this experience created some organisational problems and contributed to organisational breakdown, although it is beginning to become re-established.

Cocoa value chains

Ecuador is well known for its fine, aromatic cocoa. Currently, Ecuador produces 59% of total global production of this type of cocoa, which is used to make high quality chocolate products. 75% of total Ecuadorian cocoa exports are of aromatic cocoa, the rest being a mix of traditional variety *nacional* and new variety CCN51. Globally, this kind of cocoa represents only 5% of total world production and it is often blended with conventional cocoa. Fine, aromatic cocoa is prized for its quality and attracts a superior price.

Cocoa value chains are relatively long, with farmers selling to intermediaries; either brokers, who collect in rural areas, or large-scale buyers who collect and store the product to sell wholesale either to exporters who channel the production to the export market, to enterprises that semi-process products, or to the chocolate factory. Quality and quantity demands can be a barrier to small producers selling direct to larger distributors. Long value chains can reduce the profit margins of each intermediary and the price difference between the producer and consumer increases. In some remote areas of Ecuador, monopsony conditions can apply (i.e. there is only one buyer). Lack of efficiency and integration in the value chain also means higher transaction costs for farmers.

Cocoa and livelihoods

Poverty levels are higher in rural areas than urban zones. Agriculture is critically important for food security and employment in the former. Cocoa is an important livelihood activity for many households, with an estimated 100,000 families involved in cocoa production. Some farmers have diversified their livelihood systems, engaging in waged labour, plantain cultivation and sale and production of other crops, which for some, can be as important as cocoa.

Average household size was similar for certified and non-certified producers in the 2010 sample (4.97 and 4.92 persons respectively). However, in the 2012 sample, average household size of certified producers was significantly smaller and household heads significantly older than for non-certified producer households. There were no significant differences in other household characteristics such as education or gender of head of household.

Most cocoa is grown on 11 to 50 hectare farms (middle-sized farms) employing hired labour, but smallholders are also involved in cocoa production (average holdings of 2 hectares in the mountains and 10 hectares at the coast). The area under cocoa declined in the early 2000s as older plantations were eliminated, but then the area under cultivation rose again in the latter half of the decade as a result of the introduction of more productive and better quality genetic material. Land tenure is highly inequitable in Ecuador, as is access to irrigation.

A significant number of producers use mixed cropping systems, reflecting traditional agricultural practices. Genetic diversity is high, with three different types of cocoa grown – Creole, Amazonian and Trinitario. Key tasks in cocoa production include cocoa cultivation and processing, pruning, disease management, rehabilitation of cocoa plantations, post-harvest handling, fermentation and drying. In Ecuador, fermentation is conducted using wooden boxes and drying can be done naturally or artificially, which is more rapid.

There was no significant difference in overall farm size between certified and non-certified producers. However, certified producers had a larger area and proportion of their land under cocoa than non-certified farmers in 2010 and 2012, but the difference was significant only in 2012 (3.64

hectares cocoa for certified compared to 2.32 hectares for non-certified). This indicates that certified farmers may have greater confidence in cocoa farming as a livelihood option – however, in the case of Fairtrade certified FTO/NO farmers, cocoa is important but it is not their most important source of income.

Certified smallholders also have a significantly larger proportion of land with title than non-certified producers. Although there is a correlation it is unlikely that this is influenced by certification as no relevant impact pathway emerged in the research that would attribute change in land tenure to the different certifications and their implementation by the POs.

Road conditions vary per agroecological zone and hence PO, but this is not influenced by certification. However, road conditions to selling point were significantly worse for non-certified individual producers, than those in cooperatives. Distance to processing stations was not significantly different when comparing certified and non-certified producers.

Productivity and quality

Certified producers achieved significantly higher productivity of raw and dry beans in 2010 and 2012 compared to non-certified producers. Organic farmers reported that yields have increased as a result of technical improvements and management techniques flowing from RA and organic certification. Organic RAO/AE and RAO/KN producers have higher yields than non-organic farmers in their respective organisations, although the rate of improvement is higher amongst the non-organic farms (perhaps because some are in transition to organic where yields drop in the early years, then pick up). There is room for improvement in RAO/KN yields, but they are generally considered fairly good given the farming system (*chacra* cropping, in which cocoa shares space with a lot of other trees and annual crops). The Fairtrade certified FTO/NO and FTO/FM and their non-certified comparison groups (including NC/PM) in the same provinces, have higher average yields than RAO/AE and RAO/KN farmers, partly due to more monocropping and better growing conditions.

The certified farmers in RAO/AE have higher costs than the non-certified farmers, but for RAO/KN farmers there is little difference, because both groups follow the same traditional, agroforestry farming system. For FTO/NO Fairtrade certified farmers, their costs were higher than non-certified farmers, but at FTO/FM it was the non-certified farmers who had higher costs.

FTO/NO and FTO/FM invest their Fairtrade Premium in fertilizer use, reforestation and soil conservation which should all help with productivity. In contrast, O/UCO, which is organic certified, and hence lacks the opportunity to invest the Fairtrade Premium, has lower yields.

Certification has supported improvements in quality according to individual members, because farmers must comply with rules on farm management, use of agrochemicals and hygiene methods for pest and disease control for Rainforest Alliance and organic certification. According to the organic PO managers, quality is key for sales as customers are primarily buying (and paying a premium) for high quality Ecuadorian *nacional* type cocoa and only secondly for the certification label. One of the Fairtrade certified organisations – FTO/FM – buys only raw cocoa so it can control the quality of the end product and so sell more to lucrative export markets, including Fairtrade. FTO/NO only buys dry cocoa because it has limited processing capacity, but it uses the Fairtrade Premium to invest in farmers' purchase of fertilizer and to carry out reforestation and conservation activities. Thus, having Fairtrade certification supports quality and productivity as it enables investment in production and post-harvest systems.

Hired labour

The 2012 survey showed that 48% of the whole sample employed labourers in cocoa production. The percentage of certified producers hiring labour (52%) was significantly higher than for non-certified producers (39%). Around half of the producers who employ labourer reported that the labourers' conditions had changed for the better, particular their wages and the timing of payments. Certified producers also reported an improvement in labourers' level of exposure to health and safety hazards, whereas non-certified reported no change. This difference was significant.

However, qualitative research in RAO/AE and RAO/KN did not indicate major differences in labour conditions resulting from certification. Government pressure was the cause of improvements for workers (indicating a rise in salaries, improved health and safety and a reduction in child labour) according to Fairtrade organisations.

Sales and market access

Certified producers sold significantly more raw beans and dry beans in total in 2010 and 2011 than non-certified producers. The total value of beans sold by certified producers was significantly higher than for non-certified producers in the years 2008 to 2011.

RAO/AE and RAO/KN both organize collection of their members' harvest and ferment and dry the beans in optimum and homogeneous conditions, producing higher quality beans than if processed by the farmers. The beans are then sent to semi-processors or sometimes to a chocolate maker. FTO/FM certified farmers can also sell raw beans to their PO, but in the other certified POs, FTO/NO and O/UCO and in non-certified NC/PM, farmers sell dry beans to their respective organisations, having dried the beans themselves in their own installations, which is less preferred by members.

Certified farmers ranked their PO significantly higher in terms of importance than other buyers (local and external intermediaries). Certified producers sold a significantly higher proportion of their yield (in 2010 and 2011) to their producer organisations than non-certified producers in organisations, indicating a preference for their producer organisation over other market alternatives. There was a significant increase in the percentage of cocoa sold to an association or cooperative between 2010 and 2012 and a reduction in the proportion sold to local and external intermediaries. The certified sample sold 74% of their cocoa to their cooperative in 2010 compared to 41% for non-certified cooperative members and 91% to their cooperative in 2012 compared to 61% for non-certified cooperative members. Non certified individual farmers sold more to local middlemen and external middleman.

These higher sales to POs on the part of certified organisations are due to the other benefits they receive, such as the price premium for organic farmers, workshops and training in cultivation and some farmers receive pruning saws and brush cutters for site clearing, plus transport for cocoa from fields to the collection station organized by the PO. In addition, the non-certified POs and middlemen tend to buy only dry beans, whereas several of the certified POs (RAO/AE, RAO/KN and FTO/FM), buy raw beans and process them, reducing the burden of drying for farmers. However, organic supply is outstripping the capacity of the infrastructure and RAO/KN and RAO/AE farmers who need cash sometimes have no choice but to sell to intermediaries. Many intermediaries are pushing up their prices to try and compete with the certified POs – sometimes raising their prices above those of the organic certified organisations and challenging the commitment of members to certified production.

Certification has led to increased market access according to producers. There is variation in organisational end markets – RAO/AE and RAO/KN sell mainly on domestic markets, but the latter sells some (the highest quality) on export markets. RAO/KN managers said that they had used

Rainforest Alliance certification to enable them to secure sales for their organic members when demand was limited. RAO/KN's BCS organic certification gives it market access in the US, Europe and Japan. Its markets have diversified and commercial contacts increased – something which RA and organic certification has supported. However, its production of chocolate bars is not the result of certification, but a partnership with Salinas de Bolivar and companies with stores in the US such as Good Food. RAO/AE lacks capital and logistical capacity. They attempted to include producers in price setting, but a consensus could not be achieved. However, certification has enabled RAO/KN and RAO/AE to increase the price they pay to farmers and to buffer the price drop of 2009.

For the Fairtrade organisations, Fairtrade markets provide more stable sales: FTO/NO sells most of its cocoa through UROCAL to France and Italy. FTO/FM directly exports its own cocoa and sells all of its production on Fairtrade terms. The managers of Fairtrade certified organisations were positive about the stability of the contracts developed with Fairtrade buyers.

RAO/AE and RAO/KN individual members have limited understanding of value chains and influence on price, although RAO/KN management has a strong vision of their future marketing strategies. Understanding is also limited amongst individual Fairtrade farmers, although at organisational level there is greater vision about future value chain strategies than amongst their counterparts. Fairtrade FTO/FM management indicated that market forces largely set prices, but they are becoming less dependent on intermediaries. Similarly, FTO/NO managers reported that prices are determined mainly by the market, but the Premium is generated on all sales and distributed to members. The management of O/UCO (organic) and non-certified, NC/PM, appear to have less understanding of the value chain or vision of how they might improve the terms of trade for their members in comparison to the Fairtrade certified managers. This is particularly the case at non certified NC/PM, where despite having good infrastructure, they no longer collect or buy cocoa from the members due to recent administrative and financial problems. Instead, members have to sell to local and external intermediaries.

Since 2010, cocoa prices have been rising, but farmers' perceptions are that during the two year period (2010-2012) prices fell. **The price paid to organic certified farmers for fresh beans is always higher than for conventional (non-certified) beans**, although the price for organic beans has driven up the price for conventional beans, reducing the difference. Organic farmers have to put in more labour than conventional farmers, and it is therefore debatable if the extra price offsets the increased (mostly family) labour investment. Prices paid to RAO/KN organic members are higher than in the RAO/AE region because of the greater competition in the former from intermediaries. RAO/AE farmers complain that the price they receive is insufficient and unstable.

The prices paid to Fairtrade farmers are slightly higher than for non-certified farmers and have been gradually rising for the past few years. However, farmers' perceptions are that prices have got worse or decreased – possibly because profits have been decreasing because of increased production costs, or that domestic costs have risen with inflation, reducing the buying power of their income. Poor communication on the part of the organisations may also play a role. The FLO Minimum Price is a useful safety net for certified organisations and their members, but prices since 2006 have been above the present minimum price, so prices have been linked to the New York Stock Exchange instead. The prices for raw beans received by certified farmers from their producer organisations were higher in 2010 and 2011 than those of non-certified producers (but they received lower prices for dried beans).

Use of the Premium

Fairtrade farmers also benefit from the Fairtrade Premium generated on all sales – US \$ 150/MT FOB for non-organic and US \$200/MT FOB for organic Fairtrade dry cocoa. The Premium is given to the

general assembly and should be used for social, economic and environmental projects through a democratic process and implemented by the members.

In the 2012 survey, 75% of the Fairtrade/organic certified farmers knew about the use of the Fairtrade premium. It was mainly used for cocoa production, followed by (in decreasing order) infrastructure and equipment, credit, health, training and education. **98% of Fairtrade certified farmers reported benefitting from use of the premium in production and at least 80% benefitted from its use for infrastructure, credit, health and other uses.**

FTO/NO uses the Premium for administration, organisational strengthening, environmental activities, health costs, social security for members and staff and school scholarships, as well as funds for fertilizer application and soil conservation. There is limited benefit for the wider community as the funds are directed mainly to members.

For FTO/FM, nearly half of the Premium earned is used for providing credit to members, while the rest is split between health and funeral funds, the rehabilitation of plantations, a plant to make organic fertilizers, infrastructure development, training and information. Again most of the Premium is focused on farmers and organisational productivity, rather than the overall well-being of communities. However, unlike FTO/NO no part of the Premium is explicitly earmarked for running the organisation. Although the audit reports are discussed during meetings, when asked, many individual members did not know about or understand the Premium, indicating a lack of communication between the PO and members.

Producer incomes and expenditure

Farming households earn their income from various sources including the sale of cocoa, banana, plantain, citrus, other fruits, food crops and small and large animals. They also earn money working as contracted labour, either permanently or seasonally depending on where they live and the extent to which the land provides a living. **Certified farmers obtain a significantly higher income from cocoa production than non-certified producers (as well as a higher income from other crops).** Certified producers also rank the importance of cocoa production and other crop production for their income more highly than non-certified smallholders – the latter ranked remittances in the final survey as a more important source of income than certified producers.

Survey results from 2010 and 2012 showed that total household income increased significantly for both groups. Certified farmers obtained a higher total income than non-certified smallholders. Nevertheless, the rate of increase was higher for non-certified producers, mainly derived from a large increase in income from permanent employment, while their cocoa income reduced by around 35%. However, there is considerable variation and complexity at the local and organisational levels. In terms of producers' perceptions, in the baseline survey, certified farmers reported an increase in income over the previous two years, while non-certified farmers reported no change. In 2012, both categories of farmers reported a slight improvement. There was no significant difference between certified and non-certified producers perceptions in 2012.

In terms of the contribution of cocoa income to basic household expenditures (food, clothing, school expenses, health, water, energy and debt repayment) there were no significant differences in 2010 between certified and non-certified producers (with the exception of higher contribution of cocoa income to debt repayments for non-certified producers). However, in 2012, certified producers reported significantly higher contributions of cocoa income to covering all basic expenditures except school expenses. Many respondents replied that the household relies on multiple income activities of multiple household members (head of household, spouse and in some cases older children).

Income activities included permanent jobs, selling timber and charcoal, searching for gold, casual labour and crop and livestock sales.

Credit is not made available through the organically-certified organisations, but Fairtrade members of FTO/NO and FTO/FM reported good access to credit from their own organisations through funds from the Fairtrade Premium. Surprisingly, no significant difference in access to credit was reported by farmers in the questionnaire survey.

Certified farmers have more savings than non-certified farmers. However, incomes barely cover basic necessities for organic farmers and savings are used for short-term needs, rather than longer-term investments. Less than 30% of Fairtrade farmers have been able to achieve savings from cocoa sales for the last two years. Where Fairtrade farmers did have savings, they were higher than those of non-certified farmers. Savings are typically spent on paying off loans and improving homes and farms.

There were no significant differences in how the certified and non-certified producers ranked the importance of investment of cocoa income in debt repayment, household appliances, farm improvements, business investment or health. In 2010 certified producers ranked house improvements higher and in 2012, non-certified producers ranked 'other' investments (such as education, livestock, food and labour hire) higher than certified producers.

Food security

Certified farmers are more food secure than non-certified farmers. In 2010 certified producers ate meat, chicken or fish significantly more often than non-certified producers; there was no significant difference in frequency of consumption of staple foods, or the numbers of meals per day, or in satisfaction with quantity of food. Satisfaction with quantity of food was lower for non-certified producers. In 2012, there were more differences; certified producers consumed significantly more meals per day, more frequently consumed meat or fish, and consumed slightly more staple foods. There were no significant differences in satisfaction with the quantity and quality of food. The proportion of food covered by own farm production - between a quarter and a half for both certified and non-certified producers, was significantly higher for certified farmers in both years.

Changes in assets

Overall, farmers saw positive changes in a wide range of factors related to cocoa farming. **Highest levels of improvement were in management of the cocoa crop and the environment.** Certified farmers were more positive about change in a number of areas than non-certified. In addition to a significantly larger proportion of certified producers reporting an improvement in market access compared to non-certified producers, they also reported improvements in payments for quality cocoa and improvements in the environment. Farmers' assessment of the importance of the changes reflects the level of perceived improvement.

Producers reported improvements in all aspects of household well-being and welfare. In 2012, certified producers had more land under cocoa than non-certified producers, as well as higher cocoa yields. Both categories had increased their cocoa area in the previous 2 years, but only certified farmers had significantly increased yield. There was a decrease in some categories of livestock (cows, chickens and pigs) among both certified and non-certified producers. Certified producers reported, on average, more improvement in farming methods than non-certified producers.

Certified producers received significantly more training than non-certified producers in 2010, but reported a reduction in training events by 2012. Access to training and technical assistance is important for increasing productivity and quality, both of which are routes to increased incomes for

farmers and the organisation. No significant difference in access to training emerged in the final survey, but there was a greater increase in satisfaction with training among certified farmers than non-certified farmers.

There did not appear to be many significant differences in the level of change in household assets between certified and non-certified producers. Certified producers reported, on average, significantly more improvement in access to credit than non-certified producers between 2010 and 2012. In terms of patterns of asset ownership, certified producers had significantly more bicycles, pickups, radios, and credit than non-certified producers in 2010. Certified producers had more bicycles than other producers in 2012, but otherwise household assets were not significantly different between certified and non-certified producers.

In terms of services available in the community, some positive change was reported in infrastructure, health, education and household services (e.g. water, electricity). Certified producers reported a significantly greater improvement in education services compared to non-certified producers, but mostly this was attributed to government interventions.

All producers were relatively positive about the future; there was no significant difference in perceptions about the future between certified and non-certified producers.

Gender and equity

In terms of gender and participation, in the RA/organic organisations there were women board members, although most were men. Women tended to report that they could not act as board members, because they did not have time to attend. This accession to board level by women is seen as a change brought about by a shift toward more progressive thinking in society, rather than being attributable to organic certification. In the Fairtrade and organic organisations, several female interviewees said that there was no bar on them becoming president of the organizations. Concerning membership, there did not appear to be any active discrimination along lines of gender, race or age. The organisations encourage independent producers to join them. In the Fairtrade-certified organisations, training has been provided which includes employment conditions, gender equality and discrimination issues.

There was no reporting of child labour issues in Ecuador based on qualitative discussions by the study team. The survey in 2012 reported no change in the use of child labour.

Satisfaction with producer organisations

All respondents – certified and non-certified - gave good scores for the performance of their POs. In particular they gave good scores for the POs (certified and non-certified) in terms of how they maintain the quality of cocoa, how cocoa is sold, future plans, leadership and technical assistance. Highest scores were given for maintaining quality of cocoa and the way cocoa is sold. In terms of maintaining cocoa quality there was a significant difference between certified and non-certified farmers' scores, with certified farmers more positive than non-certified farmers. However, there was also a significant difference in 'the way cocoa is sold' with non-certified farmers giving a higher score than certified farmers.

Cocoa producers' satisfaction with their producer organisations increased for both the certified and non-certified producers over the course of the study. The double difference analysis indicates that there was a **greater increase in certified producers' satisfaction with their PO compared to non-certified farmers, in terms of leadership, financial management, technical assistance, the way cocoa is sold, communication of information, future plans and use of the Fairtrade Premium.**

Access to training and technical assistance is important for increasing productivity and quality, both of which are routes to increased incomes for farmers and the organisation. No significant difference in access to training emerged in the final survey, but there was a greater increase in satisfaction with training among certified farmers than non-certified farmers.

The picture is somewhat complicated by the support provided by external organisations which can vary over time. Some of the organisations that dropped RA certification would have previously received training and technical assistance to comply. Over the study period, certified farmers became more satisfied with the technical assistance provided by the PO, compared to their non-certified counterparts. The qualitative data shows that all POs provide some training to members, whether certified or not, with some receiving support from other buyers or development agencies. But the Fairtrade organisations can invest their Fairtrade Premium resources in improving the quantity, quality (e.g. location and classroom versus practical field training) and breadth of topics of the training and technical provision. Organic farmers in one organisation were obliged to attend, whereas non-certified members were not.

In RAO/AE and RAO/KN, both organic-certified and non-certified farmers have a similar, good level of access to infrastructure for processing cocoa via their organisations. Both organisations have good facilities, in part funded by external agencies and access is not restricted to certified farmers. Both organisations buy fresh cocoa beans and have similar infrastructure to ferment and dry the beans to obtain a high quality product. This provides confidence that their beans will be processed carefully, reach high quality standards and command a good price. Both organisations have their own cocoa nurseries for their respective members, and they all have their own collection stations, with awnings, sheets, fermentation boxes, storage rooms and all that is required for drying the beans. RAO/AE has substantial equipment having been founded with external support, but RAO/KN's equipment is more modern. They have recently bought three motorized brush cutters to speed up weeding to assist members and the PO is constructing a factory to produce chocolate.

Within the Fairtrade organisations the picture is more mixed. Farmers in the FTO/FM organisation have better access to processing facilities than the non-certified NC/PM group, and also have better access than Fairtrade certified FTO/NO, despite both receiving the Fairtrade Premium. FTO/FM has a large facility that includes an administrative and financial area, fermentation area, drying area, storage warehouse, and a laboratory for quality control. They also have a cocoa liquor tasting facility and plan to make their own chocolate. Finally, they have an area for events or meetings. Much of this has been financed from sales and the Fairtrade Premium. Perhaps because of these good facilities, FTO/FM is able to sell all its production to Fairtrade buyers. NC/PM (non-certified) has an office area and a collection station. But they are not in use currently. Each member organization has its own collection station, and space for fermentation and drying, but these too are also not in use. FTO/NO has to buy dried beans from farmers and does not have control over product quality, because of its more limited processing facilities. A sub-group of FTO/NO have a small collection station close to their farms consisting of a small traditional cocoa drier. Their cocoa is later sold to UROCAL. This centre has been selected for improvement using Fairtrade Premium.

The Organic certified O/UCO, in the same province as FTO/NO, and under the same umbrella organisation, UROCAL, also has better processing facilities than FTO/NO. O/UCO members through their own means have purchased sheets for drying the cocoa, a cocoa nursery and a small collection centre where they also hold meetings. They also classify the different quality types here and then it is sold to UROCAL where it is ready for export.

UROCAL has offices for administration, technical and financial activities, where farmers can meet and attend training sessions. They also have a central collection station where the cocoa from all

members is brought together (both organic and Fairtrade). They have wooden fermentation boxes and gas driers, but the latter are not in use due to the high maintenance costs.

There were no significant differences between certified and non-certified smallholders in the extent of change in levels of infrastructure or in post-harvest handling facilities between 2010 and 2012.

Producer organisations - governance

There are similar levels of transparency and democracy in RAO/AE and RAO/KN overall. In many ways they operate more as cocoa buying operations than farmer representative organisations. Farmers bring their cocoa for sale to these organisations and this is the main basis of the relationship. **Benefits for farmer members and the organisations are linked to raising production and quality, but less so to farmer voice and empowerment as part of a producer organisation.** The farmers are not seen as having a role beyond production. RAO/AE members do not have access to concrete information about markets, nor the price at which the organisation sells their cocoa, how much stays in the country. They are only informed about how much they are paid – because farmers do not participate in price negotiations. Economic data was not shared for this study by RAO/AE, so costs, prices and quantities sold by this organisation are unknown.

Members of the other four organizations studied - FTO/NO, FTO/FM (both Fairtrade), O/UCO(organic), and NC/PM (non-certified), agreed that their organizations are democratic because members elected their leaders and new members and because there is no exclusion of anyone. The Fairtrade organisations should demonstrate certain levels of accountability, democracy and transparency, as this is specified in the producer standards. However, the Fairtrade system requires umbrella organizations as well as member organizations to be democratically controlled by their members and so it would be expected that the organisations would all exhibit some level of democratic organisation as a result of Fairtrade participation.

There is a small problem with participation in meetings for FTO/NO because many of its members are senior citizens. FTO/FM has regular meetings of leaders and members, but the organisation is fairly large compared to the other study POs, with a membership of 900. The state of administration in NC/PM is not currently settled and so this is restricting meetings and the active participation of members.

For FTO/NO and FTO/FM (both Fairtrade), managers said that there is transparent management of the distribution of the Fairtrade Premium because both they and the auditors are always working on this topic. However, interviews with individual members did not indicate a strong understanding of the Fairtrade Premium – how it is generated and what it is used for. However, the 2010 survey found that over 73% of Fairtrade certified producers and 50% of FLO/organicas certified had knowledge of the premium and for Fairtrade, this increase to 75% in 2012. In both 2010 and 2012, the other areas relating to certification of which 50% or more of certified respondents were aware, were access to training, technical assistance, environmental management and waste management.

Many RAO/AE and RAO/KN farmers know in general terms that organic certification is good for improving the quality and production of cocoa through a series of standards, and that this will help to achieve a better price and a more assured market. However, there was also some confusion amongst members regarding the difference between Rainforest Alliance and organic certification.

Environmental impacts

The greatest changes in natural resource management were reported at RAO/AE, with increased diversification, more fruit crops planted for household subsistence and sale and support for improved cocoa production. The farmers and producer organisation leaders mentioned mixed

cropping, and the economic benefits and advice on reducing chemicals resulting from organic certification (BCS). The impact was less pronounced for RAO/KN in the Amazon region where farmers were already practising environmentally friendly production. Organic certification predated RA certification – and the former has stricter standards on soil and crop management so it is unlikely that the latter has had additional impacts. RA mainly influenced waste management and waste collection. O/UCO was able to conduct some awareness raising activities. Using the Fairtrade Premium, FTO/NO has invested in agroforestry and environmental training. Fairtrade has positive environmental impacts, but may, on its own, be insufficient to challenge the wider forces causing environmental degradation in the study zones. Further, it is not necessarily the standards that cause farmers to care for the environment – other personal and organisational values are at least as important. In the survey, certified farmers were more positive about change relating to the environment than non-certified producers.

Changes at national and regional scale

The most obvious impact on a national scale has been an increase in the amount of organic cocoa produced. More farmers are joining POs and there has been an increase in the number of organic certified organizations. **The area planted, the volumes of cocoa exported and foreign currency earned, have all increased.**

Cocoa organisations are gradually gaining greater representation in Ecuador and gaining greater self-esteem and confidence as a result. In the Amazon region, an example of this has been RAO/KN's membership of the Cocoa Roundtable of the Sumaco Biosphere Reserve, which has increased the voice of small producers locally, as well as nationally. RAO/KN's work together with other organizations, has led to a new proposal for a "Cocoa Law." The participation in the Roundtable and the associated interactions with other value chain players has been important in extending the PO social and commercial networks: such contacts can potentially assist the POs to establish cooperative or commercial agreements with different organizations.

Public development bodies are also showing increased interest in supporting cocoa farmer organisations and cocoa heritage, including investing in cocoa-related projects. In Tena Province, for example, where RAO/KN is based and has developed a strong reputation, the state is funding projects to recognize and rehabilitate cocoa culture and its origins. This in turn influences the marketing strategies of cocoa by the producer organisations and its promotion locally and with it the creation of niche markets for local groups.

RAO/KN has become the main cocoa buyer in the region and is creating alliances with other groups and this gives them greater ability to push prices upwards to the benefit of members – with intermediaries often following suit. RAO/KN's confidence has grown rapidly to the extent that they dropped RA certification and are now considering ending organic certification at some stage in the future to develop their own standard or brand, based on chacra farming, now that they have positioned their products on the market and have established an international reputation.

FTO/NO and FTO/FM are Fairtrade (and organic) certified, but also belong to the Unión Nacional de Asociaciones de Pequeños Productores Agropecuarios Certificados en Comercio Justo del Ecuador (CECJ). This organization was founded in 2010 to lead the empowerment of democratically organized small producers in Ecuador and have been pioneers in developing Fairtrade as an alternative form of sustainable development. CECJ is linked to the CLAC network (Coordination of Fairtrade in Latin America and the Caribbean) which represents democratically organized small farmer organizations in Latin America, and aims to strengthen and develop grass roots organizations through supporting their members, promoting their products and their involvement in social, political, economic

institutions within the Fairtrade framework. These two associations - both locally and at a regional level - help strengthen small producer organizations and promote their products to different clients.

Conclusions

From the evidence of the study the certified organisations in Ecuador have contributed to increasing the incomes and productivity of their members. Certified Fairtrade and organic producers achieved significantly higher productivity in 2010 and 2012 compared to non-certified producers. Sustainable farming practices have been introduced. Farmers report that certification has supported improvements in quality through improved environmental management, reduction in agrochemical use and improved pest and disease control (RA and organic) and through investment in production and post-harvest systems (Fairtrade).

Incomes from cocoa of certified producers have improved slightly over the two year period, while non-certified producers' incomes from cocoa have significantly decreased. This income has not been visibly converted into assets, but levels of satisfaction for certified producers on food security and a range of other livelihood dimensions are higher than among non-certified producers.

Farm worker conditions have also improved, including their health and safety. Although this could have been influenced by broader government policies, there was a significant difference between certified and non-certified producers in reported improvements in labourers' exposure to health and safety hazards.

The major uses of the Fairtrade Premium have been for cocoa production, infrastructure and credit. health, training, education, infrastructure development and environmental activities. One of the Fairtrade organisations also uses the Premium for administration, organisational strengthening, and social security for members and staff. 98% of Fairtrade certified farmers reported benefitting from use of the premium in production and at least 80% benefitted from other uses. There is limited benefit for the wider community as the funds are directed mainly to members. The level of awareness concerning the Premium and its use among certified producers could be improved.

The certified producer organisations appear to be functioning well in their wider advocacy role in the market and able to deliver better financial services for members. The organic certified sector has grown and volumes of sales are up. Cocoa organisations are gradually gaining greater representation in Ecuador, helping to increase the voice of small producers locally and nationally. This increased profile has helped to attract support from public development bodies including investing in cocoa-related projects. Nevertheless, there is scope for increasing internal participation of farmer members and provision of more information on the organisations business transactions

SECTION 1: INTRODUCTION & CONTEXTUAL ANALYSIS

1. Introduction

This report presents the findings for Ecuador of the DFID funded project 'Assessing the poverty impact of voluntary trade standards', which is led by the Natural Resources Institute, University of Greenwich in collaboration with SIPAE. The study began in 2009 and has the following objective: ***'to systematically examine the impact of voluntary social and environmental standards on poverty and livelihoods, particularly for the most disadvantaged workers and producers in developing countries'***.

Two commodities were selected by DFID and the research team at the beginning of the study for inclusion in this study, namely tea and cocoa, and focusing on Rainforest Alliance, Fairtrade and Utz Certified Sustainability Standards and information on membership size. Cocoa was selected as an important crop for certified systems. Ecuador is a major producer of fine aromatic cocoa, whereas Ghana produces bulk ordinary cocoa. There were Rainforest Alliance and Fairtrade certified organisations in Ecuador, allowing for comparisons to be drawn between the standards in the same national context.

2. Methodology

2.1 Overall conceptual framework, research questions and theory of change

The project aims to answer the overall research question about the poverty impact of sustainability standards, but also a number of specific research questions on the poverty impacts of voluntary standards. This report explores only those questions of relevance to the Ecuadorian situation. The overall project research questions are set out in Table 1 below.

Table 1: Main research questions

Do voluntary standards have an impact on the poverty and livelihoods of smallholders, outgrowers and hired labourers and their organisations? If so what kind? Are voluntary standards effective mechanisms for tackling poverty?
Do producers selling certified products experience greater positive long-term social, economic and other livelihood impacts than their uncertified counterparts?
Do workers on certified plantations achieve greater positive long-term social, economic and other livelihood impacts than those working for uncertified enterprises?
Are voluntary standards lifting people out of poverty? What is the scale or magnitude of their impacts on poverty? Are there limits to the effectiveness or potential of these standards as a means of tackling poverty?
Can voluntary standards reach the most disadvantaged in society? What are the inclusion or exclusion thresholds which shape entry to such voluntary schemes and how do these vary across time, contexts and for smallholder and hired labour situations? Is there a risk that voluntary standards reinforce regional inequalities?
What are the characteristics of the participants who remain within a scheme and those who leave?
What are the gender dimensions of the poverty impact of voluntary standards?
Are there negative or unexpected impacts on participants or non-participants?
Assuming a broad-brush definition of poverty, what <i>types of impacts</i> of voluntary standards are the most significant for tackling poverty and supporting livelihoods? (social, economic, empowerment etc)? Are the standards tackling strategic as well as practical needs, e.g. building local institutions, mgiving greater power and voice etc

Is there a difference in the kinds and magnitude of impacts (in terms of number assisted and extent of changes resulting) being achieved in hired labour and smallholder situations?
j) Which elements or mechanisms of voluntary standards are the most effective in tackling poverty (e.g. producer support to access export markets, greater security through guaranteed prices and pre-financing, stronger producer organisations to increase the power of disadvantaged groups, networking amongst certified groups etc).
In which circumstances do voluntary standards have the most poverty impact (e.g. newly liberalized economies, existence of relatively strong small farmer cooperative movements etc?) What are the key drivers for success?
How sustainable are the impacts of the voluntary standards and the standards themselves?
Can farm level sustainability make a difference to larger scale changes in land use and ecosystem health? If not, does it matter and with what implications for tackling poverty?
Are positive impacts by voluntary standards sustained over time or do they tail off?
Can voluntary standards achieve the same kinds of impacts in mainstream value chains as well as alternative ones?
Can voluntary standards have an influence beyond their specific certified value chains (e.g. positive impacts in raising local market prices; possible negative impacts on non-certified producer access to markets? Can voluntary standards push up standards in the rest of the market and achieve poverty impact that way? Can they change the terms of trading (market transformation) or is the overall effect more about achieving market access or market reform? How do such schemes challenge or reinforce prevailing power relations and inequalities?
Can voluntary standards have an influence beyond their specific certified value chains (e.g. positive impacts in raising local market prices; possible negative impacts on non-certified producer access to markets? Can voluntary standards push up standards in the rest of the market and achieve poverty impact that way? Can they change the terms of trading (market transformation) or is the overall effect more about achieving market access or market reform? How do such schemes challenge or reinforce prevailing power relations and inequalities?

A secondary set of research questions will be explored relating to more nuanced comparisons between different standards and their approaches.

Table 2: Secondary research questions

What differences are there in the impacts achieved by voluntary standards and how far could they be complementary?
What relative contribution do different mechanisms make to any positive impacts (e.g. price premiums, longer-term trading relations, support to negotiations with buyers
How do the poverty impacts of the different voluntary standards vary? How do the different provisions in their standards and the varying approaches they adopt (e.g. to producer support) affect the poverty impact on smallholders, outgrowers and workers?

How do different business models and value chain relationships affect the impact upon poverty of voluntary standards? How do the values, power and incentives of different actors in the value chain affect the impacts upstream? (e.g. What differences are there between retailers? What differences are there between ATOs? What difference does producer ownership along the value chain make to overall poverty impact?).

How do the costs of certification and compliance (e.g. to quality requirements) affect inclusion and the membership poverty profile (e.g. does the membership of co-operatives reflect the poverty profile of their communities?). Are factors such as remoteness and marginality of land, factors in being able to benefit?

To answer these research questions, an overall conceptual and analytical framework for the study was developed in 2009 (see Nelson et al, 2009). Theory of change thinking (with visualisations of *hypothetical* theories of change developed during the project for specific standard systems – Rainforest Alliance and Fairtrade), provided the conceptual basis for the exploration and assessment of impact. By setting out the expected causal linkages and then gathering appropriate data, it is possible to assess how far these causal linkages exist in practice. Data was gathered from a range of sources and using a variety of methods – in order to triangulate and build up a chain of evidence (both qualitative and quantitative).

Figure 1 below shows a generic diagram of Social and Environmental Voluntary Standard Systems (SEVSS) and the main mechanisms by which change is brought about. Figure 2 provides a more detailed analysis of the Fairtrade theory of change and Figure 3 provides the Rainforest Alliance hypothetical theory of change. As a system it was unclear, initially, what exactly are the inputs, given that Fairtrade is a system rather than a project, and the system can vary from place to place in terms of actual inputs and the implementation of standards. Furthermore, the organisation itself did not articulate one clear Theory of Change. More recently Fairtrade International has developed its own Theory of Change, which has, amongst other things, drawn upon the thinking of this project.

As the project seeks to assess poverty impact, it is important to specify how we have defined poverty: Our definition moves beyond income alone, to a livelihood asset based framework (Carney, 1998). In the design of our research instruments (e.g. checklists and questionnaires) we have included a wide range of indicators to establish impacts on income, but also a broader range of assets at the household level, as well as access to services (e.g. from companies) and satisfaction with organisations. The broader asset framework includes consideration of empowerment indicators relating to knowledge of certification and the value chain, organisational development and advocacy/voice. We have also assessed to a limited extent the wider impacts of the sustainability standards, e.g. on local communities and economies. In recognition of the intertwined nature of socio-economic wellbeing and environmental health, we have considered changes in agricultural and natural resource management practices that feed back into poverty impacts for smallholders, workers and communities. It has not been possible to directly measure changes in ecosystem services.

Figure 1 The generic sustainability standard impact chain and the importance of context

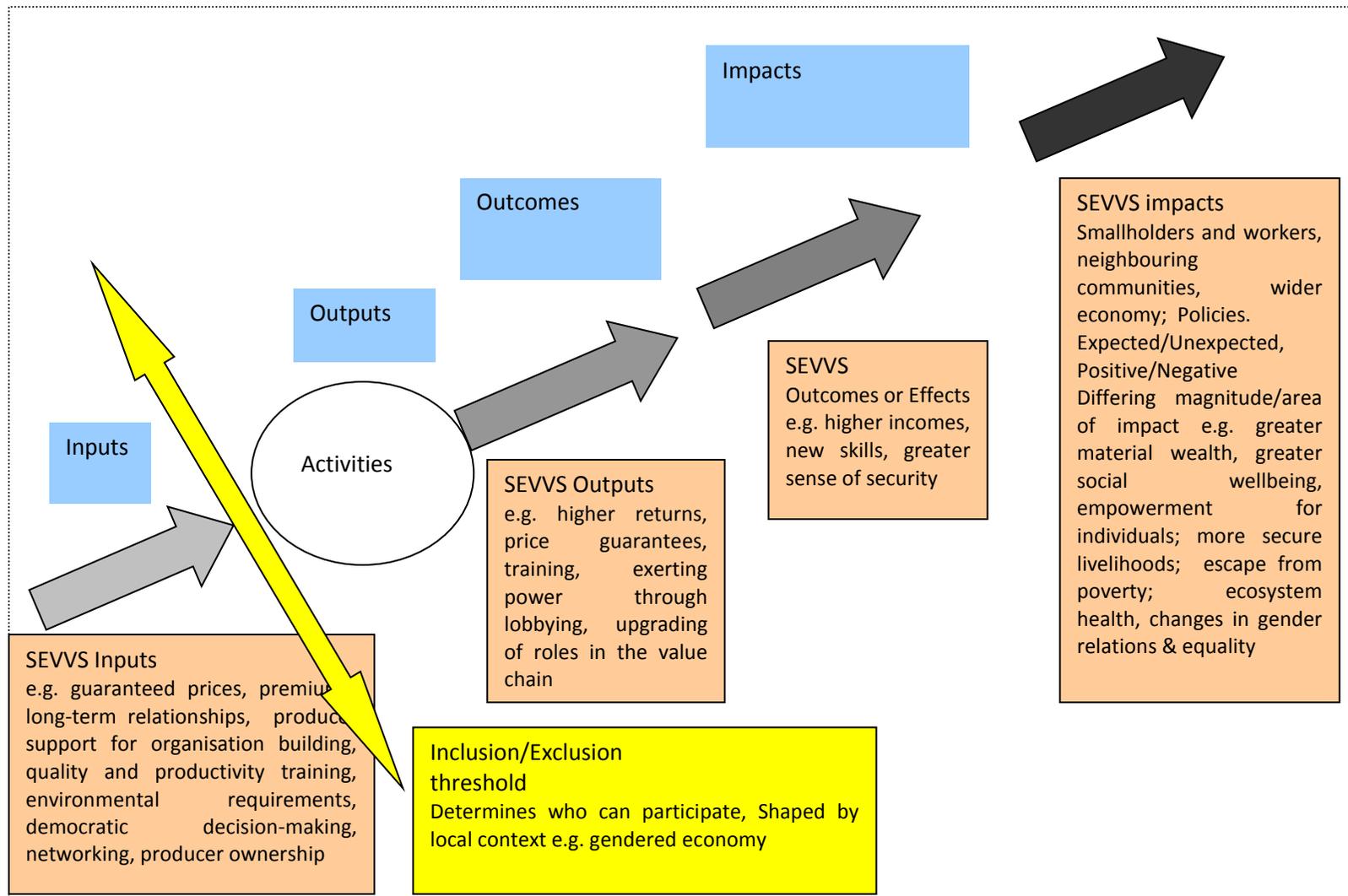


Figure 2: Hypothetical Fairtrade Smallholder Production Poverty impacts Theory of Change

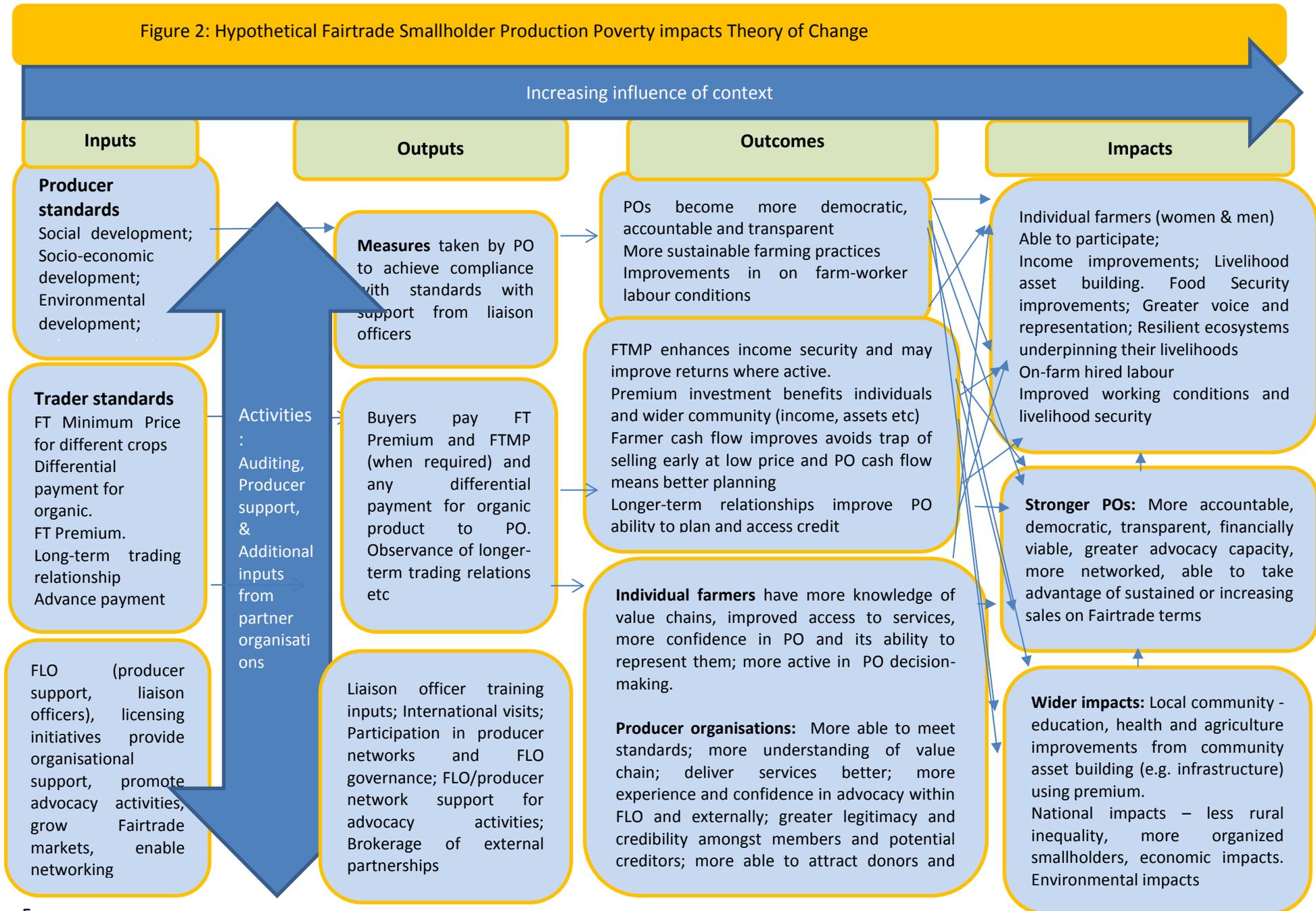
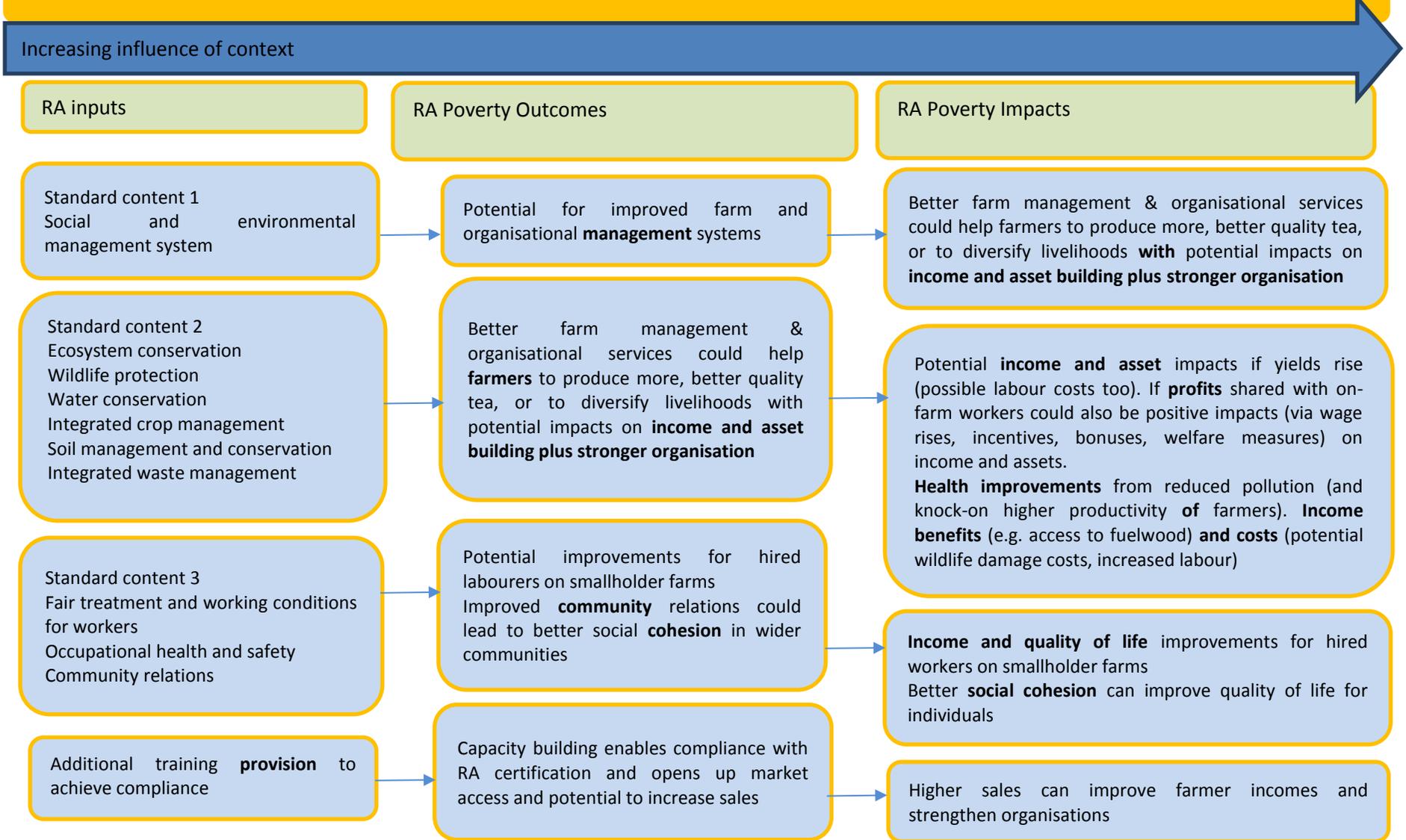


Figure 3: Hypothetical Rainforest Alliance Smallholder Production Theory of Change



2.2 Methodology

As well as the use of theories of change, the study was also based on two key comparisons – certified and non-certified producers ('with and without' an intervention) and changes over a selected period of time ('before and after') – data collected in early 2010 was compared with the situation two years later in 2012. Further, baseline study respondents were asked to remember the situation two years prior to the baseline survey – allowing another time comparison. The producer organisations selected had already achieved certification and so it was not possible to construct a baseline at, or prior to certification. Also, Fairtrade standards in particular, have minimum progress criteria, so there should be continual improvement. The aim was to assess change over time to establish if there had been positive and negative impacts resulting from certification to the different standards. These two dimensions of comparison (time and with and without certification) were combined in the 'difference in difference' calculation made in the statistical analysis.

Thus a theory of change case study approach was combined with a quasi-experimental research design. A range of methods were used to collect data from multiple sources, with equal weight being given to both quantitative and qualitative research methods. The study was therefore mixed in terms of both designs and methods. Unfortunately, there were not sufficient funds to conduct an in-depth value chain analysis.

2.3 Selection and sampling strategy

2.3.1 *Selecting producer organisations and constructing a counterfactual*

Following the development of a matrix by the NRI team, based on data provided by the standard systems on the country location of certified groups for different commodities, it was possible to select countries and commodities (Ecuador and Ghana for cocoa; Kenya and India for tea).

Selection criteria were developed for the selection of producer organisations in Ecuadorian cocoa. The four certified cocoa farmer organizations selected for this study were chosen based on their location (production zone) and type of voluntary certification.

Box 1: Selection criteria - POs

Certification type: Fairtrade and Rainforest Alliance (two organizations for each certification type)
Representativeness of agro-ecological zones for each organization for important factors such as physical environment for cocoa production. The selection included the Central Amazon region (1 organisation) and the coastal region (3 organisations).

The four organisations chosen as certified groups were: i) RAO/AE in Esmeraldas Province on the north coast; ii) RAO/KN, in Napo province, Central Amazon region. Both these organisations were Rainforest Alliance certified and organic until mid-2011 when Rainforest alliance was dropped. Also included were two organisations having certification from FLO: iii) FTO/FM in Manabi, in the central coastal region; and iv) FTO/NO, a group under La Unión Regional de Organizaciones Campesinas del Litoral (UROCAL) located in El Oro province on the south coast. These Fairtrade organizations also had members who were certified organic. By 2012 RAO/AE and RAO/KN had not continued with the Rainforest Alliance certification for strategic reasons, and had taken up BCS¹ organic certification scheme instead.

In selecting the non-certified groups, the following criteria were used:

¹ BCS ÖKO-GARANTIE GMBH is licensed as a private controlling agency to implement the EU Regulation on organic production (http://www.bcs-oeko.com/en_about_bcs.html)

Box 2: Selection criteria – Non certified POs

Similar physical environment/agro-ecological zones as the corresponding certified organisation:
 Shared characteristics (with the certified organisations) between members in respect to the farm size

The counterfactual non-certified sample was chosen from non-certified members of RAO/KN and UROCAL, (which was possible because organic farmers are certified individually), or from among non-certified cocoa farmers in the same areas (for RAO/AE) and from a non-certified producer organisation, (NC/PM) in the same province as FTO/FM.

For the survey in 2012, the sample from RAO/AE and RAO/KN was now of solely organic farmers, while a further sample of organic farmers was drawn from a producer organisation, O/UCO (in El Oro Province). The Fairtrade plus organic certified farmers and the counterfactual non-certified sample were selected as in 2010.

Table 3 Study selection of producer organisations

Location	Certified groups – certification at baseline & 2012	Non-certified Comparison Groups
Central Amazon	RAO/KN 2010 - RA certified at baseline (many RA certified members also held organic certification) 2012 - BCS organic	RAO/KN 2010 – Non-certified members of RAO/KN (i.e. not RA or organic) 2012 – Non-certified members of RAO/KN (i.e. not RA or organic)
North Coast	RAO/AE 2010 RA certified (many RA certified members also held organic certification) 2012 - BCS organic	RAO/AE 2010 - RAO/AE non-certified members (i.e. not RA or organic) (and some individual farmers in the same area). 2012 - RAO/AE non-certified members (i.e. not RA or organic)
Central Coast	FTO/FM 2010 - FLO-Fairtrade & ECOCERT organic 2012 – FLO Fairtrade & ECOCERT organic	NC/PM 2010 - NC/PM (was organic certified for one year, but then suspended for using chemicals) 2012 - NC/PM (not FLO or organic)
South Coast	FTO/NO (part of the umbrella organisation, UROCAL) 2010 - FLO-Fairtrade and organic 2012 – FLO Fairtrade and organic O/UCO (part of the umbrella organisation, UROCAL) 2012 – O/UCO (organic)	2010 – Non-certified members of UROCAL (i.e. not RA or organic) 2012 – Non-certified members of UROCAL (i.e. not RA or organic)

2.3.2 Sampling the individual producers

It is important to note that in organic certification farmers are certified, not the organisation (it can have both certified & non-certified members) – but certification allows the organisation to pay the farmer a premium for organic cocoa. In Fairtrade certification the organisation is certified. In Rainforest Alliance, individual farms are certified, while operations that buy from Rainforest Alliance Certified farms and sell them as certified, can be ‘Chain of Custody’ certified, meeting the economic

and environmental standards of the Sustainable Agriculture Network (SAN), a coalition of non-profit conservation organizations.

A sampling strategy was developed for random sampling at lower levels – e.g. from primary society levels and individual farmers. In the baseline survey in 2010, useable data was collected from 576 farmers of whom 329 were certified and 247 farmers were not certified (the ‘counterfactual’ sample). For the final survey in 2012, a total of 415 farmers were interviewed; 290 certified and 125 non-certified. The distribution of the sample across organisations is shown in tables 4 and 5.

Table 4: Sample selection of certified and non-certified farmers in 2010

Certified		Non certified	
Name of the organization	Sample size	Name of the organization	Sample size
RAO/AE	77	RAO/AE	89
RAO/KN	79	RAO/KN	72
FTO/FM	109	NC/PM	53
FTO/NO	37	UROCAL	43
UROCAL	27		
Total	329	Total	247

Table 5: Sample selection of certified and non-certified farmers in 2012

Certified				Non certified			
Name of the organization	Number of cert members	Sample size	Sample %	Name of the organization	Number of members	Sample size	Sample %
RAO/AE	140	80	57.00	RAO/AE	55	21	38.88
RAO/KN	366	80	21.88	RAO/KN	136	80	58.82
FTO/FM	908	82	9.03	NC/PM	N/A	24	
FTO/NO	97	32	32.98				
O/UCO	53	16	30.18				
Total	1571	290		Total	191	125	

2.4 Data gathering

In both the baseline study and final survey, data collection methods included management workshops and interviews, a questionnaire survey, focus group discussions and key informant interviews. Following a review of secondary data and initial analysis of the data, a feedback phase was undertaken with stakeholders. This was followed by report writing, translation and finalization. See table 6 below.

Table 6: Timetable of the study

Phase	Timing
Preparatory work (e.g. approaching POs, testing checklists and questionnaire)	Mid-2009 – early 2010
Baseline Fieldwork	Jan – April 2010
Final survey	Jan – April 2012
Data cleaning, analysis, write-up, dissemination	April 2012 – March 2013

The **questionnaire** was developed centrally to cover cocoa smallholder production, but then adapted to fit the Ecuadorian context and translated into Spanish. The topics covered included: individual respondent data; location, organization and certification; household demographics and information, including non-resident but economically contributing members; farm characteristics; total production and sale of cocoa; sources of income and income trends; household food security; importance of cocoa for basic needs; sources of income other than cocoa; sale of cocoa; savings; knowledge about certification; perceptions about change; changes in the community; knowledge of premiums; perceptions about the organisation; perceptions about the family possessions; perceptions about access to goods and services; costs; changes in social status. The questionnaire took approximately one hour long. The responses were entered into a database. Quality control was applied before data entry and after.

Photo 1: Cocoa farmer questionnaire interview



In the baseline survey **fifteen focus group discussions** were held (sixteen had been planned, but in RAO/AE zone it was not possible to convene a group of non-certified women farmers, so mixed and men-only FGD were held). **In the final survey twelve focus group discussions** were conducted with farmers (7 in certified organisations and five in non-certified groups) - where possible separate groups were held with female and male farmers². The focus group discussions covered topics such as knowledge of certification, household socio-economic status, social differentiation, quality, cocoa production and the environment,

perceptions of the producer organisation, hired labour, gender, the future.

Interviews with management and workshops with directors were held to obtain information about the producer organisations and their structures and on a range of issues (e.g. social economic aspects; hired labour; markets and cocoa quality; farmer organisation; local development and environment). In the **baseline survey, twenty four semi-structured key informant** interviews were carried out, covering the President and Executive members of the Producer Organisations as well as their General Managers, Quality Managers, and Technical and Commercial staff and workers. In addition, lower level organization presidents, producers, the presidents of other organizations, non-member producers and the Presidents of other organisations were interviewed. In the **final survey, a total of eight interviews** were held to better understand the impacts of certification, with managers, presidents and treasurers and three interviews were held with representatives of equivalent positions in the non-certified groups. A number of **additional key informant interviews** were also conducted in the final survey to understand the Ecuadorian cocoa sector, including organic certification inspectors, the FLO liaison officer, and representatives from the CLAC for Ecuador, the regional coordinator for Fairtrade in the European market, the fair trade company Ethiquable, and an official from the Ministry of Foreign Relations with responsibility for fair trade issues. All of the

² In 2012, the FGDs with certified POs were: RAO/KN – 1 mixed gender FGD; RAO/AE – 1 women’s and 1 men’s FGD; FTO/FM – 1 women’s and 1 men’s FGD; UROCAL – 1 women’s and 1 men’s FGDs from a primary society. For the non-certified organizations: RAO/KN 1 women’s and 1 men’s FGDs; RAO/AE – an invitation was given, but no focus group was formed; NCPM – 1 mixed gender FGD group from a member organization; UROCAL 1 women’s and 1 men’s FGDs from O/UCO.

qualitative data was systematically analysed, with data from different sources organized into similar topics to allow synthesis of data and findings.

To obtain data on the **costs of production**, interviews were held with field technicians to obtain an estimate of production costs and then 16 farmers were interviewed using a questionnaire. Information on area of cocoa, yield, maintenance costs, clearing, weeding, harvesting, pruning etc. was entered into a spreadsheet. In some instances, costs of agro-chemicals and transport were included. To determine gross revenue, the yield was multiplied by the average sale price. To determine profit, costs were subtracted from the gross revenue.

2.5 Data management and analysis

Databases were designed by the Statistics Department at the University of Reading, which provided statistical advisory support to the project in the early phases. Data was inputted and cleaned by the research team in Ecuador and then shared with NRI, where the data was checked again for inconsistencies and statistical analyses were conducted.

The statistical analyses compared the certified and non-certified farmers ('with and without') at the time of the baseline survey, and analysed the questions on changes in the previous two years. At the final survey stage, comparisons between certified and non-certified farmers were also drawn; comparisons with the baseline were analysed and a double difference analysis was completed.

For the baseline and final survey statistical analysis, parametric tests (t-test) and non-parametric tests (Mann-Whitney test and Wilcoxon test) have been used for continuous and categorical variables respectively, to test the significance of differences between the various categories of producers. However, most continuous variables do not follow a typical normal distribution which is an important assumption for parametric tests. Non-parametric tests have therefore also been used to check the results of the parametric tests. If opposite results are obtained, the results of the non-parametric tests are preferred because they are less affected by outliers. Non-parametric tests are less precise but more robust than parametric tests.

For the comparison of results between the surveys in 2010 and 2012, different methods are used. To test any differences in 'static' characteristics, the T-test or Mann-Whitney tests are used. For some 'impact' variables, however, it is expected to see change over time, and the double-difference method is used to test whether the change is significantly different between farmers in certified and non-certified producer organisations.

Box 3: Difference in difference analysis

The Double-Difference (DD) method, in contrast to PSM, assumes that unobserved heterogeneity in participation is present, but these factors do not change over time. DD compares treatment and comparison groups in terms of outcome changes over time relative to the outcomes observed for a pre-intervention baseline:

$$DD = E(Y_1^T - Y_0^T | T_1 = 1) - E(Y_1^C - Y_0^C | T_1 = 0)$$

Where:

Y_t^T is the outcome for program beneficiary at time t

Y_t^C is the outcome for control (non-beneficiary) at time t

t is a two-period setting where t=0 is before the program and t=1 is after the program

$T_1=1$ denotes treatment or the presence of the program at t=1

$T_1=0$ denotes the untreated sample or area at t=1

The value and significance of DD is determined by estimating a regression model with the outcome as dependent variable and dummies for the time and programme, and an interaction term for the two dummies (which gives the value for DD), as independent variables:

$$Y = c + \alpha T + \beta P + \gamma TP$$

Where:

Y is the outcome

c is a constant

T is a dummy where $T=0$ is before the program and $T=1$ is after the program

P is a dummy for program participation (i.e. treatment) where $P=0$ for the control and $P=1$ for the beneficiaries

TP is the interaction term for the two dummies T and P

α, β, γ are estimated parameters, where γ equals DD

When the DD value (difference in change) is significant, it is assumed that this is caused by the treatment (i.e. certification) and is thus the impact of certification. When the DD value is not significant, it can be concluded that other factors have caused the change in outcome, but certification had no impact.

The data has been managed centrally at NRI, with the findings written up by the research partners in Ecuador and by the NRI team. The statistical data and qualitative data is synthesized and analysed in this report, providing the overall findings for Ecuador.

2.6 Confidentiality

The findings relating to specific organisations and locations at have been anonymized (except for large umbrella organisations). The report has been shared with both FLO and Rainforest Alliance to allow for correction of factual errors and to enable each organisation to prepare a response prior to publication of the findings should they so wish.

2.7 Limitations

In the 2010 survey there was some uncertainty over the different combinations of certifications reported by the certified sample of smallholders, specifically whether they had single Fairtrade, Rainforest Alliance or organic certification or a combination of these. Similarly, the 'non-certified' sample included some farmers who were in transition to organic. In addition, because of the dynamic nature of certification in Ecuadorian cocoa (and globally), some producer organisations changed the types of certifications held during the study. This meant that it was not possible to hold together the *ideal* sample for controlled comparisons over the period of the study. Hence for the quantitative analysis, the entire certified sample was treated as a single group. While the detailed qualitative data provided insights into the differences among the certifications. Another limitation was that it was not possible to match the numbers of certified and non-certified cocoa farmers in each location as closely as planned, particularly for FTO/NO which is located in an area where banana production is predominant. The cost of production information was difficult to interpret in the area, because cocoa is often grown in association with bananas and other crops. Information generated by 2010 Masters students was used which included an in-depth analysis of these different cropping systems.

3. Context

3.1 Global cocoa markets

Globally, West Africa is the biggest cocoa producing region. It produces approximately 70% of global production. Ivory Coast and Ghana are the largest country producers, followed by Indonesia, Nigeria, Cameroon and Brazil (see table 7 below). Together these produce 85% of world cocoa bean production. ICCO figures for 2010-11 were for production from these countries of approximately 3.2 million to 3.7 million MT of world cocoa bean production³ (Laroche et al, forthcoming). These countries produce ordinary cocoa (which comes from 'forastero' type varieties), rather than the aromatic or fine cocoas (made from 'criollo' or 'trinitario' varieties). The main focus of cocoa research and development over previous decades has been in ordinary cocoa, at the expense of fine, aromatic cocoa, because the former has higher levels of productivity and is less susceptible to diseases.

ICCO estimated global production of 4,052 thousand tonnes (down 6.1% from the previous year) in 2011/12. World grindings were estimated by ICCO of 3,921 thousand tonnes in 2011/12 - down 0.2% from the previous year.⁴

Table 7 Cocoa output of producing countries (thousand MT)

Country	2007-2008	2008-2009	2009-2010	2010-2011
AFRICA				
Ivory Coast	1370	1222	1242	1325
Ghana	675	662	632	825
Nigeria	210	250	240	240
Cameroon	185	227	205	220
Other, Africa	137	158	156	178
Total Africa	2577	2519	2475	2788
AMERICA				
Brazil	160	157	161	190
Ecuador	114	134	160	150
Peru	31	34	37	
Other, America	145	161	167	208
Total America	450	486	525	548
ASIA and OCEANIA				
Indonesia	580	490	550	500
New Guinea	50	59	50	50
Malaysia	34			
Other, Asia and Oceania	26	49	47	52
Total Asia and Oceania	690	598	647	602
WORLD TOTAL	3717	3603	3647	3938

Source: ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXVII, No. 1, Cocoa year 2010-2011

FAO (2010) ranks countries by cocoa output. The Cote d'Ivoire is the highest producer, with Ecuador in 7th place producing 132,100 tons. Ecuador's production increased by 46,209 tonnes between the years 2007 and 2010.

³ ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXVII, No. 1, Cocoa year 2010-2011

⁴ <http://www.icco.org/home/latest-news.html>.

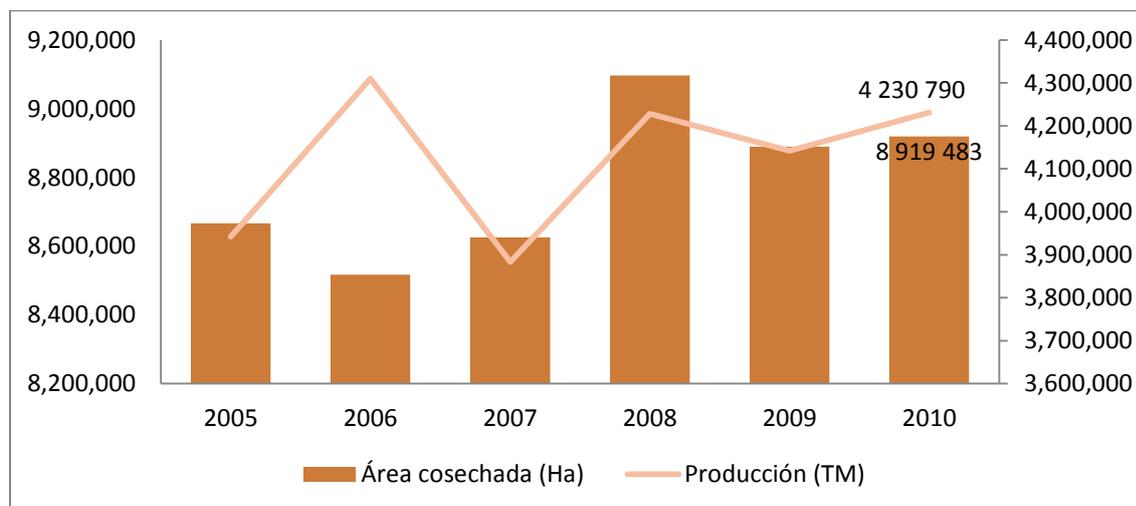
Table 8: Top cocoa producing nations (2010)

Rank	Country	Production - metric tonnes (t)
1	Ivory Coast	1 242 300
2	Indonesia	810 100
3	Ghana	632 037
4	Nigeria	427 800
5	Cameroon	264 077
6	Brazil	233 348
7	Ecuador	132 100
8	Togo	101 500
9	Papua New Guinea	56 800
10	Dominican Republic	53 000

Source: FAOSTAT, 2010

According to FAO, approximately 9 million hectares were used to grow 4 million tons of cocoa worldwide in 2010. The graph below shows that during the five-year period, the amount produced increased by 7% while the area in production rose only by 2%.

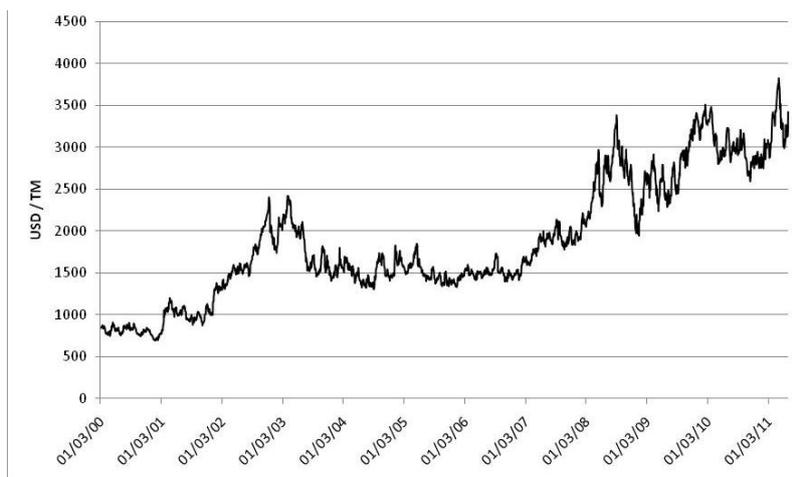
Figure 4: Worldwide area in hectares (ha) and production (metric tonnes - t) of dry cocoa beans (2005-2010)



Source: FAOSTATA, 2010

Cocoa prices on global markets are determined by two major trading platforms in the markets of London (LIFFE or London International Future and Option Exchange) and New York (New York Board of Trade or NYBOT). During the last decade, the international price of cocoa has risen, reaching USD 3,700 per MT in 2011, a historical record of the last 20 years. This is the result of cocoa commodity speculation, itself a result of dollar depreciation and a strong interest of investment funds in commodity markets (Laroche et al, forthcoming). The U.S. economic situation, along with rising crude oil prices and fluctuations in the exchange rate of the dollar, has motivated investors to adopt anti-inflationary measures covering the commodity markets. Demand in consuming countries has maintained an upward trend, while dry weather in exporting countries has affected crop yields, mainly in the Ivory Coast. In Nigeria, over the last two years, diseases and dry weather have also reduced the supply of cocoa (Laroche et al, forthcoming).

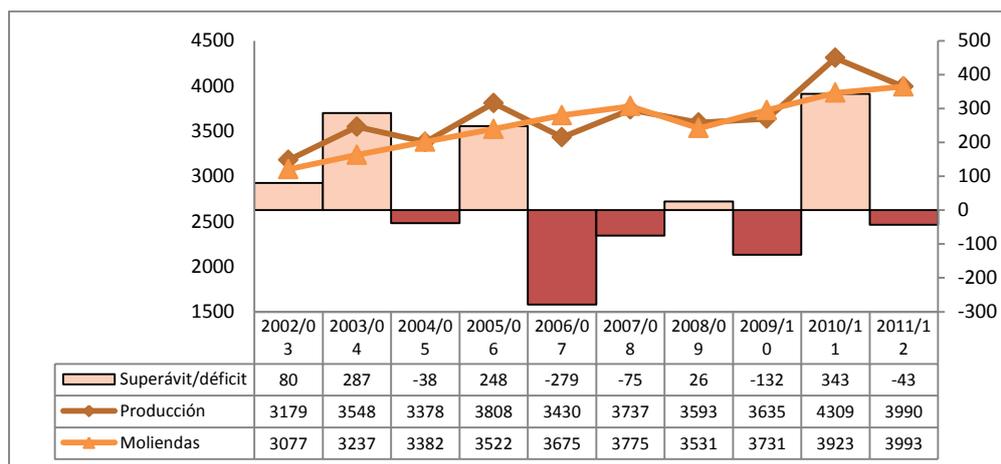
Figure 5: New York Board of Trade cocoa prices from 2000 to 2011



Source: Intercontinental Exchange – ICE (NYSE)

It is not possible to accurately determine the global demand for cocoa beans, because products made from cocoa (butter, powder) are used in a wide range of industries and an even wider range of products. Therefore, to assess the demand for cocoa beans, the grinding totals per country are an important measure. The International Cocoa Organization (ICCO) provides information on the estimated consumption of cocoa (ground cocoa, plus net imports of cocoa products and chocolate products in grain equivalent,^{5,6} which could provide a better understanding of industrial demand. However, this information should be used with caution, as it still does not represent the total industrial demand for cocoa products. Global consumption of cocoa has an upward trend at an average 2.7 per cent annual growth. ICCO estimates world consumption of 3.78 million MT for 2011 (Laroche et al, forthcoming). According to the International Cocoa Organization⁷ (ICCO), in 2012 there will be a 43,000 tonne cocoa global deficit due to demand outstripping supply (Figure 6).

Figure 6: World cocoa production, milled output, surplus and deficit in thousands of tonnes



⁵ Using the following conversion factors: cocoa butter 1.33, cocoa paste/liquor 1.25, cocoa powder and cake 1.18, chocolate and chocolate products 0.40 or 0.20

⁶ CBI market survey: The (organic) coffee, tea and cocoa market in the EU. Pierrot Joost, Centre for the Promotion of Imports from developing countries – CBI, May 2008

⁷ The International Cocoa Association (ICCO) is a global organization composed of cocoa producers and consumer countries. Its headquarters is in London and it was established in 1973 to enact the International Cocoa Convention, which was negotiated in Geneva during a UN International Cocoa Conference.

Source: ICCO trimestral statistics

Instability in production leads to deficits in supply relative to demand in some years, which generates more speculative movement and the upward trend in international prices. 2007 and 2010 were the years of greatest deficit in recent times. The financial and economic crisis in 2008-2009, combined with the steady rise in the price of cocoa beans, had a negative impact on consumer demand for chocolate products. While the final consumption of chocolate confectionery seems not to have been significantly affected by the economic crisis, the overall consumption of cocoa has been deeply affected. Many chocolate manufacturers reported that they have reduced the cocoa content in chocolate products, in order to alleviate the impact of rising raw material costs in their products, and to continue providing chocolate products at affordable prices⁸ (Laroche et al).

According to the FAO,⁹ the global market for premium chocolate (including aromatic, single origin, organic, Fairtrade and chocolate of high cocoa content) has grown significantly in recent years and will continue even in periods of economic downturn. This is because consumers seek affordable luxuries during hard times. It is expected that the global premium chocolate market will grow from USD 7 billion in 2007 to USD 12.9 billion (USD 3.6 billion only in the USA) in 2011, driven by growing consumer awareness and manufacturer interest in premium quality chocolate (Laroche et al, forthcoming).

The main cocoa bean consumer countries are the United States, Germany, France, Britain, Japan, Italy and Brazil. One of the areas showing a major expansion of the chocolate industry is the Asia – Pacific region, where chocolate consumption is becoming more popular and is growing on average by 4 per cent per year (Laroche, et al, forthcoming).

The processing industry continues to be dependent on the supply from Africa, which in 2007-2008 accounted for 69.3 per cent and now accounts for 70.8 per cent of world production, with Ivory Coast and Ghana as current leading suppliers of bulk cocoa. Any political or social unrest in the region – as recently experienced in Ivory Coast - leaves consumers, industry and other actors of the cocoa chain susceptible to adverse changes in raw material prices. Political uncertainty also slows investment in the cocoa sector in African countries, preventing an expansion in the supply needed to meet growing demand (Laroche, et al, forthcoming).

There is significant uncertainty with regard to cocoa price levels: speculation will continue to determine the trends in the international cocoa market in terms of prices and a high degree of volatility is expected in the short and medium term, given the strong presence of investment funds (Laroche et al, forthcoming).

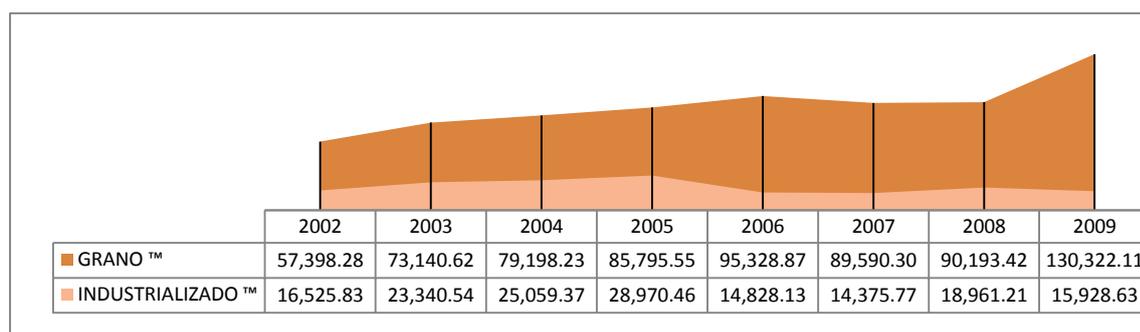
3.2 Ecuadorian cocoa

Cocoa exports from Ecuador have increased. Figure three shows all types of production of cocoa for export from Ecuador. Cocoa exports grew from 57,000 mt in 2002 to 130,000 mt in 2009, an increase of 127%. However, the amount of processed cocoa dropped from 16,500 tons in 2002 to 15,900 tons in 2010 (Figure 7).

⁸ Annual Report 2008 – 2009, ICCO

⁹ The market for organic and fair-trade cocoa, FAO, Sept 2009.

Figure 7: Cocoa exports (Metric Tonnes) as beans and processed product between 2002 - 2009



Source: ANECACAO

Ecuador is the largest producer of “fine or aromatic” cocoa in the world, contributing 59% of total global production of this type of cocoa. Fine, aromatic cocoa (termed “fine or flavor” cocoa by the ICCO) is used for making high quality chocolate products, and has a floral scent which affects the final product. On a global level, this kind of cocoa represents only 5% (120,000 tonnes) of total world production and is often used blended with conventional cocoa. Aromatic cocoa is prized for its quality, attracting a superior price. The market for high quality chocolate is growing because of rising living standards in the countries of consumption.

Currently, 75% of total exports from Ecuador are of aromatic cocoa (ICCO, 2008). The reduction from 100% to 75% was the decision of the Council of ICCO (the International Cocoa Organisation) in 1993 which authorised mixing of the traditional variety *Nacional* with the new variety CCN51.

3.3 Cocoa value chains and actors

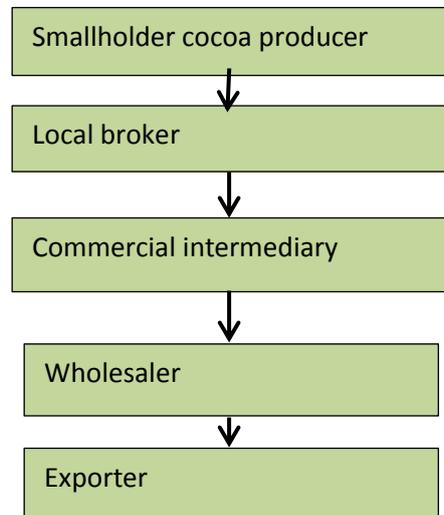
The Ecuadorian cocoa market is defined by informality, where the producers experience costs due to the poor performance of the market. Farmers are normally obliged to sell to intermediaries that may take advantage, charging taxes, and fees, and sometimes collaborating to fix prices at a lower rate. In Ecuador, cocoa marketing is characterised by a relatively long value chain, (see Figure 8), where the smallholder producer trades most of his/her production through intermediaries, who channel the production towards the export market, the enterprises that semi-process products (cocoa powder, cocoa butter, cocoa liquor, and cocoa cake) or to the chocolate factory. Individual producers lose control over the produce once it is delivered to the nearest intermediary, whereas organized producers have other commercialization channels. For producers, the most important challenge is achieving a larger share of the market.

The following actors can be identified in the cocoa value chain (Ramírez, 2006):

- *Individual producers:* They are about 90,000 farmers (90% of total producers), who are mostly smallholder producers and who sell their product to the intermediary from the nearest town.
- *Producer associations:* farmer organisations which are part of the production, storage and marketing of cocoa, and direct the production towards the intermediary, industry or directly to exporters. There are very few organizations of this kind in the country.
- *Intermediaries:* Their number has been estimated as over a thousand. Several kinds can be distinguished according to volume of cocoa they buy and the place of storage. The industry of semi-processed products transforms the bean into an intermediate product such as butter, cocoa mass or liquor and directs its output to international markets.
- *Manufacturers:* A business producing final products such as chocolate, direct to the international or domestic market.

- *Exporters of cocoa beans*: they are the main collectors who direct their produce to the international market, meeting the quality standards of the importer.

Figure 8: Conventional value chain in Ecuador



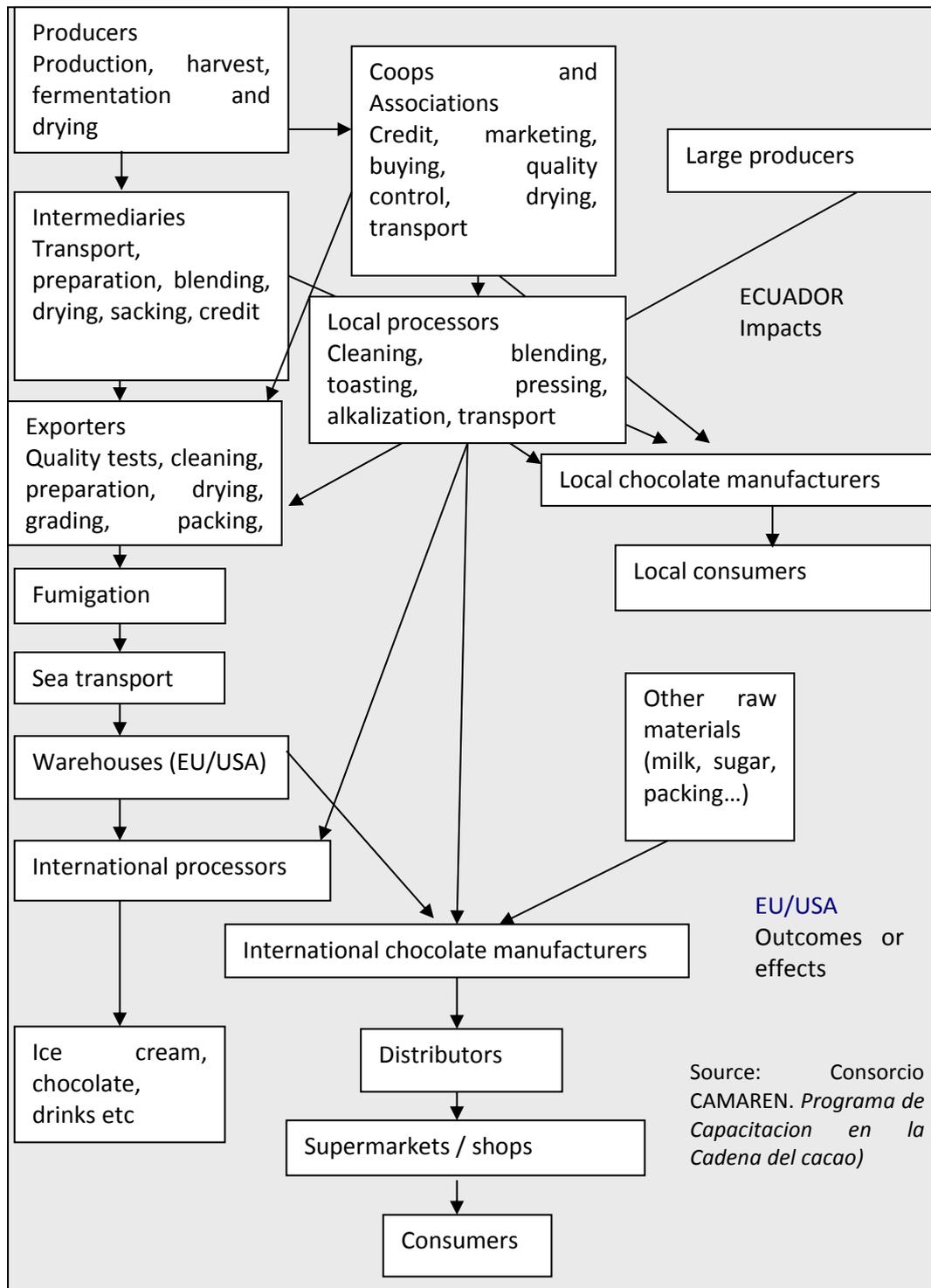
Source: Sanz, 2003

Due to their low volumes and resources, small farmers sell their beans to a local broker. This broker usually owns a business where the transaction occurs. Depending on their relative distances from large towns, the farmer may be able to sell either to a broker or a larger scale buyer. The intermediary dealer transports the production and acts as a link between rural and urban areas. The larger scale buyers collect and store wholesale production in order to sell it to an exporter. The wholesaler provides financing to intermediaries with whom they have formed bonds of trust to ensure continuity of supply.

In complex value chains, with many operators and links, the profit margin of each intermediary is reduced and the price difference between the producer and the consumer of the product increases, creating a scenario in which both the producer and the consumer can lose. In some remote areas of Ecuador where there may just be one buyer, the buyer has a monopsony (Nelson, Tallontire and Collinson, 2002¹⁰). The lack of organization and integration in the cocoa supply chain may exclude small farmers from market participation. Requirements (quantity, quality) demanded by wholesale buyers (private retailers) can be a barrier for small producers, who supply directly to large distributors. Figure 9 shows a generalized country-wide value chain for cocoa in Ecuador and its exports to the USA and the EU.

¹⁰ Nelson V, Tallontire A and Collinson C. 2002. Assessing the benefits of ethical trade schemes for forest dependent people: comparative experience from Peru and Ecuador. *International Forestry* Vol 4, No 2 pp 99-109.

Figure 9: Cocoa Value Chain, Ecuador



The lack of organization is also reflected when a buyer needs raw materials. Cocoa is a 'commodity' (an unprocessed basic product) for which large buyers look for large producers in order to reduce their transaction costs. Lack of organization and integration in the marketing chain also means higher transaction costs for farmers, making them vulnerable when they sell their product to intermediaries. Additionally, it limits their access to information and their possibilities of finding new market niches. All these issues translate into a downward pressure on returns for smallholder cocoa farmers.

It is estimated that 10% of production is traded through an intermediary trucker, 22% is purchased by the merchant from the nearest town, 54% is bought by intermediary in the main District (canton) town head, and 14% is acquired directly by the exporter (Ramírez, P., 2006). The largest buyer of Ecuadorian cocoa in 2009 was Blommer Chocolate (a US company), with 24% of the *nacional* dry cocoa bean production, followed by ADM cocoa with 10%. In 2002, the Transmar Commodity Group was the main buyer with 17% and Blommer bought just 12% of production (see table 9).

Table 9 Buyers of dry cocoa beans from Ecuador (2002-2009)

	2002	2002		2009	2009
Buyer	Total (MT)	% of production	Buyer	Total (MT)	% of production
Transmar Commodity Group	9 999.14	17%	Blommer Chocolate	31 169.51	24%
Blommer Chocolate	7 068.57	12%	ADM Cocoa	13 359.99	10%
Walter Matter S. A.	5 290.99	9%	General Cocoa Company	11 046.28	8%
Mitsubishi Corporation	4 691.45	8%	Walter Matter S. A.	10 404.99	8%
Cía. Nacional de Chocolates S. A.	3 829.91	7%	Transmar Commodity Group	9 160.03	7%
Atlantic Cocoa	3 821.91	7%	Albrecht & Dill	8 591.88	7%
E. D. F. Man Cocoa	3 255.90	6%	Agroindustrias Unidas de Cacao S.A. de CV	8 056.23	6%
Finagra	2 961.96	5%	Barry Callebaut	4 629.14	4%
Daarnhouwer	2 070.62	4%	Armajaro Trading Limited	4 352.59	3%
Others (30+)	14 407.83	25%	Others	29 551.47	23%
Total dry cocoa beans	57 398.28	100%	Total dry cocoa beans	130 322.11	100%

Source: ANECACAO

The US was the main importing country for Ecuadorian cocoa in 2002 and 2009 with 34% and 48% respectively of the market. Germany was the second largest importer in 2002, but in 2009 the Netherlands moved into second place (see table 10).

Table 10: Dry cocoa bean imports from Ecuador by country (2002-2009)

		2002			2009	2009
Nº	Importing Country	Total (t)	%	Importing Country	Total (t)	%
1	USA	19 379.75	34%	USA	61 937.29	47.53%
2	Germany	9 089.07	16%	Netherlands	22 821.91	17.51%
3	Netherlands	7 213.88	13%	Germany	15 441.81	11.85%
4	Colombia	5 776.40	10%	Mexico	9 256.90	7.10%
5	Japan	5 011.88	9%	Belgium	6 292.68	4.83%
6	Italy	3 525.24	6%	Italy	4 692.87	3.60%
	Canada	2 313.92	4%	Colombia	4 127.03	3.17%
	France	2 118.51	4%	Japan	3 003.02	2.30%
	Belgium	2 019.56	4%	Spain	1 095.31	0.84%

	Others (4+)	950.06	2%	Others (13+)	1 653.31	1.27%
	Total dry cocoa seed	57 398.28	100%		130 322.11	100.00%

Source: ANECACAO

3.4 Ecuadorian cocoa economy

Cocoa production in Ecuador has seen booms and busts. During the decade starting in 1890, Ecuador was the world's largest cocoa exporter, selling mainly to the UK market and the Ecuadorian economy began to grow. The first banks in the country were formed thanks to the cocoa industry (ANECACAO 2012). However, economic growth based on cocoa was affected by an international crisis in 1873 (Acosta, 2006) and by the emergence of other important primary export crops, such as tagua (a nut bearing tree, *Phytelphas aequatorialis*), coffee, leather and rubber. The demand for tropical products grew with European and later North American purchasing power increases, and because of the cheap labour and favourable climates of parts of Ecuador for cocoa production. Cocoa cultivation was so profitable that it became known as the 'Pepa del Oro' or the 'gold seed/pip' (Nelson and Galvez, 2002).

Cocoa prices began to decline during the First World War, and new exporters emerged after the war leading to an excess in supply and further reducing prices. In the 1920s the emergence of diseases such as *monilla* (Moniliophthora pod rot, caused by *Moniliophthora roreri*) and witches' broom or '*escoba de bruja*' (caused by the fungus *Crinipellis pernicioso*) led to a reduction in production of 30% (Nelson and Galvez, 2002). In addition, the lack of transport and international markets as a result of WWI, resulted in cocoa and the Ecuadorian economy entering into a period of depression and instability (ANECACAO 2012). Cocoa as a percentage of total exports declined from 77% in 1914 to 40% in 1918. It later increased to 71% in 1920; cocoa sales then fell again to 29% in 1930 marking the end of the cocoa boom (Acosta, 2006).

Ecuador is currently the world leader in fine, aromatic cocoa producing 62% of the world's total (according to the Agriculture Subsecretarym Ecuador). Production is largely fine aromatic cocoa from the *Nacional* variety, grown in a highly biodiverse agroforestry system (known locally as *chacra*). CCN51 cocoa is also grown, and this higher yielding and more disease resistant, but is often grown in monoculture systems. There is significant land inequality in Ecuador in terms of access to land and land quality, with a small number of landowners also having greater access to irrigation.

3.5 Cocoa livelihoods and patterns of poverty

Patterns of poverty across the country are marked, with significantly more poverty in rural areas compared to urban ones. In 2011, poverty at the national level was estimated in national surveys to be 29%, but there was a rural-urban divide, with 51% poverty in rural areas compared to only 17% in urban areas. In rural areas, agriculture accounts for almost 70% of all economic activities (2009), with commerce being the second most important rural activity (7.12%).

Approximately 28% of the national employment is in the agriculture sector, where a large part of the country's poverty exists. **Cocoa is an important livelihood activity for many rural households:** in the Ecuadorian Cocoa Sector, 100,000 families are involved in cocoa cultivation according to the 2000 census, 90% of whom live in the coastal region.

The majority of cocoa is grown on medium sized farms of 11 - 50 ha, the larger ones using hired labour, but also on smaller farms of around 2 ha in the mountains and 10 hectares along the coast. The cocoa area covers 173,862.90 ha or 45% of the country's total farm area of 386,362 ha.

However, the majority of agricultural productive units (55,500) in the country are of less than 10 ha in size (MAGAP/FAO, 2010).

A significant number of producers use mixed cropping systems reflecting traditional agricultural practices. 4,328 combinations were identified of which 25 were most commonly found.

There have been changes in the areas planted to cocoa in Ecuador. The area planted to cocoa fell in the first half of the 2000s and then increased in the second half of the decade, as a result of the elimination of older plantations followed by the use of more productive and better quality genetic material (INEC, 2010). The area planted with cocoa in Ecuador decreased from 434,419 ha to 366,927 ha between 2000 and 2004. The area planted then increased to 491,221 ha by 2010.

Table 11: Cocoa area planted, dry bean production and yield (2000-2010)

Year	Area planted (ha)	Dry bean production (MT)	Yield (MT/ha)
2000	434 419	107 911	0.27
2001	415 327	101 693	0.26
2002	383 711	91 632	0.25
2003	374 045	122 451	0.35
2004	366 927	131 164	0.39
2005	406 866	144 143	0.40
2006	407 868	139 498	0.40
2007	422 985	131 419	0.37
2008	455 414	143 945	0.38
2009	468 840	189 755	0.48
2010 ¹¹	491 221	212 249	0.51

Sources: MAGAP / III CNA / SIGAGRO; INEC / ESPAC **Compiled by:** MAGAP/SIGAGRO/Sectoral Analysis

Land tenure structure and land distribution has not changed significantly in the last 50 years and significant inequalities persist. Census data from 2000 indicated that 75% of the units of agricultural production between <1 ha to 10 ha account for 11.8% of the total land area, while 0.8% are properties over 200 ha, representing 29.1% of the total land area. Many of the large properties were subdivided in order to avoid agrarian reform policies (Brassel, Herrera and Laforge 2008). The Gini Index of Land Concentration has not varied significantly with consistent scores of 0.86, 0.84 and 0.80 in 1954, 1974 and 2000, respectively (Brassel, Herrera and Laforge 2008). Census data from 2000 is inconclusive about land quality. Nonetheless, it can safely be assumed that the best lands are in the hands of large landowners while smallholders own land of inferior quality.

Inequalities in access to irrigation are also marked: smallholders have 25.59% of the irrigated land, the large landowners whose agricultural production units are 50 ha or more have 51% of the irrigated land. Large state investments in irrigation favour large and medium size landowners and only help the smallholders indirectly (Third Agriculture Census, 2002).

In rural areas, agriculture is a key source of livelihood security: Agriculture accounts for 69.18% of all economic activities (December, 2009) with commerce the second most important rural activity (7.12%), (Central Bank of Ecuador). Self-employment accounted for 10% of all jobs, while private salaried jobs accounted for 68% of all jobs (INEC, 2008) in the rural areas.

¹¹ Data from 2010 is provisional and was calculated as an average of the percentage variations from the previous three years.

According to a well-recognized typology of farming in Ecuador, (SIPAE, 2007) there are five types of agricultural enterprises/units: i) agro-business holdings; ii) extensive agriculture on large properties; iii) medium-size agriculture with contracted labour on 20-50 hectares of land; iv) small-scale family agriculture (between 2 ha in upland areas and 10 ha at the coast, with diverse cropping and animal production systems, and sometimes external incomes sources and remittances; v) subsistence agriculture (less than 1 ha in the mountains and less than 5 ha in coastal areas), with low yields and agricultural income. Cocoa producers generally belong to Type 3 or Type 4 categories based on these definitions and the fact that they often use family labour.

Figure 10: Typology of farming in Ecuador

<p>Type 1: Agro-business holdings. These are mostly dedicated to export and use a strategy of high capital investment per hectare for technology. They usually obtain high yields and high return on investment through a concentration of land and water resources. Examples include the large floriculture, poultry and pork companies for selected national and international markets and the mango, pineapple and papaya plantations for export.</p>
<p>Type 2: Extensive agriculture on large properties. These also concentrate land and water resources, but they have a low capital investment per hectare in technology and subsequently a differentiated profit margin. Examples include banana, African oil palm, sugar and forestry plantations. More and more demographic groups within the farming population are becoming labourers for these companies, especially youth and women who taken on specific tasks. Both groups suffer from recurrent forms of labour exploitation, outsourcing and child labour. These are scenarios often associated with intense environmental destruction with grave impacts for the labourers and adjoining communities.</p>
<p>Type 3: Medium size agriculture with contracted labour on 20 - 50 hectares of land. Production is oriented towards national markets and a few traditional exports such as banana and cocoa. Investments fluctuate in technology, inputs and labour (both family and contracted).</p>
<p>Type 4: Small-scale family agriculture. Land area varies between 2 ha in the mountains to around 10 ha in the coast. Diverse cropping and animal production systems are used which allow a certain level of subsistence. However, external income from other sources or remittances is becoming more common.</p>
<p>Type 5: Subsistence agriculture. This is practiced on UPA under 1 ha in the mountains and less than 5 ha in the coastal areas. Yields are very low and agriculture income is only complimentary to other income sources.</p>

Cocoa producers generally belong to Type 3 or Type 4 categories based on these definitions and the fact that they often use family labour.

3.6 Ecuadorian cocoa production and varieties

Ecuador is well known for the cultivation and export of a rare type of cocoa known as ‘Nacional’, which provides fine, or aromatic cocoa.

Box 4: Ecuadorian Cocoa

In Ecuador there is a rare type of cocoa known around the world by the name “*Nacional*.” It has a short fermentation period and produces a very smooth, good tasting chocolate with an excellent aroma. Internationally it is classified as “fine aroma” cocoa. For two centuries, *Nacional* cocoa was grown in the upper watersheds of the Daule and Babahoyo Rivers, which lead into the Guayas River where the main shipping port of the country, Guayaquil, is located. Today, cocoa continues to be shipped from this city to the rest of the world. Since the beginning of its export, Ecuadorian cocoa earned a strong reputation and now has a denomination of origin as *cacao arriba* (IICA / FAO 2007).

Genetic diversity in Ecuador is high. There are currently 3 different sorts of cocoa: Creole, Amazonian, and Trinitario.

Box 5: Cocoa varieties in Ecuador

Creole cocoa developed in the north of Ecuador, Colombia, Venezuela and Central America and in the Mexican rainforest. This kind of cocoa is prone to diseases, but the seed quality is excellent, and it produces high quality chocolate.

Amazonian cocoa developed in both the upper and lower basins of Amazonia. It was found in the wilderness areas of Ecuador, Colombia, Peru, Venezuela and Brazil, whence it was taken to Africa, SW Asia, and Oceania. This kind of cocoa is the most common, representing 80% of the global cultivated area of cocoa. This cocoa is considered “ordinary”, because of the chocolate it produces with a basic cocoa flavour.

Trinitario cocoa developed spontaneously from the crossing of the creole and Amazonian varieties in the island of Trinidad, spreading afterwards through Venezuela, Colombia and the rest of the world. This kind of cocoa developed a clone called Castro Naranja Collection 51 (CCN-51) and is considered “ordinary” cacao.

The Ecuadorian variety “**Nacional**” developed specifically in Ecuador. Botanically, it is considered as an Amazonian cocoa, but differs from it in quality. Its aroma and flavour are unique in the species and so it is used for the elaboration of the world's best chocolate.

While some cocoa plantations in Ecuador were planted with empirically selected materials, many used unselected materials resulting in plantations prone to diseases, and of low productivity. Currently, the National Institute for Agricultural Research in Ecuador (INIAP) has developed certified cocoa Nacional-type hybrids, which can reach a productivity higher than 20qq/ha/year. These clones are described in the Table below.

Table 12 : Characteristics of Nacional cocoa clones, recommended by INIAP

Characteristic	EE T-19	EE T-48	EE T-62	EE T-95	EE T-96	EE T-103
Seed index*	1,7	1,7	1,6	1,3	1,3	1,5
Pod index**	18	17	20	20	20	20
Self-compatibility	yes	no	yes	no	yes	yes

Yield: qq/ha/year	33,6	20,8	22,9	30,2	25,3	29,4
Crinipellis perniciosa	Suscep.	Suscep.	Suscep.	Resist.	Resist.	Resist.
Moniliophthora roreri	Resists	Resists	Resists	Resists	Resists	Resists
% of fat	42,5	46,4	51	50	47,2	46,1

*Seed index: average weight of a fermented and dry almond.

**Pod index: quantity of pod needed for getting a dry cacao kg.

EET: Experimental Tropical Station, in Pichilingue.

INIAP recommends clones reproduced by grafting. It is recommended that at least 3 different clones are sown to avoid disease attacks.

For many years, the *Nacional* cocoa, known in the country since at least the Spanish conquest, was considered an Amazonian type because of its pod form. However, based on morphological and DNA studies as well as taste tests, many authors now believe it should be classified in its own genetic group (IICA / FAO 2007).

In Ecuador, during the last decades a clone called CCN51 has been propagated and used. It is classified as belonging to the Trinity group (MAGAP 2011). Today, most of the cocoa planted in Ecuador is the *Nacional* x Amazonia type and to a lesser extent the *Nacional* x Trinity type. The amount of land dedicated to growing the pure *Nacional* cocoa type has decreased substantially: only 25,000 - 30,000 ha or 5% of the total cocoa area contains the *Nacional* type and those plantations are old and less productive. Their owners prefer to plant other, more remunerative crops (IICA / FAO 2007).

Following the decline in production and exports due to frosty pod rot and witches' broom diseases, orchards were renovated in the 1940s with seeds harvested from *Nacional* trees, which showed resistance and crosses between this and the Forest, Trinity and Creole types. Genotypes were also selected from the upper and lower Amazon as well as Orinoco River basins. This gave origin to the *Nacional* Complex Cocoa, which retains the floral flavour of the *Nacional* type but grows like the Trinity type¹².

There are a number of tasks undertaken in cocoa cultivation and processing, including pruning, disease management, rehabilitation of cocoa plantations, post-harvest handling, fermentation and drying. **Pruning** is undertaken to create low plantations (3.5m), which makes harvesting easier and enables air circulation, phytosanitary control, leaf re-growth, light exposure and healthy fruits. It should be carried out in the dry season when there is no production. There are four kinds of pruning: formation, maintenance, phytosanitary and rehabilitation. There are endemic diseases which can seriously reduce production. Witches broom infects the growing points of the plant and reduces photosynthetic capacity and production. *Moniliophthora roreri* is the most dangerous of all the diseases, as it affects the fruits in all the stages of their development, reducing the production and the bean quality. Zones of high relative humidity (80%) are the most affected by these diseases. There are other diseases and plagues such as the "mal del machete" (*Ceratocytis fimbriata*) that can

¹² 1) *Nacional* x Orinoco or Venezuelan; 2) *Nacional* x upper Amazon; 3) *Nacional* x lower Amazon 4) *Nacional* x Orinoco 5) *Nacional* x Creoles of different origins. Cocoa originating as Pure *Nacional* and *Nacional* Complex are recognized in International markets as Fine Aroma (IICA / FAO 2007).

kill the tree. **Disease management** is based on Phytosanitary pruning to eliminate affected fruits and any other affected part of the plant. These agricultural practices are recommended at the beginning of the dry season, when the plant is not producing leaves or branches. However, agrochemical control is expensive, because of the costs of inputs and labour (as well as affecting organic certification status).

Rehabilitation of cocoa plantations is sometimes necessary. After assessment of tree damage, the correct form of pruning is selected. General pruning removes undergrowth, damaged or diseased boughs, and epiphytes and can control the percentage of shade, increasing air circulation and exposure to light. Crown reduction is recommended for trees that are considered too tall. Leaf renovation consists of cutting of the trunk in order to stimulate the shooting of a new sucker that will take the place of the original tree. New production can start at 18 months.

Once the pods are picked and husked, the beans are extracted, separating them from the mucilage to start two important phases which guarantee the product's quality – namely fermentation and drying.

Fermentation involves the piling up of cocoa so the yeasts in the mucilage turn the sugars into ethylic alcohol, and subsequently into acetic acid. This causes the death of the embryo and chemical reactions that change the inner colouration of the bean. In the case of Nacional cocoa, the recommendation is for four days of fermentation, while for CNN-51 it is six days. Both involve a mixing within the fermentation box every 48 hours. After the fermentation CCN-51 tends to have an acidic taste. A well fermented bean has a pleasant smell, a lightly bitter taste, and an inner dark-brown colour. Cocoa fermentation occurs inside wooden boxes in Ecuador.

Drying reduces the bean's humidity percentage to 7%. Natural drying is the best, as it allows the continuity of the chemical reactions that began during fermentation. In contrast, artificial drying interrupts those reactions, producing an acid cocoa. Natural drying can take 4 to 7 days, depending upon the intensity of sunlight. Artificial drying takes only 8 to 12 hours. In Ecuador, cocoa is dried on a plain surface called a "*tendal*", which can be built on wood or concrete. During the winter, an awning can be used, made of wood with a plastic roof. The combined yield of fresh cocoa and dry cocoa varies according to the physiological maturity of the pod. On average, 100 kg of fresh cocoa from mature pods produces 40 kg of dry cocoa

3.7 Sustainability standards

In 2012 there were 10 Fairtrade (FLO) certified producer organisations in Ecuadorian cocoa, and 3 World Fair Trade Organisation (WFTO) certified cocoa organisations, plus 1 Ecocert certified cocoa organisation and three RA certified and 7 RA verified cocoa organisations. There were also two Utz certified cocoa organisations and various organic standards – with BCS (BCS ÖKO-GARANTIE GMBH) being the most common.

3.7.1 Fair trade

Different approaches to 'fair trade' are found in Ecuadorian cocoa. By 1997, the majority of the diverse European certification schemes were brought together as "*International Fairtrade Labelling Organisation-FLO*" – known as Fairtrade. FLO certifies products not companies. In 1989 the International Federation for Alternative Trade (IFAT) was founded and is now called World Fair Trade Organization (WFTO). In 2004, WFTO started its own certification scheme for businesses (not products) called FTO Fair Trade Organization (FTO). A European division was started in 2007. An informal network called FINE was set up in 1998 (comprising FLO, IFAT, NEWS – the Network of European World Shops, and EFTA – the European FairTrade Association).

Box 6: Cocoa varieties in Ecuador

Fair trade is a “commercial association, which seeks more equality in International commerce. It contributes to sustainable development by offering better commercial conditions and assures the rights of farmers and marginalized workers especially in the South. Fair trade organizations, supported by consumers are actively involved in helping farmers, raise awareness and develop campaigns to ensure changes in the rules and practices of conventional international commerce”, according to the fair trade body (FINE).

FLO Fairtrade separated its certification activities from its other functions – creating FLO-Cert for certification and FLO e.v. which sets the standards and provides producer support. There are generic standards for smallholder producers and specific product standards including for cocoa, as well as standards for traders (see Figure 2 – hypothetical theory of change for Fairtrade smallholder cocoa producers). An initial fee is charged (currently €525 in 2012) and an initial audit is conducted paid for by the producer organisation – the amount depends on the size of the organisation. Further audits are conducted every three years.

Box 7: Summary of main FLO Fairtrade standards

Producer standards: Producer organisations have to be democratic and transparent, have the welfare of members in mind, be non-discriminatory in terms of membership, and spend the Fairtrade Premium in ways that are decided by and benefits the membership.

Environmental standards: Producer organisations are tasked with ensuring that producer members adhere to standards on reducing agrochemical use (with zero use of prohibited chemicals), reduction/composting of waste, maintaining soil health, reducing water use and contamination, prevention of fires and avoidance of Genetically Modified Organisms.

Trader standards: Traders that buy directly from the Fairtrade producer organizations must pay a minimum price, pay an additional Premium that producers can invest in development, provide pre-financing to producers, and offer long-term contracts.

Labour standards: All Fairtrade producers must: develop an employment policy, and ensure there is no discrimination, physical/verbal abuse, sexual harassment, forced labour or child labour. Producers who employ a significant number of workers – and those who adopt the Hired Labour standard - must also meet standards on right to organise, wages and benefits, regular employment, working hours and Occupational Health and Safety.

In Ecuador, 37 organisations have achieved FLO certification for 11 agricultural products, including bananas, sugarcane, cocoa, coffee, flowers and plants, fresh juice, herbs and spices, nuts, pulp and quinoa. Of these, 27 are producer (farmer) organizations and 10 are traders or exporters. Ten organizations are certified for cocoa; four are traders and six are producer organisations.

Table 13: FLO certified organisations in Ecuadorian cocoa (2012)

Organisation	Type
UROCAL	Trader
Chocoexport CIA. LTDA	Trader
COFINA S.A.	Trader
Fundación MCCH Maquita Cusunchi	Trader

Hojaverde CIA Ltda / Hoja Verde Gourmet S.C.C.	Trader
Transmar Commodity Group of Ecuador S.A.	Trader
Asociación Productores Agroartesanales Orgánicos y Limpios	Producer
Corporación de Organizaciones Campesinas de la Provincia de Esmeraldas	Producer
Corporación FTO/FM	Producer
Unión de Organizaciones Campesinas Independientes de la Provincia de Esmeraldas	Producer

Source: FLO-CERT

As well as FLO certified Fairtrade, there are other approaches to fair trade which are active in Ecuador. Of relevance to this study is the **World Fair Trade Organisation (WFTO)** which has members in Africa, Asia, Latin America and the Pacific. It is currently the global representative body of over 350 organisations committed to 100% Fair Trade. It operates in 70 countries across 5 regions with elected global and regional boards, to create market access through policy, advocacy, campaigning, marketing and monitoring¹³. It has a representative body in North America called the Fair Trade Federation. WFTO does not certify products, but certifies the organisation and whether it uses fair trade standards. A WFTO certified organisation must respect the following principles:

Box 8: WFTO principles

The ten **WFTO principles** are i) Creating opportunities for economically disadvantaged producers; ii) Transparency and accountability; iii) Fair Trading Practices; iv) Payment of a fair price; v) Ensuring no child or forced labour; vi) Commitment to Non-discrimination, gender equity, and freedom of association; vii) Ensuring good working conditions; viii) Providing capacity building; ix) Promoting fair trade; x) Respect for the Environment.

There are some differences with the FLO Fairtrade approach. As an example, 'fair prices' are not set centrally, but should be 'mutually agreed by all through dialogue and participation, which provides fair pay to the producers and can also be sustained by the market' (WFTO website).¹⁴ Environmental criteria are not defined as specifically as they are in FLO or Ecocert standards. WFTO members produce an annual self-declaration of activities against the WFTO standards and the commercial members then evaluate the declaration to ensure the accuracy of the reports. Between 5-10% of members are also evaluated by a third party each year. WFTO is not accredited by ISO 65, unlike FLO. In Ecuador there are eight WFTO certified organisations, of which seven fall into their 'fair trade' category and one is a 'fair trade network'. Out of the seven certified organisations, three deal with cocoa (Camari, Corporación Grupo Salinas, and Maquita Cushunchic or MCCH) (WFTO).

There are other approaches to fair trade in the Ecuador cocoa sector as well, namely; i) Ecocert (Fairness, Solidarity and Responsibility) standard and certification; ii) Fair for Life; and iii) the **Símbolo Pequeños Productores** or Symbol of Small Producers (SPP) (see box 9).

¹³ http://www.wfto.com/index.php?option=com_content&task=view&id=890&Itemid=292

¹⁴ http://www.wfto.com/?option=com_content&task=view&id=2&Itemid=14

Box 9: Symbol of Small Producers

The 'Symbol of Small Producers' (SPP) was established by the Latin American and Caribbean Coordinator for Smallholder Fair Trade (CLAC) to benefit small producers, communities and consumers. To guarantee the correct use of their symbol, the network created the Fundación de Pequeños Productores Organizados or FUNDEPPO, which works with organisations and professionals to certify independently and confidentially the compliance of *producer organisations* with the require standards. The SPP uses FLO criteria as a starting point, but minimum prices are set by FUNDEPPO and small producers themselves and producer organisations can only have smallholder members (defined as having a maximum of 15 ha in production). SPP certifies not only small producer organisations, but also trade collectives, buyers, intermediaries and manufacturers. Total financial and administrative transparency is required. Buyers must sign a code of conduct, including a declaration of values and must agree to buy from the farmer organisation at least 5% of its total in the first year, rising annually by 5% until it reaches at least 25%. The cost of certification is much lower than it is for FLO. In Ecuador there are three small producer organisations registered to use this label, and only one of these is certified – the Federación Regional de Asociaciones de Pequeños Cafetaleros Ecológicos de la Región del Sur de Ecuador (FAPECAFES). The other two are in the registration and pre-registration phases. However, none of these are certified for cocoa.

3.7.2 Rainforest Alliance

Rainforest Alliance (RA) is an International NGO founded in 1987 and based in New York City, USA. Its mission is to “conserve biodiversity and achieve sustainable livelihoods through the transformation of land use practices, Business practices and consumer behaviour.” Its first certification scheme called SmartWood was for forests. In 1991 it began working with the Sustainable Agriculture Network, SAN. In 1994 they certified their first banana plantation. SAN began in Latin America and is a coalition of independent, non-profit conservation organisations promoting socially and environmentally sustainable agricultural practices through the development of best management practices (BMP). It aims to link responsible producers to ethical consumers. Rainforest Alliance and the subcontractors who conduct audits are members of SAN.

Sustainable Farm Certification International (SFC) is a subsidiary of RA and is sanctioned by SAN. It follows SAN certification standards and it is solely responsible for deciding whether a group has achieved certification or not and can use the RA label. A farm or group is certified, with an initial certification audit which determines conformity, annual audits in years 1 and 2 which verify and monitor the on-going fulfilment of the standards, and serve to identify any required corrective actions. This is followed by a second certification audit in the third year. Verification (of documents and plans) and research audits (unannounced visits to investigate specific complaints or issues) are also sometimes conducted. SFC is responsible for delivering the certificates and legal documents.

Farm certification general compliance requires auditors to use the following scoring system¹⁵. Farm performance is scored based on all applicable criteria of the Sustainable Agriculture Network Standard (see Figure 3: hypothetical theory of change for smallholder cocoa production Rainforest Alliance). During the certification process, the following 10 criteria are applied that are within the SAN principles: Environmental management system; Social management system; Conservation of ecosystems; Protection of wildlife; Conservation of water; Working conditions; Occupational health; Community relations; Integrated crop management; Soil conservation.

¹⁵ <http://sustainablefarmcert.com/certification-process-3/>

In order to achieve certification, a farm or Group must pay a fee. 80% of the criteria must be met and 15% of the criteria within each of the 10 principles. There are an additional 15 criteria that must be fulfilled 100%. Non-conformities to any criteria can include major non-conformity and minor non-conformity.

When a group seeks certification, the Group Administrator must achieve compliance with all critical criteria of the SAN standard, and at least 50% of the criteria of each principle, and at least 80% of all criteria of the standard at first certification audit (year 1), 85% by year 2, and 90% by year 3. Member farmers must also comply against the scoring system – a representative sample is selected for auditing. There are additional requirements for groups of more than 17 members.

The RA principles include environmental, social and labour aspects. In contrast to the FLO standards, no organizational or democratic criteria are included. There is no trader standards (as found in the FLO Fairtrade system) covering minimum product price, social premium or emphasis on longer-term trading relationships. The Rainforest Alliance logo is a green frog. Products can be certified RA with 30% of certified ingredients. Rainforest Alliance has strong links to some international companies, including Chiquita, KraftFoods, Nestle and McDonalds. The RA label opens up market access in different European countries, but mostly in the United States.

In Ecuador, RA has been working with a partner organisation, Conservación y Desarrollo (C&D) (an Ecuadorian NGO that promotes integrated development through responsible environmental and social practices) to restore the cocoa tradition, since 1997. German International Cooperation, GIZ (formerly GTZ), and other donors (who partially funded the certification process) have supported this work in alliance with Kraft Foods. RA has supported the planting of varieties of native species in shaded agroforestry systems in cocoa rather than monoculture production using agrochemicals. RA states that they have worked *“with over 3000 cocoa farmers from six communities. This has strengthened their organizations, improved their agriculture practices and fermentation and drying technology. They have sold certified cocoa with the Rainforest Alliance label at a better price. This has stimulated a revival of traditional practices. This has helped to increase production and lower costs.”* There are 74 entities with RA certification or verification in Ecuador, with ten certified in relation to cocoa production.

Table 14: RA certified export and producer organisations (2012)

Organization	Category
Asociación de Productores Agropecuarios Autónomos Eloy Alfaro	Rainforest Alliance Certified
Fundación MCCH (Maquita Cushunchic Comercializando como Hermanos)	Rainforest Alliance Certified and Verified
Asociación de Productores Orgánicos de Vinces (APOVINCES)	Rainforest Alliance Certified
ARMAJARO ECUADOR S.A.	Rainforest Alliance Verified
Chocolates Finos Nacionales Cofina S.A. (COFINA)	Rainforest Alliance Verified
CHOCOEXPORT	Rainforest Alliance Verified
CORPORACIÓN GRUPO SALINAS	Rainforest Alliance Verified
Exportadora Pedro Martinetti	Rainforest Alliance Verified
LA NUEVA CASA DEL CACAO SA. (CASACAO)	Rainforest Alliance Verified
Transmar Commodity Group of Ecuador S.A.	Rainforest Alliance Verified

Source: RFA

3.7.3 UTZ CERTIFIED Good Inside

UTZ was established in the 1990s, with a label launched in 2002 in the Netherlands called 'UTZ KAPEH' or 'good coffee' in Mayan. The label guarantees the transparency and traceability of socially and environmentally responsible produced coffee. In 2007, the name was changed to "UTZ CERTIFIED Good Inside". Tea and cocoa and oil palm standards have been developed in recent years. The UTZ CERTIFIED Foundation is the owner of the label. The standard covers mainly social and environmental issues including labour standards as set out by the International Labour Organisation (ILO) and Eurepgap (a standard for good agriculture practices for fruit and vegetables - <http://www2.globalgap.org/about.html> and part of Globalgap).

The certification aims to ensure good agriculture practices and working conditions, but it does not have the trader standards of Fairtrade. The principal differences to FLO certification are that UTZ tolerates genetically modified organisms (GMOs), which are prohibited under Fairtrade. Secondly, organic production is not required. Democracy or prioritization of marginalized farmers is not mentioned in the UTZ standards. There are not many criteria about the importance of women's participation. There is no technical or trade support given to the producer. There is no long term trade agreement or pre-defined minimum price. UTZ has close relationships with several large multi-national companies, including Nestlé, McDonalds, Ikea, Burger King and Mars. Third party independent auditors with ISO 65 accreditation conduct the certification.

In Ecuador, there are two UTZ CERTIFIED cocoa certificates with Nestlé Ecuador and with Transmar.

3.7.4 Organic certification

Organic certification was first instituted in the 1970s and started as a voluntary activity. Organic certification includes the control of farms, processors and retailers as well as the chain of custody (traceability). IFOAM requires national standards to be developed through national processes. To promote management practices that rely on crop rotation, green manure, compost, and biological pest control. The use of manufactured N-fertilizers and pesticides, plant growth regulators and genetically modified organisms is banned. There are some social criteria usually in organic standards, but few economic ones. However, a premium is often paid for organic produce.

BCS ÖKO-GARANTIE GMBH is licensed as a private controlling agency to implement the EU Regulation on organic.¹⁶ The two organisations certified organic by BCS (RAO/AE and RAO/KN) are supposed to meet environmental and social standards shown in box 10 below.

Box 10: Summary of main Organic requirements (BCS Oko-Garantie)

Environmental standards: Standards banning use of synthetic herbicides, fungicides, pesticides, and chemically treated plants. Minimal use of synthetic fertilisers only as part of integrated system. Restrictions on land clearing/soil management. Requirements to preserve local ecosystems including setting aside conservation areas

Social standards: Requirement for operators to have a social policy. No forced labour, right to organise, no discrimination, equal opportunities, no child labour. Following recommended but not required: decent wages and benefits, decent contractual arrangements, good Occupational Health and Safety practices, decent living conditions. Recommended that organic producers should respect indigenous rights and impoverished farmers who are farming but do not have legal rights to land.

¹⁶ See http://www.bcs-oeko.com/en_about_bcs.html

Under the organic system it is the farmers that are certified, rather than the organisation, but certification then allows the organisations (which have both certified and non-certified members) to pay them a premium for their products over conventionally grown cocoa. The reduced or non-use of synthetic agro-chemicals leads to greater labour inputs. For the small-medium sized farms, this is mainly family labour, but larger farms hire in labour. Organic certification encourages the growing of cocoa in mixed plantations with other tree and food crops, which provide a range of products (reducing dependency on cocoa and reducing vulnerability to disease and adverse climate events as well as providing good ground cover for soil and water conservation). This is particularly the case for RAO/KN farmers who grow cocoa in the traditional *chacra* agro-silvo-pastoral system, which also has strong cultural significance.

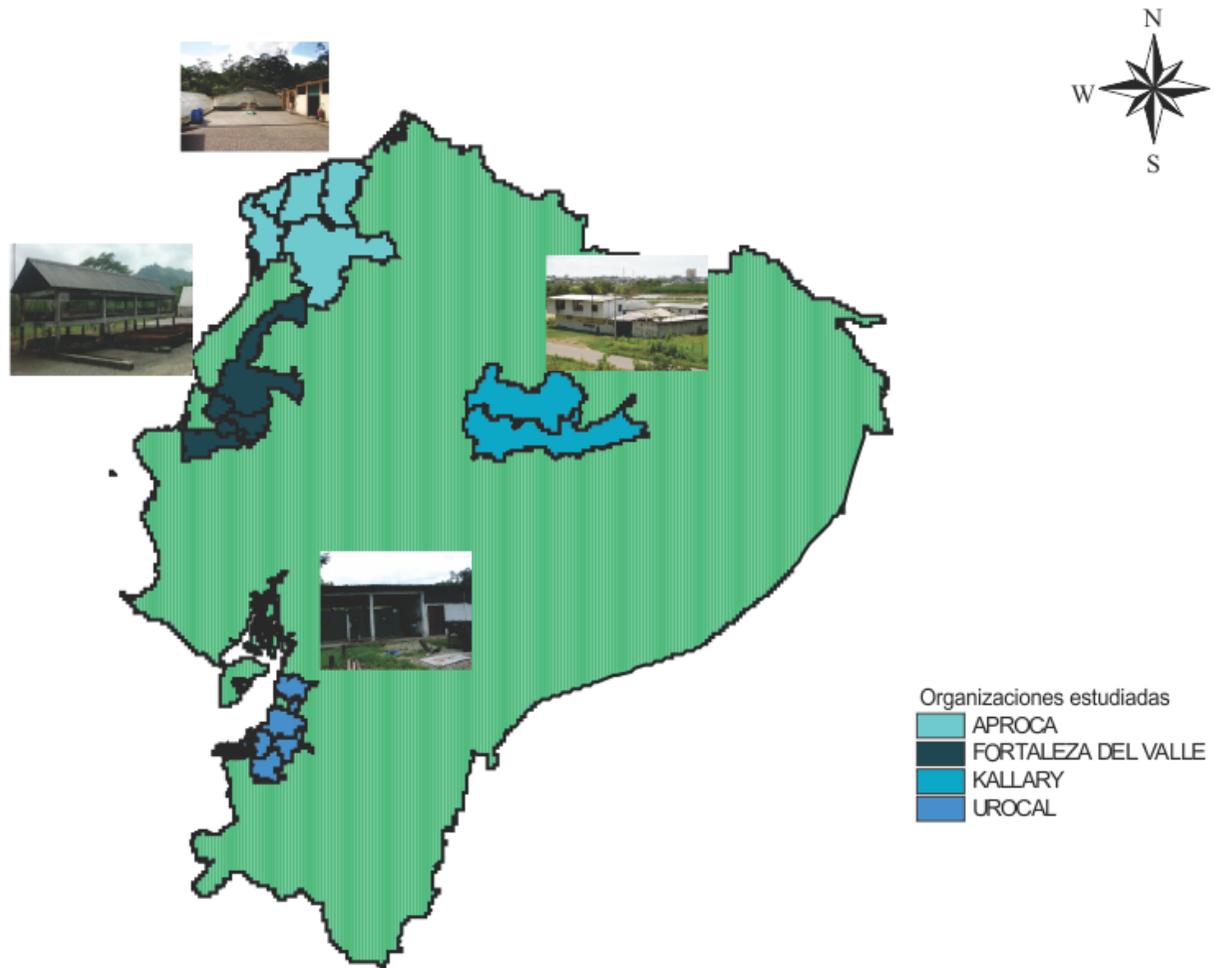
4. Overview of the Study Organisations

Ecuador can be divided into three major geo-climatic regions: coast, mountains and Amazon. Cocoa requires a hot climate and is suited to the coastal and Amazon region and some varieties are native to these areas.

- **RAO/KN** (BCS-organic certified, previously RA certified as well – and also includes non-certified groups used as comparison group) is located in the Amazonian region and is linked with the cantons of Tena and Archidona;
- **RAO/AE** (BCS-organic certified, previously RA certified as well – as well as non-certified groups used as comparison groups) is located in the province of Esmeraldas in the Northern Coastal region and works in the cantons of Atacames, Muisne, Quinindé and Rio Verde;
- **The FTO/FM** (FLO Fairtrade and organic certified) is located in the central coastal zone of the province of Manabí and works in the cantons of Chone, Bolívar and Portoviejo. The comparison group – **NC/PM** was organic certified, but was suspended for use of agrochemicals and the organisation and members are currently non-certified;
- **UROCAL** is located in the Southern Coastal Region and works in three provinces: Guayas and the cantons of Balao and Naranjal; Azuay with the canton of Ponce Enríquez and El Oro with the cantons of San Ana, Pasaje and el Guabo. La Asociación. Two of the UROCAL groups were included in the study, **FTO/NO** is FLO Fairtrade and organic certified and **O/UCO**, is organic certified.

In Figure 11 below shows the location of each organization as well as pictures of the cocoa collection stations.

Figure 11: Location of the certified study organisations



Source: INEC and photos from the organizations



Photo 2: Cocoa farmer in the Central Amazonian Region

4.1 RAO/AE - Organic certified (previously RA certified)

RAO/AE is a union of farmer organizations and independent producers from Atacames. Its membership is of African-Ecuadorian and mixed heritage. It was founded in June 2004 with technical and financial support from the Corporación Financiera para la Formación y el Desarrollo Integral¹⁷ (CEFODI), during the implementation of an organic cocoa project and attained non-profit status in 2005. There were currently 82 members in 2012, of which 48 had organic certification and the rest were in transition. RAO/AE works in the following areas: cocoa plantation improvement, marketing and socio-economic improvement. The focal cantons where RAO/AE works are: Atacames, Rio Verde, Muisne and Quinindé. RAO/AE is not an umbrella organisation, but it does work closely with a number of partner organisations – namely RAO/AER, RAO/AEM and la Cooperativa Velazco Ibarra¹⁸.

RAO/AE organisation buys cocoa from members and conducts cocoa processing. RAO/AE members - as well as members of their partner organisations - have organic certification and were part of this study. However, some of their members do not have certification and formed a comparison Group.

Table 15: Profile of RAO/AE partner organisations

Name of partner organisation	Formation	Number of members & cocoa cultivation
RAO/AER	Formed in 2004; Legal status in 2008	37 members; 62 ha of cocoa in Rio Verde canton
RAO/AEM	Formed in 2000; Legal status in 2008	54 members; 42 have organic certification; rest are in transition. 8 active communities. 200. 43 ha of cocoa cultivation. Tree nursery.

¹⁷ CEFODI started as Comité Esmeraldas Flandes Orientales para el Desarrollo Integral which was an agency for integrated development focused on the province of Esmeraldas. Since 1993 la Corporación Esmeraldeña para la Formación y Desarrollo Integral has led efforts to improve the conditions for disadvantaged groups in Esmeraldas.

¹⁸ Asociación de productores Cacaoteros del Cantón Rio Verde (RAO/AER); Asociación de Productores Cacaoteros del Cantón Muisne (RAO/AEM); Cooperativa Velasco Ibarra

Cooperativa Velazco Ibarra	Established in 2011	22 members, with 91.50 ha of cocoa
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RAO/AE and partners have a total of 195 farmers, with a total of 1,612.73 ha of cocoa across four cantons. There are both organic and conventional farms owned by RAO/AE farmers and partners. There are 140 farmers with organic certification and they have just over 800 ha of land. The majority of these farmers have smallholdings of under 3 ha. **Only 21 people own farms (over 10 ha), but these account for 56% of the organic certified land.** Those farmers with more than 10 ha own over 80% of the land. There are 55 farmers who are in transition to organic certification in RAO/AE and partners.

Table 16: Size of organically certified and 'in transition' farms (2011)

Farm Size	Certified Farmers				'In transition' farmers			
	Farmers	% of Farmers	Area (ha)	% Area	Farmers	% of Farmers	Area (ha)	% Area
Up to 3 ha	84	60.0%	140.68	17.5%	14	25.5%	31.25	3.9%
3 - 10 ha	35	25.0%	210.50	26.1%	19	34.5%	128.50	15.9%
> 10 ha	21	15.0%	454.40	56.4%	22	40.0%	647.40	80.2%
Total	140	100.0%	805.58	100.0%	55	100.0%	807.15	100.0%

Source: RAO/AE

4.2 RAO/KN – Organic (previously RA) certified

The organisation began promoting arts and crafts community development in communities along the banks of the Napo River, and included efforts to improve health and education, but also to promote environmental conservation, with support from Fundación Jatun. Tena and Archidona are the most important for RAO/KN in terms of membership and production.

Currently, there are 502 members, many of whose families are related. The 502 farms are either organically certified or in transition to organic certification. There are 366 members who are growing organic cocoa, the majority of whom have farm sizes under 3 ha in size and are using the traditional *chacra* method. Some RAO/KN farmers are in transition to organic certification. A total of 136 farmers with smallholdings (less than 3 ha) are currently working towards certification. Their land area is 119.05 ha and they all use the *chacra* cropping system (See table 17 below).

Table 17: Size of organically certified farms for RAO/KN and conventional farmers (2011)

Farm Size	Certified Farmers				'In transition' farmers			
	Farmers	% of Farmers	Area (ha)	% Area	Farmers	% of Farmers	Area (ha)	% Area
Up to 3 ha	338	92.3%	498.39	79.9%	132	97.1%	119.05	88.5%
3 - 10 ha	28	7.7%	125.50	20.1%	4	2.9%	15.50	11.5%
Total	366	100.0%	623.89	100.0%	136	100.0%	134.55	100.0%

Source: RAO/KN

Full members have a recognized voice in the producer organisation and voting rights, whereas commercial members can sell cocoa to the organisation, but do not share these rights. Cocoa is grown in the traditional *chacra* system, which is environmentally friendly due to the nutrient recycling involved. Through technical assistance and training, a high quality product is produced that is recognized by the organization (RAO/KN 2010). RAO/KN provides technical assistance and training to members. They have seed collection centres, and offices. RAO/KN produces a value added product—chocolate bars (see Photo 3 below).

“Chacra” is an intermittent cropping system. It includes diverse specialty agroforestry systems grown under an opening in the forest canopy, which is deliberately created and tended. Using a *chacra* system, farming families combine marketing and subsistence strategies whose attributes define this as a sustainable and priority land use in the Amazon (Arévalo, 2009; INIAP 2010).

4.3 UROCAL – Fairtrade and organic

UROCAL was established in 1964 as a result of the country’s agrarian reform and the legalization of land and gained legal recognition in 1984 (UROCAL 2009). UROCAL covers the Southern area of Guayas, the coastal area of Azuay and the Northern part of El Oro province. UROCAL seeks to build farmer capacities, developing communities, improving cocoa production, harvesting and marketing. It is a regional umbrella organization that has successfully linked with a wide range of national and international organisations. It comprises organic farming groups, women’s groups and youth groups (UROCAL 2012a). In 2007 there were only 6 member groups, but this has now increased to 11 and these are found in several different cantons (e.g. Ponce Enríquez, Santa Ana, Balao, Naranjal, el Guabo and Pasaje). There 322 members in the farmer groups at primary society level, of which 212 are men and 110 are women (April 2012). Most members belong to FTO/NO with 102 farmers, followed by O/UCO with 59 members. Three women’s organizations also participate: 3 de Junio, Greta and Nueva Esperanza. Across the UROCAL organisations there are 99 directors (male and female). In 2009 UROCAL participated in the Program for economic development in border zones (ACDI-VOCA/USAID) financed. The project included \$99,750 to finance two technicians, capacity building, field trips, nurseries, clonal gardens, financial literacy training and equipment for a cocoa seed collection station (Producer Organisation).

Table 18: Members of UROCAL (2012)

Province	Canton	Member organizations	Members	Men	Women
Guayas	Balao	Asociación Mujeres Greta	11	0	11
	Balao	Asociación Productores 12 de Octubre	17	16	1
	Naranjal	Asociación Mujeres Nueva Esperanza Costa	11	0	11
	Naranjal	Pre-Asociación Productores Costa Azul	18	11	7
Guayas/El Oro/Azuay		Asociación Productores Nuevo Mundo	102	82	20
El Oro	Santa Ana	Asociación Nuevo Porvenir de El Oro	20	14	6
	Pasaje	Unión Casacay	59	46	13
	El Guabo	Asociación Mujeres 3 de junio	23	0	23
Azuay	Ponce Enríquez	Asociación Agrícola la Florida	17	13	4
	Ponce Enríquez	Asociación Agrícola Shumiral	24	14	10
	Ponce Enríquez	Asociación Río Gala	20	16	4
Total			322	212	110

Source: Producer Organisation until April 2012

Two organisations within UROCAL included in the study - FTO/NO (Fairtrade and Organic certification) and O/UCO (organic).

Table 19: Study Group from UROCAL

Producer Organisation	Formation & areas of work	Membership
FTO/NO	2005; Guayas, El Oro, Azuay	53 members in 2005; Now 104 members. Began with organic and FT banana certification, and later added cocoa production. Bananas are grown on 80% of their land (cf only 20% for cocoa). Majority of members have more than 10 ha of farmland. A subgroup located in Naranjal, of Guayas Provincen has 29 members producing bananas and cocoa. Most of their land is dedicated to cocoa production, with only 40% used for bananas.
O/UCO	Located in El Oro Province, canton Pasaje. Founded 2005; Obtained legal status in 2008.	Currently has 59 members, of which 46 are men and the rest are women. Dedicated almost entirely to organic cocoa certification and working towards FT certification. Farmers have 11 ha on average with an average of 6.4 ha planted with <i>Nacional</i> cocoa type and 3.1 ha planted with improved variety CCN51

Table 20: Area of certified organic cocoa and banana in FTO/NO and O/UCO

	Farm Size	Farmers	% of Farmers	Area (ha)	% Area
FTO/NO	Up to 3 ha	20	20.6%	35.00	3.8%
	Between 3 - 10 ha	22	22.7%	538.50	57.8%
	More than 10 ha	55	56.7%	358.66	38.5%
	Total	97	100.0%	932.16	100.0%
O/UCO	Up to 3 ha	25	47.2%	47.00	14.8%
	Between 3 - 10 ha	20	37.7%	130.30	40.9%
	More than 10 ha	8	15.1%	141.00	44.3%
	Total	53	100.0%	318.30	100.0%

Source: Producer Organisation

4.4 FTO/FM - Fairtrade and organic certified

La Corporación Fortaleza del Valle is an umbrella organization formed by Unión de Organizaciones Campesinas Cacaoteras del Ecuador (UNOCACE), INIAP and GIZ (formerly GTZ) aimed at cocoa farmers working in the irrigated region of Carrizal-Chone. They acquired organic certification in June 2006 from ECOCERT and FLO Fairtrade certification in December 2006. They operate in the following cantons: Bolívar, Chone, Tosagua and Portoviejo. There are 5 member organisations namely: Valle del Carrizal, FTO/FM, Quiroga, Rio Grande and Rio Chico, which are located in different parishes and have varying membership sizes (see table 21 below). Overall, the organisation has grown rapidly to a current total of 908 members, of which 333 are from the Asociación Valle del Carrizal, followed by 250 members from FTO/FM and the group with the fewest members is Asociación de Rio.

Table 21: Member organisations of FTO/FM (2011)

Organization	Canton	Parish	Members
Valle del Carrizal	Bolivar	Cálcate	333
Fortaleza del Valle	Chone	Canuto	250
Quiroga	Tosagua	Quiroga	193
Rio Grande	Chone	Canuto	90
Rio Chico	Portoviejo	Calderón	42
Total			908

Source: Corporación FTO/FM

The 908 members all grow cocoa on a land area of 2253.25ha. The majority of members (607) have farms of less than 3 ha in size, although this only represents approximately half of the land in the association. About 40% of the land is owned by 170 members whose holdings are between 3- 10 ha while another 10% of the total land area is owned by only 14 larger farmers.

Table 22: Farm size for Corporación Fortaleza del Valle en 2011

Farm size	Members	% of Members	Area	% of area
Up to 3 ha	724	79.7%	1138.75	50.5%
Between 3 - 10 ha	170	18.7%	903.75	40.1%
More than 10 ha	14	1.5%	211.00	9.4%
Total	908	100.0%	2253.50	100.0%

Source: Corporación FTO/FM

NC/PM is the comparison group for FTO/FM. This was founded in 2005 by an ACIDI-VOCA funded project which provided training and established farmer field schools. Further support was provided by the Spanish Development Cooperation and the Agency for Development in Manabi Province (ADPM). It is an umbrella group with seven members: Unitriunf, Asoc. Agroartesanal de la Zona Norte, la Y de Cucuy, Finanza, Asociación las Brisas, Asociación Río de Oro and Asociación de productores de plátano. They have cocoa drying and storage facilities as well as specialty equipment for value added products made from cocoa. They have sold their products to Nestlé, which was not a good experience according to members. This created a lot of discontent and loss of credibility in the organization (Gilles 2011). In 2011 the organization stopped functioning, though it is now starting again.

SECTION 2: THE FINDINGS

5. Findings on the poverty impact of sustainability standards on individual producers

5.1 Producer profiles

Average family size was 4-5 members and average age of household heads 50 to 52 years. Average household size was similar for certified and non-certified producers in the 2010 sample (4.97 and 4.92 persons respectively). However, in the 2012 sample, average household size of certified producers was significantly smaller and household heads significantly older (53.7 compared to 43.6 years) than for non-certified producer households. There were no significant differences in other household characteristics such as education or gender of head of household. In the Fairtrade certified FTO/NO many of the members are senior citizens, which affects the training sessions, as they are not always able to attend or as able to act on information provided. Thus attracting new, younger members is a priority for the organisation.

5.2 Farm size and livelihoods

Understanding of the relative importance of cocoa in the overall farming system of certified and non-certified households is important in order to understand the relative traction that certification of cocoa production (and trade in the case of Fairtrade) might have.

The final survey finds that certified producers grow significantly less coffee, plantain, and cassava, than non-certified farmers, but they grow more fruits and keep more cattle and other animals than non-certified producers. However, there are differences in the farming systems amongst the different organisations and hence it is more instructive to consider the variation with each group and to analyse what difference certification may have made.

Amongst RAO/AE farmers in the northern coastal zone there is highly unequal land ownership, with few farming households owning most of the land and livestock being the primary land use. Cocoa is the main crop, followed by plantains (and tropical fruits and timber). There is slightly better land equality amongst RAO/KN farmers in the Amazon region, with most farmers having middle-sized plots and most farmers growing cocoa in the *chacra* system, also with plantains, maize, yucca, fruit trees and timber. UROCAL farmers are relatively mixed in terms of farm size and they grow bananas as their most important crop, following by cocoa, yucca, maize, tropical fruits and timber. In FTO/FM in the Central coastal zone, most of the farmers are smallholders, followed by middle sized farmers, with very few large-scale farmers. NC/PM farmers have mixed cropping systems, with average farm sizes of 10 ha, but their primary crop is cocoa. Most members work on their own farms, but some also do seasonal and permanent work elsewhere.

Table 23 below provides a systematic comparison of the farming systems of farmers within the study organisations. Tenure, topography, and proximity to processing stations are fairly similar within the study organisations. Most farmers own their properties, but fewer non-certified farmers have land title.

Table 23: Profile of the Producer Organisations

Producer Organisation (certification of members; location)	Farming system	Farm size & Land distribution	Cocoa importance in HH income
RAO/KN Organic certified (previously RA) Amazon region Total Membership:: 502	Most farms <i>chacra</i> farming (traditional, biodiversity rich, agro-silvo-pastoral system).	More equitable land distribution than RAO/AE area. 46% are small farmers with 31% of land. Mainly middle sized farmers.	Important crop for both certs & non-certs
RAO/AE & partners Northern, coastal Esmeraldas region Certified & non-certified Members. 195 members covering 1,612.73 ha of cocoa. 140 farmers with organic certification and they have just over 800 ha of land (Previously RA certified).	Mixed: Range of tree, food crops, small & large livestock	Highly inequitable: ½ of all cocoa farmers are in small category, owning 7% of land area and 23% classified as 'large' (66% of land area). <i>No differences in land between certified & non-certified farmers</i>	Important for certs & non-cert RAO/AE farmers, but esp. small and medium sized farms
UROCAL (umbrella organisation) Southern Coastal Region, Selected study groups: i) FTO/NO [certified] and subgroup; ii) O/UCO [organic]	Mainly diverse cocoa systems with mixed crops Tree nurseries established via FT Premium at certified groups. FTO/NO farmers work their own farms (bananas require maintenance), but O/UCO farmers do work off farm (e.g. on banana plantations or non-agricultural labour)	Unequal land distribution. 50% of farmers small – 25% of farmed land area	Bananas are main crop & income earner. Cocoa is the minor crop. FTO/NO farmers work on their own farms – bananas are their main crop.. O/UCO also work elsewhere .Cocoa is their main crop.
FTO/FM (certified) & NC/PM (non-certified) Central zone of the Manabí	FTO/FM: Mainly diverse systems – cocoa is the main crop, but with various other crops (e.g. maize, peanuts) and livestock keeping. Some work off farm I seasonal or permanent work, but also work their own farms. NC/PM: as above.	Unequal land distribution. Most members are small farmers (61% of farmers have smaller plots with 23% of farmed area)	Cocoa is an important crop, along with other crops, livestock keeping and some off farm as well as own farm labour.

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There was no significant difference in average farm size between certified and non-certified producers. However, certified producers had a larger area and proportion of their land under cocoa than non-certified farmers in 2010 and 2012, but the difference was significant only in 2012 (3.64 hectares cocoa for certified compared to 2.32 hectares for non-certified). This indicates that certified farmers may have greater confidence in cocoa farming as a livelihood option – however, in the case of FT/NO, cocoa is important, but it is not their most important source of income.

A clear difference was observed by the research team between certified and non-certified farms within RAO/AE and RAO/KN, with the certified farmers reporting a noticeable shift away from production using agrochemicals and towards more environmentally friendly methods, particularly amongst RAO/AE farmers. RAO/AE members, in particular, report more healthy and organic crop management. RAO/KN farmers do not report a significant change in practices, and this is explained by the fact that many farmers in the Ecuadorian Amazon area had not previously used pesticides. Thus, certification has not made a large change in farming practice, although arguably it may help to recognize the public good element of traditional farming practices in that zone. For these families, organic certification has helped to rescue and reaffirm the “chacra” concept in the region and re-emphasize its utility within the organization. For future members it will be a requirement to use this type of cropping system.

“For the cocoa farmer, there are traditional norms and criteria for using the “chacra system” that are very different than those stipulated by the BCS auditors. Only those who apply the chacra standards will be able to work with RAO/KN in the future” (Interview with the manager of RAO/KN, 2012)

Amongst RAO/AE farmers there is high land inequality, but most households are involved in agriculture. Cocoa is a widely grown crop. Better off households, however, usually grow oil palm, heart of palm and eucalyptus, as well as livestock (chicken and pigs) and shrimp farming, for sale, while poorer households rely on a combination of cocoa, bananas, livestock and working as hired labourers. Cocoa generates the highest returns in the February to July harvest season, but other crops are important to generate income when cocoa yields are low.

RAO/KN farmers’ livelihoods are also largely agricultural, but incomes are supplemented through other activities by the better off and the poorest – the latter seeking waged labour off farm. Amongst the other activities used to diversify their livelihood incomes are gold washing, wood harvesting and sale, craft making and sale, construction and if possible, teaching. The better off are less likely to work off their own farms and have larger areas of cocoa cultivation, which generates higher levels of income and quality of life.

Amongst RAO/KN farmers there did not appear to be any particular differences along the lines of certification status in terms of livelihood patterns – all farmers have been encouraged to grow more cocoa as a result of higher market prices. Some RAO/KN farmers (certified) do find additional work within the organisation, for example, in safeguarding cocoa in storage or conducting administrative tasks – these options are not open to non-certified farmers.

“The poorest look for work outside the farm; they look for a way to survive. They work in gas stations. People with a lot of resources are few and they work in their own stores. Looking for work with others is when you get exploited.” (Male focus group of non-certified farmers, RAO/KN, 2012)

“Some people do not take care of their chacras; those who do not maintain them properly have less income. Those who do not own land have to make sacrifices and look for work, searching for a way to live” (Mixed gender FGD, certified farmers, RAO/KN (2012)

At the south coast, UROCAL farmers (FTO/NO Fairtrade certified and O/UCO organic) have a mixture of farm sizes and grow more bananas, followed by cocoa.

In UROCAL, there are a mixture of farm sizes with most owning small (0.5 to 8 ha) or middling size farms (8-16 ha), and very few larger farms (e.g. more than 17 hectares in size). Bananas are a major crop amongst UROCAL farmers, for some more important than cocoa, followed by yucca, maize, oranges, mandarins and papaya, with key timber species including laurel, guayacan, balsa.

FTO/NO certified farmers follow the UROCAL principles of agroforestry and obtain a biodiversity premium. FTO/NO farmers work on their own farms because bananas require more constant maintenance. Other crops grown by FTO/NO farmers are corn, peanuts, coffee, timber, chickens and pigs all of which are sold or used for home consumption. Their average farm size is 10ha. For O/UCO organic certified farmers, cocoa is the primary crop (rather than bananas at FTO/NO), and they also grow plantain, fruits, maize, peanuts, coffee, timber, chicken and pigs for sale or subsistence. O/UCO members do not work only on their own farms: they work as temporary or permanent labourers in banana plantations or in other, non-agricultural sectors. Their average farm size is 15ha.

In the (Fairtrade certified) FTO/FM organisation, amongst individual members the majority are small farmers (0.5-5ha) (61%), followed by 115 middle sized farmers (30%) and just 37 larger farmers (20-50ha). Average farm size is 3 ha. Most members of FTO/FM have diversified farms, although a minority have cocoa as a monoculture. Their main crop is cocoa along with corn, peanuts, chickens, pigs, and beef cattle all of which are sold or used for home consumption. Most members of FTO/FM work on their own farms, but they also work seasonally or permanently in other sectors. NC/PM members (the non-certified comparison group) have mixed cropping systems and less than 25% grow cocoa as a monoculture. Their main crop is cocoa. Other crops are corn, peanuts, coffee, timber, chickens and pigs all of which are sold or used for home-consumption. Most members of NC/PM work on their own farms, but they also work seasonally or permanently in other sectors. Average farm size is 10 ha. An average of 4 ha is under cocoa and other crops.

5.3 Farm characteristics, production, productivity and quality

In terms of **topography** certified farmers (baseline survey) have a significantly larger land area in the plains, compared to the non-certified smallholders (and less land in undulating slope areas). However, no significant differences emerged in the final survey. The organisations were chosen for their location in different agroecological zones, but attempts were made to match the groups.

- The RAO/AE (organic and non-certified farmers) farms vary between flat and hilly as is common in the coastal, Esmeraldas region and in the RAO/KN (organic and non-certified farmers) area (Napo Province, Amazon region) the topography is similar, but there are some farms on very steep slopes;

- For FTO/NO, 95% of the members say that their farmland is flat and 90% of O/UCO have hilly farms;
- For FTO/FM, 83% of its members say that their land is flat. For NC/PM, 80% of members say their farms are hilly.

In terms of **road conditions** the baseline survey found that certified farmers have better road conditions than non-certified farmers, however no significant difference emerged in the final survey.

- RAO/AE members consider the road to be bad/moderate, and RAO/KN members consider them to be moderate/good. The Ecuadorian government maintains and improves the roads and their condition is not influenced by certification.
- FTO/NO (Fairtrade certified) members stated that the roads are in moderate condition and for O/UCO (organic) members reported that the roads are in average condition as well.
- Roads are moderate for FTO/FM (Fairtrade) members, and for NC/PM (non-certified), the roads are also in average condition.

Distance to processing stations was also investigated – this could be influenced by certification where increased profits or the Fairtrade Premium are invested in improving infrastructure. No significant difference was found between certified and non-certified smallholders with regard to their distance to nearest buying centres (baseline and final survey).

- For the organic certified and comparison groups, cocoa farms are located on average, 5-10 km away from the processing stations *for both* certified and non-certified organizations. Distances between members are often further.
- FTO/NO farmers say that the closest sales point is on average 11 km and for O/UCO that figure is on average 7 km (i.e. slightly closer)
- For FTO/FM farmers the closest sales point is 13 km on average and for NC/PM the closest sales point is 11km.

In terms of **land title**, the surveys showed that certified smallholders have a significantly larger **proportion of land with title** than non-certified smallholders.

Certified smallholders have a larger area of **land under cocoa** than non-certified farmers (2.6ha compared to 0.1ha respectively on average). Although in the baseline there was no difference in the ratio of farm area under cocoa, in the final survey certified farmers had a larger area of their farm under cocoa than non-certified farmers. This would indicate perhaps that certified farmers are showing greater confidence in cocoa farming than non-certified producers.

No difference emerged in terms of the **age of the plantations** of certified versus non-certified producers in the baseline survey, but in the final survey certified producers reported that they do have significantly older plantations compared to the non-certified producers. The age of plantations influences their productivity. There is variation between the organisations.

- Amongst the organic certified and comparison non-certified members, the plantations are generally comparatively young. For RAO/AE they average about 21 – 24 years, and for RAO/KN about 10 – 12 years.
- FTO/NO members have very old plantations reaching 35 years of age. O/UCO members have on average 26 year-old plantations; FTO/FM plantations are around 20 years old and members of the control group NC/PM have plantations of 38 years old of age.

Similarly, no major difference emerged in terms of **plant variety** – in terms of correlation with certification status, but there is variation between the organisations.

Organic certified (RAO/AE and RAO/KN farmers) mainly grow fine, aromatic cocoa: Most farmers (90%) from both organizations grow the *nacional* variety fine aromatic cocoa, while the rest (10%) grow CCN–51. They prefer the *nacional* over the CCN–51 clone because the final product with its floral aroma is of a higher quality and enjoys a higher market demand. However, its susceptibility to pests and diseases (especially monilia and witches broom¹⁹), make it hard to grow organically. That is why the organizations request more training and technical assistance on pest and disease prevention and control.

Table 24: Farm characteristics - certified and non-Certified smallholders (survey 2012)

	Total	No certification	Certified	Sig
N	415	125	290	
Distance from home to nearest cocoa selling point	7.72	6.53	8.22	ns
Road condition (ranking)	2.14	2.15	2.14	ns
Percentage mono-cropping (%)	12.7%	11.6%	13.1%	ns
Percentage intercropping (%)	87.4%	88.4%	86.9%	ns
Total size of household farmland (ha)	12.0	12.0	11.0	ns
Area under cocoa (ha)	3.24	2.32	3.64	***
Percentage of total farm under cocoa (%)	51.6%	44.6%	54.5%	**
Average age of cocoa trees on your farm (years)	18.9	15.5	20.3	*
Percentage of farm that is owned privately (%)	92.2%	87.5%	94.2%	*
Percentage of farm that is rented (%)	2.5%	4.5%	1.7%	ns
Percentage of farm that is communal property (%)	5.3%	8.0%	4.2%	ns
Percentage of land with title (%)	58.2%	43.2%	64.7%	***
Percentage of land without title (%)	41.6%	56.8%	35.0%	***

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P<0.05, **P<0.01, *** P< 0.001

In terms of **productivity** the final survey found that a certified producers achieve a significantly higher productivity (production per ha) of raw beans and dry beans in 2010 and 2012 compared to non-certified producers (final survey).

Table 25: Comparison of means – cocoa productivity

¹⁹In Ecuador, the major cocoa diseases are witches broom and monilia (frosty pod rot) caused by *Crinipellis pernicioso* and *Moniliophthora roreri* respectively causing losses of 60% of the production. Physical control measures include crown reduction, annual sanitary prunings and weekly removal of infected pods. (Solis and Hidalgo 2005)

	Total	No certification	Certified	Sig
N	415	125	290	
Productivity of raw beans 2010 (unit/ha)	637	398	739	***
Productivity of fermented beans 2010 (unit/ha)	5	9	4	ns
Productivity of dry beans 2010 (unit/ha)	131	77	154	*
Productivity of other beans 2010 (unit/ha)	0	0	0	ns
Productivity of raw beans 2011 (unit/ha)	726	493	828	***
Productivity of fermented beans 2011 (unit/ha)	6	18	1	ns
Productivity of dry beans 2011 (unit/ha)	144	95	165	*
Productivity of other beans 2011 (unit/ha)	0	0	0	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P<0.05, **P<0.01, *** P< 0.001

The organic farmers reported in qualitative discussions that their yields have increased as a result of technical improvements and management techniques (i.e. as a result of previously RA and organic certification), but that the increases are still insufficient. Their harvests are still lower than the national average in 2012, which for dry beans is 11qq/ha²⁰.

“When we started dry beans yields were only 1.2qq/ha. Now through regular pruning, cultural practices, application of organic fertilizers and better production control, yields are at 2.7qq/ha. But we want to improve on this” (Male certified focus group discussion, RAO/AE).

For RAO/KN farmers, the average dry bean production is 1.5 qq/ha (2011) with the maximum achieved to date of 4 qq/ha. There is a lot of room for improvement compared to national averages. Nonetheless, these yields are generally considered fairly good for the diversified *chacra* cropping system, where cocoa shares space with a lot of other trees and annual crops.

An analysis was conducted of the yields of organic and non-organic members of RAO/AE and RAO/KN.

- The organic RAO/AE farmers achieve higher yields than the non-organic farmers.
- Amongst RAO/KN farmers organic farmers have higher yields than the non-certified farmers, although the rate of increase is higher amongst the non-organic farms (perhaps because some are in transition to organic where yields drop in the early years). See table 26 below.

Table 26: Productivity for organic and non-organic producers (2012)

RAO/AE Organic	RAO/AE Non-organic
According to interviews, in 2010 average yield of dry cocoa beans was 1.2 qq/ha In 2011, the average rose to 1.5 qq/ha.	In 2010, average yield of dry cocoa beans was 0.9 qq/ha. In 2011 the average rose to 1.1 qq/ha
RAO/KN Organic	RAO/KN Non-Organic
In 2010 the average yield of dry cocoa beans was 2.7 qq/ha In 2011 it was 3.3 qq/ha	For conventional farmers, average yields in 2010 for <i>fresh</i> cocoa beans were 50% less than for organic farmers, at 1.6 qq/ha.

²⁰ The conversion rate is approximately 3 qq of fresh cocoa beans with mucilage equals 1 qq of dry cocoa beans

<p>There has not been a strong increase in the last few years because the results of organic methods are often seen slowly due to organic matter breakdown in compost etc. (Mejía and Palencia 2002)</p>	<p>However, the rate of increase is higher than for the organic farms, because for 2011 they obtained yields of 2.9 qq/ha Many farms are in transition from conventional to organic. During this time, yields generally drop at first ²¹, until they have established an equilibrium between soil fertility, weed control and pest and disease control. (ASOCAM 2002)</p>
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Source: Field surveys, 2012

The official 2010 national yield data for dry cocoa beans in Ecuador is 11 qq/ha, according to ESPAC data and is derived mostly from *nacional* cocoa. For FTO/NO yields are 8 qq/ha, O/UCO6 qq/ha, FTO/FM 9 qq/ha and NC/PM 8 qq/ha.

Productivity levels depend also on how organizations work with farmers. FTO/NO members receive economic incentives derived from the Fairtrade Premium to help with fertilizer, reforestation and soil conservation. Non certified farmers who do not receive a premium are unable to invest in their farms to improve technology use and raise their productivity like FTO/FM.

5.4 Sale of cocoa to buyers

Cocoa value chains have numerous linkages and there can be both local and external intermediaries involved, industrial players (those doing semi-processing, transforming the cocoa into butter, paste or liquor, which is then exported, as well as those making chocolate products for export and exporters of cocoa beans, of which there were an estimated 29 at the time of the study.

The total value of beans sold by certified smallholders in 2008 and 2009 is significantly higher than the value obtained by non-certified smallholders. The total value of beans sold by the certified smallholders to the PO is higher than for non-certified smallholders in the same period and a lower value is sold to 'other buyers' in comparison (baseline survey). Certified smallholders sold more raw beans to the PO in 2008 and 2009 and less raw and dried beans to other buyers than non-certified smallholders (baseline). Certified producers sold significantly more raw beans and dry beans in total in 2010 and 2011 than non-certified producers.

The questionnaire survey data indicates that certified farmers are more likely to sell to and rank as important their own organisation, compared to non-certified producers. Certified smallholders are more likely to sell to and rank as more important their cooperative or association, rather than other local or more distant, external intermediaries, compared to non-certified smallholders. **This would indicate a difference in the 'offer' of POs to members compared to that of intermediaries, with the former being more positive.**

In discussions, farmers reported that in recent years, they have preferred to sell their cocoa harvest through their organizations. This is due to the benefits they receive, including the price premium (see section on prices). The number of organic farmers is increasing as well and the infrastructure for collection (beans are not stored). The intermediaries have reportedly begun to pay more for conventional beans, to attract the organic farmers to them, but most of the farmers are not responding as they prefer to sell to their own organisations. This leaves poorer quality beans (e.g. affected by monila) for the intermediaries. RAO/KN only accepts high

²¹ An abrupt change to organic production will lower yields at first (transition phase) until there is an equilibrium between soil fertility, weed control and pest and disease control (Garibay and Zamora 2003).

quality beans from members, but they only pay farmers fortnightly for their products. As a result some farmers who need cash have to sell some of their cocoa to intermediaries. Further, the RAO/AE and RAO/KN PO infrastructure is being challenged by the rapid increase in organic production as new farmers have achieved certification – and as a result farmers sometimes have no other choice than to sell their harvest to the intermediaries who work in the region. Often, they pay higher prices than the conventional organizations, causing certified farmers to fluctuate in their decision whether to maintain their production as 100% organic.

Farmers who achieve organic certification benefit from workshops and training in cultivation and some farmers have received pruning saws and brush cutters for site clearing. In addition, transport for cocoa from the fields to the collection station has been organized by the PO so the farmers do not have to pay for transport. These benefits catch the attention of conventional farmers.

Amongst the Fairtrade certified organisations their members sell primarily to the PO whereas non-certified producers are more likely to sell to intermediaries:

- FTO/NO farmers do not sell much of their production to intermediaries because of the commitment that they feel they have with the price the organization pays or the ease they have with their collection systems.
- O/UCO (organic) sell a considerable amount of their production to local and external intermediaries.
- For FTO/FM neither local nor external intermediaries are used for the same reasons above.
- NC/PM (non-certified) famers sell to local or external intermediaries and also a private company, even though the latter often pays less in comparison with the PO.

Table 27: Sales quantities and values of raw and dried beans (Baseline)

	ALL	non certified	certified	Sig
N	576	242 ¹	334	
Sale to the PO - Raw beans - units - 2008	8.58	0.49	14.45	***
Sale to the PO - Dried beans - units - 2008	1.62	0.35	2.55	-
Sale to the PO - Raw beans - units - 2009	9.74	0.67	16.32	***
Sale to the PO - Dried beans - units - 2009	1.61	0.52	2.39	-
Sale to other buyers - raw beans - units - 2008	4.27	5.39	3.45	-
Sale to other buyers - dried beans - units - 2008	3.69	5.57	2.33	***
Sale to other buyers - raw beans - units - 2009	4.88	6.58	3.64	*
Sale to other buyers - dried beans - units - 2009	4.33	5.99	3.13	*
Sale to the PO - Raw beans - total value USD - 2008	394	26	661	***
Sale to the PO - Dried beans - total value USD - 2008	174	31	277	-
Sale to the PO - Raw beans - total value USD - 2009	513	39	857	***
Sale to the PO - Dried beans - total value USD - 2009	177	50	269	-
Sale to other buyers - raw beans - total value USD - 2008	232	233	231	-
Sale to other buyers - dried beans - total value USD - 2008	245	405	130	***
Sale to other buyers - raw beans - total value USD - 2009	305	339	281	-
Sale to other buyers - dried beans - total value USD - 2009	376	539	258	*

	ALL	non certified	certified	Sig
Sale to the PO - total value USD - 2008	597	58	988	***
Sale to the PO - total value USD - 2009	732	89	1198	***
Sale to other buyers - total value USD - 2008	478	638	363	**
Sale to other buyers - total value USD - 2009	683	879	541	*
Sale - total value USD - 2008	1076	696	1351	***
Sale - total value USD - 2009	1415	967	1739	***

¹ Numbers of certified and non-certified differ from final comparisons as 5 farmers were miscategorised.

Table 28: Sales quantities of raw and dried cocoa beans (Final survey)

	Total	No certification	Certified	Sig
N	415	125	290	
Quantity of raw beans sold to the organisation 2010	1240	390	1605	***
Quantity of dried beans sold to the organisation 2010	443	49	612	***
Quantity of raw beans sold to the organisation 2011	1525	582	1933	***
Quantity of dried beans sold to the organisation 2011	479	12	681	***
Quantity of raw beans sold to other buyers 2010	203	254	181	ns
Quantity of dried beans sold to other buyers 2010	142	227	106	ns
Quantity of raw beans sold to other buyers 2011	179	375	94	*
Quantity of dried beans sold to other buyers 2011	182	302	131	ns
Total quantity of raw beans 2010	1440	643	1781	***
Total quantity of dry beans 2010	586	279	716	**
Total quantity of raw beans 2011	1704	957	2017	***
Total quantity of dry beans 2011	662	314	812	**

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P<0.05, **P<0.01, *** P< 0.001

5.5 Value chains

Organic cocoa value chains in Ecuador are relatively long. Fairly small quantities of cocoa beans are produced on any one farm. RAO/AE and RAO/KN farmers sell their beans to the organisation, which collects their members' harvests until they have enough to ferment and dry them under optimum and homogenous conditions – producing higher quality beans than if processed by the farmers. The beans are then sent to semi-processors or sometimes to a chocolate maker.

Certification contributes to an increase in market access: a significantly larger proportion of certified producers reported an improvement in market access than non-certified producers. There is variation in organisational end markets (e.g. both RAO/AE and RAO/KN sell mainly on domestic markets, but RAO/KN also exports a small proportion, whereas RAO/AE lacks capital and logistical capacity). RAO/KN managers said that they had used Rainforest Alliance certification to enable them to secure sales for their organic members when demand was limited.

In the case of RAO/AE, the farmer delivers fresh organic or conventional beans to RAO/AE's collection station for fermentation and drying where the beans are classified by quality. Beans are later sold to cooperative exporters, such as Maquita Cushunchic or the company Transmar, for further processing²², and then sold to foreign exporters who take the cocoa products to Europe or elsewhere for final conversion to chocolate. According to RAO/AE members, the best local buyer is PACARI²³, because they buy both conventional as well as organic cocoa beans. Farmers do not set prices, and much of the profit goes to the processing and exporting organisations. Farmers see their role as producing high quality beans, leaving the rest of the value chain to others. There was an attempt to include farmers in price negotiations, but this was not successful as they could not reach agreement.

The cocoa produced in RAO/AE area of sourcing²⁴ is competitive in international markets, but the majority is used for local consumption, principally in Guayaquil. The short-term goal is to export because with organic certification, the US and the European markets could be good outlets given the cocoa quality (Anon. 2012c). Unfortunately, RAO/AE does not have capital to access more markets and it does not have the logistics required to sell internationally (DIARIO HOY, 2011), although there are new attempts to send cocoa to a European buyer. Some members of RAO/AE noted that certification does not automatically lead to sales and it appears that they are experiencing an over-supply of organic certified produce.

“Doors do not automatically open just because someone has certification, because not everyone recognizes organic cocoa and they don't care about its added value. So, they should not keep certifying farms. The members believe that the certifier should promote its products” (Male focus group of certified farmers, RAO/AE, 2012).

Each organisation has to decide upon and has different strategies for market insertion: certification can help to provide more stable markets, but according to one key informant different organisations may prefer different strategies (e.g. looking to the spot market):

“Rainforest Alliance has a specific, large-scale market for its products – it sells to big brands. It has secured markets, although the conditions for Rainforest Alliance vary as world market conditions change. But organisations have to judge what their strategies are for market insertion, because not everyone wants to work with a long-term contract. Some prefer to play with the spot market and visit sellers at their offices and build on relationships. A long-term contract means that prices may vary, and if a 2-year contract is signed the price can be reviewed every six months. Although the price can rise or fall, an organisation has to estimate its buying costs. In the spot market, it is a game for the best-positioned buyer and seller. While some organisations prefer this, others prefer to work with secure markets on a long-term basis and with an economically and environmentally sustainable process, but this depends on negotiations and the procedures organisations use” (Regional coordinator for inclusive trade with the European Union, 2012).

RAO/KN uses its best, certified cocoa to make its own chocolate. Cocoa is taken to the Salinas factory in the province of Bolívar. This company also rents factory space, warehouses, sanitary

²² RAO/AE also sells to PACARY, a local processor and chocolate maker that then exports finished bars of chocolate. Other buyers include Ecuatoriana de Chocolates, SKS, Cofina, Colonial, Agritusa, Gringo and Vorbeck in 2006 – 2007 (RAO/AE 2012a)

²³ Chocolate Pacari is a high quality organic chocolate brand and is the first single origin chocolate made totally in Ecuador. Pacari is directly associated with small cocoa farmers to preserve their traditional growing practices which helps guarantee the cocoa biodiversity in Ecuador. They conduct several sustainability programmes with cocoa growing communities. (Pacari 2012)

²⁴ RAO/AE did not share economic or sales data. Information here is based on interviews and focus “

registration services, and sells cocoa, sugar and vanilla. The 50 g chocolate bars are packaged and sold in small volumes to the RAO/KN café in Quito. The majority is sent to Camari, a company that distributes it in Fairtrade shops and green markets in the US (GIZ and CORPEI). Currently, RAO/KN is building its own chocolate factory in order to earn more for the value added product (Interview with the manager of RAO/KN. 2012). Within RAO/KN's value chain, there are other support groups. As with RAO/AE, governmental support is given by INIAP through MAGAP and by GIZ in trade issues.

In RAO/KN, as with RAO/AE, there also seems to be an issue of oversupply of organic cocoa now:

“In the beginning, we did not have a secure market niche, but then we decided to apply for socio-environmental certification with Rainforest Alliance. We needed to recuperate and finance organic production in the area and reduce the excessive use of agrochemicals in naranjilla production. Now, organic certification has increased so much that the organization cannot now collect and process it all. As a consequence, some cocoa is sold as conventional in order to at least secure farmer income and reinforce the rejection of agrochemical use. Bear in mind there is a \$10/qq price difference” (RAO/KN manager, 2012).

The RAO/KN manager infers that Rainforest Alliance certification was used as a means to secure sales and support organic farming – i.e. the certification was used as a strategy to support organic production. RAO/KN has BCS organic certification giving it access to US, Europe and Japan. BCS is the most globally recognized certification and they have been working with it for a few years. Although costs increased to get the certification, they were offset by the increase in the number of farmers. According to the RAO/KN management, most buyers are more interested in the good management of the chacra and the good quality of cocoa produced as a result by their organization:

“There is not a lot of difference between the price of conventional and organic cocoa. Right now, organic goes for \$185/qq. Those who buy from RAO/KN do not care if the cocoa is organic or not; what they are after (and willing to pay for) is high quality. They will even sell organic as conventional. What catches the buyer's attention is the good management of the chacra system” (RAO/KN manager, 2012).

In 2006, RAO/KN exported 27t of dry cocoa to its primary buyer in Switzerland. Exports have increased continuously, reaching 101t in 2011 (an increase of 274%). Markets have diversified and commercial contacts have increased (GIZ, 2011). 70% of their production is sold within the country and 30% is exported. The main destinations are US²⁵, UK, Spain, Italy, Germany, Switzerland, Denmark and since 2011 also Japan. Exporting to this country is the first step in doing business in that region and RAO/KN have sent samples via commercial agents to Asian countries. RAO/KN has three main buyers for its production (Max Felchlin is the largest, followed by Cofina and Ecuatoriana de Chocolates. Cocoa sales declined locally between 2009 and 2010.

Before 2006, many farmers now working with RAO/KN sold their cocoa to local intermediaries. Today, three-year commercial contracts are kept and are based on trust. Buyers incorporate the characteristics of the beans by mentioning origin, ethnicity, and environmental benefits in their marketing strategy. These give RAO/KN farmers confidence that they have a long-term future in cocoa.

²⁵ Chocolate bars of 70 grams, with 75% and 85% of cocoa are sold for €4.75 in the USA (Univero 2008)

RAO/KN started making 70g chocolate bars in partnership with Salinas de Bolivar and started contacting companies such as Good Food to sell these at their stores in the USA. Now bars are made in Quito by the company Ecuatoriana de Chocolates and about 300t are exported as bars every year.

Certification has enabled RAO/KN and RAO/AE in concrete terms, to increase the price they pay to farmers and buffer the price drop of 2009, and indirectly, certification has increased total volumes sold at a better price. Rainforest Alliance certification has also allowed the organisations to access new markets and indirectly maintain/increase price. But it is not possible to quantify these indirect price increments through Rainforest Alliance certification.

For Fairtrade certified organisations FTO/NO farmers sell their beans to the PO and UROCAL acts as an exporter, some of which is sold on Fairtrade terms. O/UCO farmers also sell via UROCAL to export markets, but not on Fairtrade terms. For FTO/FM, all production is sold on Fairtrade terms and market access is increasing, whereas NC/PM (non certified) farmers sell dry beans to the multinational Armajaro, which then exports the cocoa. See table 29 which explains their full value chains.

Table 29: Value chain characteristics of the Fairtrade study organisations

Organisation	Value chain
FTO/NO (subsidiary of UROCAL) Fairtrade certified (and organic)	<p>Farmers sell most of their dry beans to the organization and only a small proportion to intermediaries. FTO/NO sells to UROCAL that acts as an exporter selling some to ETHIQUABLE²⁶ under the Fairtrade label. UROCAL assures that through this label, there is market stability. Most of this cocoa goes to France through ETHIQUABLE and to Italy via the Grupo Salinas. UROCAL, ETHIQUABLE and CAFIESA TRIIARI²⁷ process the beans into cocoa powder or butter. Based on the decision made within FTO/NO, farmers can use the Fairtrade Premium to modernize their farms via pruning, new plants or fertilizers.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>It is “a secure market that we have been working with for three years. They ask for processed products like cocoa butter or cocoa powder. Also, contracts are agreed annually whereby global amounts are agreed that can be delivered throughout the year. For example, if I send in 50 t in January, I can send in the remaining 10 t another month to meet my quota.” (President of FTO/NO)</p> </div>
FTO/FM Fairtrade certified (and organic)	<p>FTO/FM farmers sell most of their fresh beans to the organization and only a small proportion to intermediaries. FTO/FM processes the beans and acts as a direct exporter and sells all of its production via the Fairtrade system. Its principal clients with the FLO label sell to Switzerland via PRONATEC²⁸, to México via Agroindustrias Unidas de Cacao, and the EEUU via Atlantic Cocoa Company. With the Premium earned on sales to Fairtrade farmers buy fertilizers, new plants or machines to prune trees. State support is provided through MAGAP and its project Agricultural Competitiveness and Rural Sustainable Development, CADERS.²⁹</p>

²⁶French organization founded in 2003 to distribute and promote fair trade products creating a link between producers and consumers.

²⁷ An Ecuadorian company with a tri-national agreement to process dry beans

²⁸ Swiss company that offers organic raw materials and also fair trade products.

²⁹State project that promotes sustainable rural development to guarantee food sovereignty. It offers integrated solutions to the poor infrastructure in rural areas through getting smallholder farmers to work together to process and transport their agricultural products.

	<p>“Since our first sale our organization was via Fairtrade and over time we are increasing our markets; now we sell to Germany, Mexico, Switzerland and the US. We feel that we are in a safe position because the prices have never been less than the stock market” (President of FTO/FM, 2012).</p>
O/UCO (organic)	<p>Farmers sell fresh cocoa beans to the organization and the farmers must dry the cocoa in their installations. Once dried, the cocoa is sold to UROCAL that sells it to national and foreign buyers. Its cocoa goes to México via Agroindustrias Unidas, to the US via Atlantic Cocoa Company, and to national companies such as SKS FARMS³⁰ and COFINA³¹.</p>
NC/PM (non certified)	<p>NC/PM farmers sell their dry beans to the company Armajaro that then exports the cocoa. Farmers did not know about the rest of the value chain. When NC/PM was active, it had help from the Agency for Development from the Manabí Province (ADPM), and national and international development agencies such as Corporation for Development and Creative Production (FUNDES), and the Spanish Agency for International Development (AECID)</p>

5.6 Quality

A significantly **larger proportion of certified producers reported an improvement in payments for quality cocoa than non-certified producers**; certified producers reported on average an improvement whereas non-certified producers reported on average a decline (final survey).

Certified producers had significantly higher productivity of raw and dried cocoa beans in 2010 and 2011 compared to non-certified. Yield increases resulting from technical improvements and management techniques (organic, RA and Fairtrade) and access to inputs (Fairtrade). Farmers saw positive changes in management of the cocoa crop and environment.

For the RAO/AE and RAO/KN organic farmers, yields are between 30 and 50% higher for organically certified farmers than for non-certified farmers, having improved over recent years. Improved disease control has been an important factor in improving yields, delivered through workshops, training and distribution of tools, plus transport of cocoa from fields to collection station. Within organizations, there is a generally held belief that the previous Rainforest Alliance and present organic certifications have directly influenced improvements in cocoa quality because farmers must comply with rules on farm management and the use of agrochemicals and hygiene methods for pest and disease control. Quality is key for sales and income as customers are primarily buying (and paying a premium for) the high quality available from Ecuadorian *nacional*-type cocoa, and secondly for the certification label. However, the rapid growth in organic production has outstripped current organisational capacity for collection.

Table 30: Organic production, quality and certification

RAO/AE and RAO/KN have been active in improving cultivation and post-harvest aspects through workshops and training and, in the case of RAO/KN, farmers have received pruning saws and brush cutters for site clearance. In addition, transport for cocoa from the fields to the collection station has been organized so that the farmer does not have to pay for transport, and quality can be monitored in the field. These benefits catch the attention of conventional (non-certified) farmers. However, organic production has increased so much that

³⁰Ecuadorian private company with the aim of producing, transforming and selling organic agriculture and forest gathered products. They help smallholder farmers market their products.

³¹ Cocoa processing company with capacity to offer cocoa liquor.

infrastructure is not sufficient to collect all the harvest, and sometimes farmers have no other choice than to sell to intermediaries.

The organic producer organisations (RAO/AE and RAO/KN) are improving crop management and quality to have a greater competitive advantage, regardless of whether they are certified or not. While environmental or Fairtrade certification has provided additional value to date, accessing new market niches requires compliance with quality standards.

Farmers and the organizations (RAO/AE and RAO/KN) are conscious that quality is actually a long-term process starting with crop maintenance through to post harvest techniques. So, organizations are working hard in disease control, training and technical assistance because diseases are an important contributor to yield losses. The organizations also totally prohibit mixing cocoa plant varieties, separating the CCN-51 from the *nacional* variety. Cocoa with pod rot is also separated out. Then the fermentation and drying processes are applied as per each organization's system. In general, Ecuador is trying to promote "fine aromatic cocoa" as its market niche based on the specific floral aroma of its *nacional* variety cocoa grown under good agricultural, but not necessarily organic, practices.

Within the PO management, there is a generally held belief that certifications have directly influenced improvements in cocoa quality because within organic certification standards farmers must comply with rules regarding plot or *chacra* management and especially with the obligation not to use agrochemicals and with regard to promoting diversification and forest management on the farm. For example in RAO/KN, they are putting a minimum standard of 80 species per cocoa plantation. And all of these practices are also associated with improving quality. A key informant explained how certification has supported longer-term planning and the ability to meet quality requirements:

"Certification has helped organizations in important ways through their requirements to obtain better quality. Nowadays, the requirements are stricter because the markets are really going for quality first—before certification. We are now better equipped to respond through improvements and through innovation of certain quality processes because organizations are planning for long-term processes thanks to certifications. In addition, this improvement in quality has given us access to other markets without certifications, but it is because of our certification process...So, really, certification often is an opportunity to create a dynamic of quality that little by little increases sales volumes with more access to other markets." (Anon. 2012b)

Fairtrade-certified members of UROCAL (FTO/NO) and FTO/FM obtain 2 to 3 times better yields than those with organic certification, but this is partly because of better growing conditions (less disease) and partly due to some members growing cocoa as a monoculture. While the control group organisation members often sell to intermediaries, the Fairtrade-certified members are mostly loyal to their organisations, demonstrating the value they place on the benefits derived from the organisations (including price and the collection system provided for cocoa) and from the Fairtrade Premium (credit, training and funeral funds).

One of the Fairtrade-certified organisations studied (FTO/FM) buys only raw cocoa so that it can control the quality of the end product and so sell more to lucrative export markets, including Fairtrade. The other Fairtrade-certified organisation studied (FTO/NO) mostly buys dry cocoa as it has very limited processing capacity. O/UCO members sell both raw and dry cocoa beans. In NC/PM farmers sell dry beans to a company.

The final destination of the production is determined by quality. The FLO-Ecuador liaison person stresses that sustaining market access requires quality:

“Traders want Ecuadorian cocoa. Due to the way it is grown, the climatic conditions and its geography, it has a special characteristics and this is what has to be preserved and improved, either with Fairtrade or without” (FLO liaison officer)

Having a Fairtrade label helps the farmer to improve quality and supporting the POs’ access to markets through investment of the Fairtrade Premium in the organisations, in production systems and in post-harvest systems:

All FTO/FM cocoa is now sold via Fairtrade, and thus generating the Fairtrade Premium - much of which is used to further increase production and quality – and thereby farmer’s incomes.

FTO/NO members receive economic incentives derived from the Fairtrade Premium to help purchase fertilizer, and carry out reforestation and soil conservation

Thus the Fairtrade-certified organisations are using the Premium to increase production and quality over time, which is not an option for their non-certified counterparts, and to sustain stable markets and access to market premiums for quality cocoa.

5.7 Market access

A significantly larger proportion of certified producers reported an improvement in market access than non-certified producers (final survey).

At the Fairtrade certified FTO/NO organisation, the stability of the market is very important to the organisation: “it [Fairtrade] is a secure market that we’ve been working with for several years. We work by yearly contracts based on one set volume that is filled throughout the year. The price is set by Fairtrade, either the contract is adjusted or the price is adjusted. The Europeans are more flexible about the quality, but the Americans are more strict about quality, the beans, the consistency and the aroma” (President of FTO/NO). **Thus, Fairtrade certification is supporting these producer organisations to reduce their dependence on certain buyers, to develop more stable markets and to gain greater commitment from members as a result of the Fairtrade Premium.**

5.8 Members knowledge of the value chain and ability to influence price

Improved knowledge of the value chain and the ability to influence price are important dimensions of producer empowerment. Knowledge of the value chain and influence on price amongst RAO/AE and RAO/KN individual producers appeared somewhat limited (whether certified or not), although RAO/KN management have a strong vision of their marketing. Understanding is also limited at the individual level amongst the Fairtrade farmers, although at organisational level there is greater understanding of the value chain than at comparison groups.

RAO/AE managers stated that their members know the value chain actors and suggested that farmers are the ones with the most power as they produce the cocoa, but the farmers do not set the prices. Farmers cannot set the prices and they recognize that each player in the value chain has specific functions. They believe that their function is to provide high quality beans, but not enough emphasis has been given to understanding or learning about this topic. An RAO/AE manager confirmed that:

“No, the farmers do not do the deals, they do the production bit. The employees manage the administration so that it all works. But you have to get the member’s opinions” (Interview with RAO/AE manager, 2012).

The RAO/AE managers said that they had trialled farmer price setting, but obtaining a consensus was too difficult:

“They do not have power with respect to prices. On several occasions in 2006 we tried to include farmers in the setting of the price, but there were too many difficulties to reach an agreement, mainly, “we don’t handle financial data”, people said. Also, some people did not participate. If not enough people were present, then the topic could not be discussed. (Interview with the manager of RAO/AE. 2012). “Farmers believe that the biggest beneficiaries of the cocoa value chain are the importers because they have the biggest profit because they sell processed cocoa, not just cocoa as a raw material” (Interview with Treasurer and President of RAO/AE, 2012)

It is clear that there is limited understanding amongst individual farmers about the value chain and confidence or organisation to advocate for greater influence in price setting. It would not necessarily be in the organisation’s interests to pay farmers much higher prices as this would affect their profits.

The situation in RAO/KN is fairly similar to that in RAO/AE – farmers sell their fresh beans to the organisation, where they are fermented and dried properly, with the difference that they sell three products: i) organic cocoa without certification; ii) organic cocoa with certification; and iii) RAO/KN chocolate. The best cocoa, whether certified or not, is exported. Cocoa that does not meet the grade is sold to local buyers, mainly COFINA. The RAO/KN managers said that their members have been able to influence the prices they receive. However, interviews with individual farmers did not indicate a widespread understanding or influence.

“For those parts of the value chain managed inside the organisations, the farmers have been able to set the price. This is thanks to the recognition farmers have received abroad with international awards, allowing the RAO/KN brand within niche markets to be known as one of the best cocoa and chocolate producers in the world. We take advantage of this situation when it comes to negotiating prices, because by having different buyers waiting for our products, we avoid the price monopoly of the big importers. Our organic cocoa has fetched even better prices than the prices quoted on the stock market and by the Fairtrade system” (RAO/KN manager, 2012).

“Farmers know the prices they will get, they know how their cocoa is used and they know the clients of the buyers of RAO/KN cocoa” (RAO/KN manager, 2012).

Although, farmers are aware that chocolate is made from cocoa beans and the prices that farmers will get, they do not understand the basis upon which prices are determined. For example, few have heard of the New York stock market price, with even fewer knowing the price range for cocoa on that market. People just know what country their cocoa is going to – they do not know the buyers. RAO/KN management indicated that farmers were receiving higher prices than from intermediaries:

“When buying locally, the farmers get 50% more of the value within the value chain and through the intermediary. He will pay \$45-50 qq for dry cocoa, whereas RAO/KN pays \$90/qq for conventional and \$120/qq for organic cocoa. The organisation takes \$5/qq for operating

costs because we buy directly at the farm gate. If selling to intermediaries, the farmer would have to take their product to them. The money paid for operating costs is used to re-capitalize the organization" (RAO/KN manager, 2012).

Some of the individual members interviewed, also suggested that the prices were low and on occasion actually lower than that of the intermediaries. This is why they were also selling part of their harvest to intermediaries. The RAO/KN managers also stated that in the future they may have to not buy directly from farms, as this makes their operating costs too high.

Within the Fairtrade cocoa value chain, the manager at FTO/FM said that market forces largely set the prices, but they are becoming less dependent on intermediaries: *'to some extent we are the owners of the business for now, farmers get the most benefit from the value chain'*.

FTO/NO said that prices are dictated largely by the market, but that in Fairtrade value chains there is a Premium which is paid to the organisation and distributed to the farmers.

The management of NC/PM and O/UCO appear to have less good understanding of the value chain or vision of how they might improve the terms of trade for their members in comparison to the Fairtrade certified managers. This is particularly the case at NC/PM, where they no longer buy cocoa and the members have to sell to local and external intermediaries - due to recent administrative and financial problems, and despite having good infrastructure, the organisation has stopped collecting cocoa from farmers). When NC/PM was active, they sold to Nestlé and FTO/FM. Now they sell to the company Armajaro³², which exports to different countries.

5.9 Prices and the distribution of the Premium (producers and organizations)

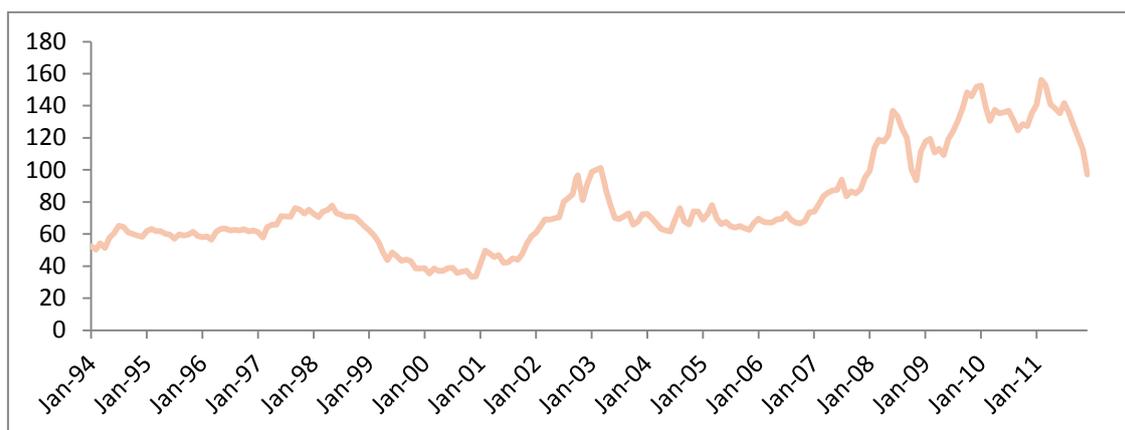
International cocoa prices are highly volatile and fluctuate due to several factors: i) changes in average production of the largest producers ii) outbreaks of pests and diseases iii) weather changes iv) inventory variations of the largest buyers and v) consumer preferences and income changes. Historically, the price of cocoa beans was strongly correlated to international production cycles. When worldwide production increased and there was a cocoa surplus, prices fell considerably. These variations made growing cocoa unattractive for many farmers and they switched to other crops. As a consequence, shortages developed which made prices surge. In real terms, these cycles have caused a strong drop in cocoa bean prices (UTEPI 2007).

In addition, prices respond to factors of supply and demand as defined by the *International Cocoa Convention* (2001). The daily price of cocoa beans is an average of the future quotes of the three most active months closest in the International Futures and Financial Options Exchange of London and the New York Stock Exchange (NYSE).

The evolution of the monthly NYSE average price for a 100-pound bag of dry cocoa beans is shown in Figure 12. Since 2010 prices have been rising. But farmer's perceptions are that during the same two-year period, prices have dropped making them uneasy about the situation.

³² ARMAJARO TRADING multi-national company selling commodities and specializing in both fine aromatic cocoa and CCN 51 cocoa. It began trade in Ecuador in 2009.

Figure 12: Average New York Stock Exchange Price (US\$), 1994 - 2011



(Source: Fep – cacao)

Due to the special taste of Ecuadorian cocoa, it has a special price in the Stock Exchange, depending on its quality as defined by the International Cocoa Organization, ICCO.

Organic cocoa obtains higher prices than conventional cocoa. However, just like prices for other agricultural products, the price of certified organic cocoa fluctuates. The prices that organizations pay to farmers are fixed every year based on the quantities they will sell to different traders and on the price per 100-pound bag in the sales contracts. Before establishing the price with the farmer, the organizations define the price with the trader taking the prices on the New York and London Exchanges into consideration. Currently, the prices are dropping. The price paid to organic-certified farmers for fresh beans is always higher than for conventional (non-certified) beans, although the price for organic beans has driven up the price for conventional beans, reducing the difference. Organic farmers have to put in more labour than conventional farmers, and it is therefore debatable if the extra price offsets the increased (mostly family) labour investment.

- **Organic and non-certified comparison:** In the RAO/KN area (Amazonas), prices paid are significantly higher than in the RAO/AE (coastal) area due to competition with intermediaries. RAO/AE farmers complain that the price they get is insufficient and unstable. RAO/KN sets a price at the beginning of the season based on demand and the price they can get from buyers. RAO/KN has increased production markedly (through both increased productivity and area planted) over the last few years and now their organic market is not big enough for all their production and they have to sell some as conventional cocoa. In addition their collection logistics are insufficient, so some produce is sold to intermediaries who tour the area speculatively in trucks.
- **Fairtrade and non-certified comparison:** The price paid to farmers by both Fairtrade-certified organisations is slightly more than that paid to farmers by both non-certified organisations, and has been rising gradually for the last few years. The prices paid by the Fairtrade organisations are higher than those of the New York Stock Exchange and since 2006 have been above the Fairtrade minimum price. However, for all four organizations (Fairtrade and comparison organisations) the perceptions of farmers are that cocoa prices have got worse or decreased during the last two years even though the evidence does not bear this out. This may be because their profits have been decreasing because of increased production costs, or that domestic costs have risen with inflation reducing the buying power of their income. Poor communication on the part of the organisations may also play a role.

The FLO-Fairtrade minimum price for cocoa is a useful safety net for certified organisations and their members, but prices since 2006 have been above the present minimum price, so prices have been linked to the New York Stock Exchange instead.

In the final survey, certified producers received significantly higher prices for raw beans from producer organisations in 2010 and 2011 than non-certified producers. Certified producers received significantly lower prices for dried beans in 2010 and 2011 from other buyers than non-certified producers.

5.9 Distribution of the Fairtrade Premium

In addition to the price paid to farmers for their cocoa, Fairtrade-certified farmers also benefit from the Fairtrade Premium paid to the certified organisations (US\$150/MT FOB for non-organic and US\$200/MT FOB for organic Fairtrade dry cocoa).

Individual farmers are not paid directly, rather the Premium is given to the general assembly of each organization and should be used on social, economic or environmental projects agreed through a democratic process and implemented by the members. It should also be a transparent process. Farmers in non-certified organisations do not benefit from the Fairtrade Premium.

- FTO/NO use the Premium for administration, organisational strengthening, the environment, health costs, social security for members and staff, and school scholarships. The proportion going to each activity varies from year to year. Included is an amount for increasing production through the application of fertilisers and soil conservation. There is limited benefit to the wider community as the Premium is primarily directed at the organisation or its members.
- For FTO/FM, nearly half the Premium earned is used for providing credit to members, while the rest is split between health and funeral funds, the rehabilitation of plantations, a plant to make organic fertilisers, infrastructure development, training and information. Again most of the Premium concentrates on improving farmer and organisational productivity rather than the overall well-being of communities. However, a difference with FTO/NO is that no Premium is explicitly earmarked for running the FTO/FM organisation.

5.10 Understanding of the Fairtrade Premium

The administrators / leaders of the organizations know the most about the Fairtrade Premium and how it is spent. 75% of the FT/Organico producers interviewed knew how the premium was used. Use of the premium for cocoa production was most often mentioned, followed by (in decreasing order) infrastructure/equipment, credit, health, education, individual cash payments, training and other activities. The majority of the producers said they benefitted from the uses of the premium they mentioned. The producers ranked the importance of each use of the premium in a similar order. However, knowledge of use of the premium varies between organisations. Members of FTO/NO were asked about the use of Premium, but had less idea how it is being used.

Authorisation of the use of Premium is decided in General Assembly meetings. The distribution of the Premium is part of the FLO audit conducted with each organization to guarantee its transparency and credibility. One manager stated:

“The audit reports are publicly available and the results are discussed during meetings. The external auditor invites the leaders and the members to read the final report. Results are also shown with photos, videos, flyers etc. The problem is that some members are elderly and they don’t remember what happened two weeks ago. So, now in order to avoid this problem of people saying we don’t publicise the audit results, we are going to make posters” (manager, FTO/FM)

There appears to be scope for improving communication between PO and members with regard to the Fairtrade Premium.

5.11 Income

5.11.1 Relative importance of cocoa in household income

Cocoa and other crop production is more important to household livelihoods than for non-certified farmers: In both the baseline and final surveys certified smallholders obtain a significantly higher income from cocoa production than non-certified smallholders and obtain a significantly higher income from production of other crops than non-certified smallholders. Certified smallholders in the baseline rank cocoa production and other crop production as significantly more important than non-certified smallholders. In the final survey certified producers also rank cocoa production as significantly more important than non-certified producers – the latter ranked remittances in the final survey as significantly more important as a source of income than certified producers. Certified producers ranked ‘other’ as significantly more important source of income than non-certified producers.

5.11.2 Farmer estimates of total income

Certified smallholders obtain a significantly higher total income than non-certified smallholders in both the baseline and final surveys (table 31).

Table 31: Household Income

	Certified			Non certified		
	2010	2012	Sig	2010	2012	Sig
N	329	290		247	125	
Household income: cocoa	1843	1891	ns	1100	718	*
Household income: other crops	1786	1944	ns	708	561	ns
Household income: livestock	524	405	ns	287	526	ns
Household income: casual labour	399	585	ns	373	704	*
Household income: permanent employment	648	1411	***	658	1874	***
Household income: remittances	27	124	ns	27	175	ns
Household income: business	115	239	ns	161	330	ns
Household income: transport	38	50	ns	25	0	ns
Household income: ‘bono’	258	330	**	310	390	*
Household income: handicrafts	9	19	ns	33	20	ns
Household income: other	131	498	***	145	323	ns
Total household income	5775	7496	*	3826	5621	***
-1 = decrease / deterioration; 0 = no change; 1 = increase / improvement						
Change in farm income over past 2 years	0.30	0.22	ns	0.00	0.19	*

Sig = Significance of differences between groups (based on Mann-Whitney test): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Between 2010 and 2012 there was no significant change in cocoa income for certified farmers, but for non-certified producers, income from cocoa significantly declined (table 31). Household incomes were higher for certified farmers compared with non-certified, although the rate of increase in income was higher for non-certified household incomes, linked to a large increase in permanent employment.

Farmers' incomes are derived from various sources including the sale of cocoa, banana, plantain, citrus, other fruits, food crops, and small and large animals. They also earn money working as contracted labour, either permanently or seasonally depending on where they live and the extent to which the land provides a living.

The figures comparing certified versus non-certified farmers are fairly clear in terms of income with certified producers earning a higher income and gaining more from cocoa than non-certified farmers. However, there is significant variation and complexity at organisational level. Table 32 provides a summary of the income earned from cocoa by farmers in the different organisations. Cocoa incomes are higher for non-certified farmers at all of the organisations except for RAO/KN – (although certified Fairtrade farmers receive other benefits from the Premium), but there are also differences in the relative importance of cocoa to household incomes, with some certified producers (RAO/AE and FTO/FM) earning more from paid work or growing bananas (FTO/NO) than from cocoa income.

Table 32: Farmer incomes by organisation and certification

Organisation	Income
RAO/AE	
The poorest grow cocoa, bananas and keep chickens and pigs and do waged labour. Richer households have livestock or shrimp farms, plant oil palm, Eucalyptus or heart of palm.	
RAO/AE organic-certified farms: Average total annual income of \$6,644 Annual income of \$1,482 annual income 22% of total farm income from cocoa	RAO/AE conventional farms: Average total annual income of \$7,514 Annual income of \$1,790 year 24% of total farm income from cocoa
This difference in cocoa income is surprising given higher cocoa yields on organic farm and higher prices paid for organic cocoa. An explanation is that the principal activities for certified farmers, in order of remuneration, are: paid permanent work, production and sale of cocoa, and income from other farming activities. For non-certified farmers, the main source of income is cocoa, followed by paid work and finally other activities.	
RAO/KN	
Poorer households: off-farm work, with consequent neglect of their crops. However, improved cocoa prices that accompany organic certification (whose standards many farmers meet anyway through their traditional <i>chacra</i> farming system) mean that farm income can rise and offset the need for off-farm employment. RAO/KN farmers have also started to grow vanilla as an associate crop which is also marketed through the RAO/KN producer organisation. The need to work as a labourer, either seasonally or permanently, continues to be an important component of overall income in the RAO/KN region, particularly for the smaller farmer. For certified farmers, cocoa is the most important crop, while for non-certified farmers, other	

crops such as plantains, cassava and maize are more important than cocoa.	
RAO/KN organic farmers Average total annual income of \$4,372, Annual cocoa income of \$694 20% of income from cocoa	RAO/KN conventional farmers Average total annual income of \$4,668 Annual cocoa income of \$208 8% of income from cocoa
FTO/NO	
For FTO/NO cocoa farmers, bananas are the main income earner, followed by cocoa, sale of citrus, other fruits, sale of small animals and seasonal or permanent labour. In a few cases, remittances are sent from family members living abroad.	
Fairtrade FTO/NO certified farmers: Annual cocoa income - \$4600	Non-certified FTO/NO certified farmers: Annual cocoa income - \$5,200
FTO/FM	
For FTO/FM Fairtrade-certified farmers the main economic activities are permanent or seasonal work, cocoa, plantain and the sale of small animals or cattle. Some people also receive state benefits such as the "human development" or disability payments. Farmers belonging to the control groups earn more from sales, but Fairtrade farmers also receive benefits from the Fairtrade Premium awarded to their organizations.	
FTO/FM Fairtrade certified: Annual cocoa income - \$6,400	NC/PM non-certified: Annual cocoa income: \$7,100

5.11.3 Costs of production and gross margin

The cocoa production process is composed of several pre-harvest activities including: clearing and weeding, sanitary pruning of diseased pods or limbs, and irrigation depending on the climate. The cost of these activities changes from place to place and according to input and labour prices³³.

According to the National Autonomous Agriculture Research Institute of Ecuador (INIAP), in 2010, the investment per ha to establish cocoa (first year) was \$2,299.56. In the second year, maintenance costs were \$1,543.33. Between years 6 and 7, costs varied between \$965.49 and \$976.49. Starting with the harvest in year three, marginal utility from one ha of conventional cocoa is \$378.93, \$1,133.38 and \$1,609.38 for years four, five and six, respectively.

Production costs fluctuate a lot. ICCO does not publish average production costs because they are so different from region to region and depend on climate factors, precipitation, relative humidity, temperature, soils, texture, topography, water availability, and market access. Initially, after discussions with extension agents from the different organizations, production information was recorded with standardized data sheets. But because of time limitations, this method was discontinued. Data from a study conducted by SIPAE in 2010 was used instead (see section on production systems and types of farmers).

The calculation of cost of production was done using the following definitions:

³³ For RAO/KN labour costs were not given a value since all the labour is by family members.

- **Consumables:** The value per ha of all the goods and services used during production (seeds, fertilizers, tractor use etc). Family or contracted labour is not included.
- **Depreciation:** The cost of annual usage of all equipment, installations, crops and tools used. A linear calculation was done dividing the cost by the useful lifetime of the item.
- **Payments to others:** Payment of taxes, rent, transport of products and any others. Family or contracted labour is not included.
- **Hired labour:** Labour contracted by the day or by the month

Cost of production findings were as follows:

- RAO/AE: Average production costs for RAO/AE farmers with organic certification are 1.5 times higher than those for conventional farmers (non-capital costs are US\$208/year for certified farms and US\$144/year for conventional farms), mainly due to increased labour costs for weeding as contracted labour accounts for 16% of the costs for organic farmers and only 8% for conventional farmers.
- RAO/KN: For RAO/KN farmers, the difference in production costs between certified and non-certified farmers is only \$7/ha/year (US\$117 for certified farmers and US\$124 for conventional farmers). This is due to both types of farmers using the *chacra* system. Even conventional farmers only apply agrochemicals when it is really necessary.
- For UROCAL FTO/NO Fairtrade-certified farmers production costs were \$2,335/ha, compared to \$1,926/ha for non-certified farmers - a difference of 21%. For certified farmers, consumables are the most important cost line, while for non-certified farmers, payments to others were more important.
- For FTO/FM Fairtrade-certified members, average annual production costs were US\$538.10/ha vs. US\$589.57/ha for their non-certified counterparts in NC/PM.
- For RAO/AE certified farmers costs are higher than for non-certified farmers, but for RAO/KN farmers there is little difference, because both groups follow the same *chacra* farming system. For FTO/NO Fairtrade certified farmers their costs were higher than non-certified farmers, but for FTO/FM non-certified farmers had higher costs. Thus, the results were fairly mixed,

5.11.4 Change in income

In 2010 certified smallholders reported more positive change in income over the previous two years than the non-certified farmers, although the difference between them was not significant (table 31). By 2012, certified farmers continued to report more positive income improvement in the previous 2 years, than the non-certified group, but the latter showed a larger degree of change on average, certified farmers reported an increase in income whereas non-certified farmers reported no change since the baseline survey.

5.11.5 Covering basic needs

In the baseline survey (2010) the proportion of food covered by 'own farm' production is significantly larger for certified smallholders than non-certified smallholders. However, cocoa income also covers a significant larger proportion of debt payments of non-certified smallholders compared to certified smallholders. However, in 2012 non-certified producers covered a **significantly smaller proportion of all their household expenditures with their cocoa income than certified producers**, except school expenses where there is no significant difference. Comparing the degree of change, both groups reported a decline in the extent to which cocoa income covers their basic needs (table 33), but this was significantly greater for the non-certified group for clothing, health, water, energy and rent (table 34).

Table 33: Cocoa income and basic needs

	Certified			Non certified		
	2010	2012	Sig	2010	2012	Sig
N	323	289		245	125	
Income covers basic needs: Food	2.38	2.57	*	2.31	2.30	ns
Income covers basic needs: Clothing	2.96	2.01	***	3.02	1.70	***
Income covers basic needs: School expenses	2.80	1.87	***	2.89	1.92	***
Income covers basic needs: Health costs	2.79	2.16	***	2.87	1.74	***
Income covers basic needs: Water	3.08	1.77	***	2.99	1.37	***
Income covers basic needs: Energy	2.79	2.26	***	2.92	1.84	***
Income covers basic needs: Debt	3.33	1.31	***	3.51	1.15	***

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Table 34: Relative change in ability of cocoa income to cover basic needs

DD results for tea income covering HH expenses	DD	P> t
DD income covers food expenses certified vs non-certified	0.204	0.090
DD income covers clothes expenses certified vs non-certified	0.366	0.004
DD income covers school expenses certified vs non-certified	0.046	0.739
DD income covers health expenses certified vs non-certified	0.498	0.000
DD income covers water expenses certified vs non-certified	0.317	0.047
DD income covers energy expenses certified vs non-certified	0.553	0.000
DD income covers rent / mortgage expenses certified vs non-certified	0.336	0.011

Responses to the open question of how respondents meet their needs if cocoa income is insufficient are varied. However, many respondents replied that the household relies on **multiple income activities of multiple household members** (head of household, spouse, and in some cases older children). Income activities include permanent jobs, selling timber and charcoal, searching for gold, casual labour, and crop and livestock sales.

According to the surveys, for farmers working within the Fairtrade system and those who are not, the income generated from cocoa is not enough to cover their basic necessities of food, clothing, education, health and payment of basic utilities like water or energy. But, cocoa growing is considered one of their most important activities that can pay for 24%-50% of the basic necessities mentioned above. It does not cover all their necessities because cocoa harvests are not constant. It has its peaks during certain times of the year, making the search for alternative income sources for the rest of the year a necessity.

5.11.6 Access to credit and savings

The baseline and final survey, 2012, did not find significant difference in farmers' access to credit. **Credit is not made available through the organically-certified organisations.** Rather, any loans that farmers have are with banks and other lenders rather than with their

organisations and this is one of the most frequent requests by members to their organisations. On average, organic farmers have loans worth \$288 (RAO/AE) and \$981 (RAO/KN) compared to conventional farmers with \$38 (RAO/AE) and \$1150 (RAO/KN). So, RAO/KN members do have more credit, but this is due to the individual farmer's efforts with different banks not due to the organization.

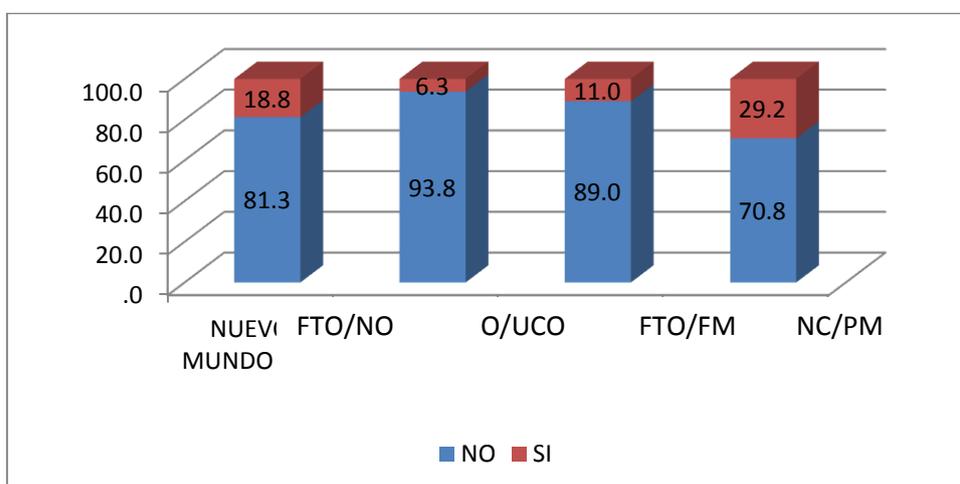
However, Fairtrade members of FTO/NO and especially FTO/FM have good access to credit from their own organisations through funds from the Fairtrade Premium. For FTO/FM, nearly half the Premium earned is used for providing credit to members. Farmers in the control groups, O/UCO and NC/PM, say that in order to get a loan they need to go to the Banco de Fomento or private banks where payback times are short and interest rates high.

Fairtrade members of FTO/NO and FTO/FM, where credit is an important part of how the Premium is used, have better access to credit from their own organisations. Farmers in the control groups, O/UCO and NC/PM, say that in order to get a loan, they can only make requests to the Banco de Fomento or private banks. But the payback times are short and they use (high) commercial interest rates.

In terms of savings, certified farmers have more savings than non-certified farmers. However, incomes barely cover basic necessities for organic farmers and savings are used for short-term needs (e.g. replacing tools), rather than larger, long-term investments). A lot of farmers borrow small amounts over the year, but savings go to pay these back.

- Few organically-certified farmers are able to save money earned from cocoa. In RAO/AE <40%, and in RAO/KN <20%, of members say they have money set aside for family needs. Of those that do have savings in RAO/AE, certified members have larger savings (US\$398) compared to non-certified farmers (\$144). The main use of savings is for the payment of loans, purchase of household electrical items, improvements to the farm and house, and health expenses. This pattern is the same for both certified and non-certified farmers.
- More than 70% of the Fairtrade-certified farmers studied have not achieved savings from cocoa sales in the last two years. In those cases where members did have savings from cocoa, they were larger than for their non-certified counterparts (FTO/NO US\$289, O/UCO\$222; FTO/FM \$310 and NC/PM \$187). Savings are typically spent on paying off loans, and improving homes and farms.

Figure 13: Availability of savings generated from cocoa and available for investment in the last two years



Source: Surveys with members of the organizations in this study Produced by: SIPAE

5.11.7 Investments

Where farmers achieve higher incomes through certification, it is important to understand how that income is invested in order to better understand the impact of certification on poverty. The questionnaire survey results indicate that overall certified farmers do achieve higher incomes than non-certified farmers, but at organisational level there is significant variation.

Non-certified smallholders ranked investments in house improvement as significantly more important than certified smallholders (baseline survey), but there were no other differences on other types of investment. In the final survey (2012) non-certified producers ranked 'other' investments (such as education, livestock, food, and labourers) as more important than certified producers. There are no other significant differences in how the producers rank the importance of different types of investments made with the income from cocoa production.

Table 35: Investments made with cocoa income (2012)

	Total	No certification	Certified	Sig
N	415	125	290	
Cocoa income used for investments (%)	25	21	27	ns
Ranking of importance: 1 = most important, 2 = second most important, etc				
Credit payments	1.43	1.67	1.39	ns
Household durables	1.38	1.50	1.33	ns
House improvements	1.90	1.50	1.95	ns
Land acquisition	3.00		3.00	ns
Farming activities or inputs	1.63	1.33	1.73	ns
New livelihood activity	1.67	1.00	1.77	ns
Other	1.53	1.15	1.64	*
Health	1.81	1.60	1.86	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤0.001

5.12 Food security

The baseline and final survey results show that for certified farmers, in general they are more food secure than non-certified farmers. The baseline survey results show that certified smallholders eat meat, chicken or fish significantly more often in a week than non-certified smallholders and are less dissatisfied with food quality than non-certified smallholders. The proportion of food covered by farmers' own farm production is significantly larger for certified smallholders than non-certified smallholders. The final survey results also indicate that certified producers are significantly more food secure than non-certified producers. Non-certified producers are more reliant on their farms for household consumption than certified producers.

From this study, the general trend that emerges is that families eat three times a day and their diet includes protein (meat) three times a week and carbohydrates seven times a week. Amongst the organic certified farmers and their comparison groups the findings were as follows: A slightly higher proportion of certified farmers believe they have enough to eat than the comparison group: 53% of RAO/AE certified farmers and 43% of their comparison group believe that they have enough to eat, while 40% and 52%, respectively state what they eat is "neither sufficient nor insufficient." – i.e. more of the non-certified farmers are food insecure.

However, for RAO/AE certified farmers, 56% state the quality of the food is good, while 62% of the non-certified farmers state that the quality is good. About half of certified and non-certified farmers think that their farms produce half of their food requirements, while the rest think their farms cover only 25% of what they need. In RAO/KN 50% of certified farmers and 61% of the control group state that the quantity of the food they eat is “neither sufficient nor insufficient.” About 50% of certified farmers and 68% of non-certified farmers believe their food quality is good. While 69% of certified and 78% non-certified members think that their farms produce half of their food requirements.

Of the Fairtrade certified households and their comparison groups [FTO/NO, FTO/FM and NC/PM], most of the farmers stated that they eat meals three times a day. They eat beef, chicken or fish three times a week and carbohydrates such as cassava and rice daily. Much of this food is from their own farms underlining the importance of associated crops with cocoa for self-consumption. The majority of those surveyed, said that they eat enough food and that the quality of the food they eat is sufficient.

5.13 Perception of change

Farmers were asked in the questionnaire survey whether they perceive a decrease/deterioration, increase/improvement or no-change in a number of areas (e.g. production and household assets). **Certified farmers were more positive on a number of indicators than non-certified farmers (market access, quality of cocoa, and environment).**

In the final survey the questionnaire findings show that a significantly larger proportion of certified producers reported an improvement in market access than non-certified producers. Further, a significantly larger proportion of certified producers reported an improvement in payments for quality cocoa than non-certified producers; certified producers reported on average an improvement whereas non-certified producers reported on average a decline.

A significantly larger proportion of certified producers reported an improvement in the environment than non-certified producers.

Table 36: Perceptions of changes in services from the PO (2012)

	Total	No certification	Certified	Sig
N	415	125	290	
1 = decrease / deterioration; 2 = no change; 3 = increase / improvement				
Minimum price for cocoa	1.41	1.34	1.44	ns
Premium payments	2.37		2.37	
Credit including farm inputs on credit	2.12	2.08	2.14	ns
Advance payment for product	2.15	2.22	2.14	ns
Market access	2.32	2.10	2.42	***
Payments due to quality cocoa	2.09	1.85	2.20	***
Access to training	2.31	2.33	2.30	ns
Extension services for cocoa	2.36	2.31	2.39	ns
Crop management cocoa	2.55	2.54	2.55	ns
Availability of cocoa production inputs	2.37	2.30	2.39	ns
Post-harvest handling facilities for cocoa	2.23	2.26	2.21	ns

Diversification of farming enterprises	2.28	2.21	2.31	ns
Value addition on farm	2.07	2.02	2.10	ns
Environment	2.58	2.47	2.62	*
Safe use of pesticides	2.24	2.20	2.26	ns
Functioning of the producer organisation	2.40	2.34	2.42	ns
Social development	2.30	2.33	2.28	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

5.14 Perceived changes in the community

Overall, the producers reported on average positive changes in their communities.

Certified producers reported on average a significantly larger improvement in education services in particular compared to non-certified producers. However, certified producer attributed this more to government interventions than to certification.

Table 37: Changes in services in the community

	Total	No certification	Certified	Sig
N	415	125	290	
1 = decrease / deterioration; 2 = no change; 3 = increase / improvement				
Infrastructure	2.38	2.37	2.39	ns
Health services	2.54	2.50	2.55	ns
Education services	2.70	2.61	2.74	**
Household services	2.44	2.39	2.46	ns
Other (houses, playing fields, etc)	2.88	2.75	2.92	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

5.15 Changes in household assets

Certified producers have currently more land under cocoa than non-certified producers, as well as higher cocoa yields. Certified producers received significantly more training than non-certified producers 2 years ago. Certified producers also had significantly more bicycles, pickups, radios, and credit than non-certified producers 2 years ago.

Certified producers have more land and higher yields of cocoa now than 2 years ago. However, the certified producers have now less livestock (cows, chickens, pigs) than 2 years ago. The certified producers also reported less training events now than 2 years ago.

Table 38: Household assets (2012)

	Total	No certification	Certified	Sig
N	415	125	290	
Land owned ha	11.87	11.99	11.82	ns
Land rented ha	0.12	0.15	0.11	ns
Land planted to cocoa ha	3.29	2.45	3.65	**
Yield of cocoa	4.61	2.73	5.41	***
Area of other perennial crops ha	7.12	5.92	7.63	ns

Area of other annual crops ha	0.51	0.50	0.52	ns
Number of cows	4.01	4.31	3.89	ns
Number of chickens	15.24	15.01	15.34	ns
Number of pigs	1.42	1.62	1.33	ns
Number of training events	2.14	2.36	2.04	ns
Number of bikes	0.32	0.16	0.39	***
Number of motor bikes	0.62	0.15	0.82	ns
Number of pickups	0.51	0.04	0.71	ns
Number of radios	0.76	0.26	0.97	ns
Number of TVs	1.26	0.76	1.48	ns
Credit (\$)	1016	923	1056	ns
Cash savings (\$)	254	159	295	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P<0.05, **P<0.01, *** P< 0.001

Table 39: Household assets (2010)

	Total	No certification	Certified	Sig
	415	125	290	
Land owned	12.11	11.92	12.20	ns
Land rented	0.18	0.27	0.13	ns
Land planted to cocoa	3.04	2.22	3.40	**
Yield of cocoa	4.14	2.52	4.82	***
Area of other perennial crops	7.19	5.22	8.02	ns
Area of other annual crops	0.53	0.56	0.52	ns
Number of cows	4.76	4.78	4.74	ns
Number of chickens	32.59	28.60	34.29	ns
Number of pigs	2.04	1.72	2.18	ns
Number of training events	3.50	2.19	4.07	***
Number of bikes	0.34	0.18	0.40	***
Number of motor bikes	0.15	0.20	0.12	ns
Number of pickups	0.09	0.04	0.11	**
Number of radios	0.29	0.22	0.32	*
Number of TVs	0.73	0.65	0.76	ns
Credit (\$)	847	519	988	*
Cash savings (\$)	285	163	337	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P<0.05, **P<0.01, *** P< 0.001

5.16 Changes in household wellbeing and welfare

Producers report improvements in all aspects of household wellbeing and welfare. Certified producers report on average more improvement in relation to better farming methods and access to credit than non-certified producers. This is consistent with findings that Fairtrade farmers have improved access to credit via the Fairtrade Premium, and that all farmers, are improving farming methods via certification.

Table 40: Household wellbeing and welfare 2012

	Total	No certification	Certified	Sig
	415	125	290	
1 = decrease / deterioration; 2 = no change; 3 = increase / improvement				
Roof	2.18	2.21	2.16	ns

House quality	2.27	2.34	2.25	ns
Drinking water	2.07	2.10	2.05	ns
Electricity	2.32	2.30	2.33	ns
Better farming methods	2.10	2.02	2.13	***
Road access	2.25	2.30	2.23	ns
Mobile phone	2.31	2.27	2.33	ns
Technical assistance	2.37	2.35	2.38	ns
Medical facilities	2.52	2.55	2.51	ns
Schooling facilities	2.64	2.55	2.68	ns
Membership of groups	2.43	2.45	2.43	ns
Social security	2.46	2.41	2.47	ns
Access to credit provision facilities	2.23	2.13	2.26	*
Household food consumption	2.29	2.34	2.27	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

5.17 The future

The producers reported on average that their own lives, as well as the lives of the women in the community, had improved in the last 2 years. Producers expect that their lives will further improve in future, and even more so for their children. **Certified producers showed a significantly greater change in expectations for their children than the non-certified group.**

Table 41: Changes in wellbeing

Comparison of means (non-certified smallholders)	2010	2012	Sig
N	413	125	
-1 = decrease / deterioration; 0 = no change; 1 = increase / improvement			
In the past 2 years, did you become better off	0.21	0.26	ns
In the near future, will you become better off	0.47	0.68	ns
In the past 2 years, did the women become better off	0.45	0.40	ns
How will you children be in comparison to you	0.77	0.73	ns
Comparison of means (certified smallholders)	2010	2012	Sig
N	321	287	
-1 = decrease / deterioration; 0 = no change; 1 = increase / improvement			
In the past 2 years, did you become better off	0.20	0.22	ns
In the near future, will you become better off	0.22	0.56	***
In the past 2 years, did the women become better off	0.23	0.41	*
How will you children be in comparison to you better off	0.30	0.74	***

Sig = Significance of differences between groups (based on Mann-Whitney test): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

5.18 Hired labour, child labour and working conditions

About half of all producers employ labourers in cocoa production. Significantly more certified producers employ labourers in cocoa production than non-certified producers, which can be explained by the larger scale of cocoa production of the former. About 90% of the labourers are paid in cash solely, or in a combination of kind and cash (7%). Only a very small proportion of labourers receive payments in different kinds.

About half of producers who employ labourers report that the labourers' conditions have changed for the better, in particular their wages and the timing of payments. Certified producers also reported that the labourers' exposure to health and safety hazards had improved, whereas non-certified producers reported no change; this difference was significant. **Thus, according to certified producers conditions for their hired labour has improved.**

However, in the qualitative research major differences between RAO/AE and RAO/KN certified and non-certified situations did not emerge:

- In the RAO/AE area most cocoa farmers do not hire workers. If they need help during harvest, families help each other. If labour is hired in, they are paid between \$10-\$12/day with lunch included.
- Things are different in RAO/KN. Labour (when needed in addition to the family) is hired through a written contract and workers are paid \$12 for working from 8am -2pm. There are no substantial differences between the certified and non-certified situations.
- RAO/AE staff has health and social security insurance. However, this cannot be attributed to organic certification. Rather it is to meet national employment requirements.

Amongst the Fairtrade organisations workers did report improvements in working conditions, but this attributed more to government pressure, rather than certification:

- Fairtrade-certified members of FTO/NO and FTO/FM and their counterparts in the O/UCO and NC/PM all say that they hire outside labour especially during harvest (for US\$8-10/day plus lunch). They pay cash, and in a few cases they pay with food or they offer a place to live. Sometimes farmers help each other in reciprocal agreements. Workers say that salaries have risen, their exposure to health risks have dropped (three out of the four certified organisations are organic-certified and therefore use no harmful agrochemicals) and child labour has fallen. But these changes are mainly thanks to government pressure with stricter laws—and not due to certification, even though the labels also require these standards.

Table 42: Employment of labourers (2012)

	Total	No certification	Certified	Sig
N	415	125	290	
Employs labourers (% respondents)	48%	39%	52%	*

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Table 43: Forms of payment to labourers (2012)

	Total	No certification	Certified
N	200	49	151
in cash	90%	86%	91%
in kind	2%	0%	2%
combination of in cash and in kind	7%	10%	6%

no payment	0%	0%	0%
Other	2%	4%	1%

Note: There is no significant difference between the different categories ($p = 0.285$, based on Mann-Whitney test).

Table 44: Changing conditions of labourers

	Total	No certification	Certified	Sig
N	201	49	152	
Conditions of labourers changed (% respondents)	48%	55%	45%	ns
If change: 1 = decrease / deterioration; 2 = no change; 3 = increase / improvement				
N	95	27	68	ns
Days of employment in the year	2.36	2.56	2.28	ns
Wage	2.73	2.67	2.75	ns
Timing of payment	2.44	2.42	2.44	ns
Use of children / youth	2.03	2.00	2.04	ns
Exposure to health and safety hazards	2.24	2.08	2.31	*
Other	2.50 (n=8)	2.00 (n=2)	2.67 (n=6)	ns

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, * $P \leq 0.05$, ** $P \leq 0.01$, *** $P \leq 0.001$

6. Findings on the impact for producer organisations

This section sets out the findings on the impacts of sustainability standards for producer organisations.

6.1 Overall producer perceptions of the producer organisation

All respondents – certified and non-certified - gave good scores for the performance of their POs. In particular they gave good scores for the POs (certified and non-certified) in terms of how they maintain the quality of cocoa, how cocoa is sold, future plans, leadership and technical assistance (final survey, 2012).

Table 45: Perceptions of producer organisation performance (2012)

	Total	No certification	Certified	Sig
N	415	125	290	
1=very bad, ..., 5 = very good				
Cocoa price provided	3.43	3.34	3.46	ns
Leadership	4.11	4.21	4.07	ns
Financial management	3.94	3.89	3.96	ns
Technical assistance	4.01	4.12	3.97	ns
Maintaining quality of cocoa	4.63	4.48	4.70	*
Way cocoa is sold	4.43	4.64	4.37	**
How your views are understood	3.41	3.25	3.48	ns
Communication of information	3.91	3.78	3.97	ns
Future plans	4.38	4.53	4.32	ns
Use of fairtrade premium	3.75	-	3.75	-

Sig = Significance of differences between groups (based on t-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

The main differences between certified and non-certified farmers' perceptions of their PO were found for two indicators – maintaining cocoa quality and in the way cocoa is sold (table 45). **In terms of maintaining cocoa quality there was a significant difference, with certified farmers more positive than non-certified farmers.** However, there was also a **significant difference in 'the way cocoa is sold' with non-certified farmers giving a higher score than certified farmers.**

Table 46: Smallholders assessment of their PO

	2010	2012	Sig
N	287	289	
Scoring on scale 1-5 where: 1=little satisfied, 5=very satisfied			
Cocoa price provided	3.67	3.46	ns
Leadership	3.77	4.07	***
Financial management	3.57	3.96	***
Technical assistance	3.68	3.97	**
Maintaining quality of tea	4.54	4.70	*
Way cocoa is sold	4.24	4.37	ns
How your views are understood	3.29	3.48	ns
Communication of information	3.71	3.97	**
Future plans	3.82	4.32	***
Use of Fairtrade premium	3.18	3.75	*

Sig = Significance of differences between groups (based on Mann-Whitney test): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Comparing results of the baseline and the final survey, certified producers' satisfaction with their PO significantly increased in terms of leadership, financial management, technical assistance, the way cocoa is sold, communication of information, future plans and use of the Fairtrade Premium, over the course of the study (table 46).

6.2 Access to training and technical assistance

Access to training and technical assistance is important for increasing productivity and quality, both of which are routes to increased incomes for farmers and the organisation.

In the final survey there was no significant difference in terms of the changes which certified and non-certified farmers observed in relation to access to training over the previous two years. This picture is likely to be complicated by variation between organisations and the fact that at the baseline RAO/AE and RAO/KN organisations were engaging with Rainforest Alliance, but then subsequently dropped this certification, while continuing with organic. Thus they may have had good access to training previously, which has now reduced in quantity. The picture is also complicated by the support provided by other organisations to the POs, which means that training provision may increase or decrease independent of certification and shaping producer perceptions. It is also likely that training is more intensive (e.g. in organic certification) prior to compliance.

The qualitative data shows that all POs provide some training to members, whether certified or not, with some receiving support from other buyers or development agencies. But the Fairtrade organisations can invest their Fairtrade Premium resources in improving the quantity, quality (e.g. location and classroom versus practical field training) and breadth of topics) of the training and technical provision, and for organic farmers in one organisation they are obliged to attend whereas non-certified members are not.

At the organic certified organisations (previously also/only RA certified) all members have access to training and technical assistance on cocoa production and quality, although within RAO/KN only those who are certified organic are obliged to attend workshops.

“There are improvements especially regarding training and knowledge in order to maintain and improve quality and stay in the market. It is not just about certification. Rather as an organization we have to deliver quality and in order to get quality from the farmer, it has to come from his farm. That is why most of our training is done directly in our farms, and now the majority have the knowledge needed to manage their farms. Also, equipment like pruners and saws are given out to use with the cocoa trees”. (RAO/KN manager interview, 2012)

With increased incidence of cocoa diseases over the past two years, technical assistance has become increasingly important according to RAO/KN managers and farmers, although the number of training sessions has dropped in the last two years – even though the expressed demand for training is high. RAO/KN has received support from a number of external organisations over recent years, which creates a source of complexity when trying to gauge changes in service provision by the PO and attribute changes to sustainability standards in particular.

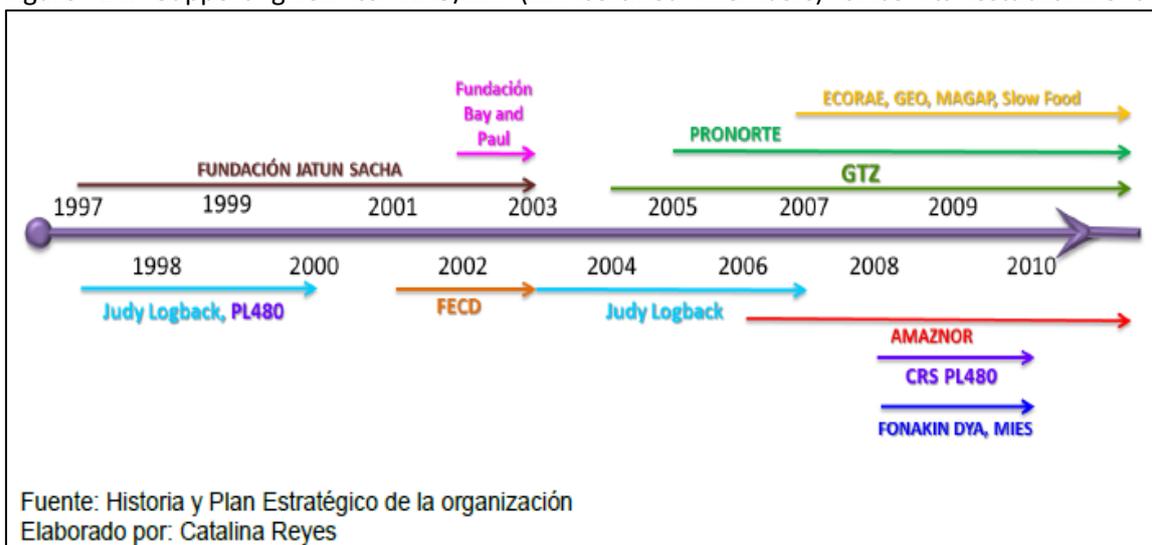
“We have had workshops about how to manage the chacra. They have given us tools for the cocoa trees and they gave us “some vitamins” to spray and showed us new techniques. We need more workshops to combat cocoa pests and to increase production because managing the chacra with just a machete is more expensive than using chemicals”. (Mixed, certified, gender group, RAO/KN 2012).

“Training is to improve our farms. They have talked to us about different types of pruning and grafting that make our production increase.” (Male focus group, non-certified members of RAO/KN. 2012).

“RAO/KN does not give us training—that is what we need to improve our yields and to control diseases.” (Mixed gender focus group of non-certified members of RAO/KN,” 2012).

“This year we have not had any training, but last year there was on different management techniques for the chacra. They should make field visits to cocoa farms and invite and take community leaders.” (Mixed gender focus group of non-certified members of RAO/KN,” 2012)

Figure 14: Support given to RAO/KN (RA certified members) since its establishment



RAO/AE, which also has organic certified members, organizes training activities for all members, with technicians providing ‘constant training on cocoa production, post-harvest, and quality improvement techniques and practices’ (RAO/AE manager, 2012). Farmers interviewed said they have participated in the training because it has helped them to raise productivity and quality.

“When they ask my husband: ‘What are the benefits of your organization?’ He responds saying that he has knowledge that he did not have before about growing his cocoa” (female farmer interviewee, 2012)

RAO/AE (organic certified) farmers think that they should also have workshops about how to treat employees, even though contracted labour is not that common. One farmer said they had recently received training on this topic:

“There was training about how to treat employees - even though most of the work is done by family members. Often, at a conventional plantation, they do not manage operations well. And when they hire labourers, they do not protect them against chemicals. This is the difference with organic farms.” (2012)

The Fairtrade certified organisations are able to provide more technical assistance and training compared to their counterparts, and more accessible training (i.e. in the field rather than in the classroom) as a result of the Fairtrade Premium.

Box 11: Fairtrade PO training and technical assistance

Fairtrade certified FTO/NO can invest the Fairtrade Premium in training. The O/UCO (organic organisation) provides training, but in the classroom on grafting, pruning, fertilizing, compost and fermentation processes, whereas FTO/NO workshops are held in the field, along with talks about health, social security, food security etc. FTO/NO has technicians who are very involved on farm in topics like pruning, harvesting and post-harvest operations. The FTO/NO President says that due to Fairtrade investment: *“there has been more training at the farmer level. The technicians have been more involved on farms in topics like pruning, harvest and post-harvest. They have made farmers aware that they should ferment 2-4 days longer and that they should grade their beans, leaving out diseased or bad ones, because the cocoa is exported directly.”*

This advantage is causing the O/UCO to consider becoming Fairtrade certified (interview with President): *“we are interested in Fairtrade because we think we will get a better price as well as have the Premium benefit. We think we are disadvantaged without the label. That is why we are applying to become certified.”*

FTO/FM (Fairtrade certified) provides training for members, but farmers noted that other organisations also provide training (e.g. government extension on topics such as compost making and farm management. Because of the Fairtrade Premium, farmers also get seasonal technical assistance about pruning and renovating their plantations. This capacity building gives FTO/FM a why over its non-certified counterpart organisation (NC/PM) which has to rely on technical assistance from a private company (Armajaro is farm management and organic techniques) and in the past have had support from a public development organisation.

6.3 Organisational infrastructure

For the organic certified organisations, there is little difference between the organic and non-certified groups in terms of their access to processing facilities as both organisations have good facilities, in part funded by external agencies and access is not restricted to certified farmers. Within the Fairtrade comparison organisations the picture is more mixed. The organic O/UCO has better facilities than FTO/NO, despite the former having access to the Fairtrade Premium,

whereas in the FTO/FM organisation the certified groups have better access to processing facilities, funded by the Fairtrade Premium, compared to the non-certified NC/PM group.

In RAO/AE and RAO/KN, both organic-certified and non-certified farmers all have a similar, good level of access to infrastructure for processing cocoa via their organisations. Both organisations buy fresh cocoa beans and have similar infrastructure to ferment and dry the beans to obtain a high quality product. This provides confidence that their beans will be processed carefully, reach high quality standards and command a good price. Both organisations have their own cocoa nurseries for their respective members, and they all have their own collection stations, with awnings, sheets, fermentation boxes, storage rooms and all that is required for drying the beans.

RAO/AE was founded with the technical and financial help of a public development organisation (not a sustainability standards organisation) and now has gas dryers, fermentation areas, 2 storage rooms, 2 drying tables, 23 computers, 1 lab (equipped with a refrigerator, thermometer and humidity gauge) balances, a truck, and a commercial management system. It has a large truck with a 20 qq capacity with which it services three satellite collection stations in Muisne, Río Verde and Cascajal. However, RAO/KN's equipment is more modern than that of RAO/AE.

In addition, RAO/KN is (with public assistance) is constructing a factory to make chocolate from its own beans that it hopes to sell domestically and internationally.

“They wanted to build a chocolate making plant. This will be built with the help of Municipio del Ten, el Consejo Provincial del Napo, MAGAP [Ministry for Agriculture, Livestock, Aquaculture and Fisheries] and the Ministry of MIPRO [Ministry of Industry and Productivity] and MIES [Ministry of Economic and Social Inclusion]. These last two have agreed to help expand the collection centre... because the current facilities are not big enough for all the production in the region.” (RAO/KN manager, 2012)

In order to increase organic production, RAO/KN have also purchased three motorized brush cutters to speed up weeding, as farmers normally rely on machetes, so farmers can avoid using agrochemicals in production.

UROCAL, the umbrella organisation, has offices for administration, technical and financial activities, and farmers meet here and attend training sessions. They also have a central collection station where the cocoa from all members is brought together (both organic and Fairtrade). They also have wooden fermentation boxes and gas driers, but the latter are not in use due to the high maintenance costs. Production has risen recently, meaning these facilities are not big enough. At the lower level organisations within UROCAL, compared within this study, there are different levels of processing facilities. **Processing facilities at the Fairtrade-certified FTO/NO organisation are - surprisingly - not as good as in the organic O/UCO.** Both fall within the umbrella organisation, UROCAL, and the former has access to the Fairtrade Premium. The Fairtrade certified FTO/NO has to buy dried beans from farmers, and does not have control over product quality, because of its more limited processing facilities

FTO/FM has a large facility that includes an administrative and financial area, fermentation area, drying area, storage warehouse, and a laboratory for quality control. They also have a cocoa liquor tasting facility and plan to make their own chocolate. Finally, they have an area for events or meetings. Much of this has been financed from sales and the Fairtrade Premium. Perhaps because of these good facilities, FTO/FM is able to sell all of its production to Fairtrade

buyers. NC/PM (non-certified) has an office area and a collection station. But they are not in use currently. Each member organization has its own collection station, and space for fermentation and drying; but these too are also not in use.

The Double Difference analysis does not indicate a significant difference between certified and non-certified in the perceived levels of change between 2010 and 2012 in infrastructure or post-harvest handling facilities

6.4 Access to post-harvest facilities

Essentially, post-harvest facilities vary by organisation – and there is not a close correlation between certification and the quality of post-harvest facilities and systems.

In the RAO/KN and RAO/AE producer organisations, both have collection stations to benefit their members – both organic and non-certified. Members deliver the beans fresh and the organization is in charge of classifying, fermenting and drying the beans using specific standards to guarantee quality and get a good price. The organizations also are responsible for packaging and storing the beans.

“In RAO/KN, we store the beans at 6.5% – 7% humidity. The ambient relative humidity here is 85%. Because we buy fresh beans, we are in charge of the whole process. From our porches to the storage rooms we have to ensure that we keep the beans at 6%-7% humidity.” (Interview with the manager of RAO/KN. 2012)

It is important to stress that the farmers are paid less for fresh beans. But they prefer this system because more profits are made for higher quality beans and then demand also rises for their products.

As explained in the section on infrastructure, the situation amongst Fairtrade organisation and their comparison groups is mixed. In one case the Fairtrade organisation has invested Fairtrade Premium and can count on good facilities compared to their counterpart. In the other organisation, the non-certified group is outperforming the certified one.

“Our major limitation is a lack of infrastructure and the post-harvest management of our cocoa. We don't have big facilities like FTO/FM in Manabí, where they buy freshly harvested beans and do the fermentation process in wooden boxes and apply other techniques. In UROCAL, each farmer has to do the processing and the result is an uneven fermentation that affects quality” (Field technician, UROCAL).

RAO/KN and RAO/AE both benefit from the support of various supporting agencies, including government research, extension and the donor, GIZ (formerly GTZ). Unlike RAO/AE, farmers are involved in setting the price of cocoa.

6.5 Organisational development and membership

In terms of **organisational development**, the rules for organic certification of a group do not necessarily require the group to be a legal entity. However, a structure and a system to communicate decisions and to manage information are needed. Where a group is not legally

recognized, it has to have a description of its mission and objectives, a list of members, policies and procedures to manage its operation and to make decisions.

Rainforest Alliance certification was held by both RAO/AE and RAO/KN during the baseline survey. RA was not found to require legally formed groups (again requiring documentation of mission and objectives, clear procedures for management and decision-making only), and nor has RA had an impact on the administration or management of the producer organisations.

RAO/KN is a rainforest, indigenous people's organisation. The management believe they have a special niche and can use these characteristics to market their products – as product attributes. More than any of the other organisations in the study, RAO/KN has a long-term vision, in which the organisation takes control of a greater part of the value chain. It has been building a large, modern chocolate factory (observed by the team in the final stages of construction). RAO/KN achieved RA certification (their status during the baseline – as well as many members also holding organic certification) and this enabled them to improve the standard of sustainability in agricultural practices and improve environmental protection as well. RA provided training and helped institute the new practices through their certification inspections. However, the management later decided that they did not need the RA certification to open up new markets, as they were already developing their own and did not need to rely on the price premium generated on RA certified sales in the market, as they were already able to pay members a good price. However, the managers reported that organic certification enables them to continue with/to build upon their own traditional brand of environmental practices called 'chacra' – a multi-storey, multi-species, chemical-free agroforestry system of agriculture. While RA suits those selling to large companies, RAO/KN wants to develop its own identity and for this purpose organic certification is most appropriate as they feel it best promotes the farming practices they support and presents the correct image on their products.

RAO/AE management explained that they had become RA certified in 2005 in response to the "KRAFT project" when high prices were being paid for RA certified cocoa (nearly double the uncertified price). This "bubble" continued until around 2009, when (according to RAO/AE) KRAFT decided that the price had gone too high and looked for cocoa from elsewhere at a cheaper price. Thus demand fell off and RAO/AE decided to switch to organic certification that would give it a premium price and a more assured market.

RA certifies farms or farm groups. Thus, a group of farms in a biosphere reserve could all be certified together as fulfilling the sustainable agriculture standards set under the 10 RA principles (environmental, social and economic sustainability). It is not the organisation that is certified as in Fairtrade. In the case of RAO/KN the management coordinated the RA certification of its members. Indeed the knowledge of RA by individual members (even though they might have been inspected) was limited, and farmers were nominated if they are more likely to pass the RA criteria and benefit from the RA trainings and requirements (e.g. more likely to separate different types of waste and treating them in appropriate ways).

The farmers, members of RAO/KN or RAO/AE, that were RA certified and are now organic certified, did not benefit individually, but collectively by the improved price that the organisations were able to get for the products that were collectively marketed (and the greater proportion of products they were able to sell at a premium price).

The quality requirements stipulated as part of organic farming and the price premium generated, has provided indirect help to organisations, but most of the organisational strengthening activities are not attributable to sustainability standards, but to autonomous

actions of the organisation's management and to external support, e.g. from the Ministry of Social and Economic Inclusion or GIZ.

An important aspect of organisational strengthening is **producer loyalty and sustaining membership** (and sales). Both RAO/AE and RAO/KN – which have groups of organic certified farmers as well as non-certified farmers – are relatively well established – 8 and 12 years old respectively – and membership has been steady. Both still retain founding members as well as having more recent recruits³⁴. Most of RAO/AE's members joined because of the better price paid for organic cocoa by the organisation and the access to training and technical assistance offered - all of which have contributed to their improved standard of living. There is a strong allegiance to the organization amongst members, with older members persuading their children to join and often multiple members of the same family joining the organisation. This helps to increase the stability of the organisation. Where members have left RAO/AE or RAO/KN, this is because of the demand on household labour of organic farming, which competes with other farming and non-farming activities. RAO/KN has also sustained its membership (a few members left when there was a false rumour of an additional tax being introduced).

“People leave because they don't have the time to dedicate to cocoa. They have other things to do and sometimes they don't believe that cocoa prices will be paid” (Male farmer, certified focus group discussion, RAO/AE, 2012)

The RAO/AE treasurer commented that organisational development within their organisation has enabled ‘improvements to our farms through better understanding and control of the production processes’ (RAO/AE treasurer, 2012). A key informant also commented that farmer organisation is critical to achieve stable cocoa prices and to deliver technical assistance and training:

“Really, the first topic is price. If the farmers don't organize and improve themselves then there is not going to be a stable price. The other issues are training and technical assistance via workshops. They also need a place where they can make decisions” (CEFODI, manager, 20102)

6.6 Information communication and participation in meetings

Member participation in assemblies and meetings are important in order for an organization to grow and evolve. They are a place for people to interact and reinforce their social relationships and thus change a group's identity. According to Según, (Dávila 1998) these political acts allow people to democratically decide how to manage their own resources. They are also important for the communication of information between management and members.

In terms of ‘how your views are understood’ no significant difference emerged in the findings (final survey or double difference analysis) amongst certified producers over the course of the project.

³⁴ Some only joined 6 months ago in RAO/AE and RAO/KN has newly joined ‘commercial members’, i.e producers but without voting rights.

RAO/AE (organic, previously RA certified) has a relatively strong system for communication and participation. They hold a general assembly every two years to bring together all of its member organisations – both certified and non-certified. Lower level member organisations meet two to three times each year and member organisations meet on a monthly basis. Farmers interviewed said that they attend these assemblies. However, certification has not played a role in this, and both certified and non-certified members have equal access to the general assembly.

In RAO/KN (organic, previously RA certified) general assemblies are not always held or meetings, and so member organisations cannot influence how the organisation is run. But RAO/KN member organisations meet three to four times per year and participation is high – although not 100%. The commercial members are not invited to these meetings and so are excluded from decision-making. There are not clear or strong lines of communication in RAO/KN mainly due to logistics – elected directors, community representatives and field technicians are very dispersed and so attending frequent meetings is difficult. Meeting dates are published in advance via community officials and leaders and by posting up signs, but the information does not always reach the individual producers and then attendance can be low.

“The leaders do not give us advance notice, and they do not tell everyone, so not everyone attends - there is miscommunication between the different people in the organization.” (Mixed gender focus group, RAO/KN, 2012)

“RAO/KN decides when workshops or talks are held, not the member organisations. RAO/KN tells the community presidents and they in turn meet with community members, but not everybody can go due to a lack of time. Out of 50 people maybe only 15 go, which is really not enough” (Mixed gender focus group, certified farmers RAO/KN, 2012)

As well as a lack of information, which means members cannot have an influence on the PO, other obstacles constrain the participatory development of RAO/KN. These include internal community conflicts, the isolation of some communities, a lack of interest of community leaders (who may not grow cocoa and are not necessarily connected with RAO/KN). The lack of representation and inability to improve the communication makes these organizations seem to the farmers interviewed more like cocoa buyers rather than a farmer’s organization. There have been some improvements, but this has been the result of engagement by other organisations such as the Ministry of Social and Economic Inclusion.

Amongst the Fairtrade organisations The Fairtrade-certified organisations hold regular meetings, but so do their non-certified counterparts as per their organisation’s statutes. All profess reasonable levels of satisfaction with the frequency and conduct of meetings.

In O/UCO (organic, also part of UROCAL) meetings are held fortnightly.

“Our meetings are held every two weeks according to the statutes of the organisation, and if there are extra topics to discuss, we hold another meeting. Most people come to the meetings. A minimum number is needed. If not enough people come there is a \$5.00 sanction” (O/UCO, 2012).

“Meetings for the members are every two to three months, but it depends on the organisation. There are five member organisations, but not all of them have the same information. In my organisation we meet every month. The leaders meet every month too here at the offices of FTO/FM. The majority of members attend, sometimes they bring their family members along” (FTO/FM farmer, 2012).

The comparison NC/PM group, which is part of FTO/FM, report monthly meetings for the organisation and indicate that there may have been some improvement of late in terms of participation and communication compared to in the past.

“Our meetings as a member group are once a month and we participate both husband and wife and if possible the whole family. Meetings with NC/PM were usually just for directors, but right now they are in active—that is a complicated topic.” (NC/PM farmer, 2012.)

6.6 Accountability, democracy and transparency

In the previously RA/organic and now just organic or non-certified organisations (RAO/AE and RAO/KN) any changes in accountability, democracy and transparency are not driven by organic certification (or previous RA certification), which does not require this as part of its standards. There are similar levels of transparency and democracy in both RAO/AE and RAO/KN overall and in many ways they operate more as cocoa buying operations than farmer representative organisations.

“The farmers don’t do the business side, they produce the cocoa. The employees of the organisation manage the administration so that it all comes together” (RAO/AE manager, 2012).

Farmers bring their cocoa for sale to these organisations and this is the main basis of the relationship: while there are benefits to being members, these benefits are directed at raising production and quality, which benefits the farmers and the organisation, but less so to farmer voice and empowerment as part of a producer organisation. The farmers are not seen as having a role beyond production:

“They [individual members] do not have power with respect to the price they receive. In many cases in the year 2006, there were a lot of problems around the price, because farmers do not know financial information. In the beginning there were a lot of problems because if the organisation did not meet, then there was no opportunity to discuss the price. Farmers do not know the price. What they know is how to produce” (RAO/AE manager, 20102).

RAO/AE members do not have access to concrete information about markets, how much for their production is being sold or how much stays in the country. They do not know the price at which the organisation sells their cocoa. They are only informed about how much they are paid – because farmers do not participate in price negotiations. Economic data was not shared for this study by RAO/AE, so costs, prices and quantities sold by this organisation are unknown. In the case of RAO/KN, the community presidents along with two or three delegates are the ones who attend assemblies and can vote on decisions by RAO/KN leaders and approve their

implementation. Community presidents are elected by everyone in the community— whether they grow cocoa or not and whether they sell to RAO/KN or not. If RAO/KN calls a meeting, the community president chooses a few people to attend with him—there is no vote about it, rather it is the decision of the community leader. In addition, there is no debate or a session for members and the president to reach a consensus. In the case of RAO/KN, the non-certified members do not get the vote in any assemblies and are therefore effectively disenfranchised. Even certified members do not appear to be involved in setting the purchase price of cocoa. Therefore, there is not a particularly democratic or accountable system within RAO/KN.

In the Fairtrade organisations it would be expected that there would be good levels of accountability, democracy and transparency, as this is specified in the producer standards. An internal control system for financial, democracy and transparency issues is required. However, the Fairtrade system requires umbrella organizations as well as member organizations to be democratically controlled by their members and so it would be expected that the organisations would all exhibit some level of democratic organisation as a result of Fairtrade participation. Members of all the four organizations studied - FTO/NO, O/UCO, FTO/FM and NC/PM, agreed that their organizations are democratic because members elected their leaders and new members and because there is no exclusion of anyone. There is a small problem with participation in meetings for FTO/NO because many of its members are senior citizens. FTO/FM has regular meetings with the leaders of its member organizations and information is then passed onto the other members. However, it is difficult to have meetings with all the members because they are over 900 in total. The state of the administration of NC/PM is not currently settled and so this is restricting the holding of meetings and individual member participation.

The Fairtrade audit process enhances transparency for the certified organisations as the findings of the audits are made available to all members. For FTO/NO and FTO/FM (both Fairtrade), members agree there is transparent management of the distribution of the Fairtrade Premium because both they and the auditors are always working on this topic.

“Everyone knows about the distribution of the Premium and it is even debated in the assembly. Farmers know that the auditor is coming and we show them the traceability documents. Because we publicize this information in assemblies, the communication of information is transparent and democratic” (President of FTO/NO).

The final survey does not indicate a significant difference between certified and non-certified producers in terms of their satisfaction with PO financial management. However, the double difference findings indicate that there is a significant difference in the level of satisfaction of certified producers in 2012 compared to 2010, with an improvement indicated.

6.7 Knowledge and perceptions about the certification

The knowledge of organic-certified members of RAO/AE and RAO/KN about access to markets, access to training, technical assistance, use and application of pesticides, and the security and stability of the market was good. However their knowledge about health and safety and organizational strengthening was fairly poor. Many know in general terms that organic certification is good for improving the quality and production of cocoa through a series of standards, and that this will help to achieve a better price and a more assured market.

“We know a bit about a lot of different topics. Once they gave us a workshop where we talked about the management of waste, that we should not spray with chemicals and that we should have timber trees mixed with other fruit trees in the chakra and that we should use the right tools for pruning. Most of all we do what our ancestors taught us” (Mixed gender, focus group, certified farmers, RAO/KN, 2012).

There was some confusion regarding the differences between organic and Rainforest Alliance certification amongst some of the focus group interviewees, and what each entails. For example:

“BCS told us that with these certifications we are now organic and that our cocoa is special enough to sell to other countries. One of the benefits we have received were some pruners a year ago during a visit. We don’t know if we will continue or not. They told us that this organic certification is different from the one Rainforest Alliance gives, but we don’t know what Rainforest Alliance certification consists of, but we do know that it implies an organic management of our farms” (Male certified farmers, RAO/AE, 2012).

Some RAO/KN farmers thought that their organisation was still working with the Rainforest Alliance, even though this relationship had actually ended in mid-2012, indicating a lack of communication perhaps between management and individual members.

More than 50% of the FTO/NO Fairtrade-certified (and organic) farmers surveyed are aware of access to markets, credit, training and the minimum price, about environmental management, the Premium and social projects and organisational strengthening. Less than 50% understood that certification also strives for a more secure and stable market for cocoa. In their commentary, farmers stressed the recurring theme that Fairtrade improves product quality so that it will sell well.

There was a very different story at FTO/FM, where only 15-46% of farmers knew about the topics mentioned above. This suggests poor communication and involvement of farmers, despite the excellent Fairtrade sales record at FTO/FM.

Information from focus group surveys also helps to illustrate general trends:

“Organic certification is good for improving quality and production through a series of standards. The benefits are a better price and a niche market. The help consists of the certifications and the recommendations that they give us” (Interview with the coordinator of CEFODI, 2012).

6.8 Gender

In terms of gender differentiation, the results were very similar for the two organic organizations and their respective control groups. **Organic certification** does not appear to have a direct impact on gender (roles, responsibilities and rights of women and men) at the field level. Most of the farm work, such as applying fertilizers and weeding the plot is done jointly, with some activity differentiation – men tend to do more of the physical tasks (e.g. cocoa pruning and harvesting) and women tend to do lighter tasks (e.g. collecting harvested pods, extracting the seeds).

“Women perform the same roles as men these days. They use machetes, they are strong. In the field, the woman is in charge of clearing the chacra, the man is in charge of cutting the trees. Some jobs are harder, so the man does it because he is stronger. For annual crops, we do the same things to keep our chacra properly maintained. In the kitchen we share the work” (Male focus group, certified farmers, RAO/AE, 2012). “For cocoa we do the same things – we both go to the training workshops and we both know what to do with our farm” (Mixed gender focus group, RAO/KN, 2012).

In financial aspects, greater gender equality is also becoming more common according to some interviewees, although this was not attributed to organic certification. Income from daily work is distributed between the couple based on priorities and necessities, without gender distinction they suggested:

“Women manage the money – it is proven that they are better administrators” (Male focus group, RAO/AE). “We work the same for the money. We make decisions together” (Male focus group, RAO/KN).

At the organisational level, there are women board members, although most are men. Women tend to report that they cannot act as board members, because they do not have time to attend. This accession to board level by women is seen as a change brought about by a shift toward more progressive thinking in society, rather than being attributable to organic certification.

“Talking about gender issues, a lot has changed in our organisation. Women work on everything in the field, they are leaders, and they have the same opportunities. We all participate to give ideas to our community” (Mixed women’s and men’s focus group, RAO/KN, 2002)

In the Fairtrade system, there are requirements to avoid discrimination in terms of new entrants to the producer organisation. FLO states in its Small Producer Organisations (Para 4.3.1) that: *“The organization does not discriminate nor restricts new members affiliation because of race, colour, sex, sexual orientation, disability, marital status, age, religion, political opinion, language, property, nationality, ethnicity or social origin”*³⁵. Across the Fairtrade (and organic) certified organisations – FTO/FM and FTO/NO and their comparison groups (either organic only or previously organic and now uncertified), there did not appear to be any active discrimination along lines of gender, race or age. The organisations encourage independent producers to join them. Several female interviewees said that there was no bar on them becoming president of the organizations, this being an indication that there is no kind of gender discrimination. A possible discrimination based on ethnicity might arise in the future, where an organisation markets its products as being produced by ‘indigenous rainforest families’.

For the Fairtrade-certified organisations training has been provided which includes employment conditions, gender equality and discrimination issues, more than technical production issues (baseline report).

For the Fairtrade (and organic) certified organisations and for their comparison PO there is sharing of agricultural tasks between women and men in the household. However, women are responsible for a greater share of domestic tasks than men. As well as tending crops, women are in charge of the cocoa harvest, while the men cut the pods and bring them to the house or barn. Women remove the mucilage³⁶ from the beans and are in charge of the fermentation and drying. Depending on how the beans are sold, if there are additional workers, it is the women in the household that prepare meals for everyone.

Opinions about women’s participation were gathered from focus groups from the two Fairtrade (and organic) certified organisations and their counterpart POs. There do not appear

³⁵³⁵ http://www.fairtrade.net/fileadmin/user_upload/content/2011-12-27_SPO_EN_FINAL.pdf

³⁶ Cocoa harvest includes cutting the pods, collecting them in a central place, then opening the pods and removing the mucilage from around the beans so they can be fermented.

to be major differences between the Fairtrade certified and comparison groups (either organic or previously certification only).

“There is no discrimination based on gender. Our members are 50% men and 50% women. Now our leaders are men and women” (Interviews held with members of FTO/NO).

“There is equality, there is respect, but unfortunately there are not a lot of women members. Hopefully, over time, there will be an equal number of women and men in our organisation” (PO manager)

“Now there is the opportunity for women to participate. Our organisation has 20% women on its board and we have about equal numbers of men and women members. All members are active in decision-making and participation” (Survey with members of FTO/FM).

“There is gender equality – we have the same responsibilities and even half the board of directors are women and this is good because they attend to our needs. Now, we are members, both husbands and wives of our organisation” (Women’s focus group, O/UCO).

Financial decision making whether in the farm or in the organization is done jointly, according to the majority of those interviewed, with discussion of the use of economic resources.

Table 47 below shows the different roles that men and women play in two of the primary associations in FTO/FM (Fairtrade certified). Despite the differences in roles the perceptions of the benefits and disadvantages are similar between men and women.

Table 47: Different opinions from women and men in 2 FGDs (baseline)

FTO/FM: Farmer opinions		
Activities	Women	Men
Role in the home	Domestic work (cleaning, cooking and looking after children)	Bring money to the house and cultivate cocoa Domestic work (cleaning, cooking and looking after children)
Benefits of Fairtrade	More income	Price: More income, especially if production is increased
Disadvantages of Fairtrade	Need training and technical assistance	Need training and technical assistance

Both women and men within the Fairtrade system ensure together that women reach a better position in society. Some producers argue that gender inequality is reducing, but it is a slow process. Access to education is giving women better job and development opportunities, but as part of overall societal change.

7. Changes in Natural Resources Management

Organic agriculture (IFOAM, 2002) supports general principles of promoting and diversifying the biological cycles of agricultural systems, respecting micro-organisms, wild flora and fauna, crops and domestic animals, and maintaining genetic diversity in agriculture systems. Organic agriculture should respect and protect natural ecosystems and their genetic diversity and prevent negative impacts on the environment and social fabric from cultivation and husbandry techniques. These general principles are adapted to the reality of each region, especially with respect to the diversification of products.

“If they diversify then normally farmers are told that they should not just plant cocoa; rather they should have a farm with a variety of crops like plantains, mandarins, avocados...which can also be sold.” (Interview with the President of RAO/AER, 2012)

“Normally we recommend mixed cropping. BCS does not recommend monocultures. They say not to work with just one crop and that chemicals should not be applied to other crops.” (Interview with the coordinator of CEFODI, 2012)

“Since we have been part of BCS, they recommend that we plant other crops between the rows. Because the pollinating insects give the cocoa different tastes, so now we grow fruit trees as well.” (Focus group of male certified farmers, RAO/AE, 2012)

“The certifier has been helpful for planting mixed crops that not only help economically, but also help with family food needs. Nowadays they teach us to plant cocoa in the permanent shade of other timber trees or even temporary shade like yucca and potatoes. This gives us an economic benefit so we can make a living and feed ourselves.” (Focus group of women certified farmers, RAO/AE, 2012)

Organic certification has made most difference at the coastal organisation, RAO/AE, bringing benefits according to the majority of producers interviewed with increased diversification, with more fruit crops being planted for household subsistence, sale and to support improved cocoa production. The farmers and producer organisation leaders mentioned the mixed cropping, economic benefits and advice on reducing chemicals resulting from organic certification (BCS).

The difference made has been less pronounced in the Amazonian region, where standards have played a different role – reaffirming and better defining the best ways to continue ancestral *chacra* farming system. The (previously RA and organic) RAO/KN members do not think that diversification has changed because they already use the *chacra* system, which is already highly diversified and so both certified and non-certified farms have diverse crops for sale and household use. The farmers interviewed highlighted the diversity that characterizes the *chacra* system.

“Within the chacra system, other crops and products abound, such as timber, medicine, fruit, crafts, and food plants such as yucca, plantains, oranges, pastures—everything a farmer needs to eat and some is also sold. Within the same chacra other crops are being added so we can work with other value chains like vanilla, ginger, orange and lemon.” (Interview with the manager of RAO/KN, 2012)

“When diversifying, cocoa is planted with plantains, yucca, other fruit and timber trees. Different products from the region like guava, pineapple and orange should be included.” (Mixed gender focus group of certified farmers, RAO/KN, 2012)

In referring to natural resource management, it is important to clarify that when Rainforest Alliance was working with farmers their focus was more on caring for the environment. Now, the organizations have the BCS certification and it is more focused on organic production.

Rainforest Alliance seeks primarily to protect ecosystems and the people and wildlife that depend on them through a transformation of land use practices, commercial practices and consumer behaviour. The companies, community groups and owners who participate in their programs must meet rigid standards to conserve biodiversity and deliver sustainable well-being to inhabitants (Rainforest Alliance, 2004). Organic agriculture (BCS certification) is focused on sustainable production practices and a holistic management system to strengthen the overall agroecosystem.

Organic certification has stricter standards for soil and crop management compared to Rainforest Alliance. In addition, the organic standard uptake pre-dated RA certification in many cases. Thus it is unlikely that RA has had additional impacts on crop and soil management (Baseline report). Topics like farm management, agriculture practices and use of fertilizers are fairly stringent under organic certification – this has led to a strong impact because farmers – particularly members of RAO/AE – say that they have learned to cultivate in a more healthy way. Members of both RAO/AE and RAO/KN feel they are protecting the environment by using organic inputs for food production. From the majority of members’ point of view, organic certification has been positive for environmental stewardship.

Under RA, farming systems are composed of agroforestry systems (e.g. cocoa, timber etc) and consumption systems (yucca, plantation and maize). Agricultural practices have not changed significantly according to the farmers interviewed, but some environmentally friendly framing practices have been improved.

The main environmental impact of Rainforest Alliance has been in improving waste management. Rainforest Alliance taught farmers to put all their rubbish in the same place and to bury it, whereas before it was not collected and left as litter.

As well as organic inspections, the PO makes inspections before and after the rainy season, when farmers commonly use herbicides. If banned chemicals are found being used, the member is sanctioned (membership is suspended for the period it takes for the chemicals to degrade to the active ingredient – usually two years). During this period the member cannot sell cocoa to the PO. Repeat offenders can be completely banned. Unfortunately, in this instance the research team were not able to distinguish which changes in chemical use can be attributed to either Fairtrade or organic certification, which would require more detailed contribution analysis. Several of the RAO/AE and RAO/KN PO members (now organic certified) indicated that chemical use has reduced overall:

“We don’t use (chemical) products, we are always protecting the environment” (Mixed gender focus group, certified farmers, RAO/KN, 2012).

“The role of BCS is important for the environment, because farmers do not use chemicals – nowadays farmers tell you they have organic cocoa. It is not an environmental certification like Rainforest Alliance, it is a certification with a focus on organic production” (Interview with the manager of RAO/AE, 2012).

“BCS is a certification that guarantees a quality product through standards that follow every farmer in the field through to the collection station. There are standards like no cutting down of forests, protecting the environment and preparation of organic fertilizers. They want us farmers to work hard to improve the quality of our crops and by doing so our country benefits through the consumption of healthy food without chemicals” (Focus group of male, certified farmers, RAO/AE, 2012).

Under Fairtrade certification there are restrictions on the use of agrochemicals, (as well as under organic standards). The farmers from the Fairtrade (and organic) certified organisations - FTO/NO and FTO/FM – and the non Fairtrade groups (O/UCO and NC/PM – some of which are also organic certified) manage diverse cocoa systems with mixed crops. When cocoa is young, they plant short-term crops, and as the cocoa ages it requires shade from plantains and fruit trees. Later timber trees provide permanent shade. From the inception of UROCAL, members have been encouraged to maintain crop diversity through the use of agroforestry systems (i.e. this is an organisational policy). However, the Fairtrade Premium has enabled the lower level member organisation (FTO/NO) to invest in agroforestry and environmental training:

“Because of the Fairtrade Premium, we have started nurseries and planted more plants. We have promoted environmental stewardship by avoiding soil pollution and they have encouraged us to collect plastic waste and improve soil fertility. Fairtrade does help us protect the environment by avoiding monoculture, and promoting biodiversity” (President of FTO/NO)

In contrast the President of the O/UCO, another lower tier member PO in UROCAL which has only organic certification and therefore no access to Fairtrade Premium funds has not been able to do more than limited awareness-raising:

“UROCAL does talk about promoting environmental awareness, but if one protects the environment or not is a matter of each person’s conscience. Here we only prune and do manual weeding and we use compost for fertilizing. For pests and diseases we don’t apply anything, we just do proper pruning” (President, O/UCO)

Members of FTO/FM, another Fairtrade and organic certified PO said that there had been improvements in natural resources management as a result of certification:

“There has been a change in natural resource management, we have improved a lot due to the requirements of the certified. We are now purely organic and we try to comply with quality” (FTO/FM farmer).

The PO chosen as a matched comparison to FTO/FM is NC/PM. It was organic certified for one year, but then suspended as members were using chemicals. Despite this suspension, members claimed that they are still separating waste, and are not using chemicals etc.

“They have taught us how to manage waste by separating it into the different kinds and we don’t use chemicals so we don’t negatively affect our health or our children’s health – this is how we have harmony with the environment. The truth is that now we don’t have organic certification, but we keep producing without chemicals. We classify the organic and inorganic waste and we work with a machete – that is, we keep up the same kind of management” (NC/PM farmer).

The coordinator of CLAC spoke about the management of natural resources and environmental protection and indicated that while Fairtrade has positive environmental impacts, it is on its own insufficient to challenge the wider forces causing environmental degradation. The coordinator also noted that it is not necessarily the standards that cause farmers to care for the environment – other personal and organisational values are at least as important:

“Fair trade is responsible for important positive environmental impacts. But they are not enough to offset the large powers that generate the majority of environmental imbalance. We as small producers attempt to work in harmony with nature, because she is the one who punishes and will keep punishing when she is not respected. But it is more through personal interest that because of standards that we – small farmers – try to protect the environment and it is even in our constitution” (Interview with the coordinator of the CLAC, n.d.)

8. Changes in local and regional development

The most obvious impact on a national scale has been an increase in amount of organic cocoa produced. More farmers are joining the POs and there has been an increase in the number of organic certified organizations. Consequently, the amounts of area planted, cocoa exported and foreign currency earned have all increased.

Cocoa organisations are gradually gaining greater representation in Ecuador and gaining greater self-esteem and confidence as a result. In the Amazon region, an important development has been the founding of RAO/KN and its membership of the Cocoa Roundtable of the Sumaco Biosphere Reserve. This has allowed a better understanding of the cocoa context in Ecuador and the importance of small producers locally as well as nationally. RAO/KN’s work together with other organizations has led to a new proposal for a “Cocoa Law.” The ideas proposed within the Roundtable have been discussed with farmers and municipal and provincial leaders, as well as GIZ, MIES and MAGAP. The participation in the Roundtable and the associated interactions with other value chain players has been important to lengthen the PO social and commercial networks: such contacts can potentially assist the POs to establish cooperative or commercial agreements with different organizations.

Public development bodies are also showing increased interest in supporting cocoa farmer organisations and cocoa heritage, including investing in cocoa-related projects. See box xx below. In Tena Province, for example, where RAO/KN has developed a strong reputation, the state is funding projects to recognize and rehabilitate cocoa culture and its origins. This in turn influences the marketing strategies of cocoa by the producer organisations and its promotion locally and with it the creation of niche markets for local groups.

Box 12: Public investment attracted to cocoa farmers and culture in Ecuador

Public development bodies are now interested in supporting cocoa farmer's organisations as well as the cocoa culture and its ancient origins. *"The origin of cocoa is in the Napo province, Cantons of Archidona, Tena and Morona Santiago. Through its work in rehabilitating and saving old cocoa plantations, the Heritage Ministry is going to declare the town of Santa Rita, Archidona the City of Cocoa. They will also establish a cocoa garden and cocoa park in Tena where they will sell different cocoa products."* (Interview with the RAO/KN manager, 2012)

Another impact of certification is the fact that RAO/KN has now become the main cocoa collector and seller for the region creating alliances with other groups. There is more active networking between cocoa farmer organisations, and this gives them greater ability to regulate prices (i.e. set good prices for farmers) in the face of intermediaries (who have to adjust their prices upwards). When RAO/KN started buying cocoa in the region, intermediaries were forced to raise their prices. From this point on, RAO/KN has served as a cocoa price regulator.

RAO/KN has grown in strength and confidence as an organisation. There are now discussions amongst management about withdrawing from organic certification and creating its own standards based on the culture and practices of the *chacra* system and drawing upon the concepts of sustainability and natural resource equilibrium, but with modifications flowing from RA and BCS organic standards. RAO/KN feels at liberty to make this move thanks to the prestige and reputation it has gained at a national and international level. The hardest part has been positioning the product in the market, but now that this is achieved, they can take on further challenges. While these changes are not really the result of certification, the standards RAO/KN has followed to date will be used to support quality production directed by its own autonomous process without a certifier controlling them. However, while this is the aim, the organisation would need to secure a market for such a standard, as it is not clear if buyers would accept this standard in lieu of internationally recognized ones.

"Yes, there are talks about this. Nothing concrete has been planned, but we do wish for a day when we have parameters and standards for the chacra system. It all depends on the market and how things develop with organic certification. Maybe we will leave the organic certification, because we want to have our own certification with our own standards and direct this type of production. It will be more than just organic production. It will be with a philosophy of sustainability and balanced with the natural resources in the chacra ecosystem" (Interview with the manager of RAO/KN, 2012).

In discussing changes in local and regional development through cocoa with the Fairtrade standard system, it is important to mention the organizational aspects of small cocoa producers. The FLO Fairtrade theory of change includes inputs relating to networking. FTO/NO and FTO/FM are Fairtrade (and organic) certified, but also belong to the Unión Nacional de Asociaciones de Pequeños Productores Agropecuarios Certificados en Comercio Justo del Ecuador (CECJ). This organization was founded in 2010 to lead the empowerment of democratically organized small producers in Ecuador and have been pioneers in developing Fairtrade as an alternative form of sustainable development. CECJ is linked to the CLAC network (Coordination of Fairtrade in Latin America and the Caribbean) which represents democratically organized small farmer organizations in Latin America, and aims to strengthen and develop grass roots organizations through supporting their members, promoting their products and their involvement in social, political, economic institutions within the Fairtrade framework. These two associations - both locally and at a regional level - help strengthen small producer organizations and promote their products to different clients.

SECTION 3: THE CONCLUSIONS

9. The Conclusions

From the evidence of the study the certified organisations in Ecuador have contributed to increasing the incomes and productivity of their members. Certified Fairtrade and organic producers achieved significantly higher productivity in 2010 and 2012 compared to non-certified producers. Sustainable farming practices have been introduced. Farmers report that certification has supported improvements in quality through improved environmental management, reduction in agrochemical use and improved pest and disease control (RA and organic) and through investment in production and post-harvest systems (Fairtrade).

Incomes from cocoa of certified producers have improved slightly over the two year period, while non-certified producers' incomes from cocoa have significantly decreased. This income has not been visibly converted into assets, but levels of satisfaction for certified producers on food security and a range of other livelihood dimensions are higher than among non-certified producers.

Farm worker conditions have also improved, including their health and safety. Although this could have been influenced by broader government policies, there was a significant difference between certified and non-certified producers in reported improvements in labourers' exposure to health and safety hazards.

The major uses of the Fairtrade Premium have been for cocoa production, infrastructure and credit, health, training, education, infrastructure development and environmental activities. One of the Fairtrade organisations also uses the Premium for administration, organisational strengthening, and social security for members and staff. 98% of Fairtrade certified farmers reported benefitting from use of the premium in production and at least 80% benefitted from other uses. There is limited benefit for the wider community as the funds are directed mainly to members. The level of awareness concerning the Premium and its use among certified producers could be improved.

The certified producer organisations appear to be functioning well in their wider advocacy role in the market and able to deliver better financial services for members. The organic certified sector has grown and volumes of sales are up. Cocoa organisations are gradually gaining greater representation in Ecuador, helping to increase the voice of small producers locally and nationally. This increased profile has helped to attract support from public development bodies including investing in cocoa-related projects. Nevertheless, there is scope for increasing internal participation of farmer members and provision of more information on the organisations business transactions

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