

AGRO ECCO
LOUIS BOLK
INSTITUTE



MAKING COCOA MORE SUSTAINABLE



Introduction

The Louis Bolk Institute (LBI) is an independent research, advisory, training and development institute to advance truly sustainable agriculture, health and nutrition. In Africa we operate under the trade name **Agro Eco-Louis Bolk Institute (AE-LBI)**. In Ghana the two offices (in Accra and Kumasi) have 11 staff and around 80 officers in the field.

In this brochure we explain the various activities we undertake throughout especially the cocoa value chain. We work with farmers, farmer organisations, authorities, the cocoa buyers and NGOs to make cocoa farming more sustainable. Certification is an important tool. Certification requires an Internal Control System (ICS) which is a smallholder management information system with which one can follow the developments.

We work on the inputs for the farmers like the fertilisers and planting materials. There is a lot of work to do on farmer organisation. Training those who train ten thousands of cocoa farmers. Assisting farmer groups with marketing their cocoa into niche markets. There is work on quality, on fine flavour cocoa. We look at Payments for Ecosystem Services and preferably from a landscape level.

Certified cocoa

With Ghana producing one-quarter of the world's cocoa, the price that chocolate manufacturers are willing to pay for Ghanaian cocoa mainly depends on the physical quality of the cocoa beans, i.e. moisture content, low percentage of mouldy beans and uniformity, but there is more ...



Recently chocolate consumers have become more concerned about the wellbeing of West African cocoa farmers, their communities and their environment. And the sustainability of their supply. Consumers want to know that farmers and their communities that produced cocoa for their chocolate are receiving benefits that result in higher

incomes and better livelihoods.

With certification, farmers can now access new markets and be able to demand a higher price for their cocoa. This extra money can be used to improve incomes and livelihoods of those cocoa farmers.

Agro Eco – Louis Bolk Institute supports farmers in Ghana by providing training and assistance to obtain and maintain the certification, which allows them to sell their cocoa beans at a higher price.

Standards

Internal Control System

The presence of an Internal Control System (ICS) is a requirement for Organic group certification. The ICS is a tool to manage the integrity of the organic production and ensures traceability during buying. It can also be used to monitor and improve the quality of production.

Being certified is not a one-time thing, but an ongoing process. Farmers are expected to comply with the standards throughout the year; the surveillance by the ICS should also be active throughout the year. ICS activities include registering

farmers, training on ICS; updating farmer files and monitoring the ongoing activities up to the time of harvest.

ICS can be the competitive advantage for organic business, since it allows inclusion of quality management aspects without much additional effort.

Agro Eco-Louis Bolk Institute (AE-LBI) has experience in assisting organic exporters to develop an ICS for their grower groups. This links with the Management Information System of the buyers. We have experience and can help setting up systems like Geotraceability, FAQ, Cropster and E-Cert.

Organic, Fairtrade & Rainforest Alliance Certification

AE-LBI leads producers and exporter through the different certifications required by the market. Whereas organic is its main specialty, it has developed experience in Fairtrade, Rainforest Alliance and UTZ Certified and other trade standards. AE-LBI is working closely with the organic certification bodies and is an active member of IFOAM (International Federation of Organic Agriculture Movements).

Organic

Global demand for organic products has been growing for more than ten years and farmers from developing countries can benefit from this niche market which can offer premium prices. Consumers have an interest in organic production mainly for environmental and health reasons.

Organic cocoa is different from conventional cocoa; during its cultivation environmentally friendly methods (i.e. no use of chemical pesticides) are applied and during production of chocolate only organically produced ingredients are being used.

Exporting organic products can be attractive for farmers and their producer organisations; the specific markets segments (niche markets) offer the opportunity to achieve better prices and acquire a more privileged market position. Sales of organic products are steadily increasing, so is organic in low and middle income countries.

What appeals to a lot of farmers is the fact that they will not need unhealthy expensive, chemical, imported inputs. Research has pointed out that producing certified cocoa beans is just not enough.

It is known that there are problems (identified by importers and chocolate manufacturers during BioFach 2011) with inconsistent supply, very small volumes and supply only being available at harvest time (instead of on-demand). AE-LBI's projects are addressing these challenges, trying to close the gap between producer and buyer.



Fairtrade

The term 'fair trade' usually refers to trading partnerships between producers in developing countries and market partners in consuming countries.

It is based on conditions that enable producers to improve their livelihoods. A trade relationship does not necessarily need to be certified in order to be fair, but certification provides third-party independence which ensures the integrity of the trading relationship, as well as communication to consumers.

The most widely used Fairtrade standard and certification system is



the one under the Fairtrade Labelling Organisation International (FLO).



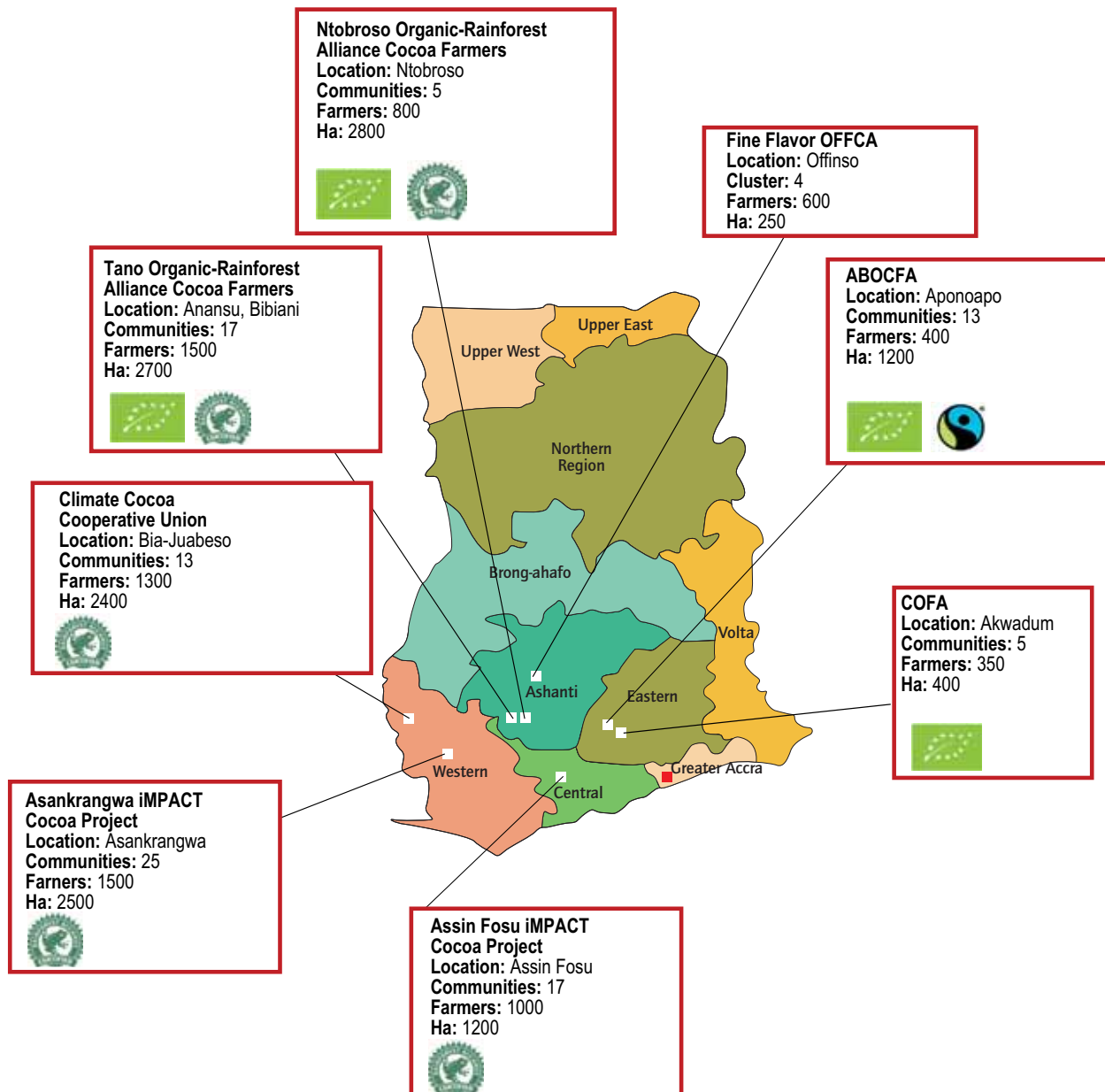
Rainforest Alliance

In 2008, Agro Eco - LBI entered into a partnership with Rainforest Alliance (RA) to represent it in Ghana.

The partnership sought to promote the Sustainable Agriculture Network (SAN), build capacity of farmers committed to following the standard and assist the farmers to prepare for RA certification. RA works to conserve biodiversity and ensure sustainable livelihood by transforming land-use practices, business practices and consumer behavior. It is a welcome addition to, or starting point for organic cocoa growing.



Cocoa Projects in Ghana



Organic and Rainforest Alliance Certified Projects

Cocoa Organic Farmers Association (COFA)

In the year 2006, the Cocoa Organic Farmers Association (COFA) in Akwadum-Brong Densu, were supported by the Dutch based Rabobank Foundation to go organic. Agro Eco provided technical support in the form of capacity building to improve livelihoods of about 350 cocoa producing households.



The support was also to develop export of high quality certified Organic and Fairtrade cocoa beans in three years time. COFA is now a self sustaining

association, managing their own affairs. COFA has 350 active farmers (owners and caretakers), in 5 communities producing between 50 to 100 tons of cocoa.

In 2011 they were able to produce 200,000 organic milk chocolate bars for HEMA's Return to Sender project, supported by the Postcode Lottery and DOEN Foundation. COFA has now a dedicated buyer, TCHO.

Mars Partnership for African Cocoa-Communities of Tomorrow (iMFACT)

In the framework of a development partnership Mars drives the iMFACT project with its implementing partners. About 10,000 people in the 40 iMFACT communities in Ghana and Ivory Coast have improved their living conditions through the project. More than 70 percent of the small-scale farmers have adopted sustainable agricultural practices such as diversification into various crops, planting new cocoa seedlings, shade tree integration and the application of integrated pest management techniques.

These activities lead to a better cocoa quality, significantly increased productivity and consequently to higher

incomes. Some challenges remain, particularly the improvement of income diversity and financial services. So far, 80 per cent of the income still derives from cocoa. Access to credits is necessary to enhance production activities.



Aponoapono Biakoye Organic Cocoa Farmers Association (ABOCFA)

The project was initiated in 2008 and targets over 400 farmers in the Aponoapono enclave in the Suhum Kraboa Coalter district of the Eastern Region near Suhum in Ghana. An association of organic cocoa farmers

has been formed in the project area. Its name is Aponoapono Biakoye Organic Cocoa Farmers Association, or ABOCFA. The project covers 13 communities that have a total area of 2800 acres of cocoa farms.



The project was initiated by AE-LBI with the support of Cadbury on behalf of its organic brand Green & Black's. At the end of the second phase of the project the farmers' association should implement all organic and fair trade related activities independently, so that the Fairtrade cocoa business will become a sustainable business for the association.

Expected results include maintenance of standards and an increase in cocoa production, and subsequently farmer income. Results include an increase in the percentage of certified cocoa sold

on the market and most important ABOCFA assuming all responsibilities, including provision of farm inputs. They have a dedicated buyer: Tony Choclonely. Who is making chocolate bars and organic chocolate milk.



Ntobroso Organic Cocoa project

The Ntobroso Organic Project area consists of 5 villages with total farmer population of 1500 located in the Atwima Mponua district in the Ashanti region of Ghana. The District is located in the south-western part of the region (60 km West from Kumasi) covering an area of approximately 900 square kilometers.

The project was facilitated by Ghana Organic Agriculture Network (GOAN) and Agro Eco since 2007 with support from Progreso up to 2012. It is an area where cocoa farming is the main source of income.

The main aim of this project is to help cocoa farmers adopt good agricultural practices in order to increase production and gain additional income from premiums for poverty alleviation. Farmers work towards Payments of Ecosystem Services (carbon sequestration, biodiversity) as well.

The group achieved Organic and Rainforest Alliance certification since 2009 and 2010 respectively. It has a potential of 1000MT of Organic and Rainforest Alliance certified cocoa. The Farmer Based Organisation has testified

about the impact of the project and their willingness to sustain the project.

Nyinahini Sustainability Cocoa Production and Community Empowerment Project

Cocoa farmers from the Nyinahini catchment area requested for a similar intervention like the Ntobroso Organic Project. Subsequent feasibility and consultations gave birth to Nyinahini Sustainability Cocoa Production and

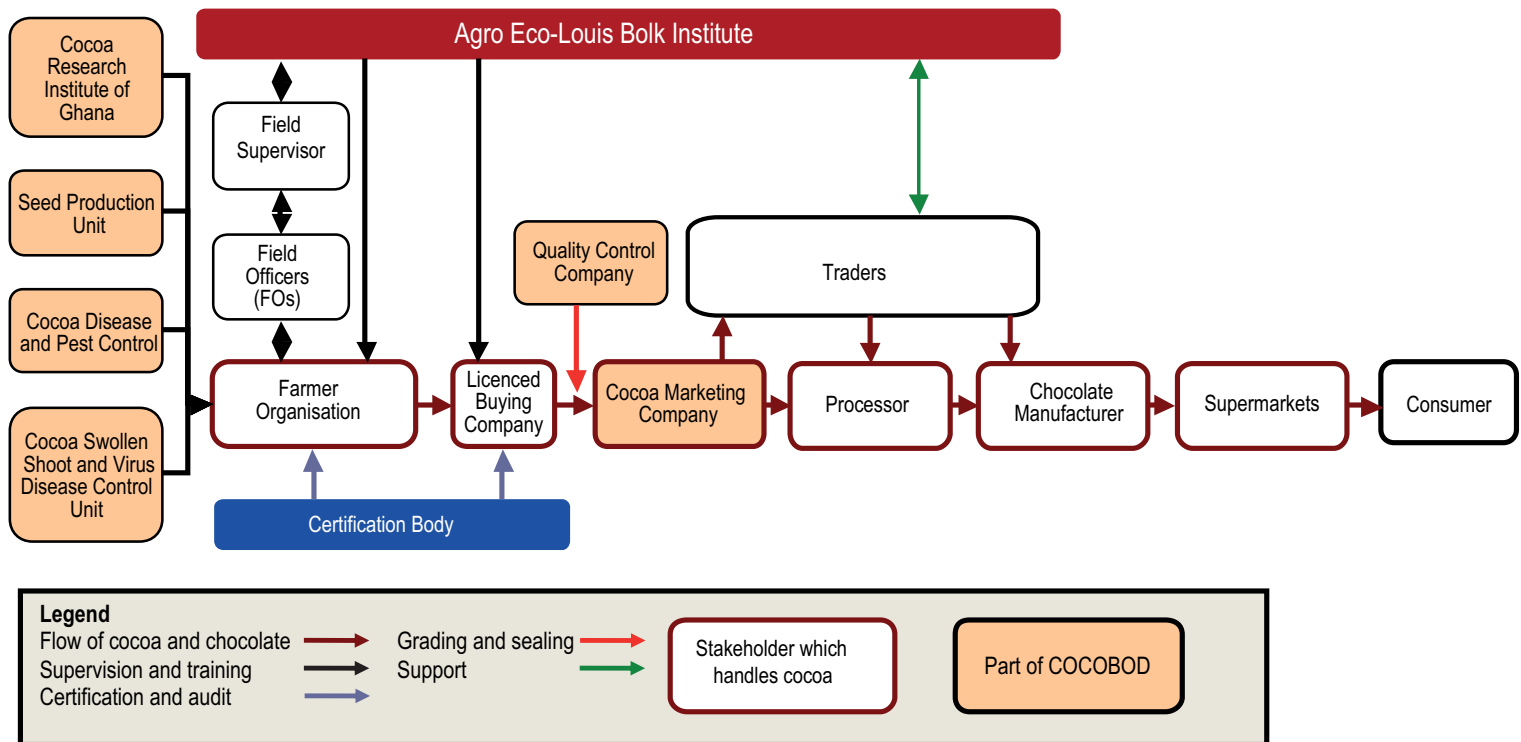
Community Empowerment Project (NSUCOPEC) which the farmers call now: Tano Organic-Rainforest Alliance Cocoa Farmers Cooperative. The Nyinahini project is also located in the Atwima Mponua district (100 km West of Kumasi).

The main aim of the project is to assist the community build capacity to improve their cocoa production for increased income and better livelihood.

About 1500 cocoa farmers have received training in Organic and Rainforest Alliance standards. Potential tonnage is 2000 MT. Farmers have grasped organic and good agricultural practices and participating farmers are enthusiastic. In addition, the community based farmer organization is established as well as bridging corridors to sustain the ecosystem in the three forest reserves within the district.



Cocoa Value Chain in Ghana



West Africa's cocoa sector has been pressurized to liberalize; most countries have done that and not always with good results. Ghana, however, has largely maintained its structures and the sector is performing very well compared with its neighbours. The Ghana Cocoa Board is regulating the sector. Buying cocoa from the farmers is done by various Licensed Buying Companies, for a fixed price. All export is done by the Cocoa Marketing Company, a subsidiary from the Cocoa Board. However, for a buyer it is possible to be engaged in a location/ community, keep the beans separated and buy "their own beans".

Any project has to have an agreement with the Cocoa Board and all rules and regulations should be followed, which may look a little laborious for newcomers. Developing a project or value chain means that one has to engage with the different Cocoa Board departments or services. Nowadays, both the public and the private sector have to deal with an increasing number of regulations, standards and expectations on food safety, sustainability, traceability and ethical practices. This requires sensitization and capacity building throughout the value chain.

Focus on Flavour

Fine Flavor Cocoa project

Ghana may be well known for its well fermented, clean, consistent cocoa that earns a premium on the world market, but it is not participating in the fine flavour cocoa market like Latin American countries do. Similar to coffee, the demand for single origin, specialty flavours is increasing in the chocolate industry, bringing considerable price premiums to those farmers who produce them.

In 2008, the Ghana Fine Flavor Cocoa project (FFC) started. It is a collaboration of fine flavour connoisseurs, researchers and farmers. While the first phase was funded by the Bill and Melinda Gates Foundation, the second is funded by the Sustainable Food Lab, Green Mountain Roasters, Rabobank foundation and ADM.



Flavour specialists from Hershey, Mars, Guittard Chocolate and TCHO identified a number of varieties with superior flavour characteristics from the existing clonal gardens in

the country. Multiplication is through grafting onto young seedlings but also still vigorous older trees. Farmers in and around Offinso have self-organized into the Offin Fine Flavour Cocoa Farmers Association (OFFCFA).

It is the first farmer group in Ghana to plant grafted FFC in commercial quantity. Farmers are trained in high density planting. There is a revolving loan scheme managed by Opportunity International. In the first phase, 60 farmers planted FFC grafted planting materials (clones) on 80 acres. The project is currently outscaling to 600 farmers in the Offinso district.

The flavours come out best with the use of improved fermentation technology. Confirmation of FFC samples coming from the farmers by industry cocoa evaluators has generated considerable interest. Agro Eco-LBI coordinates the project with technical support from Cocoa Research Institute of Ghana, Sustainable Food Lab and the International Center for Tropical Agriculture (CIAT).



Flavour labs

The FFC project links with the establishment of cocoa flavour labs in Ghana which is done by TCHO, a US based fine flavour buyer. A flavour lab will be established with a trained staff and sensory panel.

They will screen cocoa from different areas to possibly identify 'origins' for which there might be a special market. They will also determine which improvements in fermentation and drying technologies would bring out the desired flavour characteristics even better. Tests will be done with farmers and several of our project sites are part of it.

Heritage varieties

In some of the project sites there are fields that are planted with old varieties, like Amelonado, Trinitario and Amazonia. We are investigating whether the continued production of these varieties has a potential for niche markets.

Most of these trees are extremely old but it might be possible that there is a market for a Ghanaian Trinitario coming from a certain soil and then it is worth preserving it. In that case the farmers are encouraged to take better care of their trees, perhaps replant, which would have a direct effect on their incomes.

These old varieties have a lower productivity and lower resistance to pest and diseases than the modern hybrids and any premium price needs to balance this.

In-country processing

A recent development is the processing of certified cocoa beans in Ghana. NICHE is a privately owned and operated cocoa processing company in Tema. It produces high quality cocoa liquor, butter and powder to customer specifications. It is certified to ISO 22000.

The factory is specifically designed to process and store relatively small quantities of certified or specialty cocoa. NICHE has organic certificates for the European, Japanese and North American markets. In addition, the plant has certification for Kosher production from the Federation of Synagogues (Israel) and for Halal by the South African National Halal Authority.



It has exported organic cocoa liquor to as far as Japan. Farmers have visited the factory to understand better what happens with their beans, and the importance of quality management from their side. Synagogues (Israel) and Halal by the South African National Halal Authority. The process into other certifications has started, awaiting approval by auditors.

Organic Schoolgardens

In rural Ghana a large part of the children suffer from undernourishment, a bad diet, parasitic infections and diarrhoea. This has an effect on their learning. When the Ghana government revamped its School Feeding Program in 2006, we put in place organic school gardens alongside a series of primary schools all over the country.

These vegetable gardens and fruit trees had the aim to supply the children with a better lunch while at the same time it would be an opportunity -for some grades- to learn about biology and agriculture. Government and NGO extension staff trained interested teachers, and the topic was brought into the curricula of the schools.



A budget was provided to start the schoolgardens: for fencing, a water tank, some tools and a small shed. Seeds were provided. The school boards annually provide a small part from their schoolfeeding budget to continue the exercise.

Setting up the schoolgardens required some heavy labour so parents were invited to assist. This had as a result that a number of schoolgardens became a kind of Farmer Field School location for some of the parents who started to grow more vegetables; for home consumption, for selling to the school and local markets. In some cases they got into commercial vegetable production, delivering to nearby restaurants and hotels (very much appreciated because of its organic production).

A start was made to engage in using the schoolgardens as a venue for training mothers in better cooking (maintaining nutritional value), in nutrition and better hygiene. This could easily be extended with issues like better cooking stoves, sanitation and waste management but then the project ended.

We are keen to continue this work, particularly in cocoa areas, as well fed children are the basis of the communities' development. And some of them are tomorrow's farmers.



Beyond certification

Payment for Ecosystem Services

Ecosystem services are those services that an environment provides to society. These include water retention, rainfall attraction and thus provision of drinking water, and (agro) biodiversity. This means an ecosystem where natural balances prevent pest and disease outbreaks. But also provides various foods, fruits and medicines to the farmer; food security.

Another important service is carbon sequestration, in trees and in the soil. Deforestation is one of the largest contributors to climate change. While parts of the cocoa belt are classified as biodiversity hotspots, it is quickly eroding. Maintaining various shade trees, protecting water streams and creating bio corridors on cocoa farms can partly compensate.

We want to generate robust but productive ecosystems where farmers can grow cocoa and make a good living for decades to come, so that no new rainforests need to be cleared. With

the exception of carbon, these ecosystem services are usually not paid for. We believe in multifunctional agriculture but it should pay off. With CREM Advisors in Sustainability we are implementing the 'PES in Cocoa Agroforestry' project for the Dutch Ministry of Economic Affairs. Together with the Dutch private sector, pilots are developed where the Payment for Ecosystem Services theory is put into practice.

The easiest mechanism is when there is a certification initiative (training, monitoring, financial system, etc.) in place. This can then be extended with ecosystem services. We are developing management plans, identifying what needs to be done, the cost, and the (value of the) ecosystem services that will be delivered over e.g. 30 years. Initial calculations show that the Ghana cocoa farmer could earn a serious side income when he/she would grow commercial timber as shade trees.



The next level: landscapes

One can work with hundreds of individual farmers in an organic project, or with thousands of cocoa smallholder farmers in for example a Rainforest Alliance certified location, but at a certain moment one has to move beyond the community level, including the non-certified farmers, to have real impact.

This is particularly the case in the natural resources conservation. There is little use to have 80% of the farmers abiding by the rules of better wildlife management when there is one (non-certified) hunter. Or when in the course of three years, 10% of the farms are sold to illegal miners. We are thus moving towards working on a landscape level, in a more agroecological and multi stakeholder approach.

In Ghana, there are a number of districts with a high percentage of certified farmers. One of these districts is Atwima Mponua. The District Chief Executive has declared that she wants the whole district to become sustainably managed. That is a laudable starting point. The idea is that one could rally the different stakeholders around the need to create a resilient ecosystem that will produce cocoa for the next decades, where cocoa farming families can generate a good income.

With good schooling that will stimulate a local economy with increased employment for the young, an improved standard of living for the area. The common interest of the cocoa buyers -that they want to continue to buy cocoa in the area- can provide an excellent basis for such a development. Some of the cocoa buyers are interested; let's see whether they are willing to participate.

Market Linkages

Producers not only need support in their organisation and in improving farming practices, but also in the marketing of their produce. There is little need to improve production when there is no market demand. AE-LBI's contacts in the international trade are of great value, in both the traditional organic field and in supermarket and large industry oriented trade. Every year, Agro Eco-LBI is participating in the Biofach, the largest organic trade show, where it assists exporters to better market their products. The last three years cocoa has been the main theme of the stand.

In a recently started project together with The Hunger Project and SNV, we are not only looking at Good Agricultural Practices and extending the growing season of vegetable growers in Eastern Ghana but also at developing a series of local and export market opportunities. The fruit and vegetable market is often the first entry point for clean, healthy, organic products. In this way we promote the local market for those products as well; for the more conscious middle class consumer.



About The Louis Bolk Institute

The Louis Bolk Institute (LBI) is an independent, international provider of advice and development services for sustainable agriculture, health and nutrition. We use the natural source of knowledge and respect the integrity of life. The institute is known for its participatory and systems approach ('making systems work') and is acknowledged for its implementation skills and practical solutions. Its results lead to healthy and sustainable growth of humans, animals, plants and soil.

LBI was founded in 1976 and is located in Driebergen, the Netherlands. In Africa we operate under the trade name Agro Eco-Louis Bolk Institute. In Ghana the two offices (in Accra and Kumasi) have 11 staff and around 80 officers in the field.

Mission

"To advance truly sustainable agriculture, health and nutrition"

Expertise

Our scope is the entire food system: soils, crops, and livestock production, value chain development, via nutrition to healthcare and integrative medicine.

Serving West Africa's need for more sustainable agriculture, Agro Eco-Louis Bolk Institute supports local organic development through offering the following services:

Project management

- Feasibility studies • Impact assessments
- Proposal writing • Project evaluation

Organic and sustainable agriculture

- Training in organic agriculture (certified PIP trainers)
- Pest & disease control • Soil fertility management
- Organic crop protocols.

Marketing

- Market surveys • Buyer contacts
- Participation in trade shows
- Project presentations/brochures.

Assistance towards certification

- Organic certification procedures
- Internal Control System (ICS)
- Certification to additional standards: Rainforest Alliance, Fairtrade, GlobalGAP, HACCP and others.

Farmer organisation

- Small-scale capacity building
- Smallholder group certification
- Smallholders access to the markets
- Farmer Field Schools.

Quality management

- Pre & Post-harvest technologies
- Cold chain handling & management
- Quality assessment.

Partners

Agro Eco-LBI works primarily together with farmers; the institute actively and effectively passes research findings through to them; they are the ones to formulate the problems and identify the solutions. The work is based on developing sustainable value chains.

The Agro Eco-LBI department has a history of developing close to 80 value chains in the tropics, for businesses and for development NGOs. Our 'Development through Trade' approach has substantially increased the sales of sustainably produced agricultural products from Africa onto the global market over the last 15 years and at the same time improved the living standards for the farmers involved.

Important clients and funding agencies include the Dutch Ministry of Economic Affairs, Agriculture and Innovation, national and local governments, NGOs active in nature conservation (e.g. IUCN) and international development (e.g. Oxfam-Novib, Hivos), the European Commission and private companies such as Heineken, Unilever, Tradin and CocoaSource. Thanks to AE-LBI's expertise in sustainable agriculture, conventional companies such as Armajaro and ADM turn to AE-LBI for advice on sustainable practices.

For many research and advisory activities, Agro Eco-LBI works in close collaboration with universities (such as Wageningen UR, University of Utrecht, University of Ghana, Legon) and research institutes (like CRIG, FiBL, IITA).



Partners / Research Institutions / Donors / Companies



COCOASOURCE SA



MARS

HERSHEY'S

TCHO



the natural source of knowledge



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