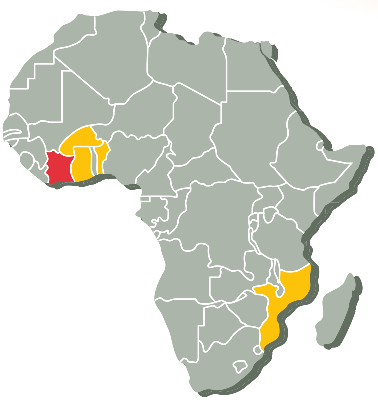

Analysis of the Cashew Sector Value Chain in Côte d'Ivoire

African Cashew initiative (ACi)

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April 2010

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Summary

Cashew nuts are grown in northern, north-western and north-eastern Côte d’Ivoire, where cashews and cotton are the main cash crops. The total production of cashew nuts in Côte d’Ivoire rose from 6,300 tons in 1990 to 335,000 tons in 2008, with over 20% of the increase occurring between 2004 and 2010. According to *Autorité de Régulation du Coton et de l’Anacarde, the government body overseeing the cashew sector (ARECA)*, the rise resulted from increased land cultivation rather than a rise in productivity, and cashew plantations covered around 420,000 ha in 2005.

Côte d’Ivoire currently exports more cashew nuts than any other country worldwide and is the world’s third highest producer of cashews; the lion’s share of the production is exported in the form of raw cashew nuts to India (71%) and Viet Nam (28%).

The civil war in Côte d'Ivoire, which began in 2002, has had serious consequences for the national cashew sector – more than 54% of the cashew-growing areas are located in the area occupied by the rebels. Cashew farmers depend heavily on manual labour for maintenance and harvest and the war has had a negative impact on the cost and availability of manpower –most farm workers are from neighbouring countries such as Mali, Burkina Faso and Guinea, and have returned home because of the crisis.

The poverty rate in Côte d'Ivoire has risen sharply: in 2008, one in two persons was categorised as poor, compared to 1 in 10 in 1985. Poverty is primarily a rural problem: 12 out of 20 rural inhabitants are classed as poor, whereas only 6 out of 20 urban dwellers are poor. There are no specific figures on the prevalence of poverty among cashew farmers. In recent years, however, poverty has spread essentially in rebel-held areas – the areas where cashews are grown. It can be assumed therefore that many cashew farmers belong to the poor population group.

Cashew nuts are grown mainly by small-scale farmers. Owing to property laws, female farmers account for only about 17% of all cashew farmers. Farmers cultivate cashews extensively, using few inputs. Few farmers use insecticides. Some cashew trees profit from the fertiliser given to intercropped cotton. Furthermore, farmers do not make sufficient efforts to properly maintain the trees, carefully harvest the fruit or carry out proper post-harvest treatment. Women are traditionally in charge of harvesting, transporting, sorting and drying the fruit. Yield per tree is very low, amounting to 2 or 3 kg of raw cashew nuts per tree per year. Average income from cashew production is subsequently also very low.

Associations of cashew farmers are still weak. However, experience in other countries has shown that strong producer group associations are a pre-condition for accessing inputs (in particular, credit), making use of economies of scale and better defending the interests of the sector at political level.

Various actors at local, national and international levels are involved in the marketing of cashews. Most farmers sell their nuts to local traders, mostly community members whom they know and who come to their farms. The local traders sell their products to independent buyers or to buyers working with bigger trading companies. Local traders thus operate as intermediaries between buyers and farmers. Certain buyers work with big trading companies or export companies, some of which have global connections and pre-finance the costs of the buyers for the nuts. This system for marketing cashews functions relatively well and ensures some degree of competition, at least at the level of buyers and trading companies. Marketing of the nuts is dominated by export firms, which exported more than 76% of output in 2009. However, despite the minimum producer price fixed by *INTERCAJOU (Association interprofessionnelle de la filière cajou)*, which is made up of representatives of farmers, exporters and processing companies, it is doubtful whether farmers have a sufficient overview of price changes on local, national and global markets or the knowledge to negotiate with traders.

Only a small part of the cashew nuts is processed locally. The cashew processing industry in Côte d'Ivoire is in its infancy and most factories started operations as recently as 10 years ago. The oldest and one of the biggest companies is *SITA*, which has a processing capacity of 2,500 tons and started operations in 1998. Apart from *SITA* there is *OLAM Ivoire*, with a processing capacity of 5,000 tons per year, and a third company with a 5,000-ton processing capacity is currently being constructed. Two further small-scale processing companies and many small-scale processing cooperatives have started up in the past ten years. Major bottlenecks to expansion, especially for small-scale companies and cooperatives, are access to working and investment capital and inappropriate technologies that lower the quality of the processed nuts.

Whereas the bigger processing companies in Côte d'Ivoire have strong growth potential, smaller companies and cooperatives will have to prove their competitiveness on national and global markets in the coming years. Co-operation agreements between smaller units and well-established processing companies could be the means to ensure the sustainability of cashew processing cooperatives.

The government attempts to regulate the cashew market by strengthening the organisations involved in the cashew sector and through certain interventions. For example, *INTERCAJOU* fixes the minimum price for cashews in the country every year and officially announces the start of the marketing season for cashews.

The main recommendations made at a workshop organised by the World Bank in 2007 to stimulate the cashew sector in Côte d'Ivoire are as follows:

With respect to farmers:
- improve access to seedlings;
- strengthen extension services for farmers;
- strengthen farmers' associations at local and national level.

With respect to processing companies:
- improve access to export credit for processed nuts;
- provide tax exemptions and subsidies for local and imported services, goods, equipment and spare parts needed to process nuts;
- improve access to financial means to buy raw material;
- improve the market information system;
- strengthen cooperation between cooperatives.

With respect to the marketing and exporting of nuts:
- provide training in quality requirements and quality control;
- develop a global market information system;
- strengthen the capacities of exporting cooperatives.

1 Introduction

1.1 Purpose of the study

The low rate of return on production and the low level of local processing are serious obstacles to the harmonious development of the cashew value chain in Côte d'Ivoire. Production, which remains by far the most important link, is largely carried out by small-scale growers whose output is almost entirely exported in the form of raw nuts.

The *ACi* was launched in Côte d'Ivoire in October 2009. It aims to provide support to at least 50,000 cashew growers and create at least 3,400 new jobs in the cashew processing facilities to be established or renovated.

ACi implementation started with a workshop held on 6 and 7 October 2009 at the *GIZ* office in Abidjan and attended by key players in the national cashew sector. The workshop inter alia promoted a sense of ownership in the *ACi-CI* project among the sector's various stakeholders and served to review the state of the cashew sector in Côte d'Ivoire, identify the challenges specific to Côte d'Ivoire which the *ACi* can address, designate the members of the project's national steering committee and draw up an action plan for 2009 and 2010.

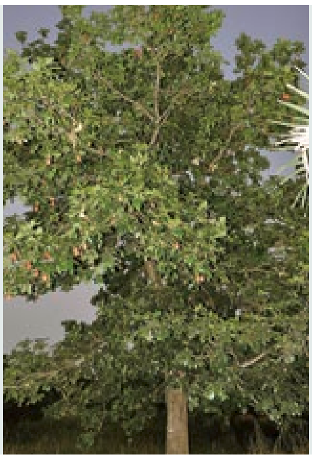
After the project had been launched, the present socioeconomic study was conducted in order to obtain the requisite documented overview of the cashew sector value chain. The study's immediate goals are to:

- obtain a comprehensive view of the current situation with, if possible, an overview of its history;
- identify the sector's possibilities and the action being taken by the various stakeholders;
- bring to light and analyse the sector's strengths, weaknesses, opportunities and threats;
- take a critical look at cashew sector value chains with an emphasis on cashew growing and processing;
- determine the cashew sector's place in the national economy and gauge its relative importance in the various growing areas;
- on the basis of the value chain analysis, identify and rank the main ongoing activities and consider what needs to be done next with a view to promoting the development of the sector in Côte d'Ivoire.

1.2 Method

The method used to conduct the study comprised the following activities:

- **Exchanges with the GIZ project team:** the contacts singled out at this level were the *GIZ - ACi-CI* National Project Coordinator (who works out of Korhogo) and the Regional Coordinator based in Bondoukou. As a result of these meetings, the actors to be interviewed during the mission were identified and the relevant documentation was made available.
- **Methodological support from the international consultant for the study:** this support, which was provided in the form of exchanges, included an insight into the overall philosophy of the study conducted in other countries with *ACi* projects and the concepts involved, tables and available document resources.
- **Collection of bibliographical data:** the documents available on the subject were collected from public and private institutions *(CIRES, INADES-Formation, ARECA, INTERCAJOU, I2T, ACE, ANADER, CNRA,* Customs, *etc.).*
- **Collection of supplementary data:** supplementary data were collected through exchanges with previously identified resource persons and cashew sector stakeholders. The exchanges were conducted using interview guidelines specifically developed for this purpose.
- **Data analysis and drafting of the report:** this stage consisted in analysing, collating and ensuring the coherency of the data compiled, using the data analysis grids and the outline prepared for the drafting of the report (documentary review and interviews), and concluded with the writing of the report.



1.3 Brief overview of the ACi project and the activities undertaken in Côte d'Ivoire

The first *ACi-CI* project activity was the organisation of a workshop to plan the project's activities for 2009 and 2010. The workshop was held on 6 and 7 October 2009 in *GIZ's* Riviera Golf offices in Abidjan.

The workshop brought together around 30 participants representing the sector's various stakeholders, including growers, processors, exporters, representatives of the *Ministries of Agriculture, Industry and the Economy and Finance*, development structures, NGOs, the *World Bank* and regional and local *ACi* project officers. It provided the project team with an operational plan of action comprising three objectives:

- to increase the efficiency, quantity and quality of primary cashew nut production, using a socially and ecologically sustainable model *(GIZ)*;
- to increase the quality and quantities of processed cashew nuts (market research group *TNS*);
- to promote an environment conducive to increased production and processing of cashew nuts and the creation of added value in Africa *(GIZ)*.

The workshop also served to define the terms of reference and composition of the *ACi-CI* steering committee.

To date, the progress made in implementing the project can be summed up as follows:

- with regard to programme management, the three planned coordinating offices are operational in the field and the project steering committee has been established;
- with regard to production support, the programme to train cashew growers in harvest and post-harvest techniques has been completed: instructors were recruited, teaching aids developed, trainers trained, instruction dispensed to 21,600 growers and the partners' activities monitored. A programme is currently being implemented to train cashew growers in techniques for setting up and maintaining plantations, which is due to end in August 2010;
- the *ACi* project team is arranging meetings and taking part in those organised by the sector's various stakeholders with a view to reaching agreement on the possible ties between these activities and identifying action that can be efficiently taken by the various parties involved;
- synergies have been developed with a view to identifying opportunities for innovation with the help of other partners (e.g. innovations involving the use of new information and communication technologies to set up a reliable information system for the cashew sector in Côte d'Ivoire and the development of value-added cashew by-products other than cashew kernels).



1.4. Brief overview of cashew production and processing

Table 1.4.1: Importance of the cashew value chain for the national economy

Indicators			Cashews	Sources / comments
Human development index (global rank): 163rd out of 182 countries				Human Development Report 2009
GDP (in US$ + global rank): US$ 23.78 billion				Agricultural Information Centre (CIA), 2008
Agricultural GDP: US$ 2.559 billion **Agricultural GDP / national GDP:** 25.6%				FAO, 2004
Export structure and trade balance: In 2008, the trade balance recorded a surplus of CFAF 872.6 billion (US$ 1.802 billion)				INS (Institut National de la Statistique)
Average total cashew production			336,957 t in 2008 (outgoing flows to Ghana are estimated at between 15 % and 20 %)	FIRCA, 2009 Information collected at the ARECA and ACA one-stop service. No study has been conducted of outgoing flows, the size of which would seem to be overestimated.
Land under cultivation in ha: 9,500,000 ha in 1999			420,000 ha in 2005	Support for Analysis and Research in Africa (SARA), 1999 ARECA, 2006
Poverty index: ► Monetary poverty index: 48.94 % ► Human poverty index: 41.5 % Approximately one out of every two Ivoirians lives in extreme poverty, i.e. spends less than CFAF 660 per day.	Urban	30 %		INS (Institut National de la Statistique), 2008 UNDP (United Nations Development Programme), 2006
	Rural	60 %		
Population: 15,366,671, according to the 1998 General Population and Housing Census (RGPH), and an estimated 21,395,198 in 2009	Urban	10,654,809		INS (Institut National de la Statistique) Calculated on the basis of an urbanisation rate of 49.8 %
	Rurale	10,740,389		

Table 1.4.2: Information on the growers

Information on the growers		Sources /comments
Total number of cashew growers	250,000	ANADER, 2006
Farmgate price (producer price) [US$/t]	CFAF 150,000, or US$ 309.018	INTERCAJOU, 2009
Average household income obtained from cashew production [in US$]	CFAF 248,876, or US$ 512.714	Calculated on the basis of a grower financial flow of 62.219 billion (INTERCAJOU, 2008) for 250,000 growers. The number of growers is valid for 2006. The 2008 figure is therefore an underestimate.
Other food and cash crops grown	► Intercropped food crops: groundnuts, maize, millet, yams, fonio ► Intercropped cash crops: cotton (the big cotton growers are also big cashew nut growers)	ANOPACI, 2008 INADES – FIRCA, 2009 RONGEAD, 2008 Miaman KONE, 2010
Other sources of income	Small trade, animal husbandry, hunting, services/farm labour, transfers	Miaman KONE et al, 2003
Harvest period	February to May	Red River Foods. Inc., March 2008 The nuts are marketed all year round as some growers speculate and hold back their production.
Number of cashew trees [per ha]	According to a survey carried out in eight cashew-growing departments, average plantation density is 290 trees/ha. Current practice in the country is 200 to 300 trees/ha. Some fields have more than 1,000 trees/ha.	ANADER (Agence Nationale d'Appui au Développement Rural), 2006
Productivity per cashew tree [in kg/ha] **and US$**	The average nationwide yield was between 400 and 500 kg/ha in 2008.	ANOPACI (Association Nationale des Organisation Professionnelles de Côte d'Ivoire), 2008
Average age of cashew trees [in years]	Between 5 and 15 years	ANADER (Agence Nationale d'Appui au Développement Rural), 2006
Degree of cashew certification: specify the system of certification and indicate the percentage of cashew nuts certified	CODINORM, after having consulted the cashew sector's various stakeholders, drew up standards that apply to the sector's three levels: ► standards for samples ► standards relating to the characteristics of raw nuts ► standards relating to the kernels The following controls are currently carried out: ► phytosanitary control by Ministry of Agriculture services (100%) ► quality control: moisture content, seed setting, level of foreign matter, defective kernels and out-turn, by the ACE (100%) ► weight control by the Chamber of Commerce and Industry (100%) ► ECOREST and FLO-CERT GmbH for fair trade products	► Rapport provisoire de l'étude sur la stratégie de transformation de l'anacarde en Côte d'Ivoire [Study of the cashew processing strategy in Côte d'Ivoire – Provisional report], ERAGHU KUMAR et al, August 2009 ► Information collected from ACE, the Chamber of Commerce and Industry, the ARECA one-stop service ► Étude sur la commercialisation interne de la noix de cajou brute en Côte d'Ivoire [Study of domestic marketing of raw cashew nuts in Côte d'Ivoire], ACE, April 2007
Inputs used	Before the plantation becomes productive, fertiliser is used and pesticides are applied to combat pests. Most growers do not carry out these measures, however.	ANADER (Agence Nationale d'Appui au Développement Rural)
Land available for the expansion of cashew plantations [taking into account product competitiveness]	The cashew plantations have a huge expansion potential. Even when account is taken of the land needed to develop other crops, it would appear that the land under cashew can still be doubled. First, however, the productivity of existing plantations must be improved.	

Table 1.4.3: Information on the processing industry

Information on the processing industry		Sources
Processing capacity of all processing facilities in Côte d'Ivoire	Currently used: 6,957 t/year, or 2.06 % of national production	FIRCA, 2009
	Potential: 18,000 t (7 % of 2007 production, according to ANADER), 10,000 t/year	Rapport de l'atelier national sur la filière anacarde, ARECA, 2006
Processing facilities (location, region)	**Large industrial facilities (average capacity over 1,000 t)** ► OLAM IVOIRE (Dimbokro, N'Zi Comoé) ► SITA SA (Odienné, Denguélé)	FIRCA, 2009 Mémoire de fin d'étude sur la rentabilité des petites et moyennes unités de transformation de noix de cajou [Final dissertation on the profitability of small- and medium-sized cashew processing units], N. Vincent DJAN, May 2008
	Semi-industrial facilities (average capacity between 500 and 1,000 t/year) ► COOGES (SEPINGO, Bondoukou, Zanzan) ► CAJOU DE FASSOU (Yamoussoukro, Lacs)	
	Small-scale facilities (average capacity under 500 t/year) ► COOPABO (Bondoukou, Zanzan) ► COOPRAMOVIT (Tiénigboué, Worodougou) ► PAMO (Bongouanou, N'Zi Comoé) ► COOPRAK (Korhogo, Savanes)	
Technologies used [1]	► Italian ► Brazilian ► Indian (the most commonly used) ► Local (invented and adapted)	FIRCA, 2009 Rapport provisoire de l'étude sur la stratégie de transformation de l'anacarde en Côte d'Ivoire [Study of the cashew processing strategy in Côte d'Ivoire – Provisional report], ERAGHU KUMAR et al, August 2009
Employment:	Not available	
Service provided to growers	► Nuts purchased at a more favourable price ► Advice for quality improvement ► Encouragement to create cooperatives	Rapport provisoire de l'étude sur la stratégie de transformation de l'anacarde en Côte d'Ivoire [Study of the cashew processing strategy in Côte d'Ivoire – Provisional report], ERAGHU KUMAR et al, August 2009 Information gathering
Market	**White kernels:** Europe, United States, Canada **Roasted kernels:** Europe, local and regional (Morocco) market	Rapport provisoire de l'étude sur la stratégie de transformation de l'anacarde en Côte d'Ivoire [Study of the cashew processing strategy in Côte d'Ivoire – Provisional report], ERAGHU KUMAR et al, August 2009
Ownership structure and source of financing/ownership	All processing facilities are private initiatives (individual or grower cooperatives). They are either self-funded or rely on donations.	Rapport provisoire de l'étude sur la stratégie de transformation de l'anacarde en Côte d'Ivoire [Study of the cashew processing strategy in Côte d'Ivoire – Provisional report], ERAGHU KUMAR et al, August 2009
Assistance received from: ► government ► NGOs	► General Investment Code ► Training	Information gathering

1) The big industrial facilities have sophisticated equipment and expertise in the procedures involved. In other facilities, major efforts are still required. On the whole, with the exception of the big industrial facilities, Ivorian processors are underequipped.
The material used comprises:
- grading: only SITA SA, OLAM IVOIRE and PAMO have grading machines;
- embrittlement: SITA SA, OLAM IVOIRE, CAJOU DE FASSOU and PAMO have sophisticated, verifiable systems, the other facilities have self-made systems;
- shelling: shelling machines are locally made, except for those of SITA SA, OLAM IVOIRE and PAMO;
- drying kernels: only OLAM IVOIRE, SITA SA and CAJOU DE FASSOU have modern equipment, the others use traditional systems;
- packaging: SITA SA and OLAM IVOIRE have packaging equipment.

Table 1.4.4: Information on traders and their activities

Information on traders and their activities			Sources
Number of certified traders in the cashew sector		► 30 companies and 15 cooperatives in 2009 ► 28 companies and 12 cooperatives in 2010	INTERCAJOU, 2009 Ministry of Agriculture
Estimated volume traded annually [in t]		334,846,203 t of raw nuts were exported in 2009. Of that volume, cooperatives accounted for 23.46 %, companies for 76.54 %.	ARECA, 2009
Target market(s)	Raw nuts	► India: 71.09 % ► Viet Nam: 28.52 % ► Myanmar: 0.03 % ► Italy: 0.01 % ► Indonesia: 0.35 % ► China: 0.01 %	INTERCAJOU, 2009
	Kernels (processed products)	White kernels: Europe, United States, Canada Roasted kernels: Europe, local and regional market (Morocco)	

Table 1.4.5: Collective action and public support for the value chain (stakeholder associations and organisations)

Types and size of the various organisations involved in cashew-related activities
INTERCAJOU (Interprofession de la filière cajou): the association of cashew sector stakeholders, grouped in three bodies: growers, industrialists and exporters. It is an intertrade federation.
ANOPACI (Agence Nationale des Organisations Professionnelles Agricoles de Cote d´Ivoire): groups 17 grower organisations in the following sectors: ► animal husbandry: sheep, goat, pig and poultry breeders (3 FPOs) ► plant production: coffee and cacao growers (3 FPOs), natural rubber growers (2 FPOs), producers and exporters of pineapples, bananas, mangos (1 FPO) and non-traditional fruits (1 FPO), cotton growers (2 FPOs), food crop growers (1 FPO), growers of rice (1 FPO) and sugar cane (1 FPO), cashew growers (1 FPO) ► a microcredit institute (1 FPO)
APACI (Association nationale des producteurs d´anacarde de Cote d´Ivoire): national in scope, aims to group cashew grower cooperatives and cooperative unions
Union of Cashew Growers of Côte d'Ivoire: federation of Côte d'Ivoire's cashew grower unions and associations (cosynapa-ci), which aims to help improve the living conditions of its members
FENOPACI (Fédération nationale des organisations professionnelles paysannes agricoles productrices d´anacarde de Cote d´Ivoire): groups roughly 200 cooperatives and has 25,000 members
PROMEXA (Association pour la promotion des exportations agricoles traditionnelles de Cote d´Ivoire)
National organisations and institutes: ACE, Chamber of Commerce and Industry, FIRCA, ANADER, I2T and CNRA
National and international NGOs: INADES, RONGEAD, GIZ, ACA

Cashew-related projects, programmes and initiatives

Projects and programmes	Main partners involved	Geographical area	Main activities	Implementing period
Workshop on revitalising the cashew sector in Côte d'Ivoire	World Bank, Ministry of Agriculture, sector stakeholders	National	► Sector diagnostic assessment	Completed
Project to improve cashew varieties/ prospecting	INTERCAJOU, FIRCA, CNRA, ANADER	Zanzan, Bandama Valley, Savanes, Denguélé	► Prospecting ► Varietal selection	Starting 2009
Study to review cashew-processing procedures and equipment and extract value from cashew by-products	FIRCA	National	Study	
Programme to improve the quality of cashews	INTERCAJOU, FIRCA, INADES-Formation, ACE		► Production of teaching aids ► Advice to farmers	Starting 2009
Diagnostic study of cashew cooperatives	INTERCAJOU, FIRCA, BFCD	The 11 cashew-growing areas	► Evaluation of the situation of cashew FPOs	March-April 2010
Training in negotiating for export cooperatives	FIRCA		Training	2010
Project to manufacture and install small processing facilities / post-crisis emergency programme to revive activities in the industrial production sector	UNDP/I2T	Four areas: Bouna, Séguéla, Korhogo, Bouaké	Installation of small cashew nut processing facilities	2010
Project to develop bags for the cashew sector	FILTISAC SA, ARECA	National	Production of bags	2006-2008
Study of cashew sector risk analysis and traceability in Côte d'Ivoire Study on cashew processing	Ministry of Agriculture		Study	

Cashew-related projects, programmes and initiatives				
Projects and programmes	**Main partners involved**	**Geographical area**	**Main activities**	**Implementing period**
Project for the professional structuring of the cashew sector: a lasting contribution towards peace	INADES-Formation	Denguélé, Zanzan, Savanes, Worodougou, Bandama Valley	► Training for growers and FPOs ► Support for marketing ► Production of teaching aids	2004–2008
Small-scale shelling of cashew nuts: an opportunity for people in the north	INADES-Formation	Denguélé, Zanzan, Savanes, Worodougou, Bandama Valley	► Support for the establishment of processing facilities ► Production of teaching aids ► Certification ► Fair trade	2007–2010
Information project on cashew nut prices	INADES-Formation	Denguélé, Zanzan, Savanes, Worodougou, Bandama Valley	► Dissemination of business information ► Business networking	Starting November 2009
Study of the cashew processing strategy in Côte d'Ivoire	GIZ, World Bank			

Table 1.4.6: Information on policy applying to the cashew value chain

Information on policy		Sources
Cashew sector policy	The sector has no formal policy as such. The Ministry of Agriculture nevertheless appears to give priority to the organisation of sector stakeholders and local cashew processing.	Information obtained from the Ministry of Agriculture
Policy goal	None	
Price regulation	INTERCAJOU sets the (minimum) indicative price each season under the supervision of the Ministry of Agriculture.	Information obtained from the ARECA one-stop service ACE, 2007
Raw nut export taxes	One-time export duty: CFAF 10 per kilo	Rapport provisoire de l'étude sur la stratégie de transformation de l'anacarde en Côte d'Ivoire [Study of the cashew processing strategy in Côte d'Ivoire – Provisional report], ERAGHU KUMAR et al, August 2009
Kernel export taxes	None	
Investment tax credits (or similar measures)	A draft list is being prepared of cashew-processing equipment that will be exempted.	Information obtained from the Ministry of Agriculture
Country label	None, but the project for a cashew bag to promote a Côte d'Ivoire label is making steady progress.	ARECA one-stop service FILTISAC SA
Exchange rate policy	CFAF – euro fixed parity	
Exchange rate stability (past decade)	Exchange rate: 1 euro = 655.957 CFAF	
Trade arrangements and preferences	► Economic Community of West African States (ECOWAS) ► West African Economic and Monetary Union (WAEMU) ► African, Caribbean and Pacific/European Union ► World Trade Organization (WTO) ► AGOA (African Growth and Opportunity Act, facilitating access to the United States market)	

2 Analysis of the Value Chain

2.1 Historical development of the cashew sector in Côte d'Ivoire

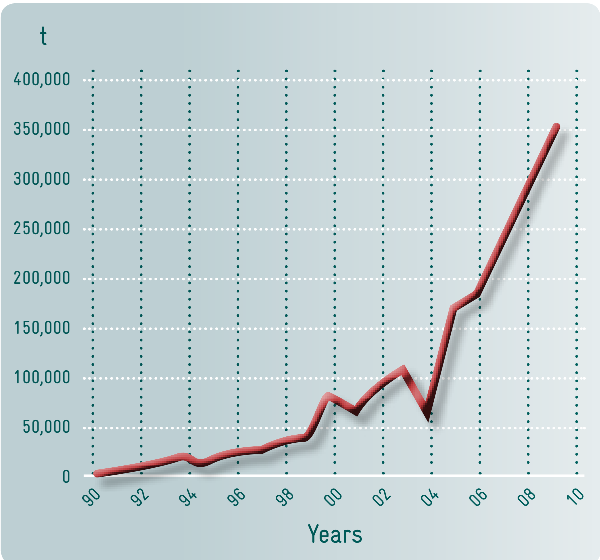
Cashews, which bear the scientific name Anacardium occidentale and belong to the family of anacardiaceae, are one of the two main cash crops in northern, north-western and north-eastern Côte d'Ivoire, the other being cotton.

In Côte d'Ivoire, cashew production as such started in 1959. The first cashew trees were planted in 1959 and 1960 by *SATMACI (Société d'Assistance Technique et de Modernisation de l'Agriculture en Côte d'Ivoire)* and *SODEFOR (Société de Développement des Forêts)*, in partnership with villagers, with a view to improving the protection of ecosystems seriously affected by deforestation and fighting bush fires. The plantations underwent several developments over the years *(ARECA, 2006)*.

In 1972, *SATMACI's* cashew plantations were handed over to *SODEFOR* to be transformed into fruit orchards. They were subsequently ceded to village communities, but most of the villages declined to work them because they felt unable to ensure their upkeep. The plantations became profitable in the 1990s as the market price of cashew nuts rose.

Awareness of the plantations' economic viability led to the creation of *SOVANORD* in 1972 to market cashew nuts. The *AICI (Anacarde Industrie)* shelling factory was opened in 1975 to process the raw nuts purchased by *SAVANORD*.

Figure 2.1.1: Changes in cashew nut production (in t)



Source: GIZ data, 2009

The factory's shortcomings became apparent in 1980, and the marketing of cashew nuts was taken over by private traders.

In 1990 rising prices sparked grower interest and output increased. Grower enthusiasm led to the expansion of the area under cultivation, more intense maintenance work and improvements in harvest-related activities.

This emerging sector underwent rapid development following the rise in world cashew nut prices. Production rose from 6,300 t in 1990 to 335,000 t in 2008, but not in linear fashion. There were three main periods of growth, as indicated below:

- a first spurt of growth, registering an average rate of 40%, between 1990 and 1993;
- switchback growth during the following ten years;
- steadier growth, at a rate of 22%, starting in 2004.

The rise in production did not, however, result in increased revenues for growers, who lacked a minimum of organisation and appropriate regulation. In addition, the nuts were marketed in a rather haphazard fashion.

One of the sector's traditional characteristics is the predominance of raw nut exports. The raw nut export business continued to grow in the 1990s, with some six Ivoirian companies involved in exports. Towards the mid-1990s, trading companies from southern Asia started to enter the market. Thanks to their thorough knowledge of the market, easier financing conditions, and a range of business activities involving import and export, they succeeded in dominating the sector *(GIZ 2009)*.

Little has been achieved in terms of processing, the only avenue of sustainable development in the sector. Approximately 1% of total cashew nut production is processed *(INTERCAJOU, 2009)*. Cashew nut processing is dominated by two companies, a significant fact that puts Côte d'Ivoire in the 'unfortunate position' of being the world's biggest exporter of raw nuts even though it is only the third biggest producer. At present, the country produces about 335,000 t/year, of which roughly 323,000 t are exported.[2]

Côte d'Ivoire's cashew sector plays a major role in meeting the needs and requirements of the processing industries in India and Viet Nam. The kernels produced from raw Ivorian nuts are marketed as 'product of India' or 'product of several countries'.

2 Statistics from ARECA and shipping agents, 2008.

Côte d'Ivoire is thus totally dependent on the factors dictating market conditions in India, Brazil and Viet Nam. It can only become more competitive on the global market if its brand is developed and its cashew nuts are processed, converting a 'low-value tropical agricultural' product into an export product with a high value added and high demand *(GIZ, 2009)*.

On the other hand, the sector seems to have a promising future thanks to increased demand for cashew nuts, which is rising by 5% per year (India has now replaced the United States as the world's biggest consumer, with annual consumption amounting to over 160,000 t), a trend that is expected to continue for the next ten years at least. The efforts being made by India, and to a lesser extent by Viet Nam, to increase their production of raw nuts are limited by the cost of land, competing farm products and population growth.

2.2 Illustration of the value chain and marketing

Analysis of the main links in the Côte d'Ivoire cashew sector value chain, namely input supply, production, local trade, processing and export, serves to highlight the players involved and the relations between them.

Production of inputs

At the micro level, i.e. among individual growers and their organisations, very few chemical inputs are used. The main input is seeds, which are usually distributed from grower to grower through cooperatives or on the local market via input dealers. The quantities of seed delivered through research channels *(CNRA), ANADER* and NGOs remain low compared to the total volume of seeds used each season. Direct seeding is the most widespread practice, and very few growers have recourse to nurseries.

Most of the nuts are packaged in bags. Bagging specifically designed for cashews was conceived and implemented by *FILTISAC SA* to help develop the Côte d'Ivoire cashew label. The bags produced are usually ordered by *INTERCAJOU* or by operators in the sector. In practice, however, cooperatives and intermediaries tend to prefer to keep these better quality bags for themselves and use lower quality bags instead. Cardboard boxes, while not widely used, have been employed in some cases.

The other inputs and consumables (lubricants, electricity, water, spare parts, etc.) are those used by the processing facilities. It was not possible, however, to obtain reliable information in this regard. The work carried out at such facilities, in particular those operating on a small scale, is essentially manual.

Production of cashew nuts

Cashew cultivation is relatively well developed in Côte d'Ivoire, which is the world's biggest exporter of raw cashew nuts. In most cases, the cashews are grown on individual farms. Very few growers work as part of a cooperative, which means that there are hardly any collective farms.

The cooperatives that do exist are small in size (few members, small areas under cultivation). Some attempts have been made at nationwide organisation, one example being *APACI*, although from a technical point of view it is not really representative.

The growers and their organisations benefit, depending on the region, from technical support and, more rarely, financial support, provided by NGOs *(INADES, RONGEAD)* and *ANADER*. The support is usually forthcoming within the framework of projects and programmes launched with the backing of certain partners *(GIZ, FIRCA)*.

Local trade

The distribution channels for raw cashew nuts in Côte d'Ivoire are long and complex and involve numerous actors. The main actors in the cashew sector are individual growers, informal grower associations, cooperatives, local middlemen, buyers under contract and independent buyers, industrialists (processors) and exporters.

Generally speaking, the cooperatives encountered in the cashew sector are akin to organised merchants in that their purchases are made in cash and not on a consignment basis. They buy both from their members and from non-member growers. The cooperatives supply traders, companies and cashew nut exporters.

The local middlemen play a crucial role in the collection of cashew nuts. They operate in the same area as the growers. They act as intermediaries between growers and buyers. In general, they receive a cash amount from the buyer. That amount is equal to the quantity of nuts to be bought on the basis of a farmgate price set by the buyer in the light of the information available to him. In the field, the local middlemen's strategy is to obtain the nuts at a price below that set by the buyer in order to pocket the difference.

Buyers under contract work for export companies, which advance the funds needed to purchase the nuts, while independent buyers have their own collection and distribution channels and tend to be self-financed.

Other players intervene to help the cooperatives find better outlets (*INADES, RONGEAD*, other NGOs), enable the *FILTISAC* plant to manufacture bags, and regulate trade *(ARECA, INTERCAJOU, Trade Ministry)*.

Processing

In Côte d'Ivoire, three types of facility are involved in cashew processing. The first category comprises the large industrial facilities, with an average processing capacity of more than 1,000 t/year. There are two such facilities: *SITA SA* and *OLAM IVOIRE*. A third large-capacity facility (5,000 t) is being set up in Touba, in the north-west.

The second category consists of semi-industrial facilities, whose average processing capacity is between 500 and 1,000 t/year. There are two such facilities: *CAJOU DE FASSOU,* in Yamoussoukro, in the Lacs region (total processing capacity: 1,500 t/year), and *COOGES*, in Zanzan region (processing capacity: 540 t/year).

The third category is made up of small facilities that have an average capacity of less than 500 t/year. These are generally artisanal operations. This type of processing is a relatively recent development brought about thanks to the support of NGOs *(ACMC, RONGEAD, INADES-Formation)* and the initiative of officials from the areas concerned.

Cross-cutting support has been provided in several instances by *FIRCA, INTERCAJOU, ARECA* and the technical ministries.

Control

Côte d'Ivoire's cashew sector has three structures involved in quality control. *CODINORM* sets all the quality standards relating to cashew nuts. The *Chamber of Commerce and Industry* checks the weight of the products. Lastly, *ACE* provides export quality control (it takes and tests samples when the products are loaded into containers).

Export

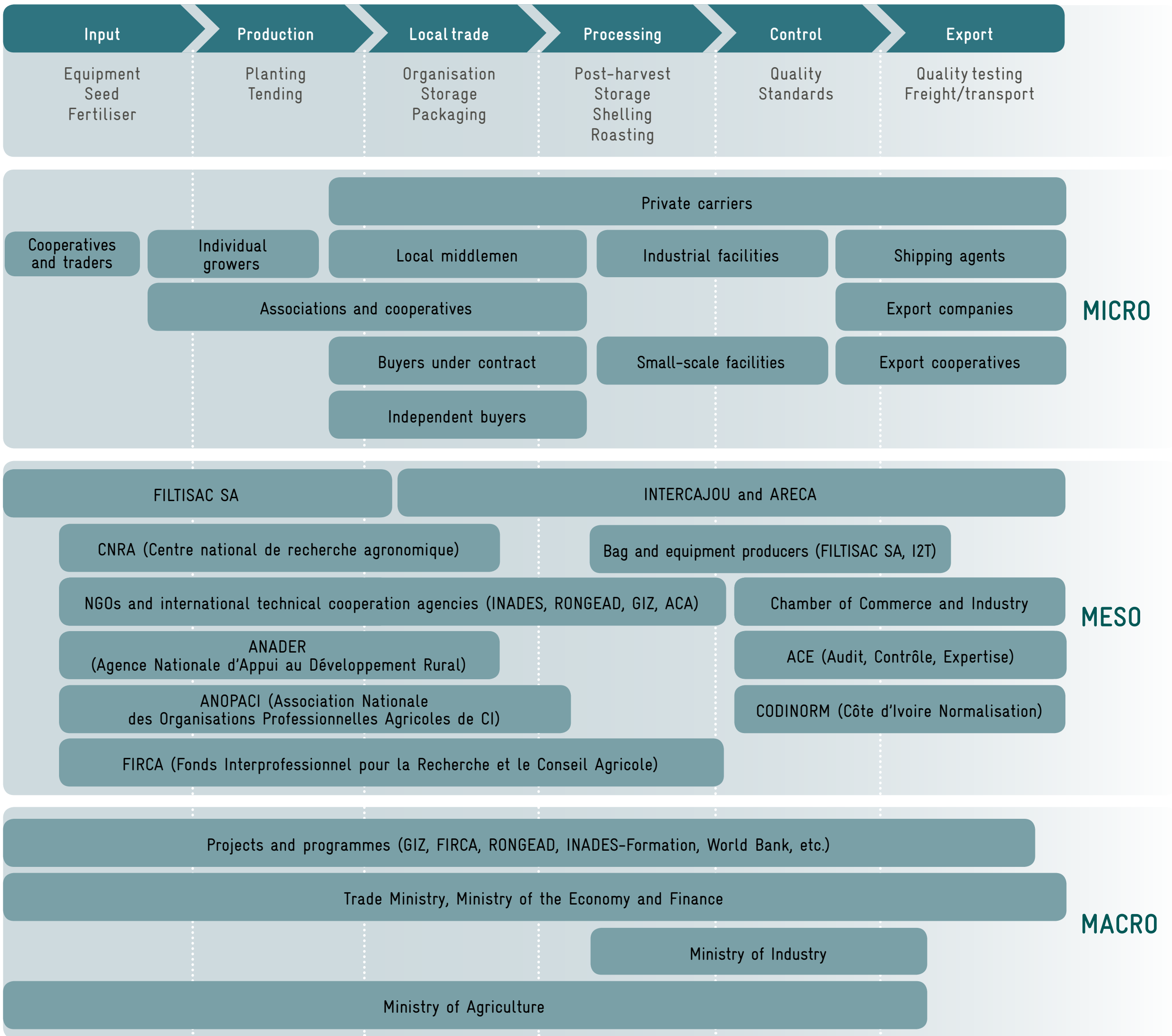
Export companies and export-oriented processing cooperatives are the final links in the chain, through which the raw nuts leave Côte d'Ivoire for the export market. Some export companies operate on a seasonal basis and others are active year-round. In either case, their aim is to buy cashew nuts from buyers and cooperatives with a view to exporting them, in most cases to countries in Asia.

Export cooperatives buy and export their members' output. In practice, however, they also collect cashew nuts from non-members so as to meet their export quotas.

Factories (processing plants) are also involved at this level. They export fresh and/or roasted kernels to Europe, Asia and the Americas. It should be noted, however, that some factories also export raw nuts or sell part of them to exporters or even to middlemen.

In addition to the players mentioned above for each link, a number of other players are involved more or less indirectly in Côte d'Ivoire's cashew sector. They include carriers, who transport the nuts from the farm to the port of lading, and forwarding agents, who complete the shipping formalities. In addition, the sector is overseen by a number of bodies *(CNRA, ANADER, FIRCA* and so on).

Figure 2.2.1: The actors in the cashew value chain



2.3 Detailed description of the cashew-growing system

2.3.1 Production system

Increasingly, cashews are seen as a strategic opportunity by the people of northern, north-western and central Côte d'Ivoire, given the growing demand for cashew kernels on the world market *(ARECA, 2006).*

Production is carried out by individual growers (individual farms). Very few conduct this activity within a cooperative framework. The farms vary in size from 1 to 50 ha and do not benefit from the support of a seed-producing structure. An important characteristic is that the farms are not clearly delimited. This makes it difficult for farmers to monitor yields *(ARECA, 2006).*

The plant material used has undergone no selection process and has not been researched. Some plantations in the Savanes region have been planted with a new variety called *JUMBO*. This variety has yet to be described by agronomic research in terms of inputs, technical procedures and potential yield depending on ecosystem.

There are two methods of cultivation. The first has recourse to a nursery and the second is by direct seeding. The second is the most widespread. It usually involves intercropping with annual crops such as yams, maize, millet, fonio, beans, groundnuts and cotton.These annual crops are systematically intercropped with the cashew trees for most of the growing cycle *(ANOPACI, 2008).* The length of the association depends on the distance between the cashew trees. The succession of annual crops depends both on ground coverage by the cashew trees and soil fertility. Crops demanding the most light, such as cotton, yams and maize, tend to be intercropped during the first years of growth (1 to 5 years on average).

The tables below describe crop management in a cashew-based cultivation system. By intercropping with these annual crops, the grower can lower the management costs of cashew plantations (upkeep, protection, etc.). No matter how the plantations are laid out, few respect the recommended distance of 10 metres between trees.

Table 2.3.1: Succession of crops in cashew-cotton intercropping

	1st year	2nd year	3rd year	nth year
Cashew				
Cotton				
Groundnut				
Maize / millet				

Source: INADES-FIRCA, 2009

Table 2.3.2: Succession of crops in cashew-yam intercropping

	1st year	2nd year	3rd year	nth year
Cashew				
Yams				
Beans				
Maize				

Source: INADES-FIRCA, 2009

2.3.2 Geographical distribution of growing areas

The cashew plantations are to be found essentially in the Bafing (Touba), Denguélé (Odienné), Lacs (Yamoussoukro, Toumodi, Tiebissou), Marahoué (Bouaflé, Sinfra, Zuenoula), Moyen Comoé (Agnibilékro), N'Zi Comoé (Bongouanou, Daoukro, Dimbokro, M'Bahiakro, Bocanda), Savanes (Korhogo, Ferké, Tengrela, Boundiali), Bandama Valley (Bouaké, Dabakala, Béoumi, Katiola, Sakassou), Worodougou (Séguela, Mankono) and Zanzan areas (Bondoukou, Bouna, Tanda).

The growing areas are shown *on the map below.*

Figure 2.3.1: Main cashew-growing areas in Côte d'Ivoire

Source: ARECA, 2006

According to ARECA (2006), cashews are grown in three agro-ecological zones in Côte d'Ivoire, which are described below:

Zone A: the Guinean zone

This is the zone below the imaginary line drawn through the towns of:

- *SIPILOU, BIANKOUMA* and *MAN* to the west;
- *BOUAKÉ* in the centre;
- *AGNIBILEKRO* in the east.

It is characterised by an annual rainfall of over 1,000 mm per year. In this zone, the tree's crop development is excellent. The disadvantage in this zone is the tree's poor fruiting after flowering because of the relative air humidity, insufficient sunlight and the absence of a pronounced dry season.

Zone B: the intermediate zone

The intermediate zone is that delimited by an imaginary line running through *SIPILOU, BIANKOUMAN, MAN, BOUAKÉ* and *BONDOUKOU* and another running through *BAKO, SIRASSO* and *KONG* and below *BOUNA*. The departments of *KATIOLA, DABAKALA* and *AGNIBILEKRO* are located in this zone. Annual rainfall is over 1,000 mm and there is a pronounced dry season.

Conditions in the zone are right for the development of good cashew plantations. Although the dry season has fluctuated over the past few years, it lasts at least five months. This promotes fruiting and helps conserve the harvest. Zone B marks the boundary between the Guinean and the Sudanese agro-ecological zones.

Zone C: the Sudanese zone

The Sudanese zone is located above the imaginary line running through the towns of *BAKO, SIRASSO, KONG* and *BOUNA*. Annual rainfall is less than 1,000 mm. The dry season is more pronounced and the impact of the Sudanese climate makes itself felt. When the continental winds last longer than usual, they cause the blossoms to fall. The tree grows well, but produces little fruit.

2.3.3 Productivity

Productivity at the cashew plantations remains low. Indeed, while average yield worldwide is around 1 t/ha, among farmers in Côte d'Ivoire it is between 200 and 500 kg/ha *(ANOPACI, 2008).*

Because the plantations are generally very densely planted (>100 trees/ha), average production per tree is approximately 2 to 3 kg *(www.anacardium.info; www.cashewinfo.com; Matthess et al, 2008).*

2.3.4 Crop time sequence

The crop time sequence for cashews depends on the area. There are two main crop time sequences, one for the centre and one for the north. In these areas, the crop systems are dominated by yams and cotton.

As shown *in Table 2.3.3 on page 30*, in these areas the month of February is devoted to preparing the land and planting the main crop, in this case yams. The cashews are not planted until one month later, as March marks the start of the rains, which are intermittent at this time of year.

The cashews are planted during this period to allow the seedlings to develop a good root system before the following dry season. Given that the area has a relatively substantial annual rainfall, direct seeding can be used with no harmful consequences.

One year after planting, the growers start thinning, which involves removing the least developed and weakest plants.

In order to prevent tracts of land from becoming overgrown with grass, which would put them at risk from bush fires, the plantations are hand-hoed two or three times a year. In order to control the trees' development, the growers prune them for shape and, in rare cases, fertilise them. These two activities constitute the required pre-harvest tending operations.

Cashew trees become productive in their third year, after which they are pruned after each production cycle. Pruning consists in removing dead branches and unwieldy offshoots, allowing the tree to engage in robust new growth.

The trees are further thinned between the tenth and the fifteenth year in order to optimise yield. Thinning consists in cutting down a tree in order to allow more space for the leaves and roots of neighbouring trees and thereby increase overall production and ensure that the remaining trees are well shaped.

As of the twentieth year, the cashew plantations are renewed, either through progressive lines or by thinning.

Table 2.3.3: Crop time sequence for cashews in central Côte d'Ivoire: intercropping with yams

Crop operations	Year 1												Year 2												Year 3												Years 4 to 9	Years 10 to 15
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
Choosing and clearing the land		■																																				
Ploughing		■																																				
Hilling		■																																				
Staking out		■																																				
Planting the yams		■																																				
Seed selection		■	■																																			
Direct seeding			■	■																																		
Thinning													■	■																								
Weeding (plantation and fire belts)					■				■			■					■			■				■			■								■			
Shape pruning															■	■																						
Adding fertiliser															■		■		■								■		■		■						■	■
Pruning																											■		■		■						■	■
Pest and disease control		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Harvest, drying, storage																										■	■	■	■	■							■	■
Thinning																																					■	
Start of regeneration																																						■

Source: FIRCA-INADES, 2009

Table 2.3.4: Crop time sequence for cashews in central Côte d'Ivoire: intercropping with cotton

Crop operations	Year 1												Year 2												Year 3												Years 4 to 9	Years 10 to 15
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
Choosing and clearing the land, removing stumps		■																																				
Ploughing			■																																			
Ridging			■																																			
Seed selection			■	■																																		
Staking out				■																																		
Making holes					■																																	
Filling holes and adding fertiliser					■																																	
Establishing nurseries					■																																	
Planting the cotton						■																																
Direct seeding							■	■																														
Thinning							■	■																														
Replacing dead plants								■	■																													
Adding fertiliser																	■		■		■						■		■		■							
Weeding (plantation and fire belt)											■			■			■			■						■						■						
Shape pruning																	■	■																				
Thinning																										■			■			■						
Pest and disease control							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Harvest, drying, storage																																					■	■
Thinning																																					■	
Start of regeneration																																						■

Source: FIRCA-INADES, 2009

During the first six months of the year, the land is worked for the main crop, which in this case is cotton. The cashew trees are introduced only as of the seventh month (July), when rainfall is relatively steady. In addition, even though both the direct seeding and nursery methods are used, the nursery method tends to predominate because changes in the weather can disrupt rainfall patterns.

Dead plants are replaced in the two months after thinning. The other operations mentioned have practically the same purpose as those practiced when cashews are intercropped with yams.

2.3.5 Ecological aspects

Cashew cultivation has a positive ecological impact in that it serves to protect, conserve and restore the soil. One of the main reasons it was introduced in Côte d'Ivoire was to fight deforestation and bush fires in vulnerable areas.

The areas under cashew cultivation are characterised by a crop system based on cotton and yams. These two main crops have a devastating impact on the soil because of the land that has to be cleared for their growth and, in the case of cotton, the massive amount of pesticides needed.

2.3.6 Forms of land tenure

According to *Diomandé Yatié (2009*), the first State initiative with regard to rural land dates to 1961 and the establishment of the interministerial commission for land reform. On completion of its deliberations, the commission concluded that *»land reform must follow only one criterion, that of effectiveness, and each time it appears, in the current circumstances of time and place, that the State is best placed to profit fully from the natural resources of Côte d'Ivoire, the law should allow it to act in the public interest. Should that not be the case, the State should call on private initiative, be it individual or collective. In such cases, the law guarantees that the producers benefit from the fruits of their labour«* [translated from French].

The commission's work resulted in the enactment of the law of 20 March 1963, *Article 1* of which stipulated that *'all the land and forests that are not registered on the date of [its] entry into force shall be the property of the State'. Articles 31 and 37* nevertheless limited the State's acquisition of unused land by making the law retroactive to January 1962, so as to prevent owners with customary title from hastily clearing the land in order to maintain their control over it. The law thus implied the abolition of customary rights, since a right to the land could only be secured through registration or, failing that, use. It was also perceived as broadly favouring migrant planters. This is why, although it was adopted by a majority at the National Assembly, the law was never promulgated, as it was deemed to be too ambitious for the times.

In the absence of a land tenure code, rural land continued to be managed on the basis of administrative procedures reconciling the primacy of the State with customary law. Legally, the State remained the owner of all land not registered in someone's name, which meant that it alone could cede land. In practice, however, things were different. Access to land was secured through the customary owner, who often ceded plots of land to others without referring to the State. The beneficiary who cultivated the land could then claim a right of ownership in that the President of the Republic at the time, the late *Félix Houphouet Boigny*, was wont to say that the land belonged to whoever made something of it.

According to Yatié, it was difficult, in that context, to know whether the State, the customary owner or the grower was the true owner of the land.

The failure of the policy to bring young people back to the land, the strained relations between the local and displaced populations in the south-west and the frequent disputes between farmers and herders in the north are all examples of the difficulties encountered by the administration in taking effective action to organise and re-organise rural areas.

The State embarked on its second major initiative in the 1990s. With a view to drafting up a land code, it launched a pilot operation to draw up a rural land plan to obtain a better understanding of the land tenure situation on the ground. It received the support of international financial institutions such as the *World Bank* and the *AFD*. The aim of the operation was to ascertain, through mapping and census taking, all the rights exercised on every parcel of agricultural land, whether they were customary rights or modern, State-recognised rights.

The *Rural Land Plan* produced an unprecedented amount of land documents that contributed to putting in place an effective land tenure code in the form of *Law No. 98-750* of 23 December 1998. The law provides that only Ivoirians may hold title to rural land, but that this does not preclude foreigners from working or profiting from the land. Some foreigners occupied and worked land they had been granted before 1998 and over which they claimed full title, in particular the right to bequeath the land to their heirs. Although the 1998 law recognised that foreigners who had obtained title to rural land before 1998 had the right to keep it, it obliged the descendants of foreigners inheriting land from their parents to sell it to an Ivoirian within three years *(Art. 26)*. They could also make over the land to the State, which could then grant them a long-term lease while retaining title to the land. These provisions provoked numerous disagreements and disputes, and *Article 26* was therefore amended by the *Marcoussis Accords* as

part of the settlement of the military-civilian crisis that broke out in Côte d'Ivoire on 22 September 2002. At present, any foreign physical person who can prove, by deed of ownership, that he or she has title to a parcel of rural land can bequeath it to his or her heirs, who inherit full title to the land. To date, the law on rural land has been only timidly applied.

A study conducted by *ANADER* in 2009 shows that, of all the heads of household interviewed in the coffee-growing area in the west (Montagnes, Moyen Cavally and Bafing regions), a mere 19.77% claimed to have title to the land they occupy, whereas 80.23% replied that they have no title. A nationwide *ANADER* survey of 10,000 farm households in 1996 and 1997 obtained similar results. The absence of title to village land is therefore widespread. In addition, the nature of the title sometimes varies. Some consider that a document from the land registry (indicating the boundaries of the farm) is tantamount to a deed, showing that the application of the law on rural land is not yet a reality in the field and that mass awareness-raising action is required in the countryside to encourage people to register their land. As concerns land use, the study showed that 89.5% of the households surveyed work their own plots of land, while only 8.2% have recourse to sharecropping. In terms of access to land in the region, 45.67% of heads of household said that they had de facto land tenure, 35.30% had acquired their land through succession, and 4.63% had received their land in the form of a gift or bequest. A further 13.26% of heads of household had purchased their land and 0.16% leased it.

In the north in general, land is essentially inherited, received as a gift, bought or leased. Inheritance nevertheless predominates. A study should be conducted to determine exactly what the situation is and to identify land perspectives in the light of changes in the area under cultivation and land still available for cashew plantations.

2.3.7 State and potential of the Ivoirian cashew-growing area

The Ivoirian cashew-growing area, like all the other links in Côte d'Ivoire's agricultural value chains, suffers from a lack of up-to-date information. The situation was exacerbated by the crisis that started in 2002, which has seriously hindered efforts to produce agricultural statistics. A partial picture can nevertheless be obtained from the studies carried out in certain zones.

Amount of land under cashew cultivation

The heightened pace of growth in cashew nut production in Côte d'Ivoire is essentially due to the increase in the area under cultivation and not to improvements in yield. According to *ARECA's* 2006 findings, the area under cultivation is constantly expanding. It was estimated at 420,000 ha in 2005.

Age of plantations

Ivoirian cashew plantations are, on the whole, young. They vary in age from one area to another. A 2006 study by *ANADER* in *Bondoukou, Bongouanou, Daoukro, Dimbokro, M'bahiakro, Tanda, Toumodi* and *Yamoussoukro* departments indicates that the largest group of parcels is between 5 and 15 years old, a rate corresponding to 44.49%. Given the history of cashew growing in the country, the cashew area in the country as a whole could be older than that of the area covered by the study.

Yield

Nationally, yield averaged between 400 and 500 kg/ha in 2008 *(ANOPACI, 2008)*. Yield is linked to the age of the plantation. In eight departments, the situation in terms of plantation yield according to age is as follows *(Table 2.3.5)*.

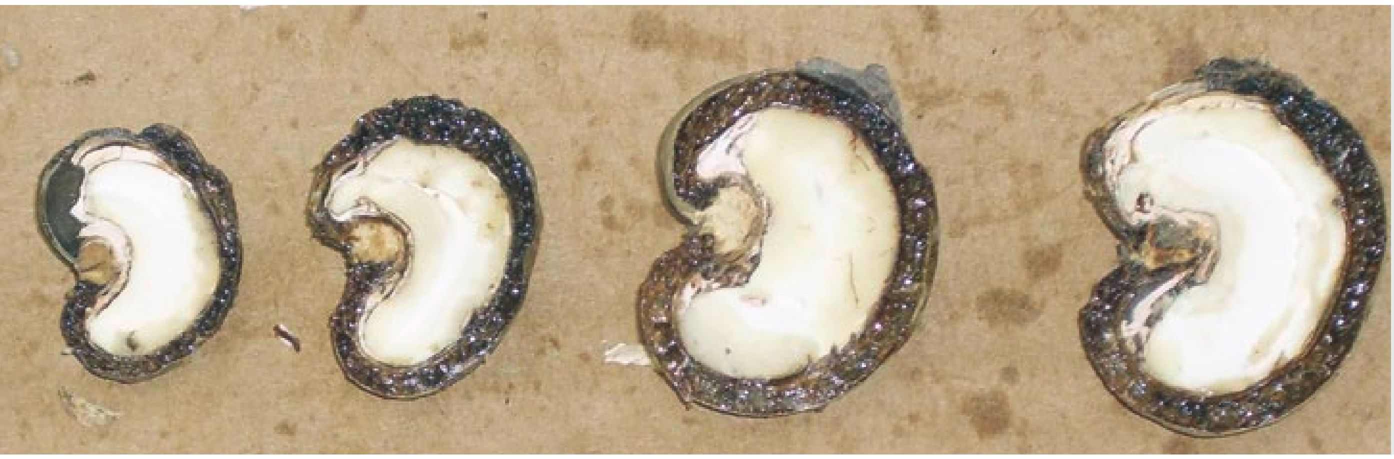


Table 2.3.5: Average yield (kg/ha) in eight departments in 2006

Departement	Under 5 years	5 to 15 years	15 to 25 years	Over 25 years	Average
Bondoukou	434	398	426	537	449
Bongouanou	421	382		600	468
Daoukro	609	649			629
Dimbokro	401	360	428	315	376
M'Bahiakro	206.2	223.1	235.2		
Tanda	608	413	425	800	561,5
Toumodi	313	320			316,5
Yamous-soukro		170	600		385
Total average	464	385	470	563	408

Source: ANADER-ARECA, 2006

These low yields would appear to be the result of poor performance by the dominant varieties and the failure to observe growing procedures .

Plantation density

The standard of 100 trees/ha is rarely respected in any of the growing areas. As revealed in the 2006 *ANADER* study, the standard is usually exceeded in the eight departments listed above.

Table 2.3.6: Plantation density (trees/ha) in eight cashew-growing departments

Departement	Under 5 years	5 to 15 years	15 to 25 years	Over 25 years	Average
Bondoukou	368	336	357	322	345.2
Bongouanou	191	210		300	199.7
Daoukro	520	429			495.6
Dimbokro	221	206	176	156	212.8
M'Bahiakro	246.9	266.4	140		238.15
Tanda	490	382	369	464	400.2
Toumodi	173	173		600	175.2
Yamous-soukro	202	190	420		201.4
Total average	309	275	330	368	290.0

Source: ANADER-ARECA, 2006

One of the characteristics of these areas is that they have all recently experienced an increase in cashew cultivation. They could therefore be expected to benefit more from agricultural expertise.

Plantation density could be higher in the northern areas, which were the first to plant cashew trees.

Plantation tending operations

The plantations require two kinds of tending operations. The first are carried out before the trees start bearing fruit and the second after they have starting producing.

Before the plantation starts producing fruit, tending operations include weeding, the establishment of fire belts, shape pruning, the application of fertiliser and pest control. Most growers, however, do not engage in pest control or apply fertiliser.

Once the plantation has been established, tending operations include weeding and pruning.

Cashew production potential in Côte d'Ivoire

The potential for increasing cashew production remains high. It could be increased by improving plantation productivity, by increasing the amount of land under cashew cultivation, or by the combined effect of greater yields and an increase in the cashew-growing area.

As concerns productivity, when compared to yields registered in some countries and described in the literature, average yield in the various growing areas remains very low (under 500 kg/ha). Means of increasing productivity include improving the varieties used and improving the quality of plantation tending operations.

With regard to expanding the amount of land under cashew, it should be noted that cashews and other perennial crops (mango trees, coffee plants, cacao bushes, teak, etc.) occupy between 5 and 15% of the land in most of the current cashew-growing areas. A proper evaluation of the potential to expand cashew farms should also take account of the possibilities to improve the food crop production system.

The relatively high potential to increase production can only be realised if farmgate prices are high enough to encourage farmers to grow cashews rather than other crops grown in the various growing areas and if they are helped to improve yields (with the establishment of supply points for inputs and more productive seeds in the villages, the dissemination of technical information among largely illiterate growers, increased awareness of the need for the efficient management of space, etc.).

Accurate figures on cashew production potential will only be available once the research being conducted for this purpose has been completed.

2.3.8 Socio-demographic and socioeconomic profile of cashew growers in Côte d'Ivoire

In Africa in general, and in Côte d'Ivoire in particular, farming is an activity that is strongly influenced by individual social and cultural peculiarities. Knowledge of the socio-demographic profile of cashew growers is therefore crucial for deciding on future initiatives. The main socioeconomic and socio-demographic characteristics of growers can differ from one zone to another.

According to the study conducted by *ANADER* in 2006, in the three main growing areas (Lacs, N'Zi Comoé and Zanzan), the largest cohort of growers is over 60 and accounts for 77% against only 23% for all other age groups between 0 and 40 years. There are two reasons for this:

- the mode of land management: usually the land, and sometimes the parcel, belongs to the family, which is headed either by the father or by the oldest member;
- the rural exodus, which is heavy in many regions of the country.

There is also a positive correlation between age and the size of the farm.

According to the study conducted by *ANADER* in 2006, 74.59% of growers in the N'Zi Comoé, Zanzan and Lacs regions are illiterate. Only 17.4% of growers have attended school, progressing no further than primary education. This low level of education does not bode well for the process of modernising and professionalising cashew production in Côte d'Ivoire.

Cashew growers in Côte d'Ivoire are individual producers, as evidenced by the *ANADER* data on the three regions mentioned above. In those regions, 71.1% of growers do not work within the framework of an *FPO*. Farm organisation is, however, key to the success of activities to professionalise the sector in general, and to the organisation of production with a view to quality control in particular.

Nationwide, the average area of farms is 3 ha *(ARECA 2006)*. *INADES* came up with similar findings in 2003, in the Bondoukou region. There, the total productive area of farms varied between 0.5 and 13 ha and between 0.5 and 12 ha, with averages of 3.65 and 3.08 ha respectively.

It should be pointed out, however, that these data tend to be based on simulations. It would be inaccurate to extrapolate them to a total surface area of at least 700,000 ha, on the basis of the data, and of a total number of 250,000 cashew growers, since the total known surface area does not exceed 500,000 ha. There is therefore a genuine need for a specific study using clearly explained methods to establish the sector's socioeconomic indicators.

Grower experience is measured in terms of years spent growing the crop. Most cashew growers have been farmers from an early age. Their experience of cashew cultivation would nevertheless appear to be linked to the growing area. According to *INADES* 2003, in Zanzan (Bondoukou), growers have between 2 and 35 years of experience, the average being 8 years. They are reportedly more experienced in the Savanes region, because it was there that cashews were introduced to fight the advanced deterioration of ecosystems in the wake of deforestation and desertification.

2.3.9 Impact of the crisis on the cashew-growing system: the case of Bondoukou region

Since September 2002, Côte d'Ivoire has been in the throes of a political and military crisis that has resulted in the partition of the country, one part of which remains in the hands of and is run by the armed forces of the Forces Nouvelles. More than 54% of the country's cashew-growing areas are in the zone occupied by the former rebels.

In view of the administrative and institutional changes that have been made in these areas, the situation may have an impact on this 'budding' sector. A study conducted in 2003 by

INADES in one of the main growing areas (Bondoukou) neighbouring on the country's occupied north-east hints at the possible impact of the crisis.

The situation of most cashew growers, who obtained an average income above the poverty threshold from their activities, has deteriorated since the crisis flared in Côte d'Ivoire. Indeed, initial evaluations of the impact of the war on cashew-grower income points to a considerable drop in this variable. A comparison of average income obtained before and after the start of the crisis indicates that average income fell from CFAF 273,411 to CFAF 140,831, that is, an average difference of CFAF 132,580. This drop in grower income reflects the impact the crisis has had on farm work and the availability of labour.

The impact of the crisis on cashew farms takes the form, in this area, of less land being worked. The climate of insecurity prevailing in the region, which makes it impossible to work the parcels, has reduced the amount of land being cultivated. Failure to tend the plantations results in bush fires, one of the main threats faced by cashew farms. The difficulties of tending the plantations have had a knock-on effect on harvest quality and quantities.

Côte d'Ivoire's political and military crisis has had dramatic consequences on farm labour. The impact has been felt in terms of labour availability and cost. The crisis has lead to the departure of farm workers, most of whom were citizens of Cote d'Ivoire's neighbours, namely Burkina Faso, Mali and Guinea. The shortage of manpower has led to a steep rise in the cost of labour recruited to tend the plantations, which has had a negative impact on grower income in the area.

While the impact of the crisis on growers in the 'sensitive' government zone is easily discerned, there would seem to be little data relating to the zone controlled by the former rebels, which, as mentioned above, contains more than 54% of the cashew-growing areas.

However, the impact on farms in that zone in terms of quantity and quality is real. The crisis has led to an increase in livestock movements, fuelling conflicts between farmers and herders. These forms of livestock farming affect growth in young plantations, as the animals (cattle) damage young cashew plants. As the growers are forced to replace the plants that are damaged, the plantations end up having plants of varying ages. This is one reason why growers do not respect recommended plantation density standards.

2.3.10 Income and poverty among cashew-growing households

In the 2009 *Poverty Reduction Strategy Paper (PRSP)*, poverty in Côte d'Ivoire was analysed on the basis of a relative poverty threshold determined using data from the *1985 Enquête permanente auprès des ménages (continuous household survey)*. The threshold was equal to CFAF 75,000 per inhabitant per year. The amount was assessed using consumer prices.

The poverty threshold is re-assessed with each new survey. The thresholds obtained are as follows: CFAF 101,340 in 1993, CFAF 144,800 in 1995, CFAF 162,800 in 1998, CFAF 183,450 in 2002 and CFAF 241,145 in 2008. In 2008, therefore, anyone with consumer spending under CFAF 241,145 per year, or CFAF 661 per day, was considered poor.

In 2008, one person in two was poor, up from one in ten in 1985. The poverty rate rose from 10% in 1985 to 48.9% in 2008, meaning that the total estimated number of poor people jumped from 974,000 in 1985 to 10,174,000 in 2008.

Poverty in Côte d'Ivoire has always been stronger in rural than in urban areas. In 2008, 12 out of every 20 rural inhabitants were poor, compared to six in urban areas. In 1985, three out of every 20 rural inhabitants were poor, compared to one urban dweller. Rural poverty deepened especially during the recent period of military and political upheaval, with the rural poverty rate rising from 49% in 2002 to 62.45% in 2008, or by more than 13 points, whereas the urban poverty rate rose from 24.5% in 2002 to 29.45% in 2008.

Moreover, poverty is unevenly distributed throughout the national territory. Since 2002, it has increased sharply in the development poles occupied by the rebels. In 2008, eight of ten development poles had a poverty rate of over 50%, compared to four in 2002. Of these, the development pole in the north was most affected by poverty, with four out of every five inhabitants considered poor in 2008. It was followed by those in the west (63.2%), the mid-west (62.9%), the north-west (57.9%), the mid-north (57.0%) and the north-east (54.7%).

In the absence of data on the income and poverty of cashew growers, information on household poverty in these poles can be used for estimates. Indeed, almost all cashew growers are concentrated in the north, mid-west, north-west, mid-north and north-east poles.

2.3.11 Organisations of cashew growers

In Côte d'Ivoire cashews are grown for the most part on individual farms. There are relatively few farm organisations, in spite of the fact that they could play a crucial role in defending farmer interests in the face of pisteurs and other buyers.

Growers need to organise not only because it is in their direct interests to do so, but also because the future of the entire sector depends on it. Indeed, the sector's stakeholders are currently engaged in a process of professionalisation, and several of their initiatives relate to cashew growing, one of the most important being improving the quality of cashew nuts.

The cooperatives that do exist are distributed throughout the country and are small considering the potential number of members.

None of the existing cooperatives operate effectively. According to *ARECA* (2008) and *ANOPACI* (2008), the main shortcomings of grower cooperatives are:

- poorly functioning statutory bodies, which result in a lack of motivation among members, abuse of authority on the part of the leaders and poor governance of the organisation;
- failure to monitor the number of members, making it harder to improve activity planning;
- lack of technical personnel: activities are not properly followed up, farmers are not trained and, consequently, the results are limited;
- lack of knowledge of the organisation's legal framework: this is the root of many of the problems observed, as the cooperatives increasingly resemble individuals dealing in cashews, etc.

Thus, most of the farm organisations are small in size. This is true of most of the cooperatives and grower groups. In view of the sector's ambitions, regional (union) and nationwide (federation) organisations are called for.

Table 2.3.7: Quantities of cashew nuts exported by each cooperative at 31 December 2009

C cooperative	Quantities (in kg)
BARAKA	14,761,774
ORRADA	3,841,282
COOPRADI	13,260,832
CODEPADEN	1,282,966
CABF	3,932,285
COOPAD	12,035,877
COSAMA	1,132,806
COOPAG	1,350,990
COOGES	11,739,316
ECAB	5,814,816
BAGBE	269,411
UCAB CI	1,435,803
CAB-CI	7,689,412
Total COOPEX	78,547,570

Source: Intercajou, 2009

Several attempts have been made to found nationwide organisations, notably *APACI*, which is technically not very representative.

Little is known about the number of members of cashew grower cooperatives in Côte d'Ivoire. An assessment is being carried out by *INTERCAJOU* to this end. The cooperatives nevertheless have enormous potential, especially in the northern areas (main cotton-producing area), where the many cotton-producing cooperatives could intercrop cashews with cotton.Some of the existing cooperatives have been granted export certificates. Of the 15 grower cooperatives certified for export in 2009, for example, 13 actually exported cashew nuts, as indicated in the *table 2.3.7 above.* The quantities exported by these cooperatives account for nearly 24% of total exports.

2.3.12. The sector from the gender perspective

Overview of inequalities between men and women in different areas

According to the *PRSP* drawn up in 2009 by the Government of Côte d'Ivoire, gender inequality persists at various levels: access to basic social services (education, health), jobs, resources and factors of production, in particular land and credit, and involvement in decision-making and public and political life.

When it comes to education, the proportion of girls enrolled in 2006 in the first year of primary education (44%) was well below that of boys (56%). Moreover, the gross primary school enrolment rate for girls (60.2%) was low compared to that of boys (65.5%). These tendencies are confirmed by the gender parity index, which was 88 girls for every 100 boys in primary school and 77 girls for every 100 boys in secondary education in 2006. In 2008, the net primary school enrolment rate for girls was 53.07%, compared to 58.84% for boys. The respective rates for secondary education were 22.56% and 30.34%.

In terms of employment, women are less present on the modern employment market. In 2005, only 12.71% of modern jobs were held by women.

The proportion of women participating in political life and decision-making remains low. After the last elections, only 19 of 223 seats in parliament are held by women (8.5%), only 9 of 197 mayors are women (4.6%), and there is only one woman among the country's 58 presidents of General Councils and districts. In the government formed in March 2007, only 4 of the 33 ministers are women (12.12%).

Poverty affects men and women everywhere indiscriminately, although overall it is not as high among households headed by women.

In 2008, the national poverty rate was 48.4% for men and 49.5% for women. In rural areas, the level of poverty in female-headed households was higher (above 70%) than in households headed by men in the north, mid-west, mid-north and north-east poles. The reverse was observed among rural inhabitants in the western, central and mid-east poles, where the poverty rate in households headed by men was over 64%. In the remaining poles no significant difference was observed.

Gender-related inequality is rooted in socio-cultural ills, stereotypes, humiliating social relations and failure to deploy the human rights approach to meet the practical and strategic needs of men and women. Persistent gender-related inequality also results from lack of grassroots awareness and the timid application of regulatory and legislative texts promoting equality and equity between men and women. Indeed, despite the existence of legal frameworks providing protection, 35% of married women live in polygamous households, many girls continue to be pressured into cohabitation and nearly half of all women are victims of excision.

The above demonstrates that efforts to promote gender equality are hindered by the persistence of social, economic and political inequality between men and women in society.

Women are active in Côte d'Ivoire's cashew sector mainly in the areas of growing and processing. The data available on gender-related aspects vary greatly and are limited to small towns or groups; they do not provide a representative national picture.

Women do not have a marked presence on the plantations. In most growing areas, plantations are not generally owned by women. The proportion of women growers in three regions (Zanzan, N'zi Comoé, Lacs) was 17% *(ANADER 2006)*. This observation applies not just to the cashew sector but to all perennial crops. The cultivation of perennial crops and land title issues go hand in hand, for in most traditional communities in the various regions of Côte d'Ivoire women can only acquire farm land through succession. During the growing season, women very often help their husbands by cooking and seeing to other household tasks.

On the other hand, the proportion of women involved in post-production activities is much higher. They are more active in harvesting, sorting, drying and transporting the produce from the plantations to the home. Both women and men are involved in marketing the raw nuts.

There are, however, exceptions. In Odienné (north-west Côte d'Ivoire), for example, a cooperative was set up by women in 1981. It is called the Coopérative des planteurs d'anacardiers de Côte d'Ivoire *(COPLA-CI)* and today owns 150 ha.

Women have the highest profile in processing. Most of the workers in processing facilities are women. The proportion of women workers in such facilities is around 80%. The rate is 85% at *COPLA-CI* (Odienné) and 80% at *SIMPUGO* (north-east).

Elsewhere, numerous initiatives have been launched to reduce poverty among women and promote their independence through cashews. One example is the programme conducted since 2007 by *RONGEAD* for 400 women.

Box 1: Impact of the RONGEAD project for the professional structuring of the cashew sector as a lasting contribution towards peace on equity and gender issues (excerpt from the final evaluation, 2008, translated from French)

Processing is the link that truly structures the sector. The enthusiasm it stirs and the sharp increase (52%) in the amounts processed and exported in the past two years are a source of genuine hope for the rural areas covered by the project.

The facilities set up within the project framework have served to capture added value for the villages. They have provided an income to many women and young people involved in the processing of raw cashew nuts into kernels.

The farms from which the women processors come have improved their capacity to meet costs. In three of the four villages in which a processing facility has been established, cashew nuts are the largest source of revenue, and in two of the villages (Kiramissé and Kpanan) they are a mainstay of community life.

The project evaluation mission lamented the absence of centralised, processed data on the revenues distributed and their use by the women. It also regretted the absence of data on overall farm income in those villages, which would have given a more accurate picture of the facilities' real impact on the level of wealth of the family farms concerned.

Although the production of cashew kernels represents a very limited use of cashews (the cashew apple and shell oil are not used), it has served to structure production in the zones around the facilities. The quantities processed remain low, but they nourish hopes for a better future in the areas concerned. Three of the four facilities set up in Bondoukou are operating in a very satisfactory fashion.

In addition to remuneration, there is the question of justifying control of the units by the cooperatives. Most of the efforts are made by the women's groups. The profits generated by the units are not distributed transparently.

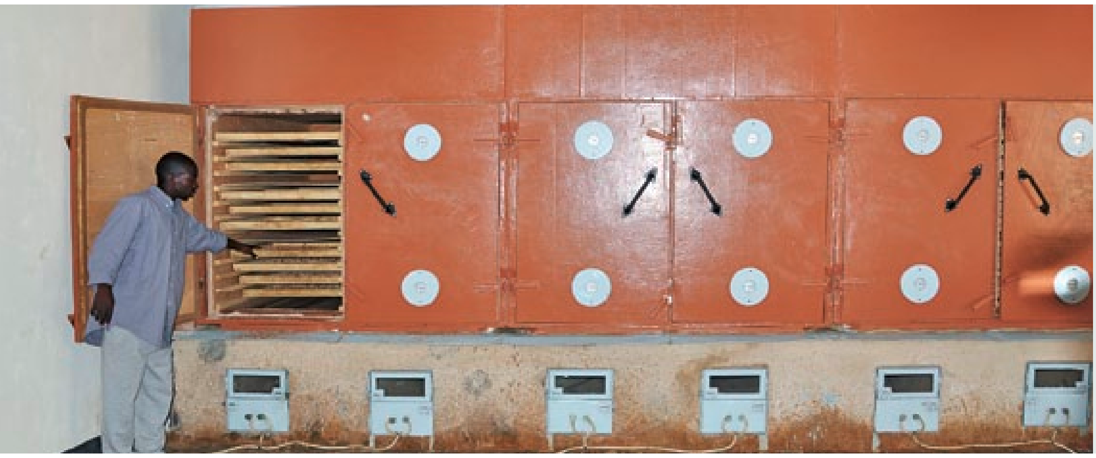
Perhaps, for example, the facilities could set themselves up as rural micro-enterprises owned by groups. It is vital that the matter be considered in greater depth with the cooperatives and the women's groups in the light of each facility's actual a ccounts. According to the evaluation report, the project served to extract greater value from production by controlling procedures for processing nuts, with returns equivalent to industrial rates. Thanks to the pilot processing facility set up in four villages and the technical training of groups of women, other cooperatives, created using their own funds and with a clear objective to process their members' entire output, are being established.

A wave of protest is gathering strength in the processing facilities. Women, who make up just under 88% of the work force in the facilities, are becoming more and more demanding: they are assigned the hardest work (shelling and peeling), but are paid less than young men.

Facilities	Number of workers	Women	Men
Taoudi	79	63	16
Kiramissé	107	99	8
Kpanan	186	164	22
Total	372	326	46

The growers are investing substantial sums in setting up processing infrastructure. While some of the financial arrangements appear questionable, the fact that such large sums are being invested is in itself a pledge by the communities that must be counted as a positive project outcome.

Some villages have already identified the processing facilities as a means of keeping young people there. In Kpanan, there is a clearly stated desire to recruit young girls to take over from the older workers, above all as an alternative to migration.



2.4 Detailed description of cashew processing and marketing

2.4.1 Description of processing

There is undeniably a growing interest in cashew processing, as reflected in the various initiatives taken to reverse the current trend, which is to trade in raw nuts. Indeed, at present processing is a relatively marginal activity in terms of the level at which it is carried out. The rate of processing, which has gradually fallen off as national production has risen, has hovered at around 2% of national production over the past two years.

All the various products and by-products are marketable. In Côte d'Ivoire, the products of processing are cashew kernels, the fruit and the shell. The cashew kernel, which is the main product of cashew processing, accounts for roughly 85% of the value of the raw nut. There are few figures available on kernel exports and domestic sales. This is partly because the sellers do not feel obliged to report transactions to the sector's authorities, given that kernel exports are not taxed. Some operators, for example *VAGNY-LAB*, currently process the apple to produce a liqueur. Such initiatives are just getting off the ground. The waste is presently used as fuel by some rural localities. It is used as an alternative source of energy to wood and stalks for cooking in the villages.

2.4.1.1 History of processing facilities

Historically, processing started in 1975 with *SOVANORD*, which was established by northern 'officials' to extract greater value from the cashew crop. *SOVANORD* ran into a number of difficulties and was subsequently replaced by *AISA* until the end of 1998. Anacarde Industrie *(AICI)* took over from *AISI*, but in the face of the difficulties encountered, above all the cost of raw materials and the sector environment, it rented its installations to *CAJOU-CI*, which belongs to the *AFRECO* group. For various reasons, the factory closed in 2002.

Most of the facilities currently in operation were established more recently. The oldest is *SITA*, previously *SIDORO*. It was established in 1998 and was the first facility in the country to really use Indian steam technology. It has a capacity of 2,500 t/year. The remaining processing facilities were installed after 2004.

The processing facilities generally cover all of Côte d'Ivoire's growing areas. However, only two areas have large operational processing facilities: N'Zi Comoé, with the *OLAM IVOIRE* group's facility, and Worodougou, with *SITA*. The *AFRECO* group's *CAJOU-CI* facility, which uses Italian Oltremare technology, is situated in the Savanes region (Korhogo) and is reportedly preparing to resume its activities. Local momentum is building for small-scale processing.

Box 2: SOVANORD: background and difficulties

In 1972, in an effort to reduce regional disparities, the Ivoirian State set up a company in Korhogo (north) to process cashews from the north. The company's objective was to collect and market cashew nuts for the Indian market. It quickly hit a number of constraints, including high transport costs, lack of professional leadership and conflictual relationships with private agents, which forced the company to stop exporting nuts in 1975. Even though it was in the red, the company continued collecting and storing products with the help of the *Stabilisation Fund (CAISTAB) (Yves-A. Faure and Pascal Labazée, Development Research Institute (IRD), Paris, 1998).*

2.4.1.2 Structure and geographical distribution of processing facilities

Cashew processing is carried out by three types of facility, namely:

- large industrial facilities, which have an average capacity of over 1,000 t/year;
- semi-industrial facilities, which have an average processing capacity of between 500 and 1 000 t/year;
- small facilities, which have an average capacity of less than 500 t/year and are generally artisanal operations.

There are two large industrial facilities:

OLAM IVOIRE: Located in Dimbokro, in N'Zi Comoé, *OLAM IVOIRE* uses Indian steam technology. It has a processing capacity of 5,000 t of raw nuts per year. *OLAM IVOIRE* has helped set up small facilities working in the same area. The small facilities have been processing cashew nuts since 2005 in the Zanzan and N'Zi Comoé regions.

SITA SA: Located in Odienné, in Denguélé region, the *SITA SA* factory also uses Indian steam technology and performs the first and second stages of processing. The first stage produces fresh kernels, most of which are exported. The second stage consists in producing ready-to-eat roasted and salted kernels that are distributed to large retail outlets locally and in Europe. *SITA SA* has an estimated capacity of 2,500 t/year.

A third large facility is being set up in Touba, in north-western Côte d'Ivoire. According to its promoter, who was interviewed for this study, the facility will have a cashew-processing capacity of 5,000 t/year.

The literature mentions two semi-industrial facilities:

CAJOU DE FASSOU: Established in December 2007, *CAJOU DE FASSOU* is located in Yamoussoukro, in Lacs region. It is equipped with machines manufactured locally using boilers as steamers, cutting machines, dryers and calibration systems using steam technology. It has a capacity of 1,500 t/year.

An industrial facility in Korhogo, in the north's Savanes region, was the oldest of all of Côte d'Ivoire's processing facilities. It became *CAJOU-CI* in 1998 after changing its legal status a number of times. It used Italian technology and performed primary processing of cashew nuts to obtain white kernels that it exported to South Africa and France. According to an *ANADER* study, it was closed because it did not have sufficient supplies of raw material and had poor results.

COOGES: the processing company started operations during the 2008 season and is located in the village of Sepingo, in Zanzan region. It is owned by a cooperative. Like most existing facilities, it uses Indian technology. It has a processing capacity of 540 t.

According to a review of cashew-processing procedures and equipment conducted by *FIRCA* in 2009, the work of the industrial and semi-industrial facilities is supplemented by small-scale processing facilities. This kind of processing is a relatively recent development that has emerged with the support of NGOs *(ACMC, RONGEAD, INADES-Formation)* and thanks to the initiative of local people.

Some 11 facilities have been set up in five regions with the support of these NGOs, including:

- Bandama Valley: Bouaké (NGO *Notre Enfance*), Katiola *(COOPRAG cooperative)*;
- Worodougou: Pokoutou in Tiénigboué *(COOPRAMOVIT)*;
- Savanes: Dabakala *(OFED)*, Karakoro *(Chongagnigui group)*, Nganou in the subprefecture of Niofoin, Ferké *(Klognonmon cooperative)*;
- Zanzan: Bouna *(Cocopraged)*, Bondoukou *(COPABO, 3 facilities)*.

Some of these facilities are described below so as to give a clearer picture of their operations.

COPABO, for example, is a benchmark cooperative in Côte d'Ivoire's cashew sector, operating in Bondoukou. According to a 2009 *GIZ* study, it started operations in 2004 and uses processing techniques in its milling process. It is said to have a processing capacity of roughly 400 t/year. Today *COPABO* has three facilities that are basically managed by women's groups.

The facility run by the *Cooperative of Cashew, Mango, Orange and Food Crop Growers (COOPRAMOVIT)*, in Tiénigboué, is another example. Situated in Mankono department, the facility has been operating for four years and today has two shelling machines. It is run by a manager and employs about 50 casual labourers. Initially the workers were women, but over the years more and more are young people from the village of Pokoutou. During the 2009 season, the facility processed 20 t of raw nuts. The main difficulty it faces is the absence of funding to constitute a stock. Since consignment purchases are not common practice, the cooperative has to pay cash for the products making up its stock, and this requires substantial resources.

The *CHONGAGNIGUI* facility, in the Savanes region, is a cooperative of women market gardeners located in Karakoro, 10 km from Korhogo. The cooperative has 3,800 women members from 75 groups: 1 in Sinematiali, 6 in Komoro and 68 in Karakoro. Since most of the women are illiterate, the administrative and book-keeping tasks are performed by the few men in the cooperative who have attended school. The *CHONGAGNIGUI* cooperative set up a processing facility in February 2008. The facility was launched as part of projects to build facilities to process farm products financed by *UNDP* on the proposal of the Korhogo General Council. With the assistance of *INADES-Formation*, the cooperative dispensed training to its members in May 2008. The training covered instruction in cashew-processing technology (shelling and peeling) and processing facility management. The cooperative exports kernels to Europe. For the 2009 season it received an order for 4 t of kernels from a European importer. The NGO *CHITAGA* promised the cooperative new shelling machines in order to improve the quality of the kernels. To maintain the facility's plant, the cooperative sends its technicians to *I2T*, which engages in capacity-building activities. The cooperative also has two small warehouses in which to store nuts for processing.

The mission was unable to obtain detailed information on the other small-scale facilities mentioned above.

Table 2.4.1: Location of beneficiaries of UNDP support

Regions	Beneficiaries
Worodougou	Soutia, Babien Copramovit, Tiéningboué
Bandama Valley	Eboyekun, Diabo Ucopak, Niakara
Savanes	Uconako, Korhogo Womagnon, Sinématiali
Zanzan	Kassitrou, Tanda Cocopragel, Bouna

Eight small cashew processing facilities are being set up as part of UNDP's project to manufacture and install small cashew processing facilities. Each facility has a capacity of 250 kg per day, or about 50 t/year. The facilities will be established in four zones (Bouna, Séguéla, Korhogo, Bouaké), with two facilities per zone.

The facilities are being built on the spot by *I2T*, which will also equip them and train the beneficiaries, the members of eight cooperatives. They should be operational by the end of 2010. According to an *ANADER* source, the main difficulty faced by these small facilities is the supply of raw material, which they cannot finance. This difficulty poses a constant threat to the facilities' continued existence.

2.4.1.3 Processing procedure used

The technologies used by all the factories are based on the same procedure: steaming. The only difference is that all the facilities except OLAM IVOIRE use, at various stages in the process, machines that are locally designed and not always very efficient. The machines used at the OLAM IVOIRE factory have all been imported from India and are known for their efficiency.

The equipment in all the factories includes hand-operated shelling machines and steam technology.

The small facilities rely on their spirit of technological innovation and the local manufacture of equipment, which, in terms of processing, does not always achieve good results. For example, CAJOU DE FASSOU has demonstrated its inventiveness by converting lorry tires into cookers and a 20-foot container into a dryer (*GIZ*, 2009).

2.4.1.4 Chief characteristics of the main processing facilities

Table 2.4.2: Overview of the processing facilities

Category	Facility	Location	Legal status or ownership	Date of commissioning	Potential processing capacity	Technology used
Large industrial facilities	OLAM IVOIRE	N'Zi Comoé (Dimbokro)	Private	2004	5,000 t/year	Indian
	SITA	Worodougou (Odienné)		1998	2,500 t/year	Italian
	COSAMA[3]	Bafing (Touba)	Cooperative	2009	5,000 t/year	
Semi-industrial facilities	CAJOU FASSOU	Lacs region (Yamoussoukro)	Private	2007	1,500 t/year	Local
	GOOGES	Zanzan region (Sepingo)	Cooperative	2008	540 t/year	Indian
Small facilities	COPABO	Zanzan region (Bondoukou)		2004	400 t/year	
	PAMO	N'Zi Comoé (Bongouanou)			500 t/year	Brazilian
	COOPRAMOVIT	Worodougou (Pokoutou Tiénigbé subprefecture)	Cooperative	2006	About 50 t/year	Local and foreign
	CHONGAGNIGUI	Savanes region (Ferké)				
	COCOPRAGED	Zanzan region (Bouna)				
	COOPRAK	Savanes region (Korhogo)				
	CHONGAGNIGUI	Savanes (Karakoro)		2008		
	KLOGNONMON	Savanes region (Ferké)				
	OFED	Savanes (Dabakala)	Women's group			

2.4.2 Detailed description of marketing

Côte d'Ivoire is a special case when it comes to the marketing of cashew products. Indeed, raw nuts account for almost 98% of the market, which is why Côte d'Ivoire is the world's primary exporter of cashew nuts. The marketing of cashew kernels, the main product of processing, is not developed. The channels of distribution for cashew apples and the other by-products of processing (kernel) are virtually non-existent.

2.4.2.1 Channels of distribution for raw cashew nuts

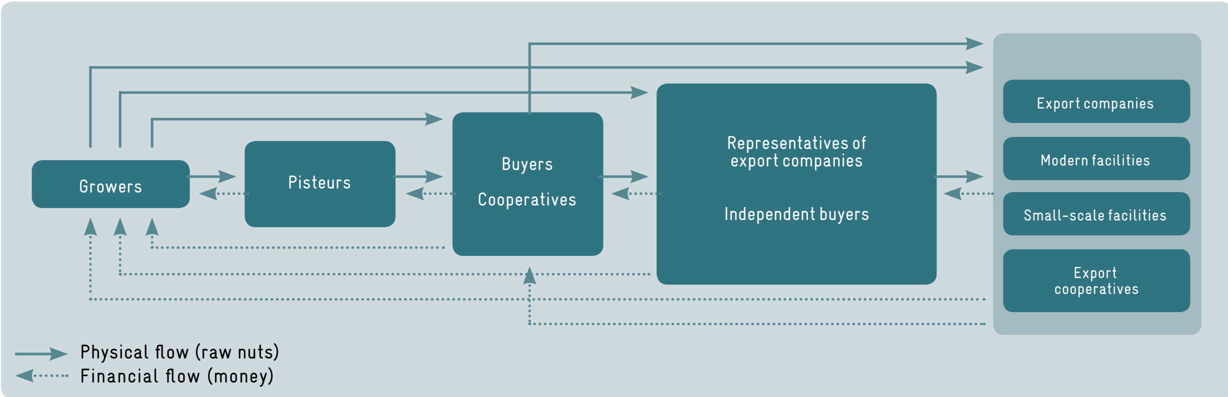
The raw nuts are exported via a dense domestic network of distribution channels involving several players.

There are four categories of players involved in buying cashew nuts. The main players involved in the cashew value chain are cooperatives, pisteurs, buyers under contract and independent buyers, traders and factory owners.

The channels of distribution are depicted in figure 2.4.1 on the next page.

3 Under construction.

Figure 2.4.1: Cashew nut distribution channels in Côte d'Ivoire



Source: ARECA, 2006

As indicated above, the distribution channels for raw cashew nuts involve various players:

a. Grower cooperatives: Because of the sector's lack of organisation, growers today do not have enough cooperatives to defend their interests in the face of the pisteurs and other buyers. There are a few cooperatives, which often bring together cashew growers and growers of other crops.

The cooperative delegates based in the villages establish what supplies are available and collect the produce. They are also in charge of finding means of transportation to bring the collected produce to the cooperative's headquarters.

The cooperatives' operations are self-financed. In most cases, the cooperatives are akin to organised traders in that they pay for the produce in cash and not on a consignment basis. The cooperatives supply cashew nuts to traders and trading companies.

b. Pisteurs: Pisteurs usually operate in the same area as the growers and know the villages well. They may be opinion-leaders or the heads of social groups (youth leaders, heads of families, etc.). The buyers, exporters and industrialists rely on them and advance them the sums needed to buy the nuts at a price set in advance. The pisteurs play a key role in the collection of cashew nuts. They may work simultaneously for the buyers, the exporters and the cooperatives. They possess information on the availability of stocks and changes in price and other market information obtainable from growers and buyers.

c. Buyers under contract and independent buyers: Buyers under contract work for export companies that advance them the money to prefinance the purchase of nuts at a price corresponding to a quota. A buyer may call on the services of several pisteurs, up to 10 or more depending on the resources available to him, his radius of action and the quantities of nuts to be collected.

The independent buyers have their own collection and distribution network. They generally use their own funds or borrow funds from physical persons or financial establishments. Buyers have a trade register, weighing machines, one or several warehouses, rolling stock, pisteurs and the financial means to carry out transactions.

d. Trader representatives: The role of trader representatives is to monitor the activities of buyers financed by the company. They also provide technical support (analysis of product quality) and statistics on growing areas.

However, during the season, some representatives exceed their mandate and act as buyers.

e. Traders, export cooperatives and processing factories: The traders, export cooperatives and processing factories are the final links in the chain, through which the raw and/or processed nuts leave Côte d'Ivoire for the export market.

There are many export companies. About 30 were certified for the 2009 season. They can be grouped in two main categories according to their activities:

- companies with seasonal activities; they are companies set up by representatives of Indian factory owners; they operate only during the season and their sole activity is marketing cashew nuts;
- companies with year-round activities; they are established thanks to either foreign or Ivoirian capital or by a combination of the two; in addition to cashews, they have a variety of other activities, sometimes in sectors other than agriculture.

The traders' mission can be summed up as purchasing cashew nuts from buyers and cooperatives with a view to exporting them to other countries, mainly in Asia.

Box 3: Activities conducted before the raw nuts are exported

The steps described below must be completed to obtain authorisation to export cashew nuts.

Step 1: Figure on the list of certified exporters for the current season (for 2010 there are a total of 40 certified operators: 12 cooperatives and 28 trading companies).

Step 2: Phytosanitary inspection at the point of lading; the inspection is carried out by inspectors from the *Ministry of Agriculture*. The entire amount to be exported must be treated with phytosanitary products in order to eliminate all living organisms. The treatment costs CFAF 600/t and is paid for by the exporter. The inspection is carried out and the authorisation to load the nuts delivered after the treatment has been completed.

Step 3: Quality control; the State has entrusted the *ACE* with this task, which is carried out when the products are loaded into containers. The *ACE* takes samples and controls quality in three areas:

- moisture content: the accepted moisture content is 10%, the average over the past four years has been 9.6%;
- grain rate: the allowed rate is between 180 and 220 nuts per kg, with the desired standard being 200;
- kernel yield: in Côte d'Ivoire, an average 48 lbs are needed for 80 kg (1kg = 0.454 lbs).

Once the check has been completed, a quality control bulletin *(Bulletin de contrôle qualité)* is issued. In addition, the **Chamber of Commerce and Industry** checks the weight and issues a weight certificate. Both controls are invoiced to the operator-exporter at CFAF 1.5 per kg.

Step 4: The export authorisation is issued. The authorisation, which is established on the basis of the above documents (authorisation to load, quality control bulletin, weight certificate) and which indicates the *FOB* customs value, is issued by the one-stop service. It is used to draw up the licence cheques for the various stakeholders and for customs, which charges a single export duty of CFAF 10 per kg.

No lot has ever been rejected as a result of the various controls. This is because, before arriving for export, the operators and their customers agree on the amount and quality of the products to be delivered, and because there exists no local consumer alternative. However, the information collected by the one-stop service will serve to guide capacity building and develop programmes to improve quality

In all, 334,846 t of raw nuts had been exported as at 31 December 2009, of which the exporting companies accounted for 256,298 t (76.54%) *(ARECA, 2009).* During the season, some companies finance pre-collection (pisteurs) and collection (buyer) activities and organise delivery of the produce to the port of Abidjan.

For the 2009 cashew season, fifteen cooperatives were certified to export cashew nuts. These cooperatives are obliged to buy and export their members' output. In practice, however, they collect cashew nuts from non-members in order to meet their export quotas.

The number of export companies and cooperatives has changed over the years, as indicated in the *table 2.4.3:*

Table 2.4.3: List of cashew export companies and cooperatives

Year	No. of companies	No. of cooperatives	Total
2005	23	11	34
2006	19	5	24
2007	30	10	40
2008	29	13	42
2009	30	15	45
2010	28	12	40

Source: ARECA

The companies and the cooperatives encounter difficulties relating to the fact that during the marketing season, some certified companies and cooperatives have no export activities, especially those that operate year round, because they lack the requisite funds. They also often find it difficult to obtain contracts with importers because they are not familiar with the market and, most importantly, lack professionalism.

The factory owners are the final actors in the domestic marketing of cashew nuts. It must nevertheless be underscored that some of them are also active in exporting raw nuts and in processing cashew nuts into kernels. Such is the case of the *OLAM IVOIRE group*.

ARECA is the sector's regulatory body and represents the State. It intervenes in the marketing of cashew nuts in two main ways:

- it draws up a list of companies and cooperatives for export certification by the Ministry of Agriculture;
- its one-stop service issues export authorisations.

INTERCAJOU, which works with *ARECA* in marketing, provides *ARECA's* one-stop service with information on the amounts exported. It sets the price for the season in March of each year.

Carriers are involved in the marketing of raw cashew nuts. They transport the product from the collection sites in the departments to the port of Abidjan.

The *ACE* provides export quality control (by taking and testing samples when the containers are filled).

The *Chamber of Commerce and Industry* acts according to *Decree 691* of 31 October 2001, issuing weight certificates after its agents have weighed the goods. It had assigned this task to the *ACE* in accordance with an agreement up to 2009. It was only in 2010 that the Chamber started performing this task itself.

FILTISAC SA became active in the cashew sector in 2006 together with *ARECA*, in the context of a domestic project to develop bags for the cashew sector. At the agency's request, efforts were made to find a type of bag that was suitable for cashew nuts. After several attempts had been made, a bag was identified in 2007 that was adapted to the sector, the price per bag being approximately CFAF 570. In 2008 trials were conducted among various sector participants. At the end of the trials, a type of label was adopted with a specific and unique identifier that made it possible to distinguish cashew bags from other kinds of bag. The label says: *INTERCAJOU /NOIX DE CAJOU – NEW CROPS/ ORIGINE CÔTE D'IVOIRE*. Two vertical white stripes make the bags easily recognisable.

2.4.2.2 Cashew nut price-setting mechanism

As stated earlier, the price of cashew nuts is set in Côte d'Ivoire by *INTERCAJOU*, which comprises three groups: the growers, the exporters and the processors. A fourth group, made up of middlemen or buyers, is to be set up. The fact that the price is set and applied by consensus helps ensure a smooth season.

Each year in March, *INTERCAJOU* announces the season's minimum price and official opening. The price set takes account of the global price for cashew nuts, the expenses and margins of the various stakeholders, and the amounts collected by the State and the authorities concerned with the sector.

For the 2010 season, *INTERCAJOU* set the following prices: the farmgate price is CFAF 170/kg; the price in export warehouses is CFAF 222/kg. These prices, which were set in March, are currently being revised upwards in the field.

The table 2.4.4 on the pages 50-51 gives an overview of the expenditure, margins and duties applying in the sector. Most of the expenditures are indicative and not all the duties mentioned are official.

The amounts were calculated on the basis of information obtained from growers, carriers, exporters, and *ARECA* and *INTERCAJOU* agents. They clearly indicate the various stages at which costs are incurred.

Table 2.4.4: Detailed costs of transit from plantation to destination. per kg (value in CFAF)

Components	2008	2009
Official farmgate price (variable)	200	150
Operations relating to local production		
► On-site loading (CFAF 100/bag)	1.25	1.25
► Transportation (variable)	8.50	8.50
► Unloading/local storage costs	1.25	1.25
► Warehouse costs	0.50	0.50
► Expenses (police road blocks, etc.)	2.00	2.00
► **Total**	13.50	13.50
Transportation to port		
► Loading	1.25	1.25
► Lorry rental	15.00	15.00
► Unloading at the port	1.50	1.50
► **Total**	17.75	17.75
Weight loss (including refractive index for moisture)	7.00	7.00
Port costs		
► Storage costs	2.00	2.00
► Warehouse entry	1.50	1.50
► Warehouse exit	1.50	1.50
► Jute bags	6.00	7.75
► Transfer of jute bags	0.50	0.50
► Marking of jute bags	0.35	0.35
► Quality control, including phytosanitary products	1.70	1.70
► FOB costs (variable)	15.00	15.00
► Security	1.00	1.00
► Administration	3.00	3.00
► **Total Port costs**	39.55	41.30
Financial costs (variable)	10.00	10.00
Duties and fees		
► Single export duty	10.03	10.15
► ARECA	2.50	2.50
► ACE/Chamber of Commerce and Industry	1.50	1.50
► INTERCAJOU	0.50	0.50
► FIRCA	1.00	1.00
► Chamber of Insurance Brokers (variable)	1.30	1.30
► Office to Support Marketing of Food Crops	0.10	0.10

Components	2008	2009
► Ministry of Agriculture	0.10	0.10
► Armed forces escort	1.50	1.50
► Municipality	0.03	0.03
► Armed forces of the Forces Nouvelles	10.00	14.00
► SYDAM (automated customs clearance system)	0.20	0.20
► **Total Duties and fees**	38.76	42.88
Other costs		
► Export licence (CFAF 200,000)	0.00	0.00
► Foreign exchange risk (variable)	2.50	2.50
► Miscellaneous (variable)	3.00	3.00
► **Total Other costs**	5.50	5.50
Ocean freight rates (variable)	30.00	30.00
Commissions and agents' gross profits		
► Commissions and agents' gross profits (variable)	10.00	10.00
► Trader commissions (variable)	15.00	15.00
► Overseas agents' commissions (variable)	10.00	10.00
► Exporters' profits (variable)	25.00	25.00
► **Total Commissions and agents' gross profits**	90.00	90.00
GRAND TOTAL	205.06	210.93

Source: according to Mesira Ltd. April 2009

An analysis of the *table 2.4.4* shows that the cost of the product increases at each stage of the transaction, from grower to port, which is not in the growers' interests.

The analyses carried out by *GIZ* in its study on Côte d'Ivoire's cashew processing strategy show that local processing leads to less merchandise being exported but at a greater value, which benefits the national economy. Local processing will lead to the following savings:

- at least 50% on commissions and agents' gross profits;
- around 85% on duties and fees, especially if the export of finished products is exempted;
- around 25% on transportation costs;
- approximately 25% on port charges.

2.5 Analysis of the business development service for the value chain

2.5.1 Overview of value chain service providers

The needs of the cashew sector are particular to the players involved and vary throughout the value chain.

- Field observation has shown that very few inputs are used to cultivate cashews; some farmers use insecticides. In some cases, the cashew plants benefit from the fertiliser spread for cotton crops. Bags remain the input most used by all the growers, and needs remain high in this regard. Studies should be conducted to bring to light the benefits of more intense cashew cultivation.
- In terms of production, needs exist for supplies of selected plant material and for labour to carry out harvesting and plantation tending activities.
- At the level of local trading, the needs are for improved organisation of the players, the establishment of warehouses able to improve crop storage by both the growers and the various intermediaries, the supply of bags suitable for cashews and the creation of laboratory capacity to analyse quality in the growing areas.
- In terms of processing, there is a real need for modern processing facilities and for improved equipment in existing facilities (shelling, roasting and packaging).
- In terms of control, standard quality criteria need to be defined for all the stakeholders.

In addition to these specific needs, there are more general ones, such as the need for financing and guidance that most actors experience.

Various service providers are endeavouring to meet these needs. At the micro level, there are grower organisations such as cooperatives, traders, pisteurs, maintenance workshops (mechanics) and NGOs. Some organisations *(APACI, FENOPACI, ADEFICA)* are attempting to play the role of unions and defend the growers' interests.

At the meso level, the structures involved are *ARECA* and *INTERCAJOU*, which, as regulatory bodies, issue operating rules, *ANOPACI*, which groups the *FPOs* in various farm sectors and which presently has a low-profile role in the cashew sector, *FIRCA, ANADER* and the *CNRA* for financing, advice and agricultural research, the *ACE* for quality control, *I2T* for the development or adaptation of small-scale or semi-industrial processing facilities, *FILTISAC SA* for bags, the Chamber of Commerce and Industry of Côte d'Ivoire to check the amounts exported, and the national organisations *(INADES-Formation Côte d'Ivoire, APEX-CI, etc.)*, technical cooperation agencies *(GIZ)*, multinationals *(TechnoServe)* and international NGOs *(ACA, RONGEAD, etc.)* providing support at various levels.

At the macro level there are the *Ministries of Agriculture, the Economy and Finance and Industry*. There are also international institutions such as the World Bank.

Table 2.5.1.1: Overview of value chain service providers

Research and guidance	Grower organisations	Quality management	Information on the market	Business management	Technology	Financing
Centre national de recherche agronomique (CNRA)	INTERCAJOU (framework for coordination between the various links in the chain)	Audit contrôle et expertise (ACE)	ARECA	PROMEXA	I2T	Multilateral: ► World Bank ► UNDP ► European Union ► AFD ► international NGOs
Agence nationale d'appui au développement rural (ANADER)	APACI	Chamber of Commerce and Industry of Côte d'Ivoire	ACA	Centre de promotion des investissements en Côte d'Ivoire (CEPICI)	Workshops for the local manufacture of equipment (craftsmen)	Commercial banks ► BNI ► BFA ► VERSUS BANK ► micro-finance units
NGO INADES-Formation	National Federation of Professional Cashew-Growing Organisations in Côte d'Ivoire (FENOPACI)	Ministry of Agriculture	APEX-CI	APEX-CI		Intertrade funds: ► FIRCA ► Cashew reserve fund (a concept that has been discussed and approved)
NGO RONGEAD	Association for the Development of the African Cashew Network (ADEFICA)	CODINORM	INADES-Formation, through its information project on cashew nut prices			Public funds: The State (financing of the regulatory structure (ARECA), possibility to waive certain fees)
GIZ	Regional Union of Cooperative Undertakings in the Savanes region of Côte d'Ivoire (URESCO-CI)					
	Local cooperatives					

In practice, some structures provide services in various fields. *Table 2.5.1.2* gives an overview of all service suppliers and the areas in which they work: research, grower organisation, quality control, market information, business management, technology and financing.

For example, *INTERCAJOU* is involved in both organising the players and providing market information.

Exchanges with some of the grassroots players and a look at the documents available, in particular the outcome of the workshop organised with *World Bank* support in 2007 on the revitalisation of the cashew sector in Côte d'Ivoire, served to pinpoint the major needs of these players. Those needs are set out in the *table 2.5.1.3*

An analysis of this table reveals that input suppliers need supplies of inputs that are specific to cashew cultivation, farm materials and spare parts for the processing facilities. The growers need good quality plant material, guidance to incorporate innovations and capacity building. As for the processors, they have a real need for credit to finance their operations, tax incentives, promotion of cashew nut by-products and market information.

Table 2.5.1.2: Overview of service suppliers in the cashew value chain

Service supplier	Research	Grower organisation	Quality control	Market information	Business management	Technology	Financing
FILTISAC SA					x		
Interprofession Cajou (INTERCAJOU)		x		x			
Autorité de régulation du coton et de l'anacarde (ARECA)			x	x			
Centre national de recherche agronomique (CNRA)	x						
Ivoirienne de technologie tropicale (I2T)						x	
INADES-Formation		x		x	x	x	X
GIZ		x			x		
ACA		x		x	x		
Chamber of Commerce and Industry			x	x			
Agence nationale d'appui au développement rural (ANADER)		x					
Association nationale des organisations professionnelles agricoles de CI (ANOPACI)		x					
Fonds interprofessionnel pour la recherche et le conseil agricole (FIRCA)	x	x		x	x		X
Côte d'Ivoire Normalisation (CODINORM)			x				
Audit, Contrôle, Expertise (ACE)			x				
RONGEAD	x	x		x	x	x	X
Ministry of Trade					x		
Ministry of the Economy and Finance				x	x		X
Ministry of Industry					x	x	
Ministry of Agriculture	x	x		x			
Funding structures (commercial banks, multilateral donors)							X
Private consultants	x	x	x	x	x	x	

Table 2.5.1.3: The main service needs among value chain stakeholders

Input suppliers	Growers	Processors	Traders and exporters	
► Supply of bags ► Supply of inputs, farm material and spare parts	► Production and distribution of good quality plant material ► Information on innovations ► Management capacity building for cooperatives ► Training growers and FPOs to calculate out-turn	► Financial support for the export of processed kernels ► VAT-exempt status for local or imported goods and services used in processing ► Elimination of duties and fees on the import of equipment, spare parts and consumables used for processing ► Local promotion of by-products ► Financing for the purchase of raw material ► Development of networks of small processing facilities with a view to developing a market ► Market information system	► Training and information on conducting commercial transactions ► Training on quality ► International market information system ► Construction of warehouses/ general storage facilities ► Organisation of inter-trade quality control ► Capacity building for cooperatives ► Financing of cooperatives' activities ► Fluid traffic flow ► Reduction in the number of intermediaries	MICRO

Lastly, the traders and exporters need guidance and training on commercial transactions and quality. Other needs are the establishment of an information system on the international market and the financing of activities.

To heighten the efficiency of Côte d'Ivoire's cashew sector, the number of intermediaries in the distribution channels needs to be reduced. In this respect, there is a need to reorganise the way in which the product is marketed.

2.5.2 Overview of value chain financial service providers

It is difficult for agriculture in general, and for cashews in particular, to obtain financing from financial institutions. Financial institutions are reluctant to provide financing to Côte d'Ivoire's cashew sector because of the total lack of organisation. The cashew sector's finance-related problems were identified at a workshop organised by the World Bank. They include poor access to credit, lack of funding for projects and programmes and lack of self-funding capacity.

The main problem discouraging banks and hampering the sector's financing is risk. Indeed, because the sector is not well organised, risks are high and banks exercise extreme caution. Growers need financing to maintain the land under cashew and for the harvest (seasonal credit). Since production is very dependent on weather (rainfall), there is a real risk that loans will not be repaid. When it comes to the purchase of nuts, the risk is that buyers or pisteurs may abscond with the funds received or be robbed when carrying the cash on their person. Moreover, improper storage can affect product quality, and this also leads to reimbursement difficulties. The risk resulting from global price fluctuations is lower, because demand is a function of supply, except when prices are artificially manipulated by Indian importers looking to bring them down. For the processors, the risk lies not only in the quality of the kernels, which can easily deteriorate in poor storage conditions, but also in the efficient management of the processing facilities.

The risk problem is compounded by the difficulty banks have in recovering loans in agricultural areas. The weak capacity of the sector's players to constitute or mobilise guarantee funds is another factor that can affect the repayment of loans to banks.

Players that do manage to obtain financing from financial institutions are export cooperatives, traders and processing facilities.According to the 2009 *GIZ* study on the cashew processing strategy in Côte d'Ivoire, most purchase operations by trading companies are financed by their head offices, which are based chiefly in Singapore and Hong Kong.

Each of these companies has preferred contacts with the traders, who use each transaction to forge relations on a range of basic products – from rice to cooking oil and tomato paste when it comes to imports and from cacao to coffee and timber when it comes to exports. Thanks to the networks and influence of big traders in the country's interior, relations with individual exporters are locked up.

The difficulties posed by this relationship when export prices fall are, to a certain extent, offset by close communication between the exporter and the traders' agents, who regularly supply information on the purchase, price level and deadlines for closing past accounts. These contacts occur on a weekly basis. Although they are striving to become financially independent, local companies are prevented from dealing with South Asian merchants by lack of knowledge about the international market.

Companies based abroad have access to financing at *SIBOR (Singapore Interbank Offered Rate)* rates, which can vary from 4% to 7%. The volume of Far East financing is based on the rotation of capital loaned to enterprises whose turnover is based on low profit margins and high business volumes.

Local exporters have access to financing via commercial banks, but the interest rates, which vary between 9 and 12%, are far higher than those applied for local branches of foreign companies based in Côte d'Ivoire. For example, one cooperative wishing to export was made to pay interest and bank fees amounting to 21% by a local bank, highlighting the fact that export operators do not operate on an equal footing. The cooperative concerned ultimately received assistance from a Lebanese financier, who charged CFAF 10 per kg, or less than 5% of the price per tonne CNF.

To consider the matter in depth, it would be useful to conduct a study of financing sources so as to enhance understanding of the cashew sector's needs and the current trading system compared to the financing available from foreign banks. On the basis of the study's findings, the government could draw up a strategy to fight unfair trade practices.

Table 2.5.2: Overview of bodies supporting farm activities

Name of the financial institution	Target	Cashew experience
Banque pour le finance-ment de l'agriculture (BFA)	basic products, farm products, private sector mine products	No information available
Banque nationale d'investissement (BNI)	produits de base agricoles, miniers et secteur des PME/PMI, entreprises du secteur public et parapublic	No information available
Banque régionale de solidarité (BRS)	BNI basic farm, mine products, SME/SMI, sector, public and semi-public sector enterprises	In its infancy
Banque atlantique de Côte d'Ivoire (BACI)	private sector enterprises, mine products and SME/SMI sector	No information available
Ecobank	private sector enterprises, mine products and SME/SMI sector	No information available
Société Ivoirienne de Banque (SIB)	basic farm products, mine products and SME/SMI sector	No information available
VERSUS BANK	basic farm products, mine products and SME/SMI sector, public and semi-public sector enterprises	No information available

According to the same *GIZ* source, the rate offered for financing projects, in particular projects to set up processing facilities, vary from one bank to another (the *BFA* proposes 11.50% for term financing, the *BNI* 12%) depending on the specific nature of each project.

Compared to India and Viet Nam, the financial aid provided to investors in this sector is very costly in Côte d'Ivoire. In India, the banks are authorised to grant a 2% annual subsidy for loans to companies exporting cashew kernels. Consequently, exporting companies pay around 8% interest on bank loans.

It is important to draw attention to this shortcoming in Côte d'Ivoire's financing system, and it is crucial for the problem to be tackled, given its impact on local initiatives.

2.6 Preliminary analysis of impact on poverty

No reliable source was found for analysing the sector's impact on poverty. The question can nevertheless be considered from the point of view of the average income of cashew growers.

2.7 Institutional and political governance chain

The need for government action to develop the country's potential, promote its economic growth and monitor trade in the sector was clearly brought to the fore at the end of the seminar on the cashew sector held in Yamoussoukro in 1997. The first official reaction was the formulation of *Order 2002 - 448 of September 2002.*

In this order, the State, acting through the *Ministry of Agriculture and Rural Development, the Ministry of the Economy and Finance, the Ministry of Industry and Promotion of the Private Sector* and the Ministry of External Trade, established the organisational framework for cotton and cashews.

It was shortly after the launch of this initiative that the military-political conflict broke out in Côte d'Ivoire, on 19 September 2002. Since then, development programmes have been placed on hold, with efforts focusing on restoring peace. The north of the country, which is where cashews are grown, ended up under the control of the armed rebels. This has not played out in favour of cashew development programmes, and the sector owes its salvation during this period to the work of a few NGOs and economic agents. It was also during this period of crisis that the development of cashew cultivation took off. It became the main source of wealth for the population, at times replacing cotton in certain areas, and is today the hope of the peasant masses because of the jobs generated, in particular for young people and women, by the processing facilities.

Cashew plantations contribute to protecting the environment, as they are a means of combating wild fires, which threaten the bushland during the dry season. They also help to restore the forest cover.

The socio-political crisis created new priorities for the Ivoirian State, prompting reconsideration of the development plans conceived hitherto.

Plan directeur de développement agricole 1992-2015: The *Agricultural Development Plan* was produced to provide a policy instrument for the agricultural sector in the broadest sense covering the 1992-2015 period. It is based on the macroeconomic directions and policy objectives set out in the Plan de stabilisation et de relance de l'économie (plan to stabilise and revive the economy) drawn up by the government in 1990, during negotiations with donors funding agricultural adjustment programmes. It is also based on the medium-term economic renewal programme adopted in 1991 by the National Assembly.

In the plan, the government established the objective of improving competitiveness, in particular by increasing productivity, achieving food self-sufficiency and security, and rehabilitating forest resources. Because interest in cashews is recent, cultivation of this crop was barely mentioned in the plan.

A recent evaluation (2008) of the plan clearly indicates that the challenges and strategies identified at the time have lost none of their relevance. It also highlights the clear absence of any coordination in the implementation of activities, which is required to monitor progress.

Strategy to revive development and reduce poverty: Launched in 2000, the *PRSP* drafting process, which in March 2002 led to the adoption of the interim *PRSP* by the international financial community, was unfortunately interrupted by the military-political crisis which broke out in the same year. The government nevertheless continued to implement the interim *PRSP*, in spite of the costs of resolving the crisis.

The *Ouagadougou Political Accord* signed in March 2007 laid the groundwork for a return to lasting peace, and Côte d'Ivoire started on the process of normalising its relations with the international financial community. This prompted the resumption of the *PRSP* preparatory process on 3-5 December 2007 in Yamoussoukro, following the signing of a post-conflict assistance programme with the *World Bank* on 7 July 2007 and an emergency post-conflict assistance programme with the *International Monetary Fund* in August 2007.

The *PRSP* is being prepared on the basis of a review of interim *PRSP* implementation and the outcome of dialogue in the ten development poles and also takes into account the findings of the *Enquête sur le niveau de vie des ménages (Survey of household living standards, ENV 2008).* The national and international actors involved in preparing the *PRSP* participated at all stages of implementation. Their involvement made the process highly participatory, as all the sectors of the nation were represented: decentralised services, territorial authorities, civil society, defence and security forces, rural agents, the private sector and development partners.

Today, the process's outcome document, which has been endorsed by the development partners, remains the main reference for the country's development.

The document does not, however, mention the cashew sector specifically. The guidelines for this sector were set out in a series of regulatory measures comprising orders, decrees, interministerial decisions and *ARECA* circulars issued as warranted by the situation. The *table 2.7.1 on the next page* contains a succinct list of these texts.

Table 2.7.1: List of regulatory measures pertaining to the cashew sector

Year	Type of text	Reference	Purpose	Structures/actors concerned
2001	Decree	No. 2001-695 of 31 October 2001	Authorises Côte d'Ivoire's Chamber of Commerce and Industry to weigh general merchandise at customs points	Chamber of Commerce and Industry
2002	Order	No. 2002-448 of 16 September 2002	Establishes an organisational frame of reference for the cotton and cashew sectors called the INTERPROFESSION	INTERPROFESSION
2002	Decree	No. 2002-449 of 16 September 2002	Establishes a State corporation called the Autorité de régulation du coton et de l'anacarde.	ARECA
2003	Interministerial decision	No. 032 ME.MCI.MCE of 17 February 2003	Establishes the terms of application of Decree No. 2001-695 of 31 October 2001, authorising general merchandise to be weighed at customs points by the Côte d'Ivoire Chamber of Commerce and Industry	Minister of State, Minister of the Economy and Finance Minister of Domestic Trade Minister of Foreign Trade
2003		No. 367 of 27 October 2003	Modifies and supplements interministerial decision No. 032 ME.MCI.MCE of 17 February 2003	
2005		No. 021 of 17 February 2005	Establishes the transitional body for the INTERPROFESSION	OTIFA
2005	Interministerial decision	No. 304 of 13 September 2005	Designates the members of OTIFA's General Assembly	
2005	Decree	No. 2005-22 of 27 January 2005	Terms and conditions for the collection of ARECA fees	ARECA
2005	ARECA circular	353/DMK/DE/KP/ ARECA-05	Scope of application of the cashew sector's current regulations	Operators, economic partners and administration services
2005	Customs circular	No. 1262 MEMEF/ DGD of April 2005	Export of cashew nuts	
2005		No. 1271/MEMEF/ DGD of 13 May 2005	Export conditions for cotton and cashews	Services and users
2005		No. 1292 of 17 October 2005	Fraudulent export of coffee, cacao and cashew nuts	
2005	Interministerial decision	No. 015 of 3 February 2005	Institutes weight and quality control for raw cashew nuts intended for export	Minister of State, Minister of Agriculture Minister of State, Minister of the Economy and Finance Minister of Trade
2005	ARECA circular	No. 132/DSK/DT/Kp/ ARECA-05	ACE mission	SAGA Côte d'Ivoire, Ivoirian Maintenance Company (SIVOM), Ivoirian Maintenance and Transport Company (SIMAT), GETMA, SDV, MAERSK LOGISTIC
2006	Interministerial decision	No. 003 of 27 February 2006	Extension of OTIFA	OTIFA
2006	Ministerial decision	No. 005 of 16 March 2006	Extension of the term of members of OTIFA's General Assembly	
2006	ARECA circular	No. 01/DE/ARECA-06 of 5 January 2006	Conditions for the marketing of raw cashew nuts during the 2006 season	Exporters, buyers and pisteurs
2006		No. 02/DE/ARECA-06 of January 2006	Conditions for certification of exporters and identification of raw nut purchasers for the 2006 season	
2006	Interministerial decision	No. 012 of 5 April 2006	Supplementary list of agents certified to export cashew nuts during the 2006 harvest	Minister of Agriculture Prime Minister's Delegated Minister for the Economy and Finance

Source: INTERCAJOU

The season functions on the basis of these measures. Thus, in accordance with *Decree No. 2005-24* of 27 January 2005 establishing the conditions for the certification of agents for the export of raw cashew nuts, agents are certified each year by the technical ministries, notably the Ministries of Agriculture and the Economy and Finance, on substantiated proposals put forward by *ARECA*, which has the authority to process applications for raw cashew nut export certificates.

Provisions have also been set down with regard to domestic transactions, exports and penalties.

- Domestic transactions cover the collection and purchase of raw cashew nuts from individual growers or from grower cooperatives in 11 of the country's 19 administrative regions.
- Provisions relating to export operations concern traders and cooperatives certified for export. At the start of each season, the list of operators meeting the conditions is published.
- Any operator failing to comply with the provisions set out in the circulars is penalised in accordance with the laws and regulations in force.

2.8 Cashew value chain strengths, weaknesses, opportunities and threats (SWOT)

Analysis of the cashew value chain, like that of many agricultural enterprises, brings to light strengths but above all weaknesses into which insight must be gained in order to attain strategic objectives. These weaknesses are to be found throughout the value chain, from production to export and including local marketing and processing.

Weaknesses can be summed up as follows.

- **As concerns production:** absence of selected plant material, absence of a disease-control programme, cultivation techniques not mastered by the farmers, insufficient knowledge of procedures, techniques and standards for harvesting, conserving and storing the nuts, lack of cooperative spirit among growers in general and poor functioning of existing cooperatives.
- **As concerns collection and storage:** shortage of labour during the season, no bagging specifically designed for the sector, lack of suitable storage space for bags.
- **As concerns the sale of the nuts:** lack of reliable scales among pisteurs and other buyers, presence of a host of actors in the growing areas, lack of information on the buyer-imposed price mechanism, use of counterfeit bills by some intermediaries, lack of information on group marketing initiatives, poor organisation among grassroots growers.
- **As concerns local middlemen (pisteurs):** lack of respect for commitments to financiers on delivery of the product, the provision of erroneous information on prices and stocks, failure of the administration to identify the players.
- **As concerns the buyers:** loss of products brought about by sales by pisteurs to other operators, insufficient operating funds and guarantees, high level of traffic and escort costs, problems with the issue of the certificate of origin and source, arrears in payments to growers, lack of reliable means of transportation, failure of the administration to identify the players.
- **As concerns grower cooperatives:** consignment feasibility hamstrung by lack of control over establishment of the purchase price, lack of means of transportation for pre-collection and delivery to port, high rate of refraction practised by transit agents, lack of credit to finance between-season costs and cash purchases.
- **As concerns packaging:** too few bags to meet needs at the height of the marketing period, poor quality of the bags received, difficulty experienced by cooperatives and buyers in recovering bags from growers.
- **As concerns export companies and cooperatives:** some certified companies carry out no export operations, especially if they are year-round companies established with Ivoirian capital, difficulty in obtaining access to loans for marketing for national exporters, absence of associations of exporters, difficulties encountered by some cooperatives in mobilising the funds needed to carry out their activities, presence of seasonal exporters.
- **As concerns processing:** low rate of processing, difficulties experienced by local facilities in obtaining supplies, absence of a financial framework to promote processing by *SME/SMI*, high cost of equipment and absence of tax incentives.
- **Other weaknesses:** problems relating to capacity building among the sector's agents, lack of information on the volume of activity, domestic marketing price, existence of corrupt agents (exporters, buyers and other intermediaries), non-existence of quality standards for domestic marketing of cashew nuts, additional costs arising from payment of dues in the zones controlled by the Forces Nouvelles and racketeering carried out by the armed forces, insecurity during the marketing season in the growing areas, red tape relating to road transport.

Table 2.8.1: Summary of strengths, weaknesses, opportunities and threats (SWOT)

Strengths	Opportunities
► Amount of land under cashew cultivation (world's largest exporter of raw nuts) ► Good quality of Ivoirian nuts ► Existence of grower organisations ► Existence of a permanent framework for dialogue between stakeholders (INTERCAJOU) ► Population's keen interest in the crop ► Interest of operators and the State in processing ► Existence of support structures ► Existence of bagging specifically designed for the sector	► Growing international demand ► Existence of national and international guidance structures with genuine expertise ► Possibility to develop a local market ► Indirect financial support from the State for the export of kernels ► Possibility to develop production ► Existence of quality infrastructure
Weaknesses	**Threats**
► Failure to make use of by-products ► Lack of research programmes on plant material and the technical aspects of production ► Grower ignorance of technical aspects, for example the majority lack expertise in harvest and post-harvest activities ► Poor functioning of the cooperatives ► Complexity and poor organisation of distribution channels ► Lack of financing ► Low processing rate and under-equipment of existing facilities ► Failure to respect the prices established by INTERCAJOU ► Poor product traceability ► Lack of reliable statistics on certain aspects of the sector	► Absence of tax incentives (tax exemption for production factors and inputs) to encourage the installation of processing facilities ► Existence of non-tariff barriers (compliance with quality standards) impeding access to the international market ► Length and complexity of distribution channels ► Failure to control quality and poor management of post-harvest practices ► Absence of formal legal tools for negotiations between the partners ► High cost of equipment ► Payment of fees in areas controlled by the Forces Nouvelles and red tape relating to road transportation ► Insecurity during the marketing season in growing areas

3 Cooperation and Collaboration with other Programmes

3.1 Overview of guidance activities

Côte d'Ivoire's cashew sector has only recently been organised. Encouraged by the growing interest of the sector's operators and the activities of certain NGOs, the sector 'imposed itself' on the State, which crystallised its involvement by establishing *ARECA* in 2002. It was therefore during the ten years between 2000 and 2010 that projects and programmes were launched, with the operationalisation of *INTERCAJOU* in 2007 and the involvement of *FIRCA* starting in 2008. Well before these two bodies were established, assistance to growers was first provided mainly by NGOs such as *INADES-Formation* and the *ACMC* in 1997 in the Bondoukou area, followed in 1998 by *RONGEAD*. Grower interest prompted *ANADER* to spread information on cashew cultivation in the northern areas.

The first event bringing together the sector's actors was the national workshop to review and assess the cashew sector in Côte d'Ivoire and consider development prospects, organised by *ARECA* in 2006. A second workshop on the revitalisation of the cashew sector in Côte d'Ivoire was held in 2007 by the *Ministry of Agriculture* with the support of the *United States embassy,* the *World Bank* and *GIZ*. These workshops clearly identified the sector's problems. Given that there is no strategy document on the sector's development, the workshop outcomes constitute the main reference for the sector's development today.

As a prelude to future programmes and activities, a series of studies were launched, among them:

- a study to review cashew-processing procedures and equipment and develop cashew by-products, *FIRCA, 2009;*
- a study of risk analysis and traceability in the cashew sector in Côte d'Ivoire, *Ministry of Agriculture, 2009;*
- a diagnostic study of cashew sector cooperatives, *FIRCA, 2010;*
- a study of Côte d'Ivoire's cashew-processing strategy, *GIZ, 2009.*

The activities of certain NGOs spawned projects. Such was the case of *INADES-Formation*, which implemented:

- the project for the professional structuring of the cashew sector: a lasting contribution towards peace in the Denguélé, Zanzan, Savanes and Worodougou regions and in the Bandama Valley, 2004-2008;
- the project entitled small-scale shelling of cashew nuts: an opportunity for the peoples of the north, 2007-2010.

At present, the following projects are being implemented or prepared:

- project to improve cashew tree varieties / prospecting;
- programme to improve the quality of cashew nuts;
- project to manufacture and install small processing facilities / post-crisis emergency programme and resumption of activities by the industry's productive sector;
- project to improve information on cashew prices.

3.2 Opportunities for cooperation with ACi

The mechanisms put in place to steer the *ACi project* and the approach used to implement it facilitate cooperation with other projects and programmes.

The project's governance at the steering committee level includes key actors likely to be involved in any cashew development project in Côte d'Ivoire, namely the *Minister of Agriculture, INTERCAJOU, ARECA* and *FIRCA*. The approach used involves periodic meetings of the steering committee to determine what progress has been made and observations made by the sector's actors in the framework of studies or for the implementation of project activities. This ensures a high level of cooperation.

Vis-à-vis certain players in the field, namely *ANADER* and *INADES*-Formation, specific steps have been taken. *ANADER's* technical experts and members of cooperatives and NGOs have been trained to act as trainers in the areas where cashews are grown. Initiatives have been launched to take into account the processing facilities set up in the context of *INADES*-Formation projects, which will be wound up in 2010.

The *ACi* project could make a substantial contribution to the forthcoming preparatory work on a cashew development strategy in Côte d'Ivoire by the *Ministry of Agriculture*, which chairs the *ACi* steering committee.

Table 3.2.1: General summary of projects and programmes implemented in the sector

Projects and programmes	Main partners involved	Geographical scope	Principal activities	Implementation period
Workshop on the revitalisation of the cashew sector in Côte d'Ivoire	World Bank, Ministry of Agriculture, sector stakeholders	National	► Sector diagnostic assessment ► Recommended action	Completed
Project to improve cashew varieties / prospecting	INTERCAJOU, FIRCA, CNRA, ANADER	Zanzan, Bandama Valley, Savanes, Denguélé	► Prospecting ► Selection of varieties	Starting 2009
Study to review cashew-processing procedures and equipment and develop cashew by-products	FIRCA	National	Study	
Programme to improve the quality of cashews	INTERCAJOU, FIRCA, INADES-Formation, ACE		► Production of teaching aids ► Agricultural advice	Starting 2009
Diagnostic study of cashew cooperatives	INTERCAJOU, FIRCA, BFCD ;	The 11 cashew-growing areas	► Evaluation of the situation of cashew FPOs	March-April 2010
Training in negotiating for export cooperatives	FIRCA		Training	2010
Project to manufacture and install small processing facilities / post-crisis emergency programme to revive activities in the industrial production sector	UNDP/I2T	Four zones: Bouna, Séguéla, Korhogo, Bouaké	Installation of small cashew-processing facilities	2010
Project to develop bags for the cashew sector	FILTISAC SA, ARECA	National	Bags	2006-2008
Study of cashew sector risk analysis and traceability in Côte d'Ivoire Study on cashew nut processing	Ministry of Agriculture World Bank		Study	
Project for the professional structuring of the cashew sector: a lasting contribution towards peace	INADES-Formation	Denguélé, Zanzan, Savanes, Worodougou, Bandama Valley	► Training for growers and FPOs ► Marketing support ► Production of teaching material	2004-2008
Small-scale shelling of cashew nuts: an opportunity for people in the north			► Support for establishment of processing facilities ► Production of teaching material ► Certification ► Fair trade	2007-2010
Project to improve information on cashew nut prices			► Dissemination of market information ► Business networking	Starting November 2009
Study of the cashew-processing strategy in Côte d'Ivoire	GIZ, World Bank			

4 Conclusions and Recommendations

In conclusion, and in the absence of reliable and recent data on some of the links in the cashew value chain, this study recommends that reflection on the cashew sector's development in Côte d'Ivoire concentrate on compiling statistics and ensuring access to them.

The missing data must be collected from the various actors in the value chain at macro, meso and micro level. With regard to the actors governing the sector, the data required include agricultural *GDP* and national cashew revenues. The cost of growing cashews warrants in-depth study, as it provides an insight into the growers' level of income in the light of the farmgate price set by *INTERCAJOU* or actual farmgate prices.

With regard to growers, reliable data are lacking in particular on actual production and its distribution by cashew-growing area (number of growers, land under cultivation, yield, unsold produce), the varieties cultivated, farm structure, cashew grower income, the potential for increased production, the impact of production on improving grower well-being, and production seeping out to neighbouring countries.

Gaps in data with regard to processing include the exact number of small facilities (operational and non-operational), the potential for local processing, the quantities of nuts processed locally, the type of cooperation between small and large facilities, the number of jobs created and the income distributed in the form of wages.

With regard to marketing, few data are available on the flow of nuts to neighbouring countries, sales of nuts deferred to the next season, unsold production and operator turnover.

Table 3.2.2: Information gaps

Value chain stakeholders	Information gaps
Sector governance players	► Agricultural GDP ► National cashew revenues ► Price structure ► Unexported production from the previous year ► Production sold before the opening of the season ► Production seeping out to neighbouring countries (Ghana, Guinea, Mali, Burkina Faso)
Growers	► Number of cashew growers disaggregated by sex ► Land under cultivation (ha) per department ► Yield per ha by growing area ► Production quality (kernel out-turn ratio, or KOR) ► Post-harvest losses ► Structure of the cashew grower's farm/typology ► Production cost ► Hours of manpower ► Availability of manpower ► Average income per cashew-growing household ► Cashew revenues as a proportion of total income ► Varieties cultivated and their performance ► Average age of cashew trees ► Substitute and complementary crops: rate of substitution, level of complementarity ► Area occupied by perennial crops
Processing industry	► Capacities and volumes actually processed by small facilities ► Number of jobs created at facilities ► Organisation of large facilities in the field, cooperation with small facilities ► Quality of processed output
Traders	► List of pisteurs, cooperatives, industrialists, traders, independent buyers
Cross-cutting questions / financing	► Studies of interest rates and conditions applied by local banks ► External financing opportunities available from banks ► Strategies for fighting unfair trade practices

It is recommended that the following activities be carried out to obtain these data:

1. gender-based survey of cashew growers, accompanied by mapping of growing areas and typology of cashew-based production system; the data-collection methods should be clearly set out;
2. exhaustive survey of facilities and actors involved in farmgate collection in the various growing areas;
3. development of synergies between players, establishing a framework for dialogue and data sharing;
4. closer communication with security forces in order to reduce racketeering in growing areas;
5. development of capacity-building programmes for growers with regard to quality;
6. given that growers and their organisations are insufficiently informed about the quality of their products and that ignorance of quality standards at the time of purchase is a serious obstacle to price negotiation, a programme needs to be developed covering:
   - the formulation of quality standards and their dissemination among growers,
   - the widespread availability of varieties better able to meet both ecosystem and market requirements,
   - advocacy for the use of a unique bag by the sector in order to standardise the presentation of products leaving Côte d'Ivoire;
7. development of a programme to support the promotion of local cashew processing, covering inter alia:
   - the development of financing mechanisms for the purchase of raw material by small processing facilities,
   - the development of synergies thanks to cooperation between small facilities and large facilities,
   - the development of local expertise on production and the maintenance of processing facilities;
8. promotion of the local consumption of kernels (appetisers, oil, paste for sauces, etc.) through a programme serving to increase the local use of kernels and push up producer prices;
9. development of the use of by-products:
   - the shells can be used to produce energy in shelling facilities
   - the apples can be distilled into alcohol, turned into bags similar to jute bags, composted, etc.
   - the cashew nut shell liquid (CNSL) can be extracted for a niche market.

List of Abbreviations

ACA	African Cashew Alliance
ACE	Audit, Contrôle et Expertise (Audit Control and Expertise)
ACi	African Cashew initiative
ACi-CI	African Cashew initiative – Côte d'Ivoire
ACMC	L'Association des Communes du Mono-Couffo (association of communes of Mono-Couffo)
ADEFICA	Association pour le Développement de la Filière Cajou Africain (association for the development of the African cashew network)
AFD	Agence Française de Développement (French development agency)
AFRECO	Africaine d'Echanges Commerciaux (African trade company)
AGOA	African Growth and Opportunity Act
AICI	Anacarde Industrie (Ivorian cashew processing company)
AISA	Anacarde Industrie Société Anonyme (Ivorian cashew processing company)
ANADER	Agence Nationale d`Appui au Développement Rural (national agency for support to rural development)
ANOPACI	Agence Nationale des Organisations Professionnelles Agricoles de Côte d´Ivoire (national association of agricultural trade organisations of Côte d'Ivoire)
APACI	Association Nationale des Producteurs d´Anacarde de Côte d´Ivoire (Côte d'Ivoire national association of cashew growers)
APEXI-CI	Association pour la Promotion des Exportations de Côte d'Ivoire (association for the promotion of Côte d'Ivoire's exports)
ARECA	Autorité de Régulation du Coton et de l'Anacarde (cotton and cashew regulatory agency)
BACI	Banque Atlantique Côte d'Ivoire (Ivorian bank)
BFA	Banque pour le Financement de l'Agriculture (agricultural finance bank)
BFCD	Bureau de Formation et de Conseils en Développement (office for training and consulting for development)
BNI	Banque Nationale d'Investissement (National Investment Bank)
CAISTAB	Caisse de Stabilisation (stabilisation fund)
CEPICI	Centre de Promotion des Investissements en CI (centre for the promotion of investments in Côte D'Ivoire)
CFAF	Communauté Financière Africaine Franc (African Financial Community – CFA – Franc)
CIRES	Centre Ivoirien de Recherches Economiques et Sociales (Ivorian centre for economic and social research)
CNRA	Centre National de Recherche Agronomique (National Centre for Agronomics Research)
CODINORM	Cote d´Ivoire Normalisation (Côte d'Ivoire national standards organisation)
COOPEX	Coopérative d'Exportation (export cooperative)
COOPRAMOVIT	Unité de la Coopérative des Producteurs d´Anacarde, de Mangue, d´Orange et de Viviers (cooperative of cashew, mango, orange and food crop growers)
FAO	Food and Agriculture Organization of the United Nations
FENOPACI	Fédération Nationale des Organisations Professionnelles Paysannes Agricoles Productrices d´Anacarde de Cote d´Ivoire (national federation of professional cashew-growing organisations in Côte d'Ivoire)
FILTISAC	Filature Tissage Sacs (packaging manufacturer)
FIRCA	Le Fond Interprofessionnel de la Recherche et du Conseil Agricole (interprofessional fund for agricultural research and consultancy)
FOB	free on board

FPO	farm products organisation
GDP	gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
ha	hectares
INADES-formation	(international non-governmental organisation)
INS	Institut National de la Statistique et des Etudes Economiques (national statistics institute)
INTERCAJOU	Interprofession de la Filière Cajou (cashew sector intertrade association)
kg	kilogram
I2T	Institut de Technologie Tropicale (I2T Tropical Technology Institute)
lb	pound
NGO	non-governmental organisation
OFED	Organisation pour la Femme et le Developpement (Organisation for Women and Development)
OTIFA	Organe de Transition de l'Interprofession de la Filière Anacarde (cashew sector intertrade association transitional body)
PROMEXA	Association pour la Promotion des Exportations Agricoles Traditionnelles de Cote d´Ivoire (Côte d'Ivoire's non-traditional agricultural export promotion association)
PRSP	Poverty Reduction Strategy Paper
RGPH	Recensement Général de la Population et de l´Habitat (general population and housing census)
RONGEAD	Réseau d'ONG Européennes sur l'Agroalimentaire, le Commerce, l'Environnement et le Développement (European NGO Network on Food, Trade, Environment and Development)
ROPPA	Réseau des Organisations Paysannes et des Producteurs Agricoles de l'Afrique de l'Ouest (Network of Farmers' and Agricultural Producers' Organisations of West Africa)
SATMACI	Société d'Assistance Technique et de Modernisation de l'Agriculture en Côte d'Ivoire (company for technical assistance and the modernisation of agriculture in Côte d'Ivoire)
SITA	Société Ivoirienne de Traitement d'Anacardes (Ivorian cashew-processing company)
SODEFOR	Société de Développement des Forêts (forest development company)
TNS	TechnoServe
SME/SMI	small and medium-sized enterprises / small and medium-sized industries
SODIRO	Société pour le Développement Industriel de la Région d'Odienné (Odienné regional industrial development company)
SOVANORD	Société de Valorisation de l'Anacarde du Nord (company for extracting added value from northern cashews)
UNDP	United Nations Development Programme
URESCO-CI	Union Régionale des Entreprises Coopératives de la Savane de CI (regional union of cooperative enterprises in the Savane region of Côte d'Ivoire)

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