

Analysis of the Benin Cashew Sector Value Chain

African Cashew initiative



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Postfach 5180, 65726 Eschborn, Germany
T +49 61 96 79-1438
F +49 61 96 79-80 1438
E Ulrich.Sabel-Koschella@giz.de
I www.giz.de

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Author:

TANDJIEKPON André Mahoutin

Responsible editor:

Peter Keller (Director African Cashew initiative)
African Cashew initiative (ACi)
32, Nortei Ababio Street
Airport Residential Area
Accra, GHANA
T + 233 302 77 41 62
F + 233 302 77 13 63

Contact:

cashew@giz.de

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February 2010

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Summary

This analysis of the cashew sector has been carried out for the *BMGF*-funded *ACi* project, a federative project implemented in five African countries producing and exporting cashew nuts with little value added. The launch of a project of this scope requires us to take stock of what is known about production, processing, marketing and export in the participating countries. The aim of this analysis is therefore to enhance understanding of the cashew value chain in Benin.

The cashew value chain represents an enormous economic, social and environmental opportunity for Benin. The cashew sector has gained in importance in recent years, especially since the late 1990s. Cashew plantations have gone from covering an estimated surface area of 10,000 ha at the time to over 190,000 ha nationwide today, with more than 75% of plantations being under 10 years old. Similarly, exports of cashew products rose from 10,000 tonnes in 1996 to 116,398 tonnes in 2008. The local, regional and national economies have used the substantial revenues obtained thanks to the sector's health – cashews account for 8% of national export revenues and 24.87% of agricultural export revenues – to stabilise the trade balance. The sector's basic characteristic is that income from cashew products is derived chiefly from exports of raw nuts with no added value, making processing the weakest link in the cashew value chain.

There have been some success stories, and the potential for developing the cashew sector in Benin is truly favourable, but a great many difficulties remain to be overcome before national production is competitive and becomes a source of greater revenues for the various stakeholders. Those difficulties include poorly functioning producer and stakeholder organisations, ageing plant material, problems of access to cashew-specific funding and inputs, low local processing capacity, the trend towards lower product prices, low plantation productivity, poor control of market access rules, few incentives to invest in processing, the lack of reliable statistics, the absence of appropriate credit and the exporters' stranglehold on the market.

These difficulties or constraints are the major challenges facing the *ACi* federative project. The project will be implemented in partnership with *GIZ*, which coordinates all activities, *TechnoServe*, which is developing processing-related activities, and *FairMatchSupport*, which is in charge of market access activities. The *ACA* promotes linkages between cashew growers, processors and dealers through the transregional exchange of experience.



1 Introduction

1.1 Purpose of the study

The main reason for analysing the planned cashew value chain in the countries participating in the *ACi* project is to synthesise and systematically analyse all the information available on cashews in order to enhance understanding of the activities carried out in the sector, to gauge their importance for the national economy and to measure their impact on poverty reduction. The aim is thus to build on the reference data available at the outset of the project in order to ensure the various development structures do not duplicate their activities and to augment synergy and effectiveness. Specifically, the study aims to:

- ▶ analyse the cashew value chain at national level, focusing on production, processing and trade of cashew nuts and their derivatives
- ▶ use the analysis of the cashew value chain to document ongoing activities or actions and to bring to light new priority activities.

1.2 Method

In Benin, the study started with training to ensure uniform understanding and to introduce the forms of presenting the information collected and the technical aids and tools to be used in the field. After that training, which took place in Accra (Ghana) in August 2009, the study was conducted in Benin by:

- ▶ collecting the documents available on the subject from public and private institutions (research institutes, universities, development projects and programmes, ministry technical departments, processing and trading units, grower organisations at various levels, etc.)
- ▶ reviewing and consolidating existing information relevant to the study
- ▶ collecting additional information from resource persons and stakeholders involved in the cashew sector
- ▶ analysing, weighing and collating the data obtained (document review and interviews)
- ▶ drawing up the report, step by step, using the basic study outline
- ▶ finalising the report in the light of the observations made.

1.3 Brief description of the *ACi* project and activities in Benin

The *ACi* project aims to bring about lasting improvement in the competitiveness of African cashew nut smallholders and to reduce poverty in Benin, Burkina Faso, Côte d'Ivoire, Ghana and Mozambique. It is a federative project targeting the following development objectives:

- ▶ a sustainable increase in the profitability, productivity and quality of cashew production
- ▶ a sustainable increase in the quantity and quality of local cashew processing
- ▶ distribution of and recognition for the high quality of African cashew nuts in the global marketplace
- ▶ improving incomes from cashew production and local processing
- ▶ learning and innovation.

Four organisations are involved in the project's implementation: *GLZ*, which coordinates all activities, the NGOs *TechnoServe* and *FairMatchSupport*, and the *ACA*, which promotes linkages between cashew growers, processors and dealers through the transregional exchange of experience.

After the project's official launch on 15 to 18 April 2009 in Accra (Ghana), activities in Benin started with a kickoff workshop presenting the project to the various players in the cashew sector, on 20 and 21 July 2009 in Cotonou. The workshop enabled growers, processors, economic operators and technical and financial partners to learn about the project's objectives, to highlight the specific challenges in Benin which the *ACi* could help to overcome, to define a joint standard planning frame that took into account national strategies, and to identify the members of the programme's national steering body. Following the announcement in February 2009 that the project would be funded by *BMGF*, steps were immediately taken in Benin to lay the groundwork for meeting the project's objectives (information, awareness-raising, review of national strategies linked to the cashew value chain and their indicators, communication to mobilise the stakeholders, etc.) and training provided to growers and processors.



1.4 Brief description of cashew production and processing

The cashew sector represents a huge agricultural export opportunity for Benin, together with cotton. Indeed, exports of raw nuts rose from 36,487 tonnes in 2001 to 116,398 tonnes in 2008 (*PAC/DCM/SESP, 2009*). The sector accounted for 13.5% of Benin's exports in 2008 and 1.7% of traffic at *PAC*. Cotton, which had always been Benin's top agricultural export product, was replaced in 2008 by cashews, which outpaced all agricultural products exported by Benin during that year. The estimated *FOB monetary value* of those exports was 36.47 billion CFAF. According to the *MEF (2008)*, in 2008 the *FOB value* of goods exported by Benin rose by 9.3% in comparison to 2007, increasing from 419.5 billion CFAF in 2007 to 458.3 billion CFAF in 2008. According to the same source, the change is the result of growth in exports of cashew nuts (+30.7%) and cotton fibre (+16.5%). Cashews represented 8% of the total value of exports in 2008, 7% of agricultural GDP and 3% of national GDP. The production of raw cashew nuts, in 8 of the country's 12 departments, occupies about 200,000 planters (*Matthess et al. 2008*) work-

ing a total of 190,000 ha in an agroforestry land-use system (*FAOSTAT reported by FBSPL (2008)*) that also produces annual crops such as cotton, manioc, maize, groundnuts and sorghum. Most of the crops are grown without chemical inputs.

The cashew processing sector is very stunted, accounting for less than an estimated 5% of national production. At present it comprises only one industrial processing unit with a capacity of more than 1,000 tonnes/year, whose output is exported to the European market (*Afonkantan Benin Cashew factory* south of Parakou), and small units with a lower capacity of 150 tonnes/year, whose output is sold on local and regional markets (*GK5, AFETRACA, ZANCLAN, SONGHAI Centre and GNICOBOU units*). Many processing units that existed in the past shut down for reasons of market availability, the poor quality of the processed goods, lack of suitable technology, inefficient resource management and the absence of suitable financial support (*SEPT, CADJOBE, AGRICAL/Parakou units, etc.*).

¹ FOB value estimated on the basis of an export volume of 116,398 tonnes in 2008 at 700 US\$/tonne with an exchange rate throughout 2008 of 1 US\$ = 4,478.053 CFAF (BCEAO, 2008).



Table 1.4.1: Changes in PAC cargo traffic (1999–2008, in thousands of MT)

Sources	1999*	2000*	2001	2002	2003	2004	2005	2006	2007**	2008**
Total imports	2,236.2	2,674.8	2,929.3	3,007.7	3,808.9	3,520.6	4,556.8	4854.8	5,528.0	6,135.1
Total exports	360.4	398.7	380.5	462.2	469.4	448.2	596.1	514.3	624.4	863.3
Cashew nuts	0.0	0.0	36.5	44.8	48.4	65.8	66.2	101.7	88.2	116.4
Cotton, cotton seeds	264.5	273.3	198.7	182.8	202.2	144.2	233.0	103.1	124.7	113.8
Other agricultural and forest products	0.0	3.1	52.3	88.6	95.5	90.4	81.4	117.8	98.1	83.0
Other products	96.0	122.3	93.1	146.0	123.4	147.9	215.4	191.7	313.4	550.1
Total imports and exports	2,596.7	3,073.5	3,309.9	3,469.9	4,278.3	3,968.8	5,152.9	5,369.1	6,152.4	6,998.4

* 1999 & 2000: Cashew and karite nuts included in other products.
** The 2007 and 2008 volumes include processed Afonkantan products shipped to the Netherlands.

Source: PAC, 2009

Table 1.4.2: Importance of the cashew value chain for the national economy

Indicators			with cashews accounting for ...	Sources
Economic HDI (global ranking)	163 rd out of 177 countries		-	(UNDP)
GDP (in US\$ + global ranking)	5,4 billion US\$		3% of GDP	<ul style="list-style-type: none"> World Bank, 2007 (agricultural GDP) Matthess et al, 2008
Agricultural GDP	1,73 billion US\$		7% of agricultural GDP	
Agricultural GDP / national GDP	32%			
Export structure and trade balance Benin had a trade balance deficit of 300 billion CFAF (667 million US\$) in 2008 compared to 232.6 billion CFAF (517 million US\$) in 2007. The import/export cover rate fell from 64.3% in 2007 to 60.4% in 2008.			<ul style="list-style-type: none"> 8% of national export revenues 24.87% of agricultural export revenues 	<ul style="list-style-type: none"> MEF/CNPE, 2008 PAC, 2009 Calculated on the basis of agricultural revenue² = 32% of exports
Average annual total volume of cashews produced			116,398 tonnes (incl. cashews from Nigeria, Togo and Burkina Faso, estimated at 15% by the players, i.e. 17,460 tonnes in 2008)	<ul style="list-style-type: none"> PAC, 2009 Data collected locally
Area planted (ha)	2,335,151		2,335,151	Calculated using existing data
Poverty index <ul style="list-style-type: none"> Monetary poverty index: 33.3% HPI: 48,9% 2 out of 5 households live in poverty (INSAE, 2002) 	Urban	33% (2000)	No information on % of cashew farmers believed to live below the poverty threshold ³	MEF/GPRS, 2007, Benin PRSP 2003–2005 MEF/CNPE, 2008
	Rural	23% (2000)		
Population 6 769 914 (recensement 2002) 8 497 828 (prévision 2009)	Urban	3,284,119	2.5–3% of the population is involved in / depends on cashew production	INSAE, 2002 INSAE, 2008 Calculated using existing data
	Rural	3,485,795		

² The agricultural sector comprises agriculture, animal husbandry, fisheries and forestry.

³ Sociologically, every Beninese hopes to rise above the poverty threshold.



Table 1.4.3: Information on growers

Information on growers		Sources
Total number of cashew growers	<ul style="list-style-type: none"> ▶ 200,000 (national estimate) ▶ More plantations are owned by men (95%) than by women (5%) (national sample + survey in Atacora/Donga) 	<ul style="list-style-type: none"> ▶ MAEP, 2008 ; ▶ Tandjiékpon et al, 2008
Average household size [in number of persons]	National: 5.59 Urban: 5.12 Rural: 5.95	INSAE, 2002
Farmgate price (grower price) [US\$/tonne]	500 US\$/ tonne (2007-2008)* * 1 US\$ = 4,478.053 CFAF	Data collected from the players DGCE, 2008
Average household income of cashew growers [in US\$]	247.40 US\$	Calculated on the basis of 98,938 tonnes produced locally by 200,000 estimated growers in 2008 at an average price of 500 US\$/tonne (grower price).
Cashew revenues in terms of total revenue [as a % of total revenue]	24.87%	Cashew accounts for 24.87 % of agricultural export revenue
Other crops associated with cashew cultivation	Cotton, yams, cassava, maize, groundnuts, sorghum, chilli peppers	MAEP, 2007 MAEP, 2008 MEF/CNPE, 2008
Other food and cash crops cultivated [average surface area / crop (ha)]	> 1: cotton < 1: yams, cassava, maize, sorghum 0 and 0.5: groundnuts, chilli peppers	MAEP, 2007 MAEP, 2008
Other sources of income	<ul style="list-style-type: none"> ▶ Cashew apples ▶ Residue from clearing and pruning used for energy 	
Harvest period	January to April (peaking in February)	Tandjiékpon et al, 2008 MAEP, 2008
Number of cashew trees [number per ha]	> 100 to 200: common practice < 100: few	Tandjiékpon et al, 2008
Productivity per cashew tree [in kg per ha] and US\$	2.5 kg/tree 1.25 US\$/tree (grower price)	ACA, 2006 + Calculation based on existing data
Average age of cashew trees [in years]	78% of cashew trees were less than 10 years old in 2008 (survey in north-west Benin). Similar trend nationwide. Most plantations were planted after the boom in the late 1990s	Tandjiékpon et al, 2008





Information on growers		Sources
Degree of cashew certification	<p>Beninese standards (NB):</p> <ul style="list-style-type: none"> ▶ NB 01.03.002 on specifications and analyses of cashew nuts and kernels ▶ NB 01.11.015 on aflatoxin B1 dosage and B1, B2, G1 and G2 totals in cereals, nuts and derivatives ▶ NB 01.11.002 on labelling of pre-packaged food products ▶ NB 01.11.003 on analysis of pesticide residues ▶ NB 01.03.004 on roasted cashew kernels ▶ NB ISO 6633 on fruits, vegetables and derivatives ▶ NB 01.03.005 and NB 01.11.017 on uncertified cashew specifications and analysis methods <p>Raw nut: KOR applied by the buyer to determine the price for all exported products (100%) Kernel: HACCP for exported products (Europe)</p>	<p>Information from processors and buyers</p> <p>CEBENOR (2007)</p>
Inputs used	<p>Very few chemical inputs (manure, pesticides) are used to grow cashews in Benin. The few cases observed are individual initiatives taken by growers either to control pests affecting a few trees or to make up for insufficiencies at the plantation. In rare cases, phytosanitary treatment using insecticides and fungicides. The trees benefit from the after-effects of inputs applied to associated crops at a young age (cotton).</p>	<p>Various MAEP reports</p>
Land available to expand cashew plantations	<p>Land pressure in southern and central Benin and availability in the north.</p> <p>Population density/sq km in cashew-growing areas:</p> <ul style="list-style-type: none"> ▶ south-centre: 38-125 inhabitants/sq km ▶ north: 20-31 inhabitants/sq km 	<p>INSAE, 2002</p>

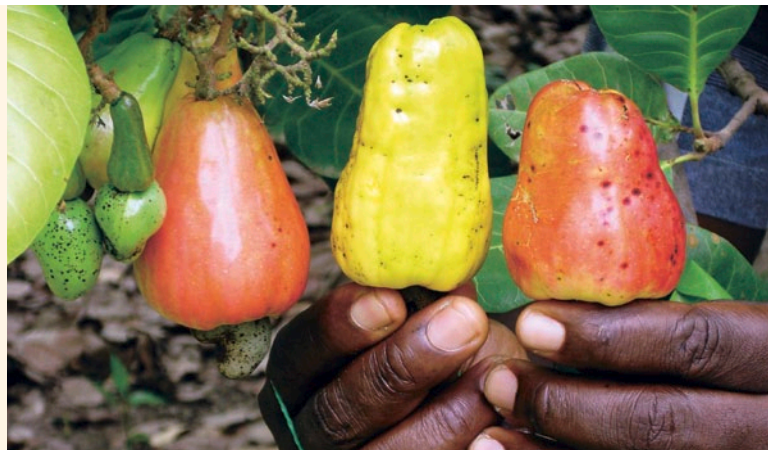


Table 1.4.4: Information on the processing industry

Information on the processing industry			Sources	
Processing capacity of all processing industries in Benin	Currently used [In tonnes/year]	1,800 tonnes	FBSPL (2008) www.cashewinfo.com (Cashew Handbook, 2008) MAEP, 2008 Adex, 2007 + Data collected from processors and stakeholders	
	Potential	4,000 tonnes/year (with the units that shut down)		
Processing units	Large over 1,000 MT	Afonkantan Benin Cashew (ABC) Tchaourou, northern Benin		
	Average exceeding 1,000 MT			
	Small 500 MT: Operational:	<ul style="list-style-type: none"> ▶ Groupe KAKE- 5 (Savalou) ▶ EMS (Glazoué) ▶ AFETRACA, Cotonou (Sud-Bénin) ▶ ZANCLAN, Cotonou (Sud-Bénin) ▶ Centre SONGHAI Porto-Novo (Sud-Bénin) 		
Non-operational:	<ul style="list-style-type: none"> ▶ Kadjobbé (Savalou) ▶ La LUMIERE (Savalou -Tchetti) ▶ ORI SARL (Bantè) ▶ NAD and CO (Tchaourou) 			
Processing capacity	Currently used	1,800 tonnes		<ul style="list-style-type: none"> ▶ FBSPL (2008) ▶ www.cashewinfo.com (Cashew Handbook, 2008) ▶ Information from processors
Technology used	Indian technology ⁴ Italian technology Local manufacture (adaptation)			Information from processors
Employment: about 220 jobs per year ⁵		permanent	seasonal	
	Men	44		
	Women ⁶	176		
Service provided to the grower	Training in quality approach Rural credit Advice		Information from processors	
Market	White kernels (Europe and Nigeria) Roasted kernels (Local and regional)			
Annual turnover	2,868,716 US\$ (calculated on the basis of 1,800 tonnes of raw nuts producing an average 20% kernels at a price of 5.44 euros/kg of w320 kernels, the benchmark grade)		<ul style="list-style-type: none"> ▶ FBSPL (2008) ▶ www.cashewinfo.com (Cashew Handbook, 2008): for processed volume ▶ "The Hindu" newspaper of 14/02/09 for benchmark price 	
Ownership structure and source of financing / ownership	Private properties for all processing promoters. Financing is obtained for the most part from the processors. However, the Afonkantan unit benefited from the GIZ Private Public Partnership Facility. Others benefited from the ADEx and PASP cost-sharing support mechanism.		Information gathering	
Assistance received from:	The promoters benefited from various facilities:	<ul style="list-style-type: none"> ▶ Tax exemption for imported equipment ▶ Duty-free zone conditions ▶ Training 	Information gathering	

⁴ The technology used comprises: calibrators for sorting raw nuts into four categories; steam embrittlement; nut-shelling devices (hand or foot operated); drying chambers for drying shelled kernels before blanching; Italian mechanical peeling conveyors (pre-peeling followed by hand peeling); weighing devices (sorting); vacuum and carton packaging devices; warehouse by grade.

⁵ The processing data obtained indicate that it takes 0.03817 men/working day to process one kg of nuts. The 1,800 tonnes processed annually would therefore require 68,706 men/working day for 313 working days in the year (except Sunday).

⁶ Women account for at least 80% of the staff of processing units.

Table 1.4.5: Information on commercial companies and activities

Information on commercial companies and activities			Sources	
Number of companies in the country	Companies present in 2007 and 2008 (most based in Cotonou)	18	Information gathering from the stakeholders; DGDDI, 2008; ADEx, 2007	
	Companies working in the sector occasionally	25		
Estimated annual turnover [in million US\$]	1023,4 4 million US\$ ⁷		MEF/CNPE, 2008	
Annual turnover relating to cashews [in million US\$]	81,88 million US\$ ⁸		Calculated on the basis of data collected; MEF/CNPE, 2008	
Estimated annual volume traded [in tonnes]	Raw nuts	116,398 tonnes	PAC, 2009; FBSPL (2008); www.cashewinfo.com	
	Kernels	360 tonnes ⁹		
Target market(s)	Raw nuts	India	70%	ADEx, 2007
		Vietnam Pakistan Singapore }	25%	
		Local processing	5%	
	Kernels (processed product)	100% of Afonkantan output is shipped to the Netherlands (white kernels). About 70% of the output of small-scale and semi-industrial units is sold on the national market, 20% in Western and Central Africa and 5% informally in Europe and the United States (GK5 and BOULAMB).		DGDDI, 2008 and information gathering ADEx, 2007 Information gathering and firsthand accounts

⁷ The total value of 2008 exports equals 458,3 billion CFAF.

⁸ Cashews account for 8% of export value.

⁹ Representing 20% of the total 1,800 tonnes processed by Benin.



Table 1.4.6: Value chain collective action and public support (stakeholder associations or organisations)

The various kinds of organisations involved in cashew activities and their size
<ol style="list-style-type: none"> 1. FENAPAB, which has four main members¹⁰: <ul style="list-style-type: none"> ▶ Atacora and Donga URPA (north-western Benin), with 21,701 growers in 308 cooperatives out of a total of 35,700 growers surveyed (2008 survey¹¹) ▶ Borgou and Alibori URPA (north-eastern Benin)¹² ▶ Zou and Colline URPA (central Benin), with 56,516 growers in 300 cooperatives ▶ Kétou UCPA (eastern Benin), with 481 growers in 28 cooperatives. 2. ADEx. World Bank and EU financing. 3. GEPT 4. ANAPAT
Cashew-related projects, programmes and initiatives
The various organisations and/or initiatives that have existed in the country, specifying the donors/financial partners
<ol style="list-style-type: none"> 1.1. Institutions/organisations <ul style="list-style-type: none"> ▶ INRAB, financed by GIZ, DANIDA ▶ Plant Protection Service (DAGRI) ▶ DPQC ▶ CeRPA ▶ SONAPRA ▶ FSA/UAC ▶ Faculty of Agronomy, UP ▶ Fund for the Development of Occupational Training and Apprenticeship (FODEFCA) ▶ IITA-Benin ▶ SNV ▶ CNA 2. Projects, programmes and initiatives <ol style="list-style-type: none"> 2.1 Current projects <ul style="list-style-type: none"> ▶ ProCGRN: GIZ funding ▶ ACi: BMGF and BMZ funding ▶ PADS/ component for private sector agriculture: DANIDA funding ▶ PADFA: funding – Benin budget support ▶ PADEX 2.2 Completed projects¹³ <ul style="list-style-type: none"> ▶ PADSE, 2000–2005: AFD funding. Used to promote cashew development in Collines, Borgou and to a lesser extent Atacora and Donga departments (guidance, planting, research, organisation, marketing) ▶ PAMRAD, ended 2008: Cashew promotion and development in Atacora and Donga (marketing, training and survey of potential); BTC funding ▶ Project to restore Bassila's forest resources (PRRF-Bassila: ended 2004). Support for planting in Bassila commune; GIZ funding ▶ Project for forest massif management in Agoua and Agramarou (PAMF, ended 2007). Support to rehabilitate former State plantations in Bantè and Tchaourou communes; African Development Bank funding ▶ Joint technical assistance project for developing countries and other African countries (ended 2003); support for the formulation of market access strategies; ITC/CIC funding ▶ PASP, ended 2009; support to promote cashew nuts (processing, market, training, etc.); World Bank and EU funding

¹⁰ Cashews are grown not only by these four members but also elsewhere by a non-negligible number of growers. Each member has a significant number of growers who function outside the cooperatives and therefore do not appear in the statistics.

¹¹ Atacora and Donga (30.7% of the territory) are the only parts of Benin in which a systematic survey was made of potential cashew production.

¹² There are no reliable data for the Borgou and Alibori URPA, but the two departments have a large pool of growers whose number is estimated at between 50,000 and 60,000.

¹³ The projects considered cashews inter alia as a means of diversifying activities.

Table 1.4.7: Information on cashew value chain policy

Information on policy		Sources
Cashew sector policy	<ul style="list-style-type: none"> ► Strategy to reinforce the cashew system: reference document 2007-2011 ► PSRSA, 2006-2011: cashews are one of the Government's 12 priority systems 	MAEP, 2007 ; MAEP/PSRSA, 2007
Policy objective	Enhance cashew sector organisational and economic efficiency	MAEP/PSRSA, 2007
Price regulation	<ul style="list-style-type: none"> ► Set the rural floor price (minimum) under the arbitration of the Minister of Trade ► Establish the schedule for the sale of raw nuts by joint decision of the Ministers of Agriculture and Trade 	Information gathering
Export taxes on raw nuts [%]	Only road tax for 0.8%	Benin Finance Act
Export taxes on kernels [%]	Only road tax for 0.8%	Benin Finance Act
Raw nut export and import taxes	Nuts enter the country in uncontrolled amounts via the porous borders with Nigeria, Togo and Burkina Faso. They are not officially registered at customs points because they benefit under the clauses for the free circulation of goods between ECOWAS countries. Undocumented payments are nonetheless made to uniformed agents (customs officials, police, gendarmes, etc.) depending on the size of the shipment	Information gathering from the stakeholders
Tax-related investment facilities (or similar measures)	Duty relief on the import of processing equipment for agricultural products.	Finance Act 2007, 2008
Country label	None	
Exchange rate policy	Fixed parity with euro, CFAF zone	MFE, 2008
Exchange rate stability (last decade)	Exchange rate 1 € = 655.957 CFAF 100 CFAF = 1 French franc (before the euro); 1 US\$ = 470 CFAF (September 2009)	MFE, 2008
Trade licences and preferences Specify membership and relevance to cashew trade	Agreements: <ul style="list-style-type: none"> ► ECOWAS free-trade zone ► WAEMU, monetary zone ► African, Caribbean and Pacific Group of States/EU ► WTO ► AGOA (easier access to the American market) 	







2 Analysis of the Value Chain

2.1 Introduction to the history of cashew production in Benin

Benin's cashew sector is characterised by a local processing sector that can handle a mere fraction of local raw nut production. Beninese cashews continue to have a reputation for high quality and are considered second in West Africa only to those from Guinea Bissau (*ACA*). The pace of sector development has quickened, particularly since the late 1990s, when the price of nuts rose on the international market, initial signs of trouble in the cotton sector pointed to the need to diversify agricultural revenues and the devaluation of the *CFAF* made locally produced nuts more attractive. Cashew plantations are owned chiefly by men, as women have difficulty obtaining access to land ownership. They also tend to be owned by natives rather than non-natives; the latter are as a rule not authorised to plant perennial crops like cashews on land they exploit for agricultural or agriculture-related activities.

In 1990, only 10,000 ha of land were covered with cashew plantations (*Lacroix, 2003*); by 2008 that figure had risen to an estimated 190,000 ha (*FAOSTAT*, reported by www.caswewinfo.com). Port data indicate an export volume of 116,398 tonnes in 2008 (*PAC, 2009*), an estimated 15% of which came from Nigeria, Togo and Burkina Faso (stakeholder survey). National production in 2008 therefore probably hovered around 98,938 tonnes. Since it is hard to obtain inorganic fertiliser (which is essential for a high-quality bountiful yield) and specific pesticides, the plantations' real yield is very low, between 300 and 500 kg/ha of raw nuts. This low yield, usually the result of poor cultivation (high planting density, i.e. > 100 trees/ha, irregular maintenance, bad seeds, poor harvest and post-harvest practices, etc.) is being corrected by the introduction, through training and the production of appropriate extension aids, by improved techniques for starting and managing plantations and the use of improved seeds. By the same token, the use of appropriate fertilisers and pesticides could help raise the level of yields in terms of both quantity and quality.

At each marketing campaign, the grower's floor price for raw nuts is fixed by the Government after multiparty negotiations (growers, buyers, exporters, state structures). In 2008, for example, the floor price was 200 CFAF/kg. It has never, however, been paid by the buyers since the mechanism was introduced in 2000. Most of the nuts are usually bought from the growers at a price that is 25% lower, often because growers sign pre-harvest purchase agreements (in exchange for loans from buyers, because they need access to financial means in the face of various social problems, etc.). Generally speaking, farmgate prices fluctuate widely and depend on the world market price,

changes in the dollar-CFAF exchange rate, redefined quality standards, the demand for nuts, and so on. Trade is the most visible part of the cashew value chain and concerns mainly the raw nuts exported to India, Viet Nam, Singapore, Malaysia, Indonesia, Sri Lanka, Thailand, China, etc. It occupies many stakeholders – agents, local dealers, transporters, customs officials, financial institutions, public quality and standard control agents, international exporters – for about six months of the year. International exporters are limited in number and can heavily influence the local market in terms of price (*AGRO BENIN, SAKSON, GK5, NOMAS, OLAM(COPA), SWISS BENIN, SAIPRITI, Btc, RALS COMMODITIES, NOOR Sàrl* account for 75-80% of the market). As mentioned earlier, the trade is strongly influenced by nuts coming into the country from neighbouring countries – around 17,500 tonnes in 2008 according to information provided by dealers. At *PAC*, dealers consider that the FOB prices obtained by exporters are more attractive than those obtained in neighbouring ports because of the acknowledged quality of Beninese nuts. It is that quality that prompts the flows observed, the percentage of which varies from one harvest season to another.

Total capacity for processing raw cashew nuts is 1,800 tonnes annually (less than 3% of national production), mostly by *Afonkantan Benin Cashew* (1,000-1,500 tonnes/year). Processing remains the sector's poor relation; it is reliant on private initiatives and receives scant support from financial institutions and partners (*GIZ, DANIDA, SNV, BMGF*). Export taxes on raw cashew nuts, commonly referred to as road taxes, amount to 0.8% of the statistical customs volume and are a function of the volume exported. Otherwise, no export tax is officially levied on agricultural and agriculture-related products at customs posts, in accordance with Benin's financial laws.

While cashew nuts are harvested in the cashew plantations, other products, such as cashew apples, estimated at more than 600,000 tonnes/year (*Dossou et al., 2008, Tandjièkpon et al., 2009*) are left to rot for want of the possibility to use them. The apples could be transformed into biofuel, juice, jam and edible alcohol. Processing by-products such as shells are used by the factories to generate the energy needed to blanch processed kernels. Most of these by-products remain unused, however, for want of an alternative. Other processing waste is used as animal fodder but not in such a way as to form an organised and profitable value chain for the units concerned. In the cashew sector, several technical and financial partners, working through projects, programmes, NGOs and technical structures, have provided organised and non-organised growers with direct and indirect support for production, processing or marketing. This varied involvement has enabled the cashew sector to contribute 3% to the national economy and 7% to the agricultural economy, creating job opportunities with regard to inputs, production, post-harvest activities, transportation, processing and marketing (*Matthess et al., 2008*).

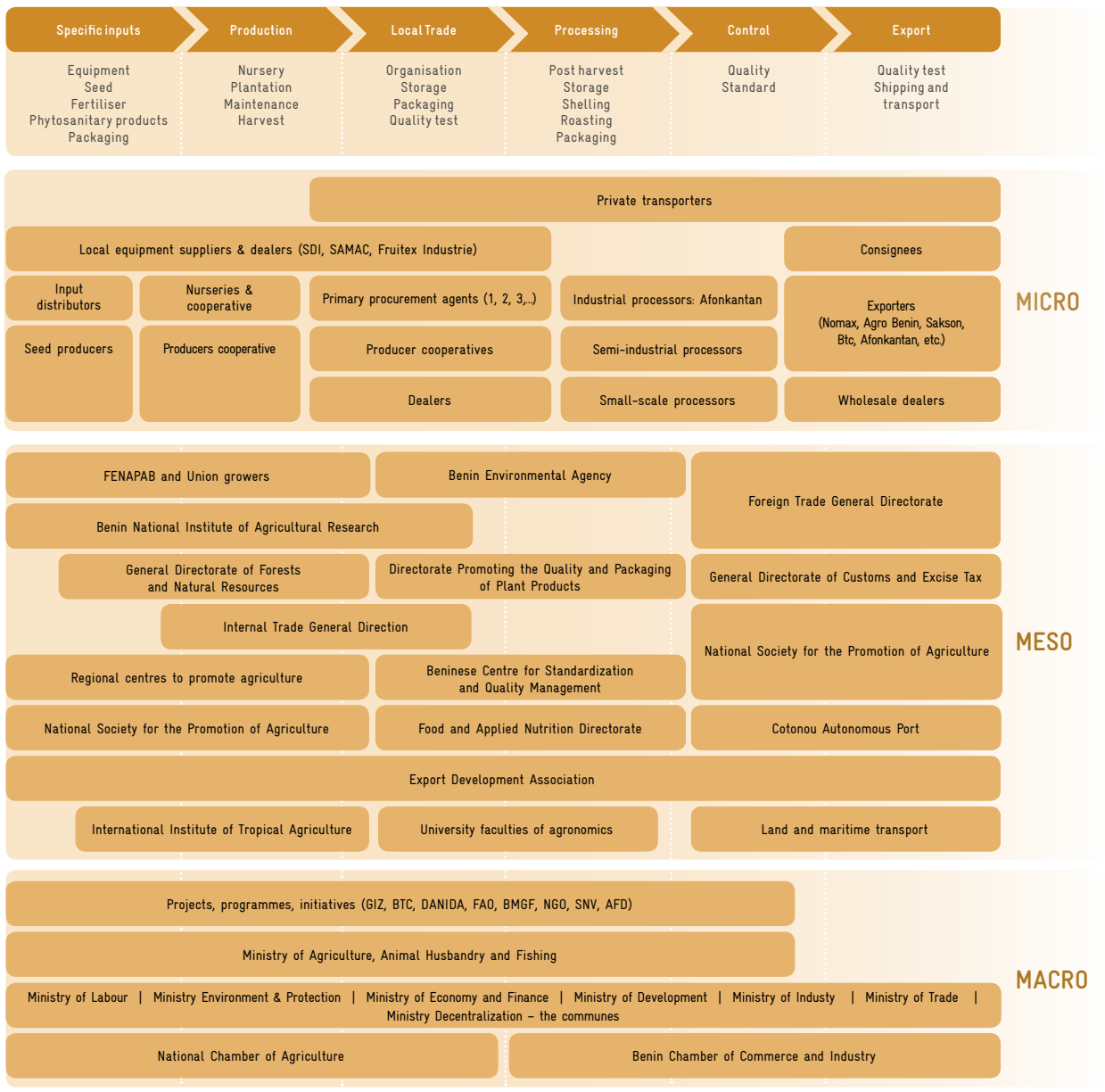
2.2 Illustration of the value chain and the marketing process

At the micro level, suppliers of chemical inputs, equipment and packaging are more specialised in products relating to cotton and are for the most part based in the country's major urban centres (Cotonou, Parakou, Porto Novo). The nurseries provide seedlings, which are made available to growers for their plantations. The growers may work within an association (cooperative) or not, but each owns his plantation. Dealers and agents are important players who drive the marketing system, working with individual growers or cooperatives of growers. Processors handle some of the raw kernels sold on the local market or exported. Exports are organised by several

companies, chiefly *AGRO BENIN*, *SAKSON*, *GK5*, *NOMAS*, *OLAM(COPA)*, *SWISS BENIN*, *SAIPRITI*, *Btc*, *RALS COMMODITIES* and *NOOR Sàrl*. They have connections to major dealers who move the product to Cotonou for loading at the port.

At the meso level, the players are for the most part state actors and are usually involved in supervision, research and various forms of support. They include the *MAEP's INRAB*, *DPQC*, *CeRPA*, *SONAPRA* and *DANA*, the *Environment Ministry's Environmental Agency* and the *DGFRN*, as well as the *Trade Ministry's DGCE* and *DGEI*. The field work of these various state and non-state structures is backed by technical and financial partners in projects and programmes. The most active at present

Figure 2.2.1: The stakeholders in the cashew value chain



are *GIZ, BTC, DANIDA, BMGF, ICCO, SNV, AFD, the International Fertilizer Development Center* and the *MCA*.

The macro level comprises ministries such as the *MAEP*, which is in charge of agricultural policy and technical supervision of production, the Environment Ministry, which provides environmental protection and guidance, and the Trade Ministry, which handles market regulation.

In reality, two sources of cashew products constitute the supply exported via *PAC*: national output and supplies of nuts from neighbouring countries. There are two local marketing systems. The system by which individual growers sell their crop directly to agents or buyers, and the batch selling system,

a relatively recent innovation that is still being tested. The latter system allows growers to pool their output and obtain a higher tonnage with a view to directly negotiating interesting prices with the buyer. Batched selling still accounts for a tiny portion of the market compared to the first system, however. In either case, more than 98% of raw nuts reach the exporters, according to current data. They are shipped directly to processing factories in Asia, where they are turned into kernels for the European, American and even Asian markets. A minute proportion of Benin's raw nuts are processed on the spot. The kernels produced by these local units are sent to the Netherlands (in the case of Afonkantan) or consumed locally or sent to other units in the subregion.

Figure 2.2.2: Economic illustration of the raw nut value chain for exported raw nuts

	Production raw nuts	Collection of nuts	Export trade	Export
Price (CFAF/kg)	200*	230	255	300 (FOB)
Commission (CFAF/kg)		30		
Transport to store Cotonou (CFAF/kg)			15	
Wholesale margin (CFAF/kg)			10	
Transit (CFAF/kg)				20
Misc. costs (CFAF/kg)				10
Export margin (CFAF/kg)				15
Value added (CFAF/kg)		30	25	45
% value added	-	15%	11%	18%

* The production cost per kg of nuts is not included in the calculations of grower value added.



Source: Compilation of 2009 survey data.



2.3 Detailed description of the cashew production system

2.3.1 Production system

The raw nuts are produced, virtually without chemical inputs, by an estimated 200,000 growers across the country (Matthess *et al.*, 2008). The average area farmed per cashew planter measures between 1 and 1.5 ha. There are bigger farms, though, of up to 5 ha, that belong to landowners, economic agents, civil servants, etc. Benin's central zone and the southern part of northern areas grow most of the nation's crop and produce good quality cashews. They receive support from public institutions, projects and programmes financed by the technical and financial partners in a wide variety of areas with little synergy for greater efficiency.

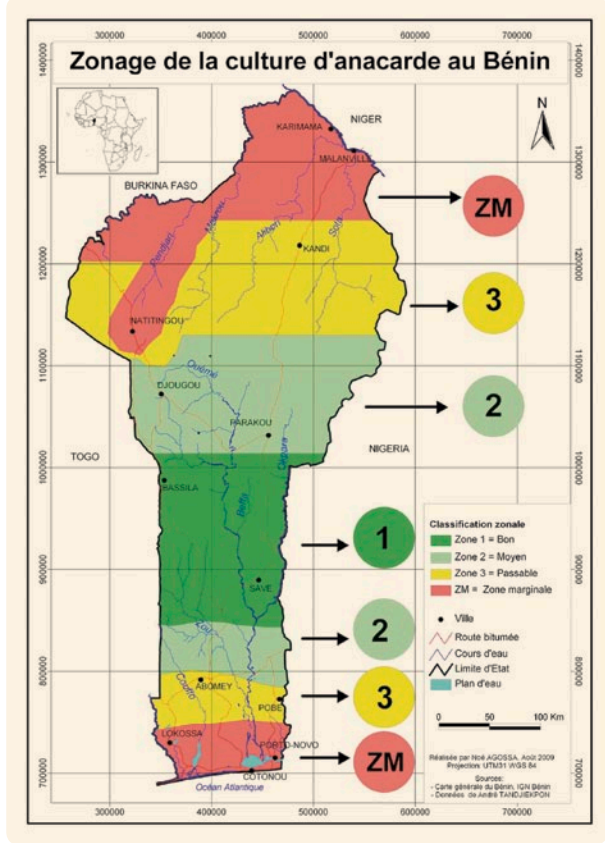
Cashews are produced in Benin in an agroforestry land-use system in which the cashew trees grow alongside annual crops such as cotton, yams, maize, cassava, groundnuts and sorghum. The land that is suitable for growing fruit is situated approximately between 7°20' N (the line of latitude running through Kétou in southern Benin) and 10°50' N (the line of latitude running through Gogounou in northern Benin). This geographical belt does not include the Atacora chain in north-western Benin (Tandjiékpon *et al.*, 2005).

Generally speaking, except for the state plantations started in the 1960s and 1970s by the *National Society for Forest Development (SNAFOR)*, of which there remain a reported 2,000 ha today, almost all cashew plantations belong to individual small-scale growers. Those plantations, which are considered cash crops, feature a production system in which annual crops are systematically integrated with the cashew trees for much of their life cycle. The length of the integration depends on the space between cashew trees. The succession of annual crops depends both on the extent to which the ground is covered by cashew trees and soil fertility. The crops requiring the most light, such as cotton, yams and maize, are usually associated with the beginning of the cashew tree's life cycle. By integrating annual crops, growers are able to reduce the costs of managing cashew plantations (maintenance, protection, etc.) until they start to produce fruit. For most growers, work in the plantations is manual and involves the use of tillage implements (hoes, dabas, machetes, etc.). Growers with large plantations use animals to till the land, in rare cases heavy machinery; in all cases family labour makes an important contribution to covering operating costs.

There are roughly three main areas of cashew production in Benin (Figure 2.3.1): i) **zone 1** is considered to be good – cashew growing appears to pose no special problems in view of the favourable climatic and geomorphologic conditions; ii) **zone 2**, which is fairly suitable for cashew trees but where

the climate (two rainy seasons in the south) and geological conditions do not allow the trees to produce to their full potential; iii) **zone 3**, which is fair for cashew trees (Tandjiékpon *et al.*, 2008).

Figure 2.3.1: Map of cashew-growing areas in Benin



2.3.2 Average plantation size

The most recent systematic survey of cashew plantations in north-western Benin indicates an average size of 0.76 ha per plantation for an average of 1.5 plantations per grower. These data can be extrapolated to all of Benin, except the central and southern regions, where the average size is probably slightly smaller. In general, the largest areas planted are between 5 and 30 ha, but there are fewer of them, and several plantations are 50 ha in size (central and north-eastern Benin), (Tandjiékpon *et al.*, 2008).

2.3.3 Access to land

While in the northern part of the country more land remains available for cashew trees, the same is not true of the southern and central regions, where there is heavy pressure on the land. In both cases, migrants and women have difficulty obtaining access to land.

2.3.4 Use of inputs

The cashews are grown without specific inputs (fertiliser, phytosanitary products), which are not available on the market or produced by appropriate institutions. The few growers who use chemical fertilisers and pesticides generally have recourse to products used for other crops, in particular cotton and vegetables. They do this because there are no products for cashew trees specifically. Even when such products do exist, input importers are not particularly interested because demand is not strong enough to justify greater involvement in the sector. Small-scale producers have difficulty obtaining financing (purchase of equipment, work in the plantations, harvest and post-harvest activities) and are therefore obliged to sell their nuts at prices fixed in pre-harvest purchase contracts.

2.3.5 Productivity

The cashew plantations have low productivity, between 300 and 500 kg/ha, although the potential for the plant material currently available is 1,000 to 1,500 kg/ha (*Tandjièkpon et al., 2005*). Because of the very high density of most plantations (>100 trees/ha), the approximate average is 2 to 3 kg/

tree (www.anacardium.info; www.cashewinfo.com; *Matthess et al., 2008*). Low productivity can compromise the competitiveness of national production if it is not substantially improved by means of appropriate innovations.

2.3.6 Seasonal time sequence of integrated crops

The period of intense activity for cashew production corresponds to the lean food and economic period, when growers have limited personal resources.

2.3.7 Ecological aspects

Cashew growing has a positive ecological impact in that it serves to protect, conserve and reconstitute the land. In Benin, cashew trees are for the most part grown in agroecological areas that are suitable for growing cotton and yams. These two crops, more than any other, lead to soil deterioration, as the forests are cleared to make room for them and, in the case of cotton, they involve the massive use of pesticides. Cashew trees are ideal for reconstituting degraded land and for carbon sequestration.

Table 2.3.1: Seasonal time sequence for cashews integrated with annual crops

Activity		Month											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Production of seedlings													
Planting													
Plantation management / Maintenance and treatment													
Harvest													
Integrated annual crops	Northern Benin												
	South and central Benin												

Table 2.3.2: Distribution of work along the cashew value chain, by sex

Sex	Value chain activity						
	Planting	Management and maintenance	Harvest	Transport	Post-harvest	Trade in raw nuts	Processing
Men	****	****	*	*	*	****	*
Women	*	*	****	****	****	****	****

* - **** = Degree of involvement

2.3.8 Gender aspects

Gender is a major issue in the cashew value chain, with socio-cultural factors varying from one region to another. Access to land is a major constraint for women and non-natives. In Benin, land is governed by the customary system, which is more common in rural areas, and the modern system. It is characterised by the presence of a land authority who continues to be traditional and who is more influential in the country's central and northern regions. Inheritance laws are more favourable towards men, depriving women of land and consequently of the possibility to start a plantation. Ninety-five percent of plantations belong to men, and the average age of all planters (men and women) is 40 to 50 years. Men do the work of planting and maintenance, as it requires a great deal of physical effort. Women are more involved in harvesting, sorting, drying and transporting the produce home. Both men and women market the raw nuts, but the women are better at primary nut procurement. In processing, women are more often owners of small-scale processing units, because investment costs are lower, and more workers in the semi-industrial and industrial units are women. Overall, marketing and distribution of processed products is the work of women, who have market and consumer expertise.

2.3.9 Economic analysis of the cashew system

Cashew trees are usually planted with other crops in an integrated approach. During the first 3 or 4 years after the trees are planted, they generate no revenues. During that period, the grower earns an income from the crops integrated with the cashew trees, which at the same time benefit from the investment in those crops (work on the soil, maintenance, manure spread for integrated crops, etc.). After the fourth year, when the cashew tree starts to bear fruit, the growers start to earn additional income from the trees, in a proportion that changes over the years; cashews become the operation's main source of income after eight or ten years. The length of integration with annual crops depends on the distance between the trees. When there are 10m between trees, for example, crop integration lasts on average six or seven years, depending on the tree's rate of growth. That rate is also linked to soil fertility and depends on the geographical area. In central Benin, for example, the rate of growth is twice as fast as in the north. In short, the negative yield of the first years after planting explains the use of the agro-forestry approach integrating the trees with annual rotated crops (cotton, yams, maize, ground nuts, black-eyed beans, cassava, a.s.o.).

2.3.10 Cashew household income and poverty

The income generated by cashew operations tends to be diverse, its components depending on the duration and area of the integrated operation. In addition to the monetary income earned from the sale of produce, the cashew-growing household also obtains material goods for its own consumption (food, wood for energy, etc.).



2.3.11 Organisation of growers/cooperatives

Organisations of cashew growers have only recently started to emerge, as the sector's share of the local, regional and national economies has grown. According to the information gathered from existing organisations in 2009, a substantial number of growers have formed associations but many of them still continue to be independent. There is only one federation of grower organisations, *FENAPAB*, and it is organised into four *URPAs*, one for each cashew-growing region. The *URPAs* are represented in the communes by the *UCPAs*, which are further broken down at village level into *UVPA*s. The latter is the basic operational unit for targeted action.

The *Atacora and Donga URPA* (north-western Benin) has 21,701 growers in 308 cooperatives (*UVPA*) out of a total of 35,700 growers surveyed in the region in 2008 (*Tandjiékpon et al., 2008*). The *Zou and Collines URPA* (central Benin) has 300 cooperatives with an estimated total of 56,516 growers, but the number of members is unknown. The *Borgou* and *Alibori URPA* (north-eastern Benin) has no reliable statistics, but the number of growers can be estimated at 60,000. The *Kétou UCPA* (south-eastern Benin) has 481 growers in 28 cooperatives. The commune of Kétou is the only cashew-producing commune in south-eastern Benin, its output limited to a few villages.

2.4 Detailed description of cashew processing and trading

2.4.1 Structure of the processing and export businesses

Only a fraction of the raw nut output is currently processed in the country, but interest in the business is growing among support structures and in the private sector. The statistics are very incomplete because of the informal character of small-scale processing. It is estimated that barely 5% of the national cashew output is processed locally: 2% by small-scale units and 3% by semi-industrial and industrial units. Three categories of processing units are used, as indicated in *Table 1.4.4*:

- ▶ individual or grouped small-scale processing units that have a very modest capacity of less than 20 tonnes/year, producing roasted kernels for the market
- ▶ semi-industrial units whose capacity is less than 150 tonnes/year and whose technology is based on the Indian model but with more modest equipment adapted to local conditions
- ▶ industrial units; the only one currently operational works for the European market and is run by *Afonkantan Benin Cashew* in Tchaourou (50 km south of Parakou).

2.4.2 History and location of processing units

The first cashew processing units appeared in Benin in the early 1970s, when the State launched its cashew plantation project with funding from the European Development Fund. A shelling factory was set up in Parakou (northern Benin) to transform the produce from the plantations, most of which were on state land. It was not successful and subsequently shut down for reasons related to the market, product quality and financing.



2.4.3 Processing capacity

Processing resumed in the late 1990s, when the private company *Sté AGRICAL Sàrl* took over the *Parakou factory* and a new factory (*Sté SEPT*) was opened with a capacity of 600 tonnes/year in Savè, central Benin. These initiatives also failed: the old factory never operated and the *SEPT* unit shut down in 2004. Fresh attempts were then made, and some of the semi-industrial and industrial units opened at the time continue to operate, notably *Afonkantan Benin Cashew* (capacity: 1,500 tonnes/year) and *GK5* (capacity: 80 tonnes/year). Many *GK5* units (about a dozen) have closed or are working at less than capacity.

2.4.4 Technologies used

The technology used by the processors is in most cases Indian in origin. It comprises: calibrators to sort raw nuts into four categories; steam embrittlement; nut-shelling devices (hand or foot operated); drying chambers for drying shelled kernels before they are peeled; mechanical peeling conveyors (pre-peeling followed by hand peeling, with some Italian components); weighing devices (sorting); vacuum and carton packaging devices; warehouse by grade, etc. Much of the equipment has been adapted on the spot, and its performance (output) is limited; other equipment is imported (the case of the *Afonkantan factory*).

2.4.5 Job creation

Most of the workers in the processing units are women. According to the data collected in the *GK5* unit in Benin's central region in 2008 (*ProCGRN, 2008*), and in view of Benin's current estimated processing capacity of 1,800 tonnes (*FBSPL, 2008*), the number of workers employed in cashew nut processing in Benin can be estimated at 220, of whom 176 are women. By extrapolation, the number of workers needed to process the 116,398 tonnes of raw nuts exported via *PAC* in 2008 can be estimated at 14,226.

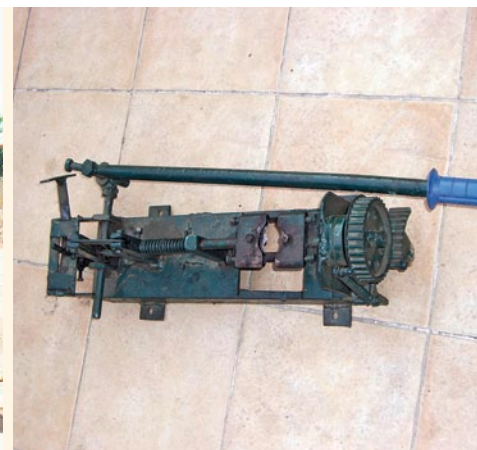
Employment in marketing is temporary (3 to 6 months) but diverse: agents, dealers, transporters, salespeople, warehouse staff, customs officials, loaders, insurance agents, bankers, etc. At present, the figures for this sector are unclear, above all because of the lack of organisation at this link in the chain and the non-transparent relations between the stakeholders.

2.4.6 Competitiveness

An analysis of why the processing units failed points overall to the poor business management skills of the promoters, who did not master the various cost and expense parameters, difficulties relating to access to good technology and its use (low output), competition with the export sector for the raw material (nuts), the high cost of labour and ineffectual state support (tax system, credit and input facilities, market regulations in favour of processing, and so on). The marketing of cashew products, chiefly the raw nuts, is the most visible part of the value chain and occupies several stakeholders (agents, small dealers, exporters, transporters, brokers, etc.) for a very brief period (January to May). During that period, the buyers scour the production areas, using various strategies to obtain the product at a price that is usually not in the grower's favour.

2.4.7 Organisational chain and business model

In general, according to *Lemaître 2003*, Benin's cashews are not marketed following a pre-established scheme within a regulatory framework known to all the stakeholders. The Government has nevertheless exerted steady pressure on those marketing cashew nuts in Benin to structure their activities. This has sparked the formation of several professional associations whose impact on the sector's organisation is not yet clearly discernible. The current lack of organisation draws dealers, who are attracted by the easy profits and weak regulations. The export sector is dominated by Indians and Pakistanis in formal companies lawfully established in Benin, but is poorly controlled by the public authorities and not very trans-



parent. This explains the disparities in official statistics. The quantities exported supplement supplies in the importing countries, chiefly India and Viet Nam, where the processing plants are owned by nationals of those countries. Indeed, the processing capacities of India and Viet Nam exceed their raw nut production capacities. The exporters are the true price controllers. They finance the entire sector and therefore have the power to set the price in their interests. Almost all exporters are branches of Indian multinationals.

2.4.8 Price structure

The branch companies receive purchase orders from their headquarters and set prices in line with global market trends and the US\$ exchange rate. This explains why the price varies during the harvest season and from one harvest season to another. When the crop outlook in the countries with processing capacity is promising, exporters in Benin and elsewhere in Africa ask their buyers to offer relatively low prices. They can control the flow of nuts because they are few in number and are present throughout the subregion. The exporters are very few in number and, because of their shared origins, use an informal price-setting mechanism throughout the harvest season. Prices at *PAC* usually vary by

10 CFAF per kilo, depending on the exporter. The exporters' tendency to function as a cartel does not work in the market's favour and is not conducive to transparency. The buyers have no information on the world cashew market (which does not exist per se, the only official market is for kernels) and are prefinanced by the exporters; all they do is forward the purchase orders from the exporters to the production areas.

Because of the opacity of the domestic cashew market, its lack of organisation and the absence of information on world prices, the growers are trying to organise in basic groups. Of the strategies used, batched selling is the most popular. It consists of "batching" the harvest of the group's members and selling it in bulk to a single buyer. Several *OCGs* are testing this approach, with interesting results. For example, in 2009, in Atacora and Donga departments, which account for 10% of national production, *OCGs* sold 19.4% of the 6,026 tonnes of nuts produced using the batch system, obtaining de facto higher earnings than under the traditional system (*URPA/Atacora-Donga 2009*). But the *OCGs* have limited financial means and are poorly organised; they cannot compete with large-scale marketing operations. Other *OCGs* ask for advances from microcredit organisations to buy nuts from their members. The nuts are then sold when the price goes up.

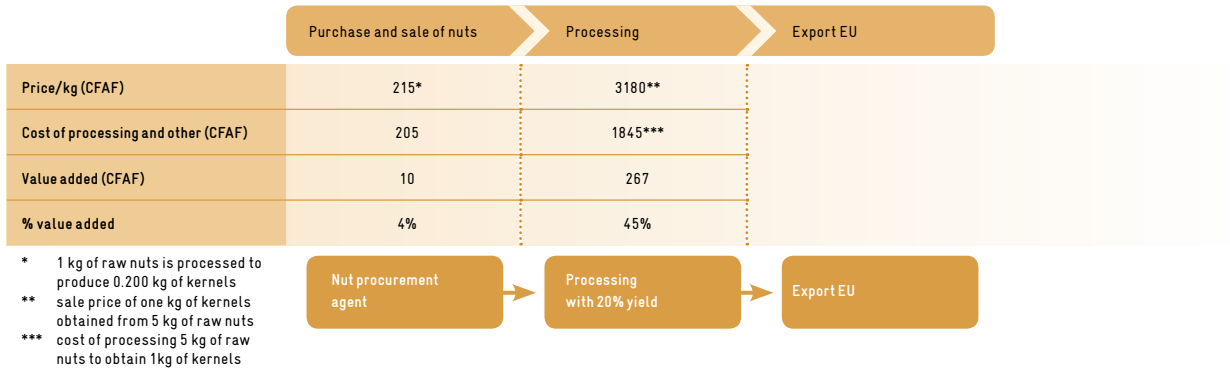


Table 2.4.1: Summary data on the processing units

Data	Processing unit		
	Industrial (capacity >1000 tonnes/year)	Semi-industrial (capacity <150 tonnes/year)	Small-scale (capacity <20 tonnes/year)
Name	Afonkantan Benin Cashew	<ul style="list-style-type: none"> ▶ GK5 ▶ SONGHAI Centre ▶ NAD & CO 	AFETRACA, ZANCLAN GNICOBOU
Geographical location	Northern Benin (Tchaourou)	<ul style="list-style-type: none"> ▶ Central Benin (GK5) ▶ Southern Benin (SONGHAI) 	Southern Benin
Brand	Pride of Africa Benin		AFETRACA, ZANCLAN GNICOBOU NAD & CO
Type of ownership	<ul style="list-style-type: none"> ▶ Partnership private operator and Global Trading of the Netherlands 	<ul style="list-style-type: none"> ▶ GK5: family-owned company ▶ NGO-type agrofood business 	<ul style="list-style-type: none"> ▶ Individual companies with personal financing
Capacity (tonnes/year)	1500	<150	<20
Number technical employees	183	8 jobs	3 permanent jobs per unit
Technology used	<ul style="list-style-type: none"> ▶ Indian shelling technology with imported material ▶ Imported Italian peeling technology 	<ul style="list-style-type: none"> ▶ Locally adapted Indian technology 	<ul style="list-style-type: none"> ▶ Locally adapted Indian technology and local equipment
Ecological aspects	<ul style="list-style-type: none"> ▶ Biofuel with shells/by-products ▶ Low water-use capacity 	<ul style="list-style-type: none"> ▶ Biofuel with shells/by-products ▶ Low water-use capacity 	<ul style="list-style-type: none"> ▶ Biofuel with shells/by-products ▶ Low water-use capacity
Business models and relations	<ul style="list-style-type: none"> ▶ Partnership with Global Trading of the Netherlands ▶ Export to Europe 	<ul style="list-style-type: none"> ▶ Relations with supermarkets, hotels and fairs to sell output ▶ Partnership with other high-capacity units in Nigeria 	<ul style="list-style-type: none"> ▶ Relations with supermarkets, hotels and fairs to sell output ▶ Informal exports in the sub-region, Europe and USA
Cooperation with growers	Partnership with local cooperatives	Partnership with local cooperatives with GK5	None
Purchase strategy (quantity and quality)	Contract	On sight	On sight
Factory experience of cooperation with growers	Weak	Weak	None
Role of intermediaries	<ul style="list-style-type: none"> ▶ Primary procurement and contact with growers ▶ Prefinancing credit 	<ul style="list-style-type: none"> ▶ Primary procurement and contact with growers ▶ Prefinancing credit 	<ul style="list-style-type: none"> ▶ Primary procurement and contact with growers ▶ Prefinancing credit
Transportation and marketing logistics	Lorries and light-duty vehicles	Light-duty vehicles	Light-duty vehicles

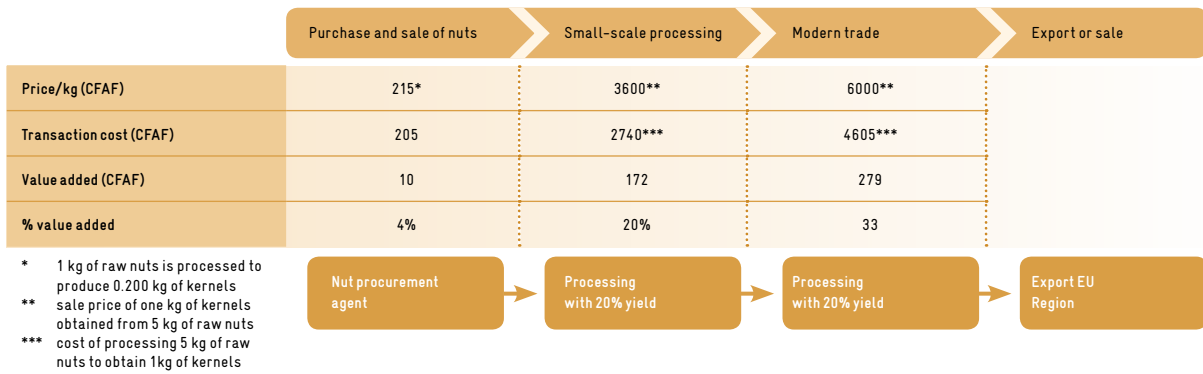


Figure 2.4.1: Economic illustration of the value chain of white kernels produced for export



Source: Matthes et al., 2008

Figure 2.4.2: Economic illustration of the value chain of roasted kernels produced for the local market and export



Source: Matthes et al., 2008





2.5 Analysis of business development services along the value chain

2.5.1 Overview of value chain service providers

At micro level, business development services are provided by stakeholder organisations such as *FENAPAB*, *GEPT*, *ANAPAT*, the *Association of Cashew Kernel Processors and Exporters*, local equipment manufacturers, etc. These organisations are crucibles for groups of stakeholders who unite in defence of their interests and to mobilise partners in their cause. The services needed for the production of cashew nuts are the provision of specific adapted inputs to improve plantation yield, the development of innovative technology, the availability of competitive plant material, technological guidance relating to the best practices required to improve productivity, the organisation of growers for the efficient marketing of their produce, access to credit, etc. Processors need services relating to the acquisition and use of appropriate technologies, access to financing for installations and operation, knowledge of market access rules, marketing, etc.

At the meso level, development services along the value chain are provided for the most part by state structures, except for several national and international institutions such as the *IITA* and *Bioversity International*, which are involved in the search for and production of innovations, private management institutes/schools providing certified training to managers, and the NGOs providing guidance services, training and support for grower organisation and product marketing. The public structures tend to be involved in research and production of innovations (*INRAB*, schools), guidance, quality control, continued training (*CeRPA*, *DAGRI*, *DPQC*, *DANA*, *National Office to Support Agricultural Revenues and Stabilisation*, *CEBENOR*, etc.) and market regulation (*DGCI*, *DGCE*).

The macro level encompasses ministries, in particular the *Ministries of Agriculture, Industry and Trade*. The *MAEP* should provide all necessary support for defining agricultural policy to promote the cashew sector (use of appropriate technology, technical training, facilitation for *OCGs*, access to inputs, and so on). The *Ministry of Industry* should provide the facilities needed to install processing promoters, and the *Ministry of Trade* should ensure respect for the rules defined when the marketing campaign opens (prerogatives of each stakeholder, application of fixed prices, transparent statistics). (*Table 2.5.1*).

2.5.2 Need for operational business services

The stakeholders' needs along the cashew value chain can be grouped under four points. With regard to inputs, distributors and manufacturers must take account of the market access requirements of cashew growers and offer products (packaging, phytosanitary products, specific fertilisers, processing equipment, and so on) enabling the production, processing and marketing links in the chain to be competitive. With regard to production, the basic need is to increase productivity by providing innovative techniques, close and specialised guidance on cashew production, and solid links with other sectors. With regard to processing, investment should be facilitated by taking measures to incite promoters (tax breaks, access to the raw material, training, etc.). As for marketing and export, the major needs are for local, regional and international market information, and for structuring, i.e. efficient organisation of the marketing system.

2.5.3 Overview of the value chain's financial service providers

Several formal and informal institutions are involved in financing agricultural and agriculture-related activities. The informal participants include the tontine companies, who are closest to the growers and are very flexible when it comes to making loans available. They tend to charge very high, extremely short-term interest rates. Formal participants include microfinance institutions (agricultural credit unions, various associations, funds and agencies, etc.). They provide limited amounts in the short term. There are a fair number of banks with great amounts of liquidity, but they are geared more to financing exports and imports, less to investment. Surety companies prefer large enterprises to smaller production units.

2.5.4 Need for operational financial services

The financial and material needs of stakeholders along the value chain are many and must be met if the Beninese cashew sector is to become more competitive and profitable for the national economy and growers.

Input suppliers require the means to import specific inputs and make them available to the beneficiaries without overreaching their investment, and resources to install local units to produce those inputs (fertilisers, tools, packaging, etc.). In addition, equipment manufacturers require specific training, especially in standards and norms.



Table 2.5.1: Overview of value chain service providers

Value chain service providers						
Research	OCGs	Quality management	Market information	Business management	Technology	Financing
Institut national des recherches agricoles du Bénin (INRAB)	Benin National Federation of Organisations of Cashew Growers (FENAPAB)	Directorate Promoting the Quality and Packaging of Plant Products (DPQC)	Foreign Trade General Directorate (DGCE)	Benin Chamber of Commerce and Industry (CCIB)	Benin National Institute of Agricultural Research (INRAB)	Commercial banks
International Institute of Tropical Agriculture (IITA)	Regional unions of cashew growers (URPA)	Food and Applied Nutrition Directorate (DANA)	Internal Trade General Direction (DGCI)	Export Development Association (ADEx)	SONGHAI Centre (equipment)	Microcredit institutions
Faculty of Agronomic Science - Abomez-Calavi University (FSA-UAC)	Communal unions of cashew growers (UCPA)	Beninese Centre for Standardization and Quality Management (CEBENOR)	National Chamber of Agriculture (CNAB)	Association of Cashew Kernel Processors and Exporters	Centre for Agricultural Mechanisation, Boko	Tontine companies
Faculty of Agronomics (UP)	Village unions of cashew growers (CVPA)	National Consumer Protection Association (ANDC)	African Cashew Alliance	National Association of Buyers of Tropical Agricultural Products		
			Benin Chamber of Commerce and Industry	Beninese Agency to Promote Trade		
			Benin National Federation of Organisations of Cashew Growers			
			Export Development Association (ADEx)			



Table 2.5.2: Synoptic overview of agencies financing agricultural activities

Name	Target groups	Products	Experience in financing		
			Agriculture and agrofood	Cashew value chain	
Local agricultural credit unions	<ul style="list-style-type: none"> ▶ Small-scale growers ▶ Small-scale dealers 	Small short-term loans for operating funds and purchase inputs (12 months)	Long and good experience	Limited	
Formal and informal tontine companies and loan sharks	<ul style="list-style-type: none"> ▶ Small-scale growers ▶ Small-scale dealers Product agents 		Good and long experience but non-transparent operations		
Federation of saving banks and farmers' mutual loan associations	<ul style="list-style-type: none"> ▶ Large-scale growers ▶ Dealers ▶ Equipment suppliers ▶ Distributors of inputs 	Short-term loans for operating funds and purchase inputs (12 months)	Long and good experience		
Association to Promote and Support the Development of Micro-enterprises (PADME-BENIN)	▶ Low-income individuals	Micro-enterprise financing	Good experience, especially of processing		
Association for the Development of Local Initiatives (ADIL)	▶ Mixed groups, above all women, children and most vulnerable households	Microfinance	Good and long experience		
Association Fighting to Promote Development Initiatives (ALIDé)	Women		Good experience, especially of trade and processing		
Agency to Promote and Support Small and Medium-sized Entreprises (PAPME-BENIN)	<ul style="list-style-type: none"> ▶ Enterprise promoters ▶ Groups and organisations of industry 				
National Fund to Promote Business and the Employment of Young People	Young people and women	Facilitate employment by creating businesses	Little (starting)		
Development, Ongoing Occupational Training and Apprenticeship Fund	Unemployed young people	Training and information			
African Investment Bank (AIB)	<ul style="list-style-type: none"> ▶ Dealers ▶ Entrepreneurs ▶ Savers ▶ Industrialists 	Trade and investment	Good trading experience	Limited	
Banque Internationale du Bénin (BIBE)		Trade Investment Credit Surety bonds			
Banque of Africa (BOA)					
Banque Régionale de Solidarité Bénin (BRS-BENIN)					
Sahel-Sahelian Bank for Investment and Commerce (BSIC)					
Continental Bank – Bénin (CBB)					
Diamond Bank (DBB)					
Ecobank Bénin (EB)					
Financial Bank-Bénin (FBB)					
Société Générale de Banques au Bénin (SGBBE)					
African Fund for Guarantee and Economic Cooperation (FAGACE)	Investment credit guarantees				Trade and processing
National Guarantee and Assistance Fund for Small and Medium-sized Entreprises (FONAGA)					

For the production of raw nuts, the means needed chiefly relate to the purchase of good quality seeds and seedlings so as to improve plantation productivity. Because good quality plant material is impossible to access, growers generally have recourse to run-of-the-mill material, and this has an impact on plantation performance. Another need relates to the means of monitoring and managing plantations, especially at critical production times. Indeed, the months just before the cashew trees flower in Benin (September to December) constitute a period of intense harvest and post-harvest activity in respect of other annual crops (cotton, yams, maize, sorghum, groundnuts, etc.) and involve heavy labour. They also correspond to a key period in the cashew tree's life cycle, when maintenance is needed and action must be taken to protect it from wildfires. As a rule, growers give priority, using their own resources, to annual crops, so that they can be safely harvested. Maintenance on cashew trees is carried out either too late to have the anticipated impact on production or thanks to the aid of dealers or tontine companies who prefinance production so as to obtain the crop at a lower price. The harvest season (January to March) also covers the lean period, making it difficult for growers to take care of cashew harvest and post-harvest activities. They are thus obliged to take out loans at prohibitive interest rates, providing their harvest as collateral at a pre-agreed price.

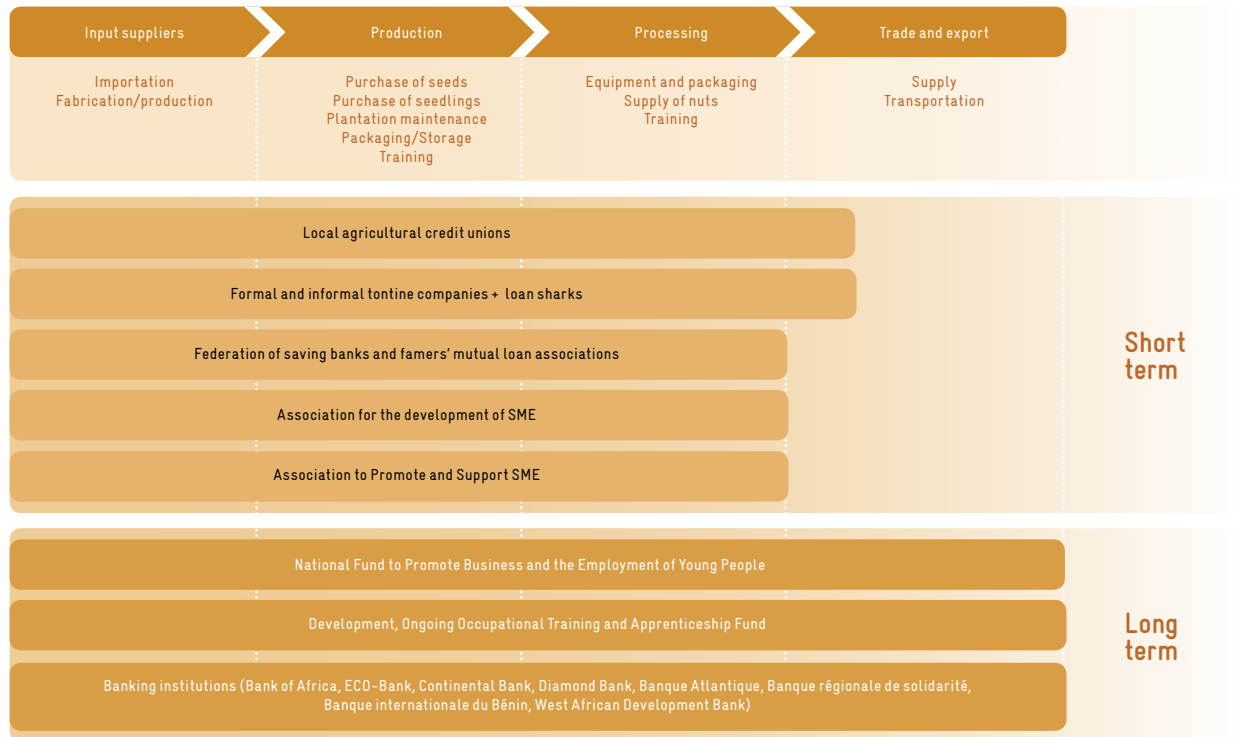
Processors need financing more to purchase good quality equipment and suitable packaging. Such equipment is a prime component for the operation of processing units. In addition, processing requires working capital to buy the raw material (raw nuts) at the right time and thereby secure production at the factory throughout the year. Moreover, funds are needed for the ongoing training of factory workers and managers with a view to heightening yield or productivity and increasing profits.

As concerns trading at local level, the most recent experiences among cooperatives in batched sales have been hamstrung by their poor financial capacity. While the batched sale of cashew products provides greater profit to the grower or cooperative, the cooperative's financial capacity does not allow it to compete with the large-scale dealers, agents and exporters flooding and thus destabilising the capital market. The problem of financing (batched sales) is compounded by the impossibility of ensuring the logistics required for the rapid and timely removal of the products to the point of departure (assembly points, port, etc.).





Figure 2.5.1: Needs of value chain participants for medium and long-term financial services



2.6 Ex-ante poverty impact assessment

Table 2.6.1: General poverty situation and high relevance to national strategies and plans

Subjects	Observations	Sources / quality of information
General poverty situation (country, department, etc.)	<ul style="list-style-type: none"> ▶ In 2007, the monetary poverty rate was 33.3%, compared to 37.4% in 2006 ▶ In 2007, the non-monetary poverty rate, based on a composite indicator for living standards that takes account of the variables pertaining to living conditions and assets, was 39.5%. 	MEF, 2008
Specific observations on the political, sociocultural and forward-looking aspects of poverty	<ul style="list-style-type: none"> ▶ A positive correlation between poverty and household size: In 2002, household poverty increased in proportion to household size. Poverty rates of households of more than six people were twice those of households with fewer than three people, both in rural and urban areas ▶ Strong negative correlation between poverty and level of education: Generally speaking, poverty decreases as the level of education rises. A sizeable human capital enables individuals to seize more economic opportunities and thus to improve their standard of living ▶ Poverty and gender: a marked gap in favour of women. The head of household's sex has a marked impact on poverty. In 2002, the non-monetary poverty rate in households headed by men was 45%, compared to 33% for households headed by women ▶ Negative correlation between migration and poverty: Migratory movements have a strong economic, sociocultural and demographic impact on areas of departure and arrival and on households. According to the 2006 global economic outlook, migration can improve well-being and reduce poverty ▶ In terms of the phenomenon's geographical distribution, poverty levels are notably higher than the average in the rural areas of the northern departments (Borgou, Alibori, Atacora, Donga), less so in Atlantique and Couffo departments. In urban areas, it is Couffo, Atacora and Ouémé departments, and to a lesser extent Atlantique, Borgou and Donga departments, that are the poorest. 	MEF/GPRS (2007)
Existence of national poverty reduction strategies (programme)	<p>Preparation of the PRSP (which became the GPRS in 2007)</p> <p>Updated multiyear convergence programme 2009–2011</p>	MEF/GPRS (2007) MEF (2008)
Brief description of action and how it is aligned on the national strategies	<p>The objectives of the ACi project are in line with the GPRS, notably with regard to strategic axes 1, 3 and 5 on, respectively:</p> <ul style="list-style-type: none"> ▶ more rapid growth: stabilisation of the macroeconomic framework, added momentum for the private sector, diversification of the economy, promotion of regional integration ▶ reinforcement of human capital: promotion of development education, better occupational training, improved access to and quality of health services and nutrition ▶ balanced and sustainable development of the national space: sustainable development of regions and towns, emergence of development and growth poles, environment, natural resource management and living environment. <p>The ACi project is also in line with the vision and objectives of the PSRSA pertaining to:</p> <ul style="list-style-type: none"> ▶ the development of promising sectors of plant production (pineapples, cashews, cotton, maize, vegetables, rice, oil palms) ▶ the strengthening of food and nutritional security, through greater competitiveness between widely consumed food crops, to maintain an affordable price level for food product consumers while lowering the food bill (reference to the integration of cashew cultivation with food crops, promotion of local consumption of cashew apples, impact of cashew trees on conservation of soil fertility for the benefit of food crops, etc.) ▶ market conquest, transparent transactions and respect for standards and product traceability, on the basis of properly shared business information. 	MEF/GPRS (2007) MAEP/PSRSA (2007)

The present study also aims to anticipate the project's impact on poverty reduction. The first two matrices of the *OECD PSIA document (2007)* were used for the general poverty impact assessment (*Table 2.6.1*) and to gauge the pro-poor

potential of key stakeholders and institutions along the cashew value chain (*Table 2.6.2*). The assessment of stakeholders and institutions reveals an interesting ratio for most of the main participants.

Table 2.6.2: PSIA analysis of stakeholders and institutions

Stakeholders (target groups/intermediaries)	Main stakeholder tasks/ Main role of institutions	Pro-poor interests and programmes - Aspects likely to prevent them from having a pro-poor programme (elements and risks)	Evaluation of their pro- poor pro- gramme (+/-)	Attenuating and/or capacity-building measures
Equipment and distribution of inputs (SDI, SAMAC, Fruitex Industrie)	<ul style="list-style-type: none"> ▶ Make available inputs / equipment ▶ Ensure use of inputs / equipment 	<ul style="list-style-type: none"> ▶ Increased productivity ▶ Less labour hardship ▶ Improved product quality 	++	<ul style="list-style-type: none"> ▶ Access to credit ▶ Tax exemption or reduction for imported inputs
Production (INRAB, DPQC, FENAPAB, URPAs, UCPAs, DAGRI, DGFRN, SONAPRA, etc.)	<ul style="list-style-type: none"> ▶ Produce high-quality raw nuts ▶ Guarantee product traceability ▶ Play by the rules of the game for production and product market 	<ul style="list-style-type: none"> ▶ Improve product competitiveness ▶ Easier access to the market ▶ More lucrative prices 	++	<ul style="list-style-type: none"> ▶ Access to apprenticeship and training ▶ Access to credit ▶ Organisation capacity building
Processors (Afonkantan, GK5, Boulamb, etc.)	<ul style="list-style-type: none"> ▶ Produce high-quality kernels ▶ Respect the rules for production and marketing ▶ Increase the added value of nuts ▶ Promote local labour 	<ul style="list-style-type: none"> ▶ Diversification of export sources ▶ Reduce unemployment and poverty ▶ Secure markets for growers ▶ Redistribute profits 	++	<ul style="list-style-type: none"> ▶ Access to credit ▶ Maintain tax exemption or reduction for imported equipment and inputs ▶ Access to apprenticeship and training
Trade / export (AGRO BENIN, SAKSON, GK5, NOMAS, OLAM(COPA), SWISS BENIN, SAIPRITI, Btc, RALS COMMODITIES, NOOR Sàrl)	<ul style="list-style-type: none"> ▶ Market raw nuts and kernels ▶ Place products on the most profitable markets ▶ Play by the rules of the game 	<ul style="list-style-type: none"> ▶ Dispose of products quickly ▶ Improve state and community receipts ▶ Smoothly functioning local market 	+	<ul style="list-style-type: none"> ▶ Access to information ▶ Registration of players
MAEP	<ul style="list-style-type: none"> ▶ Provide technical guidance for growers and processors ▶ Come up with technical innovations for growers ▶ Guarantee access to inputs 	<ul style="list-style-type: none"> ▶ Improve production and productivity ▶ Improve product competitiveness 	++	<ul style="list-style-type: none"> ▶ Increase guidance and research staff ▶ Material and financial support for technical structures ▶ Technical training for managers
Ministry of Trade	<ul style="list-style-type: none"> ▶ Ensure market regulation ▶ Ensure availability of information on the market 	<ul style="list-style-type: none"> ▶ Dispose of products rapidly ▶ Improve state and community receipts ▶ Smoothly functioning local market 	+	<ul style="list-style-type: none"> ▶ Increase in the number of follow-up staff ▶ Material and financial support for technical structures ▶ Technical training for managers
Ministry of Industry	<ul style="list-style-type: none"> ▶ Facilitate investment in processing units 	<ul style="list-style-type: none"> ▶ Develop processing industries ▶ Increase the volume of processed products 	++	<ul style="list-style-type: none"> ▶ Material and financial support for technical structures ▶ Technical training for managers

Stakeholders (target groups/intermediaries)	Main stakeholder tasks/ Main role of institutions	Pro-poor interests and programmes - Aspects likely to prevent them from having a pro-poor programme (elements and risks)	Evaluation of their pro-poor programme (+/-)	Attenuating and/or capacity-building measures
Ministry of the Environment	<ul style="list-style-type: none"> Ensure respect for environmental rules and standards pertaining to investments Provide growers with guidance 	<ul style="list-style-type: none"> Conformity of national production with standards Improve production and productivity 	+	<ul style="list-style-type: none"> Increase in the number of guidance and research staff Material and financial support for technical structures Technical training for managers
MEF	<ul style="list-style-type: none"> Facilitate productive investment (reduce or eliminate taxes, duties; exemptions, etc.) Ensure compliance with the rules of the game 	<ul style="list-style-type: none"> Develop investors in production, processing and marketing Increase export volumes 	++	<ul style="list-style-type: none"> Introduce finance bills for productive investment Training and specialisation of technical managers

Key	Intensity/ direction of the impact	++	+	0	-	--
		Very positive	Positive	Neutral	Negative	Very negative

Source and quality of information: various reports; data collection; drawn from institution or organisation missions and their contributions and from OECD 2007.



2.7 Institutional and political governance chain

2.7.1 Relevance of the cashew value chain in the national political arena

Benin benefits considerably from the cashew trade's economic, social and environmental impact. Economically, the sector generates revenues for the central state coffers and for grassroots communities. Socially, it creates jobs in the agricultural and agriculture-related (production, processing, marketing, various services) sectors. Environmentally, it helps protect soil and reconstitute areas degraded by soil-deteriorating crops (cotton, yams).

Table 2.7.1: Relevance of the cashew value chain in the national political arena

Name of the policy or policy field	Why is cashew production identified as important?
PRSP BENIN 2003-2005 GPRS = amended PRSP	Reinforcement of the macroeconomic framework in the medium term, one objective being to attract massive private sector investment to agribusiness. Cashew processing units are considered as wealth and growth-generating agribusinesses (section 4, axis 1: accelerated growth).
Updated multiyear convergence programme 2009-2011	<p>The programme is based essentially on the 2007-2009 GPRS and the Beninese Government's Priority Action Programme. Under Point 4 defining the strategic objectives, Policy and Programme Coordination emphasises inter alia:</p> <ul style="list-style-type: none"> ▶ a reduction in the rate of tax on corporate and individual business earnings ▶ training and credit facilities for economic agents working in the agrofood sector ▶ the establishment, with input importers and distributors, of a purchasing pool for agricultural inputs, under private management ▶ capacity building for research and dissemination structures to guide the private sector; ▶ acceleration and finalisation of work on the industrial free-trade zone in Sèmè-Kraké ▶ continued promotion of the Benin label by the MIC and the MAEP ▶ the founding of an agroindustrial bank able to make loans available to the various stakeholders operating in the sector ▶ the establishment of a national agricultural development fund, a system of agricultural insurance and a mechanism to support grower prices ▶ the organisation of the maize, rice and cashew sectors along the lines of the cotton sector ▶ the production of seeds and the promotion of agricultural sectors through a subsidy of 2.8 billion to SONAPRA, with a view to facilitating grower access to the seeds they need to cultivate crops. <p>All these provisions for the operational implementation of the GPRS and the Priority Action Plan will help promote the cashew sector.</p>
PSRSA Strategy to Revive the Cashew Sector	<p>The PSRSA action plan for 2006-2011 stipulates the areas of action and expected results. Sector promotion is considered a major axis through which the agricultural sector will contribute to the implementation of these new orientations. The cashew value chain is considered one of the Government's 12 priority chains (section 6, para. 6.1.5).</p> <p>The Strategy to Revive the Cashew Sector sets out the Government's vision and the priority activities to be developed with regard to the cashew value chain for the period 2007-2011.</p>
Millennium Development Goals	<p>Goal 1, to eradicate extreme poverty and hunger, targets poverty, food and poor workers and fits in with promotion of the cashew value chain.</p> <p>Goal 7, which aims to ensure environmental sustainability through sustainable development, sanitation, the provision of water and biodiversity, is also an objective of cashew value chain development in Benin.</p>

Table 2.7.2: National policies affecting value chain performance

Policy	Description	Implication for the value chain
Constitution of the Republic of Benin of 10 December 1990	Defines the political frame of reference and governance mode of Benin.	The proclamation of individual freedom, the right to justice, the free market and ethic and social protection are conducive to initiatives for the cashew value chain.
Law 93-009 of 2 July 1993 on the forestry system in the Republic of Benin	Defines the conditions for the management, protection, use of forests, the forestry and related products trade and industry.	Cashew plantations are considered a forest resource and benefit from planting safeguards and facilities, like forest trees.
Law 2007-033 implementing Benin's 2008 Finance Act	Defines the budget management conditions for 2008 and sets out facilities exempting the agricultural and agriculture-related sectors.	The import, production and sale in the Republic of Benin of agricultural machines and material, small units to process and preserve agricultural produce and agricultural inputs, instruments and phytosanitary appliances are exempted from tax, duties and VAT. This measure is in favour of the cashew value chain. Export taxes on non-timber forest products are 0.75 to 1% FOB value. This measure hinders the competitiveness of the cashew value chain.
Law 98-030, a framework law on the environment in the Republic of Benin	Contains provisions on protecting and enhancing beneficiaries and natural environments, protecting and enhancing the natural and human environment, pollution and environmental nuisances, impact studies, environmental audits, public hearings on the environment and sanctions.	Has clear implications for the cashew value chain, particularly the installation of processing units, which is subject to obtaining a Certificate of Environmental Conformance.
Rural Land Act	Is intended to modernise land law in Benin and to establish clear rules pertaining to concepts, regulations, use, disputes, etc.	The provisions secure agricultural land and promote investment in plantations of perennials like cashew trees.
Benin Investment Code	Creates an environment that is conducive to production investment in terms of freedom to trade, entry and stay of expatriates, management, capital transfers, guarantee against nationalisation and expropriation.	The development of the cashew value chain requires foreign capital, and the adoption of the code could therefore promote foreign investment in the creation of high-capacity processing units, especially in rural areas.
Labour Code Law No. 98-004 of 27 January 1998	Sets out employment provisions, particularly with regard to women and children.	Art. 166 stipulates that children may not be employed by any company under the age of 14. Art. 170 indicates that pregnant women whose condition has been medically confirmed can break their contracts without advance notice and without having to pay the financial penalty stipulated. These two provisions are in line with ethics and respect for social standards in the cashew value chain.
AGOA	AGOA is an American statute removing the tariffs on roughly one hundred African products, including cashews, from eligible countries such as Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Gabon, Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone and Togo.	
ECOWAS	A regional group of 16 West African countries that allows the free circulation of people and goods. Cashews are goods and can therefore cross borders and benefit under ECOWAS Statutes.	
WAEMU	WAEMU's members are the West African countries whose shared currency is the CFAF. The shared currency fosters trade between member countries. Fluctuations in the Nigerian (naira) and Ghanaian (cedi) exchange rate for the CFAF has an impact on trade between both those monetary zones and the WAEMU zone, in particular cashew-related transactions.	

2.7.2 Rural, regional and decentralisation policies affecting cashew production/processing

Agricultural products such as cashew nuts are generally subject to formal and informal taxation during the course of their handling, transportation between regions and sale on local markets (passage dues, market fee, development tax,

etc.). The vehicles used to transport the nuts, most of which are rundown, pay unbudgeted expenses (a form of corruption) at checkpoints manned by uniformed agents (police, customs, water and forests, gendarmerie, etc.) or for quality control (product packaging). Formal taxes are introduced by local officials and collected at passage points, leading to higher prices at the final destination.

Table 2.7.3: Rural, regional and decentralisation policies affecting value chain performance

Policies	Description	Implication for the value chain
Decentralisation Act	This law brings local governance closer, holding locally elected officials accountable for the management of territorial units (communes, districts and villages).	Rural concerns, including those related to cashews, could be swiftly understood and incorporated into communal development plans.
Law 98-007 of 15 January 1999 on the financial system in communes in the Republic of Benin	Arts 8 to 15 refer to the list of receipts of both the operational and investment section.	Companies along the cashew value chain are concerned by the following types of taxes: <ul style="list-style-type: none"> ▶ property tax ▶ general taxes on income from land occupation ▶ single business tax: patent, licence, tax on business profits, employer payments on wages ▶ advertising tax. These taxes, whose amounts vary from one commune to another, can increase the production costs of processing firms.

2.7.3 Business governance

The governance rules are basically grounded in the standards applied by the product buyers. For raw nuts, the *KOR* (*Kernel Outcome Results*) is systematically used by buyers to determine the purchase price. The higher the *KOR*, the more

interesting the price. Good *KOR* exceed 45%. The *HACCP* (*Hazard Analysis Control Critical Point*) standard relates to the hygiene of processed products.

Table 2.7.4: Production and processing standards

Name of the standard or rule	Implication for the value chain
KOR	The <i>KOR</i> is applied to raw nuts at the moment of purchase by large-scale buyers and exporters. A good <i>KOR</i> , which is a standard set by Indian legislation, is between 43 and 48. An excellent <i>KOR</i> varies from 48 to 55. A higher <i>KOR</i> results in a higher farmgate price for the grower.
HACCP	HACCP relating to the consumption of pesticides in the form of residues is applicable to processed products intended for the European and American markets. Cashews are concerned, and only the Afonkantan processing unit meets the HACCP criteria.
UNECE Standard DF-17 and ISO 6477	Codifies various aspects pertaining to kernels intended for consumption.
Traceability	In accordance with Regulation EC/178/2002, food sector agents establish systems and procedures for tracing ingredients, foodstuffs and, as required, the animals used to produce foodstuffs.



2.8 SWOT analysis of the cashew value chain

The main bottleneck in the value chain is currently poor stakeholder organisation and the low level of vertical and horizontal cooperation along the entire chain. In addition, certain meso elements, such as inputs and equipment,

function poorly. Lastly, at micro level, primary production suffers from poor quality and low productivity because of the failure to apply suitable best practices and the lack of guidance services along the value chain.

Figure 2.8.1: Illustration of the difficulties in the cashew value chain

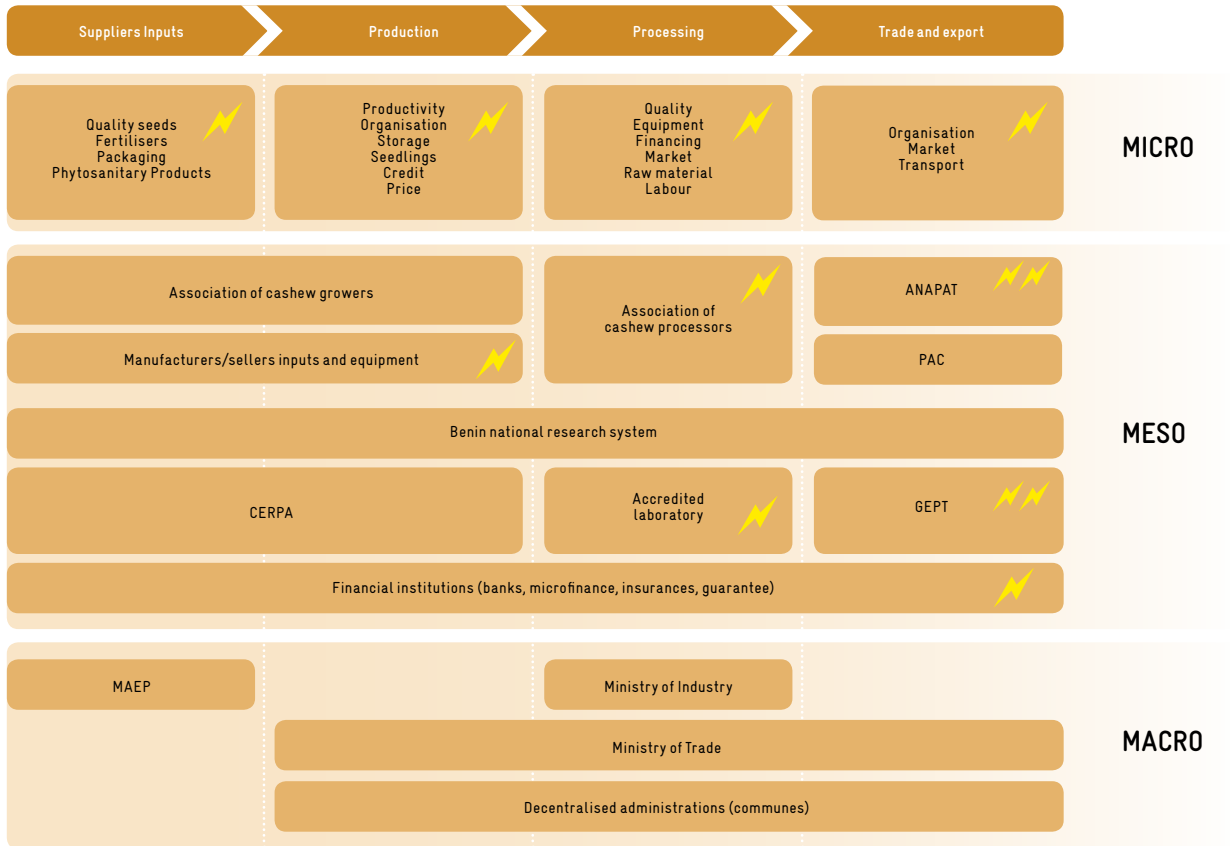




Table 2.8.1: SWOT synthesis

Strengths	Opportunities
<ul style="list-style-type: none"> ▶ Availability of outreach aids ▶ Priority for cashews in government strategic plans ▶ Existence of grower organisations ▶ Good quality of Beninese nuts ▶ Keen interest of operators in processing ▶ Existence of plantations ▶ Extension of new plantations 	<ul style="list-style-type: none"> ▶ High demand for Beninese nuts ▶ Rise in global demand (5%) ▶ ACA support to promote African nuts ▶ Possibility to increase yield ▶ Possibility to integrate crops ▶ Existing innovations badly used ▶ Processing brings added value ▶ Existence of banks for agricultural activities ▶ Availability of arable land ▶ Support from technical and financial partners ▶ Grower enthusiasm
Weaknesses	Threats
<ul style="list-style-type: none"> ▶ Organisations of growers and stakeholders barely functional ▶ Ageing plant material ▶ Difficult access to cashew-specific financing ▶ Low processing capacity ▶ Difficult access to specific inputs ▶ Product prices tending to fall ▶ Low plantation productivity ▶ Poor knowledge of market access rules ▶ Few incentives for processing ▶ Lack of reliable statistics ▶ Absence of appropriate credit ▶ Exporter monopoly of the market ▶ Nut quality affected by uncontrolled inflows 	<ul style="list-style-type: none"> ▶ Recurring fires in the plantations ▶ Fixed parity of the local currency and its pegging to the euro ▶ Difficult regulation of the local market ▶ Trading in raw nuts more lucrative than processing ▶ Massive arrival of foreign capital for trading in raw nuts, to the detriment of processors ▶ Failure to monitor trading system (fixed price) ▶ Labour-intensive ▶ Inoperative organisations







3 Cooperation and Collaboration with other Programs

3.1 Overview of ongoing cooperation activities

For some time now, in particular since the late 1990s, several projects and programmes have been involved in the cashew sector in Benin, in view of its importance in the local and national economy. Active projects and programmes include:

- ▶ *ProCGRN*, which is financed by *GIZ* and conducts activities in Atacora and Donga departments
- ▶ *PADSA-II* and its Component A (Support for development of the private agricultural sector), which is financed by *DANIDA*
- ▶ *PADFA*, which is financed by the Government of Benin
- ▶ *PADEX*, which is financed by *UNCTAD*, *ITC* and *UNDP*.

These projects and programmes have a much stronger presence in primary production, providing support to growers, to public or private service institutions such as the technical structures of the Ministries of Agriculture (*INRAB*, *DAGRI*, *DPQC*, etc.), Trade (*CEBENOR*, *DGCE*, *DGCI*, etc.) and Industry, and to unions of growers, various associations, processors, etc.

Several past projects and programmes have given fresh impetus to the sector. They include *PADSE*, which operated in central and northern Benin, and *PAMRAD*, in north-western Benin.

The *ACi* project is particular in that it integrates the “value chain” dimension and acts simultaneously on various links in the chain, i.e. the production of inputs, the production of raw material (nuts), processing, trading and market access. Since previous projects and programmes paid insufficient attention to that dimension and focused more closely on specific links, the *ACi* will be able to root its strategy in the strong points developed by each of them at each link. By the same

token, ongoing projects and programmes will make perfect partners for the *ACi* on given topics as they pool their resources for more productive action in the field.

3.2 Opportunities and suggestions for future cooperation with ACi

ACi's cooperation with the various ongoing programmes and projects remains a necessity, first to consolidate past achievements and avoid doing what has already been done, and second to draw on past experience, in particular in terms of weaknesses and obstacles. Bridges of cooperation could be built so as to pool efforts on given topics or on spatial occupation with a view to enhancing future endeavours.

An exhaustive list must therefore be made of the various programmes and projects in the public and private domains, so as to obtain information on achievements and the gaps that remain to be filled. The list could result in a database that would serve as a reference for future activities in Benin's cashew sector.

Right now, however, the *ACi* could already start to cooperate with *SONAPRA*, the *MAEP*'s instrument for implementing agriculture sector policy in Benin, including cashew policy. Cooperation could also be extended to national ongoing projects, programmes and initiatives, in particular:

- ▶ *PADSA*
- ▶ *ADEx*
- ▶ *FENAPAB* and the *URPAs*
- ▶ the various technical and financial partners in the agricultural sector
- ▶ the NGOs backed by the technical and financial partners.

Table 3.1.1: Cooperation/coordination with other programmes

Ongoing programme/project to promote the cashew value chain	Main partners concerned (government, NGOs, donors)	Geographical area	Principal activities	Duration / period of activity	Potential for cooperation	Interest in cooperation	Remarks	Experience of cooperation	Integration in the cashew value chain
ProCGRN	GIZ	Atacora and Donga (north-west)	Conservation of natural resources and cashew value chain	2007–2014	High		ACi programme support	Good	Yes
			Agriculture	2004–2009			Has participated in projects to define cashew value chains		
PADFA	DANIDA		Support for agricultural sectors		Low	Yes	PADFA activities will be transferred to SONA PRA, which heads the sector in Benin	-	
PADEX	National budget	National	Trade Agroindustry	2007–2010	-		Projects centred on the private sector	-	+/-
Income-generating projects	International Fund for Agricultural Development (FIDA)		Rural micro business financing		-		Activities for agricultural/cashew operations	-	Yes
			Facilitation		High		Programme already supporting grower organisations	-	Yes (Loi AGOA)
MCA	USA		Support for grower organisation		-		Faith-based NGO	-	Yes
ICCO/DEDRAS NGO	Netherlands	Borgou and Collines	Pest control	2009	High	Yes	Partnership between universities and research institutions	-	Yes (finan. BMZ)







4 Conclusions

4.1 Identification of gaps in information

4.1.1 Overview of missing information

Present information gaps at each level of Benin's cashew value chain relate in particular to the production link and reliable data on the national production potential (number of producers, real surface area of plantations, productivity of trees by agroecological zone and the characteristics of existing varieties and their performance). The real capacity of existing processing units, in particular small-scale units, needs to be better grasped in order to gauge the progress made in that area. The technologies and techniques used by the latter continue to be shielded from view, for reasons of "protection". In terms of trade and export, there is no control of the volume or quality of nuts leaving and entering from neighbouring countries. There is no information on the turnover and number of opera-

tors involved in cashew trading and export, above all because of the sector's informal nature. All this information is required, however, to draw an accurate map of the cashew sector in Benin and to improve activity planning and outlook.

4.1.2 Development of a plan to collect missing data

The missing data can be obtained through surveys or specific studies. A collection methodology can be conceived whereby all the information is available for all links in the value chain. It may nevertheless be difficult to obtain data on the turnover of dealers and exporters, given the lack of transparency characterising this link in the chain.

Table 4.1.1: Gaps in information

Value chain participants	Gaps in information	What follow-up is required?
Growers	<ul style="list-style-type: none"> ▶ Number of growers ▶ Plantation surface area ▶ Productivity of trees by agroecological zone ▶ Product quality categories by agroecological zone ▶ Characteristics of existing varieties and their performance ▶ X % of cashew farmers believed to be living below the poverty line 	To be determined by specific studies of sample selections
Processors	<ul style="list-style-type: none"> ▶ Real capacity of existing units ▶ Number of small-scale processing units ▶ Technologies and techniques used by small-scale units 	To be determined by a systematic survey
Dealers and exporters	<ul style="list-style-type: none"> ▶ Flow of nuts from or leaving neighbouring countries ▶ Turnover of operators involved in trading and exporting ▶ Number of operators involved in trading 	<p>To be determined by specific studies of sample selections</p> <p>Systematic survey</p>

Table 4.1.2: Timetable for obtaining the missing data

No.	Data to be obtained	Mode	Possible duration	To be done by?	Observations
1	Number of growers	Survey	6 months	<ul style="list-style-type: none"> ▶ University ▶ Research institute ▶ Research office ▶ OCG 	May be coupled with activity 1
2	Characteristics of existing varieties and their performance	Studies of sample selections		<ul style="list-style-type: none"> ▶ University ▶ Research institute ▶ Research office 	
3	Product quality by agroecological zone			<ul style="list-style-type: none"> ▶ University ▶ Research institute ▶ Research office ▶ OCG 	
4	Productivity of trees by agroecological zone			<ul style="list-style-type: none"> ▶ Consultants ▶ Research office 	
5	Plantation surface area			<ul style="list-style-type: none"> ▶ Research institute ▶ CeRPA ▶ OCG 	
6	Real capacity of existing units	Survey	1 month	<ul style="list-style-type: none"> ▶ Consultants ▶ Research office 	May be coupled with activity 6
7	Number of small-scale processing units			<ul style="list-style-type: none"> ▶ Consultants ▶ Research office 	
8	Technologies and techniques used by small-scale units			<ul style="list-style-type: none"> ▶ Consultants ▶ Research office 	
9	Flows of nuts from or leaving neighbouring countries	Studies of sample selections	3-4 months	<ul style="list-style-type: none"> ▶ Research institute ▶ CeRPA ▶ OCG ▶ Consultants 	
10	Turnover of operators involved in trading and export			<ul style="list-style-type: none"> ▶ Consultants ▶ Research office ▶ Ministry Trade 	
11	Number of operators involved in trading	Survey	2 months	<ul style="list-style-type: none"> ▶ Consultants ▶ Research office ▶ Ministry Trade 	May be coupled with activity 10





4.2 Review of the ACi project strategy

4.2.1 Priorities of the strategy

Key points of agreement	Next steps	Opinion?
<ul style="list-style-type: none"> ▶ Work on the basis of existing national action plans for the cashew sector ▶ The processing of nuts is a major loop-hole in current endeavours ▶ Relations between organisations of growers and processors/buyers are key to the project's success ▶ Existing methodologies and analyses could provide valuable lessons on the efforts made in other countries 	<ul style="list-style-type: none"> ▶ National overview of stakeholders: ensure clear links with current efforts and engage the government ▶ Evaluate and communicate investment opportunities in processing for private sector members ▶ Clarify the sequence of production and processing activities (processing order of priority, if possible) 	<ul style="list-style-type: none"> ▶ In Benin, the government is already involved in the project, through the MAEP (see participation in official launch in Cotonou) ▶ The current ACi strategy is based in the main on the priorities set out in the various existing plans. ▶ The stakeholder survey has already been made, in this report. ▶ Opportunities to invest in processing are already being communicated.

Source: Dalberg 2009

4.2.2 Suggestions for other activities

Other activities could be:

- ▶ to capitalise on existing information and disseminate it to the various stakeholders along the value chain (research outcomes, information on processing technologies, market rules, price changes, etc.)
- ▶ to document the various facilities set out in regulatory texts to promote investment in processing (laws, decrees, decisions)
- ▶ to use community radio stations to spread knowledge to the growers.







List of Acronyms

ABC	Afonkantan Benin Cashew
ACA	African Cashew Alliance
ACI	African Cashew initiative
ADEX	Export Development Association
AFD	Agence Française de Développement
AFETRACA	Association of women cashew processors
AGOA	African Growth Opportunity Act
ANAPAT	National Association of Buyers of Tropical Agricultural Products
BCEAO	Central Bank of West African States
BMGF	Bill & Melinda Gates Foundation
BMZ	German Federal Ministry for Economic Cooperation and Development
BTC	Belgian Development Cooperation Agency
CCIB	Benin Chamber of Commerce and Industry
CEBENOR	Beninese Centre for Standardization and Quality Management
CERPA	Regional centres to promote agriculture
CFAF	French Community of Africa franc
CNA	National Chamber of Agriculture
CNPE	National Economic Policy Committee
CNSL	Cashew nut shell liquid (or oil)
DAGRI	Agriculture Directorate
DANA	Food and Applied Nutrition Directorate
DANIDA	Danish International Development Agency
DCM	Trade and Marketing Directorate
DEDRAS	Faith-based NGO working for the sustainable development, reinforcement and self-promotion of community structures
DGCE	Foreign Trade General Directorate
DGCI	Internal Trade General Direction
DGDDI	General Directorate of Customs and Excise Tax
DGFRN	General Directorate of Forests and Natural Resources
DPQC	Directorate Promoting the Quality and Packaging of Plant Products
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	Statistical Database of the Food and Agriculture Organization of the United States
FBSPL	Foretell Business Solutions Private Limited

FENAPAB	Benin National Federation of Organisations of Cashew Growers
FOB	Free on board
FSA	Faculty of Agronomic Science
GDP	Gross domestic product
GEPT	Group of Exporters of Tropical Produce
GK5	Groupe Kaké 5
GPRS	Growth and poverty reduction strategy
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
HA	Hectare
HACCP	Hazard Analysis and Critical Control Point
HDI	Human development index
HPI	Human poverty index
ICCO	Interchurch Organisation for Development Co-operation
IITA	International Institute of Tropical Agriculture
INRAB	Benin National Institute of Agricultural Research
INSAE	National Statistical and Economic Analysis Institute
ITC	International Trade Centre
KOR	Kernel Outcome Results
MAEP	Ministry of Agriculture, Animal Husbandry and Fishing
MCA	Millennium Challenge Account
MEF	Ministry of Economy and Finance
MIC	Ministry of Industry and Trade
MT	Metric tonne
NGO	Non-governmental organisation
OCG	Organisation of cashew growers
OECD	Organisation for Economic Co-operation and Development
PAC	Cotonou Autonomous Port
PADEX	Programme to support the development of exports
PADFA	Programme to support the development of agricultural systems
PADSA	Programme to support the development of the agricultural sector
PADSE	Project to improve operating systems
PAMRAD	Project to support rural areas in Atacora and Donga
PASP	Private Sector Support Project
PROCGRN	Programme to conserve and manage natural resources
PRSP	Poverty Reduction Strategy Paper
PSIA	Ex-ante poverty impact assessment



PSRSA	Strategic plan to reinforce the agricultural sector
SAMAC	Société africaine pour le management, l'affrètement et le commerce
SDI	Société de distribution intercontinentale
SESP	Studies, Statistics and Performance Service
SME/SMI	Small and medium-sized enterprises/industries
SNV	Netherlands Development Organization
SONAPRA	National Society for the Promotion of Agriculture
SWPO	Strengths, weaknesses, potentials, obstacles
UAC	Abomez-Calavi University
UCPA	Communal unions of cashew growers
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UP	University of Parakou
URPA	Regional unions of cashew growers
UVPA	Village unions of cashew growers
USA	United States of America
US\$	United States dollar
VAT	Value added tax
WAEMU	West African Economic and Monetary Union
WTO	World Trade Organization
ZM	Peripheral area

Appendix I: Bibliography

A great deal of varied material has been produced on the Benin cashew sector, most of it within the past ten years. Some of that material was used for the present study and is cited above. A great deal of material was not used, because it

was not necessarily relevant. Unfortunately, many of the sector's stakeholders do not have access to the literature, either because it is not available or because it exists in a form that is not adapted to the user group.

Titles / authors	Year	Comments/observations
Benin National Assembly (2009). Law No. 2008-09 on the 2009 Finance Act; 36 pages.	2009	Legislation in force
CCIB (2009). Répertoire des institutions de financement et d'appui aux PME & PMI; 2009 edition, 180 pages.		Credible
Dalberg (2009). Competitive African Cashew Value Chains. Africa Cashew Development Project; Summary materials from kick-off workshop, April 15-18, 2009 Accra, Ghana.		Very credible
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Matthess A. et al. (2008). Atelier de validation de la stratégie et d'élaboration du Plan d'action de la filière anacarde du Benin; MAEP/GIZ/ProCGRN, 87 pages.	Credible. Government source.	
MEF/General Directorate for Economic Affairs/CNPE (2008). Programme pluriannuel de convergence actualisé 2009-2011; updated version, 50 pages.	Credible	
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INSAE (2007). Enquête modulaire intégrée sur les conditions de vie et des ménages (EMICoV) Bénin; summary report.		

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MAEP/MIC (2007). Stratégie de Relance de la Filière Anacarde: Document de référence 2007-2011; 58 pages.		Document drawn up by all the stakeholders with grassroots data.	
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Tandjiékpon, A. et al. (2007). Comment produire des semences d'anacardier de qualité? Référentiel technico-économique; INRAB 2007, 51 pages.		Excerpt from a credible research paper	
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File on Component A: Support for development of the private agricultural sector, 85 pages.		Credible



Data		Tonnes	%	Sources
Maritime transport companies shipping products out of Cotonou Port in 2008	CMA CGM LINES	56,510	48.55	PAC (2009)
	MAERSK LINES	19,445	16.71	
	GOLD STAR LINE	12,388	10.64	
	CHARLES CARRIERE CO. LTD.	12,100	10.40	
	T.K.L CO. LTD.	7,200	6.19	
	CEC SHIPPING CO. LTD.	3,800	3.26	
	PIL	3,141	2.70	
	MITSUI OSK LINE CO. LTD.	1,362	1.17	
	DELMAS BENIN	452	0.39	
Consignment/transit companies in 2008 All based in Cotonou	TRANS-OMAR SOTRAMAC SOTEC SARL SOMITRACO SITCB SARL SICAAM-BENIN SOCOTRA-BENIN DOM-TRACO BETREXCO			DGDDI (2009)

Footnotes

- 1 FOB value estimated on the basis of an export volume of 116,398 tonnes in 2008 at 700 US\$/tonne with an exchange rate throughout 2008 of 1 US\$ = 4,478.053 CFAF (BCEAO, 2008).
- 2 The agricultural sector comprises agriculture, animal husbandry, fisheries and forestry.
- 3 Sociologically, every Beninese hopes to rise above the poverty threshold.
- 4 The technology used comprises: calibrators for sorting raw nuts into four categories; steam embrittlement; nut-shelling devices (hand or foot operated); drying chambers for drying shelled kernels before blanching; Italian mechanical peeling conveyors (pre-peeling followed by hand peeling); weighing devices (sorting); vacuum and carton packaging devices; warehouse by grade.
- 5 The processing data obtained indicate that it takes 0.03817 men/working day to process one kg of nuts. The 1,800 tonnes processed annually would therefore require 68,706 men/working day for 313 working days in the year (except Sunday).
- 6 Women account for at least 80% of the staff of processing units.
- 7 The total value of 2008 exports equals 458.3 billion CFAF.
- 8 Cashews account for 8% of export value.
- 9 Representing 20% of the total 1,800 tonnes processed by Benin.
- 10 Cashews are grown not only by these four members but also elsewhere by a non-negligible number of growers. Each member has a significant number of growers who function outside the cooperatives and therefore do not appear in the statistics.
- 11 Atacora and Donga (30.7% of the territory) are the only parts of Benin in which a systematic survey was made of potential cashew production.
- 12 There are no reliable data for the Borgou and Alibori URPA, but the two departments have a large pool of growers whose number is estimated at between 50,000 and 60,000.
- 13 The projects considered cashews inter alia as a means of diversifying activities.



Notes

A series of horizontal dotted lines for writing notes.

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