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Cashew Chain Value in Guiné-Bissau: Challenges and Contributions for Food Security: A Case Study for Guiné-Bissau

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ABSTRACT

Guiné-Bissau is a recent example of political stabilization after a recent period of instability, where the international community can play an important role in cooperation and development, but with innovation and new effective policies. Food security is certainly one of the big issues to be addressed and cashew production and respective chain value one of the main opportunities to improve the quality of life for many families. Guinea-Bissau can be considered one of the most fragile countries in Sub-Sahara Africa, but at the same time with significant economic potential. Poverty alleviation is very much dependent from agricultural activities and agribusiness will be always at the core of the most possible solutions. Within those possible solutions the contribution of the cashew sector is crucial, which has been playing already a key role in the economy and in the family survival equation. More than 80% of the families depend from agricultural activities and most of them are linked to the production of cashew. This crop represents more than 90% of exports, and at the same time is responsible for income alleviation resources at local family base. However Cashew expansion is a very recent phenomena, with about 20 years of success, beyond all political “turmoil.” Today the country is the second biggest in Africa, after Ivory Coast, and the fourth worldwide (also after India and Vietnam). Exports were around 20 thousand tons in 1990 and close to 200 thousand tons in the last year’s production. But the most important factors to be considered in a cash crop business is also a very “unique” structure of production, mostly family based and where the average dimension of production per family is dominantly between 1 to 2 hectares. Very much related to those structural characteristics, which vary by region, is the role of this crop in the food security dimension of the families, which is calculated to represent in average 4,8 months of income needs for food per year. The research addresses the Cashew chain value in Guiné-Bissau, added value possibilities with transformation, better markets, improved institutional environment and other alternatives aiming to promote the global value creation but also the dynamics of the food system, able to promote the family welfare and a sustainable development process.

Keywords. Guiné-Bissau; Cashew Agro-business Chain; Food security and Sustainable Development

1 Introduction

Cashew represents one of the most successful food chain values, regarding specific tropical products, in the last decades. It is recognized that biological diversity is bigger in the tropics, and the same can be said with regard to food consumption crops. The first globalization in the XV century provided the moment for a huge change in Europe’s vision of the World but also in the attitudes, human behavior and, of course, in technology and consumption. In food habits it is always an important exercise to think about our consumption habits (European and even worldwide occidental way of living) without the introduction of many food items, innovation based on the tropical and subtropical zones, following the identification of useful crops and development of specific crop production technologies.

This exercise will stress the importance of food innovation a "couple of centuries" ago, but still important today. For example, imagine our meals without potato, rice, corn, coffee, cacao, and many others including tropical fruits. Most of the time, this process, introduction of "new food products" into consumption, has been done in the last century. For example, this is the case for coffee and cocoa and evident in turning to "mass consumption" conditions, only achieved in the second half of the last century. The same can be said for cashew, where consumption has been growing significantly in recent years, and mainly during the last decades. Growth possibilities are far away from being already well explored (great consumption expansion possibilities are expected and foreseen).

2 Methods and Approach

The main arguments the authors used are always based on a production definition with a global perspective. Production means any process that combines more than one input, with some technology, to obtain a tangible or intangible output (tangible or intangible good) with present or future utility. This definition is centered on utility generation, focused on the consumption process, the last step in any production chain. Tropical crops and respective consumption items derived from them should always be studied, in a chain perspective, including consumption, consumption behavior, as the "trigger" to support growth in production activities.

Cashew is indeed a crop introduced in India and in the African continent, with origin in Latin America, most certainly in the North/Northeast of Brazil (Ferrão, 1994). It is a very interesting food crop, with intrinsic value in nutritional content, very rich in protein and energy. However its value in the market is clearly based on a luxury consumption type of food ("delicacy" item) and growth in the world market has been very strong in the last decades. Guiné-Bissau is one of the lusophone countries taking advantage of this opportunity of markets expansion, along with India, Vietnam, Ivory Coast and others.

An overview of the cashew market is an essential step, looking at production, processing/transformation and consumption distribution and respective evolution over time. The African position and Guiné-Bissau's specific situation in the sector are important issues to better understand the competitive position of the country and respective opportunities and challenges.

Guiné-Bissau cashew production growth and relevance in the world market is a recent phenomena, indeed with less than two decades. However, the potential of this crop in regard to value creation, exports and a sustainable development process is enormous. Sustainability concerns will have to be present, because huge challenges and opportunities are on the way with present and future impact. The present research tries to address some of the most critical points on the chain value, and also to explore technological and institutional change opportunities, to take advantage of this crop and agribusiness.

The paper uses a SWOT system perspective analysis (strengths, weaknesses, opportunities and threats) and a set of agricultural development models, starting with the Induced Change and Innovation Model (ICI Model, in Carvalho, 2004, 2013), where changes are always assumed to be made accordingly with a certain economic rational, and also taking into consideration a structural view of the food balance system evolution (World Food Security Equation Model – WFSE, Carvalho, 2013). Beyond that, it is relevant to consider the Demand Constraints rational/model (Carvalho 1989, 2014) in which the demand side of the food system is seen as the main driver of the technology and institutional changes.

Guiné-Bissau is a country situated in the West Coast of Africa, with 36152 Km2 and with a population around 1.5 millions, with 75% living in the rural areas (based on last available data (INE, 2010)). Population growth is around 2% per year, with expectancy of live of 47 years. In Guiné-Bissau it is estimated that 2 persons in 3 are below the poverty line (meaning less than 2 US$ per capita/day).

Poverty and food security are always linked, but not always dependent of each other. That is, it is possible to have a reasonable food system at a very low level of income; however it is not easy, and many times not possible. For low income level countries in tropical regions, however, achieving a minimum of food intake and food security status are the most important challenges of the families, and should also be the base for public policy objectives.

Cashew in Guiné-Bissau represents more than 90% of exports, but also represents one of the main activities in most rural areas, and source of income. The estimations performed to evaluate the relevance of cashew production in the household economy showed that around 40%, in average of the food intake, depends on cashew sales. Indeed, in most regions, there is a price expressing the direct value ratio between cashew and rice. This data confirmed the responsibility of the cashew chain value in the country, at macro, but also at micro level.

The future evolution of the Chain Value for Cashew will have a deep impact on the country, and it is a collective responsibility, including the international community, to help finding out the best solutions to grow, to add value, and to have an inclusive evolution of the system. The results of the present research aim to contribute to those objectives and purposes. The paper starts with the international market analysis, looking into the main players, production and consumption and defining the relative position of Guiné-Bissau in the cashew food chain, globally and in the African region. It stresses the good recent behavior and the main challenges for the future.

It is also demonstrated the relative importance of this sector to the country at macro level, but mainly in terms of food security of the families.

3 Worldwide sector overview

India is the leading country after disputing the first place with Mozambique in the beginning of the seventies, assuming clear dominance in the market with the independence changes after 1974 in Mozambique. Cashew production was introduced most probably in Cochin/India after the connections with Latin America performed by the first globalization done by the Portuguese and European worldwide expansion. Cashew is a plant with origin in the Northeast region of Brazil and greatly expanded in the second half of the twentieth century.

Today, Asia is dominant in production and consumption, Africa is the second region in the world, regarding production. For consumption, USA and Europe used to be the most important ones. Recently, some significant changes occurred, India assuming also the leading position in consumption which represents an important structural change in the market.

Table 1.

Main Players in the Cashew Chain – Production Side (2013/14).

Asia	**Raw.Cashew Nuts(RCN)**	**% of total**	**Processing**	**% of local**
	Mt.		**Volumes**	
India	650 000	27	1 250 000	192
Vietnam	300 000	12	719 000	240
Sub-total	**1 060 000**			**188**
West Africa				
Ivory Coast	550 000	23	40 000	7
Guine-Bissau	160 000	7	3000	2
Sub-total	**1 020 000**			**12**
East Africa				
Mozambique	45 000	2	30 000	67
Tanzania	125 000	5	20 000	16
Subtotal	**182 500**			**31**
Latin America				
Brazil	**150 000**	6	240 000	160

Source: Data in annex 1

USA and Europe continue to grow in consumption, but are no more the leaders in consumption volumes. However, they still represent the most important international markets which are not involved in production. Data in table 1 show some particular issues in the value chain for this tropical crop, growing very fast worldwide, but with clear dominance from Asia, especially India and Vietnam. Both countries are important in production, but are doing very well in processing activities, meaning that they are net importers also. There is only one region which has a “net surplus,” (exporting region by definition), with very limited processing activities and volumes. Africa is really the main supply source for any other continent/region, because all the others, including the biggest are important net importers. In Africa, Mozambique is the leading processing country achieving almost 70% share in processing in regard to its own production.

The numbers show how important it will be to promote the processing activities in Africa, but also show how relevant it will be to promote new markets and chain dynamics. However, exploring the expansion capacity in raw material will continue to be important for many years ahead. In Africa, processing activities are growing in almost all countries, but strong variations are possible in short periods of time, and stable growth trends are still not evident for all. Data in table 2 show in more detail the situation in Africa, where information needs to be confirmed and better understanding is needed to look for trends and future forecasts.

Table 2.
Estimations for Africa processing quantities

Country	2007	2012*	Change	2013*
Mozambique	39000	20000	"-"	30 000
Ivory Coast	6000	15000	"+"	20 000
Tanzania	16000	10000	"-"	20 000
Ghana		5000	"+"	20 000
Burkina Faso	900	5000	"+"	10 000
Nigeria	18000	5000	"-"	40 000
Kenya	5500			6 000
Benin	1700	10000	"+"	10 000
Guiné-Bissau		2000		3 000

Source: Mendes (2011), based in ACA data and

* Est. ACA in Brou, Roger (2014). Workshop in Guiné-Bissau – ANCA organization

Beyond instability, the information is quite consistent with a great growth rate in adding value activities, which is today an objective for many countries. However, innovation is still an alternative to be studied at all levels of the chain value for cashew.

Consumption behavior will be the main driver of the cashew chain, but proactive solutions can be determinant from the supply side to promote consumption. “Consumption space” is now an interesting concept in which a set of products are competing among themselves but also with other similar products in a “common space”. In food consumption this “idea” of “consumption space” is very much evident, in the sense that human behavior will suffer from natural “demand constraints.” This can be seen as a biological limitation in food consumption (human) capacity. However, for cashew it seems we are far away from a “saturation level” and using the development perspective models of the growth theory and/or product cycle, the product seems to be on an expansion phase in most markets.

Table 3.
Consumption in kernels (ton.)

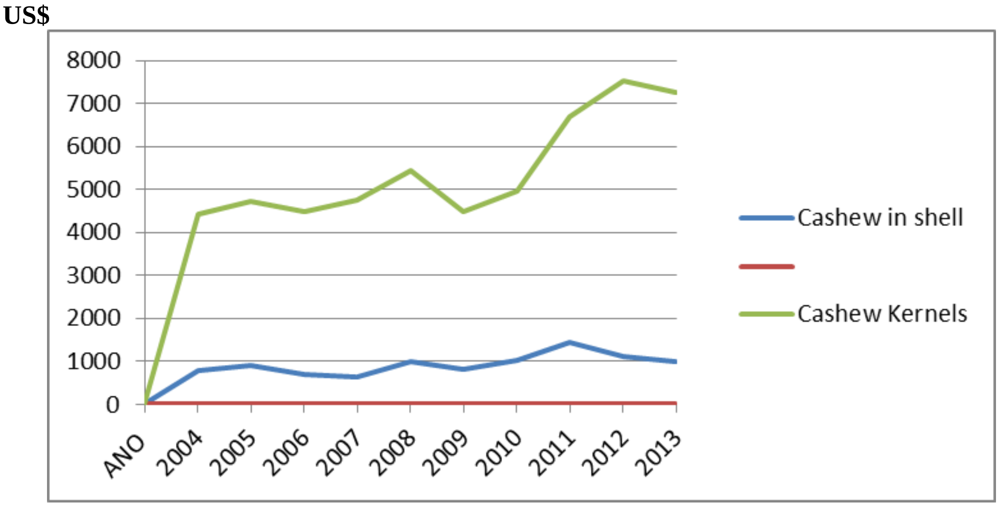
Country	1987	1990	1995	2000	2005	2008	2010	2012
INDIA	4869	4883	49995	89319	155490	209713	181054	258589
USA	43848	59185	56814	87035	136667	147441	139317	121215
EU	12040	12530	23324	39160	61282	85667	89451	86344
MIDLE. EST	945	1803	4913	6894	15926	28013	36401	45720
AUSTRALIA	2199	3036	5534	5842	14369	15697	16139	13909
Others	15908	4574	19613	28041	86159	65568	71470	102653
World	79809	86011	160193	256291	469893	552103	533832	628430

Source: Mota, A. (2014). ANCA workshop organization in Guiné-Bissau

The results presented in table 3 confirmed the expansion phase in most markets. The most relevant consumption increase, in the last years (ten year period), was in India. For the first time, the main producer is now the main consumer. USA, the biggest consumer up to the end of the twentieth century, increased consumption up to 2008, before the crisis, and now, after some decrease is supposed to recover. In regard to the European Community, the numbers are similar, with increases up to 2010 and with the crisis also some decrease. It is important to note that Europe was about 1/5 in consumption in regard to USA in 1990, but around 2/3 in 2010, which means a great expansion in Europe. All the others seem to keep a strong path of growth, with Australia also showing some negative impact with the economic crisis. However, changes will probably continue with a positive path globally with economic growth in the next years.

The Market conditions change substantially. The markets share is one dimension of the strong changes in market behavior, with more players and less concentration. Another important change is having now some producer countries with important presence in consumption, with clear relevance for India and Brazil. Accordingly with the last information available in 1990, USA had almost 70% of the market, and only 20 % today (2012), European Union had around 15% of the market share, with more or less the same share today (in 2012), and the rest of the world a very small intervention in 1990, but already dominant today. The most significant change occurred with India, with almost no relevance in the consumption market (more or less 5% in 1990) and today with more than 40% in the global market. Those changes show significant business opportunities, either exploring a general continuous growth in consumption in traditional markets, or in exploring new markets.

Looking at the price behavior since 2004 (figure 1), (more information in annex 2), it is clear that prices have been reasonably stable in the supply side for raw material, but for industrialized/processed material the prices have been growing significantly. This is the result of adding value strategies and probably some pressure from consumption, which shows good prospects for business activities. On the other side, it is necessary to do an intensive inquiry/research and market study to understand why higher prices at the final consumer are not, at least partially, reflected in higher prices in production.



Source: Mota, A. (2014). ANCA workshop organization in Guiné-Bissau

Figure 1. International prices for cashew in shell (raw material) and in kernels

4 Cashew in Guiné-Bissau

It is not possible to talk about development in Guiné-Bissau, and specifically agricultural sustainable development and food security, without considering the Cashew Value Chain and the food systems connected directly and indirectly with this crop.

The agricultural systems in Guiné-Bissau for Cash Crops such as Cashew are dominated by family farming systems. It is quite evident that on Cashew depends the sustainability of the balance of payments, but beyond that, the satisfaction of food intake and food security for a majority of the families and population.

As a consequence, the overall development process will depend greatly on the food systems based on the cashew value chain and respective interfaces. Rice production and other food production systems, together with environmental sustainability concerns, will be central to all possible strategies, which should always be implemented with an inclusive and strong participation process.

The first important fact about cashew in Guiné-Bissau is the relevance of this crop in the economy, globally and at local/family base, but also to realize that this relevance is a recent phenomena, a success "technological change process," with no more than twenty years of existence.

Table 4.
Cashew Production Evolution in Guiné-Bissau

Year	Production (ton.)	Area (Hectares)	Information	
1980	2907	6015	Source	
1990	17500		** CNC-exports	
1990	19450	26000	* Mendes (2010) in Carvalho et al (2012)	
2000	80000	103000	"	
2010	122249		ANCA(2013)	Exports
2013	182000		MOTA(2014)	Production

Source: Different sources mentioned

The numbers in table 4 show that cashew production was around 2900 tons in 1980, but only 10 years later the volume achieved a significant dimension close to 20 thousand tons. Since then, growth continued and the economic relevance became evident with this crop deserving a special attention from the government, at global level but also entering in the dynamics of family business and households in rural areas.

It is important to consider different sources of information, given the instable institutional environment, taking into consideration the knowledge about differences in data about exports (table 5) and production, because it is well known that a significant proportion of the country production is exported through the neighboring countries such as Senegal for example. Of course this concern is already under evaluation by ANCA, in regard to the identification of solutions and to find out possible policy measures that can improve the value creation in Guiné-Bissau.

Table 5.
Cashew (in shell) Exports Information

1980	**1990**	**2000**	**2005**	**2010**	**2011**	**2012**	**2013**
Ton.	Ton	Ton	Ton	Ton	Ton	Ton	Ton
2201	17500	66000	87120	122249	174002	134410	132000

Source: ANCA (2013).

Any evaluation of the production process shows a tremendous success in terms of growth in this crop and this confirms the natural advantages of the country for cashew production but also the national dynamics of the families and entrepreneurial initiatives at family level. This is important evidence that, when certain conditions are fulfilled, even people without formal education are able to act with a very economical rational (and entrepreneurial) orientation.

Guiné-Bissau is an important natural region for Cashew, with competitive and comparative advantages, which is also evident in terms of the yields in processing output. Table 6 below offers two different types of transformation coefficients, important in terms of competitive and comparative advantages overall. Notice that KOR coefficient ("out turn" measure) means the expected value in pounds (weight expected) for 80 kg of cashew in shell. For example KOR of 54, means 54 pounds of cashew kernels for 80 kg (one traditional sac) of cashew in shell (equivalent to 30,6% in weight).

Table 6.
Country Coefficients for Quality

Country	KOR	Number of kernels per kg
Benin	45-51	175-210
Gana	48	200-210
Guiné-Bissau	52-54	210-230
Ivory Coast	46	190
Kenya	43-50	180-200
Moçambique	46-52	175-230
Nigeria	46	200-210
Senegal	51-53	220-270
Tanzania	46-52	175-230

Source: Mendes (2011)

Looking to several different dimensions of the production system, it is now possible to say that natural conditions are quite good and providing comparative advantages. The entrepreneurial initiatives in production/agricultural level are quite active, and now the most important challenges are the adding value alternatives in the processing and commercialization process and the institutional/governance environment. ANCA – National Agency for Cashew is an important institutional innovation which is supposed to be a key element in the system to help "solving" those challenges (connected to REDISA-CPLP – Network for Food Security and Sustainable Development in the CPLP community).

5 Food Security and Cashew in Guiné-Bissau

It is an important conclusion, from previous research and starting point of analysis, that food security and poverty alleviation in Guiné-Bissau are very much interdependent, in the present context, from the possibilities that the Cashew chain can provide.

First of all, it is necessary to know that income level and development indices are all very low, in relative terms internationally. Being aware of all limitation on indices measures and of quality of life evaluation, it is important to take them into consideration to understand the actual situation of the economy/society and to be able to identify the main challenges for the economic development process and for policy design alternatives.

Table 7.
Absolute Poverty levels and regional contributionshare in overall poverty

Regions	Absolute Poverty Share (%) (less than 2$ per day)	Regional Contribution for poverty in %
Bafatá	72,4	13,6
Gabú	65,8	12,3
Biombo/ Bolama	62,6	9,1
Cacheu	63,8	14,2
Oio	79,6	18
Quinara/ Tombali	69,1	12,2
Bissau	51,7	20,6
Regions without/ Bissau	69,1	79,4
Country Total	64,7	100

Source: INE/2002 (Instituto Nacional de Estatísticas e Censos/Guiné-Bissau) in Embaló (2008) and Carvalho, B.P. e H. Mendes (2012)

Poverty, measured in terms of people share with income lower than 2 US$ per capita per day (table 7) is obviously very high in a society where “escambo” (or barter agreements) is still present and frequently used, for example to “trade” cashew” with food, mainly with rice. With all well known limitations, the poverty measure provides a quite good indication of development processes and the figures in table 7 allow a global view where around 2/3 of the families are below poverty line.

However there are regions with very high poverty levels and a quite good situation in food security (one of the highest poverty levels but with the best position in terms of food security (table 9) is Bafatá). What is important to realize is the fact that global development in Guiné-Bissau is in the first stages of the normal changing process with globalization. Transfer of technology, access to modern knowledge and local based research are very limited up to now. This situation can be seen as a handicap but can also bring some opportunities to act differently with innovation and to follow a very “smart move” searching for the best solutions available (with actual knowledge) and learning with others experience internationally.

What is impressive on a very “informal society organization” is the family dynamic participation in the cashew business, and the ability to react fast with this innovation. Recalling that growth in Cashew production is a recent phenomena (with relevance in the last 25 years), the family base production dominates more than 80% of overall production. Table 8 shows, quite well, that the average family production structure maintains around 50% of the area under exploration with cashew (1,5 ha in 3,3 hectares) while the rest is distributed between rice production and other crops.

Table 8.
Average Agricultural Area per family - Hectare / per family

National Average	Rice Freshwater	Rice Salt water	High Land (Whithout Cashew)	Cashew	TOTAL
Average Agricultural Area (hectare)	0,3	0,4	1,1	1,5	3,3
Cultivated % Cultivated area/ total available	9%	12%	33%	47%	

Source: SISA(2009)/GAPLA/MADR in Carvalho et al (2010)

It is an important exercise for development purposes to look to the global achievements, instead of looking only to the challenges ahead. In this case not only in terms of cashew business, but in terms of food security, Bafatá is in a good position and other two regions are already in an average situation such as Tombali and Cacheu. On the other hand, Oio, Quinara and Bolama are really in problematic positions, deserving special attention from public policies.

Table 9.
Family Classification per region in terms of some indicators, illiteracy ratio, non poverty percentage and indicators for food vulnerability and food security.

	2000	2002	A – índice	B -indice	C- indice
	%illeteracy	%Non-Poverty	Vulnerabil	Vulnerabil	Seg.Alim
	TOTAL	%	Level	%	%
RGB	68	35,3	1	45	39
BAFATA	87,5	27,6	0	0	100
BIOMBO	73,4	37,4	1	40	33
SAB	25,5	48,3	0	45	39
BOLAMA	59,4	37,4	2	100	0
CACHEU	66,6	36,2	1	42	40
GABU	85,9	34,2	1	40	25
OIO	82,5	20,4	2	80	20
QUINARA	74,1	30,9	2	88	0
TOMBALI	67,9	30,9	1	25	50

A – Vulnerability level – index between 0 and 2
B – Vulnerability level – index measure in % of vulnerable regions
C – Food Security level – index measure in % of regions with no problems
Source: DENARP (2006), SISA (2009), RNDH (2006) in Carvalho et al (2010)

Table 10.
Food Security Availability and respective Vulnerability classification, regarding sources of income and food production possibilities. Data expressed in Food months contribution for each activity.

Region	Sector	Caju	Food Months Equiv.	AGR2	Food Months Equiv.	AGR3	Food Months Equiv.	Cash Total	Local Ag.Prod. Potencial	Food Avail. Potencial	Vulnerab. Class
Oio	**Bissorã**	Caju	05-06-	Animal Sales	01-02-	Coal and wood	01-02-	07-09-	05-06-	12-13-	Vulnerab.
	Farim	Caju	03-04-	Cash Crops	01-02-	Animal Sales	<1	05-06-	05-06-	12-13-	Vulnerab.
	Mansaba	Caju	03-04-	Coal/wood	01-02-	Cash crops	01-02-	07-09-	11-12-	17-19	Normal
	Mansoa	Caju	05-06-	Cash Crops	<1	Animal Sales	<1	05-06-	05-06-	12-13-	Vulnerab.
	Nhacra	Caju	05-06-	Coal/wood	<1	Fish	<1	05-06-	05-06-	12-13-	Vulnerab.
Bolama	**Bolama**	Caju	05-06-	Cash Crops	01-02-	Fish	01-02-	07-09-	05-06-	12-13-	Vulnerab.
Quinara	**Buba**	Caju	03-04-	Cash Crops	01-02-	Animal Sales	<1	07-09-	05-06-	12-13-	Vulnerab.
	Empada	Caju	03-04-	Sazonal Migration	01-02-	Cash crops	01-02-	07-09-	05-06-	14-16-	Low Vulnerab.
	Fulacunda	Caju	05-06-	Fish	<1	Cash crops	<1	07-09-	05-06-	12-13-	Vulnerab.
	Tite	Caju	05-06-	Cash Crops	<1	Fish	<1	05-06-	05-06-	12-13-	Vulnerab.

Source: GAPLA/MADR in Carvalho et al (2010) and author elaboration.

The information on tables 9 and 10 provides a global overview of the country characteristics regarding food security vulnerability conditions and agricultural production systems, showing how important cashew is in regard to food security objectives. Data expressed in food months contribution of each activity, within the agricultural production actions and other alternatives, puts in evidence the Cashew contribution in the food security equation for each family. The income generated by Cashew activity represents 3 to 6 months of the needs in food, where the dominant situation is close to a very limited (survival level) situation of 12-13 months of food availability in many regions.

6 Conclusion: Challenges and Opportunities for Guiné-Bissau and for the Cashew Chain at local but also at global/worldwide levels.

The evidence of opportunities, taking advantage of the revealed competitive position of Guiné-Bissau in Cashew production, needs to be viewed integrated with the difficulties and challenges in regard to the commercialization and processing needs. Guiné-Bissau revealed a very good competitive position in terms of raw material production and transformation yields potential (processing output), but a very difficult situation in terms of processing/industrial activities, transport and commercialization (institutional environment). The evidence of the dominant position of certain buyers needs to be balanced with improved information and very active measures to promote better and more competitive markets, starting with the incentives to have more clients from different markets and geographies. On the other side, improving alternatives to make the chain more flexible and more dynamic in terms of the number of clients available and types of products, more or less processed and with different composition in terms of value added, will certainly improve the impact of the agri-business associated with this activities and creates better opportunities for a sustainable development process.

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Annex 1

World Cashew Production and Processing Shares

Asia	**Raw Cashew Nuts(RCN)**	**% of total**	**Processing**	**% of local**
	Mt.		**Volumes**	
India	650 000	27	1 250 000	192
Vietnam	300 000	12	719 000	240
Cambodia	50 000	2	2 000	4
Indonésia	60 000	2	20 000	33
Sub-total	1 060 000			**188**
West Africa				
Nigeria	90 000	4	40 000	44
Benin	90 000	4	10 000	11
Ghana	50 000	2	20 000	40
Ivory Coast	550 000	23	40 000	7
Burkina Faso	20 000	1	10 000	50
Mali	20 000	1	500	3
Guine-Bissau	160 000	7	3000	2
Senegal+Gambia	40 000	2	2 000	5
Sub-total	**1 020 000**			**12**
East Africa				
Mozambique	45 000	2	30 000	67
Tanzania	125 000	5	20 000	16
Madagascar	2 500	0		
Kenya	10 000	0	6 000	60
Subtotal			**56 000**	**31**
Latin America				
Brazil	150 000	6	240 000	160
Subtotal		**2 412 500**		
Total	2 412 500	100		

Source: Brou, Roger (2014) in ANCA workshop in Guiné-Bissau

Annex 2

Cashew International Prices

Ano	**Cashew in Shell**		**Cashew Kernels**
	USD/MT	**USD/LB**	**USD/MT**
2004	790	2.01	4428
2005	910	2.15	4736
2006	700	2.04	4494
2007	650	2.16	4758
2008	980	2.47	5444
2009	810	2.04	4494
2010	1020	2.25	4957
2011	1430	3.04	6697
2012	1120	3.41	7512
2013	980	3.30	7270

Source: Mota, A. (2014). ANCA workshop organization in Guiné-Bissau