Mozambique

ASSESSMENT OF THE SITUATION AND DEVELOPMENT PROSPECTS OF THE CASHEW NUT SECTOR

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CONTENT

INTRODUCTION

The project "Trade expansion in Cashew Nuts from Africa" funded by the ITC Global Trust Fund and co-financed by the Common Fund for Commodities (CFC), is aiming to establish a strong regional network and a structure best adapted to support the strategic export development objectives for the cashew nut sector in each of the participating countries. The activities of the project address market development issues and provide the basis for regional networking, in order to ensure the sustainable development of the cashew nut sectors and to increase their share in the world market.

The countries participating in the project, enumerated by order of their importance as exporters of cashew nuts, are: the U.R Tanzania, Mozambique, Guinea Bissau, Côte d'Ivoire, Nigeria, Benin, Kenya, Senegal and Madagascar.

The ultimate beneficiaries of the project are the cashew nut smallholders and the small- and medium-scale processors and exporters of the product. The project is expected to impact on the expansion of the direct export trade in raw and processed cashew nut from Africa towards both developed and developing markets. This would be a direct result of the efficient networking of traders, of increased market transparency and of the co-ordinated export development efforts in the region.

A high-level African meeting of producers and exporters of cashew nuts will be organized in Cotonou, Benin, in July 2002, in the framework of this project. The meeting will review the current situation of the sector in the participating countries, on the basis of country reports prepared by national experts, with a view to conclude on future development activities, as well as on priority technical co-operation activities to be undertaken in co-operation with the International Trade Centre/UNCTAD/WTO (ITC), the Common Fund for Commodities (CFC) and other international donors in the field of cashew nut market and product development.

The country reports are published in the present volume in the original drafting language, i.e. English or French. Translations in the other language may be considered at a later stage, depending of availability of additional project funds

Chapter 1: CASHEW NUT SECTOR – STRUCTURE, ORGANISATION AND DEVELOPMENT STRATEGY

1.1 Structure and organisation

Cashew was introduced in Mozambique in the 17th century by the Portuguese. Enjoying privileged conditions to grow, the tree became the most important cash crop among rural Mozambican households, and represents an important source of rural household incomes, in particular for female-headed households.

Cashew nuts are produced along the whole coastal area, which extends around 2000 km, and stretching inland approximately 200 km. The coastal zone of the provinces Cabo Delgado, Nampula, Zambezia and Inhambane, Gaza and Maputo are the most important areas of production in which approximately 26 million cashew trees exists, with 37% of the cashew trees are located in Nampula Province in the North, where 40% of the total production is marketed. The other three important provinces are Gaza and Inhambane in the South and Zambezia Province in the centre (see charts in Annex IV). There are approximately 2 million farmers involved in the production and collection of cashew nuts, for which this cash crop the main source of income is. In general, the areas where this crop is produced have poor soils and erratic rainfall, being therefore areas with low potential for the production of food crops.

Mozambique has been the most important cashew nut producer in the world, having achieved its peak in 1972 with the marketing of 217,000 tons of cashew nuts, and more than 95% of the production originated from the smallholder producers within the so called 'family sector'. Internal capacity to process cashew nuts had reached 80,000 tons per annum.

From the mid 1970s, when Mozambique became an independent country, cashew nut production started to decline, due to a lack of a strategy able to guide the development of the sub-sector. This was aggravated by the devastating consequences of the severe civil war that lasted for several years, leaving the rural areas isolated and without any attention. This lack of attention of farmers caused the appearance of pests and diseases, and later, uncontrolled forest fires affected an important part of the cashew orchard. The community policies adopted in the post independence period favoured the spread of these negative factors. The Nadia cyclone destroyed in 1994 about 40% of the existing trees, thus reducing the population from 45 million to around 26 million trees at present. The average production of nuts per tree is 1.3 kilos, what can be considered very low compared with the normal average that can be expected from a healthy tree about 8 kilos. The impact of all these factors caused the decline of the cashew nut commercialisation to levels of close to 50,000 tons per annum, as observed during the last few years (see first table in Annex IV). Raw cashew nut production has been declining over the last decades. The economic importance of the crop to the country's trade balance and its potential of future development, explain the priority given by the State to this sector.

Structure of the cashew sector in Mozambique

Agriculture is the primary and dominant occupation in rural Mozambique: agricultural activities at their small plots of land, or "machamba", are the main occupation of

about the 89 per cent of households. Only about one in five households receive any off-farm income.

Almost all rural households have access to some land, but are short on other productive inputs. Less than one percent of households surveyed in the national agricultural survey of 2000 did not have land. Households cultivate around 2 farms "machambas" (about 1.3 hectares) on the average. In the central and southern provinces, they have more land than in the northern part of the country. On average, each adult labour in the household works on 0.4 hectares of land.

Forty percent of the households throughout the country have an average 60 cashew trees. Some 80 percent of all households in the three main cashew-producing provinces[1] have cashew trees, and about 65 percent harvest cashew. The number of cashew trees and the size of the land tend to be positively correlated, i.e. the bigger the land, the more cashew trees owned by each household, most often as monoculture. Family labour is the main input to agriculture (only 18 percent of rural households make use of occasional labour). Traditionally, farmers do not use chemical fertilisers, mechanical input, or animal traction.

1.2 Gender issues

About a quarter of the households in the central and southern regions are headed by widows or separated women. In general, female-headed households are disadvantaged with respect to most productive resources. Female-headed households have less land than male-headed households and are more likely to have tighter labour constraints. They are also less likely to be educated.

The provinces of Nampula, Inhambane and Gaza are different along the gender dimension, particularly with respect to cashew production and marketing. Some 21 percent of households in Inhambane are women-headed, in Gaza 19 percent and in Nampula 14 percent. Cashew tree ownership is usually identified with the head of household. In the southern provinces women are more involved than in the Nampula province in all aspects of cashew production, a greater percentage of them plant trees, care for them, and harvest them.

However, the most remarkable difference is not related to production, but to the marketing of raw nuts. About three quarters of the small traders in Gaza province in 1996/97 were women, and 65 percent in Inhambane province. In contrast, only 18 percent of small traders in Nampula were women. Therefore, with women more involved in cashew production and sale in the South, policy changes that affect producer prices and production of cashew will have particularly important welfare implications for women.

Cashew is also the most pervasively produced cash crop among women-headed households (37 percent cultivate cashew), although the scale of production among these households tends to be smaller (48 trees per female headed household, versus 64 trees per male headed household).

[1] Nampula, Inhambane and Gaza

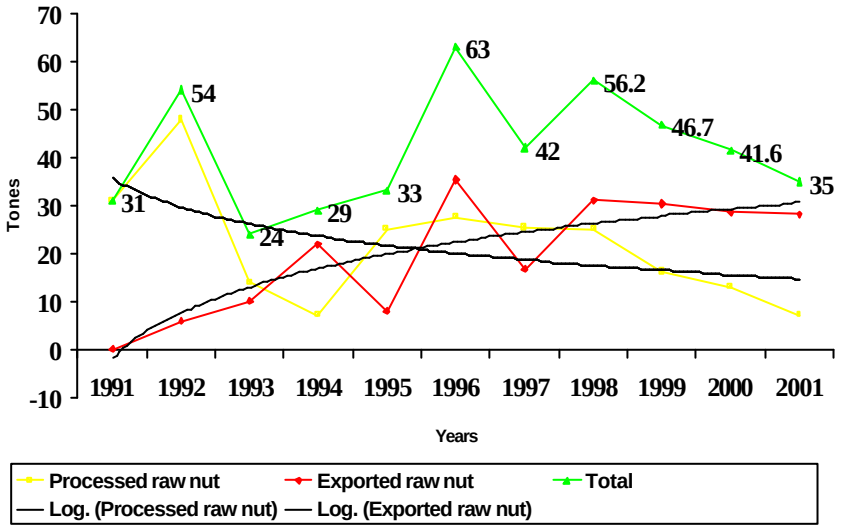
Sale of raw cashew nut constitutes an important source of income for the average rural household in the main cashew growing provinces. Additionally, many households also process some cashew into alcohol (31 percent), juice (34 percent), dry apple (25 percent), and kernel (62 percent). Sales of alcohol provide an important source of income in the South.

Nampula, Inhambane and Gaza differ markedly with respect to cashew production and marketing, reflecting several typical facts about agriculture in these three provinces. Nampula has around 20 percent (over 3 million people) of the country's population, while Inhambane and Gaza only have 10 and 8 percent respectively.

Nampula has a greater population density and smaller farm sizes. At the household level, this translates into less trees and lower raw nut production per household, but at the district and provincial level aggregation over a much larger number of households means significantly higher total quantities produced and marketed.

Partly due to the higher population density and partly for historical reasons, the trading network in Nampula is more pervasive and developed than in the South, and a higher share of households market some part of their output. As a result, commercialised cashew output per household in Nampula in 1995/96 was more than three times higher that in Inhambane and almost twice higher that in Gaza.

Processed versus exported raw nut trend



Chapter 2: SECTOR PERFORMANCE

2.1 Cashew nut production

Types of cashew cultivated. Developments concerning the improvement of cultivars.

Mozambique cashew tree orchard is composed mostly by a common tree variety whose gestation period lasts roughly 5 to 6 years. Efforts are being presently made to introduce new varieties, particularly the Brazilian dwarf variety, in order to replace gradually the old trees with more productive varieties, with a lower gestation period.

This is important because cashew is a tree crop, and the gestation period between planting and production has importance for the household responses to changes in the profitability of its cultivation. The immediate response can be through better husbandry of existing trees. Costs associated with this are primarily the higher cost of disease treatment (spraying) and the opportunity cost of family labour associated with better husbandry.

The long-term response can be a program combining new plantings and quality improvement through grafting new varieties into existing trees. Such a program is aimed to improve quality and increase production quantities. In this respect, the link between research and farmers is very important. Farmers should be left sufficient room to decide what they want to know, learn, discuss, tackle, or go on study-tours. There are no standard solutions, and making his own plan is the best way for the farmer to be sure that he does not loose money on upgrading his field.

Farmers must be better prepared to face other problems in their production, instead of building on prescriptive technologies.

INCAJU established a short term intervention program, intended to introduce the concept of business, in order to allow the companies providing services on diseases treatment (spraying) to make profits, which is in other words to make it a business and to guarantee sustainability. This will demand, however, a secured access to inputs. This can be achieved in several ways, namely by:

- Selecting local suppliers of inputs, including chemicals for spraying, petrol, oil and spare parts for motorized sprayers;
- Selecting the companies willing to provide credits and the supplies in a given geographical area, in direct cooperation and linkage with farmers' associations;
- selecting and training local mechanics by INCAJU's own mechanics, in maintenance of sprayers.
- training workers in rural areas in spraying techniques, in dealing with inputs such as, chemicals, petrol, oil etc., and in common tree diseases, showing them how to identify and treat them.

In all aspects related to the building up of the local infrastructure, it is essential that buyers play an active role in building up the capacities, as well as in providing access to credit to local suppliers.
Regarding medium and long-term intervention, there exist presently two nurseries in Nampula Province, one managed by Entreposto - a private company that is planning to leave the cashew business, and Nassuruma, which is managed by INCAJU in collaboration with INIA (Mozambique Agriculture Research Institute). These nurseries are producing and distributing (selling) seedlings to small holders. However, farmers' interest in buying these seedlings is very weak. Therefore, it is very

important to stimulate farmers' interest in buying seedlings of varieties they believe are the best for them.

Main factors influencing production and harvesting performances

Present cashew yields per tree are very low, averaging about 3 Kg, and a large program aiming at increasing productivity is being implemented under the lead of INCAJU, based on the use of intensive methods to get rid off the constraints, and to take advantage of the existing opportunities.

Cashew productivity is negatively influenced by several factors, including:

- the adverse incidence of diseases and plagues;
- uncontrolled fires, that destroy every year a portion of the orchard;
- reduced use of best cultural practices such as, pruning, budding, grafting, spraying etc.
- reduced and weak extension network, to support smallholders
- insufficient economical incentives to cultivation and maintenance of cashew trees, due to relatively low farm prices
- lack of credit for the smallholders, as financial institutions consider them as high risk groups
- Very weak research programs on the introduction of improvements for cashew production;
- weak structure of the rural communities and producers' organisations
- insufficient availability of labour to handle cashew cultivation, due the fact that cashew is competing with other food crops
- limited technology to process the false fruit, which in the end diminishes the yield of the trees.

In spite of all these constraints, several opportunities exist for in Mozambique to achieve a significant increase of cashew production in the short term and to guarantee the sustainability of sector in the medium and long term program. Some of those opportunities are:

- Good agro-climatic conditions for cashew cultivation
- Long experience of smallholders on this culture
- Existence of a significant orchard, despite the old age of trees;
- Possibilities to expand the cultivation areas, as land is still available;
- Existence of a strategy to develop the sector approved by the Government of Mozambique, integrating all the stakeholders;
- The steady increase of the international demand in the last decade;
- The possibility to increase yields and profitability of the sector, by introducing new technologies
- Availability of other countries' experience in expanding cashew production.

2.2 Processing

Cashew industry has a long tradition in Mozambique. The first cashew business was set up as a cottage industry by an Indian trader, among black women in the south of the country, and grew up to become the first processing unit in the country. At that time, the factory was known as "the women factory", since most of its work force were women, although they were doing only the "dirty jobs" and were getting lower salaries than their peers black men.

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LOCATION OF CASHEW NUT PROCESSING FACTORIES IN MOZAMBIQUE

Source: Technoserve records

Processing units in Mozambique use mainly four types of technologies to decorticate, or to extract the edible oil from the shell. These include manual shelling with hammer, semi-mechanical cutting, mechanical cutting and impact shelling. The final stages in all these processes follow in quick succession, are labour intensive and do not vary much from factory to factory.

Because of the simplicity of some operations, unskilled people constitute the majority of the labour in cashew processing. Even in the processing steps were skills are needed, women proved to perform better than men, and this was and still is an advantage for the owners, because they can get better results paying less salaries to the women. Despite this, the cashew sector is presently facing several problems that obliged some enterprises to close, provoking massive dismissal of workers, most often without any severance payment.

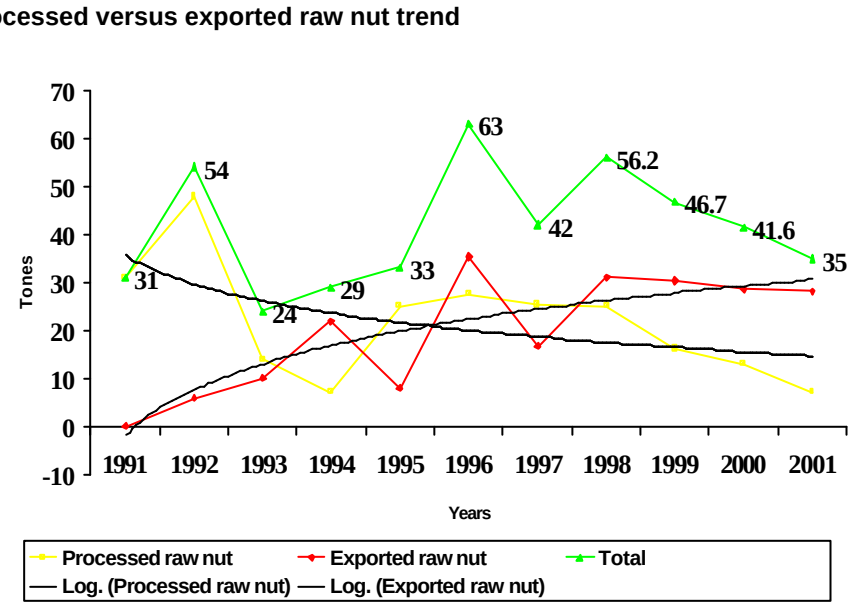
According to a consulting company that undertook in 1999 the study "Assessment of the Status of Competitiveness and Employment in the Cashew Processing Industry in Mozambique", an original characterisation of the cashew enterprises by type of

technology used includes each of the 15 existing factories in three main clusters, namely:

- Former state owned plants using impact shelling technology, including Angocaju, Mocaju, Procaju/Inhambane, and Procaju/Manjacaze;
- Traditional private companies using cutting technology, including Companhia de Caju do Monapo (CCM); the Angoche Division of Companhia de Caju de Nacala (CCN-Angoche); and Mocita;
- New private plants using semi-mechanical technology, including Cabo Caju, Cajeba, Invape and Madecaju. Three new factories using semi-mechanical technology have been recently installed in rural areas, two of them in Nampula and one in Gaza. These are small to medium size units with a start-up capacity under 500 tonnes, supposed to be increased at least to 1500 tonnes of raw nut.

There are four cashew processing units that that do not fit neatly into the above-mentioned typology. These are: Adil IC, a new private company using impact technology; as well as Inducaju and Polycaju, employing a mix of different technologies. In Inducaju, the semi-mechanical technology accounts for about a third of its capacity. Polycaju is a former state-owned company, using impact technology for about two-thirds of its shelling capacity, but also using manual shelling. Finally Socaju, the former KMC, is the only existing factory that uses manual shelling exclusively.

Evolution of the production of processed cashew products and perspectives



The trend regarding processing perspectives is not optimistic. Unless the present structure of the cashew sector is modified and adequate labour-intensive technologies are introduced, Mozambique is foreseen to loose the reputation of its cashew processing tradition.

Types of processed cashew products

Although secondary processing is not usual in Mozambique, some new small processors are selling processed cashew nuts plain, salted or seasoned with piri-piri, to local supermarket chains, either in locally manufactured packaging materials or in vacuum-sealed plastic packaging. Individual packaging varies from 100 to 1000 grams.

Normally, these products are sold under factory name and the use of a well designed brand name still does not make part of a marketing strategy, mainly due the fact that domestic market is very small and little demanding in terms of product outlets presentation. Cabo Caju is the only factory that established a marketing agreement with Delta Café, to market its products under their name. For some reasons, the agreement did not succeed.

Main factors influencing the national processing performance

Most of the cashew processors blame the Government measures of liberalisation for being the main cause of lack of raw material. However, several studies indicate other reasons, and state that even if most of the factories could get enough raw nuts for processing, they would not be able to generate profits because of their other critical production problems. Some of these problems are:

- Obsolete technology and equipment
- Inefficient processes, mixing Indian manual technology with the automatic, Oltremare processing
- Inefficient lay-out
- Lack of management skills (pointed out as the more serious problem)
- Low out-turn and percentage of whole and white kernels
- Locations far from the sources of raw nuts
- Lack of credit, in particular for small and medium scale processors.

It is important to note that the previous state-owned enterprises privatised later benefited from funds borrowed by Financial Institutions. However, despite these injections of funds and due to the other factors mentioned above, most of these factories went bankrupt.

2.3 Exports

Cashew raw nuts, kernel and CNSL exports from 1991 to 2001.

- Raw cashew nuts

Raw cashew nut production decreased sharply from the mid-seventies to 1996/7 (see tables in Annex IV), when some programs intended to reverse the situation were introduced. However, despite the efforts being done by the stakeholders of the sector, Mozambique is still far away of the glory days of its cashew production.
Taking advantage of the end of cashew raw nut exports prohibition, a handful of commodity traders and wholesalers with networks countrywide (see Annex II) entered the business and began to handle very large amounts of raw nut, some times supposed

to be of the best quality. Gani, Casa Modi, Export Marketing, Gordhandas, Casa Domodar, Golam, Euragel, Olam, Joao Ferreira dos Santos, Sabawes, and recently ICM, are some of the most important players.

Although this situation translated in an opportunity for exporters, they were not able to benefit from the premium prices of top quality raw cashew nut, due to the poor quality of the export products.

Prices of raw nut in Mozambique are highly influenced by the Indian market prices. Therefore, after the liberalization and the deregulation of internal prices, raw nut prices began to increase sharply in real terms. From 1996/97 onwards, producers steadily increased their share of the export price and, consequently, they are getting comparatively better prices than they did in 1993/94 and 1995/96 seasons.

Between 1980 and 1997, the Government established the minimum price for cashew below market prices, to protect the processors. In 1997, however, the minimum price was replaced by a referential price, apparently without any impact on the alteration of the usual margins for stakeholders. In fact, this measure was ineffective because the actual prices were on average lower than the minimum price, and most producers did not know the minimum price. In 1996/97, the mean producer price paid to farmers was 36 cents per kilogram, whereas the official minimum price was 35 cents per kilogram.

Farmers do not have formal credit to trade cashew raw nut, except for small amounts available through NGO's or small financial institutions operating randomly throughout the country. As it is virtually impossible for farmers to get credit for their business, and therefore they are forced to depend heavily on buyers, leading to the oligopolistic structure of the wholesale cashew marketing.

This situation gives farmers a very low bargaining power and does not allow them to negotiate good prices. They have to accept the prices that the main wholesalers offer them, as they are the most powerful market players, owning the means of transport, warehouses, having access to credit and being in a position to purchase nuts in the rural areas during the raining season, when the roads are very difficult to ride on. Was it not because the farmers do not have costs in treating the trees and they only spend some time collecting the nut, the price would not compensate at all the investment, since the trees in average have a very low yield.

Although after the liberalization farmers are getting a higher share of the export price, producer prices in Mozambique remain low in comparison with those practiced in Tanzania, for example.

Producer prices increased in real terms by 60 percent between 1993/94 and 1996/97. In terms of their share in world prices, producer prices increased from 29 percent in 1993/94, to 45 percent in 1995/96 and to 49 percent in 1996/97 (see Table in Annex IV)

- Kernel and cashew nut shell liquid (CNSL)

According to the source on marketing [2] indicated in the footnote and in Annex IV, the decrease in export prices, coupled with the scarcity of the domestic offer, made exports of cashew nut shell liquid unattractive in the last 2 years.

Prices in the international market are highly competitive. Moreover, in the last two years the production of kernels was low, in India in particular, and world prices are expected to rule firm following a strong demand coupled with the limited export availability.

Prices vary by grade, with bigger sizes getting price premiums, based on a benchmarking size for W 320. Although the differential between grades can be significant, their prices seem to move in parallel.

The fluctuation of the most commonly exported kernel grades from Mozambique between 1991 and 2001 is shown in Annex IV. When compared with the world market prices, export prices from Mozambique are low, mainly due to the low quality of the kernel. Kernels from Mozambique have a lower percentage of WW (Whole Whites) than other export sources, namely India, Brazil and Vietnam.

Data on prices in Annex IV reflect other two important relationships. The first is the premium price that the market is willing to pay for larger-sized whole kernel white kernel. The second is how expensive it is, in terms of foregone revenue, to scorch and break whole kernel. Schorched Wholes (SW) grades were traded at an average discount of over to W320. Therefore, the use of appropriate technologies that fit technical skills of the average Mozambican workers, coupled with a good management of the processing units, are the key conditions for increasing the value of the cashew exports.

This assessment supports the assumption that Mozambican exporters obtain reduced potential earnings because they ship less full containers of the same grade of cashew. The standard 20-foot container holds 750 cardboard boxes, weighing 50 pounds each, amounting to a total of 17,010 metric tonnes.

According to some business sources, buyers do not apply a discount as long as a single container holds no more than three different grades of kernel. However, brokers in the U.S. and Europe will apply a discount in the case where the number of grades exceeds three. The buyer needs the discount to recover the extra distribution costs at the destination markets. The labour and the other costs incurred to break a mixed lot shipment in U.S. and the European posts are expensive. It is much more profitable and easier for a broker to simply forward a container full of the same grade to the end user.

Studies suggest that the Mozambican kernel exporters sell at a substantial discount to world market prices. This conclusion is reached by comparing prices received by

[2] Source: Abt Associates Inc.

exporters over a period of 12-month period, during the 1998/1999 campaign to FOB export prices of India. The table below shows the discounts ranging from a low **8.68** % for schorched whole kernels (SW), to a high of almost **27%** for Fancy Splits (FS).

Kernel Prices: Discount of FOB Mozambique price to FOB India price, 1998/1999

Grades	Number of transactions	Full containers	Average discount
Whole White 210/pound (W210)	3	0	18.74
Whole White 240/pound (W240)	14	0	10.25
Whole White 320/pound (W320)	16	0	8.84
Whole White 450/pound (W450)	15	3	12.72
Schorched Wholes (SW)	10	0	8.68
Fancy Butts (FB)	7	0	19.95
Fancy Splits (FS)	9	0	26.82
Large White Pieces (LWP)	6	0	21.16

Several factors could determine these discounts, including differences in transport costs, a general discount applied to products from Mozambique, or a discount attributable to the fact that Mozambican companies have a tendency to ship less than full container loads of the same grade of kernel.

According to industry sources, the transport cost differential between India and Mozambique is a few cents per pound, which only explains a small portion of the discounts displayed above. Another factor may be the overall reputation of the shipper. Indian factories tend to be more regular and reliable sellers, while the Mozambican exporters have the general reputation for being "spot" sellers. That means that they enter the market when they have some product to sell, and want to sell quickly. Unlike other international exporters, exporters from Mozambique are generally unwilling to make commitments for future delivery.

However, all these explanation combined do not explain discounts of the magnitude shown in table above. It seems reasonable to attribute much of the difference to the size of lots. Larger exporters are in a position to ship full containers of the same grade of product, complying fully with buyers' preference. Exporters from Mozambique are only able to do this occasionally.

Cashew Nut Shell Liquid was an important cashew export product during the second war and later, during the seventies, being used for military purposes. At present it is only considered a marginal product, priced below US$/ton 100.

Organisation and co-ordination of the sector and its incidence on the export performance

INCAJU introduced an institutional structure that created conditions for the participation of all stakeholders at different levels of the sub-sector, in order to co-ordinate the sector.

An institutional network allows the establishment of connections among the Government entities, (Research Institute, Extension Services and INCAJU) and with others such as, NGO's, private business community and professional associations. This will allow the establishment of agreements, contracts etc., among stakeholders, introducing more discipline in the relations among them. The activities include:

- Establishment of a production forum;
- Establishment and development of regional delegations of INCAJU and regional production fora;
- Creation of community mechanisms of participation;
- Periodic seminars and meetings to discuss cashew matters;
- Establishment of relations with producer countries;
- Co-ordination with other relevant departments of the Ministry such as, DINA (Direccao Nacional de Agricultura) and Statistical Department to maintain the stakeholders informed about the evolution of the cashew business in all its areas.

Incidence of export quality on the export performance

There is no quality control system in Mozambique, allowing the full quality control through the whole chain (raw cashew nuts, kernel, products from false fruit etc.)

With the exception of some enterprises that control the quality of cashew raw nut and the final product quality (kernel) to some extent, the country lacks a true and solid control system that can give credibility to the people involved in the business in Mozambique and abroad.

This is an area where INCAJU is putting efforts to organise, by considering the introduction of control/security systems such as HACCP/ISO, in order to follow the increasingly restrictive regulations adopted by USA and European Union.

Import regulations in those countries is very demanding, and producer countries will have to allow regular inspections of their processing and packaging units, to ensure that the international norms and standards of the product are achieved.

Mozambique as a producer country with aspirations to place itself among the best world producers in the near future, will have to foster the activities in this area, to create as quick as possible a control agency, re-known internationally, which will permit to certificate the cashew products exported.

Chapter 3: CONSTRAINTS TO EXPORT DEVELOPMENT

3.1 Production and harvesting

Since Mozambique has no tradition in quality control starting from the smallholders, cashew processors and exporters are forced to buy the available raw nuts, independently of their quality. As stated above, in the case of the processors some quality control is done in the processing unit, mainly to help the classification of the nut in terms of size, in order to follow the international standards. However, the spoiled and inappropriate quality nuts constitute a loss for the processor, causing him

profitability losses.

For exporters, things happen other way. They only assess the out-turn of the nut, buying everything they can and further mixing various lots in the final container, since importers allow a certain percentage of nuts of lesser quality. The inspectors on behalf of importers visit the country before the shipment leaves, controlling the nut out-turn and the homogeneity of the entire container.

This situation is aggravated by the lack of adequate storage facilities, particularly in the first steps of the marketing chain, weakening the capacity of processors and exporters from Mozambique to capture good prices, causing at times considerable losses.

3.2 Processing

While processing adds value to the raw cashew nut, the cost of the raw material is the single most important item on the profit and loss of a cashew factory. In fact, it costs the same or more to process smaller, poorer quality raw nuts, than it does to process larger, better quality nuts. Yet, the latter should produce substantially more revenue than the former. Therefore, a successful cashew factory is one that has a well-organised and managed procurement system.

Nevertheless, the potential value of the final output of a processing unit is a function of both the quality of the raw material it acquires, and how well that raw material is processed. The market values more the large, whole and white kernels, therefore the processing unit needs large-sized, good quality raw nuts to produce them

The degree of the organisation of the processing units determines the quality of the final product they produce. An unit that process more large-sized, good quality nuts (better % of whole and white kernels) will have a higher value in the market than one which produces smaller, poorer quality nuts (schorched and/or broken kernels), all other factors being equal. Taking this in account, the way to maximise the value of a processing unit is to produce a high percentage of whole, white kernels, from large-sized, good quality raw nuts.

In this regard, the technology being used plays a key role in achieving efficiency, and the adequate choice of technology is critical for a good performance. As mentioned previously, use basically a two-stage process to heat the raw nut, either roasting raw nuts in cashew nut shell liquid (CNSL) or using steam to accomplish this. The list of processing units and the technologies they use is given in Annex II.

Four technologies exist, to decorticate the kernels after heat treatment, two of which are labour –intensive, and the other two are highly automated. They include hammering, pedal operated cutting, mechanical cutting and mechanical impact decorticating. Assessments about the efficiency of each of these technologies show that, with the exception of mechanical impact decorticating (definitely inadequate for the main purposes of achieving good quality), all the others are acceptable, depending on the circumstances (i.e. quality of raw material, capacity of the processing unit etc.)

The adoption of a diversified processing strategy, is very important and should be based on the followings:

- Capacity of obtaining adequate raw material;
- Size of the processing unit;
- Proximity of sources of raw nuts;
- Availability of skilled labour;
- Good management and adoption of strict procedures for quality control.

This will ensure the compliance with international standards and the production of high quality export products.

3.3 Export marketing

The traditional import markets of cashew products from Mozambique, namely the European Union and the USA, are becoming more and more demanding with respect of the respect of quality and of the sanitary and phyto-sanitary regulations. Products entering these markets must comply with very restrictive standards. To gain reputation as a reliable export source is also crucial, therefore marketing services play a key role in accessing and maintaining shares on these markets.

Importers are generally concerned with:

- The additional costs of resolving infestations,
- Failure to achieve appropriate prices, due to incorrectly graded kernel,
- Defaults volumes,
- Samples matching shipped products
- Variable moisture content

Therefore, the Mozambican processors and exporters must provides what the market and importers value more, by improving their own knowledge about market and import requirements, through the creation of an organised network of market information accessible to all market players.

3.4 Production and trade policies

INCAJU has been given the responsibility for developing production and trade policies to be pursued within the cashew sector, based on two approaches, namely the recovery cashew orchards through integrated treatment of plagues and diseases, and the introduction of new varieties and trees in order to replace the old ones.

However, in spite of the government's efforts to increase production, the results of these policies are still far away from the expected ones. The major cause seems to be caused by the lack of specific incentives. Most of the activities envisaged in the INCAJU Master Plans were either not activated (consistent control quality system, seasonal labour regulation), or are still facing some difficulties to be enforced (guarantee funds to be used on cashew production, trade regulation).

The only policy measure that has some influence on exports of cashew nuts is the tax surcharge of 18 % to 22%, based on the FOB value of shipments. The lack of other specific regulations led to several problems among exporters, to the uncertainty regarding future FOB prices, and forced them to take more margins, in order to cover increased risks, resulting finally in the lowering of producer prices.

3.5 Other constraints

Another major constraint for the development of agro-industry in Mozambique is the lack of a suitable environment, to create conditions for economic growth. Mozambique is still one of the weakest countries in Africa from the point of view of the quality of its production, policies, and institutional and procedural factors.

The existent infrastructure is very weak. Transport facilities and services are in bad condition, most of the feeder and secondary roads are inadequate, leading to high transport costs, harbour services are inefficient, in particular in Nacala - the main export harbour in the North of the country.

High communication, storage and shipping costs are some of the other constraints that affect strongly the price competitiveness of export products from Mozambique, together with the difficulties encountered in assessing processing technologies adequate to the domestic conditions.

Issues like tax regime, tariff regime, labour regulations, customs supervision and control are still far away from being a dynamic factor in creating the appropriate climate for economic growth, having consequently a negative impact in the development of the cashew sector, despite its significant whose contribution to foreign exchange income of the country and to the GDP growth. A lot has still to be achieved by the Government, in order to change significantly the negative impact of a discouraging economic and social environment on the whole economy in general, and on the cashew sector in particular.

Facility of access to credit is another critical factor for business development in the agro-based sector. The relatively weak organisation of financial markets in Mozambique affects negatively the procurement and export operations. If suppliers/ exporters could benefit of more easily accessible credits, they could enjoy important advantages, including the ability to charge higher prices (it happens often in raw cashew nut commercialisation). While reputable enterprises with good records frequently utilise overdraft facilities, others, in particular the small and medium scale enterprises, cannot have access to them and consequently must find suppliers willing to make credit arrangements at a great cost. Their prices are therefore increased and their price competitiveness diminished.

Chapter 4: IDENTIFICATION OF TECHNICAL ASSISTANCE PROJECTS AND ACTIVITIES AIMING AT SECTOR AND EXPORT DEVELOPMENT

4.1 Production and harvesting

Mozambique has developed programs on research and analysis of long term trends in the market. Researchers have been working on varieties imported from Brazil, India and Tanzania together with some local planting material, to assess its adaptability to Mozambique environment and its resistant/tolerance to powdery mildew disease (PMD)

One of the important programs was the "Cashew Rehabilitation Project (PRC)" in Nampula, funded by the African Development Bank (ADB), which ended in 1999. The aim of the program was to bring abandoned or neglected cashew orchards back into normal production, by planting grafted seedlings and top-working low yielding trees. Other similar and important work was done by other companies and organisations, including Entreposto (a private company) in Monapo, World Vision in some districts of Nampula, ADPP in Itoculo, Nampula and ADRA in the district of Maganja da Costa, Zambezia Province. INCAJU promoted also similar programs in the Southern part of the country.

These activities have been followed by the diffusion of planting material through nurseries. Nonetheless, there are still some doubts about the quality of the diffused material, although its selection was carefully undertaken among the most productive trees.

In 1998, trials were conducted under the control of World Vision, to assess the effects of different applications of chemical products to increase cashew productivity, the nut quality, and to evaluate the economical feasibility of the treatments. These trials were done mainly in Nampula Province, by a team of national and international researchers.

In the year 2000 began the program on the distribution and application of chemical sprays for infected trees, concentrated mainly in Nampula province, and involving private trading and processing companies (Gani Comercial, Muteko Lda.), as well as individual private entrepreneurs, NGO's (ADPP, World Vision) and input suppliers (Agroquimicos, Agrivet).

Two new programs are now under implementation. One of these programs will extend the activities of the previous program on the distribution and application of chemical sprays for infected trees over other producing provinces. Promoted by the French Agency for Development, the program will concentrate its activities on agronomic research and the renovation of the cashew orchards in the districts of Angoche, Mogovolas and Moma, in Nampula Province.

The other five years-program, funded by European Community and implemented in the Provinces of Cabo Delgado, Nampula and Gaza, falls under the auspices of Ministry of Agriculture, through the Office for the Promotion of the Commercial and

Agrarian Sector (GPSCA), in collaboration with INCAJU. This program targets the following outputs:

- Increase of the rural income in the targeted areas;
- Increase of productivity and improvement of the quality of the commercialised raw cashew nut
- Expansion and improvement of production support services and the commercialisation of inputs and raw cashew nuts.

The activities to be implemented include:

- Applied research to develop improved technological packages and to introduce appropriate good agricultural (pruning, tree cleaning, top-working low yielding trees, etc) and post-harvest practices.
- Multiplication of local and/or imported seedlings that have proved good results in terms of productivity, quality of the produced raw nut and tolerance to diseases, through nurseries that will be later sold to the cashew producers.
- Support to local multiplication activities and selling of seedlings, for instance through research centres or through targeted clients, as well as training in specific areas such as grafting techniques and business management.
- Demonstration and diffusion of improved technological packages among producers.
- Training of smallholders in areas such as production, post-harvest management and commercialisation.
- Support to organisation and training of smallholder groups.
- Establishment of market linkages between producers, input suppliers, cashew traders, processors and other financial entities operating in the field
- Training of traders and other operators in areas of pesticides handling, spraying service providers and business management.
- Building of solid relations between the providers of spraying services and the suppliers of chemicals.
- Technical and institutional capacity building of INCAJU and INIA National Agronomic Research Institute.

4.2 Processing

At processing level, some activities are being implemented aiming at supporting the re-structuring of the sector, including:

- the adoption of adequate technologies;
- the relocation of processing units near the sources of raw nuts;
- the training of managers and skilled workers;
- the provision of support services in market procurement;
- the establishment of a guaranty fund, to facilitate the access of processors to credit for working capital.

Priority is given to the re-structuring of existent units, located near sources of raw nuts and to the relocation of processing units to meet this requirement.

Profitable small and medium scale processing units are an important growth factor for the sector, because they generate added value and create jobs within the rural areas.

Processing plants are the main clients for raw nut of superior quality. They are often in a position to:

- Provide extension services to improve quality on raw nuts (playing an important role in the implementation of INCAJU program)
- Promote small processing units around them, to achieve the critical mass for exports
- Provide technical assistance to smallholders on cashew tree treatments and raw nut processing;
- Provide assistance to smaller processing units on technical and management issues.

4.3 Export marketing

The economy of Mozambique is essentially dependent on agriculture. Over forty percent of its GDP and the bulk of merchandise exports consist of cashew raw nut and kernel.

The agriculture has been substantially liberalised since 1997. With the exception of sugar and cashew sectors, the Government has withdrawn from direct involvement in production, processing, and marketing activities, and has retained only its role in setting policies. Reforms were introduced, including the revision of custom tarification of all agricultural products, the elimination of most export restrictions and of foreign exchange controls.

However, the reforms must continue mainly in the field of telecommunications and transports services, in order to allow the increase of export competitiveness of the national exports.

In pursuing these objectives, Mozambique has entered into multilateral, bilateral, regional and preferential trade agreements. Today, Mozambique is full member of the World Trade Organisation, World Bank, IMF – International Monetary Fund, Lomé Convention, SADC (Southern Africa Development Community), IORARC (Indian Ocean Rims Association For Regional Co-operation), AGOA (African Growth and Opportunity Act), GSP (Generalised Systems of Preferences) and the Trade Preferential Agreement with South Africa.

The country needs still, however, to improve the system of market information in the agricultural sector, in order to provide market operators with easy access to market, price and technology information. In this regard, the development of a web site with market and trade information would be very useful. This measure should be accompanied by the training of farmers and small-scale market operators in accessing and making use of the information.

Another area still in need of development is related to the improvement of the marketing infrastructure, including storage facilities, rural market development and feeder road improvements.

4.4 Strategy and national policies favouring the development of the sector

The main guidelines for the strategy favouring the development of the cashew sector a cashew are contained in the Master Plans elaborated by INCAJU. These Master Plans define the strategic intervention priorities, offering a driving frame to the different public and private stakeholders involved in cashew business. The guidelines refer to production, productivity of cashew trees and the quality of the raw nuts, the need to give a special emphasis to the development of efficient technological packages, to combat the diseases and to disseminate better agronomic and post-harvest practices among producers.

As far as the commercialisation is concerned, the Plan give special importance to the support of smallholder associations, a process initiated a few years ago by some NGO's, including CLUSA and SNV.

The Plan also recommends the constitution of a credit system that can provide adequate funds to traders and processors, in order to stimulate the purchasing of raw nuts. Following this directive, a guarantee fund was created by INCAJU and managed through a commercial bank (BCI-Commercial Investment Bank). Other initiatives are taking place at the level of micro-finance, supported by non-financial organisations such as World Relief.

Processing directives comprise the support to the re-structuring of enterprises, in order to allow them to benefit of the comparative advantages of the country in the cashew sector and to transform them into competitive advantages.

4.5 Sector organisation and regional cooperation

As the state agency responsible for the implementation of the policies envisaged for the cashew sector, INCAJU has a central role to play in the development of the cashew business in Mozambique.

The organisation is making efforts to organise the sector and develop the interrelations between stakeholders, in addition to its efforts to establish relations with other cashew producing countries, in particular in Africa. Building relations with other countries in Africa, including countries from East and Southern Africa, would greatly contribute for the development of a cashew sectors in the region, to the benefit of each country. A cross-country collaboration would build a consensus on substantive actions to improve the sustainable development of cashew crop in Africa.

As consequence, countries involved could take advantage of the experience accumulated by each other and hopefully benefit from specific experiences in areas where each of them has a comparative advantage. A common point of view could thus be developed on issues such as:

- Policy change
- Research and technology transfer

- Grower and business support services
- Development of market and information systems

4.6 Export quality certification and assurance

Some projects are implemented in rural areas, aiming to improve the quality of export products, based on installing processing units surrounded by smaller units that process cashew raw nut and deliver the kernel (peeled or non-peeled) to a main factory for grading and packaging.

This will help to achieve the critical mass to access the international market. On the other hand, it will allow the adoption of brand names under which, kernels produced in Mozambique can achieve a world-wide reputation. The idea is to franchise the business, creating an export centre that will buy, grade and pack the available kernels for the international markets and/or flavour them for selling in domestic or regional markets. These processing units will have a leverage effect, in increasing the quality and the levels of cashew nut production.

Besides this kind of actions in the field, Mozambique's external trade policies are designed to create an environment favourable to promoting its products in international markets. Trade policies are formulated with the view to speeding up the industrialisation process, and in such a way as to facilitate the access of national products to foreign markets. These policies are being introduced through specialised Government Agencies, such as the Export Promotion Institute (IPEX) and the National Institute of Normalisation and Quality (INNOQ), in charge of standards.

ANNEX I

CHRONOLOGY OF CASHEW PROCESSING UNITS IN MOZAMBIQUE

1950 The first cashew business was set up by a Indian trader as a cottage industry among black women in the south of the country and grew up to become the first processing unit in Mozambique. I was taken over by a business group to become Caju Industrial, (presently Polycaju). Projects are taking place in rural areas. João Ferreira dos Santos was included among original shareholders.

1965 Cajuca da Machava began operations. Manuel Rodrigues Neto, a private businessman, establishes a factory at Manjacaze.
A joint venture between Anglo-Amerciacn Corporation of South Africa and Oltremare of Italy establish Mocita at Xai-Xai.
Mr. Tucker an engineer establish factory at Inhambane

1971 Cajuca da Machava (today Mocaju) establishes Cajuca de Angoche.
Grupo Entreposto commissions Companhia de Caju do Monapo.
Anglo-American Corporation, forced to reinvest the locally- generated profits in Mozambique, establishes a plant at Antonio Enes, today Angoche.
Mahendrasing Jamnadas establishes a processing plant at Lumbo, Ilha de Moçambique.

1975 Original owners abandon Cajuca da Machava and Cajuca de Angoche.
Mr. Tucker abandons the factory at Inhambane. Neto abandons the factory at Manjacaze.

1976 Antonio Enes goes into receivership

1979 Caju de Mozambique is created to take over operations of abandoned plants, including Cajuca de Angoche Cajuca da Machava, and the factory established by Tucker (present Procaju/Manjacaze). Neto's former operation at Manjacaze, and the presently Policaju. It also enaged Antonio Enes and Socaju in Nacala.

1980 Anglo – American pulls out of Mozambique. Mocita enters voluntary in receivership and Caju de Mozambique takes over day-to-day management.

1982 Caju de Mozambique shuts down factory at Manjacaze, due to lack of raw material.

1984 Caju de Mozambique shuts down Manjacaze facility, due to lack of raw material.

1991 Bankruptcy court sells Socaju to the newly created Companhia de Caju de Nacala

1992 Antonio Enes is sold to Companhia de Caju de Nacal, through bankruptcy proceedings.

1994 Grupo Ferreira dos Santos decides to convert facility at Geba into a cashew-processing factory using semi-mechanical cutting technology.
UTRE sells the former Cajuca de Machava to HAS-NUR Group, which ropens the facility as Mocaju.
Recivership lifted on Mocita and Anglo_American Corporation began investing $ 6 million in new equipment.

1995 Adil Industrias de Caju, Lda. Starts operation.
Companhia de Caju de Nacala recommences operations with Oltremare automated cutting equipment
Procaju de Inhambane and Manjacaze recommence operations.
UTRE sell Mozambique's oldest cashew processing factory to Omar Ismael, who renames the operation Polycaju, and plants at Inhambane and Manjacaze to Sara Daude a Mozambican business woman.
The Mozambican–Korean joint venture Korea–Mozambique Cashew (KMC) begins operation.

1996 Cabo Caju begins processing in rented facility in Pemba.
Cajeba begins processing.
Current owners purchase Polycaju from State and Mr. Omar Ismael.
Grupo AGT buys Inducaju.

1997 Companhia de Caju de Nacala ceases operation and transfers most of its machinery and equipment to Angoche.
Adil Caju ceases operations
Angocaju from AGT and Grupo Enacomo ceases operations
Invape begins operation

1998 KMC ceases operation
Madecaju begins operation
Procaju/Inhambane and Manjacaze halt operations.
Mocaju ceases operation

1999 Cabo Caju secures IFC financing for major expansion and signs marketing agreement with Delta Café.
Mr. Viriato, the Mozambique partner in KMC, resumes operation and begins procedures to rename company Socaju Lda.
Caju do Monapo and CCN de Nacala from Entreposto cease operations.

2000 Caju do Bilene begins operation
2001 Caju de Morrupula, using semi-mechanical cutting technology is installed

2002 Mirandas Cashew unit begins operation using semi-mechanical cutting technology

ANNEX II

LIST OF MAIN STAKEHOLDERS

- ***Government Agencies***

Instituto de Fomento do Cajú (INCAJU)
Director Clementina Machungo
Deputy Director Raimundo Matule

Gabinete de Promoção do Sector Comercial Agrário
Director Arnaldo Ribeiro

Instituto Nacional de Investigação Agronómica
Director Calisto Bias

Instituto Nacional de Exportações
Director Tomás Oliveira

Instituto Nacional de Normalização e Qualidade
Director Gabriela Silva

- *Private Business Associations*

Associação dos Processadores de Castanha de Caju (AICAJU)
President Kekobad Patel – ENACOMO
Vice- President Rogério Nunes – ENTREPOSTO

Associação Comercial, Industrial e Agrícola de Nampula (ACIANA)
President Momade Pereira

Associação Industrial de Moçambique (AIMO)
President Carlos Simbine
Vice-President José Alves

Associação dos Empresários Privados de Moçambique (AEPRIMO)
Presidente Egas Mussanhane

União Geral das Cooperativas – Apoio ao Desenvolvimento (UGC)
Director Celina Cossa

Associação dos Fruticultores do Sul de Moçambique (FRUTISUL)
Presidente José Alcobia

Associacão dos Empresários da Zambézia (AESA)

Presidente Afonso Uageito

- ***Non- Governmental Organizations (NGO)***

Associação Moçambicana para a Ajuda de Desenvolvimentode Povo para Povo - ADPP Moçambique
Country Director Birgit Holm
Nurseries and tree plantation – Itoculo Nampula

Cooperative League of United States of America (CLUSA)
Contry director John Collon
Creation and capacity building of rural Associations – Nampula, Zambezia

Adventist Development and Relief Agency USA (ADRA)
Country Director David Tejel Subirada – Zambezia- Gaza

Associação Moçambicana para o Desenvolvimento Rural (AMODER)
Director José Carlos Trindade

Organização Holandesa de Desenvolvimento (SNV)
Country Director Geraldo Prince

Technoserve Mozambique (TNS)
Country Director John Kingman Walter

Associação Suiça para a Cooperação Internacional
(HELVETAS)
Country Director Rudolf Gsell

Associação para o Desenvolvimento Regional de Cabo Delgado
(UMOKAZI)
Director Luciano Macumbe

World Vision (WV)
Country Director Gary Bayer

- *Private companies*

Grupo Entreposto (Cashew processors)
Chairman João Navega

Casa Damodar - cashew traders (Nampula)
Manager Jessy

Grupo Enacomo - cashew processors (Nampula)
Chairman Pacheco Faria

Gani Comercial cashew traders and processors (Nampula)
Chairman Yunusso Gafar

João Ferreira dos Santos cashew traders and processors (Nampula)
Chairman João Ribas

OLAM – Nampula cashew traders (Nampula)
Manager Shiv Kumar

Casa Modi cashew traders (Nampula)
Chairman Jatine Modi

SABAWES cashew traders (Cabo Delgado – Nampula)
Manager Amílcar de Melo

EURAGEL Cashew Traders (Country wide)
Owners Laximidas brothers

ANNEX III

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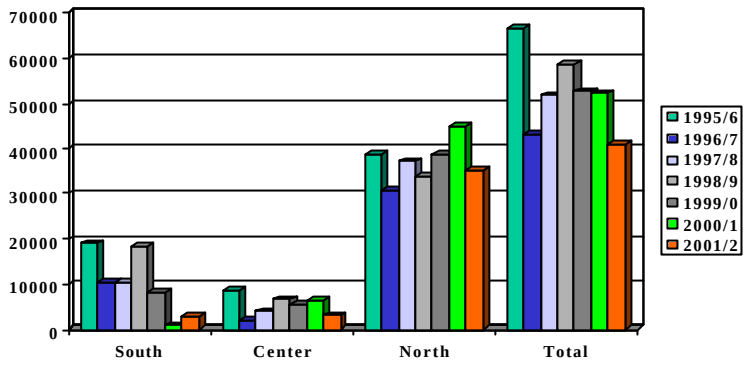
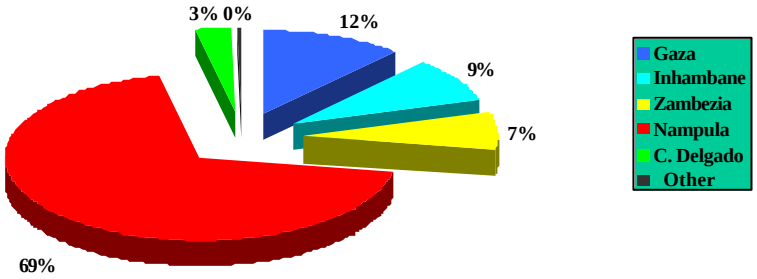
ANNEX IV: STATISTICS AND SECTOR INFORMATION

Raw cashew nut production by region



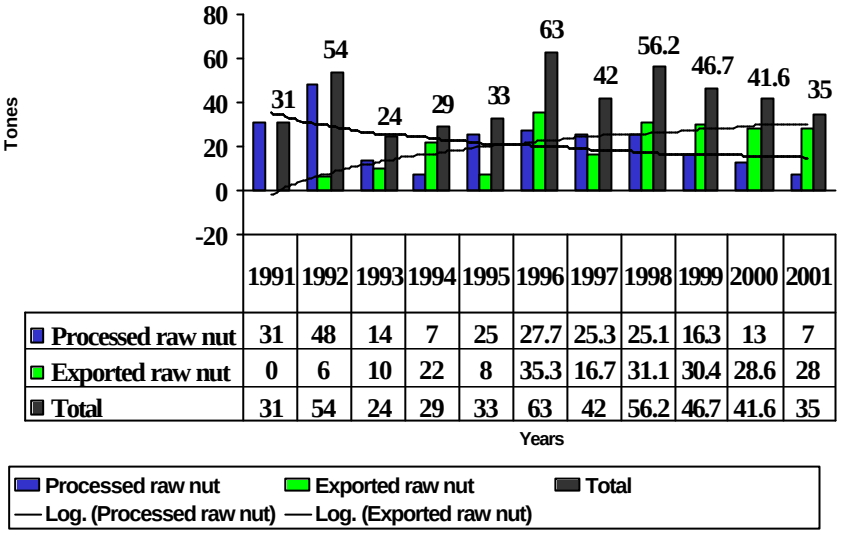
Source: Cashew Working Group/Ministry of Industry and Commerce

MARKETED RAW NUT PRODUCTION BY PROVINCE 1997/98 TO 2001/02



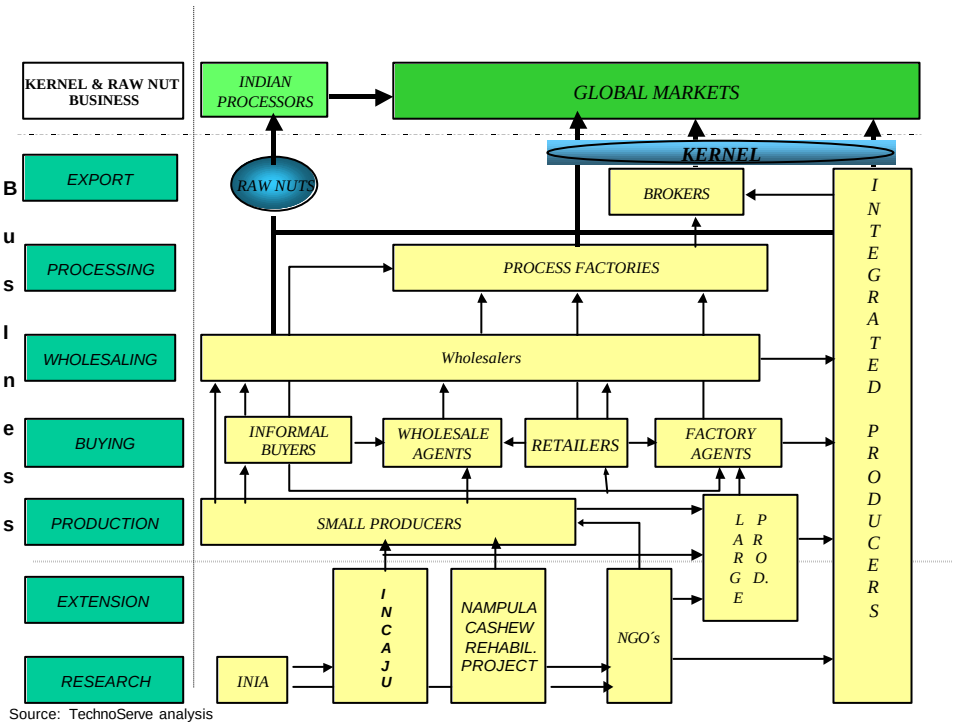
(%) Source: Cashew Working Group/Ministry of Industry and Commerce

TREND OF EXPORTS OF RAW CASHEW VERSUS PROCESSED NUTS



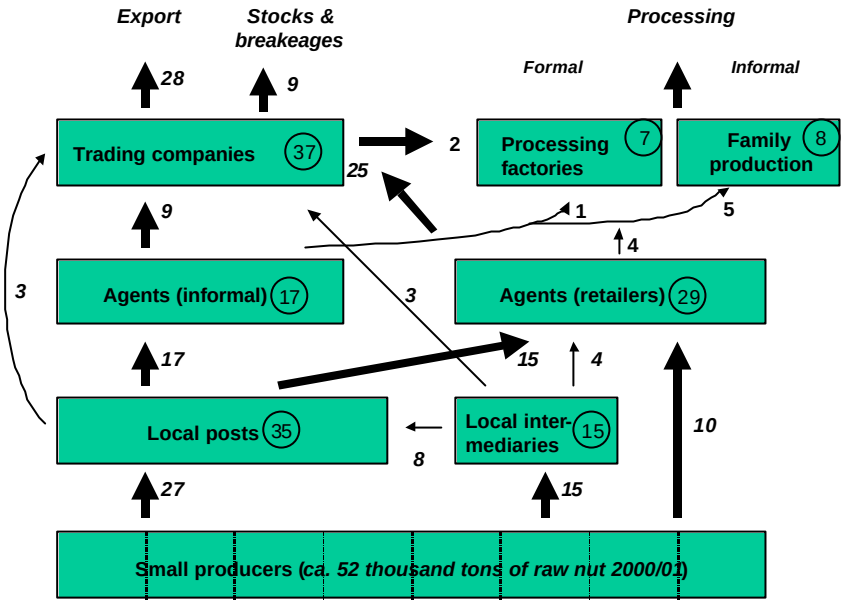
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Processed raw nut	31	48	14	7	25	27.7	25.3	25.1	16.3	13	7
Exported raw nut	0	6	10	22	8	35.3	16.7	31.1	30.4	28.6	28
Total	31	54	24	29	33	63	42	56.2	46.7	41.6	35

DISTRIBUTION CHANNELS FOR RAW CASHEW NUTS



Source: TechnoServe analysis

DISTRIBUTION CHANNELS FOR RAW NUTS



Source: INCAJU- Master Plan for Industry and Commercialization

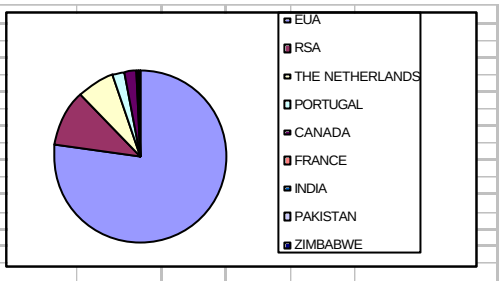
FARM GATE AND EXPORT PRICES FOR RAW CASHEW NUTS, 1992/93 to 2000/01

Season	Marketed Output	Prices		Producer Price % of Export Price
		Producer	Export	
1992/3	23 395	0.25	0.69	36
1993/4	29 987	0.23	0.78	29
1994/5	32 890	0.32	0.68	47
1995/6	66 510	0.35	0.78	45
1996/7	43 325	0.36	0.74	49
1997/8	51 700	0.35	0.68	51
1998/9	58 721	0.45	0.70	64
1999/0	52 608	0.54	0.71	76
2000/1	52 088	0.23	0.41	56
2001/2	41 009	0.30	0.43	70

Source: Statistics 2000/01 by INCAJU

EXPORTS OF CASHEW KERNELS, 1996 to 2001

EUA		15,367
RSA		2,086
THE NETHERLANDS		1,357
PORTUGAL		479
CANADA		436
FRANCE		51
INDIA		17
PAKISTAN		17
ZIMBABWE		7
	Total	



MAJOR EXPORTERS OF RAW CASHEW NUT

Exporter	Tons of raw nut exported in season 1998/1999	Destination
• **Gani Comercial**	**10,153**	• **India**
• **Euragel**	**8,728**	• **India**
• **Sabawes**	**5,364**	• **India**
• **C. Joao Ferreira**	**1, 800**	• **India**
• OLAM	1,420	• Vietnam
• Mansur Cassamo	1,300	• India
• Ghordandas	630	• India
• Exp Marketing Cª.	400	• India
• Haridas Damodar	125	• India
• Others	1038	• India
	30 391	

Average export price = $ 695.33/ton

Source: Mozambique Cashew Working Group

MAJOR EXPORTERS OF RAW CASHEW NUT (contd.)

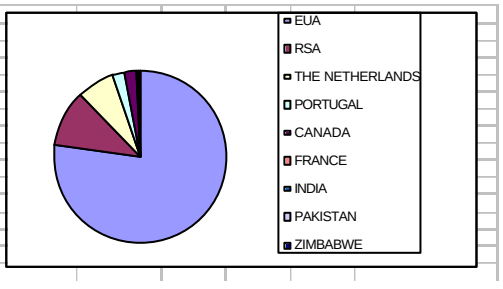
Exporter	Tons of raw nut exported in season 2000/2001	Destination
• **Gani Comercial**	**13,400**	• **India**
• **OLAM**	**6,825**	• **India/Singapura**
• **ICM**	**5.155**	• **India**
• **Euragel**	**1,500**	• **India**
• **Schleug**	**500**	• India
• Others	462	• India
	27 842	

Average export price = $ 409/ton

1)source: INCAJU Statistics

EXPORTS OF CASHEW KERNELS, 1996 to 2001

EUA		15,367
RSA		2,086
THE NETHERLANDS		1,357
PORTUGAL		479
CANADA		436
FRANCE		51
INDIA		17
PAKISTAN		17
ZIMBABWE		7
	Total	



EXPORTS OF CAHEW KERNELS BY DESTINATION, 1996-1998

Table IV - A		Kernel exports evolution from 1996 to 1998			
Importing countries		Quantities	%	Amount	Average
1996		(kgs)		(USD 1000)	Price (kg)
EUA		3'725'853	82.78%	$ 14'338.09	3.85
RSA		460'726	10.24%	$ 1'648.86	3.58
CANADA		68'060	1.51%	$ 296.28	4.35
PORTUGAL		245'027	5.44%	$ 1'152.91	4.71
ZIMBABWE		1'360	0.03%	$ 7.66	5.63
	TOTAIS	**4'501'026**	**100.00%**	**$ 17'443.80**	**3.88**
Importing countries		Quantities	%	Amount	Average
1997		(kgs)		(USD 1000)	Price (kg)
EUA		3'034'310	77.71%	$ 10'693.64	3.52
RSA		480'180	12.30%	$ 1'953.54	4.07
CANADA		218'290	5.59%	$ 848.45	3.89
PORTUGAL		132'670	3.40%	$ 598.16	4.51
FRANCE		34'010	0.87%	$ 149.16	4.39
ZIMBABWE		5'440	0.14%	$ 26.48	4.87
	TOTAIS	**3'904'900**	**100.00%**	**$ 14'269.43**	**3.65**
Importing countries		Quantities	%	Amount	Average
1998		(kgs)		(USD 1000)	Price (kg)
EUA		3'883'590	79.45%	$ 14'844.44	3.82
RSA		328'260	6.72%	$ 1'338.77	4.08
CANADA		34'020	0.70%	$ 160.01	4.70
PORTUGAL		66'030	1.35%	$ 324.18	4.91
THE NETHERLANDS		576'400	11.79%	$ 2'362.38	4.10
	TOTAIS	**4'888'300**	**100.00%**	**$ 19'029.78**	**3.89**

EXPORTS OF CAHEW KERNELS BY DESTINATION, 1998-2001

Table IV - B		Kernel exports evolution from 1999 to 2001			
Importing countries		Quantities	%	Amount	Average
1999		(kgs)		(USD 1000)	Price (kg)
EUA		1,544,900	64.31%	$ 6,627.56	4.29
RSA		164,800	6.86%	$ 707.20	4.29
CANADA					
PORTUGAL		17,300	0.72%	$ 74.41	4.30
THE NETHERLANDS		675,120	28.11%	$ 2,896.27	4.29
	TOTAIS	**2,402,120**	**100.00%**	**$ 10,305.44**	**4.29**
Importing countries		Quantities	%	Amount	Average
2000		(kgs)		(USD 1000)	Price (kg)
EUA		2,767,506	87.19%	$ 10,933.74	3.95
RSA		287,416	9.05%	$ 1,161.86	4.04
CANADA		51,075	1.61%	$ 249.94	4.89
PORTUGAL		150	0.00%	$ 1.07	7.13
THE NETHERLANDS		34,020	1.07%	$ 204.00	6.00
FRANCE		17,010	0.54%	$ 85.19	5.01
INDIA		17,010	0.54%	$ 106.72	6.27
	TOTAIS	**3,174,187**	**100.00%**	**$ 12,742.52**	**4.01**
Importing countries		Quantities	%	Amount	Average
2001		(kgs)		(USD 1000)	Price (kg)
EUA		410,939	43.44%	$ 957.85	2.33
RSA		364,389	38.52%	$ 453.85	1.25
CANADA		64,292	6.80%	$ 246.73	3.84
PORTUGAL		17,670	1.87%	$ 62.12	3.52
THE NETHERLANDS		71,650	7.57%	$ 104.89	1.46
PAKISTAN		17,123	1.81%	$ 69.90	4.08
	TOTAIS	**946,063**	**100.00%**	**$ 1,895.33**	**2.00**

EXPORTS OF CAHEW KERNELS BY DESTINATION, 1996-2001

Table V	Kernel exports evolution from 1996 to 2001			
Importing countries	Quantities	%	Amount	Average
1996/2001	(kgs)		(USD 1000)	Price (kg)
EUA	15,367,098	77.55%	$ 58,395.32	3.80
RSA	2,085,771	10.53%	$ 7,264.08	3.48
THE NETHERLANDS	1,357,190	6.85%	$ 5,567.54	4.10
CANADA	435,737	2.20%	$ 1,801.40	4.13
PORTUGAL	478,847	2.42%	$ 2,212.85	4.62
FRANCE	51,020	0.26%	$ 234.35	4.59
INDIA	17,010	0.09%	$ 106.72	6.27
PAKISTAN	17,123	0.09%	$ 69.90	4.08
ZIMBABWE	6,800	0.03%	$ 34.14	5.02
TOTAIS	**19,816,596**	**100.00%**	**$ 75,686.29**	**3.82**

EXPORTS OF CASHEW KERNELS IN VOLUME AND UNIT PRICES 1991-2001

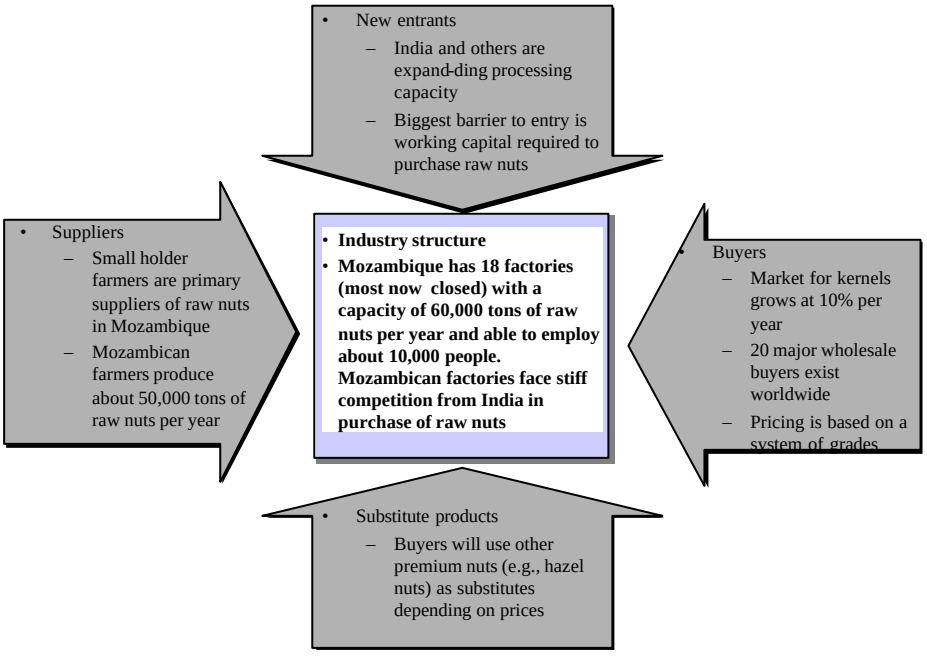
Table VI	Kernel exports evolution from 1991 to 2001		
Years	Quantities	Amount	Average
	(1000 tonnes)	(USD 1000)	Price (kg)
1991	3.80	$ 16,100.00	4,237
1992	5.40	$ 17,400.00	3,222
1993	2.80	$ 9,200.00	3,286
1994	0.60	$ 2,500.00	4,167
1995	1.90	$ 7,000.00	3,684
1996	4.50	$ 17,400.00	3,867
1997	3.91	$ 14,269.00	3,654
1998	4.90	$ 19,000.00	3,878
1999	2.40	$ 10,305.00	4,294
2000	3.17	$ 12,742.00	4,014
2001	0.95	$ 1,895.00	2,003

EXPORTS OF CNSL IN QUANTITY AND UNIT VALUES, 1995-2001

Table VII CNSL exports evolution from 1995 to 2001

Years	Quantities (Tonnes)	Amount (USD 1000)	Average Price (kg)
1995	310.00	$ 61.92	$ 0.20
1996	1,384.60	$ 156.19	$ 0.11
1997	162.00	$ 26.48	$ 0.16
1998	108.00	$ 34.28	$ 0.32
1999	200.00	$ 26.00	$ 0.13
2000	-	$ -	No exports
2001	-	$ -	>>

DYNAMICS OF CASHEW PROCESSING IN MOZAMBIQUE



LOCATION OF CASHEW NUT PROCESSING FACTORIES

Source: Mozambique Cashew Working Group/Ministry of Industry and Commerce

CASHEW NUT PROCESSING FACTORIES IN NAMPULA AND CABO DELGADO

List of cashew processing units

Factory	Owner	Location	Capacity Tons of nuts	Technology	Last year of operation
• CCM (Monapo)	• Entreposto	• Monapo, Nampula	• 8,000	• Oil bath, mecha-nical shelling	• Mar 1999
• CCN (Nacala)	• Entreposto	• Angoche, Nampula	• 6,000	• Oil bath, mecha-nical shelling	• May 1999
• Angocaju	• Enacomo, Gani, State	• Angoche, Nampula	• 5,000	• Oil bath, mech. and hand shelling	• Oct 1997
• Geba	• JFS	• Memba, Nampula	• 2,000	• Steam roasting, hand shelling	• Jun 1999
• Inducaju	• AGT, Gani	• Lumbo, Nampula	• 3,000	• Oil bath, mech. and hand shelling	• May 1999
• Cabocaju	• Jurg Reiser	• Pemba, C. Delgado	• 2,000	• Steam roasting, hand shelling	• Currently operating
• Morrupula	• I. Rafique	• Nampula	• 1 500	• Steam roasting, hand shelling	• About to begin
• Mogincua	• A. Miranda	• Nampula	• 750	• Steam roasting, hand shelling	• Currently operating

Source: Mozambique Cashew Working Group/Ministry of Industry and Commerce

CASHEW NUT PROCESSING FACTORIES IN MAPUTO AND GAZA

List of cashew processing units

Factory	Owner	Location	Capacity Tons of nuts	Technology	Last month of operation
• Mocita	• Anglo-American • ED& F Mann • Oltremare	• Xai-Xai, Gaza	• 7,000	• Oil bath, mecha-nical shelling	• Currently operating
• Polycaju	• Omar Amade • State	• Machava, Maputo	• 3,500	• Manual and mechanical	• 1998
• Mocaju	• Grupo Has Nur • State	• Chaman-culo, Maputo	• 3,000	• Mechanical	• Dec 1998
• Procaju I	• Carlos Borralho • State	• Manjacaze, Gaza	• 3,000	• Mechanical	• 1996
• Madecaju	• Madeira	• Laulane, Maputo	• 2,000	• Manual	• Currently operating

Source: Mozambique Cashew Working Group/Ministry of Industry and Commerce

CASHEW NUT PROCESSING FACTORIES IN INHAMBANE PROVINCE

List of cashew processing units

Factory	Owner	Location	Capacity Tons of nuts	Technology	Last month of operation
• Invape	• V. Rosario	• Macuacua Gaza	• 2,000	• Steam roasting, hand shelling	• Currently operating
• Caju do Bilene	• Mussa	• Bilene Gaza	• 1 500	• Steam roasting, hand shelling	• Currently operating
• Procaju II	• C. Borralho	• Inhambane, Inhambane	• 3,500	• Mechanical and manual	• 1997
• Adil	• V. Chan-dulal	• Maxixe, Inhambane	• 2,500	• Mechanical	• 1997
• KMC	• Viriato	• Jangamo, Inhambane	• 1,500	• Mechanical and manual	• Currently operating

Source: Mozambique Cashew Working Group/Ministry of Industry and Commerce