Advocating for effective regulation of the Cashew Nut Industry in Tanzania
ANSAF Profile

ANSAF is an acronym for Agricultural Non State Actors Forum. It was formed in 2006 by members from the private and civil society organizations working in the agricultural sector in Tanzania. The impetus for the formation of ANSAF was demand driven. The forum’s objectives are firstly, to advocate for a pro-poor and conducive agriculture policy environment where Civil Society Organizations and the private sector effectively engage with and influence agriculture sector policies and practices. The second objective is to effectively analyse the existing agriculture policies and suggest alternative views/directions. The third objective is to provide a platform for learning, sharing, networking and coalition building around best practices and key issues in the agriculture sector. ANSAF is now a fully registered NGO under the Non-Governmental Organization Act of 2002, with registration number 00033313. The members of the ANSAF include Agricultural Council of Tanzania (ACT), VECO Tanzania, MVIWATA, PELUM Tanzania, Oxfam GB, Action Aid Tanzania, Concern Worldwide, Tanzania Organic Agriculture Movement (TOAM), Farmland Consultancy Ltd, SNV Tanzania, VSO Tanzania, Tanzania Agricultural Development Trust (TADT), Rural Livelihood Development Company (RLDC), CEFA, Kick-start International, Rural Urban Development Initiative (RUDI), Tanzania Capacity Building (TACAB), Adventist Development Relief Agency (ADRA), Organic Farming Association – Zanzibar (OFA), Kaderes Peasants Development Ltd, Katani Ltd and Swiss Aid.

Author Profile

James Fitzpatrick is an independent international consultant and advocate specialised in the cashew nut industry with almost 30 years’ experience and knowledge in the sector. He regularly provides consultancy services on the industry and supply chain management to a range of high profile clients and is a recognised expert and a published author on his favourite subject – cashew nuts. In recent years he has compiled studies on “Competitiveness in the African Cashew Sector” and the “Global Cashew Nut Processing Equipment Study” for the African Cashew Initiative. He addressed the Plenary Session of the African Cashew Alliance in 2011 and 2012 on a range of subjects including “Cashew Nut Processing Equipment” and the international cashew nut markets and addressed workshops on “The Role of Technology in Improving Competitiveness of Cashew Processors” and “Cashew Processing Equipment Purchasing Strategies to Strengthen Competitiveness”. He is market advisor to the African Cashew Initiative as well as advising a number of private clients on the development of cashew processing activities. He has been an advocate for the development of the African cashew sector since the mid 1990’s. His monthly publication “Cashew Club” is distributed free of charge to ngo’s and stakeholders in Africa and has a circulation of approximately 750 cashew stakeholders Worldwide.

Note from James Fitzpatrick

Many actors in the cashew nut sector in Tanzania and beyond gave generously of their time, expertise, and imagination during conversations with me and Dr Rose Mushi leading to the development of this report. We would like to extend our appreciation and thanks for their time and patience. I would also like to extend a particular word of thanks to the staff at ANSAF, LIMAS (Mtwara) and Dr Rose Mushi.

James Fitzpatrick

15th January 2013
Advocating for Effective Regulations for the Cashew Nut Industry in Tanzania

1. Executive Summary

1.1 Purpose and scope

In the cashew season 2011/12 a serious crisis developed in the marketing of cashew nuts from Tanzania. At one point this seemed to pose a systemic threat to the sector and to the financial backers of the sector. The crisis was averted by developments in the market in West Africa where poor weather and political instability impacted supply and brought buyers back to Tanzania but for five months in 2012 it looked as if the Tanzanian cashew sector could face an insurmountable challenge which would have had severe repercussions not least at the level of the farmers who produce this valuable crop. This crisis was symptomatic of deep rooted structural and regulatory issues in the cashew sector in Tanzania.

Over many years the Tanzanian cashew sector has been a serial under achiever despite the presence of many of the factors necessary for the development of a thriving cashew nut producing and processing sector. The sector has been successful in the production of cashew nuts but has not reached levels of development that might be expected given the product quality and seasonal advantages present. The Government has, through close regulation and some innovation attempted to create conditions in which the sector would reach its potential. The Tanzanian cashew sector is in fact the most regulated cashew sector in the World but despite this it remains largely a producer of in shell cashew nuts for processing in Asia. It is characterised, like the rest of the African cashew sector, by low levels of productivity and low levels of value addition sacrificing at least US$550m in value addition alone over the past five years.

ANSAF is an advocacy network that seeks to advocate for pro-poor development and an agricultural policy conducive to that development. ANSAF promotes dialogue and constructive engagement among sector stakeholders, analysing existing policy and suggesting policies and practices around pertinent issues in the agricultural sector. ANSAF herein seeks to analyse the cashew sub-sector and the relationships between stakeholders with the objective of improving the regulatory system and the marketing of this important crop produced by some of the poorest people in the country.

This was done by a detailed analysis of the Tanzanian cashew sub-sector and its place in the wider international cashew market. The study utilised an innovative approach which involved not only a review of existing studies, literature, policy and law but also a series of face to face interviews with a wide range of stakeholders both national and international ranging from the growers to coops to warehouse keepers, traders, exporters, processors, public servants, politicians, input suppliers all the way through to the processors who buy Tanzania raw cashew nuts and the packers who pack cashew kernels from Tanzania and elsewhere.

A total of 101 people were interviewed for this study, more than 50 studies were assessed, 21 statistical sources were utilised and six trade publications were used for historical trends on prices and trade. In addition the author’s database built up over twenty five years in the industry was galvanised to check and cross check data gathered.

Interviewees

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The assessment of the policies, strategies, legislation, regulation and functioning of the cashew market in Tanzania is framed within the impact of the overall competitiveness of the sector. In doing so it is important to recognise that the cashew sector throughout Africa is in fact two chains which do not always operate in a cohesive manner but which are really only linked at one end at the farm gate and at the other on the retail shelf. The analytical framework is to consider the Tanzanian cashew sector within the framework of its competitiveness as a pointer to the impact of current and past policy and regulation. This was executed as stated above by a close reading of the existing studies and by interview, discussion and debate with a range of stakeholders. Through this methodology the objective is to assess stakeholders, analysts and reporters propositions for the improvement of the sector and to suggest some propositions for policy and regulation improvement.

1.2 Description of Findings

1.2.1 The Tanzanian Cashew Market

- The cashew nut industry Worldwide suffers from a lack of quality information. It is typically driven by myth, rumour and adversarial relationships. The Tanzanian sector is no exception to this rule and we found that many myths persist and often create responses, both in the institutional and commercial spheres, based on inaccurate perceptions of the market and market actors.

- It can be rightly argued that the Tanzanian cashew sector as a provider of in shell cashews to India for processing is competitive in so much as its ability to retain its market share at current levels is strong. It can also be argued that the failure of the sector to sustain cashew processing as a significant part of its activity and to retain market share casts doubt on the competitiveness of the cashew processing sector and its sustainability over the longer term.

- Advocating an approach to regulation then entails assessment of the impact of policy and regulation on the competitiveness of the two chains identified as follows:
  1. The in-shell cashew chain is difficult to categorise. It is termed a “trader” driven chain, an oligopsony dominated by a few trader/ buyers supplying or representing the processors in India
  2. The cashew kernels chain on the other hand is “buyer driven” by roasters, packers and distributors whose concerns are reliability, food safety, quality and traceability.

- Tanzania in the International cashew market
  1. Tanzania is not unusual in Africa in exporting in-shell cashew nuts for processing elsewhere.
  2. The outlook for demand is healthy and the cashew kernels market is likely to grow substantially in the coming years.
  3. The supply/demand balance is tight now and increased production is needed if prices are not to move up sharply. The increase in production can only realistically come from Africa.
  4. The tight supply/demand balance is leading to price volatility and risk.
  5. There is increasing interest in processing on the continent of Africa both from indigenous and international investors

Production, Inputs and costs

- The production of cashew nuts in Tanzania over the past ten years has been characterised by variable production with the low level being 75,000 tonnes on two occasions and the high being the 158,000 tonnes produced in 2011/12. Climate and soils are well suited to the growing of cashews always bearing in mind that cashews are grown where other crops will not thrive.

- There is evidence in Tanzania that inputs, despite Government subsidies are high priced and that access to the right inputs at the right time of year is limited by a failure to administer efficiently on the part of local government and the primary cooperative societies. The failure of the marketing and distribution system for inputs is an annual threat to the crop in Tanzania

- There is also good evidence that the costs involved in evacuating the cashew nuts from the farm gate to the warehouse receipt system and on to the ports for export are not competitive and cost the farmer significant income in any given year.
Farm Gate prices

- Like the auction itself the sales prices and analysis is opaque. At first look the farmer does well receiving between 67% and 80% of the auction sale price. Looking more closely and adding costs for moving the cashew nuts from the warehouses to the port, stuffing, and loading onto containers the figure is diluted due to the high level of those costs. At cooperative union/wrs level the costs are estimated by the coops themselves at TZS286/kg and the onward logistical costs are estimated at $60 per tonne (trade sources). The percentage the farmer receives drops to between 57% and 65%.

- Farmers actually receive about 15% less than the CBT indicative farm gate price due to high levels of costs in the system primarily with coops and due to high margins from exporters and traders of in shell cashews driven by volatility in the market place. The level of costs compare very unfavourably with similar costs in other countries.

- When we consider the price at which the nuts are eventually sold in India the farmer’s share falls to an unusually low level in the context of the international market. Through a combination of high taxes, remarkably high costs at coop/wrs level and high export margins/costs for exporters who buy at auction. At these levels it appears that Tanzanian farmers are not receiving a price which is in line with the quality they produce as compared to their counterparts in West Africa who function in an open market.

Processing: Competitiveness of the kernels chain

- The mechanised factories built in the 1980’s never worked and were probably never likely to work regardless of developments in domestic supply. Therefore every care must be taken in basing any future development of value added activity on these plants.

- It is important to recognise that the sector has from the outset been the most regulated cashew sector in any country Worldwide. This has brought some notable successes and some failures. It would not be accurate to condemn the regulatory environment as wholly responsible for the problems of the industry. However the heavy regulation has created a business culture which has not been conducive to the development of an outward looking, market oriented approach at any level except the in shell export trade level where it was driven by expediency. This culture more than any of the conspiracy theories or victimisation stories we heard so often is responsible for the position whereby value added processing has not developed and the in shell export market is dependent on a single destination, India. Therefore regulation of the sector must be tempered with an approach that is supportive of development at all levels and above all it must recognise that markets have changed and will continue to change in the dynamic market conditions which are likely to persist into the foreseeable future.

- In Tanzania today there appear to be four groups of processors or potential processors:
  1. Operating medium scale processors: These processors are Olam, Export Trading, Mo Cashew and Cashew Company Mtwara. These companies between them account for the bulk of the processing industry in Tanzania.
  2. Legacy processors: These are the processors who own the factories which they bought in the 1990’s from the Government of Tanzania. Some of the owners of the factories recognise that the equipment remaining is only of scrap value whilst others cling to the hope that the factories will one day operate. They often have political connections and in some cases were used as collateral for significant borrowings well in excess of the actual value of the buildings and equipment.
  3. Small scale and microprocessors: There are small scale “cottage industry” processors operating outside the organised economy as evidence at the crossroads of every major town testify as sales people offer shelled cashews. There is also a more organised effort toward micro processing among farmer groups supported by aid agencies.
  4. Promoters of /investors in new large scale processing.
**Constraints on processing**

Tanzania has all the elements necessary for the development of a processing industry in terms of quality product, scale, location, seasonality, tradition and history of processing. However development is constrained by:

1. The auction system means that processors have to compete for supplies with Indian processors at a time of year when Indian processors are most in need of product.
2. The fact that all cashew nuts have to be routed via the cooperative unions and auction system means that the processor has no security of supply and cannot develop normal supply chain relationships with farmers and farmer groups.
3. The costs of routing product through the cooperative unions and auctions are too high.
4. Investment in the sector would rely on the outcome of auctions which are not trusted at any level of the supply chain. Investors are unlikely to invest millions of dollars in processing facilities when their supply is decided by an auction which is rumoured to be corrupt and prone to political interference.
5. The “legacy” factories, in which so much hope and discussion has been invested are not fit for purpose.
6. Small scale processing is not suitable for export to the international markets unless it is tied to a larger scale factory which can offer buyers sufficient volume, food safety and quality product.
7. Tanzanian investors and entrepreneurs find access to financial services limited and prices high.

**Summary**

In summary, the constraints on the processing of cashew nuts in Tanzania largely arise from the economic environment, structure and regulation of the sector in Tanzania. There are however opportunities for the development of the cashew industry at all levels.

Tanzania grows high quality cashew nuts in quantities sufficient to support a national processing sector which would be welcomed by buyers and offer a supply of fresh product at a time of year when it would be in demand. The impediments to the development of processing have been due to poor policy decisions, the mistaken idea that rehabilitation of the legacy factories is the answer, lack of financial services and a supply chain which thinks short term and does not have linkages to the international kernels markets.

**1.2.2 Regulation and Institutions**

**Policy, The CBT and the auction**

- The cashew sector in Tanzania is characterised by heavy regulation and an adversarial set of relationships. Tanzania has the highest export taxation regime in the World for cashew nuts, the only auction system which is combined with the only public, state guaranteed warehouse receipt system and the only remaining cashew nut board, The Cashew Nut Board of Tanzania. The intent of these complex regulatory systems was to protect farmers from what was seen as predatory traders/middlemen. It was also intended to stimulate value addition and to recover the position of Tanzania as a major processor of cashew nuts.

- Government policy is clearly to develop the cashew sector both in value addition and in production and to enhance earning at all levels of the sector. Policy moves have been consistent with these objectives. However cashews are also used for political purposes and are viewed by some as a way of extracting money from the system with farmers as pawns in the game. Much of the regulation could be effective but it is so highly politicised as to render the institutions charged with management of the sector unable to listen to the market but obliged to listen to short term political factors especially from local politicians.
• There is a common policy without a coordinated execution which weakens the sector and opens opportunities for over charging and profiteering. Given this lack of coordination the sector is left with a series of systems, regulations and regulatory bodies which are too cumbersome for a time of volatile markets and fast growth.

• The Tanzanian cashew sector was left with a marketing system (wars/auction) which was in many ways ideally suited to the market environment of 2001-2007 but which was not suited to the situation 2008-2012 and the foreseeable future. This included an inflexible pricing structure, a closed tender auction, a high cost evacuation mechanism and a high export tax which, given that there is only a small national processing sector to protect, is effectively a tax on farmers.

• Processing capacity today is lower than five years ago. The auction system does not incentivise domestic processing even though the policy and regulation is in place to protect processing. Processors are not in a position to source from farmers in a market which demands that they can trace their procurement back to the farm gate. For an entrepreneur or investor this adds up to a lack of security of supply which is the biggest single deterrent from an investment in the sector.

Farmers’ representation
Farmers are poorly represented in the sector. Due to the nature of the auction they have no access to buyers, have only one marketing channel via the primary cooperatives and have no representation at the auctions. At present the system which purports to promote farmers interests in the cashew sector appears to deny them representation if not actively then by the omission of providing a forum for farmers in the cashew sector.

Agricultural inputs system
The government subsidises inputs for the cashew sector mainly sulphur and pesticides. The subsidy is a good way to fund inputs the delivery mechanism is not functioning in a timely manner. Farmers need to have imports during the right window when for example sulphur application will work and at prices which they can afford. Again it seems that a well-intended and conceptually sound idea is poorly coordinated making it ineffective through the involvement of no fewer than seven government bodies for the supply of inputs.

Primary Agricultural Cooperatives and Cooperative Unions
The Government Cooperative Policy of 2003 defines cooperatives should be run based on cooperative principals of equality The Government has a Reform and Modernization Program with the objectives of developing cooperatives that are voluntary, democratically led and managed on commercial and sustainable basis. The program requires a very strong public education and cooperative management training. Funding has been the reasons given for lack of vigorous implementation of the program.

The warehouse receipt system/auction
• The warehouse receipt system and auction was introduced in 2007 to prevent exploitation of farmers and to enhance competitiveness of processors. Similar systems had operated in other commodities but crucially the auction element operated differently in those cases.

• The Tanzanian warehouse receipt system for cashews working as it does in a market where information is poor, bidding is closed and non-transparent, delivery is ex warehouse interior, payment is after success without bond and storage facilities are relatively good is an ideal environment for the trader who brings finance from external sources and sells in a market which has many different clients.

• The WRS and auction is a disincentive to domestic processing investment.

• There is only one legal channel for marketing products so that there is no competition for the provision of services to farmers who are tied to the one buying outlet. Costs in the Tanzanian system are high which is most likely due to a lack of incentive to keep costs under control within this buying system.

Extension services
Given the opportunity for expansion, the availability in Tanzania of the best cashew research facility in Africa at Naliendele Agricultural Research Institute and the necessity of replacing aging trees, extension services should
be high priority. Execution of the policy is poor according to farmers, NGO’s and associations. The extension services are poorly resourced meaning that extension officers are not available to farmers.

1.2.3 The farmer’s perspective
The cashew marketing and inputs system is a basic issue for farmers and their families. The stories the farmers told were about the negative impact of the delayed onset of the marketing season and impact of the low profitability of the crop due to low prices or higher input cost. They complained about failing to pay school fees on time, failing to meet their medical costs and having to borrow or sell their crops to middle man prior to the beginning of the official marketing season.

Input Supply
Individual farmers who are members of primary cooperative societies interviewed are very negative on the system. Farmers’ difficulties with the input system lie in three areas:

- Cost of inputs and cost of administration
- Access to inputs in a timely manner. If inputs are not available at precisely the right time of year the impact is reduced or negated.
- Quality: despite the fact that the Tanzanian Bureau of Standards approves importers and the products they propose to import farmers complain that the products are not of good quality.

The tender system which is intended to create competition at the level of imports will only have an impact if there is also competition at the level of distribution. It is clear that there are too few companies supplying inputs to engender real competition and choice for farmers as buyers. It is also clear that some of the companies involved work together to support prices.

Extension Support Services
The responsibility for extension falls entirely on the government services. Reports from the trade and institutional services interviewed indicate that there is a system of extension officers but they are few and are under resourced. Farmers complained that extension services from the Government are not available to them. Local Government authority officials complain of lack of budgetary resources to effectively facilitate the delivery of extension services through recruiting adequate field staff and equipping them with necessary working tools.

Cashew Nut Prices and Marketing System
- Farmers complained not so much about the prices they receive for their crop, but more about what we concluded are the inefficiencies in the marketing system that deprives them of a fair share of the farm gate price for their raw cashew nuts. Farmers generally receive the minimum indicative price less deductions made by cooperative unions, primary cooperatives and warehouse keepers.
- Farmers have also indicated that they could have better prices had it not been for the high marketing costs that are deducted from the farm gate price by the Cooperative Unions as is demonstrated in this study.
- Farmers just like processors and many observers complain that the auction of the crop in the warehouse receipt system is not transparent. The “auction” is not an auction as such but a closed tender procurement system that is conducted in private and is not reported.
- Farmers have also complained that other forms of farmers’ organization are unfairly banned from competing with primary cooperative societies and unions in supporting farmers to market their crop. They are completely barred from participating in the marketing systems despite the fact they are legally qualified in accordance with law that regulates the warehouse operating system to collect cashew nuts on behalf of farmers and sell them on behalf of farmers through the warehouse receipt system.

Summary and Conclusion
Farmers’ organization both as cooperatives as well as non-cooperatives have an important role to play in the marketing of cashew nuts in Tanzania. Cashew farmers are small holders who are geographically dispersed. Small
holder farmers can reduce their cost of marketing and strengthen their bargaining power in the market by organizing themselves into strong organizations with professional management and accountable leadership. In reality Primary Cooperative Societies are weak in both their bargaining power and their management skills. As a result these organizations have struggled to protect the interest of the farmers.

1.3 Summary of recommendations for effective regulation of the industry
The way forward: Practical and Policy recommendations Part I Marketing and Value Addition

1.3.1 Processing and value addition

- The Cashew nut sector is important to the economy of Tanzania and is at a point in its development where the opportunity to build a modern industry is present. *In the past five years Tanzania, by exporting in shell cashew nuts instead of processing them, has lost US$551 million in value addition.*
- Tanzania must process its cashew crop at home.
- In the period 2007-2012 since the inception of the Warehouse Receipt /Auction system over 461,000 tonnes of in shell cashews have been exported. We have seen above that the cost of handling that volume through the system has been TZS286 (US$181) per tonne based on 2012 values in total US$85m. These costs are in effect paid by farmers. National processing combined with fair and transparent marketing would mean that these costs would be built into sales prices charged for export effectively the overseas buyer would pay the cost
- It is estimated, based on studies undertaken in West Africa by USAID and the African Cashew Initiative that the processing of the entire 2012 Tanzanian cashew crop would create 45,000 jobs in the sector based on current methods of processing.
- Cashew Farmers in countries where processing of cashews is carried out locally are paid higher prices than cashew farmers in countries where the in shell nuts are exported for processing elsewhere.
- The result of processing the entire crop over five years would be an inflow of value to the rural communities of over US$750M which is equivalent of a 3% increase in GDP for the country. The processing of the cashew crop can have an impact on the economy of Tanzania and a massive impact on the economy of the southern regions.

The actions required to stimulate processing are:

1. Encourage investment in processing by increasing access to financial services for domestic entrepreneurs and encourage partnerships with international entrepreneurs.
2. Build a secure supply chain where Tanzanian processors can develop normal supply chain relationships directly with farmers and primary cooperatives without having to deal with the bureaucracy and high cost structure of the auction system.
3. Support investment in processing with matching investment in the supply chain by using the existing research which is among the best in the World to improve yields at farm level and replace older trees.
4. Reward processors who develop their workforce with tax incentives and support services.
5. The use of modern shelling, peeling and grading machines will not stop large numbers of jobs being created in the sector but will mean that processors can be more flexible in their approach to labour relations as the industry develops. The importation, installation and development of technology should be facilitated by the government of Tanzania.
6. Remove barriers to trade, corruption, lack of information, excessive bureaucracy.

Dealing with constraints on processing:

**Constraint:** The fact that all cashew nuts have to be routed via the cooperative unions and auction system means that the processor has no security of supply and cannot develop normal supply chain relationships with farmers and farmer groups.

**Action:** Processors must be allowed to legitimately develop direct sourcing relationships with farmers and primary coops. This does not mean that the warehouse receipt system is redundant but that it must
compete with the processors for product. There is no evidence that processors exploit farmers on a large scale in fact there is evidence that processors pay better prices to farmers than export traders.

**Constraint:** The costs of routing product through the cooperative unions and auctions are too high and reduce the competitiveness of the processing sector as a whole.

**Action:** We have shown that the cost of export handling by the cooperative unions is the highest cost system for export in Africa. This cost is effectively paid for by the farmers who receive lower prices as a result. Tacking this cost structure is an essential pre requisite for the development of the cashew sector in Tanzania. The District tax, cess should be waived on all cashews sold to licensed processors.

- **Constraint:** Investment in the sector would rely on the outcome of auctions which are not trusted at any level of the supply

**Action:** Processors must be permitted to source outside the auction system and the auction system must be transparent like auction systems on other products in Tanzania and abroad. Publishing the results of the auction every week cannot damage the sector in any way it can only stop accusations of corruption whether these are false or justified.

- **Constraint:** The “legacy” factories, in which so much hope and discussion has been invested are obsolete and not suitable for the demands of the modern market.

**Action:** Policy to develop the sector cannot be based on these factories alone but they could be incorporated so long as they are competitive and produce by a method and to a specification which enhances the overall reputation of Tanzanian cashew kernels.

- **Constraint:** Small scale processing is not suitable for export to the international markets unless it is tied to a larger scale factory which can offer buyers sufficient volume, food safety and quality product.

**Action:** Encourage small scale processing but incentive small scale processors and large processors to work together.

- **Constraint:** Tanzanian investors and entrepreneurs find access to financial services limited and prices high. The banks that are committed to the cashew sector via the warehouse receipt system are unlikely to want to extend their risk in the sector which currently functions as a provider or in shell cashew nuts for processing in India.

**Action:** There is little evidence that the warehouse receipt system enhances the prices paid to farmers in 2012. The enhanced prices paid to farmers in recent years are a result of a major turnaround in the cashew sector Worldwide. Farmers in West African countries where there is no warehouse receipt system have also received much better prices in recent years. In fact there may be evidence that prices are lower because the product is delayed coming to the market at a time when supply of in shell nuts globally is extremely limited.

The warehouse receipt system has a constructive role to play especially in times of quiet trading but it should be unlinked from the auction system and should function as a financing mechanism for farmers who want to participate and for processors who want to buy in the season and finance or part finance their inventory at competitive rates and in secure warehouses.

- **Constraint:** Oil and gas exploration in Mtwara may limit the availability of workers for the cashew sector.

**Action:** Cashew processing can be located across the region and the technology which has become available in recent years and is improving every month should be utilised to the full. Labour practices and conditions in cashew factories should be proper and wages in line with local standards.
What type of processing and processing technology?
The future is in modern, food safe processing plants which offer buyers viable volumes in line with the kind of relationships necessary in the current food ingredients market. Therefore the sector needs a series of medium to large scale factories located throughout the producing areas which will meet buyers’ requirements. These factories must be linked to farmers to ensure traceability and must be linked closely with customers abroad.

Small scale processing experience in other countries indicates that small scale processing only succeeds when there is a significant domestic market or when the small scale processors are linked to larger units. Even when they are linked to larger units there remain major challenges in terms of food safety, contamination, breakage and pilferage in transit.

Access to technology is important and has become easier to achieve in recent years. The African Cashew Initiative and the African Cashew Alliance may have accessible databases on this aspect.

1.3.2 The in shell export trade recommendations
• The sector will continue to be dependent on the in shell trade whilst processing capacity is established so it will continue to be important to maintain and improve the RCN trade.
• Urgently open new markets in Brazil and Vietnam reducing reliance on India and ensuring competition.
• Build better information and market understanding with the Cashew Board of Tanzania developing an understanding of the dynamics of the market for in shell cashews.
• Strive for transparency in the auction system allowing the informed participants to assess the market and the options without political interference
• The costs of routing product through the cooperative unions and auctions are too high.
• Encourage the involvement of processors abroad directly in the auction by making the system easier to use and encouraging the development of companies offering services to local buyers. One such action could be to change the auction terms from “ex warehouse” to “FOB” once the cost issues at cooperative level have been resolved.
• Improve warehouse and drying practices and talk to buyers about their needs for quality cashew nuts.

1.3.3 Marketing Cashews, what do buyers want?
The Tanzanian cashew sector is driven by internal considerations and the interests of internal actors whether political or commercial. In order to develop a more viable industry a market orientation is needed. The following actions would bring the sector more closely into alignment with the market as a whole:

1. In shell: The marketing of Tanzanian cashews to Indian buyers only through indigenous exporters/traders is narrow and should be broadened. Not only should the usual buyers be invited to participate in the auction but also buyers from other countries should be invited.

2. In shell and kernels: If Tanzania is to make the most of its competitive advantages then a good market information system must be put in place.

3. In shell: Throughout the sector in Tanzania there is an adversarial approach to the current buyers of in shell cashews – “the Indians” are blamed for everything that goes wrong. The CBT and other stakeholders must do more to understand their buyers. Indian buyers are not one united mass determined to buy cheap cashews from Africa. There is competition between processors. There are many new processors especially outside the traditional processing areas who are potential customers but are excluded by the current distribution chain.

4. Kernels: Health and food safety – Tanzanian authorities as a matter of urgency must put in place a national cashew quality brand (as was done many years ago). Food safety is a major issue in the
cashew sector now and is not being met by processors elsewhere. A genuine reputation for food safety and trace ability will bring buyers for kernels.

**Actions which will not work**

1. A ban on export of RCN is not a good idea.

2. Delaying the export of in shell nuts as done in Mozambique is unlikely to work.

**Target markets for kernels**

1. Target growing markets in the Middle East and Asia as well as traditional markets in Europe and the USA. European buyers are especially interested to diversify their supply chains following threats to supply in India and Vietnam.

2. Ideas of close regional markets with the exception of South Africa do not work as all these countries either produce cashews themselves or are just not at an income level to afford cashew nuts.

3. Branding as “food safe, clean and traceable” will work.

4. India is a significant buyer of in shell nuts from Tanzania. India protects its kernels market with high levels of duty. The Indian authorities should be approached for a derogation of import duty for Tanzanian cashew kernels especially broken and pieces.

**1.4 The way forward: Practical and Policy recommendations Part II**

**Developments in Tanzania**

**Grow more cashews – work with the existing farmers.**

The most effective way to increase farmer incomes in the cashew nut sector is to educate farmers on growing cashews to bring yields up from the very low levels. Simple practices such as when and how to prune trees can have fast and effective impact. If a farmer can grow one more kilo per tree it means far more than a rise in the price he is paid. This has been well demonstrated in West Africa where a mixture of new planting and better practices has doubled production in Cote D'Ivoire in a decade.

Secondly, tree densities are low in Tanzania. Farmers could plant and manage more trees on their existing land if they had access to seedlings or seed and if they were assisted in developing their knowledge in developing more trees.

Based on evidence from other countries it is possible that Tanzania could achieve a 25% increase in the crop by concentrating on working with existing farmers to improve their practices both for growing and for post-harvest handling of the cashews. A regular annual crop in the range of 200,000 tonnes is possible without any addition to the land usage or spread of the crop to new areas.

**Inputs – effective delivery and access is more important than price.**

The cost of inputs is an important issue availability and access to inputs is a far greater issue. We have seen for example that the cost of sulphur in Tanzania is probably double the World market price but far more damaging than the high price is the situation where sulphur is not available for application at the right time or even at all.

Therefore the Cashew Board of Tanzania and the Government of Tanzania must either introduce competition into the sector to stimulate competitive delivery or it must ensure that not only is a national tender carried out but that the delivery of the sulphur and other inputs to primary cooperative and farmer is effective.

**Reward quality**

Tanzanian farmers are not incentivised or rewarded for producing better quality nuts. This system does not encourage better quality and without a processing industry to promote better quality, an effective extension service to educate farmers or a market information service to inform them they continue to be underpaid for the better quality product.

**The Co Operative Unions**

The co-operative unions which handle the cashew nuts are among the most successful organisations in the sector.
However do the coops especially the Unions do what they say they will do for the farmer? The initial evidence is that they do not.

**Action**
1. The entire Primary society and Cooperative Union Cashew activity should be audited annually.
2. Farmers should receive statements which details their costs and deductions
3. The costs that co-operatives pay and charge should be public and open to review.
4. The Government should reconsider the appropriateness of an organisation such as a cooperative being the warehouse keeper, purchaser and marketer of the product if the current system is to continue.

**Financial services**
1. The Tanzanian banking sector is well committed to the cashew sector through the warehouse receipt system under guarantee from the Government. This participation whilst welcome may be acting as a disincentive to lend competitively to the private sector for investment. A discussion as to how banks manage risk in the sector needs to take place to ascertain the truth or otherwise, formally or informally of this proposition.
2. Lack of financial services for processor/investors is a primary impediment to the development of the processing industry and leads to excessive dependence on the state for initiatives which will stimulate processing and value added activities in particular.
3. Recent reports of the establishment of a national Agricultural Development Bank if true could be significant for the cashew sector.

**The Warehouse Receipt System and Auction**
Over the past five years it is quite likely that farmers overall would have received higher prices with or without the war/auction system. We believe that it is time to reassess the current system in the light of this development and to ensure that it will be connected to the market in future.

**Efficiency**
The level of costs has to be controlled and linked to market prices in order for farmers to obtain a fair market price.

**Market information**
The auction as a marketing system without a fully supportive market information system and more importantly a full understanding of how the market works at all levels will not function properly. The Cashew Board of Tanzania and the sector as a whole need to build understanding and market information as a matter of priority.

**Transparency**
The lack of transparency in the auction system leaves it open to accusations of corruption and price fixing which is not good for the CBT or other stakeholders. An auction designed to enhance value to farmers and through which almost all in shell cashew are obliged to flow should be public with the winning bids published.

**Processors and access to farmers**
The logic of some regulated control system for the export of in shell cashew nuts is clear although the operation of the system as it stands is open to question. However the implementation of the war/auction system for domestic processors is a disincentive to investors, threatens security of supply for would be processors and stops the building of market linkages between processors and farmers/primary coops.

In a case where a domestic processor is allowed to buy directly from farmers (other than the small scale own processing which currently exists) that processor must not also be an exporter of in shell cashew nuts.

**Marketing of in shell nuts**
Under the present system (apart from the few processors) there are licensed buyers who buy for their own account and sell to processors in India and there are buyers who buy on account of India processors as handling agent. Other buyers are reluctant to become involved due to bureaucracy and myths around the
system which enforces the role of the Tanzanian exporter who makes a high margin for simply arranging the transport to the port and shipment to destination. Ultimately the farmer pays the price for this.

The current system of licensing traders to buy at auction is archaic and seems simply to be a way of collecting fees at two levels (CBT and local operator). The licensing system could be done away with enhancing competition.

Warehouse keepers
a. There is evidence that the current warehouse keepers have no incentive to move the product out of their warehouses as they earn income from storing it.
b. Quality and weight is not properly controlled in the warehouse. Under recording quality when it is known to the end buyer can create a large margin for that buyer and is a form of corruption where large gains are made for very small expenditures.

**Action on the wrs/auction**

- An accurate, timely and appropriate market information collection and delivery system must be put in place for use at tender committees and in making fundamental decisions at the outset of each season.
- The auction must be opened up to function as a real auction with bids and offers, volumes and successful prices published so as to bring transparency and thus confidence.
- The auction and the warehouse receipt system should be separated. The wrs should be seen as a system which brings competitive finance under Government guarantee. It should continue to offer this to the cooperatives for product routed through the auction system but it should also be extended to farmers and processors who choose to operate through the wrs system as part of their marketing strategy. We see the concept of the wrs system as a finance mechanism as valid but the marketing system as severely flawed in the circumstances of the market in 2012 and beyond.
- Domestic processors must be permitted to source cashew nuts directly from farmers. This will connect them to farmers bringing benefits as mentioned throughout this study.
- The wrs/auction system could continue for the export market if the reforms as suggested were put in place and if the system were adapted to the current market conditions. In which case if the domestic processing is separated from the export auction and foreign buyers of RCN are invited to participate directly then the terms of the auction should be changed from ex warehouse to FOB Mtwara/Dar es Salaam. This would give greater access to buyers from abroad and make it easier to trade directly.
- Costs of running the system must be audited and reviewed every year and the results published.
- New markets in Vietnam and Brazil must be opened for in shell cashew nuts.
- Primary cooperatives and cooperative unions provide services to farmers at varying levels of efficiency but they do not represent farmers and are not advocates for farmers’ views. If the auction system is to regain the confidence of farmers then farmers must be encouraged to form functional representative bodies and these bodies must be allowed access to the auction system

**The Cashew Board of Tanzania**

Tanzania is an important cashew country and should be represented in a confident and assertive manner which certain individuals do as individuals but the Board fails to do as an organisation. We also believe that the Cashew Board of Tanzania has not developed a market knowledge and understanding fitting of its role representing the Tanzanian sector abroad and promoting growth and development at home. The Cashew Board of Tanzania is difficult to contact. Senior staff are reluctant to meet and when they do meet they do not display knowledge of the sector abroad or the market. Symptomatic of this malaise is the strategic plan of the
Cashew Board of Tanzania. It is not connected to any reality in its description of the World market – estimates of the World crop and of World consumption are very inaccurate and can only be based on old data

Actions
1. The Cashew Board would benefit by a better more developed market information system with a global reach. Achieving this requires enlisting some support from market sources in the international market.
2. The target markets are now fast moving and volatile both for in shell and kernels. The marketing and decision making process should be more flexible in line with the movements in the marketplace.
3. The CBT has many and varied roles which overlap with other institutions and agencies. The CBT should be more focussed on its coordination and marketing role.
4. We are not aware of any method currently in place to measure the impact of CBT actions for example prices to farmers have risen but this is a market factor not a CBT factor in fact perhaps the CBT could have lifted prices higher if it had promoted Tanzanian cashews in other markets.
5. The development of processing is essential for the sustainable and growing sector the CBT has to take a central role in promoting processing, bringing market news and new processing technologies to Tanzania.

How can we build an industry?

1. Bring the regulatory and institutional interventions into line with the current market situation
2. Build a vision of 100% processing
3. Centre support programmes around the growers. Continue and expand input and education programmes for growers
4. Educate growers on looking after the trees and drying the nuts at harvest.
5. Encourage processing and build links between the processors and the growers.
6. Link the Tanzanian Cashew sector to the World market by opening up alternative destinations and developing a market information system
7. Reduce costs to competitive levels – it is not just about the costs in Tanzania it is about unfair margins, inefficiency and corruption.
8. Develop financial services including the warehouse receipts system to assist with value addition activity.
Factsheet 1: The Tanzanian Cashew Sector 2012

Tanzania 2012

- 2011/12 Producer of 158,000 tonnes of quality cashew nuts in shell.
- Third in Africa by volume; Second in Africa by quality of the major producers.
- Less than 15% processed in country: US$110 m in direct value addition lost every year.
- The most regulated cashew market in the World.
- The only functioning cashew warehouse receipt system / auction system in the World.

Problems

- The international market has changed necessitating changes to the regulatory system.
- Auction system is a disincentive for processors.
- Co Operative Unions high costs reduce returns to farmers.
- Lack of transparency at the auction and in the warehouse receipt system.
- Lack of transparency in Co Operatives dealings with farmers.
- Poor market information and understanding at all levels.
- Failure of the crop inputs distribution system.

Opportunity

- Cashew consumption is growing.
- The World needs more cashew nuts from Africa as much as 8% more every year.
- The investment climate and interest from cashew buyers is greater than ever before.
Factsheet 2: The transition: 10 ways to change the sector

1. Prioritise value addition/processing through modern processing linked to farmers and linked to small scale processors.
2. Build a market information system for kernels, in shell & processing equipment.
3. Introduce transparency in the auction system.
4. Separate the wrs and the auction.
5. Rationalise costs in the marketing system especially Cooperative Unions
6. In shell exports continue through the wrs/auction: Tanzanian processors can source directly from farmers, associations and primary coops.
7. Open new markets for in shell.
8. Prioritise cashew brand Tanzania as food safe and reliable.
9. Properly resource extension services.
10. CBT concentration on coordination in the sector.

2016
- Processors can deal directly with farmers and primary coops.
- The WRS separate from the auction as a financing mechanism for stakeholders.
- The auction concentrates on in shell export, is transparent and is well informed.
- Buyers from all over the World know about Tanzanian cashews.
- Competition in the crop inputs market
- Farmers have access to representation at all levels
✓ All cashew grown in Tanzania are processed in the in Tanzania
✓ 75% exported to international markets: 10% to domestic and regional markets: 15% is further value added for supply packaged to supermarkets in major markets.
✓ Competition for supply between major and medium processors.
✓ Small scale processing links farmers directly to the domestic market.
✓ Cashew Tanzania brand is established.
✓ Processors are now supplying packed as well as bulk kernels.
✓ Production is 250,000 tonnes.
✓ Competition in input supply.
✓ CBT role is information, technical support, representation and development.
✓ Farmer associations offer farmers an alternative to Primary Cooperative societies.
✓ The chain is characterised by value addition, quality and good information.
✓ Next objective 25% value added roasting and 350,000 tonnes production.
## Actors & Actions

### 1. Processing & Value Addition

<table>
<thead>
<tr>
<th>Actor &amp; Action</th>
<th>Encourage Investment &amp; Access to Financial Services</th>
<th>Supply Chain reform including WRS and Cost Structure</th>
<th>Supporting Investment in processing</th>
<th>Improving Agricultural practices crop size and yield</th>
<th>Modern processing methods</th>
<th>Remove barriers to trade, excessive bureaucracy</th>
<th>Become a customer oriented sector</th>
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<th>Actor &amp; Action</th>
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<th>Transparency in the auction system without political interference</th>
<th>Control costs for movement of cashews</th>
<th>Encourage the involvement of processors abroad</th>
<th>Improve warehouse and drying practices and talk to buyers about their needs for quality cashew nuts</th>
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### 3. How can we build an industry?

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<th>Link the Tanzanian Cashew sector to the World market</th>
<th>Develop financial services including the warehouse receipts system</th>
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Advocating for Effective Regulations for the Cashew Nut Industry in Tanzania

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   1.2 Description of Findings
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Bibliography
ACA African Cashew Alliance
ACi African Cashew initiative
ADB African Development Bank
ADF African Development Fund
BMZ Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (German Federal Ministry for Economic Cooperation and Development)
BoT Bank of Tanzania
CATA Cashewnut Authority of Tanzania
CBO Community Based Organisation
CBT Cashewnut Board of Tanzania
CDC Cashewnut Development Center
CIDTF Cashew Industry Development Trust Fund
CFC Common Fund for Commodities
Cif cost insurance freight
Cfr cost and freight
CNSL Cashew Nut Shell Liquid
DALDO Districts Agricultural Development Office
DCED Donor Committee for Enterprise Development
DEO District Executives Office
DfID Department for International Development
DTIS Diagnostic Trade Integration Study
EAC East African Community
EFTA European Free Trade Agreement
EIF Enhanced Integrated Framework for trade-related assistance for LDCs
EPA Economic Partnership Agreement
EU European Union
FAO Food and Agriculture Organization of the United Nations
FAO Stat Food and Agriculture Organization Statistics
FBG Farmer Based Group
FGP Farm Gate Price
FOB free on board
GAP Good Agricultural Practices
GDP Gross Domestic Product
GHP Good Handling Practices
GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
HACCP Hazard Analysis and Critical Control Points
ICMP Integrated Cashew Management Programme
IFAD International Fund for Agricultural Development
LDC Least Developed Countries
MoAFSC Ministry of Agriculture, Food Security and Cooperatives
MHQFP Masasi High Quality Farmers’ Products Ltd.
MITM Ministries of Industry, Trade and Marketing
Mts Metric Tonnes
NAPB National Agricultural Products Board
NAR Naliendele Agricultural Research Institute
NGO Non-Governmental Organization
NMB National Microfinance Bank
PCS Primary Cooperative Society
RCN Raw Cashew Nut
RIA Regulatory Impact Assessment
R&D Research and Development  
SADC Southern African Development Community  
SAGOT Southern Agricultural Growth Corridor (SAGOT)  
SIDO Small Industries Development Organization  
SMS Subject Matter Specialist  
CBT Cashewnut Marketing Board of Tanzania  
TIC Tanzanian Investment Centre  
TRA Tanzania Revenue Authority  
TZS Tanzanian Shillings  
TWLB Tanzania Warehouse Licensing Board  
UN United Nations  
UNCTAD United Nations Conference on Trade and Development  
SADC Southern African Development Community  
SAGOT Southern Agricultural Growth Corridor (SAGOT)  
TZS Tanzanian Shillings  
TWLB Tanzania Warehouse Licensing Board  
UN United Nations  
UNCTAD United Nations Conference on Trade and Development  
UNIDO United Nations Industrial Development Organization  
USA United States of America  
US$ United States Dollar  
WRS Warehouse Receipt System  
WTO World Trade Organization

**Glossary of some Cashew Terms used**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Conventional</td>
<td>Food produced without organic or fair-trade certification</td>
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<tr>
<td>Fair-trade</td>
<td>The Fair-trade system is about trading as directly as possible with producer organisations and ensuring that all participants comply with Fair-trade standards. These standards guarantee fair and sustainable terms of trade for producers in developing countries’ Fair-trade Trade Foundation</td>
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<td>FCL</td>
<td>Full container load</td>
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<td>In-shell</td>
<td>Nuts as harvested prior processing</td>
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<tr>
<td>Kernels</td>
<td>Shelled cashew nuts</td>
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<tr>
<td>LCL</td>
<td>“Less than container load”</td>
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<td>NGO</td>
<td>Non-Government Organisation</td>
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<tr>
<td>Organic</td>
<td>Production system which excludes the use of chemicals and promotes environmentally sustainable methods.</td>
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<tr>
<td>Outturn</td>
<td>Cashews – weight of kernels produced from a unit of in-shell nuts (grams per kg, lbs. per 80kg bag)</td>
</tr>
<tr>
<td>RCN</td>
<td>Raw Cashew Nuts (the cashew in its shell)</td>
</tr>
<tr>
<td>Roaster</td>
<td>Processor and packer of cashew kernels for retail or wholesale trade</td>
</tr>
<tr>
<td>Shelling or processing</td>
<td>Removal of outer shell, peeling and grading of in-shell nuts</td>
</tr>
<tr>
<td>Yield</td>
<td>Used to describe the grades of kernels produced by shelling in-shell cashew.</td>
</tr>
</tbody>
</table>
2. FACTSHEET: Tanzania
Region: East Africa

Tanzania is an important producer of cashew nuts not only for the 90,000-150000 mts it commercialises each year but because the crop comes at a time when availability of cashews is restricted. The so called “southern crops” (Brazil, East Africa and Indonesia) account for less than 20% of World production so tend to make higher prices than the “northern” crops. Tanzania has a long history of growing cashews and a long history of exporting them to India for processing going back to World War II. The development of the processing industry in recent years is a resurgence of an industry which failed in the 1980’s when production fell when farmers abandoned many of their farms and trees under an unpopular reorganisation of the countryside. More recently progress in processing has been successful compared to other African countries in a market which is highly taxed and regulated but remains disjointed and has so far failed to fulfil its potential in terms of value added activity.

Cashew growing
Hectare age: 400,000 ha in intercropping mix
Yield per hectare: 250-450 kg (low to moderate/typical East Africa)
Age of trees: Old trees – threat to production by 2020.
20-25m productive trees some very old many planted in 1990’s
Up to 15m unproductive old trees planted before 1985.
New trees planted since 2000 in Sungida and Mbarali
Type of grower: Smallholder: median est. 360,000 smallholders. There are a small number of plantations.
Season: End September - February
Pests/Threats: Powdery Mildew Disease is a major problem which can devastate yields
Also Helopeltis, borer insects and Mealy bug.
Inputs: Sulphur, pesticides, jute bags, planting materials

Quality
Yield per bag: Average: 51 lbs. Yield per kg %: 29% Range: 44 – 55lbs
Size of in-shell: 200
Ease of shelling: Tanzania material has a good reputation and is well accepted in India for shelling.
Problems: Poor drying and post-harvest.

Production:

<table>
<thead>
<tr>
<th>Crop in-shell basis dried</th>
<th>Source: CBT, CEPCI, Customs India, EU, USITC, Ministry of Ag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage dried</td>
<td>2011/12</td>
</tr>
<tr>
<td>Crop</td>
<td>158543</td>
</tr>
<tr>
<td>In-shell export***</td>
<td>126992</td>
</tr>
<tr>
<td>Kernels Export *</td>
<td>15000 Est.</td>
</tr>
</tbody>
</table>

* Calculated on in shell basis using 51lbs per bag less 4% for net yield
** Domestic consumption estimated at 1000 mts small industries, 4000 tonnes commercial

Average in-shell production is relatively is in the region of 95,000 mts but fluctuates depending on each year’s growing conditions. Recent years have shown an upward trend. The above crop figures are broadly in line with the Cashew Board of Tanzania however export figures are drawn by comparison of Tanzanian export statistics with receiving country statistics. None of these figures include cashews which are not commercialised.

Tanzania unlike many cashew producing countries has a grading system for in-shell cashew nuts which are graded into “Standard” and “Under grade”. This is not adequate as a system to reward quality but it does establish a culture that better quality means a better price. In many countries exporters take all qualities and mix the exports – this usually means that the price is set and paid based on the lower quality. The best quality cashews traditionally come from the Mtwara area with the Coast area producing a lower quality.

Trend in production:
The Cashew Nut Board of Tanzania has a policy which encourages and assists the replacement of old low/non yielding trees and combats the problem of disease in particular powdery mildew disease. If these
programmes are not successful then the trees planted in the 1990’s will begin to fall away in yield terms by 2020 and production will fall. Tanzania does have a development policy and research is taking place using selected seeds, polyclonal seeds and grafts at the Naliendele Agri Research Institute which could provide the required result although uptake among farmers is poor according to interviews. It seems likely that cashew will continue to be important in the current growing areas but a spread to other areas appears unlikely as farmers have other alternatives and trials have proved unsuccessful.

**Infrastructure/Export facilities:**

**Port:** Good port facilities: no problems reported by exporters some problems on import of equipment and inputs.

**Shipping Lines:** All major lines calling Dar set Salaam and seasonally at Mtwara for RCN.

**Storage facilities:** Warehouses failed to cope with the large 2011/12 crop with good improperly stored and recorded.

**Movement of product:** Trucking and haulage charges are said to be too expensive

**Financial Services:** High interest rates are often cited as an impediment to investment in agriculture in Tanzania. Interest rates range from 18-26% and collateral requirements of the banks are high. This applies to the cashew industry as much as to any other. Potential investors raising funds in Tanzania are at a significant disadvantage to competitors in India in terms of cost and access to funds. Processors report that they find it difficult to raise investment funds and working capital. From a grower perspective the warehouse warrant scheme described below has alleviated some of the problems in terms of pressure to sell at harvest time.

**Business environment:** The cashew sector in Tanzania is the most regulated and taxed cashew industry in the World both by local and national government. Every stage of the process is licensed sometimes by multiple agencies. Local taxes are paid on in-shell, traders and exporters are licensed and a guide price is published by the government agencies prior to the start of each season. The Cashew nut Board of Tanzania is tasked with developing the industry and has an ambitious programme funded from the export taxes. The trade is represented by the Cashew Processors Association of Tanzania. Representation for growers is weak. The World Bank rankings shows Tanzania doing well on economic freedom but has slipped on “Ease of doing business” with delays in permits, infrastructure and access to finance quoted as the major problems.

**Export/Import duties:**

- Export duty on in-shell has increased from 3% to 10% and now to 15% ad valorem or $160/mt.
- Export duty on kernels is 1% with a 2 year exemption for new factories

**Price regulation:** A guide price is issued before each season based on information from the World market and on a cost calculation of farmers production costs by the Cashew Board of Tanzania. This has led to some conflicts over the years with the exporters refusing to pay the price. In 2012 a major crisis developed and only disruption to the West African crop avoided a systemic crisis.

The warehouse warrant scheme commenced in 2007 and on first look appears to have been successful. The system allows the grower to deposit his cargo in a state administered warehouse during the harvest season for payment of a 75% advance. Crucially this allows the farmer to fund his immediate needs without having to sell during the period of selling pressure at harvest time. The product is sold by way of bid/tender auction to exporters and processors and the farmer receives the balance of his payment adjusted for the sale price. The advance payments are funded by the National Microfinance Bank and CRDB with the warehouse receipts used as security. This system also means that the cashews should be properly stored post-harvest and are checked for quality on intake.

The Tanzanian warehouse Licensing Board claims that the system has boosted prices from TSh350/kg to Tsch 1200/kg but given the soaring market prices in recent years it is difficult to apportion the reasons for the increase to the system alone. However the prices received by farmers are significantly below the actual indicative price and costs of evacuation from the farm gate to the warehouse and export ports administered by the cooperative unions are the highest in Africa.

**Importance of cashew to economy:**

Cashews are amongst the top three agricultural exports from Tanzania accounting for 15% of traditional exports in 2009 rising from 9.6% in 2008 and 8% in 2007. The crop is very important to growers in the areas of Mtwara and Lindi (areas ranked moderately food insecure by USAID during 2009) as like cashew growers in many countries they have little alternative cash crops and cashews can provide up to 75% of their income.
Tanzania – Cashew Industry

SWOT Analysis

**STRENGTHS**

- History and culture of growing and processing cashew nuts
- Quality cashew nuts
- Crop size large enough to support processing
- Government support for cashew sector
- Established processing
- Available land and suitable climate for extension
- Quality culture on RCI/quality control
- Research facilities
- Warehouse receipt system

**WEAKNESSES**

- Old trees/low yields
- Tree diseases Powdery Mildew Disease
- Lack of effective grower organizations
- Poor post harvest handling
- Poor market information
- Export taxes eventually paid by the grower
- Short term finance available to in-shell traders: More difficult for processors
- Cost of Finance and not available to small growers to allow storage/improvement
- In-shell marketing dependent on India
- Trucking, power and water expensive
- High processing costs
- Poor reputation kernel quality
- Land tenure system

**OPPORTUNITIES**

- Replacement of old trees
- Development of processing
- Diversification of export market
- Development of better tree varieties
- Development of farmers organizations
- Shelling and processing "culture" exists
- Poor reputation for contract fidelity of many Indian and Vietnamese competitors

**THREATS**

- Tree disease
- Aging trees
- Corruption
- Complicated & difficult bureaucracy
- Natural disasters e.g. cyclones to trees and processing plants
- High cost of funding
- Productivity in processing plants
- Potential growth of processing in West Africa

- Production: 95,000 tonnes in-shell average
- Trend: Up 2010/11 121,000, 2011/12 158,000
- Processing: 15 - 20,000 tonnes in-shell
- Exports: 80-85% in-shell: 15% kernels
- Area: Est 25 million trees productive
- Farmers: 360,000 households median estimate
3. The context

3.1 Analytical Framework and Methodology

Literature review: 22 articles
Interviews undertaken: 101 (Processors, Farmers, Institutional, Ngo, financial)

The approach of the Government of Tanzania within an already highly regulated and institutionalised market is crucial to sustaining and developing the cashew sector. This report seeks to advocate policies, action and regulation which will improve the competitiveness, transparency and marketing in the Tanzanian cashew sector.

It is based on
1. A detailed re-reading of the available literature on cashew nuts and the studies already compiled by national organisations, NGO’s and trade associations.
2. Interviews with a range of stakeholders – farmers, coops, government agencies, processors, in-shell traders, financial institutions, research organisations, NGO’s and consumer companies were interviewed for hard information and informed opinion on all things related to cashews.
3. The study also draws on the authors experience and contacts in the cashew sector as importer, analyst and consultant over twenty seven years.
4. The author’s database compilation of price and market reports stretching back to 1990 was used and compared to information available from a range of accredited public and trade sources.

The cashew nut industry suffers from a lack of good quality information. Export figures are often incorrectly recorded. There are no rigorously accurate estimates of crops and many countries have informal trade which is difficult to account for. There are often conflicts between figures offered by the different sources. A detailed comparison between sources and interrogation of the statistics is always essential and has been undertaken. This has shown that trade statistics and crop estimates contradict each other in which case the most reliable figure has been taken for example Indian import figures for in shell cashew are preferred to Tanzanian export figures as these are more up to date and it is estimated that some informal export trade takes place from Tanzania to avoid the export levy. Tanzanian production figures are used however as there a well-developed record is maintained by the CBT, Ministry of Agriculture and the NARI.

The cashew industry is typically driven by myth, rumour and adversarial relationships. The Tanzanian sector is no exception to this rule and we found that many myths persist and often create responses, both in the institutional and commercial spheres, based on inaccurate perceptions of the market and market actors especially internationally. Bearing this in mind the first task of the study was to place the Tanzanian sector in the context of the international cashew market.

In the approach to this study the author draws on previous work in assessing “Competitiveness in the African Cashew Sector” (Fitzpatrick, 2011, GIZ). The assessment of the policies, strategies, legislation, regulation and functioning of the cashew market in Tanzania is framed within the impact of each of these on the overall competitiveness of the sector. In doing so it is important to recognise that the cashew sector throughout Africa is in fact two chains which do not always operate in a cohesive manner but which are really only linked at one end the farm gate and at the other on the retail shelf. This is demonstrated by the fact that kernels prices and in shell prices are not necessarily linked and can even move in opposite directions at the same time.

Whereas it can be rightly argued that the Tanzanian cashew sector as a provider of in shell cashews to India for processing is competitive in so much as its ability to retain its market share at current levels is strong as has been shown over the past ten years. It can also be argued that the failure of the sector to sustain cashew processing as a significant part of its activity and to retain market share casts doubt on the competitiveness of the cashew processing sector and its sustainability over the longer term. In the short term the opportunity to build a significant value added industry creating tens of thousands of jobs is missed and the lack of the type of linkages in the value chains especially to growers which are fostered by the development of processing may develop into a threat to the industry as a whole if for example the Indian in
shell market were to stop buying from Tanzania or just to stop buying in the period October to February each year.

Advocating an approach to regulation then entails assessment of the impact of policy and regulation on the competitiveness of the two chains identified as follows:

- The in-shell cashew chain is difficult to categorise. It is termed a “trader” driven chain, an oligopsony dominated by a few trader/buyers supplying or representing the processors in India. In Tanzania this is sometimes referred to as a monopsony which term fails to recognise the diversity of the Indian market for in shell and the potential elsewhere. In fact some buyers might refer to the current system as a monopoly with only one seller offering to a range of buyers.
- The cashew kernels chain on the other hand is "buyer driven" by roasters, packers and distributors whose concerns are reliability, food safety, quality and traceability.

The following are the factors which are used to provide the framework for assessment of the competitiveness and therefore the impact of regulation on the cashew sector:

1. Factors determining competitiveness in the in-shell chain:
   - Growing the right product in the right place
   - Product Quality; Yield, variety and post-harvest
   - Seasonality: Timing of the crop
   - Efficiency of the supply chain: agents, intermediaries, logistics and costs
   - Finance
   - Risk and perception of risk – “the image of a country”
   - Market access
   - Role of the Government interventions/incentives/duties
   - Ease of doing business

2. Factors determining competitiveness in the kernels chain
   - Supply of quality product
   - Risk and perception of risk/Country risk
   - Finance
   - Availability and productivity of labour
   - Business environment - entrepreneurship
   - Logistics & Costs
   - Market Access / Domestic and international
   - Technical support
   - Government support : legal and institutional infrastructure

These factors must be assessed both in terms of the extent to which they exist and the constraints under which they exist in terms of the impact on the competitiveness and development of the sector.

In summary the analytical framework is to consider the Tanzanian cashew sector within the framework of its competitiveness as a pointer to the impact of current and past policy and regulation. This will be executed by a close reading of the literature in particular value chain studies, market reports, market analysis and statistical analysis and by interview, discussion and debate with a range of stakeholders. Through this methodology the objective is to assess stakeholders, analysts and reporters propositions for the improvement of the sector and to suggest some propositions for policy and regulation improvement.
3.2 The Global Cashew Market – a snapshot view

The Global market is well covered in publications such as “Competitiveness in the African Cashew Sector”, ACI 2011, “Cashew Week” Foretell Solutions and “The Cashew Club”, Natural Protocol,(monthly). Rather than reproducing a detailed account here a “snapshot” is presented below.

3.2.1 Market Structure

The purpose of this chapter is to create a context for the analysis of the Tanzanian industry. The cashew nut industry is young by the standards of other food commodities. Worldwide production grew to 500,000 tonnes in-shell by 1975. In the 1970’s the countries of East Africa were the dominant producers of both in-shell and cashew kernels. However from 1975 onwards production in Mozambique and Tanzania declined due to political upheaval, war and latterly tree diseases. As East Africa faded India gained in prominence as growing and processing there expanded. Cashew production saw a dramatic rise in the last decade almost doubling due to growth in Vietnam and West Africa, as trees planted in the 1990s have matured into full production. The annual supply of in-shell is now in excess of two million tonnes. Today the dominant producers of cashew nuts are India, Vietnam, Cote D’Ivoire and Brazil. Production growth has slowed down with Indian production stagnant to growing slowly, Vietnamese production falling and growth rates in West Africa stabilising.

Processing (the shelling, peeling and grading) of the cashew nut to remove the kernel remains largely confined to three major countries India, Vietnam and Brazil. Although the position has improved in East Africa in recent years the fact remains that 85% of all cashew nuts are exported for processing to India or Vietnam. In West Africa this figure rises to over 90%. India and Vietnam dominate cashew processing, with 42% and 52% respectively.

![Cashew World Map](image)

**Cashew Supply Trends**
- Vietnamese in shell (RCN) production has stopped growing and is beginning to fall – better options for farmers based on soil and climate e.g. rubber
- Vietnam State sector weakened by losses
- Indian production is moving north away from traditional growing areas of Kerala in the south. Production volume is static to slowly rising despite government programmes.
- Production in West Africa and Tanzania is increasing due to development projects and better prices for farmers.

**Cashew Demand Trends**
- World demand is growing and is projected to continue to grow
- Demand in North America and Europe accounts for 40% of World demand.
- India is the largest market in the World and is growing very quickly. India is a major net importer of cashews.
- Demand is slightly down in traditional markets (USA 2012 imports +1%, EU 2011 imports -5.5%)
- Recession, high prices, volatility, competition other nuts and cheaper snacks.
- Brazil & India have lost share in these markets to...
them to manage the financing, sourcing, consolidation and sale of the goods. Trader driven chains tend to be less organised, encourage price inconsistencies, price volatility and in turn speculation. Wide price ranges and volatility are common in the in shell business and may or may not be related to the international price of cashew kernels at any given time.

The key issue is access to and the cost of finance for traders and intermediaries in the international market. The in-shell cashew chain, sourcing nuts from Africa and especially West Africa, is a chain which operates with limited access to finance. Access to finance is essentially limited to the international traders and one or two export traders in each country. There are a range of factors at play. These range from poor financial services, prohibitive cost, the weakness of the domestic supply chain, the inability of companies to comply with bank requirement to simple exclusion from the financial system that many growers experience.

The trade operates on the basis of “risk and reward”. How many times in a given period can a given sum of money be turned over for a profit? Are the risks of losing that money worth the potential rewards involved? In other words the greater the traders’ perception of risk the higher reward he must have on any given transaction to manage or offset that risk. The risks range from losing funds sent to agents in the country, low quality or loss of product, market volatility to high scale risks on a country level such as experienced by traders in Guinea Bissau and Cote D’Ivoire in recent years. Traders compete with each other. Processors compete with each other. What is sometimes taken for collusion is often (but not always) just faster and better market information and understanding than is available to others. The idea that “the Indians “are the enemy who “steal” the cashew nuts in countries like Tanzania every year is not accurate. In fact the Indian buyers are the customer without whom there would be no market and they are likely to remain the customer until African countries build processing facilities which allow them to retain the value added and develop their own brands. That is not to say that abuses do not take place. In a market dominated by traders the margin and turnover is all important and short term thinking dominates.

As a result the price of African in shell cashew nuts is set elsewhere. This is due to the fact that the Indian/Vietnam crops which in a normal year comprise 50% of the global crop come in just before the crops in West Africa. Therefore how the buyers open negotiations in West Africa depends on the crop in India/Vietnam. In the event of a poor crop in Asia prices may open high and demand will be strong as processors compete for product or vice versa. Many other constituents of the export price are determined outside Africa such as the price of jute bags, the exchange rate, and consumption of cashews in the West or in the cities of India. From an East African point of view there is an advantage in having crops after the main seasons have ended at time when if demand has been good there will be interest from processors to stock up for the months between the end of the West African season and the beginning of the new Indian/Vietnamese season.

Processing in Africa
The success of the traders and processors in raising finance, managing logistics and managing risk militates against the development of processing in African countries on any large scale. New processors, unless they are large international companies struggle to compete for raw material. However this is not just because of problems in the cashew value chain. It is as much due to the problems of doing business in African countries especially in terms of access to finance, access to markets, access to technology, risk of all sorts, poor infrastructure, poor logistics and the complete range of problems that have to be faced by new businesses in most parts of the African Continent.

3.2.5 Some things have not changed

- The RCN market is still largely speculative and thinks short term: It is dominated by a few traders who can move the market
- Prices for both kernels and RCN remain volatile maybe even more than before
- Good market information remains difficult to find - gossip, rumour and propaganda persist as the information “chit chat” grows and the quality of that information declines
- Many factories in India, Vietnam and elsewhere have not got the food safety message yet
- Default of contract or “renegotiation” at every level is common in the supply chain from farmers to RCN exporters to kernels exporters – it happens in every origin every year. It is not only sellers who default in rising markets buyers do so too in falling markets.
Short term thinking remains the norm in the cashew business
Linkages in the supply chain remain underdeveloped between growers and processors and between processors and roasters/packers and between roasters/packers and retailers.
The primary use for cashew nuts remains as a snack food. It is estimated that 80% of cashew nuts are consumed as snack food. This is not only due to the fact that cashews are an excellent snack or that they are high priced but also due to the characteristics of the nut in terms of its taste and reaction to other ingredients. Culinary and confectionary applications are more common in India, South East Asia and Brazil as the main ingredient in sweets.
By products except for CNSL are neglected in many origins
The Cashew apple is much talked of but remains impractical for most origins due to perish ability and the fact that an apple harvest reduces the nut harvest.

3.2.6 What has this meant for prices?
The rapid growth in demand and the fact that almost 40% of the World production has to be shipped between 2000 and 500 miles to be processed has meant that even minor disruption to supply have had major impacts on price. This tight supply/demand balance caused price movements out of proportion with the fundamentals and stimulated speculation and local cartel trading. The market has been undergoing a price correction since mid-2011 from unsustainable levels but the correction was interrupted by supply scares in Cote D’Ivoire and Guinea Bissau in April and May 2012. The chances of a return to the high prices of 2011 are receding given average crops and demand. Prices should trend flat to slightly down with chances of a sharp fall in early 2013 growing.

The major impact has been price volatility which has had a major impact on changing buying patterns and undermining confidence in the market halting sales promotion in North America and making European retailers think twice before committing to cashew nuts for another year. The volatility has caused more incidences of contract infidelity, reluctance on the part of banks and most of all reluctance on the part of indigenous entrepreneurs to enter processing in African countries. There is an upsurge in interest to invest in processing but it is driven by packers and importers in consuming countries who are seeking to protect their supply chain and to try and insulate their businesses from at least some of the market volatility.

Fig 3.2.8 Cashew Kernels WW320 five year price history FOB lowest priced Origin US$/lb.

Source Cashew Club

The term “rollercoaster” has often been used to describe the pattern in the above price chart. Certainly the volatile prices have made business difficult and investment at certain times more risky. Many players in the sector are now looking for a period of stability in which to build projects and develop on crucial issues such
as food safety. On a positive note the high prices for kernels have been translated into high prices for in-shell cashew nuts and farmers have benefited accordingly encouraging them to develop their cashew activity increasing productivity which many hope will sustain the current growth pattern in the market.

![Cashew WW320 Annual Range FOB Prices 1997–2012 (Sept)](image)

**Price Volatility is bad for business**
- Packers, roasters and retailers have difficulty planning forward demand and promotions.
- The incidence of contract infidelity increases – more defaulted contracts
- Discouraging development of demand and new cashew based products
- Processors: Cannot predict their cash flow: Eventually forward buying is reduced so processors end up carrying the price risk.
- Farmers can end up in a boom/bust cycle.

**3.2.7 Summary**
The purpose of this chapter has been to outline the methodology based on an analysis of the impact of regulation and policy on the cashew value chains both for kernels and in shell and to outline very briefly the context of the international cashew nut market which is especially important in a market characterised by poor information, myth and propaganda. In the next chapter the task is to consider the Tanzanian cashew sector in terms of this methodology and to asses in particular the regulation and policies applied and the propositions offered by stakeholders to improve the regulation of the sector.

**The market**
- Tanzania is not unusual in Africa in exporting in-shell cashew nuts for processing elsewhere.
- The outlook for demand is healthy and the cashew kernels market is likely to grow substantially in the coming years.
- The supply/demand balance is tight now and increased production is needed if prices are not to move up sharply. The increase in production can only realistically come from Africa.
- The supply/demand balance is leading to price volatility and risk.
• There is increasing interest in processing on the continent of Africa both from indigenous and international investors

Conclusion
There are opportunities for development at all levels in the cashew sector at this time.

4.0 The Tanzanian Cashew Market

4.1 The history of the Tanzanian Cashew nut sector is well documented from market leadership in the 1970’s to ill-fated and poorly executed development of mechanised processing to the melt down of the 1980’s and the slow return to productivity in the 1990’s to the present day when the sector again faces a watershed opportunity, a chance to build on the progress made and finally dismiss the spectre of the mistakes of the past. This is not a historical report so we will not dwell on the successes and failure of the past. However it is important to debunk a myth which misinforms the modern market managers – the mechanised factories built in the 1970’s and early 1980’s both of Japanese and Italian origin never worked and were probably never likely to work regardless of developments in domestic supply of cashew nuts for processing. It is not correct to assume that factories such as these exist or existed in other producing countries in particular Brazil which is often inaccurately cited as the model for these plants. Therefore every care must be taken in basing any future development of value added activity on these plants.

Secondly, again we do not wish to dwell on the past for too long, it is important to recognise that the sector has from the outset been the most regulated cashew sector in any country Worldwide. This has brought some notable successes particularly at farm level and some failures. It would not be accurate to condemn the regulatory environment as wholly responsible for the problems of the industry as has been done in some studies and there is no evidence that the Tanzanian sector is any worse off than in less regulated markets in West Africa for example. However the heavy regulation has created a business culture which has not been conducive to the development of an outward looking , market oriented approach at any level except the in shell export trade level where it was driven by expediency. This culture more than any of the conspiracy theories or victimisation stories is responsible for the position whereby value added processing has not developed and the in shell export market is dependent on a single destination, India. Therefore whilst continued regulation of the sector is likely it must be tempered with an approach that is supportive of development at all levels and above all it must recognise that markets have changed and will continue to change in the dynamic markets conditions which are likely to persist into the foreseeable future.

The nature of regulation at its worst was seen in the 2011/12 marketing season during which well-meant but flawed intervention refusing the season high prices at a time when the market generally was well aware of a fall in prices in early 2012 caused circumstances to develop which became a systemic threat. The shadow of those events which have not yet been finally resolved due to remaining inventory will bear on the thinking among traders, buyers and bankers for some time to come. It is likely that it will have an impact on the current marketing season depending on circumstance and the approach of opportunistic traders. It should not be forgotten that the eventual sale of the bulk of the 2011/12 RCN stock turned not on events in the market in Tanzania or in India but on the weather in Ivory Coast and civil unrest in Guinea Bissau. It was on these events that the future of the Tanzanian cashew sector depended at the end of March 2012. Worryingly few if any of the tens of stakeholders met in the course of the field work for this study are aware of this fact.

The failure of regulation, market information, market understanding and the fact that the sector in Tanzania has come back from the brink of disaster on a number of occasions should not overshadow the fact that Tanzania is a successful producer of a large volume of quality in shell cashew nuts every year.
4.2 Tanzanian Cashew Production.

4.2.1 In 2011/12 Tanzania produced an in shell cashew crop of 158,000 tonnes which represented a significant improvement of prior years and the highest figure in the history of the sector. It is unlikely this will repeated in 2012/13 however the crop is forecast to reach levels in the region of the 2010/11 crop which itself was the largest crop for many years at that time. Indications are that despite challenges of an aging tree populations, an inefficient inputs system and an under resourced extension programme that production can increase when prices paid to farmers show good profit margins.

**Fig. 4.2.1 Tanzanian Cashew Production In shell tonnes 2002/03 – 2011/12**

Source Ministry of Agriculture, Food and Co-Operatives, Tanzania

**Fig. 4.2.2 Tanzanian Cashew Production Share 2002/03 – 2011/12**

In a good season Tanzania produces up to 20% of Africa production and up to 10% of World production of in shell cashew nuts. The sector is a successful producer and has recovered from previous declines in recent years.

4.2.2 Growing Cashews in Tanzania

The production of cashew nuts in Tanzania over the past ten years has been characterised by variable production with the low level being 75,000 tonnes on two occasions and the high being the 158,000 tonnes produced in 2011/12. Climate and soils are well suited to the growing of cashews always bearing in mind that cashews are grown where other crops will not thrive and were introduced as an
answer to problems of shade and soil erosion supporting other crops. In this respect cashews tree can once again have an important environmental impact as in the age of climate change they are good soils retainers and carbon fixers.

The growing of cashew nuts is affected by the weather as any agricultural product is but in the case of Tanzanian cashew nuts the farm gate price and the availability of inputs are also crucial factors. Inputs in particular are costly and sometimes inaccessible for farmers. Without treatment for powdery mildew for example, whether this be the traditional sulphur treatment or more modern treatments, yields will suffer. In addition the structure of the cashew sector is such that a period of high prices will cause farmers to spend more on inputs both in terms of purchased inputs and in terms of family or contracted labour. This can have a dramatically positive impact on yield and farm income.

Tanzanian cashews are mainly grown by smallholders and a few commercial plantations which are often not well managed. Estimates vary as to how many smallholders grow cashews but given the production and yield figures which are verifiable it seems that in the region of 300,000 farmers are involved in production. As elsewhere in Africa cashews are grown as a cash crop which is high value and needs very little work on the part of the farmer compared to other crops. That is not to say it is not important. Growing cashew is an essential part of the subsistence of the small holder families in southern Tanzania who make their living on poor land in a dry climate. Cashew yields in Tanzania are better than most areas of Africa but not as good as the yields reported in Asian countries. Tanzania and East Africa as a whole are susceptible to damage by pests and diseases in particular powdery mildew disease.

Tree age is a critical determinant of yield in cashew trees especially as trees age beyond 14 years. In the absence of a well-resourced public extension service and in the almost total absence of a private extension service the expansion in Tanzanian cashew production of recent years has defied expectations. It may well be that due to weather and poor input availability in prior years that the crop never reached its potential and that this has been reached encouraged by higher prices and to some extent better accessibility of inputs again of course driven by higher prices. Looking to the future the trees will reach a stage where production starts to fall again. One only has to look at the current pattern in neighbouring Mozambique to see the impact on production of an aging tree population. It is therefore critical that older trees be replaced and that policies which include well-resourced extension services be not only debated but implemented in the near future to avoid the possibility of a sharp fall in farm incomes in southern Tanzania.

4.2.3 Inputs and costs

The growing of cashew nuts is relatively straightforward and requires little in the way of inputs and labour. It is however essential that diseases and pests such as powdery mildew disease and tree borers be controlled as these can have a major impact on yields. In addition the preparation of the trees by pruning and tidying the orchard floor at the appropriate time of year is essential.

There is evidence in Tanzania, as we will see from the farmers’ perspective later in this document that inputs despite Government subsidies are high priced and that access to the right inputs at the right time of year is limited by a failure to administer efficiently on the part of local government and the primary cooperative societies. The failure of the marketing and distribution system for inputs is an annual threat to the crop in Tanzania and is partly at least responsible for the fluctuation in production volumes seen over the years.

There is also good evidence that the costs involved in evacuating the cashew nuts from the farm gate to the warehouse receipt system and on to the ports for export are not competitive and cost the farmer significant income in any given year. This topic will be dealt with in detail under the “Farm Gate Price” section to follow.

4.2.4 Farm Gate prices

Comparisons on cashew farm gate prices across countries which primarily export in shell nuts for processing abroad with different crop cycles in volatile market is fruitless as the comparisons are inevitably distorted by the price movements and the quality especially yield differs from country to
country. The fact that the Tanzanian crop is at a time when the only other crops are in Brazil and Indonesia compounds this difficulty. Therefore any comparison of farm gate prices between countries is difficult. It is more valid to assess farm gate prices against the sales prices of the product from Tanzania.

As an indication only we looked at farm gate prices for 2012 for Cote D’Ivoire, Africa’s largest supplier producer of cashew nuts. The average farm gate price for Ivorian material during the 2012 season according to Rongead the aid agency involved in cashews was $518 per tonne. This quality would be of

The impact of these deductions is a loss of $18m to the rural cashew economy every year. It is not at all clear what the functions provided for these costs are other than transportation. It is however very clear that the costs of marketing and transportation are also recovered from the eventual buyers of the goods and constitute a part of the price calculation in accepting bids or not.

It is more difficult to calculate the weight loss cost as these by their nature vary. However it is interesting to note that the cooperative unions factor into their costs a weight loss of 5%. There is no apparent justification for this as the cashew nuts in taken are already dried and more likely to gain weight than lose it initially. The farmer pays for this weight loss but there is no transparency whatsoever as to how losses occur or are calculated. As farmers point out in interviews with Dr Rose Mushi the warehouse keepers are responsible for managing the inventory and any weight loss is legally their responsibility.

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Figure 4.2.3 Comparing Tanzania Farm Gate with Cote D’Ivoire Farm Gate

<table>
<thead>
<tr>
<th>2012 season</th>
<th>Farm Gate Price US$</th>
<th>Yield</th>
<th>Adjusted to 47 lbs. Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cote D’Ivoire</td>
<td>US$518</td>
<td>46/48</td>
<td>US$518 per tonne</td>
</tr>
<tr>
<td>Tanzania</td>
<td>US$742*</td>
<td>51/53</td>
<td>US$617 per tonne</td>
</tr>
</tbody>
</table>

*Season average monthly exchange rate used

Without over emphasising the premium over Ivorian material which Tanzanian farmers receive it does seem that a similar premium is found when compared to cashew nuts from Guinea Bissau and Benin as large producers of good quality material. The premium adjusted for quality is due to the timing of the Tanzanian crop and factors such as the ease of peeling which are not expressed in the usual specifications for in shell cashew nuts. We will return to this subject when we review the international in shell cashew nut market.

Figure 4.2.4 Deductions from Farm Gate Price

<table>
<thead>
<tr>
<th>Example</th>
<th>TZS/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicative Farm Gate Price</td>
<td>1200</td>
</tr>
<tr>
<td>Less 3% local development levy</td>
<td>36</td>
</tr>
<tr>
<td>Co-operative Unions marketing charge</td>
<td>27</td>
</tr>
<tr>
<td>Primary Co-operative marketing charge</td>
<td>50</td>
</tr>
<tr>
<td>Transportation charge estimated</td>
<td>65</td>
</tr>
<tr>
<td>Total deductions</td>
<td>178</td>
</tr>
<tr>
<td>Net price paid to the farmer</td>
<td>1022</td>
</tr>
</tbody>
</table>

Of more direct interest for the Tanzanian market is the comparison between the farm gate price and the export price of in shell cashew nuts from Tanzania. The tables below compare how the export price is made up and what proportion of that price is paid to the farmers.

It is important in this context to mention that the prices which can be confirmed at farm gate level are those indicated by CBT and paid through the auction system. This represents the “official” version of the farm gate price. However farmers and primary cooperative societies in interviews undertaken for this study expressed their dissatisfaction with deductions made from these prices. Apart from the development levy of 3% levied by local government there are a range of reports including an additional levy in Masasi of TZS30/kg, unexplained weight loss and other costs which are deducted.

Of more direct interest for the Tanzanian market is the comparison between the farm gate price and the export price of in shell cashew nuts from Tanzania. The tables below compare how the export price is made up and what proportion of that price is paid to the farmers.

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The impact of these deductions is a loss of $18m to the rural cashew economy every year. It is not at all clear what the functions provided for these costs are other than transportation. It is however very clear that the costs of marketing and transportation are also recovered from the eventual buyers of the goods and constitute a part of the price calculation in accepting bids or not.

It is more difficult to calculate the weight loss cost as these by their nature vary. However it is interesting to note that the cooperative unions factor into their costs a weight loss of 5%. There is no apparent justification for this as the cashew nuts in taken are already dried and more likely to gain weight than lose it initially. The farmer pays for this weight loss but there is no transparency whatsoever as to how losses occur or are calculated. As farmers point out in interviews with Dr Rose Mushi the warehouse keepers are responsible for managing the inventory and any weight loss is legally their responsibility.
Reviewing the farm gate price again - the net level of TZS1022 could be further reduced by 5% in many cases for weight loss (the 5% is of the TZS1200) reducing the net realisation to TZS962 or US$613 per tonne – a far cry from the US$764 per tonne as per the CBT indicative price. This is of particular concern with reference to the CBT own figures which suggest the cost of producing in shell cashews is TZS1000/kg.

The next step is to consider the comparison between the farm gate price and the actual export price in order to analyse how the farm gate price compares with the auction price and the price when the goods finally arrive at destination in India.

Figure 4.2.5 What percentage of the sale price does the farmer receive?

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sales actual average per CBT</td>
<td>TZS</td>
<td>1500</td>
<td>1800</td>
</tr>
<tr>
<td>Farm Gate Price Indicative CBT</td>
<td>TZS</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Converted to US$ per tonne</td>
<td>US$</td>
<td>758</td>
<td>815</td>
</tr>
<tr>
<td>Farm Gate % of Auction Sale Price</td>
<td>%</td>
<td>67%</td>
<td>67%</td>
</tr>
<tr>
<td>2. FOB Export Levy paid</td>
<td>US$</td>
<td>1300</td>
<td>1443</td>
</tr>
<tr>
<td>Farm gate % of FOB Levy Paid</td>
<td>%</td>
<td>58%</td>
<td>57%</td>
</tr>
<tr>
<td>Adjusted for freight</td>
<td>US$</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>FOB Import Price Adjusted</td>
<td>US$</td>
<td>1347</td>
<td>1629</td>
</tr>
<tr>
<td>Farm Gate % of India imported price</td>
<td>%</td>
<td>56%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Source CBT, CRDB, Interviews undertaken for this study, www.o&A.com

Like the auction itself the sale prices and analysis is opaque. At first look the farmer does well receiving between 67% and 80% of the auction sale price. Looking more closely and adding costs for moving the cashew nuts from the warehouses to the port, stuffing, and loading onto containers the figure is diluted due to the high level of those costs. At cooperative union/wrs level the costs are estimated by the coops themselves at TZS286/kg and the logistical costs are estimated at $60 per tonne (trade sources). The percentage the farmer receives drops to between 57% and 65%.

So far we have relied on the average auction sales figures as presented by CBT and the Co-ops but if we look at the prices of Tanzanian cashew nuts as declared to Indian customs on arrival we find a further dilution of the share the farmer receives.

Figure 4.2.6
Comparison of “Auction” FOB average sale price /Indian customs price average US$/tonne

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOB Export Levy paid</td>
<td>US$</td>
<td>1300</td>
<td>1443</td>
</tr>
<tr>
<td>India Cfr Import price</td>
<td>US$</td>
<td>1412</td>
<td>1694</td>
</tr>
<tr>
<td>Adjusted for freight</td>
<td>US$</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>FOB Import Price Adjusted</td>
<td>US$</td>
<td>1347</td>
<td>1629</td>
</tr>
<tr>
<td>Difference</td>
<td>US$</td>
<td>47</td>
<td>186</td>
</tr>
</tbody>
</table>

The imported price in India is significantly higher in two years out of three years based on the average auction price as compared to the price as recorded on arrival in India. This indicates a volatile market and high margins for traders who take the risk of procuring product at auction and shipping it to India. This higher price further dilutes the percentage of the export price that the farmer receives to as low as 50% as we see in figure 4.2.5.
Final Draft 15\textsuperscript{th} January 2013

Figure 4.2.7 Farm price percentage of the export price

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales actual average</td>
<td>TZS</td>
<td>1500</td>
<td>1800</td>
</tr>
<tr>
<td>Farm Gate Price Indicative CBT</td>
<td>TZS</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>Less deductions</td>
<td>TZS</td>
<td>172</td>
<td>178</td>
</tr>
<tr>
<td>Net Farm Gate Price</td>
<td>TZS</td>
<td>828</td>
<td>1022</td>
</tr>
<tr>
<td>Farm Gate % of Auction Sale</td>
<td></td>
<td>55%</td>
<td>57%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Farm gate % of FOB Levy Paid</th>
<th>48%</th>
<th>48%</th>
<th>55%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>India Cfr Import price</th>
<th>US$</th>
<th>1412</th>
<th>1694</th>
<th>1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted for freight</td>
<td>US$</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>FOB Import Price Adjusted</td>
<td></td>
<td>1347</td>
<td>1629</td>
<td>1435</td>
</tr>
<tr>
<td>Farm Gate % of India imported price</td>
<td></td>
<td>47%</td>
<td>43%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Figure 4.2.4 indicates that the farmers actually receive about 15\% less than the CBT indicative farm gate price due to high levels of costs in the system primarily with coops and due to high margins from exporters and traders of in shell cashews driven by volatility in the market place. It should be pointed that it is a high risk chain and in many cases the traders will experience financial losses although rarely in recent years. Traders’ costs of finance and marketing have not been included but they would not make a major change to the figures. Figure 4.2.7 compares the price the farmer receives after deductions for levies, taxes and transportation to the export price of the in shell cashews.

Figure 4.2.7 shows that after deductions, over which the farmer has no control, the share of the sale price drops to as low as 44\% of the price for the cashew nuts on Cfr India basis.

Where do the rest of the proceeds go?

Figure 4.2.8 Distribution of Gross Sales Proceeds Tanzanian in shell cashews

![Gross incomes diagram](chart.png)

In conclusion on the subject of farm gate prices it becomes clear that the farmers share of the auction price is good by the standards of the international cashew market however when we consider the price at which the nuts are eventually sold in India the farmer’s share falls to an unusually low level in the context of the international market. Through a combination of high taxes, remarkably high costs at coop/wrs level and high export margins/costs for exporters and Indian buyers who buy at auction.
The CBT estimates that the farmers’ cost of production is TZS1000 and indicates a price of TZS1200 to allow for a margin. However once deductions are made the real price paid to the farmer falls to TZS1022/kg which is perilously close to break even. At these levels it appears that Tanzanian farmers are not receiving a price which is in line with the quality they produce as compared to their counterparts in West Africa who function in an open market.

On the other side of the equation assembly and evacuation costs as administered by the coops are very high and involve double handling of the product which ultimately reduces the prices paid to farmers. The estimated cost of the handling of the product through the WRS is TZS286/kg or US$182 per tonne just to bring the product from the farm gate to the warehouse door loaded on a truck. It then has to be moved to the port and stuffed in containers at a cost of a further US$60/tonne plus documentation and banking charges. The total logistics cost for handling of a tonne of in shell cashews through the coop/wrs/export system is in the region of US$260 per tonne.

This level of cost compares very unfavourably with similar costs in other countries:

<table>
<thead>
<tr>
<th>Country</th>
<th>Evacuation cost Farm Gate to FOB Per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzania</td>
<td>$460</td>
</tr>
<tr>
<td>Cote D’Ivoire</td>
<td>$220</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>$132</td>
</tr>
<tr>
<td>Ghana</td>
<td>$85</td>
</tr>
</tbody>
</table>

**Figure 4.2.9**

USAID studied the evacuation cost from Farm Gate to FOB Port including transit through an assembly area, export taxes and informal payments. Tanzania is more than double the cost of the next highest country and only in Guinea Bissau do export costs come close to Tanzania. Guinea Bissau has recently reduced its export tax by 61%.

### 4.2.5 Cashew Processing in Tanzania

Cashew processing in Tanzania is limited to circa 20% of the average crop level. Processing volumes do not change with the crop size so in 2011/12 season due to a record crop the percentage processed was less than 15% of the crop. Compared to its neighbours in East Africa Tanzania processes a lower proportion of its crop (Mozambique 40-50%, Kenya 100%) although crop size in both neighbouring countries is lower than in Tanzania.

The history of processing in Tanzania ranges from highly successful in the 1970’s to complete failure from the mid 1980’s until about ten years ago. We have already discussed the old plants installed with World Bank assistance about 30 years ago and the mistakes made at that time in relation to these plants. However the concept of processing cashews in Tanzania is valid and moving forward in this area is the key to a successful cashew sector. Cashew Board of Tanzania and Government of Tanzania support for the development of cashew processing is essential for a successful future for this sector.

A number of supply chain studies describe the capacity of Tanzania as 140,000 tonnes but in the view of the authors of this report this makes no sense at all. Factories which were installed over 30 years ago and never functioned properly cannot be described as part of the capacity of the country.

**Extract from interview notes**

There are a number of factories in Tanzania but most of them are not working and many are just left over relics of the expansion first seen in the 1970’s. These factories were built and equipped by the old Cashew Board of Tanzania and Oltremare with the support of the World Bank. There were eleven factories with an installed capacity of 120,000 per annum. He estimates that in total over 20 years the shelled volume was approximately 110,000 tonnes less than 10% of capacity. He estimates expenditure on equipment was US$20m (1970’s remember). There were also machines supplied by a Japanese company who is no longer involved in this sector.

Of the 12 factories two processed the bulk Kibaha with approx. 25,000 tonnes and Mtwara (Mtwara Cashew Co. today) 25,000 tonnes. This means effectively that the other ten factories hardly worked at all.
• Fast increase in in-shell production in West Africa without major increases in processing volumes is placing strains on the supply chain infrastructure to evacuate RCN in a timely and cost-effective way.
• This is often reducing the quality of cashews due to poor post-harvest storage and drying facilities.
• Processing capacity in West Africa has increased: latest increases are largely based on large factories with high levels of mechanisation.
• New technology especially new peeling machines and poorer quality RCN is producing much larger volumes of pieces which have collapsed in price in Vietnam.

• The Middle East, Russia, Mexico, Brazil and China are markets showing high potential.
• Food safety, traceability, health are major factors which cannot be ignored. There may be an advantage for new African processors in this.
• China is switching to higher grades creating more pieces for sale.
• Buyers want new processing origins to protect their supply, give an alternative to Vietnam in particular and to build new food safe processing plants.
• There is more interest in processing, investing and buying from Africa than ever before.

3.2.2 Cashew demand

Fig 3.2.2 Cashew Kernels Demand by Region 2011

1. Slow growth in the traditional markets has been more than compensated for by rapid growth in India by virtue of greater prosperity and population.

2. Growth is also being seen albeit from a lower base in the Chinese and Middle Eastern markets

Projections for demand based on current rates of growth show the demand for cashew kernels moving rapidly higher before the end of the decade. This is primarily driven by India and new markets with lower levels of growth in the well-established markets.

This type of growth would need an increase in production of 9% per annum until 2020 to avoid a tightening of the supply/demand balance and an increase in prices. This level of growth in production is unlikely to be met.
In Africa despite producing more than 40% of the World’s cashews in 2011 most of the cashews grown are exported to India, Vietnam or Brazil for processing. The proportion exported from the major producers ranged from 35% to 97% in 2010/11. It will be a little lower for the current season but the overall working processing capacity on the Continent of Africa has still not reached 100,000 tonnes or 10% of production. The reasons for this are many ranging from lack of finance to lack of access to markets for cashew kernels to lack of management skills, entrepreneurs and absence of access to markets. The proportion of nuts processed is higher in the small Kenyan market through a ban on the export of in shell cashews. In Mozambique, a much larger producer, a long and intensive stimulation of the processing sector has been somewhat successful.

3.2.4 The African Cashew Trade

In Africa despite producing more than 40% of the World’s cashews in 2011 most of the cashews grown are exported to India, Vietnam or Brazil for processing. The proportion exported from the major producers ranged from 35% to 97% in 2010/11. It will be a little lower for the current season but the overall working processing capacity on the Continent of Africa has still not reached 100,000 tonnes or 10% of production. The reasons for this are many ranging from lack of finance to lack of access to markets for cashew kernels to lack of management skills, entrepreneurs and absence of access to markets. The proportion of nuts processed is higher in the small Kenyan market through a ban on the export of in shell cashews. In Mozambique, a much larger producer, a long and intensive stimulation of the processing sector has been somewhat successful.

<table>
<thead>
<tr>
<th>Country 2011</th>
<th>Production</th>
<th>Domestic processing</th>
<th>Export in shell</th>
<th>% exported in shell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivory Coast</td>
<td>375,000</td>
<td>10,000</td>
<td>365,000</td>
<td>97.3%</td>
</tr>
<tr>
<td>G-Bissau</td>
<td>150,000</td>
<td>3,000</td>
<td>147,000</td>
<td>93.3%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>121,000</td>
<td>8,000</td>
<td>113,000</td>
<td>93.4%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>80,000</td>
<td>35,000</td>
<td>45,000</td>
<td>55,000</td>
</tr>
<tr>
<td>Nigeria</td>
<td>70,000</td>
<td>10,000</td>
<td>55,000</td>
<td>78.6%</td>
</tr>
<tr>
<td>Benin</td>
<td>70,000</td>
<td>4,000</td>
<td>66,000</td>
<td>91.4%</td>
</tr>
<tr>
<td>Senegal</td>
<td>35,000</td>
<td>5,000</td>
<td>30,000</td>
<td>85.7%</td>
</tr>
<tr>
<td>Ghana</td>
<td>15,000</td>
<td>3,000</td>
<td>12,000</td>
<td>80.0%</td>
</tr>
</tbody>
</table>

Growth in Cashew production in West Africa has been a feature of recent years. Despite low prices for in shell nuts during the first half of the last decade the ease of growing, the relatively pest free environment and the suitability for light dry soils has made cashew an ideal crop. The growth in production has not been accompanied by growth in value added activities and so the in shell trade to India, Vietnam and latterly Brazil flourishes.
Kenya

<table>
<thead>
<tr>
<th></th>
<th>10,000</th>
<th>10,000</th>
<th>0</th>
<th>0.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>10,000</td>
<td>1,500</td>
<td>8,500</td>
<td>85.0%</td>
</tr>
<tr>
<td>The Gambia</td>
<td>7,000</td>
<td>300</td>
<td>6,700</td>
<td>95.7%</td>
</tr>
<tr>
<td>Others</td>
<td>15,000</td>
<td>1,000</td>
<td>14,000</td>
<td>93%</td>
</tr>
<tr>
<td>Total Africa</td>
<td>958,000</td>
<td>90,800</td>
<td>862,200</td>
<td>90%</td>
</tr>
</tbody>
</table>

Source: African Cashew Alliance

**Fig 3.2.6 African countries ranked by Cashew nut Production 2011**

<table>
<thead>
<tr>
<th>Country</th>
<th>2011 Production (Tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Gambia</td>
<td>350,000</td>
</tr>
<tr>
<td>Kenya</td>
<td>300,000</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>250,000</td>
</tr>
<tr>
<td>Ghana</td>
<td>200,000</td>
</tr>
<tr>
<td>Senegal</td>
<td>150,000</td>
</tr>
<tr>
<td>Mozambique</td>
<td>100,000</td>
</tr>
<tr>
<td>Benin</td>
<td>50,000</td>
</tr>
<tr>
<td>Nigeria</td>
<td>40,000</td>
</tr>
<tr>
<td>Tanzania</td>
<td>30,000</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>10,000</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>5,000</td>
</tr>
</tbody>
</table>

**Fig 3.2.7 African countries ranked by the proportion of nuts exported in shell 2010**

The green part of each bar represents the percentage of each crop which is exported in shell for processing elsewhere. In general terms the position in terms of processing is better in East Africa than in West Africa. East Africa has in general a better business environment, more entrepreneurs and a long history of processing. More of the factors necessary for the development of processing are present in East Africa than in West Africa. However as this chart demonstrates processing is not strong in any part of Africa except in the small Kenyan market more by virtue of its scale.

The in shell value chain is dominated by traders either local or international or a combination of the two. These traders buy for their own account for onward sale or buy on behalf of processors in India or Vietnam. At the beginning of each harvest season international traders send their staff to each producing country with finance to advance funds to the local agents who in turn go to growers via a chain of intermediaries. The exception to this is Tanzania where the international traders must operate with locally licensed exporters to engage in the auction system. The traders have finance, expertise, market access and knowledge allowing...
None of these old factories is operating to installed capacity, only one is operating using the original equipment and two are operating using the premises but not the equipment. Some of the premises are used as warehouses to store in shell cashew nuts. We believe that it is time that the sector in Tanzania relinquished hopes that these factories will operate at anywhere near the installed capacity. The premises may be suitable for processing plants but the equipment is not. Significant investment is required to install modern efficient equipment and to bring the premises up to modern acceptable food safety standards.

In Tanzania today there appear to be four groups of processors or potential processors:

1. Operating medium scale processors
   These processors are Olam, Export Trading, Mo Cashew AND Cashew Company Mtwara. Processed volumes are estimated at Olam 8000 tonnes in shell (source Olam interview), Mo Cashew estimated 2250 tonnes in shell (source Mo Cashews interview) and Export Trading estimated 600-1000 tonnes per annum (authors estimate). These companies between them account for the bulk of the processing industry in Tanzania.

   They all use the steam cook and cut method favoured in India and Vietnam. They are all using a mixed manual / mechanised method of processing as favoured in most of the World. Export Trading Group and Olam have stated intentions for expansion although these have been frustrated in the Olam case by difficulties with labour in Mtwara town.

2. Legacy processors
   These are the processors who own the factories which they bought in the 1990’s from the Government of Tanzania. Two of these factories are operating seasonally and cite difficulties with finance as the primary reason for failure to operate. Some of the owners of the factories recognise that the equipment remaining is only of scrap value whilst others cling to the hope that the factories will one day operate as intended. A number of these factories were sold for low prices to the current owners in the hope that they would revitalise the processing sector. They often have political connections and in some cases were used as collateral for significant borrowings well in excess of the actual value of the buildings and equipment.

   As a result of the lack of access to finance and the political and technological legacy efforts to restart these factories in any significant way have faltered.

   The Cashew Processors Association of Tanzania was formed to represent the owners of these factories amidst calls from politicians and others for the repossession of these factories. The CPA is proposing that these factories be reequipped and used for smaller scale processing. They put forward a model which bridges their inability to raise working capital with a payment after processing proposition for the farmers effectively meaning that the farmers would finance the factory operations. This would be combined with a pre-process by farmer groups and associations whereby the farmers would be paid for cutting and shelling cashews nuts which would be centrally steamed and distributed. (Joseph Haule, Secretary CPA interviewed for this study).

3. Small scale and micro processors
   There are many small scale “cottage industry” processors operating outside the organised economy as evidence at the crossroads of every major town testify as sales people offer shelled cashews.

   There is also a more organised effort toward micro processing among farmer groups supported by aid agencies and businesses such as UNIDO, Masasi High Quality Farmers and Nature Ripe either as technical supporters or buyers of product. Olam has also commenced in recent years a method whereby they will purchase shelled unpeeled kernels or deliver cooked unshelled nuts for shelling to village operators. This is in answer to labour problems experienced at their factory at Mtwara.

   There are many small scale processors but total capacity is not likely to exceed 4000 tonnes in shell per annum based on consumption figures for the main domestic markets (e.g. Dar es Salaam...
market organised sector estimated 15 tonnes per month) and on information from a number of small processors.

4. Promoters of large scale processing actively engaged in seeking support for the activities both at commercial and political level. Experience from other markets suggests that small scale processing tends to thrive in outlying areas or where there is a good domestic market. Yields tend to be lower and there is a major food safety issue to be considered in moving already peeled kernels around the country exposed to pests and contamination. There is also the issue as to how it is financed and whether or not subsistence based farmers should be financing the larger businesses as suggested by the CPA for example.

Evidence from other countries suggests that small scale processing is viable once significant technical support and management is available which usually comes from larger processes linked to the small scale processors such as Olam practices in Tanzania. Without the involvement of a larger scale processor and without a significant domestic market it seems likely that small scale processors would lack access to markets which generally require high standards of food safety, packaging and traceability. A good marketing story is a major plus for these operators but only if combined with an acceptable product. In short small scale processing is not the answer on its own but it is part of the answer when combined with modern customer oriented businesses.

What is the potential for processing in Tanzania?
Factors determining competitiveness in the in-shell chain:

1. Growing the right product in the right place Tanzania grows a volume of cashew nuts which will support a large and flourishing cashew processing industry. It grows in areas where growing cashews makes sense as compared to other crops due to the climate and soil. There are challenges in terms of diseases and pests particularly powdery mildew disease but with an efficient and competitive inputs system these can be overcome.

2. Product Quality; Yield, variety and post-harvest
   Tanzanian cashew nuts are of high yield up to as high as 53/54 lbs. per 176lb bag gross cutting test yield. The nuts process relatively well and are sought after by buyers in India.

3. Seasonality: Timing of the crop
   Tanzania has an advantage in that its crop comes to market at a time when less than 20% of World production is being harvested and when crops from the Northern Hemisphere are becoming exhausted. This means that the RCN export trade is ideally placed to compete into the Indian market. It also means that the Tanzanian processor has to compete with the Indian buyers for raw material at a time of year when they are most in need.
   If the Tanzanian processing industry could obtain the early raw material and the marketing was more efficient the end of the seasonal market in Europe and the USA, the USA January “Super bowl” market and the Chinese New Year market could all be targeted as markets where Tanzania has a seasonal advantage offering new crop at a time when no one else can. This advantage is becoming greater as the Brazilian crop declines in recent years.

4. Efficiency of the supply chain: agents, intermediaries, logistics and costs
   There is a logistics system in Tanzania which works – every year a crop of between 90,000 and 150,000 tonnes is evacuated to India or processing in the country. However the primary disadvantage that the processor is at is the obligation to buy at the auction. This means that access to product is delayed and that the processor has no motivation to develop supply chain relationships with farmers and farmer groups. Furthermore the double handling and the cost (TZS286/kg plus TZS0.10/kg) to move product through the wrs/auction militates against the establishment of an efficient processing industry. On the other hand the Tanzanian processor is protected from competition in India by the export levy and by the distance to market for cashew nuts to be processed in India especially in times of rising freight costs.

5. Finance
The establishment of the wrs system has facilitated the introduction and familiarity of the banks with inventory collateral based finance and trade finance. The banks in Tanzania claim to offer these services to private companies and in addition offer trade finance services. However this access is limited to businesses which can offer heavy security.

In an interview for this study a leading bank told the author that they would require the inventory, the factory, a sales contract and a letter of credit in order to offer funding of raw material. Even then the cost of the funds would be between 22 and 26% which would not work for a cashew project unless processors could buy at very low prices. Indeed whilst the wrs system persists under guarantee from the Government the commercial motivation for banks to become involved in the cashew sector must be limited. They currently have the entire crop to finance – why would they increase the risk profile by funding processing ventures? In this scenario it appears that only ventures financed from outside Tanzania can succeed just as the present RCN trade is financed from the outside the country.

Finance and access to financial services is a major barrier to entry to processing for Tanzanian entrepreneurs unless they can team with international companies and source funding outside the country.

6. Risk and perception of risk – “the image of a country”
Relative to other cashew producing countries especially those in West Africa Tanzania is well positioned in this respect. There are a number of examples of successful agro investments in the country and cashew processing should be no different.

7. Market access
Tanzania is geographically well positioned to supply the markets of the Middle East and the growing markets of West Asia including India. There is no competitive disadvantage and probably marginal advantage in competing into the markets of Europe and the United States.

Market access problems in Tanzania arise from lack of market information especially about the international kernels markets. Even the Cashew Board of Tanzania does not exhibit a deep knowledge of the international market and it is clear that a development in the level of knowledge would serve the sector well. Even value studies which been commissioned in the past do not see fit to consult the international market – one major study commissioned in the past year does not even quote one market report in its bibliography. The result of this has been an inward looking sector which is not conscious of the opportunities or working of the international market.

However in terms of potential with most business people speaking English well and the country and sector being known internationally both from its history and more recent ventures the potential for good market access is greater than in some of the competing countries in Africa.

8. Role of the Government interventions/incentives/duties
National and local government intervention in the Tanzanian cashew sector has been a major factor for many years. As already stated Tanzania is the most regulated sector in the World with the highest level of Government intervention. This intervention has not always been well directed for example the total routing of supply through the wrs/auction system has acted as a disincentive to processing investment. As a result of the auction system processors cannot develop normal supply chain links with farmers or farmers groups which would secure their supply. An investor, in order to commit to the long term investment that is involved in a cashew processing plant requires that they would have a secure supply over a number of years. This is usually developed by working with farmers developing their productivity and building loyalty to the processor. The auction system whereby all products are routed through the cooperative unions means in effect that a
new large scale processor would have to purchase product from a potential competitor. Large scale processing development within this structure is not sustainable.

In terms of processing, outside of the procurement issue as described above the government does offer incentives including tax breaks and the importation of equipment for processing at preferential duty rates or free of duty. However the entire sector is governed by a complex multi-agency, multi ministry approach which involves many licences, many approvals and a very difficult communication structure which is present both at national and local level. One potential investor interviewed for this study outlined a series of fifteen meetings before the subject of business licences could be discussed. This was followed by two abortive visits to Dodoma until finally eight months after first discussions the company is free to do business in Tanzania unfortunately too late for the 2012/13 season.

Whereas Government intervention was intended to improve the lot of the farmers it appears to have acted against the development of processing in Tanzania but less against the in shell export supply chain where the cost of the system is effectively paid by lower returns to the farmers. There is good evidence from a range of countries that in countries where processing exists farmers receive higher prices for their product and better support for their extension and productivity development. Government intervention by excluding processors from this chain leaves the responsibility with the cooperative unions and the government agencies. There is no evidence of any real action on the part of the cooperative unions to enhance the farmers’ income or productivity. The Government system is under resourced especially the extension services according to many actors interviewed for this study. If the Government seeks to govern the supply chain then it must adequately resource government agencies and build processing capacity. This has failed in the past. The author of this study contends that the most likely road to success involves the encouragement of private business investment in processing and extension with the government providing facilities and an enabling business environment.

9. Ease of doing business

For the reasons which are mentioned above the cashew sector in Tanzania is not an easy sector. Over regulation is a problem in the sector. Business unfriendly and bureaucratic systems do not enhance the likelihood of investment and therefore of the development of processing. Table 4.2.9 below shows how Tanzania scores on a range of business issues according to the World Bank indicating that much is to be done in order to attract investment and enable the development of cashew processing.

<table>
<thead>
<tr>
<th>Economy</th>
<th>Ease of Doing Business Rank</th>
<th>Starting a Business</th>
<th>Employing Workers</th>
<th>Getting Credit</th>
<th>Enforcing Contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>92</td>
<td>135</td>
<td>133</td>
<td>113</td>
<td>47</td>
</tr>
<tr>
<td>Kenya</td>
<td>95</td>
<td>124</td>
<td>78</td>
<td>4</td>
<td>126</td>
</tr>
<tr>
<td>Tanzania</td>
<td>131</td>
<td>120</td>
<td>131</td>
<td>87</td>
<td>31</td>
</tr>
<tr>
<td>Mozambique</td>
<td>135</td>
<td>96</td>
<td>156</td>
<td>127</td>
<td>129</td>
</tr>
<tr>
<td>Gambia, the</td>
<td>140</td>
<td>114</td>
<td>85</td>
<td>135</td>
<td>67</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>147</td>
<td>115</td>
<td>82</td>
<td>150</td>
<td>110</td>
</tr>
<tr>
<td>Senegal</td>
<td>157</td>
<td>102</td>
<td>172</td>
<td>150</td>
<td>151</td>
</tr>
<tr>
<td>Cote d'Ivoire</td>
<td>168</td>
<td>172</td>
<td>129</td>
<td>150</td>
<td>127</td>
</tr>
<tr>
<td>Benin</td>
<td>172</td>
<td>155</td>
<td>139</td>
<td>150</td>
<td>177</td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>181</td>
<td>183</td>
<td>175</td>
<td>150</td>
<td>143</td>
</tr>
</tbody>
</table>
Summary

Tanzania grows high quality cashew nuts in sufficient quantities to support a national processing sector which would be welcomed by buyers and offer a supply of fresh product at a time of year when it would be in demand.

The impediments to the development of processing have been due to poor policy decisions, the incorrect idea that rehabilitation of the legacy factories is the answer, lack of financial services and a supply chain, including the Cashew Board of Tanzania which thinks short term and does not have linkages to the international kernels markets.

4.3 Tanzania in the International Cashew Market

Tanzanian primary activity is in the export of in shell nuts to India. There are exports of kernels to other markets so we will look at the two areas separately below

4.3.1 The in shell market

Tanzania is an important factor in the international market as the largest producer of cashew nuts in East Africa and increasingly a contributor to the World supply. In 2011/12 Tanzania supplied circa 8% of World production and almost 16% of African production. The vast bulk of this was exported in shell to India with less than 20,000 tonnes shelled in the country.

4.3.1.1 In shell exports and destinations

Exports from Tanzania are almost exclusively to India. The markets of Vietnam and Brazil which both will import significant quantities in the 2012/13 season are not involved in the purchase of Tanzanian in shell cashews. In the case of Brazil the necessary licensing arrangements between the governments of Tanzania and Brazil have not yet been put in place although we understand that the Tanzanian government through its embassy in Brasilia has made representations to the Brazilian phytosanitary authorities.

The Vietnamese buyers have not participated in the Tanzanian auctions – the highest annual figure for Vietnamese imports from Tanzania is 394 tonnes. A Large Vietnamese processor interviewed for this study stated that he though Tanzanian in shell cashews were too high priced and that the system is too difficult to offer. However when it was pointed out that Vietnam does buy Indonesian nuts which are higher priced he agreed that in fact he knew nothing of the Tanzanian system or how to access it. The opening of competition between countries at a time when both Vietnamese and Brazilian processors are looking for material would develop competition for Tanzanian material. As it stands there is little awareness that there may be alternative outlets to the traditional Indian destinations.
Figure 4.3.2 shows the high level of in shell exports compared to domestic processing metric tonnes

Source: Ministry of Agriculture Govt. of Tanzania, ISS

4.3.1.2 In shell Pricing
Tanzanian in shell cashew nuts are among the highest priced nuts traded on the World market due to the combination of quality and seasonality. An analysis of Indian import volumes and volumes shows Tanzania consistently toward the upper end of the per tonne price on a Cfr India basis as per figures supplied by The Ministry of Commerce, Govt. of India. Tanzania ranked first in price for imports 2010/11 and fourth in the following year. These high values are often not reflected in the Tanzania auction averages which were reported by various actors in the research for this study.

Looking at the trend it can be seen that prices for Tanzanian nuts in shell have been rising since 2006 which trend reflects the movements in the international market over that period.

Figure 4.3.3 Import tonnage and per tonne value Tanzania/ India trade in shell cashew nuts

<table>
<thead>
<tr>
<th>Country</th>
<th>Values in US$ Million</th>
<th>Quantity in thousands</th>
<th>$/tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>TANZANIA REP</td>
<td>157.25</td>
<td>92,679.32</td>
<td>$1,697</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>11.36</td>
<td>7,437.23</td>
<td>$1,527</td>
</tr>
<tr>
<td>MOZAMBIQUE</td>
<td>28.39</td>
<td>19,999.76</td>
<td>$1,420</td>
</tr>
<tr>
<td>GAMBIA</td>
<td>13.67</td>
<td>12,219.86</td>
<td>$1,119</td>
</tr>
<tr>
<td>GUINEA BISSAU</td>
<td>57.9</td>
<td>52,259.45</td>
<td>$1,108</td>
</tr>
<tr>
<td>SENEGAL</td>
<td>6.74</td>
<td>6,400.27</td>
<td>$1,053</td>
</tr>
<tr>
<td>GUINEA</td>
<td>7.42</td>
<td>7,672.08</td>
<td>$967</td>
</tr>
<tr>
<td>BENIN</td>
<td>77.5</td>
<td>81,740.85</td>
<td>$948</td>
</tr>
<tr>
<td>GHANA</td>
<td>43.74</td>
<td>50,783.25</td>
<td>$861</td>
</tr>
<tr>
<td>COTE D’IVOIRE</td>
<td>151.69</td>
<td>178,730.97</td>
<td>$849</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>5.34</td>
<td>6,629.38</td>
<td>$806</td>
</tr>
<tr>
<td>MADAGASCAR</td>
<td>0.64</td>
<td>943</td>
<td>$679</td>
</tr>
</tbody>
</table>
Looking a little closer it can be seen that the prices at which India recorded the import of in shell cashew nuts from Tanzania have been significantly higher in recent years than the prices which the Tanzanian authorities recorded for the export of the same cashew nuts even when the Indian figures are adjusted for the cost of freight.

Source: Tanzanian Customs, Indian Ministry of Commerce
It is difficult to explain a consistent and significant variation as that demonstrated in Figure 4.3.6. There is no reason as to why the Indian importer would want to over value the imports and the Indian figures are considered reliable. The conclusions that can be drawn are inaccuracies in the Tanzanian recording system or profiteering/speculation at the level of export sourcing in Tanzania. Either way the figures suggest that there is good reason to further investigate closely the export system in terms of the values it returns to the country and particularly its farmers.

4.3.1.3 Seasonality
The Tanzanian cashew crop comes at a time of year when cashew harvests are at their lowest. The annual cashew harvest season starts each year in Indonesia and continues in East Africa and then Brazil. During the period of the Tanzanian crop less than 20% of the World’s harvest is collected. At that time of year the availability is limited and for seasonal reasons demand peaks. This creates a significant advantage for Tanzania in the marketing of in shell and it is essential that each year this is taken advantage of with RCN prices many years peaking in the period October/November.

Figure 4.3.7 Cashew Crop Seasons

4.3.1.4 Quality and quality comparisons
Tanzanian cashew nuts are among the best in Africa as we have seen in the prices which Indian buyers are prepared to pay for them every year. A comparison of Tanzanian cashew nuts across the various qualities harvested on the continent of Africa shows that Tanzanian cashew nuts are of relatively high quality compared to most competing suppliers.

Figure 4.3.8 African In shell Cashew nuts Quality and Condition Comparison

<table>
<thead>
<tr>
<th>Country</th>
<th>Yield lbs. per bag/% Cutting Test</th>
<th>Count nuts/kg</th>
<th>Post-Harvest Handling</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinea Bissau</td>
<td>54 / 31%</td>
<td>215</td>
<td>Poor drying/ sometimes nuts picked /mixing</td>
<td>1</td>
</tr>
<tr>
<td>Senegal</td>
<td>53-54 / 30%</td>
<td>220-230</td>
<td>Poor drying/Use of polypropylene bags</td>
<td>2</td>
</tr>
<tr>
<td>Tanzania</td>
<td>51-53 / 29-30%</td>
<td>190/200</td>
<td>Product is properly dried and stored</td>
<td>3</td>
</tr>
<tr>
<td>The Gambia</td>
<td>51-52 / 29%</td>
<td>195-210</td>
<td>Poor drying</td>
<td>4</td>
</tr>
<tr>
<td>Kenya</td>
<td>48-50 / 27-28.5%</td>
<td>190-200</td>
<td>Poor Handling/Poor storage</td>
<td>5</td>
</tr>
<tr>
<td>Benin</td>
<td>48 / 27%</td>
<td>195</td>
<td>Mixing of crops and origins especially</td>
<td>6</td>
</tr>
<tr>
<td>Cote D’Ivoire</td>
<td>48 / 27%</td>
<td>205</td>
<td>Poor drying/oil staining, immature kernels</td>
<td>7</td>
</tr>
<tr>
<td>Ghana</td>
<td>46 / 26%</td>
<td>190</td>
<td>Oil staining / misshaped</td>
<td>8</td>
</tr>
<tr>
<td>Mozambique</td>
<td>42-48 / 24-27%</td>
<td>195/205</td>
<td>Poor handling, drying and bags</td>
<td>9</td>
</tr>
<tr>
<td>Nigeria</td>
<td>40-45 / 25.5%</td>
<td>200</td>
<td>Many damaged and lost/ Poorly stored</td>
<td>10</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>44-45 / 25.5%</td>
<td>210</td>
<td>Absence of data</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: ACI 2010, Competitiveness in the African Cashew Sector
4.3.1.5 International Logistics and transportation
Tanzania is well placed for export of in shell nuts to India with freight rates lower than competing suppliers in Indonesia or in West Africa. However as has been shown in the analysis of the domestic market and logistics costs within the country this advantage is largely negated by high costs of handling and double handling within the marketing system in Tanzania. In a system that expends in excess of $400 per tonne moving a product from the farm gate to the port cleared for export marginal differences on freight rates are of minor consequence.

4.3.1.6 Competitiveness in the in shell market
Tanzania is competitive on a number of levels:
- Quality and shelling characteristics of the product
- Crop size and marketability
- Seasonality
- Available warehousing facilities
- Warehouse receipt system
- Proximity to market

The competitiveness which the sector enjoys can earn high prices and relatively accessible outlets. The prices are however dependent on the product coming to market during the period October/February every year when product availability is low and inventories depleted. If the product does not come to the market during this period then the potential for high prices is significantly reduced as was seen in the 2011/12 marketing season when the product was left unsold until April/May resulting in lower values than had been available four/five months earlier. The competitiveness of Tanzanian in shell cashew nuts is diminished by the fact that only one market is targeted, India leaving the sector vulnerable to changes in the Indian market and with only competition between Indian buyers.

4.3.2 Tanzania in the international kernels market
In common with many of its African competitors Tanzania is not a major factor in the international kernels market. Its leading position as the major processor in Africa has been eroded by a lack of progress in Tanzania on processing development and growth of processing capacity in Cote D’Ivoire and Ghana.

4.3.2.1 Kernels exports and destinations
As we have seen production of cashew nuts has been growing in Tanzania but exports have been declining in recent years. Exports of cashew kernels have declined by 57% since 2008 during a period when the demand for cashew kernels has never been greater nor prices higher.

Figure 4.3.9 Tanzanian Exports of Cashew Kernels: Volumes and destinations
This decline has been due to a loss of market share in all markets but especially in the North American market whose imports of cashew kernels directly from Tanzania have collapsed from 2186 tonnes in 2007 to 510 tonnes in 2011 – a reduction of more than 75%.

Regional markets were mentioned as the way forward for Tanzania in interviews for this study often on the assumption that packaging and quality standards would be lower in those markets making them more accessible. In fact this is not the case. Cashew nuts are a high priced product and until income levels rise in surrounding countries trade on kernels to those countries is likely to be extremely limited. Potential target countries for Tanzania could be in the Arabian Gulf and the Middle East but so far penetration has been very poor into those markets. South Africa is also a market which holds potential for Tanzania if a marketing strategy is adopted. The unfortunate fact as of 2011 was that Vietnam supplied five times as many cashew kernels to South Africa as Tanzania did. Tanzania nevertheless remains the largest African supplier to the EU for example indicating that there is a potential market there for cashew kernels from Tanzania. The Netherlands is the primary destination within the EU accounting for 83% of exports – the port of Rotterdam is the primary entry point for cashew kernels which are distributed throughout Europe from there.

The primary constraint on the export of high value cashew kernels from Tanzania is the lack of processing in the country. The fall in exports of kernels is not due to markets nor is it due to any inherent problem with Tanzanian processed cashew kernels it is simply due to the constraints on processing in the country.
There does seem to be an issue in terms of the reputation for quality of Tanzanian cashew kernels which stems from past experiences rather than the quality of current exports and processors will if the industry expands have to engage in a careful building of quality profile in the international market to create a quality brand image for Tanzania. In this context small scale processors will find it much more difficult to access international kernels markets as buyers will be more cautious on quality and food safety than they would be from origins of high reputation or factories of large scale.

### 4.3.2.2 Pricing of kernels

There is anecdotal evidence that Tanzanian cashew kernels are valued below the main origins, India, Vietnam and Brazil. This also applies to cashew kernels from Africa as a whole. It is difficult to verify this with the import statistics as the values are dependent on the grades imported, whether or not a proportion of the import was of premium market products such as organic or fair trade and of course the market price and timing of sale. Therefore the ranking in table should be considered as only an indication of prices. It does however indicate in accordance with market opinion that the values of most African origins including Tanzania are below those of the main origins.

#### Figure 4.3.12 EU Kernels Av. prices imports

<table>
<thead>
<tr>
<th>Country</th>
<th>Tonnes</th>
<th>$/lb. Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>207</td>
<td>$4.36</td>
</tr>
<tr>
<td>Cote D’Ivoire</td>
<td>507</td>
<td>$3.98</td>
</tr>
<tr>
<td>India</td>
<td>24538</td>
<td>$3.80</td>
</tr>
<tr>
<td>Vietnam</td>
<td>36586</td>
<td>$3.76</td>
</tr>
<tr>
<td>Average</td>
<td>71821</td>
<td>$3.75</td>
</tr>
<tr>
<td>Brazil</td>
<td>5688</td>
<td>$3.73</td>
</tr>
<tr>
<td>Kenya</td>
<td>53</td>
<td>$3.68</td>
</tr>
<tr>
<td>Indonesia</td>
<td>526</td>
<td>$3.61</td>
</tr>
<tr>
<td>Mozambique</td>
<td>897</td>
<td>$3.48</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1723</td>
<td>$3.32</td>
</tr>
<tr>
<td>Benin</td>
<td>54</td>
<td>$3.04</td>
</tr>
<tr>
<td>Nigeria</td>
<td>151</td>
<td>$2.70</td>
</tr>
</tbody>
</table>

### 4.3.2.3 Seasonality

The impact of the seasonal advantages for cashew kernels is not as great as for in shell. It appears that the timing of the crop which give the in shell export an advantage is a challenge for the processor. As we have seen the Tanzanian crop comes to market at a time of year when inventories are depleted and new crop harvesting is at low levels. For the processor in Tanzania this means that they must compete with the Indian processor at a time of year when the Indian processor is prepared to pay a high price for raw material. This is a disadvantage for the processor in Tanzania unless the farmer is producing enough product to supply both the export in shell market and the domestic processing market.

This is not to say that processing in Tanzania cannot be profitable. The Tanzanian processor does not have to pay an export levy, nor does he have to move the product across the Indian Ocean, double or triple handling in the process. However the impact of competition from outside the country has to be carefully considered when assessing the development of processing in Tanzania. Various methods have been used in other countries and these were discussed with stakeholders. Mozambique for example delays the export of in shell until processors have had a chance to procure their needs which effectively means the end of January each year. This system has the impact of devaluing the in shell export and would not be practical for Tanzania until processing grows to a large proportion of the crop. It has not been effective in Mozambique where both processing and in shell trading are in crisis following a range of government interventions without tackling the basic problem of production and finance for factories.

### 4.3.2.4 Quality of kernels

We have seen above that Tanzanian cashew nuts are of high quality in terms of yield and size. Indian processors confirmed in interviews that the nuts can produce a high quality kernel once post-harvest handling is correct. It has also been mentioned that the perception of Tanzanian cashew kernels in the market is of a low quality product inferior to the major origins. There is no reason for this to be the case provided processing plants are of a standard that will produce nuts which match international
specifications. The discussion of kernel quality is entirely about the processing methods and capacities.

### Figure 4.3.13

<table>
<thead>
<tr>
<th>Origin</th>
<th>Count per kg</th>
<th>Yield lbs. per bag</th>
<th>Rejected nuts</th>
<th>Kernels per bag of 80kgs in kilos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinea Bissau</td>
<td>223</td>
<td>53.37</td>
<td>6.20%</td>
<td>24.21</td>
</tr>
<tr>
<td>Tanzania</td>
<td>190</td>
<td>51.89</td>
<td>5.65%</td>
<td>23.54</td>
</tr>
<tr>
<td>Mozambique</td>
<td>208</td>
<td>50.84</td>
<td>5.67%</td>
<td>23.06</td>
</tr>
<tr>
<td>Benin</td>
<td>194</td>
<td>48.63</td>
<td>6.85%</td>
<td>22.06</td>
</tr>
<tr>
<td>Cote D’Ivoire</td>
<td>193</td>
<td>47.58</td>
<td>8.45%</td>
<td>21.58</td>
</tr>
</tbody>
</table>

**Actual cutting tests over 6000 tonnes provided by a major Indian cargo inspection show the quality of the in shell cashew nuts from Tanzania which vie with Guinea Bissau amongst the major exporters for the best quality in Africa.**

Cutting tests and rejection indicate the yield and quality of processed product.

### 4.3.2.5 Logistics

In the kernels sector Tanzanian processors face similar challenges to exporters elsewhere. Costs in Tanzania for the trucking and export of kernels are no higher than elsewhere in Africa once the product is removed from the auction system which costs have been analysed above.

The argument on the unrealistically high costs of the cooperative unions and warehouse receipt system made above in the in shell discussion apply equally here and act as disincentives to investment in processing.

The primary logistical challenge for processors who are or who would like to process cashew kernels is the absence of regular liner vessels or feeder vessels for export calling at Mtwara port. This means that kernels must be moved by road over the long journey to Dar es Salaam port. This can cause additional breakage and is of course a cost factor. It also involves a greater risk. During one interview conducted with a processor he informed us of the disappearance of a truckload of cashew kernels on the journey from Mtwara region to Dar es Salaam which although insurable is a major loss to any processor. It is quite likely that in the event of the development of processing in Tanzania that demand would bring the necessary vessels to Mtwara.

### 4.3.2.6 Competitiveness of the kernels chain

Tanzania has all the elements necessary for the development of a processing industry in terms of quality product, scale, location, seasonality, tradition and history of processing.

Given these positive advantages why does Tanzania shell less than 15% of its cashews in 2012? The growth of processing in Tanzania has been stunted by a range of factors which are largely attributable to the economic conditions of the country and the regulation of the system by the Government:

**Constraints on processing**

- The auction system means that processors have to compete for supplies with Indian processors at a time of year when Indian processors are most in need of product.
- The fact that all cashew nuts have to be routed via the cooperative unions and auction system means that the processor has no security of supply and cannot develop normal supply chain relationships with farmers and farmer groups.
- The costs of routing product through the cooperative unions and auctions are too high and reduce the competitiveness of the processing sector as a whole.
- Investment in the sector would rely on the outcome of auctions which are not trusted at any level of the supply chain from farmer to multinational. Investors are unlikely to invest millions of dollars in processing facilities when their supply is decided by an auction which is rumoured to be corrupt and prone to political interference.
- The “legacy” factories, in which so much hope and discussion has been invested are obsolete and not suitable for the demands of the modern market.
Small scale processing is not suitable for export to the international markets unless it is tied to a larger scale factory which can offer buyers sufficient volume, food safety and quality product. Tanzanian investors and entrepreneurs find access to financial services limited and prices high. The banks that are committed to the cashew sector via the warehouse receipt system are unlikely to want to extend their risk in the sector which currently functions as a provider or in shell cashew nuts for processing in India.

In summary the constraints on the processing of cashew nuts in Tanzania largely arise from the economic environment, structure and regulation of the sector in Tanzania.

**Figure 4.3.14 Comparison of Cashew Producers**

<table>
<thead>
<tr>
<th>Harvesting</th>
<th>India</th>
<th>Brazil</th>
<th>Vietnam</th>
<th>Tanzania</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall/picked</td>
<td>Fall</td>
<td>Fall</td>
<td>Picked</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Roasting</th>
<th>Steam/Roast</th>
<th>Oil bath</th>
<th>Steam</th>
<th>Oil bath/ stream</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Shelling</th>
<th>Manual cracking with some new machines incorporated</th>
<th>Mechanized</th>
<th>Mix/cracking; many seasonal enterprises</th>
<th>Manual cutting</th>
</tr>
</thead>
</table>

|------------|--------|------------|-------------------|-------|

<table>
<thead>
<tr>
<th>Packing</th>
<th>Plastic flexi</th>
<th>Corvac</th>
<th>Plastic flexi</th>
<th>Plastic flexi</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Low medium</th>
<th>Medium to high</th>
<th>Low to medium</th>
<th>Low</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Proprietors</th>
<th>Family</th>
<th>Corporate</th>
<th>Trader</th>
<th>Mixed</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Conservative</th>
<th>Corporate</th>
<th>Entrepreneurial</th>
<th>Entrepreneurial</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Investment</th>
<th>Minimal</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Reliability</th>
<th>Mixed Medium</th>
<th>High</th>
<th>Mixed /Low</th>
<th>N/a</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Contract Fidelity</th>
<th>Mixed</th>
<th>Reliable</th>
<th>Unreliable</th>
<th>Reliable</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Quality</th>
<th>Reliable if checked</th>
<th>Reliable</th>
<th>Mixed</th>
<th>Reliable if checked</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Food safety</th>
<th>Mixed</th>
<th>Good</th>
<th>Poor</th>
<th>Poor</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Imports in-shell</th>
<th>800,000 mt</th>
<th>60000mt</th>
<th>500,000 mt</th>
<th>Exporter</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of factories</th>
<th>200-250 excl. seasonal</th>
<th>11</th>
<th>350</th>
<th>6 operational</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>National shelling capacity</th>
<th>2 million mt in-shell</th>
<th>500,000 mt in-shell</th>
<th>950,000 mt in-shell</th>
<th>20,000 mt in-shell</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Domestic kernels market</th>
<th>160,000 mts the largest and fastest growing market</th>
<th>11,500 mts of kernels and fast growing</th>
<th>Small, in the range of 4,000 mts of kernels</th>
<th>No substantial market</th>
</tr>
</thead>
</table>
4.4 Cashews, Regulation and Institutions

4.4.1 Policy, The CBT and the auction
The cashew sector in Tanzania is characterised by heavy regulation and an adversarial set of relationships. Tanzania has the highest export taxation regime in the World for cashew nuts, the only auction system which is combined with the only public, state guaranteed warehouse receipt system and the only remaining cashew nut board, The Cashew Nut Board of Tanzania. The intent of these complex regulatory systems, which are a layer on top of a rigorous business licensing system, was to protect farmers from what was seen as predatory traders/middlemen who were paying low prices and making large margins in the first half of the last decade. It was also intended to stimulate value addition and to recover the position of Tanzania as a major processor of cashew nuts.

It is often claimed that the wrs/auction has enhanced farmer prices and that sinister forces are seeking to break the auction so as to open the opportunity to buy low priced cashew nuts again. However as we have seen in the analysis of the international market and of the Tanzanian market there is little evidence that in 2012 Tanzanian farmers will receive a better net price, given the quality of the product, than their competitors elsewhere in Africa. There is evidence that they receive a lower price than their competitors in India and Vietnam. This situation is partially due to failure in the system in Tanzania (high costs, poor marketing, poor market knowledge) but is also due to the fact that from 2008 onwards i.e. for the life of the wrs/auction the cashew market changed dramatically. It moved from over supply to deficit supply to structural shortage based on growing demand and supply that could not keep up. This resulted in all time high prices triggered by a series of crop failures.

Figure 5.1 WW320 Cashew Kernels FOB US$/lbs.

The auction system was introduced in response to a period of low prices in international markets. However in the period of its operation the market has changed with a sharp and sustained rise in prices eventually exceeding all expectations. This has changed buyer behaviour on in shell and kernels and enhanced farm gate values everywhere.

In shell cashew prices moved up sharply from 2008 onwards and in times of shortage Tanzanian import prices to India moved up but the gap between the farm gate price in Tanzania and the import price to India grew due to higher evacuation costs, a higher export levy and higher trader margins in a volatile market.

Note: Tanzania price is higher than the average due to higher quality than average.
Government policy is clearly to develop the cashew sector both in value addition and in production and to enhance earning at all levels of the sector. The intentions are clearly demonstrated by dialogue with processors going back almost ten years aimed at developing processing. Policy moves have been consistent with these objectives. Cashews are seen as an important crop which can have a major impact in alleviating rural poverty. However cashews are also used for political purposes and are viewed by others as a way of extracting money from the system with farmers as pawns in the game. Much of the regulation could be effective but it is so highly politicised as to render the institutions charged with management of the sector unable to listen to the market but obliged to listen to short term political factors especially from local politicians.

The central government has a two tier structure with ministries and development agencies at national level and regional secretariat at regional level. The former are the policy making bodies. In most sectors they also perform the regulatory role but in the cashew sector this is provided by the Cashew nut Board of Tanzania. The latter, regional structures that provide technical support and supervisory role to the local government tend to interfere in the cashew sector without the necessary knowledge for effective intervention. According to interviewees these interventions have at best delayed decision making and at worst have caused opportunities to be missed. However it is also clear that local government blames the coops, the coops blame the primary coops, the farmers blame the coops and the Board and everyone blames "the Indians". It is not quite clear who the "Indians" are – they may be the trading companies or the processors in India – but whoever they are there is no sense of them as customers and buyers of large amounts of cashew nuts every year in Tanzania. This culture is, we believe due to a failure of the Cashew Board of Tanzania to coordinate the sector as is their brief. There is a common policy without a coordinated execution which weakens the sector and opens opportunities for over charging and profiteering. Given this lack of coordination the sector is left with a series of systems, regulations and regulatory bodies which are too cumbersome for a time of volatile markets and fast growth.

The Tanzanian cashew sector was left with a marketing system (wars/auction) which was in many ways ideally suited to the market environment of 2001-2007 but which was not suited to the situation 2008-2012 and the foreseeable future. This included an inflexible pricing structure, a closed tender auction, a high cost evacuation mechanism and a high export tax which, given that there is only a small national processing sector to protect, is effectively a tax on farmers.

Looking more broadly at the sector it is clear that the effort toward processing development has not succeeded so far. Processing capacity today is lower than five years ago. Promised expansions notably by Olam and Export Trading Group have not materialised and functioning processors have declined or disappeared as in the case of Premier Cashew, an organic processor often held up as an example to others in the past. The auction system does not incentivise domestic processing even though the policy and regulation is in place to protect processing. Processors are not in a position to source from farmers in a market which demands that they can trace their procurement back to the farm gate. They are forced to purchase their raw material through the cooperative unions of whom at least one has declared their ambition to become a large processor in competition to their customers for in shell cashews. For an entrepreneur or investor this adds up to a lack of security of supply which is the biggest single deterrent from an investment in the sector much more than for example the multiple licences or difficult labour or high priced finance.

The failure to develop processing is not unique to Tanzania and is partly due to factors such as poor financial service. However the overall market and level of interest from buyers looking to partner with processors in African countries is now more positive than ever before. Policy and regulatory coordination and leadership are required more than ever to take advantages of this opportunity.

4.4.2 Farmers representation
Farmers market their product through the primary coops and purchase their inputs through the same channel which in turn interacts with the cooperative unions. There are some farmer groups and associations in the sector but they are few. Theses have in a number of cases emerged as a result of the relaxation of the regulations in 2010 which allows farmer groups to process or part process cashews – these are often just shelled not peeled and sold to Olam. The reality is that farmers are poorly represented in the sector. Due to the nature of the auction they have no access to buyers, have only one marketing channel via the primary cooperatives and have no representation at the auctions. Farmer advocacy organisations such as ACT, ANSAF and United Peasants for example can have an influence but do not directly represent farmers in negotiations. These organisations report that at the annual
stakeholder meetings of the Cashew Board of Tanzania some farmers are present but they get a limited hearing in the presence of high ranking officials, business people and agencies. At present the system which purports to promote farmers interests in the cashew sector appears to deny them representation if not actively then by the omission of providing a forum for farmers in the cashew sector.

4.4.3 Agricultural inputs system
The government subsidises inputs for the cashew sector mainly sulphur and pesticides. This is funded through the Cashew Industry Development Trust Fund which is attached to the Cashew Board of Tanzania. It was previously handled under a voucher payment system administered by District Council. Primary Cooperative societies apply for subsidy from the District Government Fund and once approved purchase inputs and distribute at the subsidised price. As outlined elsewhere in this study whilst the subsidy is a good way to fund inputs the delivery mechanism is not functioning in a timely manner.

In the current system the export levy is collected - indirectly from the farmers (this would be different if a value added processing sector were active) – it is split between the exchequer, the research institute, the Cashew Board and the Cashew Industry Development Trust Fund and then used to subsidise inputs for farmers. It appears to be an unwieldy methodology and cannot even be described as redistribution from wealthy farmers to poorer farmers as they themselves in interviews for this study report that only farmers who have sold sufficient cashews through the primary cooperatives have sufficient credit to purchase inputs even at the subsidised prices.

Moving to the actual procurement of the inputs which is now organised by a Cashew Board of Tanzania tender for annual supply the timing and difficulty becomes more apparent. In response to overcharging in the market place for inputs (of which there is plenty of evidence just comparing domestic and international prices as is outlined herein) a system has been put in place to tender for inputs to be supplied by one provider which should be tendered for latest end January. In 2011 timely tendering was disrupted by new legislations demanding that all pesticides had to be tested for three years before being approved for sale in Tanzania. In 2012 the tender was successful but the successful tenderer did not deliver the inputs. This effectively leaves the farmer in the open market for inputs often at a time of year when he is awaiting his second payment from the auction system for the previous year’s cashew nuts.

International private suppliers who have attempted to enter the sector with sulphur for example have been told that they would have to wait for approval and licensing whilst existing suppliers offered to handle the product sale as agent for a 25% fee which is not tenable. Meantime interviewees commented that they do not trust the tender system and ask why should there be only one supplier.

In this environment farmers need to have imports during the right window when sulphur application will work and at prices which they can afford. Again it seems that a well-intended and conceptually sound idea is poorly coordinated making it ineffective through the involvement of no fewer than seven government bodies for the supply of inputs.

4.4.4 Primary Agricultural Cooperatives and Cooperative Unions

Extract from interview reports of Dr Rose Mushi

Leadership and management personnel of primary cooperative societies that were interviewed on the challenges of the marketing system had a different set of problems compared to the leadership of Cooperative Unions. The Unions were reluctant to comments on the challenges that farmers had mentioned but Tandahimba Co Operative Union attributed the pricing challenges of the marketing system to lack of mechanism for price stabilisation fund. Primary Cooperative societies complain of the increasing high marketing costs that are passed on to the farmers. While leadership of the unions attribute the low price paid to the farmer due to the fact that they are unable to stabilize prices during seasons when prices of the crop are low. They see the solution to increasing lower farm gate prices as a price stabilization fund that the Government should establish. This effectively blames volatility in the market on low prices for farmers however it does not stand up as an argument at a time when the indicative prices from CBT are satisfactory and the cashew sector worldwide is going through the highest price phase in its history since the time of the establishment of the wrs/auction system. Mention was made of plans to develop a commodity exchange which would include cashews. This would be the only in shell cashew exchange ever to exist and although it would offer more transparency than the current system it would be open to manipulation given that volumes are likely to be low and players limited.
Local Government Authorities officials and Regional Authority officials interviewed indicated weakness in leadership and management of the primary cooperative society as the key factor in poor performance of the cooperatives. Their capacity in financial management is very limited because of lack of appreciation of the need to attract and employee qualified management. The Government has a new Cooperative Policy of 2003 that defines cooperatives should be run based on cooperative principals of equality. In implementing this new policy the Government has a Reform and Modernization Program with the objectives of developing cooperatives that are voluntary, democratically led and managed on commercial and sustainable basis. The program requires a very strong public education and cooperative management training. Funding has been the reasons given for lack of vigorous in implementation of the program.

4.4.5 The warehouse receipt system/auction

The warehouse receipt system and auction was introduced in 2007 to prevent exploitation of farmers and to enhance competitiveness of processors. Similar systems had operated in other commodities but crucially the auction element operated differently in those cases.

In fact it is also a benefit to the in shell export trade who now buy at auction at an ex warehouse price and no longer have to take the risk of advancing funds to middlemen or to send buyers into the country to deal with farmers and local traders. All the risk that the traders used to face of non-delivery, poor quality, loss of product , loss of advance payments is taken up by the warehouse warrant system effectively the farmer and to a certain extent the warehouse keeper. Misunderstanding of the international trade and the trader’s relationship to the supplier is at the core of misdirection of the warehouse receipt system. In the international in shell market high margins for traders tend to reflect high risk especially in African countries. This leads to low prices for farmers. Traders who are guaranteed delivery without risk are most likely quite happy to buy at the auction so long as their customers are not encouraged to compete at auction which would remove their role in the supply chain. The Tanzanian warehouse receipt system for cashews working as it does in a market where information is poor, bidding is closed and non-transparent, delivery is ex warehouse interior, payment is after success without bond and storage facilities are relatively good is an ideal environment for the trader who brings finance from external sources and sells in a market which has many different clients.

Under the warehouse receipt system the owner of the goods usually a producer delivers the goods to a certified warehouse with is bank approved and may be operated under a collateral management agreement. The warehouse takes responsibility for the goods and issues a delivery receipt or warehouse warrant which is a negotiable instrument and on which the owner of the goods may borrow or sell. The warehouse keeper is responsible for testing the goods on arrival and warrants both quantity and quality.

In Tanzania the primary cooperatives take responsibility for the delivery of the goods to the warehouses and the cooperative unions take responsibility for marketing. Both charge the farmer a marketing fee for the service plus various charges for transportation, shrinkage etc. The roles are not clearly defined in that the cooperative union may also be a warehouse keeper as well as service provider and could also be a processor – there are no restrictions on operations within the system unlike in other such systems. It is clear that there is only one legal channel for marketing products so that there is no competition for the provision of services to farmers who are tied to the one buying outlet. As has been shown elsewhere in this study costs in the Tanzanian system are high compared to other African countries which is most likely due to a lack of incentive to keep costs under control within this buying system.

The farmers usually receive two payments, the first on delivery and the second on sale of the goods (60%/40%). There has been one occasion when a third payment was made following some high priced sales. The pricing mechanism is effectively the auction but the Cashew Board of Tanzania issues an “indicative” price each year which is non-binding but on which the first payment is based. The pricing mechanism is not formalised and seems to be based on some idea of the World market allied to an idea of farmers’ costs of producing the Cashewnuts. The prices have tended to be on the low side after an opening couple of years when the indicative prices were very low by international market standards.

Warehouses, having received the goods advise the Cashew Board of Tanzania who prepares a schedule for sale at weekly of fortnightly regional “auctions”. Sealed bids are received from licenced buyers and adjudicated on by the representatives of the cooperative unions, The Cashew Board of Tanzania, sometimes regional
commissioners attend but have no legal right to do so, farmers (in theory at least) are represented by the cooperative unions.

If a bid is accepted the successful bidder is informed by telephone and has seven days to pay and obtain a delivery note from the Cashew Board. No other party is advised of the outcome of the auction and no results are published. One buyer who attempted to secure supplies in 2012 said that the first thing he knew about the auction result was when he saw “someone else’s trucks on the highway to Mtwara”. The auction bears little relationship to what was originally intended where buyers would be licensed to buy from primary societies and would negotiate directly with them. It is not clear for example what the cooperative union brings other than attendance at the auctions and provision of warehouses in some cases. It is clear that farmers do not believe that the cooperative union represents their interests.

In some cases the primary cooperatives may sell to their own groups for small scale processing and larger farmers have the right to deliver directly into the system but cases are few. There is also plenty of evidence that cashew nuts are traded illegally outside the auction system with some processors sourcing in this manner from necessity early in the season before the Cashew Board has commenced its operation. Other source in this manner for price reasons alone.

The auction and the bureaucracy around it represent only the “tip of the ice berg” in terms of licensing. Businesses proposing to buy at auction must apply and be approved for an annual buying licence from the Cashew Board of Tanzania. They must also apply and be approved for a trading licence to the district executive office and for a buying permit. The bidding process involves posting a bid, receiving a product delivery note, a contract, an export licence and a receipt for the payment of the export levy. It seems that the purpose of this bureaucracy is not just to control the movement of the goods but to spread the revenue among the various agencies. In addition there will have been a payment of local taxes and issuing of local licences to move the product to the wrs as well as informal payments and sometimes harassment on the roads.

4.4.6 Extension services
Given the opportunity for expansion, the availability in Tanzania of the best cashew research facility in Africa at Naliendele Agricultural Research Institute and the necessity of replacing aging trees (estimated about 70% of the trees are over 20 years and past peak yield) extension services should be high priority. It would be high priority according to government policy as laid out in a range of policy documents and as made clear to us both in interviews with officials and by Tanzanian delegates at the African Cashew Alliance Conference of September 2012. However execution of the policy is poor according to farmers, ngo’s and associations. The extension services are poorly resourced meaning that extension officers are not available to farmers. Developments in West Africa often managed by ngo’s have shown that relatively small scale interventions bringing better practices to farmers can have major impacts. In the case of Tanzania it appears from the crop outturns and increases of recent seasons that the know how is present but needs to be turned into good practice but more importantly good quality seedlings are required to replace the aging tree stock.

4.4.7 The Cashew Industry Development Trust Fund
This agency is funded by the export levy and is now operational. It is responsible for the funding of subsidised inputs but it promises structural development across the entire chain. There has been discussion that the CIDTF would assist funding for Tanzanian processors but so far we have not been able to establish if this is likely to develop.
5. The farmer’s perspective

Interviews with farmers and primary cooperatives were carried out by Dr Rose Mushi for this report. Her entire report is attached as an annex. The different groups interviewed were mainly farmers in a range of roles, as members of primary cooperatives, leadership of primary cooperative societies, members of farmers association and as well as members of Cooperative Unions. Management of Cooperative Unions were interviewed in terms of their relationship with farmers. Interviews were also held with Managers from Agro-processing Plants and Warehouse Operators as well for officials of the Local Government and from the Central Government at Regional Level. There are more than 350,000 cashew farmers in Tanzania with some estimates ranging as high as 700,000. They farm small holdings intercropping with food crops and other small scale cashew crops. The cashew marketing and inputs system is a basic matter for these farmers and their families.

The stories the farmers told were about the negative impact the delayed on set of marketing season and impact of the low profitability of the crop due to low prices or higher input cost. They complained about their inability to pay such basic family costs as school fees on time, failing to meet their medical costs and having to borrow or sell their crops to middle man prior to onset of the official marketing season. They complain that they have gone to the extent of failing to bury their beloved ones in-case of death because they had no money to do so.

The results of the interviews set in the context of the wider study and interview programme undertaken for this study are, we believe a fair indication of the views of and problems faced by farmers who grow cashews in Tanzania today. We do not claim to have conducted a statistically accuracy survey which might require 1000 interviews but experience of many years in the sector both on the ground in Tanzania and internationally indicates that the views found are highly likely to be representative of the general opinion.

The commentaries from farmers indicated that they have a good understanding of the local marketing conditions and clearly see some of the most serious problems. It is often said in many countries that farmers always complain – the accuracy or otherwise of such a statement should in no way be seen as invalidating the legitimate problems faced by Tanzanian cashew farmers as expressed by themselves.

5.1 Input Supply

Farmers’ difficulties with the input system lie in three areas:

- Cost of inputs and cost of administration
- Access to inputs in a timely manner. If inputs are not available at precisely the right time of year the impact is reduced or negated.
- Quality: despite the fact that the Tanzanian Bureau of Standards approves importers and the products they propose to import farmers complain that the products are not of good quality.

Individual farmers who are members of primary cooperative societies interviewed are very negative on the poor performance of the cashew nut marketing system. They are unhappy with the input supply value chain citing poor services from by traders who win Government tenders to supply subsidized inputs. They complain about the inadequacy of the quantity of inputs and the quality of the product delivered. The root of such problems should not be in shortage of funding for the subsidy system as it is funded by the Cashew Development Fund from the export levy which has been at record levels in recent years. Therefore the problems may stem from poor execution and/or administration of the scheme.

The input system was revised last year following failure by the successful tenderer in 2011/12 to deliver inputs. It appears that the tender was not protected by significant enough penalties in the event of failure to execute the commitment. We understand that this problem has been addressed however it remains to be seen how and at what level of penalty given the profitability of the inputs business which trades far above the general World price.
Subsidised inputs are distributed to farmers by the primary cooperative society. They make estimates, request the subsidy from the District Government Fund, purchase the inputs from suppliers, distribute and sell to farmers at subsidised prices. The ability of the Primary Cooperative Societies to manage this process must be called into question as a function of the overall low level of management training and skills already referred to elsewhere in this study.

The late delivery of inputs was also a recurring theme in conversations with farmers and has been referred to in a number of value chain studies. Inputs supplies are delivered late to the farmers by their primary cooperative society and are not available during the right part of the growing season to be effective either wholly or partially. There are a number of perceptions as to why this occurs ranging from the simple explanation of poor management and logistics through to a darker explanation which suggests that by delivering late the suppliers force the farmers to buy unsubsidised open market inputs at inflated prices. This type of practice has been previously referred to both in value chain studies and market studies of the sector. Whilst we did not find irrefutable evidence we did find a range of stakeholders who held the view that this was a factor. Inputs providers were not forthcoming on this issue but we should be careful not to interpret that as any sort of confirmation.

Cost of inputs is perceived to be high by farmers even after the subsidies. There is good evidence that their perceptions are accurate for example the cost of the sulphur dust that controls powdery mildew is quoted at a range of prices by farmers from TZS20,000 per kg up to TZS35,000 per kg. Average prices are equivalent to USD 1265 per ton without subsidy. The international market price for sulphur as quoted Cfr Dar es Salaam from the same sources as supplied product in prior years is US$ 680 per ton and quotations from USA suppliers for the same specification are as low as US$200 per tonne in bulk. Clearly the landing and distribution of the product is a heavy cost but it nonetheless appears that farmers are correct in their assertion that sulphur prices are too high even after the subsidy (assuming that the subsidy system is operating correctly).

Farmers also complain that an amount TZS10 per Kg of cashew is deducted for payments of inputs by their primary cooperative society. However it comes to delivery of inputs only those with sufficient deductions to meet the cost of a 25kg bag of sulphur receive delivery of inputs. Farmers with smaller volumes of production do not receive the subsidised inputs but are nevertheless as standard practice deducted the TZS10 per kg amount from sales proceeds of their crop. This abuse of the system is in addition to deductions mentioned elsewhere in this report for transport, marketing expenses and weight loss among others. The deduction of TZS10/kg amounts to US$6.25 per tonne which of itself is not significant but when added to the range of discounts is another subsidy paid by the farmer to fund an over bureaucratic and costly marketing system.

The reasons given by farmers for the poor performance of the input supply market is the fact that suppliers are limited to one importer who is given the tender to supply inputs by the Cashew Board on an annual basis. The implication is that prices are set at high levels (suggesting collusion) reducing the impact of the subsidy for the farmer whilst not delivering the required service.

According to interviewees limited government capacity to subsidize inputs has been used as a reason to compromise the level of competition that could be promoted in the input supply market. Farmers say that there is a need to devise a mechanism for subsidizing inputs without compromising on competition in the market for inputs. Farmers have indicated the willingness to buy inputs from the market even at unsubsidized levels provided they are made readily available through a distribution network that reaches out to the villages at prevailing World market prices. This could be achieved by allowing more competition among suppliers in the agricultural inputs market.

The tender system which is intended to create competition at the level of imports will only have an impact if there is also competition at the level of distribution. Some groups have tried to import inputs on their own. United Peasants Tanzania, a farmer advocacy and support organisation based in Mtwara told Dr Mushi of their attempts to order inputs for their members. They secured an import licence but failed on the financing required by the bank to establish the letter of credit for ordering the inputs.

It is clear that there are too few companies supplying inputs to engender real competition and choice for farmers as buyers. There are also indications that some of the companies involved work together to support prices.
The distribution of inputs in a timely manner to almost 350,000 farmers is a major task with significant investment called for but a ready and long term market available for those who would invest. Domestic trading companies are faced with the challenges of access to finance and working capital issues. The agro-inputs business sector is catered for by some large multinational companies and perhaps the Cashew Board of Tanzania and the Ministry of Agriculture, Food and Cooperatives should gauge their interest in providing inputs for the sector. It is difficult to estimate what the impact of genuine competition would be on price and access - we are aware that effort by one distributor to work with farmers was frustrated by credit problems. It seems clear that the first action for immediate impact should be to implement efficient operation of the current system. The development of a more cost efficient alternative should follow soon after with responsibility clearly lying with the Ministry of Agriculture and the CBT.

5.2 Extension Support Services

According to the Agricultural and Livestock Policy 1997 the Government has the lead role in provision of extension services. However the policy recognizes and opens up space for private sector participation in the provision of agricultural extension services. The private sector has not taken this challenge of provision of extension services in cashew growing areas. There are few large scale commercial contract farms in the cashew-nut industry unlike other crop industries such as cotton, sugar cane where private agro-processors are engaged in provision of extension services to ensure guaranteed supply of the produce. The failure to develop cashew processing capacity by private companies either from new activity or by those that acquired the formerly state owned factories has meant that there are few processing units who seek to secure their supply. In addition those that are established are not able to engage with farmers in a meaningful way as all sourcing is routed through the warehouse receipt /auction system. In short there is no incentive for the private sector to develop production by provisions of extension services.

In these circumstances the responsibility for extension falls entirely on the government services. Reports from the trade and institutional services interviewed indicate that there is a system of extension officers but they are few and are under resourced. One offered the statistic that if he was mobile (he had no form of transport available) and travelled every day that he estimated that he could visit each farmer in his area only once every two years. The farmers interviewed say that extension officers do not call at the farm level for advice unless a farmer takes initiative to call the officer to solve a particular problem and that even this is a rare event.

Farmers complained that extension services from the Government are not available to them. Local Government authority officials complain of lack of budgetary resources to effectively facilitate the delivery of extension services through recruiting adequate field staff and equipping then with necessary working tools. One could question the level of effort that local government has demonstrated even given the limited resources. The absence of accountability for service delivery by the local government may also be an underlying cause of the poor performance in delivery of extension services. Nonetheless the trend in production has been upward in recent years albeit in a somewhat unpredictable fashion driven by better prices and some improvements in inputs. The question remains as to the impact in the event of a year or two of lower prices on the one hand and the aging tree stock on the other. It would be convenient to point to increasing production as evidence of an efficient extension service but the indicators are, as confirmed by farmers that the growth of 2011/12 is not sustainable without an efficient extension system never mind the ambitious targets of 200,000 and 300,000 tonnes production per annum as targeted by various agencies.

5.3 Cashew Nut Prices and Marketing System

Farmers complained more about the inefficiencies in the marketing system that reduces the farm gate price for their raw cashew-nut than they did about the price set. Farmers generally receive the minimum indicative price less deductions made by cooperative unions, primary cooperatives and warehouse keepers.
 Farmers complain that the warehouse operators who storage services to the Cooperative Unions are not efficient. There are unexplained losses of weight when the crop is delivered by the primary society to the warehouse. Reasons provided by farmers are that the weights and measurement agency that approves weigh bridges at warehouses are corrupted and register poorly calibrated bridges. Warehouse keepers who were interviewed also complained of unexplained losses to deliveries and blamed inefficient co-op’s for the problems. It is unlikely that weight losses can be ascribed to moisture change as properly dried cashew nuts are more likely to gain moisture in transit than lose it.

The problem could also be at the primary cooperative society level through pilferage; poor weighing facilities or poor record keeping. We tried to ascertain the level of losses but farmers were unable to provide data. It is known that Coops build in a 4% shrinkage to the costing which is difficult to justify given that the nuts are dried at farm level before delivery to the coops.

Farmers have held their local leadership to account for these losses by taking the law into their own hands for example evicting primary society cooperative leadership from their homes. This recent development of an increased awareness of the rights of the farmer to demand better services from the cooperative society could have an impact id indeed the problem is at that level. If not then there is a need for better management and skills training for primary cooperative society’s secretaries and managers.

There have also been cases where there have been unexplained losses of product in the care of the warehouses. The law governing warehouse operations requires that the operator pays for the losses. These losses have to be compensated by warehouse operators to the farmers. Farmers complain that compensation from warehouse operators is difficult to realize through the legal system as cases take too long to be decided to the point that farmers loss interest in following up. The inefficient legal system that fails to enforce contracts between warehouse operators and farmers cooperatives is also a contributory factor in creating inefficiencies in the marketing system and reducing farmers’ incomes.

Farmers also indicated that their return is reduced by the high marketing costs that are deducted from the farm gate price by the Cooperative Unions. The cooperative unions manage the marketing services on behalf of the farmers through their primary cooperative societies. They charge a levy for this service that is TZS 27 per Kg. The primary cooperative society also deducts TZS 50 per Kg as levy for its service rendered. Farmers are also deducted around TZS 65per Kg for transport costs. When costs of jute, shrinkage, cost of storage from warehouses and bank interest for crop purchase financing are added, total deductions add up to TZS286 per Kg. Farmers complain that these costs are inflated as coops and warehouses seek to overly profit from handling the crop. There is no doubt that these costs in the region of US$181 per tonne are well above any reasonable cost for moving product from farm to port as demonstrated elsewhere in this report.

Farmers just like processors and many observers complain that the auction system is not transparent. The “auction” is not an auction as such but a closed tender procurement system that is conducted in private and is not reported. Farmers complain that the task force comprising of officials from the Regional Administration, Regional Commissioners office have undue influence in the tendering process to the point that farmers have lost confidence in the system. Members of the regional administration and Regional Commissioners are not entitled to sit in on the tender process however there is a perception that these officials influence the auctions.

This may be due to the unfortunate intervention in 2011 of a regional commissioner who advised the cooperatives not to sell at what would have been a record price and after which prices started to fall. We cannot comment on the veracity or otherwise but there is a strong perception among farmers that the officials who decide on the outcome of the auctions are bribed to favour certain bidders. In the course of this study one former employee of a trading company described bribing a cooperative official for auction information. Baptist Phir Makaburi, the United Peasants of Tanzania leader visited the Moshi Coffee Auction and has tried to influence the CBT and Government to adopt the same system without success to date.
Farmers have also complained that forms of farmers’ organization other than coops are unfairly banned from competing with primary cooperative societies and unions in supporting farmers to market their crop. They are completely barred from participating in the marketing systems despite the fact they are legally qualified in accordance with law that regulates the warehouse operating system to collect and sell cashew nuts on behalf of farmers through the warehouse receipt system. Government officials and cooperative leadership argue that associations are barred from participating in the marketing system because they were given the opportunity and abused it by selling the crop outside the warehouse receipt system despite the fact that they paid farmers higher prices and their costs of marketing were lower than the cooperatives (in interviews with Tandahimba District Agricultural officer and The Mtwara and Masasi Coop Union Marketing Manager).

5.4 Taxes and Levies

Farmers have complained about Local Government Development levies that are arbitrarily levied on to farmers. Local Government Levies that are additional to those approved through the finance bill by parliament. The local Government approved levy/tax is a levy on the crop sold that does should not exceed 3% of the farm gate price. However some of the local authorities namely Masasi Local Government deduct an additional tax termed a development levy of TZS30 per Kg. Farmers complain that other Districts do not have this tax. They propose that these taxes that are additional to the 3% local Government development levy should not be deducted from them without their consent.

5.5 Primary Agricultural Cooperatives and Cooperative Unions View

Leadership and Management of primary cooperatives societies that were interviewed see the problems in the marketing system differently to their colleagues in the cooperative unions. The Unions were reluctant to comment on the challenges that farmers had mentioned but Tandahimba Co-Operative Union for example attributed the pricing challenges of the marketing system to lack of mechanism for price stabilisation fund. In the context of a rising market in recent years this comment shows a lack of market information and understanding.

Primary Cooperative societies complain of the increasing high marketing costs that are passed on to the farmers. While leadership of the unions attribute the low price paid to the farmer due to the fact that they are unable to stabilize prices during seasons when prices of the crop are low. They see the solution as a government established price stabilisation fund. This argument, from the cooperative unions shows a lack of market understanding and as a solution to low farm gate prices as a government price stabilization fund makes little sense. It effectively blames volatility in the market on low prices for farmers however it does not stand up as an argument at a time when the indicative prices from CBT are satisfactory and the cashew sector worldwide is going through the highest price phase in history. A secondary solution was seen in plans to develop a commodity exchange which would include cashews. This would be the only in shell cashew exchange ever to exist and although it would offer more transparency than the current system it would be open to manipulation given that volumes are likely to be low and players limited.

5.6 Local Government Authorities View

Local Government Authorities officials and Regional Authority officials interviewed indicated weakness in leadership and management of the primary cooperative society as the key factor in poor performance of the cooperatives. Their capacity in financial management is very limited because of lack of appreciation of the need to attract and employee qualified management. The Government has a new Cooperative Policy of 2003 that defines cooperatives are run based on cooperative principals of equality. In implementing this policy the Government has a Reform and Modernization Program with the objectives of developing cooperatives that are voluntary, democratically led and managed on a commercial and sustainable basis. The program requires a strong public education and cooperative
management training. Indications are that this programme has not been effectively implemented in the cashew sector in southern Tanzania. The reason offered from the local authority perspective is lack of funding.

5.7 Summary and Conclusion

Farmers’ organization both as cooperatives as well as non-cooperatives have an important role to play in the marketing of cashew nuts in Tanzania. Cashew production is a small holder activity which is widely geographically dispersed throughout the rural areas. Small holder farmers can reduce their cost of marketing, strengthen their bargaining power in the market and procure inputs more effectively by organizing themselves into strong organisations with professional management and leadership that is accountable to members.

However these organizations are weak in both their structure and their management. As a result these organizations have not been as effective in protecting the interest of the farmers and providing marketing services as they might have been.

In addition institutions which are supposed to serve the farmer in marketing, promoting and strengthening farmer organizations have largely failed due to a mix of poor structures, poor management, high costs and under resourcing.

Farmers see these problems but the absence of real accountability at a number of levels and representation in the value chain mean that their frustration is more likely to be expressed by civil unrest and victimisation of local officials than by political action.
6. The way forward: Practical and Policy recommendations Part I

The Cashew nut sector is important to the economy of Tanzania and is at a point in its development where the opportunity to build a modern industry is present. A presentation made at the Nigerian National Cashew Conference in December 2011 estimated that in order to keep supply and demand balanced African production of cashews would have to grow by 8% per annum each year to 2020. There is little chance of this target being met. Demand and prices are rising at a time when supply is struggling to keep up. There is an opportunity now which has not been present in this sector since the 1970’s.

This section will make recommendations which we believe will allow the opportunity to be taken under the headings, Cashew processing and development, The In shell trade and Marketing. In section 7 we will make recommendations on extension, costs and institutions.

6.10 Cashew Processing and Development, income, jobs and value addition

As an exporter of in shell cashew nuts Tanzania has not availed of the value addition opportunities which the country is in many ways in a position to exploit as we have seen above. Processing of cashews involves addition of high levels of value much of which is paid to workers as wages in the factories and to farmers as better prices for better quality in shell cashews

**Figure 6.1 Value Addition Calculations 5 years 2008 – 2012**

<table>
<thead>
<tr>
<th>2008-2012</th>
<th>Tonnes</th>
<th>Value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports of in-shell nuts</td>
<td>461,319</td>
<td>US$573,915,000</td>
<td>Dept. of Ag. Govt. of Tanzania</td>
</tr>
<tr>
<td>Kernels Equivalent</td>
<td>128,169</td>
<td>US$1,059,043,754</td>
<td>Based on 2 year average prices</td>
</tr>
<tr>
<td>Cashew Nut Shell Liquid</td>
<td>115,329</td>
<td>US$51,898,050</td>
<td>Based on 2 year average prices</td>
</tr>
<tr>
<td>Cashew Shell</td>
<td>230,659</td>
<td>US$14,070,199</td>
<td>Based on market value from India</td>
</tr>
<tr>
<td>Total value of products</td>
<td>564,700</td>
<td>US$1,125,012,003</td>
<td></td>
</tr>
</tbody>
</table>

**Total Value Addition lost**

US$551,097,003

**Value addition lost each year**

US$110,219,401

In the past five years Tanzania, by exporting in shell cashew nuts instead of processing them, has lost US$551 million in value addition that’s US$110m per annum.

- $110 million could build enough modern, food safe cashew factories to process the entire Tanzanian crop
- $110 million could buy enough seedlings and deliver them to farmers to double the Tanzanian cashew crop size
- The Export Levy on 461,319 tonnes at 15% for five years is less than the value added in one year.
6.1.2 Payment to Co Operative Unions, port and truckers under the WRS/Auction system

In the period 2007-2012 since the inception of the Warehouse Receipt /Auction system over 461,000 tonnes of in shell cashews have been exported. We have seen above that the cost of handling that volume through the system has been TZS286 per tonne based on 2012 values which equal approximately US$181 per tonne. If the current system continues without reform the following would be payments to Co Operatives and port loading facilities.

Figure 6.2 Payment to Co Operative Unions and Port loading costs Projected 2012-2016

<table>
<thead>
<tr>
<th>2012 -2017</th>
<th>Tonnes</th>
<th>Per tonne</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments to Coops TZS178/kg</td>
<td>550,000</td>
<td>$113.00</td>
<td>$62,150,000</td>
</tr>
<tr>
<td>In shell loading charges</td>
<td>550,000</td>
<td>$30.00</td>
<td>$16,500,000</td>
</tr>
</tbody>
</table>

If processing were conducted nationally these charges would be paid by the processors and costed into sales prices charged for export effectively meaning that the overseas buyer would pay the cost. In addition as a commercial entity looking for profit from operations and value addition rather than charging service fees the high levies and charges would disappear and farmers would receive a higher price for their goods. This would apply equally whether private business or cooperatives became processors so long as there is competition in the system.

6.1.3 Processing and employment

It is estimated based on studies undertaken in West Africa by USAID and the African Cashew Initiative that the processing of the entire 2012 Tanzanian cashew crop would create 45,000 jobs in the sector based on current methods of processing. Even if the impact of processing technologies was to reduce the figure by 30% to 30,000 jobs the impact on the rural communities would be immense.

Figure 6.3 Total Wage payments to factory workers

<table>
<thead>
<tr>
<th>Processing jobs</th>
<th>Rate per day</th>
<th>Total 250 days pa</th>
<th>Total US $ per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,000</td>
<td>5000</td>
<td>TZS 18,750,000,000</td>
<td>$11,867,089</td>
</tr>
<tr>
<td>30,000</td>
<td>5000</td>
<td>TZS 37,500,000,000</td>
<td>$23,734,177</td>
</tr>
<tr>
<td>45,000</td>
<td>5000</td>
<td>TZS 56,250,000,000</td>
<td>$35,601,266</td>
</tr>
</tbody>
</table>

6.1.4 Prices paid to farmers

Cashew Farmers in countries where processing of cashews is carried out locally are paid higher prices than cashew farmers in countries where the in shell nuts are exported for processing elsewhere. Indian and Vietnamese farmers earn more money for their products than farmers in any of the African countries even when quality is similar. The reasons are many including the long supply chain, trader’s margins, lack of finance, lack of information, the cost of moving almost five tonnes of in shell to make one tonne of kernels. The supply chains in countries where processing is not present are governed by traders and exporters who have little interest in rewarding quality and are concerned with the immediate purchase and evacuation of the product. Processors on the other hand tend to want to work with the farmers on the long term basis, rewarding quality and supporting the extension and productivity schemes of the regulating bodies and government.
6.1.5 Cashew processing balance sheet

Over the coming five years based on the average crop size the processing balance sheet would look like this:

<table>
<thead>
<tr>
<th>Assets and additions</th>
<th>US$</th>
<th>Losses &amp; Liabilities</th>
<th>US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Addition</td>
<td>US$551M</td>
<td>Loss of Export Levy</td>
<td>US$74M</td>
</tr>
<tr>
<td>Wages to rural workers</td>
<td>US$175M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Savings on Co-op Handling</td>
<td>US$ 62M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saving on doubling handling in shell</td>
<td>US$ 19M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased prices to farmers</td>
<td>US$ 30M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total income</td>
<td>US$837M</td>
<td></td>
<td>US$74M</td>
</tr>
</tbody>
</table>

The result of processing the entire crop over five years is an inflow of value to the rural communities of over US$750M which is equivalent of a 3% increase in GDP for the country. The processing of the cashew crop can have an impact on the economy of Tanzania and a massive impact on the economy of the southern regions.

6.1.6 Investment in processing

There has been much discussion in Tanzania in recent months about the future of processing. The Cashew Board of Tanzania has been working on a study to make recommendations for the development of processing, the Ministry of Agriculture, Food and Cooperatives has stated their interest in developing value added for cashew nuts and organisations such as UNIDO and SIDO have proposed and sponsored developments of small scale processing. In addition a number of international companies such as Pace International and Intersnack have expressed their interest in the sector. The Cashew Processors Association has been advocating the redevelopment of the “legacy” factories. The issue is on the agenda, the market is ready and an opportunity awaits the cashew sector.

The actions required to stimulate processing are:

1. Encourage investment in processing by increasing access to financial services for domestic entrepreneurs and encourage partnerships with international entrepreneurs. Reduce bureaucracy and introduction a simple licensing system for the processing of cashew nuts.
2. Build a secure supply chain where processors can develop normal supply chain relationships with farmers and primary cooperatives without having to deal with the bureaucracy and high cost structure of the auction system.
3. Support investment in processing with matching investment in the supply chain by using the existing research which is among the best in the World to improve yields at farm level and replace older trees with new varieties.
4. Reward processors who develop their workforce with tax incentives and support services.
5. There are major challenges bringing a workforce to the cashew industry from a society in southern Tanzania which is primarily agrarian in nature. This means that the position of processing technology is important in the development of the sector. The use of modern shelling, peeling and grading machines will not stop large numbers of jobs being created in the sector but will mean that processors can be more
flexible in their approach to labour relations as the industry develops. The importation, installation and development of technology should be facilitated by the government of Tanzania.

6. Remove barriers to trade, corruption, lack of information, excessive bureaucracy.


6.1.7 What type of processing and processing technology?
The future is in modern, food safe processing plants which offer buyers viable volumes in line with the kind of relationships necessary in the current food ingredients market. Therefore the sector needs a series of medium to large scale factories located throughout the producing areas which will meet buyers’ requirements. These factories must be linked to farmers to ensure traceability and must be linked closely with customers abroad. We suggest that a viable factory size given the nature of the geography, the market and the available technology is in the 10,000 tonnes in shell capacity per annum range. Larger than this becomes difficult to manage in terms of workers required and the movement of in shell cashews. The development of such factories needs a partnership between government, government agencies and the private sector both national and international.

We have argued elsewhere in this study that the old factories do not offer the solution to the building of a modern thriving sector in Tanzania. The buildings may however be good locations for processing, are currently being used as warehouses, do not offer a comprehensive solution but may have a place in a development strategy.

Small scale processing is present in Tanzania to supply the domestic market on the one hand and as a pre-processing operation on behalf of factories such as Olam where the local operators process their own or the factories stock of nuts. Experience in other countries indicates that small scale processing only succeeds when there is a significant domestic market or when the small scale processors are linked to larger units. Even when they are linked to larger units there remain major challenges in terms of food safety, contamination, breakage and pilferage in transit. It remains to be seen how major international cashew users will view the idea of pre-processing in terms of food safety requirements especially when the Tanzanian sector has the challenge ahead of rebuilding its somewhat damaged quality reputation. It is clear however that linkage from very small scale processing to small scale processing will not succeed in the international market in the longer term.

In terms of technology the most accessible and currently most successful is the technology offered by suppliers in India, Vietnam and to a lesser extent China. This is the methodology of steam cooking and cutting which will maximise whole nuts and keep colour and taste intact. It is the minimisation of breakage in the process which is most important for the profitable processing of cashew nuts. There are a range of technologies for cooking, cutting and peeling which are available and which are viable in terms of cost. In broad numbers indications are that a 10,000 tonne processing facility of this sort can be built for an investment of less than $6m. That means that 150,000 tonnes processing capacity can be built for an investment cost in the range of US$90m which would bring over $700m in value addition to the sector over five years if some of the constraints for processors are removed.

6.1.8 Dealing with constraints on processing
We have above referred to constraints on the development of processing as follows:

- **Constraint:** The auction system means that processors have to compete for supplies with Indian processors at a time of year when Indian processors are most in need of product.
  **Action:** There is little that can be done without damaging sales of RCN which continue to be important. However processors in Tanzania still have a competitive advantage in terms of earlier access to raw material and that they do not have to handle the cargo three times or pay an export levy.

- **Constraint:** The fact that all cashew nuts have to be routed via the cooperative unions and auction system means that the processor has no security of supply and cannot develop normal supply chain relationships with farmers and farmer groups.
  **Action:** Processors must be allowed to legitimately develop direct sourcing relationships with farmers and primary coops. This does not mean that the warehouse receipt system is redundant but that it must compete with the processors for product. There is no evidence that processors exploit farmers on a large scale in fact there is evidence that processors pay better prices to farmers than export traders.

- **Constraint:** The costs of routing product through the cooperative unions and auctions are too high and reduce the competitiveness of the processing sector as a whole.
**Action:** We have shown that the cost of export handling by the cooperative unions is the highest cost system for export in Africa. This cost is effectively paid for by the farmers who receive lower prices as a result. Tackling this cost structure is an essential pre-requisite for the development of the cashew sector in Tanzania. The District tax, cess should be waived on all cashews sold to licensed processors.

- **Constraint:** Investment in the sector would rely on the outcome of auctions which are not trusted at any level of the supply chain from farmer to multinational. Investors are unlikely to invest millions of dollars in processing facilities when their supply is decided by an auction which is rumoured to be corrupt and prone to political interference.
  **Action:** Processors must be permitted to source outside the auction system and the auction system must be transparent like auction systems on other products in Tanzania and abroad. Publishing the results of the auction every week cannot damage the sector in any way it can only stop accusations of corruption whether these are false or justified.

- **Constraint:** The “legacy” factories, in which so much hope and discussion has been invested are obsolete and not suitable for the demands of the modern market.
  **Action:** Policy to develop the sector cannot be based on these factories alone but they could be incorporated so long as they are competitive and produce by a method and to a specification which enhances the overall reputation of Tanzanian cashew kernels.

- **Constraint:** Small scale processing is not suitable for export to the international markets unless it is tied to a larger scale factory which can offer buyers sufficient volume, food safety and quality product.
  **Action:** Encourage small scale processing but incentive small scale processors and large processors to work together.

- **Constraint:** Tanzanian investors and entrepreneurs find access to financial services limited and prices high. The banks that are committed to the cashew sector via the warehouse receipt system are unlikely to want to extend their risk in the sector which currently functions as a provider or in shell cashew nuts for processing in India.
  **Action:** There is little evidence that the warehouse receipt system enhances the prices paid to farmers in 2012. The enhanced prices paid to farmers in recent years are a result of a major turnaround in the cashew sector Worldwide. Farmers in West African countries where there is no warehouse receipt system have also received much better prices in recent years. In fact there may be evidence that prices are lower because the product is delayed coming to the market at a time when supply of in shell nuts globally is extremely limited.

The warehouse receipt system has a constructive role to play especially in times of quiet trading but it should be unlinked from the auction system and should function as a financing mechanism for farmers who want to participate and for processors who want to buy in the season and finance or part finance their inventory at competitive rates and in secure warehouses.

- **Constraint:** Oil and gas exploration in Mtwara may limit the availability of workers for the cashew sector
  **Action:** Cashew processing can be located across the region and the technology which has become available in recent years and is improving every month should be utilised to the full. Labour practices and conditions in cashew factories should be proper and wages in line with local standards. Cashew processing is a profitable business and processors can afford to pay good wages to keep good workers.

### 6.1.9 Incentives for processors

Under reforms introduced some years ago Tanzania does not offer either tax holidays or preferential corporation tax rates. It does however offer a range of tax incentives for investors

**Courtesy of Tanzanian Revenue Authority:**

- Corporation tax 30% on profits. Businesses located in Export Processing Zones are free from income tax and withholding tax for 10 years.
- Capital acquisitions are 100% deductible
- All importers of raw materials, capital goods, replacement parts, and inputs for agriculture, animal husbandry and fishing do not pay customs duty on importation of these goods
- Tax Incentives - Export Processing Zone (EPZ) Under the Export Processing Zone Act, all inputs like raw materials and machinery which are imported and used to process or manufacture goods in the designated areas as EPZ are exempted from import duty and other taxes.
- VAT Deferment Importers of capital goods for investment in the lead and priority sectors do not pay VAT up front. Deferment of VAT payment on capital goods allows investors to enjoy the relief of tax
before actual production starts. The scheme is basically designed to relieve traders of cash flow problems particularly in the establishment or expansion of the existing business.

- In order to encourage export of locally produced goods from Tanzania, all exports are zero-rated under the VAT law.
- District tax or cess is 3-5% on agricultural products.

Other Non-tax Incentives
Under the Tanzania Investment Act (TIA), a business enterprise is guaranteed to transfer through any authorized dealer bank:
- Net profits or dividends of the investment.
- Payments in respect of foreign loans.
- Royalties, fees and charges in respect of technology transfer employed in the Investment.
- Remittance of proceeds, net of all taxes and other obligations in the event of sale of the business enterprise.
- Payments of emoluments and other benefits to foreign personnel employed in Tanzania in connection with the business enterprise.

Foreign Exchange Controls: None

Public, Private Partnerships: the environment for public private partnerships for example with Tanzanian Investment Bank is positive. Assistance for agricultural projects is offered through the Ministry for Agriculture, Food and Co-operatives, Ministry of Finance, Ministry of Industry Trade and Marketing, Tanzanian Investment Centre and the Tanzanian Revenue Authority.

Licensing: The procedures are clear and the costs are reasonable e.g. to set up a company costs about US$800. However the bureaucracy is difficult and slow according to interviewees who expressed an interest in processing. One investor who was interviewed described six months of involvement with a variety of ministries, boards and agencies during which progress was slow and expensive. When asked what he would do differently if he could start again he said “go to another country”.

Not all experiences are as bad as that particular investor however it seems clear that there could be some streamlining of the system both for national and especially foreign investors as it seems likely that foreign investors will be required to build a cashew processing industry in Tanzania.

Rates of taxation: Unless a processor were to be able to locate in an Export Processing Zone taxation at 30% on income and 5% cess on raw material is high for start-up businesses compared to incentives offered by other countries.

6.2 The in shell export trade
The sector will continue to be dependent with the in shell trade whilst processing capacity is established so it will continue to be important to maintain and improve the RCN trade whilst the processing is established. Since the inception of the warehouse receipt/auction system the international market for in shell cashew nuts has changed dramatically and it is therefore important to change the approach in line with the current market conditions building competition and most importantly starting to work with processor abroad as customers and not as adversaries. The means that the sector would adopt a customer and market oriented approach seeking to maximise sale values and minimise costs. There are a broad range of actions possible we would suggest the following as a start on the task:

- Urgently open new markets in Brazil and Vietnam reducing reliance on India and ensuring competition and better prices.
- Build better information and market understanding with the Cashew Board of Tanzania developing an understanding of the dynamics of the market for in shell cashews.
- Strive for transparency in the auction system allowing the informed participants to assess the market and the options without political interference on the regional or national level in the week to week auctions.
• The costs of routing product through the cooperative unions and auctions are too high and reduce the competitiveness of the processing sector as a whole. This issue must be addressed to enhance competitiveness and prices paid to farmers.
• Encourage the involvement of processors abroad directly in the auction by making the system easier to use and encouraging the development of companies offering services to local buyers. One such action could be to change the auction terms from “ex warehouse” to “FOB” which would make the auction accessible to buyers from any country to come in and purchase as required but only if the cost structure of the handling system is tackled first.
• Improve warehouse and drying practices and talk to buyers about what they require in quality cashew nuts.
• We have heard reports from interviewees that it is possible to obtain information and preference at auction by corrupt payments. These should be eliminated by restructuring the auction committees.

6.3 Marketing Cashews, what do buyers want?
The Tanzanian cashew sector is driven by internal considerations and the interests of internal actors whether political or commercial. In order to develop a more valuable industry a market orientation is needed in the sector. The following actions would bring the sector more closely into alignment with the market as a whole:

1. The marketing of Tanzanian cashews to Indian buyers only through indigenous exporters/traders is narrow and should be broadened. Not only should the buyers be invited to participate in the auction but also buyers from other countries should be invited. Vietnamese buyers say that Tanzanian nuts are too high priced and yet they buy Indonesian which is higher priced than Tanzanian. The conclusion is that they do not know of the quality of the Tanzanian cashew nuts and are excluded from the market by the largely India origin export traders in Tanzania. Furthermore buyers from Brazil should be encouraged to participate – it seems unlikely that in a normal year they would buy as their crop is Oct-Jan too but their very interest would enhance and encourage competition in the chain.

2. The level of market knowledge of the international markets in Tanzania even among professionals is low. The various Government actors, the CBT processors etc. do not have market intelligence resources that cover the cashew sector properly. This is not at all unusual in Africa or elsewhere as the cashew nut market is notoriously difficult from a market information point of view. However if Tanzania is to make the most of its competitive advantages then a good market information system must be put in place.

3. Health and food safety – Tanzanian authorities as a matter of urgency must put in place a national cashew quality brand (as was done many years ago). Food safety is a major issue in the cashew sector now and is not being met by processors in India who are too busy serving their domestic market. A genuine reputation for food safety and trace ability will bring buyers for kernels.

4. Throughout the sector in Tanzania there is an adversarial approach to the current buyers of in shell cashews – “the Indians” are blamed for everything that goes wrong. The CBT and other stakeholders must do more to understand their buyers. Indian buyers are not one united mass determined to buy cheap cashews from Africa. There is competition between processors. There are many new processors especially outside the traditional processing areas who are potential customers but are excluded by the current distribution chain.

Actions which will not work

1. A ban on export of RCN is not a good idea. It may work in a small producer like Kenya under specific conditions but in Tanzania it could kill the growing of cashews and cause greater poverty in marginal areas of the South. A ban could work only if operating processing capacity is close to the overall production level which is some years away.
2. Delaying the export of in shell nuts as done in Mozambique is unlikely to work as it would actually removes one of the competitive advantages of the Tanzanian cashew sector – its seasonality. Delaying export could mean that Tanzania comes to market with its in shell at the same time as the large crops in India and Vietnam which would devalue the RCN as we saw when the marketing season for 2011/12 came to a standstill for some months.

What do buyers want?

- Quality in conformity with international standards
- Standard packaging 50lb flexi pack or 2x25lb flexi pack
- Quality and Aflatoxin/Micro/GMO free Certification.
- Haccp as a minimum but ISO or BRC may be demanded certification for the processing plant
- Traceability minimum one step forward and one step back.
- Reliability and contract fidelity – gaining a reputation for honouring contracts is a competitive advantage.
- Access to product innovations
- They want to be sure that their supplier will not sell the same products to competitors who will undercut prices or undermine the unique selling propositions they have gained by dealing directly with a supplier.

Target markets for kernels

1. Target growing markets in the Middle East and Asia as well as traditional markets in Europe and the USA. European buyers are especially interested to diversify their supply chains following threats to supply in India and Vietnam
2. Ideas of regional markets with the exception of South Africa do not work as all these countries either produce cashews themselves or are just not at an income level to afford cashew nuts.
3. A broader targeting of the market for RCN is necessary as mentioned above.
4. Branding as “food safe, clean and traceable” will work. Health claims cannot be justified at this time due to lack of research based verification.
5. India is a significant buyer of in shell nuts from Tanzania. India protects its kernels market with high levels of duty. The Indian authorities should be approached for a derogation of import duty for Tanzanian cashew kernels (especially broken and pieces) on a multi-year agreement whilst the industry is small and non-threatening to the Indian industry.

By-Products

An in depth discussion of by products is beyond the scope of this study however in conducting we noticed a heavy emphasis on by products throughout value chain studies and conversations with a whole range of stakeholders. We strongly recommend that concentration on the main products cashew nuts and cashew nut shell liquid. If the market structure and processing can be made work for these two products then processing will develop successfully without distraction.

It is not true for example that there is a large market for cashew butters and pastes. These products are rare and often only produced when a particular producer has a niche market or a problem selling cashew pieces. It would be very difficult for a producer of cashew paste to make a breakthrough into the retail market and if he did the competition that would follow would be immense. Much has also been written about the cashew apples as a by-product but again it should be noted that apple production reduces nut production (apples should be picked/nut should be allowed to fall) which is a far more profitable operation and the processing of apples which start to degrade within hours of harvesting creating a major logistical challenge.
7. The way forward: Practical and Policy recommendations Part II

We have argued that a drive toward value addition by processing would make the sector more sustainable, add value to the economy and increase farmer incomes but this will only work if it is conducted in an efficient business-like manner. Tanzania decided long ago to support co-operative societies and it is not the role of this report to criticise that decision or to recommend wholesale privatisation as an answer – decisions like that are for the people and Government of Tanzania. We do however strongly recommend a considered and rigorous review of how the various organisations including the Co-ops deliver the services which they are charged with and the costs which are levied at all levels of the supply chain.

7.1 Production and farming

The analysis of production and feedback from the market and institutions show the following picture for the Tanzanian cashew sector:

- Production has been increasing in recent years in response to higher prices for cashew nuts. This is despite the aging trees and the aging farm population.
- Prices paid to farmers are reduced by high costs/deductions at Co-operative Union level
- Farm yields remain low between 250kg-450kg per hectare as compared to yields close to 1000 kg per hectare in India and Vietnam.
- Poor access to inputs, cost of inputs and timely delivery of inputs were issues brought up time and again by farmers, primary cooperatives, all the way through the chain to Government level.
- There is land and capacity to grow more cashew nuts with low densities per hectare throughout the regions.
- If Tanzania can produce more cashew nuts of the same quality as the current output there is most definitely a market for them it is growing and prices are likely to get higher in the years to come.
- Government and local government extension services are poor and there is no incentive for the private processor to work with the farmer as he is precluded from dealing directly with the farmer.
- The importers, exporters and processors lack incentive to become involved in delivery of inputs to farmers as they cannot recover their investment by buying directly from the farmer.
- Cooperatives are not efficient in evacuating the in shell product or delivering inputs.

We also have seen that farmers’ income from cashews depends on:

- The number of trees and density of plantation
- Productivity per tree
- Agronomic practices (pruning, clearing, allowing to fall and post-harvest practices)
- Cost and availability of inputs
- Prices for raw in shell cashew nuts.

7.1.2 Grow more cashews – work with the existing farmers.

A great deal of effort has been expended in Tanzania in efforts to ensure that farmers obtain a higher price and this has come to pass, despite unrealistic costs at co-op level, due to the rise in market prices in recent years which is forecast to persist into the future. However the most effective way to increase farmer incomes in the cashew nut sector is to educate farmers on growing cashews to bring yields up from the very low levels. Simple practices such as when and how to prune trees can have fast and effective impact. If a farmer can grow one more kilo per tree it means far more than a rise in the price he is paid. This has been well demonstrated in West Africa where a mixture of new planting and better practices has doubled production in Cote D’Ivoire in a decade.

Secondly, tree densities are low in Tanzania. Farmers could plant and manage more trees on their existing land if they had access to seedlings or seed and if they were assisted in developing their knowledge in developing more trees. Tanzania has one of the best known and respected cashew research stations in the World at Naliendele but there is little evidence that the development of an extension plan has been properly resourced. Farmers complain that extension officers are not available and at the Tanzanian stakeholders meeting at the ACA Conference in September 2012 the issue of extension services were discussed as a constraint to increased production. Clearly one extension officer per district is not enough to deliver an increase in production.
If we also consider that up to 15m Tanzanian trees are old and will drop in production in the coming years then the urgency of the issue becomes more clear although as Dr Peter Masawe of Naliendele Research Institute informed us some older trees will continue to produce cashews for years to come.

Based on evidence from other countries it is possible that Tanzania could achieve a 25% increase in the crop by concentrating on working with existing farmers to improve their practices both for growing and for post-harvest handling of the cashews. If these same farmers were each to plant three more trees of suitable varieties then a further 3-4% increase in the crop size could be achieved. A regular annual crop in the range of 200,000 tonnes is possible without any addition to the land usage or spread of the crop to new areas. This could bring an additional US$50m into the rural economy on an annual basis.

7.1.3 Inputs – effective delivery and access is more important than price.
Cashew trees throughout East Africa suffer from powdery mildew disease as the primary problem reducing the productivity of cashew trees. The problem is known, its impact is known and the cure for the problem is known. The Naliendele Research institution estimated in 2010 that the cost of variable inputs for farmers was TZS1054 per kg produced. Of this just under 10% were inputs with the bulk of the costs (85%) of production made up of labour costs for weeding and harvesting. Ashmogo in 2008 estimated that for smaller farmers who constitute the vast majority. Therefore although the cost of inputs is an important issue availability and access to inputs is a far greater issue.

We have seen for example that the cost of sulphur in Tanzania is probably double the World market price but far more damaging than the high price is the situation where sulphur is not available for application at the right time or even at all. This causes major loss of yield and income to the farmer.

A further example is the jute bags used to pack the cashew nuts provide another example of high costs in the sector.

### Cost calculated by Co-ops for jute bags

<table>
<thead>
<tr>
<th></th>
<th>Per kg</th>
<th>Per bag</th>
<th>Per bag US$</th>
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<tbody>
<tr>
<td></td>
<td>TZS43.75</td>
<td>TZS3500</td>
<td>US$2.21</td>
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</tbody>
</table>

**Quotation from Fair Bros Co 26th Sept 2012**

- Jute bags suitable for Cashew nuts
  - $415 per bale of 300 CIF
  - Cost per bag US$ 1.38.

This suggests there is a mark-up of 60% from CIF basis to usage basis in Tanzania which is too high.

Therefore the Cashew Board of Tanzania and the Government of Tanzania must either introduce competition into the sector to stimulate competitive delivery or it must ensure that not only is a national tender carried out but that the delivery of the sulphur and other inputs to primary cooperative and farmer is effective. This may well depend on the actions of the cooperative unions about whom farmers complain as being ineffective in the delivery of inputs. Furthermore the entry of new suppliers to the market is hindered by a slow and difficult approval process by the Tanzanian Bureau of Standards. If this process could be rationalised then new entrants to the inputs market would be incentivised and competition enhanced.

7.1.4 Reward quality
The primary quality factor in assessing the value of an in shell cashew nut is yield i.e. the weight of kernel which can be extracted from the complete in shell nut. This is checked by a cutting test where the nuts are cut open and the weight of kernels checked. The result is expressed either as a figure of “lbs. kernels per 80kg bag of in shell” or as a percentage i.e. either as 51lbs per bag or 29% (51lbs/80kgs). Tanzanian nuts tend toward the higher end of the range and are as we have seen among the best nuts in Africa. In the international trade each extra lb. of yield can mean an increased price of $20-25 per tonne of in shell

Tanzanian farmers are not incentivised or rewarded for producing better quality nuts but when the nuts are sold and exported the cooperative or the exporter will gain the full advantage of a higher quality nut in terms of price.
The current system allows for two grades of in shell cashew nut standard and under grade. Standard are 48 lbs. plus and under grade are below 48lbs. This effectively means that a farmer who produces a 48lbs yielding nut receives the same price as a farmer producing a 53lbs cashew nut even though in real terms in the market place The 53lbs may be worth as much as US$125 per tonne more than the 48lbs. This system does not encourage better quality and without a processing industry to promote better quality, an effective extension service to educate farmers or a market information service to inform them they continue to be underpaid for the better quality product.

All nuts are tested on intake to the warehouse receipt system. The results are recorded and the quality is advertised on the tender documents so there would be no difficulty identifying the quality of material in taken to the warehouse and paying appropriate quality premiums to the farmers in question.

7.2 The Co Operative Unions

The co-operative unions which handle the cashew nuts are among the most successful organisations in the sector. However do the coops especially the Unions do what they say they will do for the farmer? The initial evidence is that they do not.

- Coops costs for handling in shell cashew nuts through the warehouses are too high.
- Coops both primary and unions charges for marketing the cashew nuts are too high

Based on examples from TZS1200 Cashew Board farm gate price 2012

1. Farm gate price TZS1200/kg
   After deductions for marketing TZS1022/kg

2. Coops sale price TZS1500/kg
   (This is based on break even TZS1200 plus costs TZS286 in discussions with coop management)

3. Charged to buyers to load cargo TZS10/kg

4. Actual gross margin between net cost and sale TZS488/kg

The coops argue that their costs are TZS286/kg and that their break-even is therefore TZS 1200 plus TZS286 but in reality TZS187 of the TZS286 ids deducted from the farmer so true breakeven is TZS1308 and therefore any sales value in excess of TZS1308 should be paid to the farmers as bonus. There is no evidence that this has been done in 2011/12 or that it is planned in 2012/13.

In effect the coops are charging the buyers for the costs and charging the farmers for some of the same costs. Government and local government are also playing a part in these deductions with local taxes and task force fees all being paid by the farmer. The total cost equates to $309 per tonne to move to the warehouse door plus trucking to port and loading making the farm gate to FOB for in shell cashew nuts in Tanzania the most expensive in the World.

- It appears that they have failed farmers on the timely distribution of inputs .Sulphur in particular but also pesticides have not been available and the prices charged have to be questioned.
- Farmers’ costs are deducted by Coops after delivery and after the goods have left their control giving them no choice or control and no recourse. Farmers should receive clear written statements on all payments.
- There is little transparency on the part of coops in their dealings with farmers or with the state. Discussions with banks, farmers, warehouse keepers and local government all indicate dissatisfaction with the operation of the marketing system by the coops. Furthermore a number of stakeholders at all levels suggested that Co Operative Unions in some instances have been corrupted.
Action

1. The entire Primary society and Cooperative Union Cashew activity should be audited annually.
2. Farmers should receive statements which details their costs and deductions
3. The costs that co-operatives pay and charge should be public and open to review.
4. The Government should reconsider the appropriateness of an organisation such as a cooperative being the warehouse keeper, purchaser and marketer of the product if the current system is to continue.

7.3 Financial services

1. The Tanzanian banking sector is well committed to the cashew sector through the warehouse receipt system under guarantee from the Government. This participation whilst welcome may be acting as a disincentive to lend competitively to the private sector for investment in cashew processing (without guarantee) as banks will view themselves as already heavily exposed to the cashew sector via the warehouse receipt system. A discussion as to how banks manage risk in the sector needs to take place to ascertain the truth or otherwise, formally or informally of this proposition.

2. Lack of financial services for processor/investors is a primary impediment to the development of the processing industry and leads to excessive dependence on the state for initiatives which will stimulate processing and value added activities in particular. The cost and collateral requirements of banks interviewed for this study were prohibitive for Tanzanian investors. It should be noted that banks have had bad experiences on loans which funded or were collateralised against the “legacy” factories. These factories were used in some cases as security against loans which were not in fact used for the refurbishment of the factories. There are reports that loans which had been refused by banks on commercial grounds were “forced” through by high level political interference. These loans were not subsequently repaid which causes banks to view cashew processing risk poorly. There are however strong indications that banks such as NMB, CRDB and the Tanzanian Investment Bank would consider investments in cashew processing favourably if these were commercially viable and properly structured.

3. Recent reports of the establishment of a national Agricultural Development Bank if true could be significant for the cashew sector. The development of processing will require investment but it is a profitable and sustainable business.

7.4 Regulation

The sector in Tanzania is characterised by heavy regulation and an adversarial set of relationships. Cashews are used for political reasons and are viewed by others as a way of extracting money from the system with farmers as pawns in the game. Much of the regulation is effective but it not administered efficiently and it should be de politicised so that the institutions charged with management of the sector can listen to the market and not the politicians especially local politicians.

Tanzania, the most regulated market in the World, but also one of the best producers was in a serious crisis in 2012 in marketing in shell cashew nuts. Political interference at regional level to obtain higher prices initially at the farm gate level but later by holding back from sales at tender proved costly. Power in the marketing system such as exercised by regional commissioners without market understanding or knowledge will leads to mistakes. In late 2011 when the entire cashew World could see that prices in the New Year would fall the Tanzanian auction system refused high prices for cashews said to be in the range of TSh1800/kg for product which was eventually sold for less than TSh1500/kg. The buyers were blamed for this but in reality the problem was a complete lack of market knowledge and orientation on the part of the regulating authorities. The echoes of the bad decisions made in the early 1980’s to invest in unsuitable processing (which did not only fail in Tanzania but everywhere) are being heard with moves to reinvigorate these old plants. This is being put forward by vested interests who are taking advantage of the lack of coordination in the state sector and the lack of information/understanding in the sector as a whole. Greater coordination between institutions is essential.

The stress in the market place comes from the fact that in shell cashew market prices are set externally in the global market and are constantly changing whereas the internal market is set by an arbitrary price recommendation of the
CBT based on thin market information and under political influence at a defined point in time. This does not create an environment conducive to investment in the cashew sector at a time when the country as a whole is attractive for investment. It does create potential for over expectations on the part of growers and missed market opportunities. We have seen that the international cashew market is changing quickly but the regulation of the system is too cumbersome for a time of volatile markets and fast growth.

At a basic level the requirement of multiple licences to buy, sell, transport, process, warehouse or trade cashew nuts makes business difficult and opens opportunities for corruption of the system which is evident at a low level where wages are low and at a management level where opportunities are taken. A simplification of the system

7.5 The Warehouse Receipt System and Auction

Tanzania has the only functioning warehouse receipt system and auction in the World. The warehouse receipt system and auction were introduced at a time when the history of the market was of low prices paid to farmers and low prices for kernels. It was a response to what was seen as the exploitation of farmers by buyers through low prices.

Since it was introduced the international market for cashew nuts has changed dramatically. The market prices have moved upwards and farmers everywhere are receiving better prices and are likely to continue to do so for the foreseeable future. The World supply and demand balance has tipped toward demand with a tight supply picture now being the norm and prices moving sharply upwards with any crop failure. Over the past five years it is quite likely that farmers overall would have received higher prices with or without the wars/auction system although it is also likely that some would have been exploited by unscrupulous traders taking advantage of farmers weak bargaining positions.

We believe that it is time to reassess the current system in the light of this development and to ensure that it will be connected to the market in future. This is also a good time to revise the role of the wrs/auction as part of a reorientation to the World market.

7.5.1 Efficiency

The WRS/Auction does not eliminate the middlemen but replaces him with a layer of primary coops, coop unions and exporters performing the same task as the middlemen used to do but doing so at a higher margin and without controlling the costs. As has already been discussed above the level of costs has to be controlled and linked to market prices in order for farmers to obtain a fair market price.

The lessons of the near collapse in 2012 which almost became a systemic threat must call into question the efficiency of the system.

7.5.2 Market information

The auction as a marketing system without a fully supportive market information system and more importantly a full understanding of how the market works at all levels will not function properly. The sale price set in 2011 was too high (the farm gate price was workable if costs were controlled) given that the entire market was aware that prices would fall and this caused a crisis which is not yet fully resolved. The market information offered by the Cashew Board of Tanzania is not well enough aware of the international market and is not well enough connected to the market both for kernels and in shell nuts. This is not unusual as a problem and is encountered in other countries too. However the Cashew Board of Tanzania and the sector as a whole need to build understanding and market information as a matter of priority.

7.5.3 Transparency

The lack of transparency in the auction system leaves it open to accusations of corruption and price fixing which is not good for the CBT or other stakeholders. An auction designed to enhance value to farmers and through which almost all in shell cashew are obliged to flow should be public with the winning bids published. The system with is termed an “auction” in Tanzania is in fact a closed tender system which undermines confidence.

7.5.4 Costs

Costs in the system are too high especially handling as has been demonstrated throughout this study.
7.5.5 Processors and access to farmers
The logic of some regulated control system for the export of in shell cashew nuts is clear although the operation of the system as it stands is open to question. However the implementation of the wrs/auction system for domestic processors is a disincentive to investors, threatens security of supply for would be processors and stops the building of market linkages between processors and farmers/primary coops. It has been shown that in countries where processing develops farmers are paid higher prices, rewarded for quality and improve yields. This is done not necessarily because of a philanthropic approach by the processor but simply because it makes good commercial sense to support the farmer so he will be loyal to the processor and produce more and better cashew nuts. In a case where a domestic processor is allowed to buy directly from farmers (other than the small scale own processing which currently exists) that processor must not also be an exporter of in shell cashew nuts.

7.5.6 Marketing of in shell nuts
It is clear that the export of in shell cashews will continue to be an important activity until processing is fully established which will take time. In the meantime these buyers are customers. Why are the end buyers of the cashew nuts in India or Vietnam or Brazil not invited to participate directly in the auction?

Under the present system (apart from the few processors) there are licensed buyers who buy for their own account and sell to processors in India and there are buyers who buy on account of India processors as handling agent. Other buyers are reluctant to become involved due to bureaucracy and myths around the system which enforces the role of the Tanzanian exporter who makes a high margin for simply arranging the transport to the port and shipment to destination. Ultimately the farmer pays the price for this.

The current system of licensing traders to buy at auction is archaic and seems simply to be a way of collecting fees at two levels (CBT and local operator). The licensing system could be done away with enhancing competition – fees if necessary could still be raised by a levy on the successful bidder. All fees charged at whatever level are in fact paid by the farmer as the trader whose interest is primarily short term simply deducts the cost from his bid.

7.5.7 Warehouse keepers
Is it appropriate that some warehouse operators are also the coops and are also processors?
  a. There is evidence that the current warehouse keepers have no incentive to move the product out of their warehouses as they earn income from storing it. Payments to warehouses should be structured so that warehouse keepers are paid only on shipment out of their warehouse and that the handling fee be structured so that there is an incentive to move the goods.
  b. Quality and weight is not properly controlled in the warehouse. Under recording quality when it is known to the end buyer can create a large margin for that buyer and is form of corruption where large gains are made for very small expenditures.
  c. Costs for warehouse keeping were found to be competitive as were costs of loading at the port with quotes coming in between US$$33 – 38 per tonne of in shell which compares with other regional countries.

7.5.8 Action on the wrs/auction
  • An accurate, timely and appropriate market information collection and delivery system must be put in place for use at tender committees and in making fundamental decisions at the outset of each season. It is not easy to obtain information on cashews so it may be necessary to enlist assistance and support from abroad.
  • The auction must be opened up to function as a real auction with bids and offers, volumes and successful prices published so as to bring transparency and thus confidence.
  • The auction and the warehouse receipt system should be separated. The wars should be seen as a system which brings competitive finance under Government guarantee. It should continue to offer this to the cooperatives for product routed through the auction system but it should also be extended to farmers and processors who choose to operate through the wrs system as part of their marketing strategy. This would mean that the finance position of processors who need to acquire their full year’s inventory during the harvest season and the needs of farmers who do not want to be forced to sell at harvest time under pressure for cash flow would be met. WE see the concept of the wars system as a finance mechanism as valid but the marketing system as severely flawed in the circumstances of the market in 2012 and beyond.
Domestic processors must be permitted to source cashew nuts directly from farmers. This will connect them to farmers bringing benefits as mentioned throughout this study. The wrs/auction is intended to protect farmers from exploitation on price but in the domestic situation a good market information system and monitoring of the market can offer a similar function.

The wars/auction system could continue for the export market if the reforms as suggested were put in place and if the system were adapted to the current market conditions. In which case if the domestic processing is separated from the export auction and foreign buyers of RCN are invited to participate directly then the terms of the auction should be changed from ex warehouse to FOB Mtwara/Dar es Salaam. This would give greater access to buyers from abroad and make it easier to trade directly.

- Costs of running the system must be audited and reviewed every year and the results published.
- New markets in Vietnam and Brazil must be opened for in shell cashew nuts.
- Primary cooperatives and cooperative unions provide services to farmers at varying levels of efficiency but they do not represent farmers and are not advocates for farmers’ views. If the auction system is to regain the confidence of farmers then farmers must be encouraged to form functional representative bodies and these bodies must be allowed access to the auction system.

### 7.6 The Cashew Board of Tanzania

The role of the Board is defined by itself as:

- To advise the Board on policies and strategies for the development of the Cashew industry.
- To promote the development of cashew nut production, processing and marketing.
- To assist directly or through financial support the research and development of Cashew Industry.
- To regulate and control the quality of cashew nut.
- To collect, refine and maintain, use disseminate information or data concerning the cashew nut Industry.
- To promote and facilitate the formation of associations (or other bodies) related to or dealing with cashew nut Industry and coordinate their activities.
- To make and enforce cashew nut regulations.
- To provide consultancy and technical services to cashew farmers, processors, buyers or exporters.
- To represent the Government in International Forum.

In our view the Cashew Board has enacted its role as regulator and licensing body well. It has not however taken any action that we could find or that any interviewee could mention to promote the industry outside of Tanzania even its attendance at the African Cashew Alliance Conference in Benin in September 2012 was low key and overshadowed by organisations representing much smaller and less significant cashew countries. It could be contrasted with the interesting and informative stand of the Naliendele Research Centre at the same Conference. Tanzania is an important cashew country and should be represented in a confident and assertive manner which certain individuals do as individuals but the Board fails to do as an organisation.

We also believe that the Cashew Board of Tanzania has not developed a market knowledge and understanding fitting of its role representing the Tanzanian sector abroad and promoting growth and development at home. The Cashew Board of Tanzania is difficult to contact. Senior staff are reluctant to meet and when they do meet they do not display knowledge of the sector abroad or the market but keep focussed on the procedural responsibilities of the activities in Tanzania.

Symptomatic of this malaise is the strategic plan of the Cashew Board of Tanzania. It is not connected to any reality in its description of the World market – estimates of the World crop and of World consumption are very inaccurate and can only be based on old data. There is no reason for this as more and more data is available through publications such as Cashew Week and Cashew Club and from organisations such as the African Cashew Alliance and the African Cashew Initiative.
**Actions**

1. The Cashew Board would benefit by a better more developed market information system with a global reach. Achieving this requires enlisting some support from market sources in the international market. Many of these will cooperate without charge in return for occasional crop reports or market reports from Tanzania. All executives of the Cashew Board should have some understanding as to how the international market works.

2. The target markets are now fast moving and volatile both for in shell and kernels. The marketing and decision making process should be more flexible in line with the movements in the marketplace.

3. The Cashew Board of Tanzania could provide a crucial service in promoting the industry abroad and working to encourage cashew investors not least by better cooperation with other national bodies involved in investment promotion. In the research for this study we found little evidence of coordination for example between extension services and the Cashew Board or between the Cashew Board and industrial development agencies.

4. The CBT has many and varied roles which overlap with other institutions and agencies. The CBT should be more focussed on its coordination and marketing role. In particular it has failed in its leadership role. A dynamic non bureaucratic approach is essential for the industry. To achieve this the CBT needs specific, attainable and measurable goals e.g. increasing production is a good idea, 180,000 tonnes from 2007 – 2009 was an overly ambitious target but the growth to 150,000 tonnes is a great achievement.

4. However CBT role in achieving this is not defined clearly and we are not aware of any method currently in place to measure the impact of CBT actions for example prices to farmers have risen but this is a market factor not a CBT factor in fact perhaps the CBT could have lifted prices higher if it had promoted Tanzanian cashews in other markets.

5. The development of processing is essential for the sustainable and growing sector the CBT has to take a central role in promoting processing, bringing market news and new processing technologies to Tanzania.

7.7 **How can we build an industry?**

1. Bring the regulatory and institutional interventions into line with the current market situation
2. Build a vision of 100% processing
3. Centre support programmes around the growers. Continue and expand input and education programmes for growers
4. Educate growers on looking after the trees and drying the nuts at harvest.
5. Encourage processing and build links between the processors and the growers.
6. Link the Tanzanian Cashew sector to the World market by opening up alternative destinations and developing a market information system
7. Reduce costs to competitive levels
8. Develop financial services including the warehouse receipts system to assist with value addition activity.
## Annex III Suppliers of Agricultural Inputs - Tanzania

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<th>Supplier</th>
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<td>MERU AGRO-TOURS AND CONSULTANTS CO. LTD</td>
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### Potential International Suppliers

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Annex II List of Persons Interviewed

Masasi District
1. Masasi High Quality Cashew Nut Association – Manager – Mr. Mtui
2. Masasi Farmers Association – ChairPerson – Mr. Hanaf Bakari
3. Masasi Farmers Association – Coordinator – Mr Abdallah Lichinga
4. Masasi District Council – District Cooperative Officer – Mr Edward Mtekane
5. Masunge Agricultural Marketing Cooperative Society Masasi – ChairPerson – Mr A Nnella
6. Masunge Agricultural Marketing Cooperative Society – Secretary - Mr. Sued Milanzi
7. Mshikamo Agricultural Marketing Cooperative Society – Masasi – Chairperson Hamis Seif Mbinga
8. Mshikamo Agricultural Marketing Cooperative Society Secretary – Mariam Yusuf

Newala District
9. Agrofocus Processing Plant Newala - Factory Manager – Mohamed Bakari
10. Tandahimba and Newala Cooperative Union – General Manager - Mr Daimu Mpatikane
11. Mchuliwane Agricultural Marketing Cooperative Society – Chair Person
12. Mchuliwane Agricultural Marketing Cooperative Society – Secretary
13. Mchuliwane Agricultural Marketing Cooperative Society – Member – Mr Mwikani
14. Mchuliwane Agricultural Marketing Cooperative Society – Member – Mr Mkomwele
15. Tuyangatane Agricultural Marketing Cooperative Society – Chairperson - Mr Issa Chilola
16. Tuyangane Agricultural Marketing Cooperative Society – Secretary - Ms Somaye Limayo
17. Newala District Council – District Cooperative Officer – Innocent Mahinda

Tandahimba District
18. Tandahimba District Council – District Agricultural and Livestock Development – Mr Majogo
19. Tandahimba District Council – District Agricultural Officer Coordinator Cashew Nuts – Mr Mahanga
20. Tandahimba District Council – District Cooperative Officer – Mr Simon Chogo
21. Muungano Agricultural Marketing Cooperative Society – Secretary- Saidi Zuberi
22. Malopolela Agricultural Marketing Cooperative Society – ChairPerson – Salum Mkulani
23. Mji Mpya Agricultural Marketing Cooperative Society – Secretary – Ismael Makama
25. Matekeo Agricultural Marketing Cooperative Society - Secreatry Bakari Hassan
26. Tandahimba Agricultural Marketing Cooperative Society – Chairperson Hamisi Maulidi
27. Amani Agricultural Marketing Cooperative Society – Secretary – Rashidi Nsikumba
28. Mji Mpya Agricultural Marketing Cooperative Society – Chairperson Rashid Naikumbe
29. Milindu Agricultural Marketing Cooperative Society – Secretary – Abdallah
30. Milundu Agricultural Marketing Cooperative Society – Chairperson – Hassan
31. Kitama Cashew Nut Processing Group – Secretary – Saidi Awadhi
32. Kitama CashewNut Processing Group – Membership
Mtwara Rural

33. United Peasant of Tanzania – Executive Director Mr Baptist Phiri Makaburi
34. United Peasant of Tanzania – Chairperson – Yusuf Mihengwe
35. Masasi and Mtwara Cooperative Union – Marketing and Operations Manager Mr Kelvin Rajab
36. Chimbili Trading Company Warehouse Operator – Administrative Manager – Shokat Kara
37. Chimbili Trading Company Warehouse Operator – Operations Manager – Alphonse Nandonde
38. Kulathoor Company Ltd, Managing Director, Yasin P.Nair
39. Olam Cashew Processing Factory Supervisor – Mr Gilbert Hagila
40. Cashewnut Board of Tanzania, Director of Finance & Administration, Ayub Mohamed Mbawa
41. LiMAS, Expert in Cooperative Business Development, Niels Jensen
42. LiMAS, International Agronomist, Irene Christiansen
43. Ministry of Agriculture, Permanent Secretary, Mohamed Said Muya
44. MAMCU, General Manager, Ourgi Nali
45. MAMCU, Marketing Manager, Kelvin Rajabu
46. Olam Tanzania, Factory Manager, Joshua Nzioka
47. Olam Tanzania, Procurement, Anil
48. Export Trading Group, Warehouse Manager, Mr Krishna
49. Lindi Farms, Chief Technician, Almasi Llikokola

Dar es Salaam

50. Dagem. Exports Co., Administrative Director, D.L.Mgeta
51. Isodore Leka Shirima, Former Regional Commissioner Mtwara
52. Ministry of Agriculture, Sagcot Coordinator, Dr Mary C. Shetto
53. Agricultural Council of Tanzania, Executive Director, Janet Bitegeko
54. Agricultural Council of Tanzania, Promotion Officer, Khalid S.Ngassa
55. Agricultural Council of Tanzania, Networking Manager, Saidi S. Saidi
56. ANSAF, Communications and Advocacy Officer, Mary Githinji
57. Fidahussein & Co Ltd, CEO, Mushtak Ali Fazal
58. Pyrethrum Company of Tanzanoia Ltd, Director, Widmel Mushi
59. Naliendele Agri. Research Programme, Lead Scientist, Dr Peter Masawe
60. UNIDO, Chief Technical Advisor, Philip Lehne
61. Tanzanian Investment Bank, Research and Development Manager, Allan Magoma
62. Cashewnut Board of Tanzania, Chairperson, Hon. Anna Margareth MP
63. Rabobank International, Senior Analyst Africa, Sierk Plaat
64. SAGCOT, CEO, Geoffrey Kirenga
65. The East African, Bureau Chief, Mike Mande
66. Southern Jumbo Cashewnuts Ltd, Accountant, Absalim S. Mdwanbo
67. Southern Jumbo Cashewnuts Ltd, CEO, N.S.P.Ntula
68. Southern Jumbo Cashewnuts Ltd, Proprietor, E.D. Maokola-Majogo
69. METL, Manager Crop Procurement, Suresh Ramaiya
70. NatureRipe Kilimanjaro Ltd, Managing Director, Fatma Riyami
71. Export Trading Co. Ltd, General Manager, Vasudev Barkur
72. Cashew Processors Association, Secretary, Joseph Haule
73. Pace International, President, Mark Marrone
74. Pace Tanzania, Operations Manager, Thomas Skinner
75. Pace Tanzania, Director International Development, Bryce Todd
76. Ministry of Agriculture, Deputy Minister, Hon Adam Malima
77. NMB, Analyst, Carol Nyangaro
78. CRDB Bank PLC, Rehema M. Shambwe
79. NMB, Agribusiness Manager, Robert Pascal
80. Fairtrade International, Jennifer Mbubi
81. African Cashew Alliance, President, Idrissa Kilangi
82. Tanzanian Investment Bank, Director of Strategic Planning, Jaffar Machano
83. Cashew Nut Board of Tanzania, Deputy Chair, M. Mudhihir
84. Mukpar Tanzania, CEO, Pratap Krishna
85. Masasi High Quality Farmers, Director, Machiel Spuij,
86. Foodsource, Managing Director, James Mulhall
87. Mizigo Forwarders, Ephraim Elisa
88. Agrofocus, CEO, Muzamil Karamagi
89. Khalid Air, CEO, Paddy O’Dwyer

India
90. Quilon Foods Pvt. Ltd, Managing Director, Parameswaran Bharathan
91. Anu Cashew, Managing Director, Anu S. Pillai
92. Chakiat Agencies Private Ltd, Director P. Narayan
93. Meledom Trading, Proprietor, J.J. Meledom
94. Wenders, Proprietor, Hari Krishnan Nair

Vietnam
95. Long Son Joint Stock Co, Chairman, Vu Thai Son

Ghana
96. African Cashew Alliance, Managing Director, Christian Dahm
97. African Cashew Initiative, Chief Executive, Rita Weidinger
98. Irecema Casthanas, Trader,

Cote D’Ivoire
99. RONGEAD, Market Analyst, Pierre Ricau

USA
100. International Commodity Trading, President, Robert Murphree

Bangladesh
101. Fair Brothers Ltd, Managing Director, Robin Rahman
**Appendix 3 Bibliography**

<table>
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<th>Asia: Cashew Nuts</th>
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<tr>
<td>Bhaskara Rao, Integrated production Practices of cashew in India, FAO, 2002</td>
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<tr>
<td>Bhavani T.A. Towards Developing an Analytical Framework to Study Technological Change in the Small Units of the developing Countries. Institute of Economic Growth, Delhi Sept. 2001</td>
</tr>
<tr>
<td>Cashew Export Promotion Council, Cashew Vision 2020</td>
</tr>
<tr>
<td>Cong Phien, Saigon Daily, Cashew Exports increasing, cultivation decreasing, 21/3/2010</td>
</tr>
<tr>
<td>Cultivation Dept Binh Phuoc Gov. Vietnam Cashew Purchasing organisation and procession, 1 Dec 2010</td>
</tr>
<tr>
<td>Eapen et al, Liberalisation, Gender and Livelihoods: the cashew nut case, Madras Institute of Development Studies, 2003</td>
</tr>
<tr>
<td>Ede Consulting, Support for the development of the cashew sector in Dak Lak (Vietnam), GTZ, 2006</td>
</tr>
<tr>
<td>Ede Consulting, Sustainability Aspects of the Vietnamese cashew sector, Kraft Foods 2005</td>
</tr>
<tr>
<td>English.vovnews.vn 27/11/2009 Vietnam: First Green cashew plant under construction</td>
</tr>
<tr>
<td>Fitzpatrick Competitiveness in the African Cashew sector February 2011 GIZ</td>
</tr>
<tr>
<td>Hindu Business Line 10 Mar 2009 Domestic demand for cashew nut on the rise</td>
</tr>
<tr>
<td>Indian Business Standard 21 Dec 2009, Green norms drive away cashew units.</td>
</tr>
<tr>
<td>Jaeger &amp; Fitzpatrick, Cashew Development Project, Indonesia, IFC, February 2008</td>
</tr>
<tr>
<td>Kannan: Cashew Pricing Policy and Export Taxation: The Indian Experience, Paper to ITC Conference 2002</td>
</tr>
<tr>
<td>Lewis, TimesOnLine, 23 March 2010 Vietnam promotes cashews as coffee goes off the boil <a href="http://www.timesonline.co.uk">www.timesonline.co.uk</a></td>
</tr>
<tr>
<td>National Bank for Agriculture and Rural Development (India), Cashew Cultivation, 2007</td>
</tr>
<tr>
<td>Phnom Penh Post 20 Aug 2009, Vietnam investors in talks to build cashew facilities,</td>
</tr>
<tr>
<td>Pillai, Food Processing Units in Kerala, Kerala Industrial Infrastructure Development Corporation, 2004</td>
</tr>
<tr>
<td>Saigon Daily Vietnam India Brazil to establish cashew association</td>
</tr>
<tr>
<td>Vietnam News 27 Oct 2009 Cashew Exports fall nearly 10%</td>
</tr>
<tr>
<td>Vinayak, Cashew processing industry faces workforce shortage, Hindu Business Line, Mar 25 2009</td>
</tr>
<tr>
<td>Zikkir.com 17 sept 2009, India Raw material bank set up for cashew units</td>
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<td>Meaney-Leckie, The cashew Industry of Ceará Brazil: a Development Alternative, State University College at Geneseo, USA, 1989</td>
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<td>Hall et al, Benchmarking the Global Cashew Industry, Micro and small enterprise Trade Led growth Programme in Brazil, 2007</td>
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<td>Callado: Environmental Sustainability Analysis of Cashew systems in North East Brazil, INRES, 2008</td>
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<td>Africa Region Working Papers Series no 70, Tanzanian Cashew Sector, 2004</td>
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<tr>
<td>AllAfrica, Mozambique: Cashew Harvest of 95000 mts expected 2/2/2010</td>
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<tr>
<td>Artur, L &amp; Kanji, N Satellites and Subsidies: Learning from experience in cashew processing in Northern Mozambique 2005</td>
<td></td>
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<tr>
<td>Business Daily, Kenya: State ban on exports hurts cashew nut prices, 13 Jan 2010</td>
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<td>Cashew nut Board of Tanzania Cashew Statistics</td>
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<td>Cashew nut Board of Tanzania, Strategic Plan, 2010</td>
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<tr>
<td>Cashewinfo.com, Interview with Carlos Costa 2008</td>
<td></td>
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<tr>
<td>Hanlon, Mozambique 162 – Minimum Wages and Exchange rates, May 2010</td>
<td></td>
</tr>
<tr>
<td>IFC, Environmental Review Summary, SEF-Mozambique Cabo Caju Ltd., IFCEXT 1999</td>
<td></td>
</tr>
<tr>
<td>Kanji et al., Cashing in on Cashew Nuts: Women producers and factory Workers in Mozambique, Chains of Fortune: Linking Women Producers and Workers with Global Markets, Commonwealth Secretariat 2004</td>
<td></td>
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<tr>
<td>Kihara and Bocha, The cereals board will not buy cashew nuts 12/1/2010</td>
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</tr>
<tr>
<td>Kranji &amp; Vijuhiizen, Gender Myths and Feminist fables: Cracking the cashew nut myths, University of Sussex 2003</td>
<td></td>
</tr>
<tr>
<td>Macauhub Mozambique needs to invest US$60m to increase cashew production, 30/4/2010, wwwmaacauhub.com</td>
<td></td>
</tr>
<tr>
<td>Mole, An economic analysis of small holder cashew development opportunities and linkages to food security in Northern Mozambican Province of Nampula, Michigan State University, 2000</td>
<td></td>
</tr>
<tr>
<td>Muniu &amp; Wanjala, Establishment of an integrated production credit and marketing system for cashew growers in Kenya, Kenya Agricultural Research Institute</td>
<td></td>
</tr>
<tr>
<td>Paul, Factories in the Field, Technoserve, 2008</td>
<td></td>
</tr>
<tr>
<td>Peham, UNIDO, Baseline Study: Cashew in Mtwara and Lindi, 2012</td>
<td></td>
</tr>
<tr>
<td>RaboBank, A Hard Nut to Crack – Cashews, 2012</td>
<td></td>
</tr>
<tr>
<td>Recinesa, Cashew Market Trade, new developments and experience: A case study of Eastern and Southern Africa Nalindale Agriculture Research Institute, 2007</td>
<td></td>
</tr>
<tr>
<td>Shomari, Opportunities and constraints to the development of cashew exports in Eastern and Southern Africa, Regional Meeting on the Development of Cashew Exports, ITC, 2002</td>
<td></td>
</tr>
<tr>
<td>Sijaona, Tanzania: Assessment of the situation and developments prospects for the cashew nut sector, 2008</td>
<td></td>
</tr>
<tr>
<td>Technoserve; Cashew Processing in Mozambique, 2007</td>
<td></td>
</tr>
<tr>
<td>3ADI, Tanzania’s Cashew Value Chain: A diagnostic, 2011</td>
<td></td>
</tr>
<tr>
<td>Topper &amp; Calgari, Cashew Study Tour East Africa, USAID, 1999</td>
<td></td>
</tr>
<tr>
<td>Waithaka, Kenya Assessment of the situation and development prospects for the Cashew nut sector UNCTAD, 2002</td>
<td></td>
</tr>
<tr>
<td>Methodology</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Carraresi &amp; Banterle, Measuring Competitiveness in the EU Market: a comparison between food industry and agriculture, 12th Congress of European Association of Agricultural Economists, 2008</td>
<td></td>
</tr>
<tr>
<td>Food Chain, No 28, May 2001 Issue on cashew processing.</td>
<td></td>
</tr>
<tr>
<td>Frohberg &amp; Hartmann, Comparing measures of competitiveness, Institute of Agricultural Development in Central and Eastern Europe, Discussion paper, 1997</td>
<td></td>
</tr>
<tr>
<td>Gereffi &amp; Korzeniewicz, Commodity Chain &amp; Global Capitalism</td>
<td></td>
</tr>
<tr>
<td>Graef et al, Adapted Farming in West Africa: Issues Potentials and Perspectives, 2000</td>
<td></td>
</tr>
<tr>
<td>GTZ, Investing in Agriculture-Implications for Equity, Growth and Environment, Export Conference 2009</td>
<td></td>
</tr>
<tr>
<td>Junior &amp; Millis, Evaluating Competitiveness Impacts of Regulatory reform in the Brazilian Cashew industry, 2008</td>
<td></td>
</tr>
<tr>
<td>Kim &amp; Marion, Domestic market structure and performance in global markets, Review of Industrial Organization, Vol 12 , 1997</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cashew Markets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Almond Board of California, Global New Nut Products Overview 2011</td>
<td></td>
</tr>
<tr>
<td>Bakery &amp; Snacks, Innovation in Savoury Snacks Premiumisation through new healthy, natural, ethical, gourmet and ethical products, March 2010</td>
<td></td>
</tr>
<tr>
<td>Baking Business Salty snack sales rise in a recession</td>
<td></td>
</tr>
<tr>
<td>Branson: Inshell or out: China’s nutty for US tree nuts, Ag Exporter</td>
<td></td>
</tr>
<tr>
<td>Bryant, C et al, Assessing the market potential for cashew nuts in China: Report for Technoserve 2004</td>
<td></td>
</tr>
<tr>
<td>Business Line “ Russian Ban adds to cashew export woes, February 2009</td>
<td></td>
</tr>
<tr>
<td>Cashew Bulletin, Monthly reports 2006-2012</td>
<td></td>
</tr>
<tr>
<td>Cashew Club, Monthly reports 2012</td>
<td></td>
</tr>
<tr>
<td>CBI EU Market Brief 2005: Edible Nuts</td>
<td></td>
</tr>
<tr>
<td>Confectionary News, 23 Nov 2009 Food prices face a welcome perfect storm</td>
<td></td>
</tr>
<tr>
<td>Derco Foods, Monthly Almond Market Report</td>
<td></td>
</tr>
<tr>
<td>Fitzpatrick, Cashew Processing Equipment Study, ACI 2011</td>
<td></td>
</tr>
<tr>
<td>Fairtrade Foundation, Review of UK Supply Chain, returns to producers and retail margin issues. <a href="http://www.fairtradefoundation.org">www.fairtradefoundation.org</a> 2008</td>
<td></td>
</tr>
<tr>
<td>INC, <a href="http://www.nutfruit.org">www.nutfruit.org</a> Statistical database</td>
<td></td>
</tr>
<tr>
<td>Kemp: Crisis remakes the commodity business, Reuters Oct 29 2008</td>
<td></td>
</tr>
<tr>
<td>Malhotra, World Edible Nuts Economy</td>
<td></td>
</tr>
<tr>
<td>Montague-Jones, 1 Sep 2009, Bakery news, “US Snack Market shows Healthy Growth”</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Title</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Prabhu, Price Time and Place Functions in the Cashew Value Chain,</td>
<td>India Cashew Congress Paper 2005</td>
</tr>
<tr>
<td>Recorder online 12 Aug 2010 , CA: Pistachios continue to gain in</td>
<td>popularity</td>
</tr>
<tr>
<td>Scott-Thomas, American Snacking on the way up says NPD, Bakery and</td>
<td>Snacks, 2 Sep 2009</td>
</tr>
<tr>
<td>The Cracker: July 2010 Dried Fruit/Nuts Trends Explored 2010</td>
<td></td>
</tr>
<tr>
<td>USDA Gain Report, Netherlands: Oils &amp; products</td>
<td></td>
</tr>
<tr>
<td><strong>Technical</strong></td>
<td></td>
</tr>
<tr>
<td>Aliyu &amp; Awppetu, Multivariate Analysis of Cashew germplasm in Nigeria,</td>
<td>Silvae Genetica, 56, 3-4, 2007</td>
</tr>
<tr>
<td>Cashew Board of Tanzania, Inputs supplied by Mukpar Tanzania Ltd,</td>
<td>2007/08</td>
</tr>
<tr>
<td>Cashew Week Vol 7, Issue 34 Aug 26 2006, Agri-Export Zones and</td>
<td>benefits to the cashew industry</td>
</tr>
<tr>
<td>Cashew Week Vol 9 Issue 40 Oct 4 2008 Recommended International Code</td>
<td>of Hygienic Practice for Tree nuts</td>
</tr>
<tr>
<td>Cashew Board of Tanzania, Inputs supplied by Mukpar Tanzania Ltd,</td>
<td>2007/08</td>
</tr>
<tr>
<td>Cashew Week Vol 7, Issue 34 Aug 26 2006, Agri-Export Zones and</td>
<td>benefits to the cashew industry</td>
</tr>
<tr>
<td>Cashew Week Vol 9 Issue 40 Oct 4 2008 Recommended International Code</td>
<td>of Hygienic Practice for Tree nuts</td>
</tr>
<tr>
<td>Davis, Kristen Cashew, Echo Technical Note, 1999</td>
<td></td>
</tr>
<tr>
<td>Dept of Agriculture South Africa, Cultivating Cashew Nuts, 1998</td>
<td></td>
</tr>
<tr>
<td>FAO, Maintaining Raw Cashew nut quality, 2006</td>
<td></td>
</tr>
<tr>
<td>Gayatri Industries, Cashew Processing an Overview- Raw Cashew nut</td>
<td>Harvesting, Handling and Storage 2008</td>
</tr>
<tr>
<td>IFI Magazine, May 2009 “Alimentary, my dear”</td>
<td></td>
</tr>
<tr>
<td>ITDG, Technical Note: cashew nut Processing, 2002</td>
<td></td>
</tr>
<tr>
<td>Pillai, Post Harvest Handling of cashews, Paper delivered to the</td>
<td>Ambassador to India of Cote D’Ivoire, July 2010</td>
</tr>
<tr>
<td>Prassannakumarji, Infestation problem in Cashew industry, Commodity</td>
<td>India .com, 2001</td>
</tr>
<tr>
<td>Quality Assurance India, QAS Manual</td>
<td></td>
</tr>
<tr>
<td>The Cracker Jan 2006 “9 Paths to Better Health” “Aussie Physicians</td>
<td>endorse Nuts”</td>
</tr>
<tr>
<td>West Africa</td>
<td></td>
</tr>
<tr>
<td>Bassirou, Senegal Analyse du Secteur de L’Anacarde Situation</td>
<td>Actuelle et Perspective de développement, 2008</td>
</tr>
<tr>
<td>Bassirou, Senegal Analyse du Secteur de L’Anacarde Situation</td>
<td>Actuelle et Perspective de développement, 2008</td>
</tr>
<tr>
<td>Boahen, Brief Overview of Ghana Cashew Industry, Cashew development</td>
<td>Board of Ghana, 2006</td>
</tr>
<tr>
<td>Boillereau &amp; Adam, Cashew Processing, Marketing &amp; Consumption in West</td>
<td>Africa, West Africa Trade Hub, 2007</td>
</tr>
<tr>
<td>Cambon, Upgrading the Cashew nut value chain: The case of Casamance,</td>
<td>IDS MPHIL Dissertation, 2003</td>
</tr>
<tr>
<td>Cote D’Ivoire Youth Reinsertion Opportunities Study, Value Chain</td>
<td>Analysis Cashew, 2006</td>
</tr>
<tr>
<td>Ezeagu, Nigeria: Assessment of the situation and development prospects</td>
<td>for the cashew nut sector, Nigerian Export Promotion Council</td>
</tr>
<tr>
<td>Gaoussou, Cote D’Ivoire Analyse du Secteur de L’anacarde Situation</td>
<td>Actuelle et</td>
</tr>
<tr>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Ghana Business News, Cashew farmers in Ghana complain about price reduction, 2009</td>
<td></td>
</tr>
<tr>
<td>Ghana Export promotion Council, The Market for cashew nuts in India, Market Brief 2005</td>
<td></td>
</tr>
<tr>
<td>Jaeger &amp; Kane, Guinea Cashew development Plan, USAID 2006</td>
<td></td>
</tr>
<tr>
<td>Lynn &amp; Jaeger, Cas Sector Development Study Private Sector, Rehabilitation and Development Project Of Guinea-Bissau, 2004</td>
<td></td>
</tr>
<tr>
<td>Nugawela &amp; Balde, La Chain de Valeurs de la Filiere Cajou au Senegal, USAID Croissance Economique, 2007</td>
<td></td>
</tr>
<tr>
<td>Permanent Secretary, Overview of the Cashew industry in Nigeria Paper delivered by Permanent Secretary Nigerian Ministry of Agriculture, Nigerian Central Bank Seminar 10th July 2007</td>
<td></td>
</tr>
<tr>
<td>Poublanc, Support for Accelerated Growth and Increased Competitiveness – Cashew Value chain – Senegal, USAID, 2006</td>
<td></td>
</tr>
<tr>
<td>Sogla &amp; Assogba, Etude de la compétitivité de la filière anacarde du Bénin, CCI ,2009</td>
<td></td>
</tr>
<tr>
<td>Son &amp; Traore, Burkina Faso: Analyse DE Secteur De L’Anacarde Situation Actuelle et Perspective de Developpement, 2007</td>
<td></td>
</tr>
<tr>
<td>Tandjiekpon, La Filiere anacarde du Benin : Problematique enjeux soixaux, economique, environnementaux et Perspectives</td>
<td></td>
</tr>
<tr>
<td>Formation International en Gestion durable des forets et forestiere, 2009</td>
<td></td>
</tr>
<tr>
<td>The Clipper Magazine, West Africa’s move to Cashew processing , 01/2007</td>
<td></td>
</tr>
<tr>
<td>Tinlot, Intégration de filières a la mitigation au changement climatique, Cas de Burkina Faso, FAO/GTZ, 2010</td>
<td></td>
</tr>
<tr>
<td>Topper, Assessment of potentials for cashew upgrading in selected locations of Nasarawa and Kvarna States, Nigeria , GTZ 2008</td>
<td></td>
</tr>
<tr>
<td>Topper, Issues and Constraints Related to the development of Cashew nuts from Five Selected African Countries, Paper to Reunion Regionale sur le developpement des exportations de noix dec cajou d’Afrique , 2002</td>
<td></td>
</tr>
<tr>
<td>USAID &amp; Senecomex, Amelioration de la qualite de noix de Cajou au Senegal : Manuel de Formation, 2007</td>
<td></td>
</tr>
<tr>
<td>USAID, Cashew Marketing and consumption in West Africa, West Africa Trade Hub Technical note 221</td>
<td></td>
</tr>
<tr>
<td>USAID, Cross Border Trade and Food Security, The Western Basis , March 2010</td>
<td></td>
</tr>
<tr>
<td>USAID, Invest in Africa : Cashews, West Africa Trade Hub 2008</td>
<td></td>
</tr>
<tr>
<td>USAID, Industry Action Plan Nigerian Cashews , 2002</td>
<td></td>
</tr>
<tr>
<td>USAID, Plan du developpement L'anacardier Guinée, 2007</td>
<td></td>
</tr>
<tr>
<td>Vanguardngr.com Nigeria: cashew nuts association tasks FG on tree regeneration</td>
<td></td>
</tr>
<tr>
<td>Williams, West African Cashew Sector Study: Supply chain Analysis and needs Assessment, West Africa Trade Hub Technical Report No. 8 , 2005</td>
<td></td>
</tr>
<tr>
<td>World Bank, Guinea Bissau Cashew and Beyond: Diversification through Trade, Prem 4 Africa Region , 2010</td>
<td></td>
</tr>
<tr>
<td>Yapi N’Cho, Cashew Nut problems of the Development in Africa: Case of Cote D’Ivoire, ARECA 2009</td>
<td></td>
</tr>
<tr>
<td>Youl et al, Modelisation empirique de principaux déterminants socio-économique de la</td>
<td></td>
</tr>
</tbody>
</table>
**Statistical Sources**

<table>
<thead>
<tr>
<th>Source</th>
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<tr>
<td>United States Dept. of Agriculture</td>
<td>US market</td>
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<td>United States Dept. of Commerce</td>
<td>US imports</td>
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<td>United States International Trade Commission</td>
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<td>European Union</td>
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<td>Cashew Export Promotion Council of India</td>
<td>India production</td>
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<td>USITC Trade database</td>
<td>Trade</td>
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<tr>
<td>United Nations Statistics Division - ComTrade</td>
<td>Trade</td>
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<td>Europa Food Safety Rapid Alert System for Food &amp; feed</td>
<td>Food alerts</td>
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<tr>
<td>FAOSTAT</td>
<td>Trade stats, Production stats</td>
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<td>Eurostat</td>
<td>EU trade</td>
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<td>Cashew Export Promotion Council of India</td>
<td>India statistics</td>
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<td>Vinacas</td>
<td>Vietnamese Statistics</td>
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<tr>
<td>African Cashew Alliance</td>
<td>Articles and database</td>
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<tr>
<td>Sindicaju/ Caju Ceará</td>
<td>Cashews in Brazil</td>
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<tr>
<td>Almond Board of California</td>
<td>Almonds and edible nuts</td>
</tr>
<tr>
<td>Emprapa, Brazil</td>
<td>Brazil cashews</td>
</tr>
</tbody>
</table>

**Trade Publications**

- “Cashew Bulletin”
- “Cashew Week”
- “The Public Ledger”
- “Food news”
- “The Cracker”
- “The Clipper”