Cluster Competitiveness Program

A more prosperous Tanzania, together

Value Chain Assessment - Executive Summaries

28 September, 2009

Megan O'Donnell, Consultant, J.E. Austin Associates
Final Report

Table of Contents

Introduction and Methodology

This report contains executive summary value chain assessments (VCA) of eight industries in Tanzania. These findings will contribute to the Tanzania Cluster Competitiveness Program's (TCCP) selection of clusters in the implementation of this technical assistance program.

These VCAs are based upon analyses performed during this short 10-week assignment and are not meant to be comprehensive. There is a significant amount of primary research which already exists. The purpose of this assignment was not to duplicate this, but to gather available research in the selected clusters and to complement this with in-person interviews.

Time period and geography

The consultant performed the work over 10 weeks from July 2009 through September 2009, with field trips conducted throughout the country. With intermittent meetings in Dar es Salaam, four separate field trips were undertaken to cover the country geographically.

One field trip was conducted to the Mwanza/Musoma region. Two separate trips North to the Arusha/ Kilimanjaro/ Tanga region looked at cross-cutting industries in those areas. A 10-day road trip to the Southern Highlands stopped in Morogoro, Dodoma, Iringa, Mbeya and many villages along the way. Another trip to Zanzibar studied the relevant industries on those islands.[1]

Tasks

The consultant completed a set of technical research tasks for each value chain. First, a desktop was performed for each value chain which synthesized recent reports and studies. Then the consultant designed a relevant questionnaire for business, public sector and civil society stakeholders. (see Appendix A)

Working with assistance from local competitiveness advisors, the consultant then performed one-on-one interviews with business, public sector and civil society leaders in the trips described above. From each interview, the consultant also gathered relevant studies, data and research from each interviewee.

Based on the interviews, research and intelligence gathered and desktop research, the consultant performed the value chain analysis. This consists of:

- Creating a map of each cluster, including contacts and details for all the businesses operating across the value chain;

[1] Major industries of focus were Mwanza/Musoma: fish, dairy, textile, Arusha/ Kilimanjaro/ Tanga: horticulture, tourism, textile, tea, dairy, meat, food processing, Southern Highlands: food processing, tourism, horticulture, tea, meat, Zanzibar: tourism, fish, horticulture.

- Identifying the individual sector strengths, weaknesses, opportunities and threats faced in each value chain;
- Identifying the binding constraints to the growth of the sector, specifically in industry productivity, access to export markets (regional and international), quality control and upgrading, workforce development, access to supporting services and the general business environment; and
- Identifying the highest value opportunities across the value chain to enhance competitiveness.

Based upon the findings from these VCA, the consultant has prepared Eight Value Chain Assessments, the Executive Summaries of which are contained in this Final Report.

Note: the Livestock Industry is separated into two analyses, one for Meat and one for Dairy.

Tourism

--Highlight Clusters: Arusha, Zanzibar, Southern Circuit, Industry Center in Dar--

Industry Structure

Tanzania's main tourism products are safari tours, beach tourism in Zanzibar and on the mainland coast, and business/conference tourism. The Northern circuit is a more mature market for safari and business, while the South has opportunities under development.

At its core, the Tourism Cluster consists of tour operators, hotels, lodges, other accommodations as well as restaurants and tour guides. Supporting services include transport, communication, infrastructure, media, shopping, and financial services.

The sub-sectors within the Tanzania tourism industry are effectively represented by a network of associations - TATO, HAT, TAHOA, TASOTA, ITTA, TTGA, TAOA. TCT, the Tourism Confederation then advocates on the industry's behalf at the national level. Oversight and regulation for the industry falls under the Ministry of Tourism and its network of Parks Authorities, as well as dealings with TIC, TRA and others.

Value Chain Productivity

The tourism industry is well developed and effective in certain respects (e.g. association structure) and contributes a significant percentage to the national GDP; however, there are notable constraints as described below.

- *Poor public-private dialogue.* One major issue is in the relationship between the public and private sectors.
    - *Little consultation*. There is little consultation with private sector on policy initiatives due to poor public-private dialogue. The private sector explains that the regulatory environment is often unpredictable because government takes actions in an abrupt manner. One example is the recent hike in the minimum wage came as complete surprise (through it actually was long overdue) hit the industry hard and cut into profits in a difficult year. Another example is that park and lodge taxes and other fees are often raised unexpectedly (and even retroactively) which leads to uncertainty in future pricing of tour packages and makes financial planning difficult. One tour operator in Arusha explains: "Government does not understand the lead in time that the (especially) tourism industry needs to plan their business, so they can't just hike lodge taxes in the middle of the season without notice."
    - *Changing tax/regulatory rules.* There are "moving goalposts" where tax/regulatory regime (taxes, wages) change without notice. For instance, a tourism investor will be granted tax incentives and will have already realized their investment when the government will decide to rescind the tax holiday.

- *Lack of market information.* In general, there is a lack of market information within the industry due to poor information sharing within the private sector. This is due to:
  - *Culture of secrecy*. Lack of market information on tourism industry in Tanzania, culture of non-disclosure from members. (This is despite the active network of tourism industry associations.) For instance, it's hard to show the impact of the financial crisis on the industry because companies won't disclose their sales, etc.
- *Low capacity*. Low technology and human resource capacity especially in smaller tourism companies.

Access to Markets

Despite the industry's success in recent years, there are still constraints identified in terms of its ability to access markets.

- *Limited international market penetration.* Industry relies on tourist arrivals from a few key countries (US, EU).
- *Country branding weak.* Current effort is led by the Tanzania Tourist Bureau with donor input and is not taking advantage of competitive opportunities. The campaign is reportedly being led by the public sector with little input from the private sector.
- *Domestic and international tourism statistics limited.* Information on domestic tourism which is an increasingly important target market is hard to obtain. The Ministry of Tourism expects to include this statistic in their next census. Statistics need to be updated more often.
- *Low e-marketing capacity*. There is a lack of sophistication in e-marketing especially among smaller tourism service providers. More and more, the tourism industry depends on the web to manage customer service, so building capacity in this area is essential both to operations and new sales.

General Business Environment

The business environment is a major complaint of tourism cluster members at all levels. Issues here constrain productivity and present major barriers to competitiveness.

- *Poor infrastructure.* Power and electricity undependable, makes operations of hotels, lodges and other tourism operations expensive. Limited telecommunications capabilities, e.g. skype, teleconferencing.
- *Little access to finance*. Especially smaller tourism companies often do not have skills or "bankable" plans and they do not have the skills to develop business plans.
- *Complicated tax regime.* The long list of taxes on tourism are both intricate and changing (see "moving goal posts" above) which presents major problems for planning the finances of tourism businesses.

Other Major Constraints

Workforce

Poor human capital in the hospitality industry was cited as a major constraint across the industry:

- *Poor hospitality training*. Weak overall human resources in hospitality, both in customer service and management positions.
- *Under-capacity public institute*. The National Tourism College in Dar has limited curriculum and capacity; a previous campus which existed in Arusha has closed.
- *Labor tax sees no return*. Private firms pay 6% of total salary to the government for "skills development" but they see nothing in return for this.
- *Poor training institutes*. Many other hospitality training centers exist but are un-accredited, offer outdated curricula, and are of poor quality

Standards and Certifications

One major element of competitiveness in tourism is the quality of services. Standards and certifications are one way which a country's tourism industry can use to guide, monitor and upgrade this quality. Tanzania's tourism industry is lacking in several noted respects:

- *No hotel ratings system*. No established hotel rating system for Tanzania.
- *No green certification*. Has not achieved green certification standards which are becoming baseline standard for many travel companies in EU and US.
- *No accredited training.* No accreditation board for skilled labor.

Opportunities to Improve Competitiveness

Several issues were identified as potential areas for intervention to improve the competitiveness of the industry, addressing many of the constraints above. These include:

Improve the communication between the public and private sector.

- Strengthen associations' capacity to represent the industry's interests.
- Educate government on the benefits of including the private sector in decision-making.
- Increase transparency in regulation and enforcement of taxes, fees, incentives, etc.
- Align government and private sector branding strategies for Tanzania, i.e. TTB
- Develop messaging campaigns for test promotion based on these strategies

Create industry-wide workforce development strategies.

- Build capacity at National Tourism College and VETA, emulate successful hospitality models worldwide, e.g. Kenya.
- Create basic skills courses and refreshers that can be taught in 1-2 week courses during the off-season, e.g. cooks, drivers, repairing Land Rover engines
- Engage government to apply skills development tax to useful programs, or perhaps waive fee entirely.

Support programs to improve quality standards/ adapt certifications.

- Adapt certification systems (e.g. eco, hotel ratings) for EAC or Tanzania standards.
- Government/private sector partnership to set standards – then it should be up to the tourism schools to meet the standards.
- Help to facilitate an accreditation board
- Offer capacity building courses in new technologies, e.g. web marketing, especially for SMEs.
- Create an interactive forum for knowledge sharing, interaction and discussion.

Horticulture

--Highlight Clusters: Arusha/Kilimanjaro region, Southern Highlands--

Industry Structure

Horticulture is defined as the production and marketing of perishable products destined for fresh consumption, with relatively high-value per unit, as compared to other agricultural outputs. In Tanzania, the main crops are in the three categories of vegetable, flowers and fruit. These are produced for both domestic consumption (for sale as fresh or as input to a processor) or for export (fresh, packed or loose).

Two main clusters have emerged in Tanzania, one in Arusha in the North which is more developed and one in the Southern Highlands in the South. Both large scale and smallholder farms exist and produce for domestic and export. Horticultural products from Tanzania are exported primarily to Europe, South Africa and other countries in the region. Government oversight falls under the Ministry of Agriculture, with assistance in marketing provided by the Ministry of Industry, Trade and Marketing.

Value Chain Productivity

The horticulture industry is evolving to meet the growing domestic and international demand and opportunities. The supporting cluster network and institutions, however, suffer some constraints.

- *Input sources*. Sourcing inputs is a problem in several respects in addition to the certification delay noted above. There are often problems with fake, diluted or expired chemicals and other inputs on the market. Also, small farmers often have trouble accessing finance to purchase needed inputs. TAHA has made successful efforts to solve some of these problems.

- *Supply chain organization*. There is a major challenge in meeting growing demand for products, especially in the Vegetables market, because the supply chain is not organized. This results in quality that is not dependable and suppliers inability to deliver sufficient quantities on time.

- *Poor natural resource management*. In general, there is poor irrigation and land management when compared to less resource-endowed neighbors. Kenya, for instance, is much less land endowment but has managed its resources better and thus exports higher volumes with greater value-added. This puts all farmers, both large and small scale at a disadvantage.

- *Relations with smallholders a challenge.* Much of the horticulture industry relies on small holder farmers. However, there are several constraints at this level:

    - Small farmers are often suspicious of new schemes because many have been cheated before.
    - They often have little control over price of their products and find themselves "at the mercy" of middle men who control the market, especially in times of scarcity.
    - Contract farming which could improve this situation is difficult because farmers have a hard time keeping to the contracts.
    - Outgrower schemes mitigate these challenges to some degree.

- *Delayed certifications*. Low capacity at government agencies (TPRI) delays approval of much-needed fertilizers, chemical inputs which will enhance productivity and allow producers to be internationally competitive. Therefore many companies must seek outside certification services which are expensive.

- *Association structure evolving.* The industry's apex organization, HODECT, is just starting up, and is in need of capacity building. Currently, funding is entirely from the Ministry of Agriculture. TAHA, the private sector association is well-developed and making positive moves for the industry and is looking to expand its reach both into other regions of the country (further into the South) as well as into other services, e.g. the new MK Airlines service two flights per week to the EU with horticulture exports aboard.

General Business Environment

The business environment is a constraint to doing business in the horticulture industry.

- *"Moving goal-posts" for tax incentives and regulatory schemes.* These are inconsistent and subject to change, so investors are not assured follow-through and support post-investment. Recent examples include:
    - Unexpected raise of the minimum wage
    - Increase of the work permit fee this summer
    - Removal of the deemed capital goods tax exemption
    - Cumbersome and costly importation of consumables for re-export
    - Confusion over VAT exemption between TIC and TRA

- *Non-tariff barriers to trade.* Delays at customs or in transit sue to corruption or bureaucracy cause great losses in productivity and add to the cost of production. The port in Dar es Salaam is singled out as a cause of much delay and additional "red tape" expense.

- *High cost of transport.* Transport costs in Tanzania are reportedly higher than in competitive, neighboring countries. For instance, the airport taxes when exporting products in Nairobi are only $1.40 per kilo for Veg versus $1.80 in Arusha. One Veg exporter near Arusha said that this made it cheaper for him to truck his product to Nairobi and ship it from there than to send it from the airport down the road in Arusha.

Access to Markets

Transport issues are a major constraint in the horticulture industry, especially since the products in question are highly perishable. Two major constraints therefore are due to poor handling and a lack of cold chain.

- *Handling losses*. Poor handling cause losses in value to horticulture products. This is made especially significant considering the rough roads from many of the farms to market. In addition, there is a lack of training on how to handle horticulture products that could mitigate some of these losses.

- *Lack of cold chain.* Horticulture products must often be kept at certain temperature in transit from farm on the truck to the airport or ship all the way to the retailer (or processor). Lack of sufficient cold chain can reduce the value or spoil a product entirely. Key points including at the airports (Kili, Dar) are missing sufficient facilities. Several trucking companies offer refrigerated trucking service; bigger companies, however, find it more dependable to keep this part of the chain in-house.

- *Delays in clearance of goods at customs in Namanga.* Delays can last for more than 24 hours for perishable goods destined for Nairobi airport.

- *Poor feeder road conditions.* Rough roads are isolating producers and restricting access to markets.

- *Lack of air services in the Southern Highlands.* The Mbeya airport would create a critical link from the Southern Highlands to export markets.

Other Major Constraints

Standards and Certifications/Quality Control

Quality control is especially important in the horticulture industry due to the highly-perishable nature of the products. Customers and market standards are very strict and demanding. The industry's current capacity to meet these standards is relatively weak.

- *Low capacity to meet international export standards.* Compliance with standards is a challenge - it takes time and expense to register new standards and different markets have different standards, e.g. the US market is especially hard, it takes 5-7 years to get approval.

- *No national standards.* Producers do no follow any specific guidelines for horticulture production. TAHA has proposed a Horticulture Code of Conduct that will begin to address this problem.

- *Low government capacity for inspection.* Quality inspection at the airport and other key points has very low capacity.

Access to Finance

As with many industries in Tanzania, horticulture faces constraints with access to finance, especially with respect to the smallholder farmers.

- *Limited smallholder finance*. Limited access to finance, especially for smallholders, banks willing to support marketing but not production. In particular, small farmers need finance to purchase inputs for production.

- *Loan terms unfavorable*. Banks are often unwilling to give reasonable interest rates for the long terms that are required for horticulture investments. For instance, a mango tree will not produce fruit for 5 years, thus an investor must wait at least that long for a return.

- *Crisis especially hurt flowers*. Financial crisis currently straining pocketbooks of the entire horticulture industry. The flower sector, which is perceived more as a luxury item than other products, was especially hurt, with many shipments actually being returned unsold to producers.

Workforce

Human capital limitations were cited as a constraint, especially at the smallholder level in the horticulture industry.

- *Small holders lack of exposure/training.* Smallholders have low technical skills in crop husbandry, irrigation, and land management. Some outgrower schemes and donor programs and serving to mitigate this constraint.

- *Lack of training institution*. No sufficient technical training institute for the horticulture industry.

Opportunities to Improve Competitiveness

Several activities were identified as potential areas for intervention to improve the competitiveness of the industry, addressing many of the constraints above. These include:

Improve transport and handling in the value chain:

- Proposal to build a cold room at the airport
- Improving standards for shipping truck refrigeration
- Building capacity for inspection at airport
- Build pack-houses and cold storages at key points

Strengthen marketing and value-added opportunities:
- Packaging, e.g. building pack-houses on site before export
- Additional branding through upgrading of labeling
- Build capacity for performing market research for horticulture
- Develop horticulture statistics – map Tanzania's regions and capacities
- Improve quality control by establishing a National Code of Conduct for Horticulture, benchmarked to international standards

Strengthen institutions supporting the horticulture cluster
- Building capacity at HODECT, the newly formed public-private apex body
- Assist TAHA in development of its industry service programs, e.g. TAHA Fresh (handling), MK Airlines (air transport to EU)
- Build capacity with associations – lobbying and information provision

Provide technical assistance and input provision to small farmers
- Provide technical assistance in business planning and management capacity
- Build testing laboratory facilities to verify chemical inputs
- Assist in providing access to finance at farm level matched with technical support for farmers and processors
- Improve government support capacity to smallholder farmers, e.g. extension
- Provide water management techniques training for farmers
- Build capacity with farmers to move toward in contract farming

Food Processing

--Highlight Clusters: Iringa--

Industry Structure

The food processing sector refers to the manufacturing of fruit, vegetables, oils and fats, dairy, grain mill products, starches and starch products, utilizing mainly agricultural inputs. This assessment performed interviews mainly in the south in Iringa, Mbeya and in Morogoro.

The value chain is based upon the production of farmers in the region, which consists largely of tomatoes, potatoes, sunflowers, rice, avocado as well as a variety of fruits including pineapple and mango. One dairy processor is also included in this analysis. The farmers sell their products for domestic consumption, directly to exporters as well as to the processors as inputs to their operations.

Processors are selling locally in Iringa, domestically to Dar and some to other parts, and a few are exporting to the EU and the Middle East. Many small “backyard processors” sell locally while the larger ones focus on one or more of these larger markets. Packaging material is sourced mostly from Dar es Salaam or imported, while technical services are scarce. Transport is most often vertically integrated into operations.

The Ministry of Agriculture has oversight of the regulations, through the local presence of the regional administrative secretary. SIDO assists the smaller processors.

Value Chain Productivity

There are many constraints along the food processing value chain which hinder productivity:

- *Poor quality of raw materials for processing*. This is due to poor crop husbandry at the farmer level due to lack of knowledge, exposure, and training. In addition, crops are damaged due to poor post-harvest handling. Little market information or knowledge of seed technology also results in lower productivity harvests.
- *Challenges to Access of Raw Materials Inputs.* Roads to reach rural farmers are often hard to access, causing added cost, delay, lack of communication and misinformation. Also, farmers are disorganized, and cannot commit to contracts. This leads processors to have to pay middlemen high prices.
  - There is some price competition from Kenyans who are buying raw material inputs from farmers and often pay more competitive prices

- *Lack of standards/certifications.* Processors need assistance in achieving certifications for export. Standards for domestic market to be explored as well with TBS, TFDA.
- *Consumers unaware of health, nutrition, hygiene issues*. At the consumer end as well, there is low capacity for understanding issues related to hygiene and nutrition that separate many processors' products from competitors.
- *Packaging materials sourcing difficult.* Packaging materials are expensive; only the big companies can afford quality materials because of minimum bulk order requirements. In addition, the sources of supply not clear and even if a source is identified, the systems of obtaining the materials have proven not to be stable.

Access to Markets

Transport and distribution issues exist which constrain the value chain.

- *Transport costs high, logistics challenging.* Transportation costs are high from the farm to the factory - poor roads in the remote producing areas as a result farmers are not easily accessible
- *Farmers not organized.* Farmers often not organized and producing very small areas (1/4 an acre) – diseconomies of scale in transportation
- *Distribution networks hard to penetrate*. Some processors who are new to the market have found that local retail and wholesale distribution channels are difficult to penetrate, even though their products are of high quality. This is reportedly due to ingrained networks of relationships and contacts which are hard to penetrate as a newcomer or an outsider.

General Business Environment

Some shortcomings in the business environment constrain this evolving cluster.

Very little cluster cooperation or government support exists:
- *Larger companies operating on their own, very little cluster cooperation.* The food processing cluster does not have a well-established association structure for the larger players. Each one operates on its own, or through individual effort to contac the Confederation of Tanzanian Industries (CTI).
- *TANOPA unites smaller firms.* Smaller processors in Iringa receive support both from involvement with TANOPA, the food processors association and from SIDO.
- *Talk of national government support, but no follow through*. For instance, the Ministry of Agriculture talked of organizing local tomato farmers i.e. into a sort of contract farming arrangement, but no action has been seen yet

Business environment challenging for processors:
- *Lack of access to finance.* Banks are only willing to lend out high interest, short term loans which makes purchasing needed equipment a challenge.
- *Uneven power major constraint.* High cost, inconsistency of power always a constraint.

- *Tax/regulatory issues*. Unpredictable, debilitating tax and regulatory actions by the government were reported in several instances. The dairy processor in Iringa suffers many taxes which other agricultural businesses do not pay and cut into margins. Another sunflower oil producer was immediately put out of business when an 18% VAT made his product non-price competitive.

Opportunities to Improve Competitiveness

Several activities were identified as potential areas for intervention to improve the competitiveness of the industry, addressing many of the constraints above. These include:

Improve cluster collaboration

- Encourage collaboration among stakeholders (both public–private and private–private).
- Source packaging materials for the industry as a whole.

Improve market development/marketing capabilities and market information at the industry level

- Linkages - assist with participation at international trade fairs.
- Market information - benchmarking/competitive analysis with other countries as starting point.
- Increase opportunities for value-added in many product areas, e.g. upgrading of labeling.
- Improve access to competitive markets (currently transportation and shelf space determined by personal contacts)
- Support access to regional markets

Build capacity to achieve certifications and for inspection

- Help to achieve certifications, e.g. HCCP, ISO, Organic, Fair Trade to reach new explore markets in Middle East, EU, region.
- Build capacity at TBS/TFDA to inspect as well as explore creation of new standards for quality control.
- Standards and certifications laboratories

Enhance operational productivity for firms

- Facilitate technology transfer
- Support training programs for skilled specialty staff (e.g., fortification: in house and cluster-wide)
- Strengthen cold chain and distribution network
- Improve post-harvest handling procedures

Business environment

- Review tax structure
- Infrastructure improvements in power and roads

Transport

--Highlight Clusters: Dar es Salaam--

Industry Structure
For the purposes of this value chain assessment, the industry consists of transport and logistics providers which move cargo (not people) within the country by sea, road and rail. Centered in Dar es Salaam, the cluster regulatory oversight is provided by SUMATRA with main supporting government functions by TANROADS (roads), the various port/harbor authorities (THA, etc.), and TRA. Public-private partnerships operate the railways. Private firms are road transporter, logistics providers, shipping lines and other service providers such as freight forwarders.

The major sea port in Tanzania is Dar es Salaam which handles more than 90% of total imports and exports cargo. Other ports are at Tanga and Mtwara with minor ports at Kilwa, Lindi and Mafia on the Indian ocean operated by the Tanzania Harbours Authority (THA).

TANROADS oversees the network of roads which are categorized into trunk roads, regional roads, district, urban, and feeder roads. Two railway lines operate, the Central line, which runs west from Dar es Salaam to Kigoma on Lake Tanganyika via Dodoma, and the Tazara, which runs into Zambia.

Value Chain Productivity
When undertaking this analysis, one must consider the cross-cutting nature of the transport industry as it affects the cost of production and competitiveness of all of the other industries under consideration.

- *Weak Associations/Clustering.* No apex association in the transport industry to guide overall strategy. Many transport companies are vertically integrated subsidiaries of parent companies in other industries, e.g. Asas Dairy has a fleet of 95 trucks, so they are less likely to cluster with other transport companies.
- *Associations dominated by large firms.* Particularly in the trucking industry, it was observed that large firms were over-represented in the associations and dominated the decision-making. This hindered open communication and equal representation.
- *Competition issues.* Domestic industry has the perception of an unfair playing field because international firms are vertically-integrating their shipping units with other operating units such as freight forwarding.

General Business Environment
Like other industries, transport companies face several challenges in operating in Tanzania's business environment:
- *No central transport planning.* There is no integrated strategic plan for air, sea, land transport and logistics for the country.

- *Institutional shift.* SUMATRA and accompanying institutions still adjusting to recent re-structuring
- *Privatization efforts not fruitful.* Recent attempts at privatization in the railway have been largely unsuccessful, resulting in continuing financial troubles as well as maintenance problems and accidents.
- *Delays at weigh stations along major trucking routes.* Delays at key weigh stations due to poorly calibrated scales, mis-measurement, and cumbersome procedures for handling weight discrepancies. (e.g., if discrepancy with previous weight at weigh station, a fine must be paid prior to requesting a second weighing)

Access to Markets
The three major transport avenues each have major constraints to operating to their full competitive potential.

- *Dar Port slow and costly.* Processing known to take up to months to clear shipments vs. days in neighboring countries. Especially with the increased volume of cargo passing through the port in the last few years, the port has become increasingly slow. Shift from pre-shipment inspection to post destination inspection, introduced in July 2004 have further burdened port inspectors. This is due to 2 types of infrastructural problems:
    - Physical – leads to long hold times. Short capacity in terms of space, equipment, and human resources; and
    - Soft – bureaucracy, slow systems. Lack of electronic interface – there is no electronic transmission between shipping lines and TRA to register the manifest submitted by the shipping line.
- *Roads cause delays, losses.* Major efficiency delays occur in most district, urban and feeder roads. Rough roads cause serious post-harvest losses in all agricultural production businesses. Unnecessary weighing and checkpoints along roads imposed by TANROADS cause major bottlenecks and logistics delays, and encourages higher corruption.
- *No city parking for trucks.* Not allowing heavy trucks to enter the city centre (because there is nowhere for them to park) for loading and unloading causes inconvenience in making deliveries and adds another step to the delivery process.
- *Railways in poor condition, financial trouble*. Central Railway is in poor condition, with an average of three major accidents per month Tanzam Railway is in financial crisis, and suffers poor management, with many locomotives out of service. The recent privatization viewed as largely unsuccessful. The cost for rail transport of cargo in Tanzania is extremely high– estimated USD 0.12 per ton Km compared to USD 0.02 per ton Km in developed countries like US (source: Ministry of Infrastructure and Development).

Other Major Constraints
Workforce

- *Health and safety.* The health and safety of truck drivers is a major problem for logistics companies as they drive long journey with many stops. Anti-smuggling restrictions necessitating un-healthy overnight shifts without breaks for drivers
- *Technology training.* The transport industry is becoming increasing technology-based, requiring additional training, especially in highly IT-dependent industries such freight forwarding.

Standards and Quality Control
Many points in the value chains constrain productivity.

- *Safety*. Safety issues on roads, railways because of poor maintenance, cause loss of valuable goods as well as fatal accidents.
- *Adulterated fuel.* Contaminated fuel: recently, some gas stations were reportedly selling fuel mixed with paraffin or diesel with petrol.
- *Sanitary standards.* Many companies carrying cargo are operated at very low standards and go unmonitored, e.g. reportedly one company reportedly transport fish in metal boxes using un-hygienic preservative rather than in cold trucks.
- *Cold chain*. Lack of cold storage facilities at key points, airport, port hinders perishable export products.

Opportunities to Increase Competitiveness
Several activities were identified as potential areas for intervention to improve the competitiveness of the industry, addressing many of the constraints above. These include:

Create integrated strategic plan for transport industry

- Assist transport industry association in preparing strategic plans, ensure that they coordinate with one another.
- Work in tandem with government to synchronize with 4 Corridor Development plan: Central, Dar es Salaam/TAZARA, Mtwara, and Tanga.
- Assess need for and feasibility of apex private sector transport industry association.

Introduce new technologies and best practices

- Provide training and investment support in IT systems.
- Create knowledge sharing platforms across transport industry to share experiences and best practices, to encourage open communication.
- Bring technical consultants specializing in safety issues to examine recent problems on roads and railways to prevent future accidents.

Meat

--Highlight Clusters: Dar, Arusha, Dodoma, Mwanza--

Industry Structure

The structure of the Meat industry is newly formed over the last few years and is rapidly evolving, both in the public and private sectors. The Ministry of Livestock and Development oversees the industry through its network of local government authorities and the newly-formed Meat Board and Meat Council. The government also privatized several abattoirs to stimulate private sector investment in the sector.

Cattle herders are the foundation of the meat cluster. However, some larger ranchers are coming into the market as well. Next along the value chain are slaughterhouses/slab-houses and abattoirs (processors), then exporters, butchers or other retailers.

The meat industry focused on the domestic market is spread across the country. Producers more focused on export have located in Dodoma, Arusha and Morogoro, with head offices in Dar es Salaam.

Value Chain Productivity

Tanzania has a significant natural comparative advantage in meat as it has the third largest stock of cattle in Africa behind Ethiopia and Sudan, as well as an abundance of land. Actors in the value chain have a mixed score card, however, in performance in helping the industry forward in advancing its competitiveness.

Private sector

- *Poor technology and practices at all levels*. Poor husbandry, breeding practices amongst herders. Slaughterhouses and abattoirs don't have access to and do not seek out improved methods.
- *Spare parts hard to service*. No specific agent dealing with abattoir spare parts or repairs, have to go to Nairobi to get spares, which is expensive and takes time. No one is trained in-house either.
- *Limited Cold Chain.* Lack of a cold chain across the country limits the number of markets that are able to grow out of the "daily meat" cycle
- *New technology being introduced*. However, recent new market entrants e.g. Tanzania Pride Meat setting new high quality standards in packaging and meat production.

Public sector

- *Undeveloped regulatory structure.* The Ministry of Livestock Development has created a whole new structure of public institutions and regulatory structure just in the last eight years. Although their commitment to developing the industry is

commendable, progress has been slow and they started from a point of completely non-commercialized industry.
- *Representative bodies still developing*. The Meat Board and Meat Council formed under the Meat Act of 2006 are still developing oversight and representative operations. Several interviewees had heard of these institutions but did not know their functions.

Educational institutions & workforce
- *Limited training*. There is limited training available in the industry. The first VETA facility was launched in 2008 in Dodoma for meat processing, but it only produces 25 graduates per year in that one location.
- *Herders need training*. Traditional producers (herders) are pastoralists and thus not market-oriented and need to be trained in husbandry techniques as well as business development and marketing.

Access to Markets

- *Auctions need capacity building.* Cattle ‘auctions’ have limited capacity, lack oversight, security. In fact, these events are not actual auctions, but prices are just negotiated on a per animal basis. Only one livestock officer oversees the whole auction and cannot provide sufficient security and management supervision.
- *Quality incentives*. Pricing at markets based on quantity, not quality of cattle, which gives herders no incentive to produce higher quality animals.

General Business Environment

- *New, undeveloped public institution and regulatory structure*. The Meat Board, Meat Council weak as oversight and representative institutions. Few stakeholders in the cluster understand the roles of the institutions and how they can work with them to maximum advantage.
- *Limited donor support*. Results from assistance likely not to be seen for 10 years so often difficult to attract assistance to the industry.
- *No tax incentives.* High import tax of the machineries and there spare parts. Currently they neither are nor treated as agricultural inputs such that they do not qualify for import duty exemption.

Standards and Certifications/Quality Control

- No national Tanzanian standards for meat, e.g. size, quality, texture, do not meet international standards either.
- Consumers not aware of preparation, quality standards, e.g. meat best consumed after again 6 days not right away
- Little to no quality control within many abattoirs/ slaughter-houses.
- “Backyard butchers” – many people still slaughtering (especially small stock, e.g. goats, sheep) at home, which is very un-hygienic.

Opportunities to Increase Competitiveness

Several activities were identified as potential areas for intervention to improve the competitiveness of the industry, addressing many of the constraints above. These include:

Build public and private institutional capacity

- Create forum for public-private dialogue, e.g. quarterly Meat Board meetings
- Increase capacity of meat association TAMEPA
- Create quality standards for meat at all points in the value chain
- Build government capability for regulatory oversight
- Provide capacity development to VETA to expand to locations nationwide

Improve market information at all levels in the industry

- Empower TAMEPA (or identify other entity) to implement industry-wide market linkages program
- Disseminate market information on international standards
- Provide training to herders to become more market-oriented

Certifications/quality control

- Create nationwide standards on size, quality, texture, etc. (public-private effort)
- Educate herders on husbandry techniques based on standards
- Introduce higher quality breeds to new generation of cattle herders

Dairy

--Highlight Clusters: Tanga, Musoma, Iringa--

Industry Structure
"The Tanzania Dairy Processing Industry has shrunk by more than 80 % over the last 15 years, is uncompetitive on the domestic market (narrow and expensive range of products) and is not export oriented. Thirteen dairy plants have gone out of business and total amount of milk processed per day is only 60,000 liters (down from 400,000 liters)" Quote from the "BEST report" prepared for the Tanzania Milk Processors Association (TAMPA) in December 2007.

The dairy industry in Tanzania is defined as milk and milk products. The value chain is based upon herders who bring their milk to collection points to processors who then sell to distributors or retailers.

The industry is spread across the country; however, according to a December 2008 study, only 11.6% of dairy processing capacity is being utilized. Lack of government support, lack of consumer taste and competition from imports are cited as the major reason for the decline of the industry.

Value Chain Productivity
There are several constraints along the value chain which hinder productivity:

- Low productivity due to poor irrigation, poor husbandry and breeding techniques as well as high cost and low quality of feed inputs
- Electricity costs high compared to competitors, need a stand-by generator due to power outages
- Access to finance high and difficult to access, inhibiting production.
- Access to milk inputs undependable, e.g. farmers often sell to 'hawkers' when there is a scarcity because they offer a higher price and processors can no longer source from their regular suppliers.

Access to Markets
- Electricity costs are very high compared to competitors, because need a strand-by generator due to power outages
- Tanzanian dairy brand considered inferior to imported brands
- No Tanzania tradition of dairy consumption, or understanding of nutrition benefits
- Strong competition from imported products

General Business Environment
- Tax and legal structure is unclear, e.g. liquid milk is zero rated in Kenya but in Tanzania it is confusing and different everywhere and you often have to pay VAT of 40%.

- Customs – dairy equipment charged 20%, whereas agricultural equipment exempt
- Dairy Board very low capacity to provide oversight, standards
- TAMPA, TAMPRODA associations weak, can't advocate on behalf of industry
- Industry decentralized due to localized nature of production/distribution

Other Major Constraints

Standards and Certifications/Quality Control

- Poor enforcement of TFDA and TBS standards due to capacity limitations and lack of standards
- Lack of cold chain infrastructure, e.g. products often spoil because of inconstant cooling facilities in supermarkets and other small stores, customers blame the brand.

Workforce

- No specialized dairy technology colleges/universities as a result professionals are expatriates or have to be sent abroad for training
- Poor husbandry and cattle breeding techniques at farmer level.

Opportunities to Increase Competitiveness

Several activities were identified as potential areas for intervention to improve the competitiveness of the industry, addressing many of the constraints above. These include:

Build public and private institutional capacity and communication

- Increase capacity of dairy associations, TAMPA, TAMPRODA
- Create forum for public-private dialogue regarding business environment issues
- Clarify role of Dairy Board in its oversight capacity

Build marketing channels and raise consumer awareness

- Promote nutritional benefits of milk products to Tanzanians
- Create marketing linkages for domestic processors with exporters
- Build Tanzanian dairy product brand in line with imports by creating set of national standards

Increase productivity, quality and profitability

- Explore innovative ownership models, e.g. Tanga Fresh where farmer's union owns portion of company, ensuring constant and good quality source of inputs
- Educate herders on advanced husbandry techniques
- Introduce new breeding programs to increase milk production, e.g. Farm Friends

Fish

--Highlight Clusters: Mwanza--

Industry Structure

Most of the fisheries industry in Tanzania is concentrated around Lake Victoria (Mwanza) which contributes 80% of fish followed by the Indian Ocean coast and Zanzibar. A negligible amount comes from Lake Tanganyika. This study concentrated on the Mwanza fishing area. Though interviews in Zanzibar did touch on the local industry there as well, this analysis focuses on Mwanza.

In Mwanza, fishermen supply fish from Lake Victoria to processors who sell to their network of exporters to the EU, Middle East and to a lesser extent Asia. TIPFA represents the processors while TAFU is the association which represents the fishermen; the Ministry of Livestock and Fisheries oversees the activities of the industry. Several donor activities are involved mostly in the environment impact areas of the industry.

Value Chain Productivity

There are several constraints along the fish value chain which hinder productivity:

- Strong competition internationally from Vietnam, China lowering prices commanded internationally.
- Electricity costs for processors are reportedly are 60% higher than in neighboring competitor Kenya.
- Severe shortage of fish (raw material) due to over-fishing.
- Fishing gear is imported, too expensive for fishermen, processors providing needed finance.
- Little value-added to export products, mostly plain fresh, frozen fillets, labeled abroad.

Access to Markets

- Mwanza airport taxes high and low capacity, recent safety issues, more convenient to go to Nairobi.
- Hard to access many potential new fishing area, Lake Tanganyika, Lake Ruywa.
- Ports can not handle deep see fishing vessels so this limits these ships ability to fish in Tanzania waters.

General Business Environment

- Weak association structure for fisherman (TAFU), activities for processors association limited to tax, some regulatory advocacy, air of secrecy in cluster.

- High levies and royalties on fish exports compared to neighbors.
- Poor public-private dialogue, e.g. private sector (processors) has not been kept well informed of research process in recovering Lake Victoria's fish population led by TAFIRI.
- Environmental protection laws and regulations not enforced, e.g. the law restricting fish of small fish, you still see them for sale at the market.
- Big problem with illegal fishing and smuggling.

Standards and Certifications/Quality Control

- Regional offices lack up to date skills and training.
- Lack of training of fishermen of proper fishing techniques in many areas.
- Certifications often an insurmountable barrier to export.

Opportunities to Increase Competitiveness

Enhance productivity
- Link the fishermen/ agents with finance to purchase gear.
- Implement sensitivization programs for fishermen on the long term impact of illegal fishing on the environment.

Cluster collaboration
- Build association capacity at fishermen and processor levels.
- Improved collaboration between processors and the government so as to have a harmonized decision before marking industry decision or changing regulations, or changing levies/ taxies.

Develop additional value-added products
- Encourage development of aquaculture, perhaps grants, co-financing scheme.
- Explore additional packing, labeling opportunities for value-added.

Certifications/quality control
- Build capacity at district level to perform up to-date techniques of inspection.
- Assist in obtaining certifications for import to major markets, e.g. EU shrimp certification was a major hurdle for Mafia farm.
- Obtain green certifications for fish, e.g. Earlier this year, Naturland, a German organic farmers cooperative, certified Lake Victoria perch as sustainable.

Textile

--Highlight Clusters: Dar, Arusha, Morogoro, Mwanza--

Industry Structure

The textile industry in Tanzania has locations nationwide with hubs in Arusha, Mwanza and Dar es Salaam, the first two of which were interviewed.

Though Tanzania enjoys low cost and abundant labor and raw material, it suffers other setbacks that make its non-regional export industries uncompetitive. Those companies who are still targeting local and regional markets, however, are still competitive.

Value Chain Productivity

There are several constraints along the value chain which hinder productivity:

- High cost of infrastructure, energy, fuel; power outages necessitate generators, makes operating equipment expensive.
- Hard to compete on productivity measures with economies of scale of large Asian textile companies.

Access to Markets

- Port congestion raises logistics costs both for sourcing inputs and shipping exports.
- Lack of economies of scales raise transport costs relative to Asian competitors.

General Business Environment

- Industry does not enjoy the same export incentives as many of its regional and international competitors.
- High cost of finance raises cost of doing business.
- Non-tariff barriers to trade make it difficult to take advantage of international trade agreements such as AGOA, Cotonou.

Workforce

- Low level of education produces low productivity workers.
- No viable textile institute so must train employees themselves or send abroad for training.

Opportunities to Increase Competitiveness

Focus on domestic and regional markets

- Big demand regionally and domestically for African fabrics.
- Local brand for textile strong in this market

Look for new ways to improve value-added

- One factory moved away from exporting yarn only finished products
- Look for cross-cutting value added with other sectors such as tourism

Cluster strengthening

- Explore strengthening the cluster as the industry evolves, perhaps with input from CTI
- Hold public-private dialogue to see whether there are any ways left for country to take advantage of trade agreements such as AGOA

Tea

--Highlight Clusters: Lesotho/Amani, Southern Highlands--

Industry Structure

There are two tea clusters in Tanzania, one in the North and the other in the Highlands in the South. Tea is farmed both on large estates and by smallholder farmers and consumed either locally or exported.

Value Chain Productivity

There are several constraints along the value chain which hinder productivity:

- Tea plants in the North are of the old variety which is almost 50 years old so yields are very low.
- Must import most equipment from abroad which makes spare parts and repairs and maintenance expensive.
- Lack of consistent power a major constraint to productivity of tea factories.

General Business Environment

- “Cess” tax paid to the government supposedly for local road infrastructure but no services seen in return.
- No follow up support for investors once investment is made in dealing with local political environment.
- Tea Board weak, offers little advice or advocacy, no financial support for industry.
- Recent raising of minimum wage by government without warning was disruptive to business.

Access to Markets

- Poor land management and irrigation leads to low crop yields.
- “Cess” tax paid to the government supposedly for local road infrastructure but no services seen in return.

Conclusion

Based upon these VCAs, TCCP will pursue strategies to improve competitiveness in a total of six industry clusters in Tanzania over the course of the three year program. Assessments in each industry are accompanied by further research and discussion with stakeholders through a series of workshops held over the course of the next month in the focus regions for each cluster.

The results of the assessment will be further debated in these workshops and the potential activities suggested in the last section of each Executive Summary VCA "Opportunities for Improving Competitiveness" will be further refined into a set of defined activities. The ultimate objective will be to create a program that will have positive, sustainable impact on the productivity and long term competitiveness of these Tanzanian industries.

Appendix A: Value Chain Questionnaire

Cluster Mapping

- *Cluster*. Who are the major stakeholders in the industry (government, private, associations) *W*here does your organization/firm fit in? Who are the most influential?
- *Growth*. Is the cluster evolving or changing? Are there new entities?
- *Innovators*. Who are the innovators in the industry? What/who drives growth and change?
- *Donor activity*. What donor and government programs are active in the sector? Are these effective?

Product Offering

- *Segments*. Which product segments are currently being offered? Do they represent 1) the full range of segments and 2) the highest value that could be offered?
- *Demand*. Who is the end market? Are there other potential customers that could be targeted?
- *Competitiveness*. What are Tanzania's strongest areas of advantages does Tanzania in horticulture in relation to competitors? (e.g. transportation costs, labor costs, climate, proximity to market, brand)
- *Standards/Certifications*. Is Tanzania internationally/regionally competitive? What efforts have been made recently to improve? (e.g. introduce certifications, launch new association, streamline regulations, etc.)

Value Chain Productivity

- *Relationships*. Is the relationship among buyers and suppliers in the value chain cooperative or adversarial?
- *Information flow*. How effective is the flow of information along the value chain (market trends, changes in price, external cost pressures)? How aware are the producers/farmers of the downstream market dynamics of the industry (market trends, demand conditions, pricing)?
- *Cost sensitivity*. How sensitive is the overall cost structure to the cost of raw materials and other inputs?
- *Logistics*. How do logistics services affect the cost of raw materials and intermediary products?
- *Supporting services*. What is the availability of supporting services (financial, logistics, administrative) across activities in the value chain?

Workforce

- *General*. What is the nature and quality of labor force in the industry? What skills are lacking?

- *Technical school*. Are there technical schools, other educational services? What quality are they? (industry certifications, IT training, technology application)
- *Academic curriculum*. How well do the academic institutions know the needs of industry? Is the curriculum aligned with the specific skills requirements of the industry?
- *Standards*. Are there industry standards for industry skills levels? Do the academic institutions teach to these standards?
- *Investment in staff*. Do firms to invest in the technical and management skills of their employees?
- *Recruitment*. How/where do firms recruit skilled staff? Do they have difficulty retaining trained talent?
- *Benchmark*. How do the skills levels of the value chain's workforce compare to competitors along key skills categories?

Business Environment

- *Regulatory*. What are the major regulatory barriers to operating profitably in the cluster or chain? (taxes, licenses, government regulations, etc)
- *Infrastructure*. How developed is the supporting infrastructure for the value chain / cluster? (transportation, electricity, water, land etc.)
- *Standards.* Do firms have the necessary standards and certifications to compete the attractive markets? If not, why not?
- *Associations.* What are the representative bodies for the industry? How well are they coordinating and advocating for the industry or sub-sector?

Data Collection

- Market economics
    - Industry size, segmentation and characteristics: domestic, export
    - Growth, drivers of demand/supply
    - Structure: geography, clusters /chains, linkages with other clusters
    - Current products, anticipated changes in the market.
    - Regional comparison
- Investment statistics:
    - Foreign, domestic
    - R&D, technology transfer
- Value chain studies performed
    - Costs structures
    - Current value added structure