Technical Report:

SOUTHERN AFRICA’S COTTON, TEXTILE AND APPAREL SECTOR: A VALUE CHAIN ANALYSIS

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# TABLE OF CONTENTS

TABLE OF CONTENTS ....................................................................................... 2  
LIST OF ACRONYMS ....................................................................................... 3  
1. INTRODUCTION ......................................................................................... 4  
2. THE COTTON VALUE CHAIN ................................................................... 7  
   2.1. Seed Cotton Production ................................................................... 7  
   2.2. Cotton Ginning ............................................................................... 14  
3. THE INDUSTRIAL VALUE CHAIN – SPINNING TO APPAREL .............. 15  
   3.1. APPAREL PRODUCTION ............................................................... 15  
   3.2. Fabric Production ........................................................................... 23  
   3.3. Spinning ......................................................................................... 25  
4. CONCLUSIONS ......................................................................................... 26  
SATH’s REGIONAL COTTON, TEXTILES AND APPAREL STRATEGY AND  
ACTIVITIES ..................................................................................................... 28  
Annex 1: Essential Statistical Profile of SADC’s Cotton, Textile and Apparel Value  
Chain ............................................................................................................... 31  
Annex 2: Some Organic and Sustainable Cotton Programs of Relevance to Southern  
Africa ............................................................................................................... 33  
Annex 3: Schematic Overview: The Cotton Value Chain .............................. 35  
Annex 4: Schematic Overview: The Textile Value Chain .............................. 36  
Annex 5: Schematic Overview: The Apparel Value Chain ............................ 37
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGOA</td>
<td>African Growth and Opportunity Act</td>
</tr>
<tr>
<td>ALAFA</td>
<td>Apparel Lesotho Alliance to Fight AIDS</td>
</tr>
<tr>
<td>B2B</td>
<td>Business-to-Business</td>
</tr>
<tr>
<td>BCI</td>
<td>Better Cotton Initiative</td>
</tr>
<tr>
<td>Bt</td>
<td>Bio-technology</td>
</tr>
<tr>
<td>CMA</td>
<td>Common Monetary Area</td>
</tr>
<tr>
<td>CMiA</td>
<td>Cotton Made in Africa</td>
</tr>
<tr>
<td>CTC</td>
<td>Cotton Training Centre</td>
</tr>
<tr>
<td>DDA</td>
<td>Doha Development Agenda</td>
</tr>
<tr>
<td>DFID</td>
<td>Department for International Development</td>
</tr>
<tr>
<td>EPA</td>
<td>Economic Partnership Agreement</td>
</tr>
<tr>
<td>ESA</td>
<td>East-Southern African</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GIZ</td>
<td>German International Development Agency</td>
</tr>
<tr>
<td>GMO</td>
<td>Genetically Modified Organism</td>
</tr>
<tr>
<td>LDC</td>
<td>Least Developed Country</td>
</tr>
<tr>
<td>MFA</td>
<td>Multi-Fiber Arrangement</td>
</tr>
<tr>
<td>MFN</td>
<td>Most Favored Nation</td>
</tr>
<tr>
<td>PEPFAR</td>
<td>President’s Emergency Fund for Aids Relief</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention Of Mother To Child Transmission</td>
</tr>
<tr>
<td>PPP</td>
<td>Public Private Partnership</td>
</tr>
<tr>
<td>PSI</td>
<td>Public Services International</td>
</tr>
<tr>
<td>SACAU</td>
<td>Southern African Confederation of Agricultural Unions</td>
</tr>
<tr>
<td>SACU</td>
<td>Southern African Customs Union</td>
</tr>
<tr>
<td>SADC</td>
<td>Southern African Development Community</td>
</tr>
<tr>
<td>SATH</td>
<td>Southern Africa Trade Hub</td>
</tr>
<tr>
<td>SSA</td>
<td>Sub-Saharan Africa</td>
</tr>
<tr>
<td>US</td>
<td>United States of America</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>USITC</td>
<td>United States International Trade Commission</td>
</tr>
<tr>
<td>WCA</td>
<td>West-Central Africa</td>
</tr>
<tr>
<td>WRAP</td>
<td>Worldwide Responsible Accredited Production</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

This report provides an overview of the cotton to apparel value chain of the member states of the Southern African Development Community (SADC). The report does not represent primary research but is the result of desk research drawing on a wide range of sources as well as the observations and experience of the authors.

The purpose of the report is to provide a current review of the cotton to apparel supply chain in southern Africa. This will be used to inform Southern Africa Trade Hub (SATH) decision making, as a resource for the United States (US) Agency for International Development (USAID) and for SATH partners and to suggest interventions that may, directly or indirectly, be supported by SATH. Major recommendations are highlighted in the text. A snapshot statistical profile of SADC’s entire cotton, textile and apparel pipeline is presented in Annex 1.

Though often discussed together because of the potential for beneficiation of the cotton into textiles and then garments, the growing and ginning of cotton and then the manufacture of cotton into yarns, textiles and garments in southern Africa actually comprises two value chains:

1) Agricultural – Cotton: the production of seed cotton through to the production of cotton lint via ginning. Some cotton lint is processed in southern Africa, but most is exported. Cotton is grown because it is a cash crop with a ready market, is not perishable, and is often pre-financed by the buyers (ginners). It is not grown because there is a spinning industry in southern Africa.

2) Industrial – Yarn to Apparel: the spinning of cotton lint and other fibers into yarns, through to the production of textile fabrics (wovens, knits and non-wovens) and then the make-up of these fabrics into garments and home textiles. Note that all yarns, fabrics and apparel produced in southern Africa do not necessarily contain cotton. Furthermore, some or all of the cotton used may not originate from southern Africa.

While both value chains have played an important part in the agricultural and industrial development of many SADC states, they have had very distinct growth trajectories.

The cotton production value chain remains important in those SADC countries with the agro-climatic potential to grow the crop. In 2009, it was estimated that about 863,000 smallholder households in SADC were involved in the growing of seed cotton. With a typical household size of 5.5 persons, this would mean that up to 4.7 million people are directly dependent on cotton for a substantial part of their livelihoods. Almost invariably, cotton is grown in rotation with food security crops by smallholder farmers. Cotton provides these households with essential cash income to purchase food not produced by the household and other household necessities. Table 1 shows cotton production in SADC states.

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1 Home textiles includes items such as bed linen, curtains, table cloths, bathroom towels, blankets, etc.
Table 1: SADC Cotton Production

<table>
<thead>
<tr>
<th>SADC State</th>
<th>Cotton Lint Produced (tons)</th>
<th>No. Cotton Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>1,000</td>
<td>?</td>
</tr>
<tr>
<td>Botswana</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DR Congo</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lesotho</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Malawi</td>
<td>28,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Mauritius</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mozambique</td>
<td>29,000</td>
<td>45,000</td>
</tr>
<tr>
<td>Namibia</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Seychelles</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>South Africa</td>
<td>8,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Swaziland</td>
<td>700</td>
<td>2,000</td>
</tr>
<tr>
<td>Tanzania</td>
<td>90,000</td>
<td>400,000</td>
</tr>
<tr>
<td>Zambia</td>
<td>43,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Madagascar</td>
<td>7,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>111,000</td>
<td>236,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>317,700 tons</strong></td>
<td><strong>863,000 households</strong></td>
</tr>
</tbody>
</table>

By contrast, the industrial value chain has come under increasing competitive pressure and has contracted in the region on an overall basis. This pressure has been caused by a number of factors, including the lowering of tariff barriers, smuggling, aggressive targeting of the African market by Asian producers, the dumping of both new and worn clothing, significant technological developments in manufacturing machinery, and the loss of the quota system following the demise of the Multi-Fiber Arrangement (MFA).

Despite the overall trend, some SADC states (Lesotho, Mauritius, Madagascar and Swaziland) have seen a general growth in their textile and apparel manufacturing industries. On the other hand, Botswana, Malawi, Mozambique, Namibia, South Africa, Tanzania, Zambia and Zimbabwe have contracted – some quite significantly.

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2 Source: SATH estimates (December 2010).

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According to SATH estimates, in 2010 about 314,000 people were directly employed in SADC’s formal sector textile and apparel manufacturing value chain – and more than 80% of these are women. Most of SADC’s textile and apparel manufacturing enterprises are located in urban and peri-urban areas and are staffed by low-skilled workers who have often lost most contact with rural farming areas. The incomes earned by these city dwellers play an important role in poverty alleviation and provides food security to people who generally have no access to land. Table 2 below shows textile and apparel production in SADC states.

Table 2: SADC Textile and Apparel Producing States

<table>
<thead>
<tr>
<th>SADC State</th>
<th>Textile Sector Exists</th>
<th>Garment Sector Exists</th>
<th>Production Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>M</td>
<td>M</td>
<td>? (small)</td>
</tr>
<tr>
<td>Botswana</td>
<td>yes</td>
<td>yes</td>
<td>5,000</td>
</tr>
<tr>
<td>DR Congo</td>
<td>M</td>
<td>M</td>
<td>? (small)</td>
</tr>
<tr>
<td>Lesotho</td>
<td>yes</td>
<td>yes</td>
<td>40,000</td>
</tr>
<tr>
<td>Malawi</td>
<td>yes</td>
<td>yes</td>
<td>1,500</td>
</tr>
<tr>
<td>Mauritius</td>
<td>yes</td>
<td>yes</td>
<td>50,000</td>
</tr>
<tr>
<td>Mozambique</td>
<td>yes</td>
<td>yes</td>
<td>2,500</td>
</tr>
<tr>
<td>Namibia</td>
<td>M</td>
<td>yes</td>
<td>1,000</td>
</tr>
<tr>
<td>Seychelles</td>
<td>M</td>
<td>M</td>
<td>? (small)</td>
</tr>
<tr>
<td>South Africa</td>
<td>yes</td>
<td>yes</td>
<td>120,000</td>
</tr>
<tr>
<td>Swaziland</td>
<td>yes</td>
<td>yes</td>
<td>15,000</td>
</tr>
<tr>
<td>Tanzania</td>
<td>yes</td>
<td>yes</td>
<td>21,000</td>
</tr>
<tr>
<td>Zambia</td>
<td>yes</td>
<td>yes</td>
<td>&lt; 8,000</td>
</tr>
<tr>
<td>Madagascar</td>
<td>yes</td>
<td>yes</td>
<td>50,000</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>yes</td>
<td>yes</td>
<td>16,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>314,000</strong></td>
</tr>
</tbody>
</table>

Key: M = marginal; ? = unknown – but thought to be very small.

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3 Source: SATH estimates (December 2010).

4 Establishments with more than 30 employees. There are also significant numbers of micro and small sized manufacturing units, but their contribution to production and imports is relatively small.
2. THE COTTON VALUE CHAIN

In brief, raw cotton or “seed cotton” produced by farmers is sold directly or indirectly to cotton ginners. Cotton ginners gin the cotton, and their output, “cotton lint”, is sold to local or international buyers. Cotton seed, a by-product of ginning, is sold to oil extractors who produce cottonseed oil and cotton seedcake – although in some instances ginners have installed their own oil extraction machinery. See schematic value chain map – Annex 3.

2.1. Seed Cotton Production

Cotton is grown extensively throughout Africa and has been a significant cash crop for smallholder farmers for many years. The importance of this crop, both at the household and broader economic level, cannot be overemphasized.

Most SADC cotton farmers are smallholder producers who grow cotton on family-owned plots. Cotton is frequently grown in rotation with other food crops, and it is the most significant cash crop for most farmer households in Mozambique, Tanzania, Zambia and Zimbabwe. Additionally, as burley tobacco production declines, it is an increasingly important cash crop in Malawi. The key reason cotton is so important is that, once harvested and kept dry, it does not deteriorate significantly. This allows the crop to be consolidated and transported without time constraints, which is an important criterion given the poor state of much of rural Africa’s storage, road and other transport infrastructure.

Historically, cotton provided pre and post-colonial governments with a major export crop that contributed to foreign exchange earnings in a significant way. These countries protected their cotton growing sectors by imposing protective tariffs and supporting cotton through significant investment in cotton development institutions providing seed, agrochemical inputs and extension services to farmers. Inputs and extension services were offered through a state-owned cotton marketing board with monopsony powers. In the SADC region, cotton marketing has been liberalized to allow competition in the buying process, and the cotton marketing boards have been privatized or had their powers significantly curtailed. Government is involved, but to a lesser degree than previously. Although it varies from country to country, examples of government involvement include minimum price setting, allocation of concessions, involvement in the development of new seed varieties, initial reproduction of existing pure seed stocks, etc.

The number of Southern African smallholder farmers planting cotton each growing season, and the amount of land they dedicate to cotton, is largely influenced by:

- The pre-financed input package offered by ginners;
- Their perception of prices that will be paid for cotton which is heavily influenced by what farmers actually got paid for their seed cotton in the preceding harvest; and
- In countries where the systems supplying certified cotton seed have broken down, many ginners retain the cotton seed for distribution to farmers in the next planting season. The use of continually recycled seed has a negative impact on the quantity and quality of cotton produced.

6 Large scale commercial farmers in South Africa and Zimbabwe grew cotton until the late 1990s, but most switched to other crops as world prices for cotton lint continued to be depressed. The government of Mozambique is encouraging large-scale commercial cotton farming, with its associated economies of scale.
• Their perception of prices expected to be paid for the other crops they could grow.

In most SADC states cotton ginners, as the ultimate buyers of seed cotton grown by farmers, operate contract farming systems. In contract farming systems, ginners extend credit to smallholder farmers mainly in the form of seeds, agrochemicals, picking bags and agricultural extension support services. The cotton farmers who receive these inputs are then required to sell their seed cotton to the ginner that provided them with credit inputs and other support services. Contract farming systems of different types are the norm in Zambia, Malawi, Mozambique and Zimbabwe. In Tanzania, the only major cotton producing SADC state where there are currently no contract farming arrangements in place, there is no provision of inputs or extension by ginners.7

However, after cotton marketing boards were abolished, and with the advent of limited competition, the quality of inputs and extension services has seriously degraded due to lack of contract enforcement (and in the case of the largest producer, Zimbabwe, massive political interference in the marketing process)8. This has significantly impacted smallholder productivity.

To address this issue, governments need to enforce contract law so that a farmer that has contracted to sell cotton to a particular ginner actually does so and thus pays back in-kind inputs and extension services provide by the ginner. Industry self-regulation is also helpful to discourage rogue traders/ginners from attempting to buy cotton already contracted to another purchaser.

Recommendation: SATH should work with cotton production value chain stakeholders – cotton producers and ginners – to assist in the process of developing industry self-regulatory mechanisms for contract buying that will optimize the provision of inputs and extension to contract farmers.

Cotton is a global commodity traded at international prices and much of it is sold via “forward” contracts into the global marketplace. From 2000 to 2009 the price of cotton lint ranged between US$0.50 to 0.60 cents per pound. All of this changed in 2010. Floods in Pakistan wiped out a large portion of that country’s cotton crop, while India imposed severe restrictions in 2010 on the export of cotton lint and yarn in order to depress prices locally for the benefit of its own textile industry. A shortage of cotton lint stock drove prices higher until they peaked over US$2 per pound. The cotton price has pulled back dramatically in April 2011 but is still trading above US$1 per pound (see Graph 1).

7 A donor funded initiative is currently underway in Tanzania backing the introduction of contract farming (first season 2011/12).

8 Cotton ginners (or their agents) that do not provide extension or credit to farmers have lower costs, and are therefore able to pay a higher price for cotton lint, getting a “free ride” on those ginners that do.
Graph 1: The International Price of Cotton Lint (1999 to 2011)

The higher prices paid for seed cotton in 2010 resulted in a scramble to plant increasing acreages of cotton in southern Africa in the 2010/11 growing season.\(^9\)

Going forward, as global in-firm inventories of lint rise, it is likely that average prices will continue to weaken somewhat – however the International Cotton Advisory Committee (ICAC) has noted that for the foreseeable future the prices of lint will remain above the average cotton price for the period 2000 to 2009.

In many southern Africa states, governments set minimum prices that have to be paid to farmers. Generally, this is done right before the harvest to reflect the latest international price trends. This is especially the case when contract farming has been adopted and farmers are required to sell their crops to the ginners/buyers that have extended credit to them. In the price setting process, government agencies consult extensively with both ginners and cotton producers, with the ginners generally arguing for lower prices, and the farmer for higher prices. The problem expressed by farmers is that they do not have the capacity to undertake the analysis required to develop well-documented and transparent price proposals, so the ginner’s price proposals carry far more weight with government authorities. The cotton farmers complain that the result is they do not receive their fair share of the international prices for cotton. This may be as much perception as reality, but, the effect is to dampen production of cotton and sometimes farmer incomes.

**Recommendation:** SATH should assist SADC cotton farming organizations and some of its regulatory authorities to develop the capability to analyze price factors and prepare cotton pricing proposals so that they can be an equal partner in the cotton lint price setting process.

Cotton yields (kilograms (kg) per hectare (HA)) in most southern African states are relatively low when compared to production elsewhere in the world. Major differences exist in the yields within the SADC region, where South Africa has an

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\(^9\) The southern African growing season generally lasts between October/November (planting) and April/May (harvesting) of each year.
average yield of around 2 metric tons per hectare (MTs/HA) while Zimbabwe averages about 0.7 MTs/HA; in Tanzania yields are even lower. A factor depressing yield is that most cotton grown outside of South Africa is rain-fed as opposed to irrigated crop, as in South Africa. However southern Africa rain fed yields are significantly below the yields that farmers in West Africa achieve also with rain-fed farming systems. Graph 2 shows how much lower southern and eastern African cotton yields are per hectare when compared with that of global production and of West and Central African production. Another factor that may explain the differential between the yields is that the input packages and extension services appear to be more effective in West and Central Africa.

**Graph 2: Cotton Yields per Hectare: Global, West-Central Africa and East-Southern African Yields Compared**

New technologies are available that have the capability for transforming cotton production in sub-Saharan Africa. The most important for smallholder production systems is the development of genetically modified (GMO) seed. Specifically, the introduction of the *Bacillus Thuringiensis* (Bt) gene into cotton makes the plant resistant to its chief predators including tobacco cutworm and bollworm. When properly tested and implemented, GMO technology has the potential to improve cotton yields while reducing agrochemical inputs to the benefit of cotton farmers throughout the region. If African cotton farmers do not switch to GMO production, they will become increasingly less competitive compared to their counterparts in other cotton producing regions in the world that have adopted the technology.


In sub-Saharan Africa (SSA) the only states that presently allow the use of GMO cotton seed are Burkina Faso and South Africa. Malawi recently approved confined trials of GMO cotton seed, the first step in the approval process. Malawi, Zambia, Mozambique and Zimbabwe have the necessary legislative and institutional apparatus to approve its usage, although there may be room for improvement. In the discussions SATH consultants had with the SADC region’s cotton development/research/regulatory bodies, as well as organizations of farmers and ginners, stakeholders increasingly favor the introduction of GMO cotton.

At a biotech summit hosted by the Southern African Confederation of Agricultural Unions (SACAU) in May 2011, a resolution was passed that, while acknowledging the potential risks of GMO, called upon regional SADC governments to proceed to take the necessary steps to introduce GMO seeds for farmers.\(^{12}\) In Malawi, a SATH-supported biotechnology summit hosted by the Farmers Union of Malawi (FUM) in June 2011 called upon the government to expedite approval of confined trials, and the Minister of Environment gave his public support for this and shortly thereafter issued his final official approval.

In Zambia and Mozambique, the relevant ministries have expressed support for the introduction of GM cotton. In Mozambique, the Cotton Institute of Mozambique (IAM, part of the Ministry of Agriculture), has requested SATH assistance in its negotiations with the Bt technology provider.

The previously expressed concerns over health and environmental impacts, market access to non-GMO markets, the impact on local seed systems, and the additional cost/risk factor to farmers appear to have been addressed, or are outweighed by the benefits of GMO cotton to farmers. Only the government ministry in Zimbabwe still expresses significant concerns.

Still, there are many issues with regard to negotiation of intellectual property rights, the motivation and capability of public sector institutions responsible for bio-safety regulations, concerns with certain aspects of the bio-safety legislation, and the capability of local seed industry that are slowing down introduction of GMO cotton.

Genetically Modified (GM) technology is not a “silver bullet” that is the answer to all problems of cotton productivity, but in combination with improved extension/inputs and better farm prices will do much to increase the productivity and profitability of southern Africa’s smallholder cotton farmers. Should GM cotton be allowed, it may encourage the mechanized commercial production of cotton in SADC states, which may be done by large scale commercial farmers, but also by smallholders in “hub and spoke” outgrower systems, where mechanization is supplied by larger growers, or by co-operatives that share equipment.

As noted earlier, the availability of conventional certified seed that has been developed to suit local conditions is a problem. Recycled seed is widely used in Malawi, Mozambique, and Tanzania. If farmers use certified rather than recycled seed, yields and quality may improve by as much as 25%. Fortunately, activities that support the development and use of certified reinforce those measures that support the introduction of GM seed.

\(^{12}\) SACAU is a southern African organization that represents farmer bodies in SADC member states. SACAU is actively involved in the formation of the Southern African Cotton Producers Association (SACPA) – SACPA will represent the main cotton farmer organizations in each SADC state.
**Recommendation: Provide technical assistance to the private and public sector in Southern Africa to facilitate the responsible, sustainable introduction and implementation of certified seed and GMO technology in the cotton sector.**

The vast majority of farmers growing cotton in southern Africa are smallholders, who use some certified seed, fertilizers and pesticides when provided by the ginners who usually finance these inputs. The large South African producers use inputs more intensively than smallholders. Additionally, much of their cotton is irrigated, weeds are suppressed using herbicides, chemical defoliants are used prior to harvesting and the crop is machine-harvested. Unfortunately, the chemical inputs are not always used responsibly and there is increasing global concern about their impact on human health, the environment, and long-term soil fertility.\(^{13}\)

There has been a significant increase in interventions that are attempting to mitigate the negative effects of cotton production on the soil, surrounding landscapes and particularly on humans and livestock. In addition, there is a growing consumer interest in the “fair” and “sustainable” production of cotton in their supply chain. As a reaction to this, some apparel brands have started to scrutinize their cotton supply chains, from both a social and environmental aspect.\(^{14}\)

So-called “sustainable cotton” production initiatives are being introduced into many of the world’s major cotton production areas. These include “certified organic cotton”, and “sustainable cotton” such as Better Cotton Initiative (BCI), Cotton Made in Africa (CMiA) and Fair Trade Cotton. From a market perspective, the successful introduction of certified organic and BCI production in India has demonstrated that, where credible claims of sustainability can be made from cotton seed production through to finished garments, there is ready demand, although the relative sales percentages are still low. Annex 2 outlines some of the more important sustainable cotton programs.

All sustainable cotton production systems need to be contrasted against the benefits of growing cotton using so-called “conventional” methods. Classic conventional agriculture includes higher levels of control over yield, quality and time to market. Input costs in conventional agriculture are generally high in terms of inputs such as seed (if GMO is used) and agro-chemicals (pesticides and herbicides) but this is offset by larger yields and relatively lower harvesting and processing costs.

In SATH’s view, sustainable cotton initiatives that take the middle path and balance productivity with environmental, health and agronomic impacts, are worth supporting. Those sustainable cotton initiatives, like the BCI, that encourage the careful, controlled use of chemical inputs and GM technology take a sensible approach, and have the considerable added benefit of improving the marketability/price of cotton produced.

\(^{13}\) “The excessive and inappropriate use of fertilizers and pesticides and pollution of waterways and aquifers has led to beneficial insects and other forms of wildlife being killed along with the pests. There have also been negative consequences for human health: pesticides poisoning are frequent and in India rising rates of cancer are blamed on the heavy applications of pesticides that farmers apply to cotton.” Source: IFAD “Rural Poverty Report”; (2011).

\(^{14}\) For example: Tesco, C&A and H&M have banned the use of Uzbekistan cotton in their supply chains due to child labor abuses.
**Recommendation:** Support introduction of market-oriented sustainable cotton production, with a focus on the establishment of strong linkages between sustainable cotton projects and brands and retailers through linked supply chains.

Southern Africa’s cotton is relatively homogeneous in terms of fiber characteristics, due to similar growing conditions and the low number of varieties planted in most countries. Outside of South Africa, cotton is handpicked, with less contamination, and should enjoy a premium. Unfortunately the opposite is the case. Handpicked seed cotton is often contaminated with synthetic fibers introduced by the use of inappropriate picking bags at farm level. This causes serious problems further down the value chain. Also, additional contamination is caused by poor on-farm storage, and bad ginning practices. As a result, much of southern Africa’s handpicked cotton now actually trades at a discount to its machine picked cotton competition.

The quality variation within bales of southern Africa cotton is greater than that of most other cotton producing regions, because the production of several farmers is often mixed in a single bale. The quality of cotton originating from key SADC cotton producing states is thus patchy. In many cases, the cotton produced by individual farmers is inadequately graded when they sell it at the collection points meaning that contamination-free higher quality cotton is not rewarded with a better price.

Commercially estate-grown cotton originating from South Africa is generally recognized as some of the highest quality cotton in the world. Cotton originating from Zambia and Zimbabwe is generally known to be of a better quality and therefore typically attracts a higher price. Cotton grown in Tanzania and Mozambique is considered to be of inferior quality and thus its cotton trades at a significant discount. For example, cotton from Tanzania generally trades at a 5% discount to the world price due to its inherent grading and quality irregularities.

Much of the contamination/quality issues will be addressed by ensuring more effective use of grading and standards to link price and quality so that ginners can benefit from the investments they make in higher quality and farmers are compensated with higher prices for higher quality cotton. This will also require technical assistance in the area of cotton grading and reduction of contamination.

**Recommendation:** Technical assistance to help eliminate contamination and introduce/ strengthen a grading/classing of seed cotton at the point of purchase.

South Africa is the only cotton producer in the region where larger commercial producers dominate and about 90% of South Africa’s cotton is grown using irrigation. Despite the respectable yields – in some cases more than 4 tons per HA – and good quality of South African large-scale production, the area cultivated has declined enormously due to the history of depressed prices for cotton and the farmers’ ability

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15 This section relies heavily upon the work of: Estur, G.; “Quality and the Marketing of Cotton Lint in Africa” World Bank (2008).
to receive better prices for alternative crops. However, with higher prices, cotton production is expected to increase.

Cotton SA is the principal development organization for cotton production in South Africa. Previously a parastatal control board, Cotton SA is now a non-profit service provider outside of the ambit of state control. The majority of its funding is received through a levy on cotton production. However, declining volumes have caused a decrease in the organization’s funding and its capacity to continue to develop the industry successfully. It needs to find new means of revenue generation if it is to survive. Its demise would be highly unfortunate, as Cotton SA could play a unique and crucial role in research, education, farmer extension and, uniquely, grading cotton for the entire southern African region.

In Zimbabwe, the Cotton Training Centre (CTC) had a strong role in developing the cotton sector, and similarly to South Africa, with the advent of liberalization, control and funding was transferred to the private sector. However, the political chaos that engulfed Zimbabwe from 2001 has led to the demise of the CTC as a viable service provider.

Recommendation: Work with Cotton SA to help it become a regional service provider. Its skills and in-house resources are of enormous value to the regional cotton value chain including growers and ginner.

2.2. Cotton Ginning

The cotton ginning process separates the seed from the lint. Typically, one ton of seed cotton yields between 350 and 400 kilograms of lint cotton and 600 to 650 kilograms of seed. The seed is then sold by the ginner to oil extractors who crush the seed yielding cotton oil and cotton cake. The cotton seed oil is not high quality, and is used primarily for margarine and other industrial applications. The cotton cake is used for livestock feed, primarily for ruminants such as cattle as the cake is too fibrous to be used in poultry feed. In general, cotton lint is about 75 to 80% of the value of the seed cotton with the seed by-products worth approximately 20-25%.

In many SADC states, installed ginning capacity far outstrips typical annual cotton production. Thus, should average production yields increase there should in theory be sufficient ginning capacity. The excessive installed ginning capacity is partly a result of the declining production of cotton in the region over a number of years, as much from lower yields as from land taken out of cotton. In some countries, notably Zimbabwe, cotton ginning was one of the few viable ways to externalize hard currency and it attracted a number of “fly-by-night” operators with sub-standard

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16 The composition of seed cotton by weight depends on numerous factors, typically one ton of seed cotton yields between 35 to 40% lint, about 10% cotton oil, and about 30% cotton meal. The relative proportions partly depend on the ginning outturn ratio, which ranges between 30 and 40% of the weight of seed cotton, and the cotton oil extraction ratio, which ranges between 10 percent and 16 percent of the weight of cotton seed depending on the method of crushing. Source: Baffes, J.; “Markets for Cotton By-Products: Global Trends and Implications for African Cotton Producers” World Bank (2010).

17 Some of the existing capacity is obsolete but still functional. In Tanzania, for example, some gins date back to the mid-1920’s. These have been badly maintained, and can damage the cotton fiber in the ginning process.
equipment. There is a vicious circle of low utilization, low profitability, and lack of maintenance and reinvestment which may be depressing the quality of ginned cotton.

The economic incentives for keeping poor-quality gins in operation are eroding with the dollarization of the Zimbabwean economy and therefore less pressure to externalize hard currency. Also, as the entire supply chain is increasingly rewarded for producing higher quality cotton, obsolete/sub-standard gins will be retired.

3. THE INDUSTRIAL VALUE CHAIN – SPINNING TO APPAREL

The industrial value chain begins with lint cotton from the ginners and other fibers spun into yarn in spinning facilities. The cotton yarn is then made into fabric through weaving or knitting. In the final stage in the industrial value chain, fabric, together with trims (zippers, buttons, etc.) is produced into apparel.

This is a highly complex, heterogeneous value chain that runs the gamut from Small and Medium Sized (SME) producers of garments to very large integrated plans that take in cotton lint and produce finished garments. See the schematic value chain maps for textile and garment production in Annexes 4 and 5.

In southern Africa, the industrial value chain is driven by apparel production, so the demand for fabric and yarn is driven by the demand for apparel. Therefore, we will begin by examining the dynamics of garment production, and then move down the value chain to fabric and yarn production and finally briefly address spinning.

Key recommendations specific to apparel, fabric and spinning parts of the value chain will be made throughout this section. More general recommendations will be made at the end.

3.1. APPAREL PRODUCTION

3.1.1. International Dynamics

Historically, countries in the SADC region produced garments for local or regional consumption. The opening-up of trade globally from the 1990s onwards exposed a range of weaknesses in many of Southern Africa’s garment manufacturing industries – especially those domestic firms that concentrated on supplying local markets only.

Apparel production is a mobile, highly competitive industry, unusually sensitive to changes in the business environment, country incentives and international trade agreements. Apparel production is not capital intensive – a US$1 million investment can create 1,000 jobs – and it is relatively easy to shut down production in one country and move it to another. Apparel is very labor intensive and therefore highly sensitive to changes in wage rates.

Many SADC member states had granted apparel firms a range of generous industrial incentives, and they enjoyed high most favored nation (MFN) tariff protection. As a result, most firms did not invest sufficiently in their own businesses to make them more competitive once the incentives ended and when the tariffs were lowered. Other stresses that many regional firms faced included a strengthening in the value of the South African Rand (South Africa, Lesotho, Namibia and Swaziland effectively all share the same currency) which also affected the competitiveness of exports.
while making imports of apparel cheaper. Firms also generally faced increasing costs of labor and utilities - mainly water and power. Many firms failed to respond by adequately investing in human resources, attempting to reduce costs or upgrading machinery.

The biggest decline in the size of the industry has occurred in South Africa - by far the largest market in SADC – but production in countries like Tanzania, Zimbabwe and Zambia has also been affected.

Quota restrictions were imposed by developed countries on clothing originating from some of the world’s largest garment producers, including China and India, as a consequence of the World Trade Organization’s (WTO) MFA in 1994. The MFA quotas caused a worldwide dispersal of export orientated apparel producing industries from quota-constrained countries to those with underused quota. Southern Africa benefited to some extent – mostly Mauritius and to a lesser extent Lesotho and Swaziland.

The introduction by the US of the African Growth and Opportunity Act (AGOA) in May 2000 allowed apparel producers in selected SSA states duty-free as well as virtually quota-free access to the U.S. market. Additionally, except for South Africa, beneficiary countries were granted the right to use fabrics sourced from anywhere in the world through the so-called “third country fabric” provision. This set the stage for a significant growth of apparel manufacturing industries in Lesotho, Swaziland, Mauritius, and Madagascar. Without AGOA, it is doubtful that the textile and especially apparel industries in many SADC states would have employed the numbers of workers that they currently do.

The demise of the MFA at the end of 2004 meant the elimination of the apparel quota system. There was now no longer an advantage to produce in countries where other competitive factors were missing. Sourcing agents and buyers began to concentrate their commitments in a smaller number of countries that had the capacity to manage the majority of their requirements. Certain countries, including Bangladesh and China, benefitted substantially from the demise of global apparel quotas at the expense of southern African garment exporters. Bangladesh and China, due to the low level of workers’ pay, were able to supply garments into the US at lower prices than many southern African apparel producers despite the duty free advantage that many of them enjoyed under AGOA.

In common with other Least Developed Countries (LDCs), many Southern African apparel producers also enjoy duty and quota free access to the European Union (EU) in terms of bi-lateral trade deals under the recently introduced interim “Economic Partnership Agreements” (EPAs). As with AGOA, under the EPAs most southern African made apparel enjoys duty and quota free access even when made with fabrics sourced from anywhere in the world. As with AGOA, South Africa does not enjoy this “third country fabric” privilege. Outside of Mauritius and Madagascar, most southern African producers have had little historical contact with EU retailers, as the larger regional producers whose head offices are located in the Asia are mainly connected with buyers in the US. There has been a surge in EU-bound apparel exports from producers located in Mauritius and Madagascar as the French

18 South Africa was considered by the US to be a very developed economy and thus its apparel producers were denied use of the 3rd country fabric provision.
speaking owners of these establishments have considerable direct ties with EU (especially French) apparel retail value chains.

The main apparel exporting countries have been Lesotho, Madagascar, Mauritius and Swaziland, although there are smaller apparel export industries in Botswana, Malawi and Tanzania. In 2009, SADC states exported US$736 million worth of garments to the US, mainly from Lesotho, Mauritius, Swaziland and Madagascar. Similarly the EU is an important market for southern African produced clothing with SADC states exporting over US$1 billion in 2009, with Madagascar and Mauritius as the most important regional exporters to this market.

Much of the growth in garment manufacturing capacity in the region has been driven by Asian investors, mainly from Taiwan, Hong Kong and India. These investors not only had the capital to fund manufacturing investment but, more importantly, they were also well connected to the buyers (i.e. retailers, brands and sourcing agents) and to the suppliers of a wide range of fabrics. Annex 1 (columns 10 and 11) detail how much garments SADC states exported to the US and the EU in 2009.

The current positive climate for apparel production is somewhat tenuous. Should the third country provision be revoked by either the US or the EU, apparel exports from Lesotho, Mauritius, Madagascar, Swaziland and Tanzania would plummet. Also, if the WTO Doha Development Agenda (DDA) negotiations are concluded, most of the industrial output of the world’s LDC states would also enjoy duty and quota-free access. The relative protection enjoyed by many SADC states under AGOA and the EPAs would be eliminated. Under either eventuality, it is often asserted that preference erosion would cause orders that would normally go to factories in Lesotho, Madagascar, Mauritius and Swaziland to migrate to LDC states like Bangladesh or Cambodia; but this may be mitigated by other global trends.

From mid-2010 onwards, there has been a significant increase in interest in SSA as a destination for apparel procurement. EU retailers that have explored regional sourcing opportunities have included H & M, Puma, Reebok, M & S. US retailers that are working on developing SSA sourcing programs have included JC Penny and Wal-Mart. There is interest in fashion items, as well as utility/basic types of garments such as t-shirts, polos, jeans and chinos.

The reason for this new interest in SSA is due to rising production costs in the world’s key apparel producing country, China. Wages in China have gone as much as 200% in the past few years and wages are now significantly higher than those in SSA outside of South Africa. Also, manufacturers in China are turning to the higher-margin domestic market which is not as fussy about compliance with labor, social, or environmental norms. Another factor in this turn to the domestic market is that the

19 Namibia saw an important US export apparel industry develop with the establishment of the Malaysian owned Ramatex facility in Windhoek in 2002. Ramatex was a large vertically integrated spin-knit-garment make-up operation. By 2006 Ramatex was closed – in spite of very generous fiscal benefits it had received from the Namibian government. Much of its problems concerned an inability to maintain harmonious relationships with its workforce and persistent pressures on its environmental record.

20 In January 2010 Madagascar lost its AGOA privileges due to the unconstitutional transfer of political power. In October 2011 it was estimated that as a consequence of this at least 40,000 textile and apparel workers lost their jobs. It is likely that some of these workers may have found alternative employment in the apparel manufacturing industry in firms which refocused production to the EU market.
export rebate available to Chinese exporters has been cut back, reducing export margins.

Diversification of sourcing country is another factor that has become increasingly important to international apparel buyers. Costs in China could climb even higher very rapidly. Political instability has increased the risk of buying from alternative sources like Pakistan or Bangladesh and costs have also increased in Vietnam. Finally, AGOA and the EPAs with their third country fabric provisions, remain some of the more attractive preferential trade arrangements that the world offers.

These potential shifts in sourcing patterns present Southern African states with significant opportunities to attract additional manufacturing investments – mainly in apparel production but possibly also textiles – that could service this new demand. International apparel retailers will find the southern African region additionally appealing if the sources of fabrics required to make garments were readily found within the region. This issue will be addressed in more detail in the fabric section below. Close geographic proximity of textile and garment producers provides significant lead time advantages, as fabrics imported from the East can take up to 45 days to delivery to Lesotho, for example.

**Recommendation:** Support export promotion activities that capitalize on the new awareness of sourcing in Africa, such as the development of apparel and textile shows, participation of US and EU brands at shows and Business-to-Business (B2B) events in Africa, and targeted marketing of regional products at US and EU apparel trade shows.

**Recommendation:** Encourage regional private sector value chain service providers to improve productivity of firms by promoting regionally based firms to provide them with training and technical assistance in order to improve plant competitiveness.

**Recommendation:** Build the capacity of regional manufacturers associations to work with national governments and the SADC Secretariat to ensure better negotiation strategies for key trade agreements.

### 3.1.2. Regional Dynamics

Following the reduction in the levels of domestic protection, clothing demand in southern Africa has increasingly been met by imports. Supply has come from both legal imports, for which full duties are paid, and illegal imports, for which duties are not paid at all or partial duties are paid due to under-invoicing and other corrupt practices. In addition, many southern African states have seen large volumes of second-hand clothing imports from the EU and the US via commercial traders as well as by humanitarian groups.

There are changes in SADC’s largest market – South Africa. Domestic garment producers are still significant, but a number of South African apparel retailers, brands, and their domestic suppliers have begun to expand sourcing in southern
Africa as increasing wages and the strong Rand put pressure on domestic production. There is also concern that some South African based suppliers may be closed for violating the country’s minimum wages, employment conditions and labor laws, making diversification of supply footprint a prudent strategy.

In response, since about 2005, South African headquartered apparel manufacturers have begun to procure output from garment production units in other SADC member states – mainly in Lesotho and Swaziland but also in places like Mauritius. Much of the production of mainly simple commodity type apparel items has relocated from South Africa.

If the region is unable to capitalize on this demand for commodity type items, sourcing of lower cost items could move to an Asian destination. Given the higher costs associated with production in South Africa relative to the cost structures in the rest of SADC, and given the general higher level of skills of South African workers relative to the skills of workers in continental SADC, South African firms wishing to produce domestically will need to make higher value added garments – much like the garment industry in Turkey has moved up the value chain as costs have increased.

As a result of these regional dynamics, Botswana, Lesotho, Madagascar, Mauritius, Tanzania and Swaziland are supplying significant volumes of clothing to South Africa. This has occurred in spite of the fact that the rules of origin contained in the SADC Protocol on Trade, which provides for zero import duty trade, are very restrictive. As of 2011, 15% of all of Woolworths South Africa’s garments are sourced from Lesotho; up from less than 1% in 2004. Annex 1 shows how much garments were sold by all SADC states into the SACU market place – in effect more than 99% of these garments were sold into South Africa.

In SATH’s view, there continues to remain significant opportunities to grow this intra-regional trade even further. South Africa’s Edcon, Mr. Price, Foschini and Woolworth’s apparel retail groups have approached SATH for support in finding additional apparel production units in SADC states and have attended the SATH B2B shows.

However, the region cannot be complacent. Cost pressures have not been confined to South Africa. In Mauritius, a number of plants outsourced production to Madagascar and when Madagascar lost its AGOA privileges, some of this production was then re-outsourced to India. In late 2010, one Lesotho garment plant closed and relocated to Kenya – where wage costs were lower and where worker productivity was perceived to be generally higher. Some manufacturers in Swaziland are now looking at alternative regional manufacturing destinations.

The regional trade is not one-sided: South African apparel firms are also exporting considerable volumes of clothing to SADC member states (see Annex 1 column 13). Clothing and textile products are being supplied to buyers in these states who find it uneconomic to source from the producers in Asia, especially in cases where they would be ordering small volumes that would not make it viable for them to establish sourcing operations with Asian producers. Buying from South African producers also makes sense as they are closer to SADC markets and can offer greater flexibility as time to market is much less.

From the perspective of the entire value chain, in 2009, South Africa imported into the Southern African Customs Union (SACU) US$180 million worth of value chain
commodities/products from SADC states - much of this was cotton lint - and in the same period its producers exported US$130million worth of textiles and apparel to SADC member states.

**Recommendation:** Develop market linkage programs that promote the sustainable integration of the value chains in Southern Africa, such as targeted B2B matching programs.

3.1.3. Local Incentives for Manufacturers

As noted earlier, the footloose garment industry is unusually sensitive to changes in international trade agreements and the same sensitivity applies to incentives offered by local governments. Ethiopia, for example, has provided a very generous incentive package to investors, and this, coupled with very low wage rates (less than US$50/month), has succeeded in attracting large amounts of investment.

In SADC, the existence of national domestic (usually tax-based) incentive schemes also influenced the development of textile and apparel manufacturing plants in many states; especially Botswana, Lesotho, Swaziland, Madagascar, Mauritius and Tanzania. Many of these countries offered new investors tax holidays for up to 10 years. Madagascar and Mauritius have ceased offering these incentives to new investors but they have ‘grandfathered’ the incentives for existing operations.

In Lesotho and Swaziland, a significant export driver was the generous benefits that were paid to textile and apparel exporters via the Duty Credit Certificate Scheme (DCCS) which rewarded textile and apparel exporters with a cash incentive equivalent to 14% of the value of their exports out of SACU. In March 2010, this incentive ended and as a consequence, exports from these countries declined. Unfortunately, but not unexpectedly, many factories that received the benefits did little to make their firms more competitive during the incentive period – even though the DCCS mandated that firms allocate a percentage of the incentive to improving plant level human resources productivity.

In 2010, South Africa put in place a four year set of incentives worth about US$280 million for its textile and apparel industry to promote plant upgrading and lower costs of working capital, with extra benefits for certain key parts of the value chain or for companies with facilities in certain regions. The impact of these incentives on competitiveness is not clear. It is possible that a similar package worth US$14 million may be extended to garment manufacturers in Lesotho.

Botswana’s incentive program, the Financial Assistance Package (FAP), appeared to be successful, but in reality it had numerous problems. Many companies simply closed operations when the initial five-year period of assistance expired. Others were able to pocket some of the incentive package without even commencing operations. Botswana discontinued the FAP in 2001.21

Many SADC states continue to protect their own manufacturing industries with high MFN tariffs. For example, SACU imposes a 45% ad valorem tariff on most clothing imports, while Tanzania levies duties of up to 50% on a range of textile products in

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21 “Botswana Apparel Sub Sector Study”; The ComMark Trust; Salm et. al. (October 2004).
order to protect local producers. The free trade agreements of SADC and COMESA ameliorate these high levels of MFN protection to a degree.

**Recommendation:** Build the capacity of national investment promotion agencies to analyses their own country value chain strengths and weaknesses. Work with the investment agencies to develop economically rational incentive proposals, improved business enabling environments and targeted investment promotion campaigns to attract foreign investment.

### 3.1.4. Political Instability and Human Rights

If a country is politically unstable or profoundly anti-democratic, this alone will mean that global apparel brands and retailers may refuse to place orders with factories that are located in these states.

In addition, key trade benefits are also often tied to the political circumstances of a country. Under AGOA, countries are eligible to receive AGOA benefits only if they are determined to have established or are making continual progress toward establishing the following: market-based economies; the rule of law and political pluralism; efforts to combat corruption; and protection of human rights. In this context, some southern African countries have been denied AGOA privileges (Zimbabwe) or have lost them (Madagascar). Malawi and Swaziland are currently experiencing political problems which could affect their AGOA status.

### 3.1.5. HIV/AIDS

Garment production is a labor-intensive industry and the high prevalence of HIV amongst apparel workers in some of the countries in southern Africa has had a direct impact on productivity, in addition to being a human tragedy. In Lesotho, the prevalence rate in the factories is 43% and in Swaziland it is about 50%. Lesotho is currently the only country in the southern Africa region where there is a comprehensive HIV/AIDS program for the apparel industry through the Apparel Lesotho Alliance to Fight Aids (ALAFA), a public private partnership (PPP) program that brings together all involved stakeholders to address the disease within the industry.\(^22\)

The active addressing of HIV and AIDS in the industry resonates well with international buyers and helps them to build the claim that they are sourcing in a socially responsible manner.

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\(^{22}\) The ALAFA PPP is supported by the Government of Lesotho, US and EU brands, and local manufacturers. It centers around prevention education, condom distribution, and HIV clinics in each participating factory. The Ministry of Health provides free anti-retroviral, STI and TB drugs to the factory clinics for the doctors to prescribe and dispense. Free condoms are supplied in partnership with PSI. Funding is received through donor agencies including the US government’s PEPFAR program, the British government’s DFID, GIZ, Irish Aid and also from brands and retailers including Wal-Mart, Gap Inc., Levi Strauss, EDUN and Nordstrom. Industrialists contribute by providing fitted out clinics, employing HIV champions and clinic nurses and allowing workers to attend peer education training, counseling, testing and clinic attendance without deduction from their pay. As of mid-2011 over 8,000 HIV positive workers in an industry of 35,000 were on the ALAFA care and treatment program, and offers prevention services to over 90% of workers.
3.1.6. Social, environmental compliance

Many international apparel brands and retailers require that apparel production units that supply them with product meet certain social criteria. In this regard, they are especially concerned that vendors adhere to country employment legislation, and to their own private standards. Some apparel buyers also require that companies that supply them with garments meet certain minimum environmental criteria in their production processes. In southern Africa, many U.S. and EU buyers of apparel regularly audit factories to ensure that they are obeying labor laws and private standards. It is likely that additional orders will flow to the region should it be demonstrated that greater numbers of apparel production units are compliant with the minimum standards.

**Recommendation: Promote the introduction, adaptation, and adoption of market-based compliance certification schemes such as those set by the Worldwide Responsible Accredited Production (WRAP).**

3.1.7. Appreciation of the Rand and Rand-linked Currencies

The health of the value chain firms in Lesotho, Swaziland and South Africa (states in the Common Monetary Area (CMA)) has also been negatively affected by general strengthening of the value of the South African rand vis a vis the US dollar. A stronger Rand has meant that it became more expensive for buyers to purchase CMA made apparel and that the volumes of value chain imports into the CMA states – especially into South Africa, which has one of Africa’s richer consumer markets – have surged. The volatility of the Rand against the dollar places additional burdens on value chain manufacturers – especially on garment producers, who need some degree of predictability through the sourcing process. Graph 3 shows the movements in the value of the South African Rand from 2002, when the regional garment export industries started to develop, to date.

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23 WRAP is an independent US based non-profit organization which is dedicated to the lawful, humane and ethical manufacturing throughout the world.
The strengthening in value of the Mauritian Rupee has also negatively impacted its apparel exports to the US and the EU.

3.2. Fabric Production

Fabric production is the next stage in the industrial value chain. Spun yarn is produced into fabric by either a knitting or weaving process. See the map in Annex 4 for a further breakdown of the fabric production value chain.

Fabric knitting operations are relatively inexpensive and can be set up on a stand-alone basis. Weaving and ancillary operations, such as printing and dyeing, are far more capital intensive than garment or knitted fabric production and often require developed infrastructure. A woven fabric factory requires a relatively large number of weaving looms to be cost effective. Modern advances in fabric production technology have resulted in ever faster weaving looms and knitting machines requiring less power and human supervision. That notwithstanding, experienced and well-trained technicians are even more essential to operate modern textile machinery.

Due to its capital and infrastructure intensive nature, investment in fabric production tends to be more for the longer term and the industry does not respond as rapidly as the garment industry to changes in local or global conditions such as wage rates or trade agreements.

That said, for an efficient textile manufacturing industry the cost of essential utilities – in the form electricity, water, industrial waste water processing, and solid waste disposal – are vital. In the past five years the prices paid by industrial consumers within many SADC states have risen significantly, and this has a particular impact on most producers with older, less energy-efficient machinery. For the textile and apparel manufacturing utility service, quality is also important. For example, frequent power outages negatively impacts upon textile production; poor quality water

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24 SA Reserve Bank - [www.resbank.co.za/Research/Rates/Pages/SelectedHistoricalExchangeAndInterestRates.aspx](http://www.resbank.co.za/Research/Rates/Pages/SelectedHistoricalExchangeAndInterestRates.aspx)
supplied to firms affects textile dyeing and printing operations as well as garment laundering processes; inefficient ports can result in the late delivery of critical manufacturing inputs and of exports, etc. The cost and especially the quality of the utility services supplied have discouraged potential textile investors in many continental SADC states. Naturally, the poor quality utilities supplied have also negatively impacted upon the competitiveness of existing producers.

Fabric manufacturers in the SADC region have generally tended to focus on supplying domestically oriented apparel factories or have been part of integrated facilities that are producing apparel. As domestic production of garments has declined in South Africa, the regional market for fabrics is smaller, and overall, the industry has contracted.

Mauritius has a significant fabric industry but most of the firms that make the fabrics there have tended to use all the fabrics that they produce in wholly-owned garment manufacturing facilities. Only a small amount of Mauritian fabrics are available for other Mauritian and regional garment producers. Lesotho, Africa’s largest exporter to the US, has a single fabric manufacturing facility which makes a limited range of denim cloth. While connected downstream to three regional garment plants, the facility is able to supply significant volumes to unconnected clothing manufacturing plants in the region. Swaziland has a single knit fabric manufacturing facility but only a limited amount of this fabric is sold to regional firms. South Africa has seen its apparel fabric production capacity hemorrhage – especially related its woven fabric manufacturing ability. For example, the biggest spinner and textile producer in SSA, Frame Textiles, all but ceased its weaving and finishing operations in 2009.

Zimbabwe has a limited woven fabrics production capacity. Apparel fabric manufacturing capacity in Botswana, Malawi, Mozambique, Namibia, and Zambia has effectively disappeared.

At present, southern Africa has a limited ability to make quality, price-competitive apparel fabrics that are delivered on time. This has a direct effect on garment factory response times – the ability of regional apparel manufacturers to be able to deliver “fast fashion” to clothing retailers and brands. While there are many regional producers of knit fabrics, the volume and variety made regionally is limited. With woven fabrics, the region has a number of denim fabric suppliers but there are significant shortages of “shirting” and “wide-width” loom fabrics.

The general reduction in regional fabric formation capacity across the region has affected the regional supply chains with apparel manufacturers increasingly being forced to source fabrics from the major textile producing countries in the East. This adds 30 to 45 days to the lead time – the time taken from when an order is placed until it is delivered to the retailer.

Southern Africa’s general inability to make a wide range of quality and price competitive knit and especially woven apparel fabrics also impacts the level of intra-regional trade. While the SADC FTA provides for intra-member state trade at 0% import duties, there is no third country fabric provision. To qualify for 0% import duties, apparel must be made from fabrics manufactured within SADC. As there is

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25 Thirty days is roughly the time it takes a ship to sail from a Chinese port to a harbor in southern Africa. There are additional days that could be added to the transit time as these fabrics then have to be transported in excess of 500km from the port to the factory where production will take place (e.g. to garments plants in Swaziland, Lesotho or Botswana).
little fabric manufacturing capacity in the region, not much intra-regional apparel trade takes place at zero duty.

An interesting and positive dynamic for the regional fabric industry stems from the increased interest from international buyers in sourcing from SSA. Buyers from both the EU and the US have said they would like to see a larger fabric manufacturing industry that can service expanded apparel production. Local supply will help on the time to market issue, but importantly it also reduces local industry dependency on a reliable and cost effective supply of fabric imports from China and India, which is a risk that the international buyers are looking to avoid.

Notwithstanding the regional fabric supply constraints, through SATH’s work in the region, including the B2B event in Cape Town (June 2012), SATH has observed a significant fragmentation of the regional textile to fabric value chain. Many regional producers are surprisingly unaware of other value chain producers whose inputs they could use in their manufacturing processes. Greater regional integration in the context of fast fashion, market proximity and compliance with the SADC Free Trade Area will result in improved sales and competitiveness. It should provide a stimulus for local fabric production.

Regional fabric manufacturers need to take advantage of the major shifts in the apparel industry in the region, which may provide significant, yet to be exploited opportunities to fabric producers. Large garment manufacturing industries exist in Lesotho, Swaziland, South Africa, Mauritius and Madagascar; smaller, but nonetheless important apparel industries exist in Tanzania, Zimbabwe, Botswana, Malawi and Zambia. Most of these industries still import the majority of their fabric requirements from outside of the region.

Recommendation: Work with Southern African states to put in place effective investment promotion efforts with a special focus on fabric and supporting industries necessary for the garment producers to expand exports.

3.3. Spinning

As noted earlier, SADC is a net exporter of cotton lint. Only a small fraction of regionally grown lint is transformed into textile yarns by southern African spinning mills. Furthermore, a large proportion of the yarn used by regional knitters and weavers is imported.

Indeed, it is not practical for most spinners to exclusively use southern African cotton lint. Spinners generally will specialize in certain yarns counts (i.e. sizes) and yarn twists that require the blending of a range of fiber lengths, strengths and price in the laying-up process prior to spinning. For this reason, spinners will buy a fairly diverse range of qualities of cotton lint. Generally speaking, the longer the staple length of the cotton fiber, the finer the yarn that can be spun. Fine woven shirting fabrics require fine yarn. In contrast, denim, which is a far more “hairy” fabric, makes use of short staple length cotton in the weft yarns. Southern Africa does not produce many of the varieties required by the local cotton spinners.

In the past 20 years there has been a significant downsizing of SADC’s cotton spinning capacity especially in Malawi, South Africa, Tanzania and Zambia. Many regional spinning plants were protected behind high tariff barriers and when tariff
barriers began to fall they were unable to compete with imports, mainly from India and China, for a number of reasons:

- Failure to upgrade core spinning machinery, operating out of date equipment that requires more workers per unit of production, uses more power, and produces lower quality yarn.
- Tendency to concentrate on the production of a wide range of yarns, versus foreign competitors’ specialization in specific yarns, achieving economies of scale from longer runs of the same type of yarn.
- Shrinkage of demand from the region as regional apparel and textile production decreased. Regional spinners have depended mostly on regional customers and spun yarns to order. When regional demand dropped off, they did not adapt.
- In the case of South Africa and the other countries linked to the South African rand, the appreciation of the rand against the US dollar, which makes exports more expensive, and imports cheaper.

While there has been a general downward trend in SADC spinning capacity since 2000, there have been a number of significant new spinning investments in the region. Most of these have been associated with vertically-integrated fabric making plants established in the anticipation of the removal of third country privileges under AGOA.26

4. CONCLUSIONS

The confluence of international and regional trends is favorable for the sustained expansion of the cotton/textile/garment value chain in southern Africa. However, this expansion will not occur without the concerted effort of local and regional governments to improve the business enabling environment through reducing trade costs and policy reforms that create a stable and transparent platform for private sector investment.

In the cotton sector, there are significant opportunities to increase the productivity of southern Africa’s smallholder cotton farmers. Farmer incomes will improve, should they get GMO cotton seed technologies and better access to certified conventional cotton seed as opposed to recycled seed. However, the results of the GMO endeavors will not be realized in the short term. In many countries, efforts to get GMO cotton trials underway will take at least a growing season – in Zambia, Mozambique and Tanzania they should only start in November 2012 at the earliest – and it will be at least three growing seasons before results of the trials are returned. It is only after this that the full commercialization of GMO cotton seed could occur.

Should commercialization take place, there could be significant yield increases. In Burkina Faso, where GMO cotton is now being grown on a commercial basis by smallholder farmers, research has shown that farmer incomes have risen by about

26 New standalone spinning mills: Tianli (Mauritius) and Jambo Spinning (Tanzania); major new spinning facilities connected to vertical fabric making operations include: Formosa Textiles (Lesotho), CMT (Mauritius), RS Denim (Mauritius), TexRay (Swaziland – now up for sale), Tai Yuen (South Africa), and Ramatex (Namibia – now closed); significant upgrades of existing spinning facilities have occurred at Sunflag, 21st Century Textiles and Afritex (all in Tanzania); and Prilla Textiles (South Africa).
18% compared to incomes resulting from the use of conventional certified seed. More fundamentally, claims have also been made that better quality conventional seed in Mozambique (i.e. purer versions of existing non-GMO cotton seed varieties) may result in yield improvements of as much as 30% over a very low base.

With SATH supporting improved seed cotton minimum pricing models in various SADC states; and research work related to premiums being paid for better quality seed cotton sold to buyers, farmer incomes should improve. To push through the recommendations, SATH will facilitate the development of a representative SADC association of cotton growers’ organization. SATH will also encourage private sector farmers and firms to play a role in the further development of conventional seed systems. SATH believes that if Cotton SA becomes a regional service provider, this will have an important uplifting effect on the entire regional cotton growing sector.

SATH aims to increase the investment in SADC’s textiles and apparel manufacturing industry. Additional investment will not only create additional job opportunities, but it will also – should textile (i.e. fabric) manufacturing investments be established in the region – strengthen the value chain to the extent that it could shorten delivery lead times. This will in turn have profound effects on regional apparel producers being able to retain existing buyers and it may also be vital in attracting new buyers. SATH is already working to facilitate the establishment of one strategic major apparel fabric producer in Lesotho. It will also try to facilitate additional investment in Mozambique, Botswana and Zambia.

To encourage additional investments, SATH will work with select national investment promotion agencies and with the private sector. SATH wants investment agencies to understand a sector specific approach to investment promotion and to get them to see how private sector service providers could assist in developing sector strategies and rolling these plans out.

SATH aims to increase the sales of southern African made textile, garment and garment trim manufacturers. Increases in sales will come about as a result of enhanced intra-regional and export sales mainly to the US and EU. The main vehicle that SATH will use to develop this additional trade would be to support the development of a private sector owned and managed SSA trade show and B2B meeting that will be held on an annual basis.
SATH’s REGIONAL COTTON, TEXTILES AND APPAREL STRATEGY AND ACTIVITIES

**Cotton**

*Strategy: To increase the incomes of SADC’s smallholder cotton farmers by facilitating improvements in input management, yield, quality, financing and pricing.*

**Possible Interventions:**

- Facilitate the implementation of GMO cotton varieties in core SADC cotton growing states where appropriate.
- Assist in the improved grading of cotton at the point of purchase with payment of grade-based premiums sufficient to encourage farmers to deliver better quality cotton.
- Assist in the development and dissemination of a pricing model that would enable country stakeholders (farmers, ginners, etc.) to better understand and jointly agree on pricing fundamentals, and to enable them to negotiate/set pre-harvest prices in a transparent and realistic fashion that provides incentives to both grower and ginner.
- Facilitate the introduction, improvement and increased practice of “sustainable” cotton growing practices in SADC cotton producing states (integrated pest management (IPM), targeted pesticide use, proper rotation systems, enforcement of crop destruction requirements, addressing of gender issues, etc.), focusing especially on those aspects that will result in improved market share and price premiums.
- Facilitate the development of a regional organization of cotton farmer organizations that can drive seed and pricing issues and support Cotton SA to become a regional cotton sector services provider.

**Cotton Program Activities:**

a. **GMO and Conventional Cotton Seed**

- Develop a discussion around the introduction of GMO cotton it will be necessary to work closely with the farmers, the group with the most at stake from its usage.
- Provide technical assistance to develop and implement advocacy programs that objectively demonstrate GMO’s benefits and drawbacks, based on secondary research. Country case studies of Bt cotton cultivation would also be prepared.
- Facilitate visits of delegations of African farmers from target SADC states to see GMO cotton cultivation and regulation (possibly to Burkina Faso, India or South Africa) so that they can see cotton being grown and so they can also hear first-hand stories about its benefits/disadvantages from actual growers of Bt cotton.
- Provide on-demand technical assistance to help develop legislation/regulation/infrastructure required to introduce GMO cotton.
- Support the multiplication of sufficient stocks of certified conventional cotton seed in selected SADC states.

b. Grading Cotton
- Facilitate the introduction and the necessary incentives to implement a common/similar cotton grading standard for SADC states that balances incentives to farmer and ginner.
- Facilitate the development of regional training service providers that can offer paid-for training programs related to grading.

c. Cotton Pricing
- Research the typical costs of cotton production (for farmers, for ginners, regulatory/marketing) in each target country.
- Share the results of these exercises with regulatory authorities, farmers unions and ginners.
- Facilitate the development of a transparent pricing model in select SADC states.

d. Greener/Sustainable Cotton
- Analyze the various sustainable cotton initiatives to identify which have the most sensible, market-oriented approach that balances commercial imperatives with “sustainability” objectives.
- Investigate the possibilities of extending the sustainable cotton production methods such as the Better Cotton Initiative (BCI) program to major SADC cotton growing states.

e. Cotton Ginning
- Undertake an audit/analysis of cotton gins in select SADC states and encourage investment in upgrading where appropriate.

Textiles and Apparel

Strategy: To maintain, and ultimately increase, production, trade and employment levels.

Possible Interventions:
- Encourage regional integration of the industry and thereby grow the level of intra-regional sales of locally made textiles, garment trims (e.g. zips, buttons, threads, press-studs, etc.) and garments.
- Increase value chain exports to the US and EU.
- Encourage greater levels of productive investment in the value chain.
- Improve the competitiveness of value chain factories by encouraging additional fabric and apparel value chain investment; and by encouraging the use of smarter incentives that will drive competitiveness.
Textile and Apparel Program Activities:

a. Sales (intra-regional trade and extra-SADC trade)
- Overcome the overreliance on a limited number of apparel markets by many of SADC’s textile and apparel industries by taking a market diversification approach through:
  → Exploiting trade opportunities in SSA.
  → Penetrating the EU market (currently only being done effectively by Mauritius and Madagascar).
  → Refocusing efforts in order to nurture a new US buyer base using AGOA.
- Organize a major regional business connection event (which will ultimately become a private sector owned and managed event) that will strengthen intra-regional and extra-SADC business trade and connections on a sustainable basis.
- Strengthen intra-regional and extra-SADC trade support by engaging with a private sector service provider to develop an online directory/publication related to regional textile and apparel producers.
- Attempt to refine the market development approach by focusing on the sales potentials of selected value chain niches e.g., regional apparel fabrics producers, and the makers of items such as outdoor gear, sportswear, work wear, children/kids clothing, products used by tourism establishments, high synthetic fabric value garments, etc.

b. Investment Promotion
- Encourage additional textile (fabric) and apparel value chain investment in selected SADC states by assisting these states to better market themselves to prospective investors.

c. Competitiveness Improvements
- Improve firm competitiveness by encouraging efficient use of enterprise human resources and water and electricity. Enterprises should be encouraged to improve labor standards (incl. compliance with maternity rights and labor laws) to retain/expand orders. Enterprises will be introduced to private sector service providers that have technical expertise to undertake competitiveness assessments and then roll-out plant improvement/remediation programs.
- Encourage regional manufacturing and cotton processing plants to upgrade existing plant and equipment.
### Annex 1: Essential Statistical Profile of SADC’s Cotton, Textile and Apparel Value Chain

<table>
<thead>
<tr>
<th>SADC Member State</th>
<th>Other Regional Economic Group Affiliations (in addition to SADC)</th>
<th>Cotton Sector</th>
<th>Textile &amp; Apparel Production</th>
<th>AGOA Status</th>
<th>2009 Sales [HS50-63 (inclusive)]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cotton Lint Produced (2009 est. tons)</td>
<td>Cotton Farmers (est. household units)</td>
<td>Textile Sector</td>
<td>Garment Sector</td>
</tr>
<tr>
<td>Angola</td>
<td>-</td>
<td>1 000</td>
<td>?</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Botswana</td>
<td>SACU</td>
<td>0</td>
<td>0</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>DR Congo</td>
<td>COMESA</td>
<td>0</td>
<td>0</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>Lesotho</td>
<td>SACU</td>
<td>0</td>
<td>0</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Malawi</td>
<td>COMESA</td>
<td>28 000</td>
<td>110 000</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Mauritius</td>
<td>COMESA</td>
<td>0</td>
<td>0</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Mozambique</td>
<td>-</td>
<td>29 000</td>
<td>45 000</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Namibia</td>
<td>SACU</td>
<td>0</td>
<td>0</td>
<td>m</td>
<td>yes</td>
</tr>
<tr>
<td>Seychelles</td>
<td>COMESA</td>
<td>0</td>
<td>0</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>South Africa</td>
<td>SACU</td>
<td>8 000</td>
<td>1 000</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Swaziland</td>
<td>SACU</td>
<td>700</td>
<td>2 000</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

\(^27\) Establishments with more than 30 employees.

\(^28\) Does not include SACU’s BLNS state’s trade with South Africa – intra-SACU trade statistics are non-existent (it’s a Customs Union).
<table>
<thead>
<tr>
<th>Country</th>
<th>Region/Agreement</th>
<th>Minimum Production</th>
<th>Maximum Production</th>
<th>Membership</th>
<th>AGOA Status</th>
<th>Annual Value</th>
<th>Continuity</th>
<th>Value Stability</th>
<th>m = marginal production</th>
<th>S = suspended from SADC &amp; AGOA privileges</th>
<th>Source: SATH estimates (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzania</td>
<td>EAC</td>
<td>90 000</td>
<td>400 000</td>
<td>yes</td>
<td>yes</td>
<td>21 000</td>
<td>Yes</td>
<td>yes</td>
<td>1 204</td>
<td>5</td>
<td>18 956</td>
</tr>
<tr>
<td>Zambia</td>
<td>COMESA</td>
<td>43 000</td>
<td>60 000</td>
<td>yes</td>
<td>yes</td>
<td>&lt; 8 000</td>
<td>Yes</td>
<td>yes</td>
<td>10</td>
<td>264</td>
<td>141 654</td>
</tr>
<tr>
<td>Madagascar</td>
<td>SADC ($) COMESA</td>
<td>7 000</td>
<td>10 000</td>
<td>yes</td>
<td>yes</td>
<td>50 000</td>
<td>No</td>
<td>no</td>
<td>212 125</td>
<td>211 591</td>
<td>112 858</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>COMESA</td>
<td>111 000</td>
<td>236 000</td>
<td>yes</td>
<td>yes</td>
<td>16 000</td>
<td>No</td>
<td>ao</td>
<td>107</td>
<td>11 444</td>
<td>347 372</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>317 700</td>
<td>863 000</td>
<td>yes</td>
<td>yes</td>
<td>314 000</td>
<td>Yes</td>
<td></td>
<td>736 118</td>
<td>720 326</td>
<td>1 260 414</td>
</tr>
</tbody>
</table>
“Certified Organic” cotton requires significant investment in farmer training. All synthetic chemical use is eliminated and the use of GMO seed is not permitted. Expected results include increased biodiversity and improved soil quality. “Certified organic” cotton currently represents less than 1% of global production (it will likely always remain a niche product). Tanzania is the 4th largest producer of organic cotton in the world. The identity of an organic crop needs to be preserved a high level of transparency and traceability. Proponents of organic production claim that through the elimination of chemical inputs and higher priced GMO seed costs, farmer margins which is then enhanced by the organic premium. Growing organic cotton requires a transition period of several years where yields are significantly depressed. But with private/public partnerships, some of the costs of conversion to organic production can be mitigated. For example C&A, a major European retailer with over 1,200 stores is funding the research and production of organic cotton seed in India to service its organic cotton value chain. C&A currently sells over 20 million organic cotton garments annually being the world’s largest consumer of organic cotton.

“Certified Fair-Trade” cotton offers cotton farmers a base price and a “fair trade premium” payment (customers pay a premium of about 12% above the market price – part of which is then used for social investment in the cotton growing community). The certification process requires that environmental and social legislation be complied with. Currently, Fair Trade cotton represents only a tiny fraction of the market. Fair Trade Cotton has no cotton production initiatives in southern and eastern Africa – but have in West Africa.

“Better Cotton Initiative” the BCI introduces a certification system which encourages better chemical management and the use of GMO seed results. The objective of this initiative is to reduce environmental impact through careful control of chemical inputs and soil building, while enhancing quality and yields through better farm management practices, and adding perceived value by producing “sustainable cotton”. From a market perspective, the successful introduction of BCI production in India has demonstrated that, where credible claims of sustainability can be made from cotton seed production through to finished garments, there is no shortage of brands and retailers willing to buy, although the relative sales percentages are still low. The BCI is about to launch a partnership with a Mozambican ginner.

Cotton Made in Africa uses a hybrid of various production systems such as those management practices developed around organic cultivations, but allows controlled use of pesticides but no GMO seed. CMiA cotton is being produced in Malawi, Zambia and Mozambique – and cultivation in Tanzania is being considered. CMiA also apply a percentage-based premium. As with Fair-Trade, CMiA charges a premium for its raw cotton lint, part of which is used for social investment in the community. CMiA’s supporters sold 10 million pieces of finished goods in Europe in 2010 and it is expanding its marketing into the USA.
What is interesting with all these new “sustainable cotton” developments in Africa is that after the ginning of the cotton, most lint is exported for further beneficiation elsewhere in the world. Given the enormous goodwill generated by these projects and the tangible support they receive from consumers, brands and retailers in the EU and US, it likely that an opportunity exists to encourage them to support the beneficiation closer to the cotton growing communities – especially within southern Africa.
Annex 3: Schematic Overview: The Cotton Value Chain

Lint traders → LINT → COTTON OIL EXTRACTORS → To Export of Regional Spinners

- Cotton oil for human consumption
- Cotton seed cake for animal consumption
- Some oil extraction done by some gins

- Gin spare consumables (e.g., bales wire, wrap)
- In SA some farmers own gins; in TZ some gins owned by co-ops; other co-op gins are rented out. Few textile spinners own gins

Linters → COTTON OIL EXTRACTORS

- Seed Cotton

- Independent seed cotton buyers; gin linked seed cotton buyers; gins buy seed cotton direct
- Picking bags
- Agricultural extension

Smallholders Cotton Farmers (large number of producers in TZ, Zim, Mal, Moz & Nam; smaller numbers in S宁夏 & Malawi; marginal in Nam & Bot)

- Services
- Inputs
- Research

- GIN/COOP
- Pvt Co.
- State

- DONOR

Commercial Cotton Farmers (mainly in South Africa)

- Agro chemicals including pesticides, herbicides, dwarfing agents, defoliants, fertiliser and equipment
- Gins provide finance in form of inputs
- Seeds: “true” diploid seed required

- Field trials; research stations; research laboratories; legislation for BT

COTTON GROWING & GINNING
Annex 4: Schematic Overview: The Textile Value Chain

- Fabric Traders
- Fabric Finishing
- Yarn Driers
- Yarn Traders
- Spinners
- Fibre Producers
- Fibre Traders

**DYE, PRINT & LAMINATE FABRICS**

- Knit Fabrics
- Woven Fabrics
- Non-woven Fabrics

**YARN DYE**

- Cotton yarns / blended cotton yarns
- Manmade fiber spinners / extruders
- Fiber regenerations

**SPINNERS**

**TEXTILE MANUFACTURE**

- Wool
- Mohair
- Silk
- Synthetic
- Waste
- Cotton

**VERTICAL MILLS**

- Spin yarns, weave / knit fabrics, finish fabrics (dye / print), make-up into garments
- Examples: Formosa (Lensoho, denim); Sunflag (Tanzania, lux); DIP (Mauritius, denim); Cell Group (Mauritius, lots); Teamay (Swaziland, knits)
Annex 5: Schematic Overview: The Apparel Value Chain

- Packaging & logistics
- Garment value add
- Clothing producers
- Garment trims
- Garment fabric
- Sourcing intermediaries
- Ultimate buyers
- Packaging: cartons, polybags, tissue, pins, etc.
- Transport: truck / rail / ship / plane
- Commission wet & dry processing (e.g. laundry, garment dye, washing, sandblasting, screen printing, chemical finish, embroidery, etc)
- Many types. Firms tend to specialise. E.g.
  - Knits/wovens/kit-to-shape (e.g. socks; jerseys);
  - Women, girls, men, boys; specific niches (e.g. workwear; sportswear; outdoor; etc)
- Trims: e.g. threads, fasteners (zips/buttons/studs/etc),
  - Underwires, lables (printed/embroidered/woven),
  - Drawords, elastics, etc.
- Quality control (QC) functions are often embedded in
  - Package sourcing of design houses / sourcing agents / CMT apax firms. Sometimes brands / retailers use their own staff to do this work. Sometimes QC are brought in as a paid-for service. Test laboratories check fabric, garment trim & sewing quality in laboratory conditions

**KEY IN VALUE CHAIN:** sourcing intermediaries (Tables 1 / 2 / 3) - firms specialise in constructing networks of manufacturers who will make garments for them that they supply to retailers