

# **SUSTAINABLE AND CIRCULAR TEXTILE VALUE CHAINS:**

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## **LINKAGES WITH TRADE AND TRADE POLICY**



Case Study:  
**Kenya**

## ABOUT THIS CASE STUDY

This case study was developed as part of [the One UNEP Textile Initiative](#). The project was led by Ying Zhang (Economic and Trade Policy Unit) and Bettina Heller (Consumption and Production Unit), under the guidance of Fulai Sheng, Elisa Tonda and Joy Aeree Kim, all from the United Nations Environment Programme (UNEP).

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## KEY MESSAGES

Despite being one of the leading garment exporters in Sub-Saharan Africa, the Republic of Kenya's textile value chain is fragmented. There has been a drastic decline in domestic production since the 1980s, when the industry was booming. This can be attributed to large-scale importation of intermediate textile products, apparel and second-hand clothing, and reduced local production of raw materials such as cotton fibre and synthetic fibre.

Two factors worked synergistically to revive Kenya's textile and apparel (T&A) industry: the export processing zones (EPZs) established in 1990, and Kenya joining the African Growth and Opportunity Act (AGOA) in 2000. Most garment factories in Kenya are situated in the EPZs and export more than 70 per cent of the T&A products to the United States of America under AGOA. However, the local textile industries outside of the EPZs do not benefit much from this. This is because most textile raw materials are also imported from Asia.

Firms in EPZs enjoy attractive incentives, such as exemption from import duties and value-added tax (VAT). However, regulations and rules such as the restrictions of selling post-industrial waste outside the EPZs hinder circularity in regards to the implementation of potential circular solutions. Such rules must be reviewed to promote circularity in Kenya's T&A sector.

Trade in second-hand clothing is a big issue in Kenya, even with the contribution it makes to the Kenyan economy. Importation of second-hand clothing continues to rise with affordability and the variety of styles that comes with it. Kenya must find a strategy to handle post-consumer waste, especially waste arising from second-hand clothing, where annual importation has reached more than 185,000 tons.

Environmental hotspots were identified in Kenya's T&A sector. During production of textile fibres; significant amounts of water, agrochemicals, energy and land are used. Lack of proper treatment of biomass processing leads to air, water and soil pollution. The manufacturing process also involves use of chemicals and dyes. These can have adverse effects on the environment and human health. Lack of proper pre-treatment of industrial effluents from dyeing and printing before discharge leads to soil and water pollution.

The use of standby generators due to frequent power outages as well as mechanized agronomical processes also result in the emission of greenhouse gases (GHGs). Wet processing of textiles and apparel involves the use of large amounts of water and chemicals. Direct release of wastewater to sewer lines results in the pollution of water bodies and soil. Transportation of textiles and apparel products involves the use of fossil fuels, which contribute to further GHGs and air pollution. Mismanagement of post-industrial and post-consumer waste as well as improper disposal of gaseous, liquid and solid waste lead to pollution and environmental degradation.

Trade policies in Kenya are currently not systematically aligned to support the T&A sector's sustainability and circularity objectives. Trade policy measures such as favourable tariffs, ecolabels, standards and quotas, when accompanied by the removal of unnecessary and unjustifiable non-tariff barriers, can have positive impacts on T&A value chain's sustainability and circularity. Unnecessary non-tariff barriers include excessive document requirements and restrictive customs practices. More data is needed to assess their full impacts and effectiveness. This could guide the establishment and implementation of favourable trade policies where they are non-existent.

Kenya has joined several free trade agreements (FTAs) with neighbouring countries and other countries such as the United States. These have opened up markets, especially in the East African Community (EAC) and under AGOA. However, these agreements have little in terms of sustainability and environmental issues and circularity. These agreements need to be reassessed with the aim of a paradigm shift towards sustainable consumption and production.

Kenya continues to receive support from various agencies and institutions to develop its competitiveness as a hub for T&A industries. Programmes and entities that aim to transform and grow micro, small and medium-sized enterprises (MSMEs) in the T&A sector have been initiated. Some of these include:

- 1 The Micro and Small Enterprises Authority (MSEA), which is mandated to provide support to MSMEs
- 2 Kenya Industrial Transformation Programme (KITP), which aims to transform Kenya's manufacturing sector by enhancing productivity, innovation and competitiveness
- 3 The Cotton Development Authority (CODA) to revive cotton farming and production in the country
- 4 Establishment of export processing zones (EPZs) and special economic zones (SEZs)
- 5 Efforts aimed at lobbying for the formulation and implementation of favourable policies, laws and programmes that provide access to market and capacity building. These can promote trade and investments while ensuring that social, economic and environmental sustainability are being pursued.



## I. Introduction

Kenya's T&A sector boomed after independence in 1963. This was as a result of the government adopting import substitution schemes that subjected imported fabrics and apparel to high import tariffs. The government used the Industrial and Commercial Development Corporation (ICDC), a government owned development finance institution, to invest in T&A<sup>1</sup> companies. These included the Kisumu Cotton Mill (KICOMI), Mountex, Rivatex and Fine Spinners. Other privately-owned textile factories also flourished, including Raymonds, Sunflag and Thika Cloth Mills. At its peak in the mid-1980s, the T&A sector employed 30 per cent of all workers in the manufacturing sector. It was also ranked as one of the major sources of employment and the fifth-largest contributor of foreign exchange.<sup>2</sup>

The decline of Kenya's T&A sector since the 1980s can be attributed to several factors. These include policy changes, importation of intermediate textile products and competition from second-hand clothing imports.<sup>3</sup> The sector's decline can be traced back to the 1980s when Kenya adopted structural adjustment programmes (SAPs) as part of its economic reform programme.<sup>4</sup> The SAPs led to trade liberalization and the removal of protectionist measures. This made it cheaper to import finished textile products and apparel rather than produce them locally.<sup>5</sup>

1 Three phrases: (i) 'Textiles and apparel (T&A) or apparel and textile (A&T), (ii) Textile and clothing (T&C) or clothing and textile (C&T); and (iii) Textile', are phrases commonly used in reports by the Kenyan Government and other intergovernmental organizations such as the World Bank, the United Nations Environment Programme (UNEP) and the International Trade Centre (ITC). The phrases refer to the complete value chain from fibre to garment through to end of life. In this study, the term 'textiles and apparel' (T&A) will refer to the full value chain from fibre to garment (including end of life for the product) as shown in figure I of this report.

2 Chemengich, M. (2013). Policy research on the Kenyan textile industry – Findings and recommendations, African Cotton & Textile Industries Federation, ([https://agoa.info/images/documents/5264/ACTIF%20Report%20on%20Policy%20Research%20on%20the%20Kenyan%20Textile%20Industry\\_Margaret%20Chemengich\\_2013.pdf](https://agoa.info/images/documents/5264/ACTIF%20Report%20on%20Policy%20Research%20on%20the%20Kenyan%20Textile%20Industry_Margaret%20Chemengich_2013.pdf)).

3 Ministry of Industrialization and Enterprise Development (2015). Kenya Industrial Transformation Programme, (<https://www.tralac.org/images/docs/8097/kenyas-industrial-transformation-programme-2015.pdf>).

4 Omolo, J.O. (2006). The Textiles and Clothing Industry in Kenya in: Herbert Jauch / Rudolf Traub-Merz (Eds.) The Future of the Textile and Clothing Industry in Sub-Saharan Africa, Bonn: Friedrich-Ebert-Stiftung (<https://library.fes.de/pdf-files/iez/03796/11kenya.pdf>).

5 Gertz, G. (2009). Kenya's Trade Liberalization of the 1980s and 1990s: Policies, Impacts, and Implications. Carnegie Endowment for International Peace, Discussion Paper, ([https://carnegieendowment.org/files/kenya\\_background.pdf](https://carnegieendowment.org/files/kenya_background.pdf)).

The decline in the local production of raw materials such as cotton fibre and wool fibre has also contributed to the decline of Kenya's T&A sector.

Cotton is a critical raw material for this sector.

The government has thus been implementing programmes to revive cotton farming and production.

However, the sector still relies heavily on imported raw materials, which increase production costs and reduce competitiveness. Availability of second-hand clothing imports, popularly known as 'mitumba', and the high production costs from local firms, are some factors that have contributed to the Kenya's T&A sector's reduced competitiveness.<sup>6</sup> This has led to a reduced demand for locally produced textiles and apparel. Compared to 1983, when 52 textile mills were fully operational, currently only 15 mills are operating at 45 per cent of total installed capacity.<sup>7</sup> However, the garment sector has recorded an impressive growth. There are now 65 garment manufacturers, of which 26 per cent operate in the export processing zones (EPZs) and 74 per cent operate outside the EPZs.<sup>8</sup>

6 Shibia, A.G. & Igessa, B.S. (2021). Constraints and Opportunities in the Cotton-Textile-Apparel Subsector in Kenya: A Value Chain Approach. Kenya Institute for Public Policy Research and Analysis, KIPPRA Discussion Paper No. 253, (<https://repository.kippira.or.ke/bitstream/handle/123456789/3941/DP253.pdf?sequence=1&isAllowed=y>).

7 Kenya Association of Manufacturer (2018). Manufacturing in Kenya Under the 'Big 4 Agenda: A sector deep-dive report. (<https://kam.co.ke/wp-content/uploads/2018/10/KAM-Manufacturing-Deep-Dive-Report-2018.pdf>).

8 Malicha, W. & Njoroge, L. (2020). Discussion Paper No. 229 of 2020 on Assessing the Cotton, Textile and Apparel Sector Employment Potential in Kenya (<https://repository.kippira.or.ke/bitstream/handle/123456789/2397/DP229%20for%20website.pdf?sequence=2&isAllowed=y>).





## Scope, methodology and limitations

This report looks at the environmental hotspots in Kenya's T&A value chain,<sup>17</sup> its linkages to trade, and trade policy instruments that can have an impact on sustainability and circularity in the sector. It builds on UNEP's work on environment and trade, and its framework for sustainability and circularity in the textile value chain.<sup>18</sup> Trade and trade policy have an important role to play in the transition towards a green and circular economy, yet its potential has not yet been fully unlocked. Taking Kenya's T&A sector as a case study, this report aims to draw on useful insights that could be shared with other developing countries.<sup>19</sup> Data and information were obtained from government ministries, agencies, international organizations, research institutions, as well as business and industrial associations.

Quantitative data on trade flows were obtained using the International Trade Centre's (ITC's) Trade Map website.<sup>20</sup> The environmental hotspot analysis was done using publicly available qualitative information on environmental impact and trade policies concerning the sector. This was complemented by focus group discussions and a stakeholder round-table meeting.<sup>21</sup> However, the study was limited by scarcity and accessibility of available information. Additionally, information provided by experts is limited due to the number of experts consulted and experts' potential bias. An in-depth analysis of quantitative data on environmental footprints can provide a more comprehensive picture of the environmental impacts and its linkages with trade policy for Kenya's T&A sector.

### Box 1

#### UNEP's approach to a sustainable and circular textile value chain

UNEP has adopted a value chain approach to advancing sustainability and circularity in the textile sector. Analysing the value chain rather than just the supply chain increases the range of stakeholders to include all those with influence or engagement in the textile sector. This includes policymakers, financial institutions and non-governmental organizations (NGOs). Taking a value chain approach also implies looking not only at the physical processes (such as farms or factories), but also at the way products are designed, promoted and offered to consumers.

For a textile product, the value chain starts with fibre production. This can be sourcing natural agricultural materials and their subsequent processing to extract the fibre (e.g. cotton), or crude oil extraction and the manufacture of chemicals from which synthetic fibres are made (e.g. polyester), or a combination of both. Subsequent manufacturing stages involve spinning the fibres into yarn, and knitting, weaving or bonding the fibres in some other way into fabric. The fabric is then subjected to chemical and/or mechanical processing (known as finishing) to produce a textile with the desired properties (e.g. softness or water repellence). The next step in the value chain involves cutting and sewing the textile into a product, followed by getting the product to the user (distribution and retail). After its first use, the textile product can be used again (e.g. donated second-hand clothing), or it can be recycled to a different use. The aim of circularity is to shift the "take-make-dispose" linear value chain into a circular system. This means the materials are not lost after use, but remain in the economy, circulating as long as possible at the highest possible value.

17 In the context of Kenya, T&A refers to the textiles and apparel industry, encompassing production of fabrics, garments and other textile products, and is consistent with the industry's global definition. See: Kenya's Industrial Transformation Programme (KITP), Ministry of Industrialization, Trade and Enterprise Development, 2015 (<https://www.tralac.org/images/docs/8097/kenyas-industrial-transformation-programme-2015.pdf>). For more information, kindly refer to Footnote 1.

18 UNEP. (2020). Sustainability and Circularity in the Textile Value Chain: Global Stocktaking. (<https://wedocs.unep.org/handle/20.500.11822/34184>).

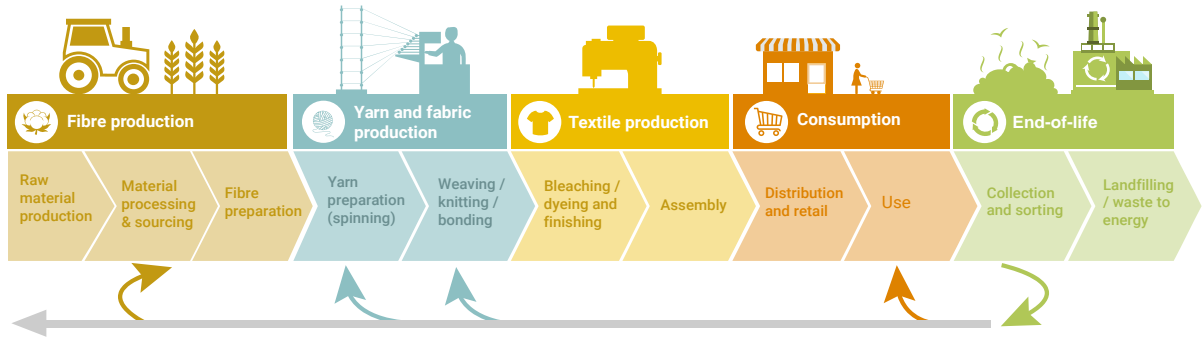
19 Similar research was undertaken for the Kingdom of Thailand. (<https://wedocs.unep.org/handle/20.500.11822/42047>).

20 Data obtained from ITC's Trade Map, which reports that the calculation is based on data obtained from UN Comtrade and the Kenya National Bureau of Statistics ([https://www.trademap.org/Country\\_SelProductCountry\\_TS.aspx?nvpm=1%7c404%7c%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c404%7c%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1)).

21 The institutions that contributed data and information for this study included: Export Processing Zones Authority; Kenya Bureau of Standards; Ministry of Trade, Investments and Industry; National Environment Management Authority; Kenya National Cleaner Production Centre; Kenya National Bureau of Statistics; Moi University; Kirinyaga University; Maseno University; National Industrial Training Authority; Kenya Industrial Research and Development Institute; SOKO EPZ; Dada EPZ; Alpha Knit; African Collect Textile; New Wide EPZ; Ethical Fashions EPZ; Tosheka Products Ltd; Kenya Association of Manufacturers; Gatsby Africa; Rivatex.



Figure I: Linear representation of activities along the textile value chain



Source: Sustainability and Circularity in the Textile Value Chain: Global Stocktaking, UNEP, 2020





## II. Overview of trade in textile and apparel products in Kenya

This section provides an overview of Kenya's T&A trade. The Kenyan T&A value chain and the effect of regional and global trade agreements on T&A are also discussed, including other factors (e.g. foreign direct investment) that affect local production and trade.

A review of Kenya's T&A trade indicates that the sector recorded its peak performance in 1984.<sup>22</sup> This could be partly due to the protected trade environment where all imports were heavily taxed. Subsequently, Kenya not only ascribed to a liberalized economy, but also entered into preferential trade agreements with selected countries/regions. After the initial decline in the 1990s, the Kenya's T&A sector recorded some signs of recovery. For example, in 2015, an increase in exports (24 per cent), employment (14.7 per cent) and an investment of (10.3 per cent) was realized.<sup>23</sup> The Kenyan Government has continuously targeted the manufacturing sector for improvement. In line with the Kenya Vision 2030, the government plans to increase the manufacturing sector's contribution to its GDP. The T&A sector is one of the strategic industries in the manufacturing sector earmarked for improvement.<sup>24</sup>


### The Kenyan T&A value chain

The Kenyan T&A value chain starts with fibre production, which includes cotton, sisal, wool and silk. Cotton is the most widely used natural fibre in Kenya's T&A industry, with most apparel exports manufactured from polyester, cotton and polyester/cotton blended fabrics. The industry has to import cotton to meet its industrial needs due to low local production. The limited cotton production taking place in Kenya is primarily located in the eastern and western parts of the country.

22 Based on information obtained from the State Department for Industry, Nairobi.

23 UNCTAD (2020). Assessing Cost-effectiveness of Non-tariff Measures – A Toolkit, A case study in Kenya. ([https://unctad.org/system/files/official-document/ditctabinf2020d8\\_en.pdf](https://unctad.org/system/files/official-document/ditctabinf2020d8_en.pdf)).

24 Malicha, W. & Njoroge, L. (2020). Discussion Paper No. 229 of 2020 on Assessing the Cotton, Textile and Apparel Sector Employment Potential in Kenya, (<https://repository.kippra.or.ke/bitstream/handle/123456789/2397/DP229%20for%20website.pdf?sequence=2&isAllowed=y>).



As shown in [Figure II](#), Kenya also imports synthetic fibres. These include polyester, viscose and acrylic. Sisal, another natural fibre, which Kenya produces mostly for export, is mainly grown in the semi-arid regions of the country, including Taita-Taveta, Baringo, Makueni and Machakos counties.

In 2020, Kenya produced 22,768 tons of sisal, making it the world's third-largest producer after the Federative Republic of Brazil and the United Republic of Tanzania.<sup>25</sup> Silk and wool are produced in the western, Nyanza and Rift Valley regions, but in small quantities.

The second stage of the value chain is yarn and fabric production. This starts with spinning, which converts the fibres into yarns. In Kenya, textile factories are vertically integrated.<sup>26</sup> This means that factories receive fibres, and perform spinning, fabric formation (weaving or knitting), dyeing and printing under one roof. Therefore, the quantity of intermediate products (yarns and grey cloth/fabric) is not well documented.

25 Data obtained from the Fibre Crops Directorate at the Agriculture and Food Authority, Nairobi.

26 The yarn spun in vertically integrated textile companies is never declared, because the Kenya National Bureau of Statistics records the final product. For example, a factory like Rivatex will be declared to have produced fabrics and garments, and not yarn, grey fabric, dyed fabrics and garments.

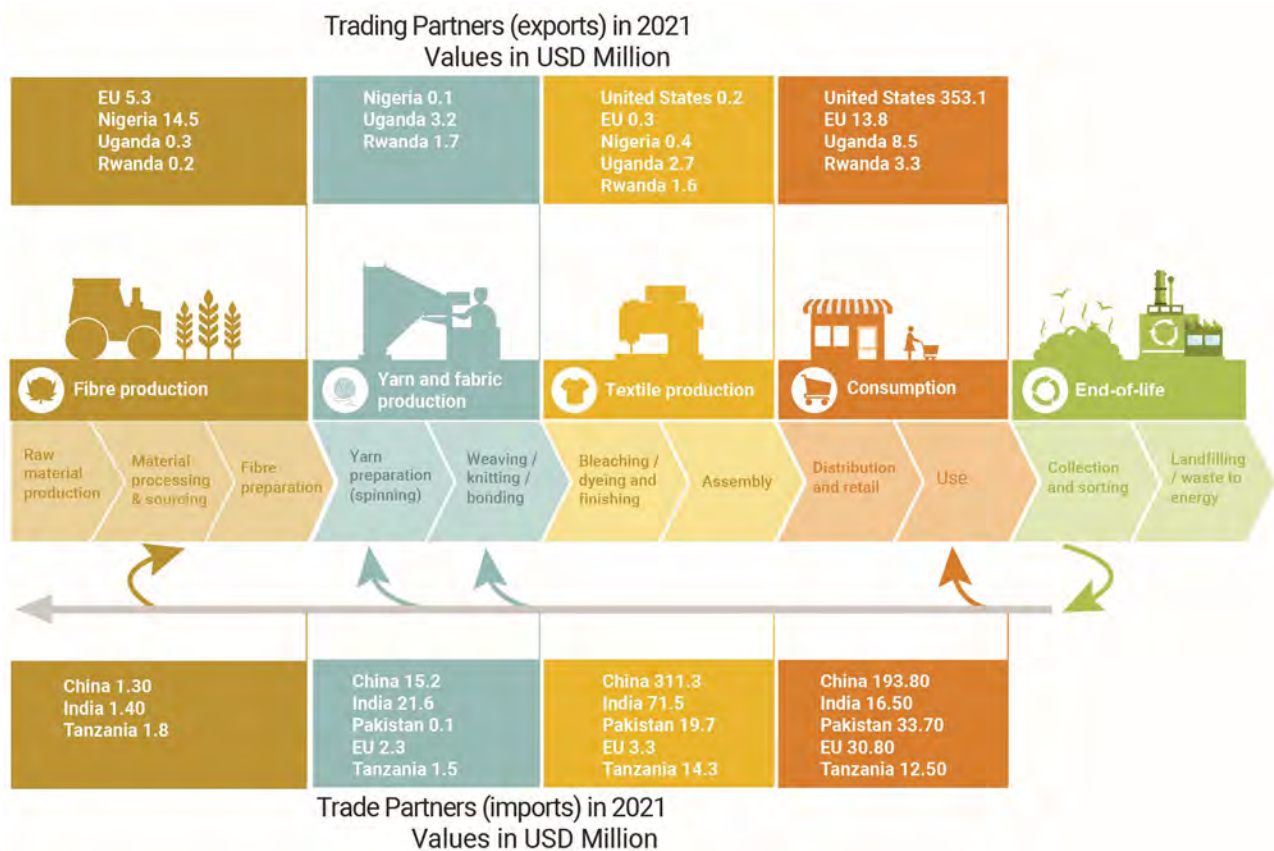
However, there is an indication that some factories prefer to import yarn<sup>27</sup> and then apply dyes to produce fabrics. There are some small and medium-sized enterprises (SMEs) in Kenya that produce hand-spun yarns for local markets and export.<sup>28</sup>

The third stage is textile production. It starts with wet processing, which includes pre-treatment, dyeing, and printing of fabrics. The fabrics produced can be sold for the manufacture of garments (assembly). However, a large number of the garment factories in Kenya, especially those located in the EPZs, import fabrics from Asia. The garment factories in the EPZs are involved in the cutting, making and trimming (CMT) manufacturing model. Some of the vertically integrated textile factories, such as Rivatex and Ken Knit, have incorporated garment making and sell the garments to the local markets.

The fourth stage is consumption. For apparel produced in the EPZs in Kenya, most of the consumption is located outside the country (in the countries to which Kenya exports). Textile consumption in Kenya is catered for by locally produced garments and imports (including second hand textiles).

The final stage is the after-use stage (end of life). This includes the collection, sorting and final disposal in landfills or incineration. Kenya is a net importer of T&A products; therefore, the country receives new and used garments from abroad. The after-use stage poses significant environmental challenges, such as pollution from disposal and the accumulation of non-biodegradable waste synthetic fibres contained in textiles.

Figure II: The Kenyan textile and apparel value chain



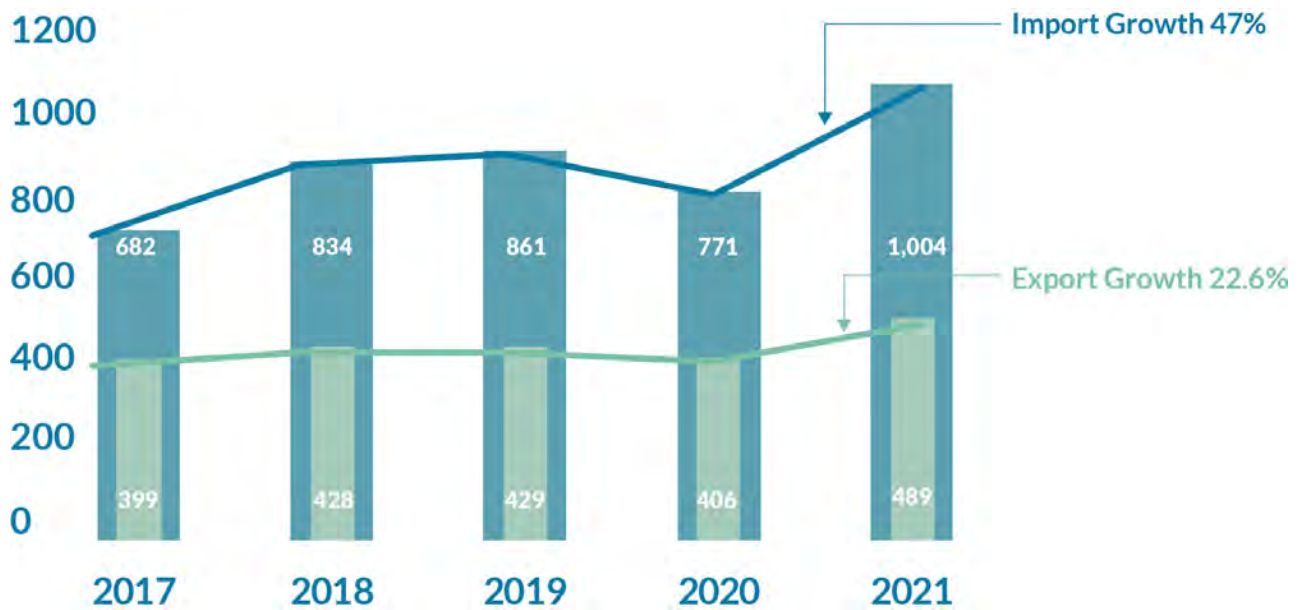
Source: Author elucidation based on Sustainability and Circularity in the Textile Value Chain: Global Stocktaking, UNEP, 2020 and data from Trade Map, International Trade Centre (ITC), 2022.

27 USAID (2021). USAID Southern Africa Trade and Investment Hub East Africa AGOA trade promotion Buy-in: FY 2021 Quarterly progress report ([https://pdf.usaid.gov/pdf\\_docs/PA00ZMN2.pdf](https://pdf.usaid.gov/pdf_docs/PA00ZMN2.pdf)).  
 28 Konishi, Y., Mogollon, M.P., Adamali, A., Ramakrishnan, K. & Barma, M., (2015). Kenya apparel and textile industry: diagnosis, strategy and action plan. (<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/441761468000939834/kenya-apparel-and-textile-industry-diagnosis-strategy-and-action-plan>).

Like many Sub-Saharan countries, with regards to exports, Kenya has taken advantage of the duty- and quota-free access to the US market under the AGOA programme. Additionally, Kenya exports T&A products to regional markets such as the East African Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA). Considering trade from 2017 to 2021, as shown in [Figure III](#), Kenyan T&A imports grew at a faster rate compared to exports. The decrease in exports in 2020 could be attributed to the COVID-19 pandemic.

For the five-year period (2017 to 2021), Kenyan imports for T&A products exhibited an increasing trend and, hence, a growing trade deficit. According to reports by Chemengich (2013),<sup>30</sup> non-EPZs Kenya T&A firms produced less than 12 million square metres of fabrics. This satisfied 7 per cent of Kenyan T&A needs, leaving a larger portion (93 per cent) to be imported. Based on data provided by EPZA,<sup>31</sup> imports by garment factories at EPZs accounted for an average of 31 per cent of Kenyan T&A imports.

**Figure III:** Kenyan T&A exports and imports from 2017 to 2021 (in USD million)



Source: Trade Map, International Trade Centre (ITC), 2022<sup>29</sup>

29 Data obtained from ITC's Trade Map, which reports that data used was based on calculations for data obtained from UN Comtrade and the Kenya National Bureau of Statistics ([https://www.trademap.org/Country\\_SelProductCountry\\_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1)).

30 Chemengich, M. (2013). Policy Research on the Kenyan Textile Industry: Findings and Recommendations, African Cotton & Textile Industries Federation, ([https://agoa.info/images/documents/5264/ACTIF%20Report%20on%20Policy%20Research%20on%20the%20Kenyan%20Textile%20Industry\\_Margaret%20Chemengich\\_2013.pdf](https://agoa.info/images/documents/5264/ACTIF%20Report%20on%20Policy%20Research%20on%20the%20Kenyan%20Textile%20Industry_Margaret%20Chemengich_2013.pdf)).

31 Export Processing Zones Authority (2019). Export Processing Zones Program, Annual Performance Report 2019, (<https://epzakenya.com/wp-content/uploads/2020/09/EPZ-Annual-Performance-Report-year-2019.pdf>).

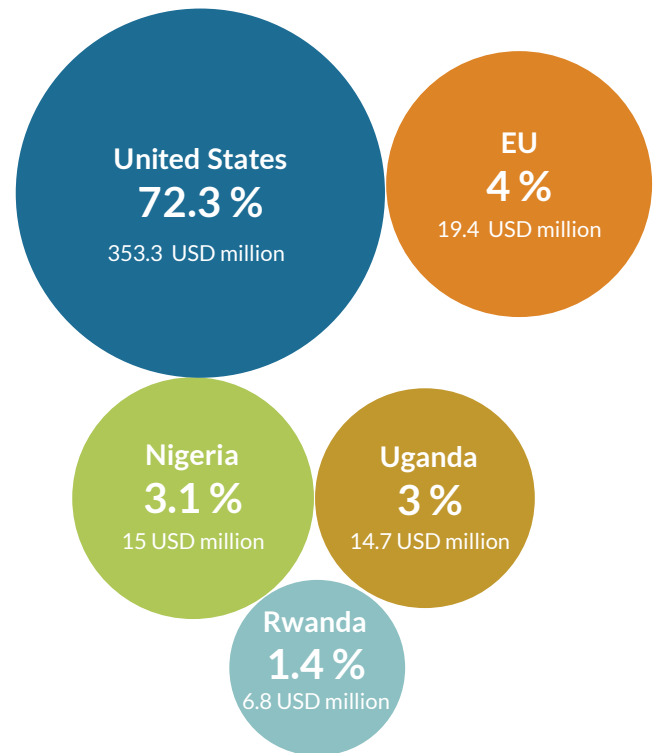


## Trade analysis – export

The Kenyan T&A sector recorded a growth of 1.5 per cent and 7.5 per cent for textile and apparel manufacture respectively in 2021. This accounted for 6 per cent of total manufacturing in Kenya and contributed 7 per cent of total export earnings in 2021.<sup>32</sup> The United States is the top destination for Kenyan T&A exports, accounting for 72 per cent of total exports in 2021 (see [Table 1](#)). Kenya has maintained its position as the main exporter of T&A products to US markets among the Sub-Saharan countries that operate under AGOA.<sup>33</sup>

Kenyan exports were dominated by apparel. Apparel accounted for 83.6 per cent of Kenyan T&A exports and fibre exports accounted for 11 per cent. There are more than 170 large-scale garment manufacturers in Kenya. Of these, 37 are in EPZs and account for the bulk of the sector's export revenue. The EPZ programme is managed by the Export Processing Zones Authority (EPZA) and was created to promote export-oriented industrial investment in designated zones.

### Kenya textile export partners



**Table 1:** Top 5 trading partners (export) in 2021

Rank	Export partner	Apparel (USD million)	Fabric (USD million)	Yarn (USD million)	Fibre (USD million)
1	United States	353.1	0.2	0	0
2	EU	13.8	0.3	0	5.3
3	Nigeria	0	0.4	0.1	14.5
4	Uganda	8.5	2.7	3.2	0.3
5	Rwanda	3.3	1.6	1.7	0.2

Source: Trade Map, International Trade Centre (ITC), 2022.<sup>34</sup>

32 Kenya National Bureau of Statistics (2021). Economic Survey 2022. (<https://www.knbs.or.ke/wp-content/uploads/2022/05/2022-Economic-Survey1.pdf>).

33 Export Processing Zones Program, Annual Performance Report, (2019). Export Processing Zones Authority, 2019 (<https://epzakenya.com/wp-content/uploads/2020/09/EPZ-Annual-Performance-Report-year-2019.pdf>).

34 Data obtained from ITC's Trade Map, which reports that data used was based on calculations for data obtained from UN Comtrade and the Kenya National Bureau of Statistics ([https://www.trademap.org/Country\\_SelProductCountry\\_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1)).

## Box 2

## T&amp;A companies have taken advantage of more favourable conditions at export processing zones (EPZs)

The Export Processing Zones Authority (EPZA) is a state corporation under the Ministry of Industrialization, Trade and Enterprise Development, established in 1990. One of EPZA's mandates is to promote export-oriented production in areas designated as EPZs.<sup>35</sup> The EPZs were established to promote and facilitate export-oriented trade investments through providing industry-driven estates with favourable logistics infrastructure. EPZs' main features include provision of foreign earnings, job creation and technology transfer. Businesses in EPZs enjoy tax incentives, exemption from import, export and value-added taxes, reduced regulatory oversight in administration and custom procedures, and lower land rentals. T&A companies have taken advantage of the special conditions in EPZs, and import fabrics and threads from Asia, process them under CMT terms and then export them to the United States under AGOA. While EPZs are open to all types of industries, the apparel sector is the dominant sector. It accounts for 82 per cent of local jobs in EPZs, 69 per cent of all exports and 63 per cent of all sales from the EPZ (EPZs are allowed to sell up to 20% of their products in the local market). The ownership of the EPZ business stands at 40.2 per cent foreign, 37.2 per cent Kenyan and 22.6 per cent joint ventures. Thus, EPZs have contributed to foreign direct investment (FDI) in Kenya.

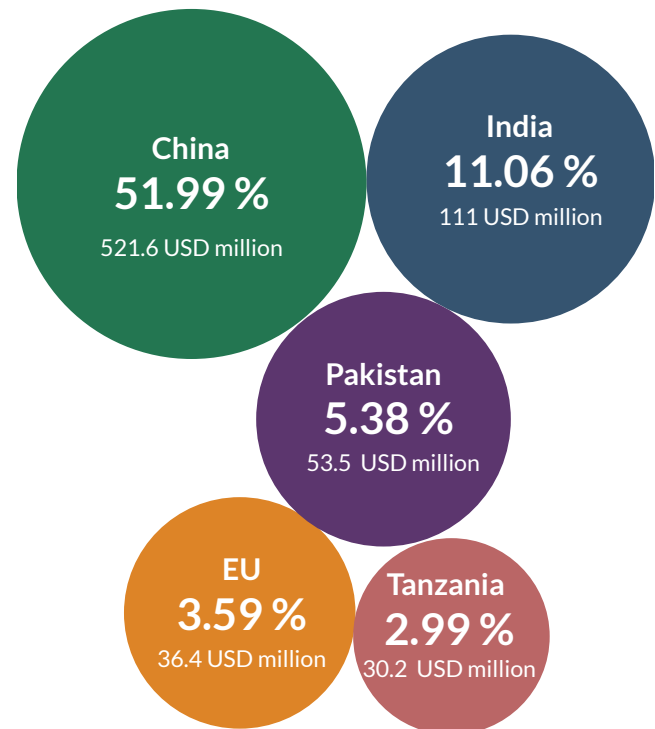


35 Export Zones Authority (2019). Export Processing Zones Program, Annual Performance Report, 2019 (<https://epzakenya.com/wp-content/uploads/2020/09/EPZ-Annual-Performance-Report-year-2019.pdf>).

## Trade analysis – import

In 2021, the leading import partners with respect to T&A were the People's Republic of China (52 per cent of T&A imports), followed by the Republic of India (Table 2). The most commonly imported item is fabric (woven and knitted), which accounted for 51 per cent of all imports. Apparel accounted for 37 per cent, and yarn and fibre accounted for 11 per cent and 1 per cent respectively.<sup>36</sup> While the use of the imported T&A products could not be established, it can be inferred that the bulk of the imported fabrics are used in EPZs' garment factories.

### Kenya textile import partners



**Table 2:** Top 5 Kenyan trade partners (imports) in 2021

Rank	Import partner	Fibre (USD million)	Yarn (USD million)	Fabric (USD million)	Apparel (USD million)
1	China	1.3	15.2	311.3	193.8
2	India	1.4	21.6	71.5	16.5
3	Pakistan	-	0.1	19.7	33.7
4	EU	0	2.3	3.3	30.8
5	Tanzania	1.8	1.5	14.3	12.5

Source: Trade Map, International Trade Centre (ITC), 2022<sup>37</sup>

<sup>36</sup> Kenya's T&A sector is fragmented and uneven. The high level of fabric imports could be due to the need for the EPZ factory to source for raw materials for garment making. Facing the Future: Technology Upgradation in East Africa's Textiles and Apparel Sector, International Trade Centre, 2020 ([https://itme2022.india-itme.com/images/bsm/Technology\\_Upgradation\\_v3\\_web-ITC.pdf](https://itme2022.india-itme.com/images/bsm/Technology_Upgradation_v3_web-ITC.pdf)).

<sup>37</sup> Data obtained from ITC's Trade Map, which reports that data used was based on calculations for data obtained from UN Comtrade and the Kenya National Bureau of Statistics ([https://www.trademap.org/Country\\_SelProductCountry\\_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1)).



## Box 3

## Importation of second-hand clothing

Kenya imports an average of 120,000 tons per year (based on a five-year study between 2016 and 2020) of second-hand clothing, worth more than \$30 million. The country employs 2 million Kenyans, making it one of the main traders of second-hand clothing in Sub-Saharan Africa (see Annex I). It is worth noting that Kenyan imports of second-hand clothes keep rising. In 2021, the country imported 185,000 tons of second-hand clothing. Most of these imports came from China (39 per cent), Pakistan (12 per cent), Canada (9 per cent), the United States (7 per cent), the Republic of Poland (6 per cent) and the Federal Republic of Germany (5 per cent).<sup>38</sup> Research by Sasi<sup>39</sup> indicated that Kenyans spend an average of 2.5 per cent of their disposable income on clothing, which is equivalent to \$2 billion per year. On average, more than 30 per cent of the clothing and footwear needs for poor and middle-class Kenyans are met by second-hand goods.<sup>40</sup> The end of life for second-hand clothing, like all other textiles, is not clear. Since there are no major recycling or upcycling programmes for the Kenyan T&A, and trash separation is not commonly practiced, it can be assumed that they are dumped into the landfills or burned. This is an environmental degradation hotspot that needs to be investigated and addressed.

## Integration into regional and global textile and apparel value chains

The Kenyan T&A sector is integrated into regional and international value chains. Within the EAC region, Kenya exports a total of \$21.5 million worth of T&A. The majority (54.9 per cent) are fabrics and imports of \$30.7 million (46.5 per cent fabrics and 41.4 per cent apparel).<sup>41</sup> Imports are mostly from Tanzania, from where 2.99 per cent of Kenya's imports are sourced. Within the larger Africa region, Kenya's trade in T&A with the Federal Republic of Nigeria accounts for 3.1 per cent of Kenyan T&A exports, of mostly fibre. At the global level, Kenya's major export partner for T&A is the United States, which accounts for 72 per cent of total exports. China is the leading import partner, with 52 per cent share of T&A imports. For more than five years, Kenya has maintained the record for being the leading exporter of apparel to the United States under AGOA among the Sub-Saharan countries.<sup>42</sup> Interestingly, Kenya exports 4 per cent of its T&A products to the European Union (EU) (71.1 per cent is apparel) and imports 3.6 per cent of its T&A from the EU (84.6 per cent is apparel).

38 Boddu, R. & Gadey, K. (2021). Kenya's Import of Secondhand Clothing and Accessories between 2016-2020: An Overview of Mitumba Market In Kenya, Textile Value Chain. (<https://textilevaluechain.in/in-depth-analysis/kenyas-import-of-secondhand-clothing-and-accessories-between-2016-2020-an-overview-of-mitumba-market-in-kenya/>).

39 Sasi, I., (2022). Unpacking The Tag of War Between Second Hand Clothes & Local Textile Sector in Kenya, Fie-Consult. (<https://fieconsult.com/unpacking-the-tag-of-war-between-second-hand-clothes-local-textile-sector-in-kenya/>).

40 Institute of Economic Affairs (2021). The State of Second-Hand Clothes and Footwear Trade in Kenya, Institute of Economic Affairs (<https://ieakenya.or.ke/download/the-state-of-second-hand-clothes-and-footwear-trade-in-kenya/>).

41 Based on calculations from data obtained from ITC's Trade Map ([https://www.trademap.org/Country\\_SelProductCountry\\_TS.aspx?nvp-m=1%7c404%7c%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvp-m=1%7c404%7c%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1)).

42 Kenya's higher export to the United States is due to its relatively higher productivity in the Sub-Saharan region. It also has a large number of foreign-owned companies that produce high-quality garments for export under AGOA. Source: Facing the Future: Technology Upgradation in East Africa's Textiles and Apparel Sector, International Trade Centre, 2020 ([https://itme2022.india-itme.com/images/bsm/Technology\\_Upgradation\\_v3\\_web-ITC.pdf](https://itme2022.india-itme.com/images/bsm/Technology_Upgradation_v3_web-ITC.pdf)).

## Box 4

## Kenya is viewed as one of the upcoming hubs for sourcing T&amp;A products

Due to the rising cost of labour in Asia and the growing populations in Africa, apparel sourcing is shifting from Asia to Africa, albeit at a slow pace.<sup>43</sup> In view of its geographical location and the presence of a number of T&A factories that manufacture goods for the export market, Kenya is viewed as a potential hub for sourcing T&A products in Africa. Several brand owners (e.g. PVH) have established regional sourcing offices in Kenya and some buyers have pursued long-term relationships with apparel producers. This is a sign that they plan to sustain networks with suppliers. T&A companies in Kenya have reported some challenges.



01. The high cost of production
02. Lack of skilled labour
03. Inadequate infrastructure
04. Competition from cheap imports
05. Rising labour costs  
(includes labour problems as shown in [Annex II](#))
06. Counterfeit products
07. Lack of access to affordable finance
08. Inconsistent government policies
09. Higher energy costs
10. High quantities from global buyers that the Kenyan market does not currently have capacity to meet

Consequently, they resort to creating triangular manufacturing networks with buyers in industrialized countries. Hence, the governance of production units managed by T&A firms is done by head offices (located outside Kenya). This includes the sourcing of inputs from their own textile mills or networks that are not located in Kenya. Additionally, the head offices control other processes such as product development, design, logistics, merchandising, marketing and direct relationships with buyers. Consequently, these production plants from transnational producers in Kenya are confined to CMT activities due to their limited importance in transferring more functions. This has made training mostly restricted to basic production and promoting reliance on foreign firms and businesses. Hence, the T&A sector has not advanced to adequately supply apparel manufacturers

43 Berg, A., Hedrich, S. & Russo, B. (2015). East Africa: The next hub for apparel sourcing? (<https://www.mckinsey.com/~/media/McKinsey/Industries/Retail/Our%20Insights/East%20Africa%20The%20next%20hub%20for%20apparel%20sourcing/East%20Africa%20The%20next%20hub%20for%20apparel%20sourcing.pdf>).

Kenya is in the process of advancing its T&A sector. Preliminary research indicates that concerted efforts should be geared towards upgrade of technology and regional (Africa) integration of the T&A value chain.<sup>44</sup> Further, attention should focus on skills development, financial policies and access to affordable and reliable energy, with emphasis on shifting to cleaner energy. Kenyan T&A trade will be affected by other external policies that include stricter requirements for sustainable and circular aspects<sup>45</sup> (see chapter VI for more detailed recommendations).

### Box 5

#### Challenges for economic growth of the Kenyan textile and apparel value chain

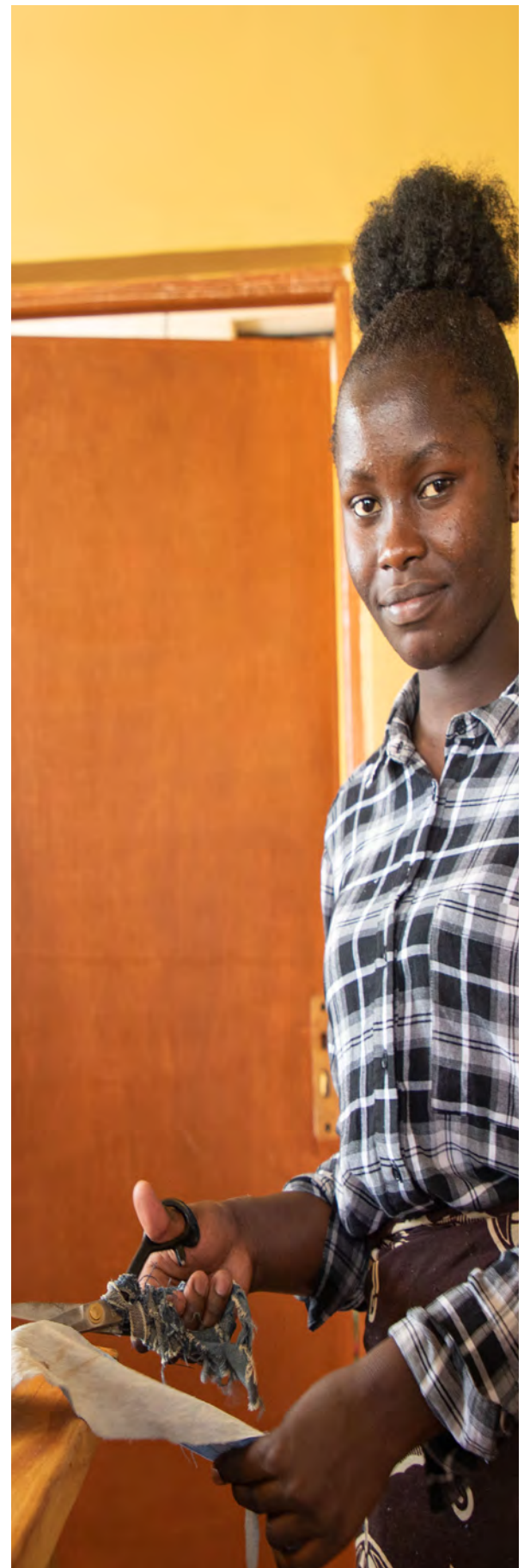
The challenges facing the Kenyan T&A sector include lack of access to affordable finance. This has adversely affected the technology upgrade in the sector. Additionally, garment manufacturers are unable to source for fabrics locally due to the poor quality and high price of locally manufactured fabrics. This could be partly due to the dearth of skills in spinning and fabric manufacture. Compared to other countries in the region,<sup>46</sup> Kenya's energy costs are relatively higher, increasing the cost of production. Moreover, frequent power blackouts necessitate the need for standby generators, which further increase the cost of energy. Another major challenge for the T&A sector is the lower level of productivity compared to Asian countries,<sup>47</sup> which is coupled with illicit imports that compete with locally produced T&A goods.

44 From round-table stakeholder meeting in the T&A sector on Trade and Trade Policies held in Nairobi on 25 October 2022.

45 Corporate sustainability due diligence: How to integrate human rights and environmental concerns in value chains, European Parliament, 2022 ([https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729424/EPRS\\_BRI\(2022\)729424\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/729424/EPRS_BRI(2022)729424_EN.pdf)).

46 Energy costs higher in Kenya and apparel producers need \$32/day to operate one machine versus \$18/day in Ethiopia.

47 Kenya's productivity rate averages 70 per cent compared to the People's Republic of Bangladesh, whose productivity rate is 80–85 per cent. Source: Facing the Future: Technology Upgradation in East Africa's Textiles and Apparel Sector, International Trade Centre, 2020 ([https://itme2022.india-itme.com/images/bsm/Technology\\_Upgradation\\_v3\\_web-ITC.pdf](https://itme2022.india-itme.com/images/bsm/Technology_Upgradation_v3_web-ITC.pdf)).





## Role of micro, small and medium-sized enterprises (MSMEs)<sup>48</sup>

MSMEs account for more than 75 per cent of economic activities in Sub-Saharan Africa.<sup>49</sup> According to the Kenya National Bureau of Statistics (2021),<sup>50</sup> MSMEs contributed 28.5 per cent of the country's GDP in 2020. The report further stated that the MSME sector employed 15.9 million people, which is approximately 84.5 per cent of total employment in the country. Additionally, SMEs create more than 30 per cent of jobs and contribute 3 per cent of the Kenyan GDP.<sup>51</sup>

MSMEs in the Kenyan T&A sector face several challenges. These include lack of information on credit and operational infrastructure, including an ambiguous operational support system from the central and county governments. MSMEs' role in Kenya is conversely skewed towards performing informal operations and major operations on less complex tasks, along with production of low-value-added products. These products are characterized by inconsistency in quality<sup>52</sup> due to inaccessibility of modern technology and machinery. A KNBS<sup>53</sup> survey indicated that less than 10 per cent of the SMEs and MSMEs that obtained credit for business were licensed to operate.

This brings to the fore a major problem that must be addressed: MSMEs, especially those operating informally, do not function within the laid-out manufacturing legal framework or adhere to rules on wages, tax and safety standards. While the Kenyan Government is working on streamlining SMEs' and MSMEs' operations, the larger T&A factories also find it hard to incorporate MSMEs into their value chain. This is due to the high risks involved, for example, inconsistent quality production.<sup>54</sup> In order to ensure MSMEs' integration into the manufacturing value chains, the Kenyan Government has made public funds available for business growth, trade and innovation. T&A MSMEs, like all other MSMEs in Kenya, can access funds through the Micro and Small Enterprises Authority (MSEA), the Youth Enterprise Development Fund, the Women Enterprise Fund, the Uwezo Fund and, recently, the Hustler Fund. The funds are designed to cater for special needs, which include lack of collateral in financing.



48 MSMEs are defined as having 1 to 99 employees. Micro enterprises have fewer than 10 employees, small enterprises have 10 to 49 employees and medium-sized enterprises have 50 to 99 employees. Source: Characteristics of Kenyan MSMEs Relevant to the Proposed Kenya Credit Guarantee Scheme, KIPPRA, 2010 (<https://kippra.or.ke/characteristics-of-kenyan-msmes-relevant-to-the-proposed-kenya-credit-guarantee-scheme/>).

49 Kenya National Chamber of Commerce and Industry (KNCCI) (2018). MSME Development: Towards a Five-Point Policy Framework, Policy briefing 1, April 2018, ([https://africacheck.org/sites/default/files/MSME-Development\\_Policy-Brief.pdf](https://africacheck.org/sites/default/files/MSME-Development_Policy-Brief.pdf)).

50 Kenya National Bureau of statistics (2021). Economic Survey 2021. (<https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf>).

51 Wakiaga, P. (n.d). SMEs critical in attaining manufacturing dream. Retrieved on February 11, 2023. (<https://kam.co.ke/smes-critical-in-attaining-manufacturing-dream/>).

52 The T&A sector in Kenya is skewed towards integration of all operations under one roof, which does not encourage the operation of SMEs and MSMEs in the value chain. Supply of raw materials (e.g. yarn and fabric) by large textile factories is not common; hence, handloom MSMEs have problems procuring yarn for weaving. From a stakeholder round-table meeting in the T&A sector on Trade and Trade Policies held in Nairobi on 25 October 2022.

53 Kenya National Bureau of Statistics (2010). Characteristics of Kenyan MSMEs Relevant to the Proposed Kenya Credit Guarantee Scheme (<https://kippra.or.ke/characteristics-of-kenyan-msmes-relevant-to-the-proposed-kenya-credit-guarantee-scheme/>).

54 Krishnan, A., Were, A. and te Velde, D.W. (2019). Integrating Kenya's small firms into leather, textiles and garments value chains, Background paper, London, Supporting Economic Transformation, (<https://africacheck.org/sites/default/files/MSMEs-Big-4-Kenya-Background-Document-May-2019.pdf>).

## Foreign direct investment (FDI)

FDI contributes to improved T&A sector performance, although fluctuations in FDI contributions have occurred over the years. In 2018, FDI inflow was \$1,139 million. The value dropped to \$1,098 million in 2019 and further to \$717 million in 2020. Kenya's FDI was low compared to Ethiopia's, which was between \$3,310 million and \$2,395 million in the same period.<sup>55</sup> Generally, it is projected that every unit rise in FDI inflows grows the Kenyan textile industry by 0.219 units. Hence, FDI contributed to an improvement in the textile industry's performance. This implies that, for every unit of FDI that flows into Kenya, 21.9 per cent goes to the T&A sector.

Consequently, there is a need for robust legal and regulatory frameworks to attract more FDI into Kenya's textile industry. Another barrier impeding FDI flows is the surging inflation level, which significantly increased the cost of doing business in the textile industry.<sup>56</sup> However, the Kenya Investment Authority (KenInvest) facilitates implementation of new investment projects by providing services for new and existing investments. Incentives are provided to investors under EPZs. These include tax incentives and holidays, VAT exemption, business allowance and investment deductions.



<sup>55</sup> Textile and Apparel Industry in East Africa, Benchmarking Reports 2022. Gatsby Africa, 2022 (<https://www.gatsbyafrica.org.uk/insight/textile-apparel-country-benchmarking-2022/>).

<sup>56</sup> Kariuki, D. (2022). Effects of Trade Liberalization on Manufacturing in Kenya: A Case Study of the Textile Industry, Journal of Economics, Management Sciences and Procurement, Volume 2, Issue I, 2022 ([http://erepository.uonbi.ac.ke/bitstream/handle/11295/160896/Kariuki\\_Effects%20of%20Trade%20Liberalization%20on%20Manufacturing%20in%20Kenya%20-%20%20a%20Case%20Study%20of%20the%20Textile%20Industry.pdf?sequence=1](http://erepository.uonbi.ac.ke/bitstream/handle/11295/160896/Kariuki_Effects%20of%20Trade%20Liberalization%20on%20Manufacturing%20in%20Kenya%20-%20%20a%20Case%20Study%20of%20the%20Textile%20Industry.pdf?sequence=1)).

### III. Environmental hotspots in Kenya's T&A value chain

Section III analyses environmental hotspots (stage i the product life cycle that accounts for a significant part of its environmental impacts) in the Kenyan T&A value chain and their link to the triple planetary crisis of climate, nature and pollution.<sup>57</sup> It follows the framework developed by UNEP and its partners on the textile value chain (as shown in [Box 1](#)).

#### Decorticating (processing) of sisal leads to GHG emission and water pollution

Kenya produced 22,768 tons of sisal in 2020,<sup>58</sup> making it the third-largest producer after Brazil and Tanzania. In Kenya, sisal is grown mainly as a plantation crop, with more than 90 per cent of the sisal exported earning Kenya \$30 million per year.<sup>59</sup> The processing of sisal fibre (decorticating) produces organic waste. For every ton of sisal fibre produced, 24 tons of organic waste is generated. Hence, the production of 22,768 tons of sisal by Kenya in 2020 led to the co-production of more than 546,432 tons of organic waste. When the biomass is disposed of in the open pond/landfill for biodegradation, methane (GHG) is emitted.<sup>60</sup> This leads to serious environmental pollution, especially in Kenya, where waste disposal procedures are poorly implemented. In fact, fires caused by the ignition of methane in sisal biomass residue landfills are common in Kenyan sisal processing factories. Some factories release wastewater straight into rivers. This leads to serious pollution of the rivers and other water sources. The use of fossil fuels for energy generation during the decorticating process can result in GHG emissions, contributing to climate pollution.

In Kenya, the use of diesel generators is common for providing energy for sisal processing. Furthermore, 1 ton of sisal needs more than 20,000 litres of water for decorticating.

This means that the proper treatment of water effluent is urgently needed to ensure that sisal processing is sustainable and to avoid depletion or pollution of scarce water resources in the semi-arid regions in Kenya in which sisal is grown.

#### Yarn manufacture and associated environmental impacts

Most fibres used in yarn manufacture are imported. This makes it difficult to assess associated environmental impacts. Kenya produces yarn mostly from imported fibres such as cotton, polyester, acrylic and viscose. The synthetic fibres (polyester, acrylic and viscose) are imported from Asia, while cotton is imported (3,000 tons of cotton from China, India, Tanzania and Uganda in 2020/2021)<sup>61</sup> and grown locally in small quantities (3,300 tons in 2021).<sup>62</sup>



57 The triple planetary crisis: Forging a new relationship between people and the earth, statement prepared for delivery to the Sub-Committee, Committee of Permanent Representatives, UNEP, 2020 (<https://www.unep.org/news-and-stories/speech/triple-planetary-crisis-forging-new-relationship-between-people-and-earth>).

58 Data obtained from Fibre Crops Directorate at the Agriculture and Food Authority, Nairobi.

59 Overview, Fibre Crops Directorate (<http://fibre.agricultureauthority.go.ke/index.php/sectors/overview>).

60 Broeren, M.L.M., Dellaert, S.N.C., Cok, B., Patel, M. K., Worrell, E. and Shen, L.(2017). Life cycle assessment of sisal fibre – Exploring how local practices can influence environmental performance, *Journal of Cleaner Production*, 149, 818–827. (<https://www.sciencedirect.com/science/article/abs/pii/S0959652617302871>).

61 Gatsby Africa (2022). Textile and Apparel Industry in East Africa – Country Benchmarking Report. (<https://www.gatsbyafrica.org.uk/app/uploads/2022/09/ta-country-benchmarking-report-ldscpe-eversio.pdf>).

62 Ministry of Agriculture, Livestock and Fisheries and Irrigation (2021). Status report on Kenya cotton sector 79th ICAC plenary virtual meeting 6th – 9th December, 2021 ([https://icac.org/Content/EventDocuments/PdfFiles-b2a9cdd2\\_68aa\\_474c\\_9150\\_b49724805967/Kenya\\_Country%20Report.pdf](https://icac.org/Content/EventDocuments/PdfFiles-b2a9cdd2_68aa_474c_9150_b49724805967/Kenya_Country%20Report.pdf)).



On a global level, cotton and synthetic fibre production are found to be closely associated with climate, water, ecosystems and land use impacts.<sup>63</sup> With limited local production, Kenyan yarn and fabric manufacturers rely heavily on fibre imports. Therefore, to fully understand the environmental footprint of fibres used in Kenya, one must consider environmental impacts in producing countries and from international transport.

Looking at local production, cotton in Kenya is grown as a rain-fed crop by more than 40,000 smallholder farmers with a landholding of less than 1 hectare. The crop is sometimes intercropped. The production of cotton lint in Kenya is low (550 kg/ha against an expected 2,500 kg/ha). This could be due to poor-quality seeds, improper use of pesticides and low application of fertilizers. Cotton growing in Kenya is likely to cause adverse environmental problems to the water sources. This is due to use and run-off of fertilizers and pesticides adversely affecting water quality in wetlands, lakes, rivers and aquifers. This could lead to the introduction of toxins (organochlorides) in the food chain.<sup>64</sup> There are further high levels of water required in growing cotton. The impact that water use has on water availability for human, industrial purposes and ecosystem services varies from country to country. This is because each geographical region experiences different degrees of water scarcity, depending on the availability of fresh water and the number of competing users. On a global level, when weighted for country-level water scarcity, cotton growing makes the highest contribution to the apparel value chain's water scarcity footprint.<sup>65</sup>

## Box 6

### Environmental footprints of Kenya's textile and apparel sector

The SCP tool<sup>66</sup> shows that, in 2020, Kenya's T&A sector consumed 2.4 million metric tons of materials, resulting in a material footprint of 4.6 tons/capita. This is higher than the global average of 2.5 tons/capita. In the same year, the industry consumed 53.2 TWh of energy, resulting in an energy footprint of 22.1 milli-daly/capita. This is higher than the global average of 14.4 milli-daly/capita.

The industry has a relatively low land footprint of -0.7 ha/capita compared to other industries due to its low land use requirements. Further, in 2020, the industry consumed 3.2 billion cubic metres of water. This resulted in a water footprint of 1,333 m<sup>3</sup>/capita. The industry also emitted GHG emissions with a carbon footprint of 1.3 tons CO<sub>2</sub> EQ/capita. This is higher than the global average of 0.8 tons CO<sub>2</sub> EQ/capita.

The industry contributes to air pollution through the burning of fossil fuels and emissions from industrial processes, especially in running standby generators due to frequent power outages. In 2020, the industry emitted approximately 1.3 million metric tons of air pollutants. This resulted in an air pollution footprint of 538 kg/capita.

The industry also generates approximately 17.8 kg/capita of domestic water pollution due to the discharge of untreated wastewater from dyeing and finishing processes.

63 UNEP (2020). Sustainability and Circularity in the Textile Value Chain: Global Stocktaking (<https://wedocs.unep.org/handle/20.500.11822/34184>).

64 Isgren, E. & Andersson, E. (2020). An Environmental Justice Perspective on Smallholder Pesticide Use in Sub-Saharan Africa, *The Journal of Environment & Development*, 30(1), 68–97. (<https://journals.sagepub.com/doi/full/10.1177/1070496520974407>).

65 UNEP (2020). Sustainability and Circularity in the Textile Value Chain: Global Stocktaking (<https://wedocs.unep.org/handle/20.500.11822/34184>).

66 Kenya: SCP Hotspot Analysis, SCP-HAT, 2022 (<http://scp-hat.lifecycleinitiative.org/countries-at-a-glance/>). Data obtained from SCP website, which provides insights into sustainable production and production (SCP) for different countries. To get the data for Kenya, one has first to select it in the drop down menu. The Kenyan report can also be accessed from [https://visualisations.fineprint.global/scp-hat-report-country/reports/scp\\_hat\\_country\\_report\\_ken.pdf](https://visualisations.fineprint.global/scp-hat-report-country/reports/scp_hat_country_report_ken.pdf).

## Box 7

## State of Kenya's environment

## Climate



According to the 2019 Notre Dame Global Adaptation Initiative (ND-GAIN), Kenya is ranked 152 out of 181 countries that are highly vulnerable to climate change due to a mix of political, geographical and social factors.<sup>67</sup> The Kenyan Government has prioritized climate change in its agenda. This has been highlighted in the Paris Agreement, where Kenya submitted its nationally determined contributions (NDCs) in 2016. These outline its intent to reduce GHG emissions by 32 per cent by 2030.<sup>68</sup> In 2021, Kenya's Finance Cabinet Secretary expressed the Kenyan Government vision of achieving a net-zero carbon neutral economy by 2050.<sup>69</sup> In order to achieve this vision, several strategies have been developed and are under implementation. These include:

- 1 Climate Change Act (2016)
- 2 National Climate Change Action Plan (2018–2022)
- 3 Kenya National Adaptation Plan (2015–2030)
- 4 Kenya Green Economy Strategy and Implementation Plan (2016–2030)
- 5 Plan for 100% Renewable Energy Scenario in Kenya by 2050 (2020)
- 6 Kenya Climate Smart Agriculture Strategy (2017–2026)
- 7 National Policy on Climate Finance (2016)
- 8 Climate Risk Management Framework (2016)

## Biodiversity



The Kenyan Government is a signatory to the Convention on Biological Diversity (CBD) since 1994. The government has since developed policies to comply with the CBD's goals. These include:

- 1 Constitution of Kenya (2010) under Chapter 5, which emphasizes biodiversity in the environment and natural resources management
- 2 National Biodiversity Strategy and Action Plan (2019–2030), which has seven strategies with more than 100 action plans and is a revision of Kenya's first biodiversity strategy of 2000
- 3 Kenya's Vision 2030, which calls for conservation and sustainable use of natural resources
- 4 Environmental Management and Co-ordination Act (2015)
- 5 Wildlife Conservation and Management Act (2013)
- 6 National Forest Policy (2020)
- 7 Forest Conservation and Management Act (2016)
- 8 Water Act (2016)
- 9 Seeds and Plant Varieties Act (Cap. 326)
- 10 Integrated Coastal Zone Management Policy (2007)

67 Country Index, University of Notre Dame (n.d) (<https://gain.nd.edu/our-work/country-index/>)

68 USAID (n.d) Kenya: Climate Change Fact Sheet (<https://www.usaid.gov/sites/default/files/2023-03/2022-USAID-Kenya-Climate-Change-Country-Profile.pdf>).

69 Obulutsa, G. (2021). Kenya plans to set up emissions trading system, (<https://www.reuters.com/world/africa/kenya-plans-set-up-emissions-trading-system-2021-05-11/>).

## Dyeing and printing stages contribute to water pollution

Kenya has 21 apparel manufacturing EPZ companies and more than 70,000 MSMEs that carry out operations in the T&A sector.<sup>70</sup> Printing and dyeing are carried out by 50 per cent of large, small and medium-sized T&A companies. National Environmental Management Authority (NEMA) rules on water effluent need to be adhered to.<sup>71</sup> The dyeing process can include de-sizing, scouring, bleaching, dyeing, washing and application of finishing chemicals. This process requires large amounts of water and the chemicals used can lead to water pollution. The disposal of wastewater from a T&A factory can contribute to water pollution if the effluent is not pre-treated. From 1990 to 2018, total blue water consumption in Kenya increased by 69.6 per cent.<sup>72</sup> While NEMA rules are well articulated in terms of pre-treatment of industrial water effluent, adherence to these rules is not well documented. The frequent reports of water pollution in areas where manufacturing takes place point to a low adherence to NEMA rules with regard to the quality of water discharged from factories. This leaves a gap that must be addressed.

## Garment production contributes to GHG emissions and air pollution

In 2019, the T&A sector consumed approximately 1.5 per cent of the total energy consumption in the country, equivalent to 1.3 million tons of oil equivalent (TOE).<sup>73</sup> As of 2021, Kenya's energy mix comprised geothermal (29 per cent), hydroelectric (29 per cent), fossil fuels (oil, coal and gas) (22 per cent), wind (18 per cent) and solar (2 per cent).<sup>74</sup>

This implies that the use of grid electricity during garment production in Kenya should translate to more than 78 per cent of clean energy. However, unreliable power supply<sup>75</sup> has compelled Kenyan T&A factories to install and use standby diesel generators. These frequent outages cause a loss of approximately 10 per cent in sales for Kenyan T&A firms, and lead to emission of GHGs and air pollution. This is a particular hotspot for garment production in Kenya. The value chain's dyeing stage is especially energy intensive, with large volumes of water needing to be heated.<sup>76</sup>

## Washing of T&A products during use phase contributes to microfibre and microplastic water pollution

In Kenya, the T&A sector is one of the leading sources of plastic pollutants. Polyester polymer (used in fabrics and also packaging) is listed as the leading leaking polymer by relative leakage (4.4 kt).<sup>77</sup> Analysis of plastic leakage indicated that synthetic textile fibres such as polyester (6 kt absolute leakage) are one of the sources of microplastics that pollute Kenyan waterways.<sup>78</sup> The microplastics might have been released from landfills<sup>79</sup> and washing of T&A products during use. The end of life for T&A goods is not well regulated. More than 70 per cent of T&A products end up in landfills or are incinerated. On the other hand, cleaning of textiles involves releasing the effluent directly into the sewer lines and there is no pre-treatment carried out to remove microplastics and other pollutants caused by detergents. Effluents released after washing of textiles in East African countries contain residues of phosphate detergents.<sup>80</sup>

70 Data obtained from the Kenya National Bureau of Statistics, Nairobi, Kenya.

71 NEMA (2006). Water quality regulations ([https://www.nema.go.ke/images/Docs/water/water\\_quality\\_regulations.pdf](https://www.nema.go.ke/images/Docs/water/water_quality_regulations.pdf)).

72 Kenya: SCP Hotspot Analysis, SCP-HAT, 2022 (<http://scp-hat.lifecycleinitiative.org/countries-at-a-glance/>). Data obtained from SCP website, which provides insights into Sustainable production and production (SCP) for different countries. To get the data for Kenya, one has first to select it in the drop down menu. The Kenyan report can also be accessed from [https://visualisations.fineprint.global/scp-hat-report-country/reports/scp\\_hat\\_country\\_report\\_ken.pdf](https://visualisations.fineprint.global/scp-hat-report-country/reports/scp_hat_country_report_ken.pdf).

73 Macharia, K.K., Gathiaka, J.K. & Ngui, D. (2022). Energy efficiency in the Kenyan manufacturing sector, Energy Policy, 161, 112715, (<https://www.sciencedirect.com/science/article/abs/pii/S0301421521005802>)

74 International Energy Agency (2020). Kenya: Key energy statistics, 2020 (<https://www.iea.org/countries/kenya>).

75 Malicha, W. & Njoroge, L. (2020). Assessing the Cotton Textile and Apparel Sector Employment Potential in Kenya-DP229, (<https://kippra.or.ke/download/assessing-the-cotton-textile-and-apparel-sector-employment-potential-in-kenya/>).

76 UNEP (2023). Sustainability and Circularity in the Textile Value Chain. (<https://www.oneplanetnetwork.org/sites/default/files/2023-10/Full%20Report%20-%20UNEP%20Sustainability%20and%20Circularity%20in%20the%20Textile%20Value%20Chain%20A%20Global%20Roadmap.pdf>).

77 National Guidance for plastic pollution hotspotting and shaping action, Country report for Kenya, IUCN-EA-Quantis, 2020 ([https://plastichotspotting.lifecycleinitiative.org/wp-content/uploads/2020/12/kenya\\_final\\_report\\_2020.pdf](https://plastichotspotting.lifecycleinitiative.org/wp-content/uploads/2020/12/kenya_final_report_2020.pdf)).

78 Ibid.

79 Changing Markets (2023). Trashion: The stealth export of waste plastic clothes to Kenya. (<https://changingmarkets.org/report/trashion-the-stealth-export-of-waste-plastic-clothes-to-kenya/>).

80 Wandiga, O. & Madadi, O. (2009) Water quality issues in East Africa, Handbook of Water Purity and Quality, 39–65, 10.1016/B978-0-12-374192-9.00003-0, (<http://erepository.uonbi.ac.ke/handle/11295/27380?show=full>).



## Production and end of life waste causes environmental pollution and value loss

Fifteen per cent of the fabrics produced in Kenya become post-industrial waste. Some of these wastes are used as boiler fuel in Kenya's EPZ factories due to the strict rules that forbid offloading of any wastes into the local market. There are some companies working on recovering fibres from post-industrial waste, but they handle less than 10 per cent of the waste produced.<sup>81</sup> Waste that is not used as boiler fuel is dumped in landfills, leading to environmental pollution. This leads to a preventable value loss and material depletion.<sup>82</sup>

Apart from recycling of post-industrial waste, there are initiatives to recycle and reuse clothing in Kenya. New start-ups<sup>83</sup> have designed a model for collecting textiles from Kenyan consumers before they are mixed with other waste and then using them to design other products for reuse. However, such initiatives currently cover less than 5 per cent of the total T&A sector wastes, and are hampered by the lack of waste segregation at the source.<sup>84</sup> T&A waste, also known as end-of-life waste, can be a significant environmental hotspot for Kenya's T&A sector. This waste comes from a variety of sources, including discarded clothing and textiles, manufacturing scraps and unsold or returned products. The improper disposal of T&A waste can lead to environmental pollution, soil and water contamination, and the emissions of GHG.

In Kenya, this situation is exacerbated by second-hand clothing, because 20–50 per cent are unusable, inappropriate, unsellable, soiled or damaged beyond repair. Additionally, it is estimated that 30 per cent of this unusable second-hand clothing is made from plastic-based fibres. A large portion of unusable second-hand clothing ends up in landfills, polluting rivers and waterways and, finally, entering the ocean. Hence, the impact of microplastic leaching and environmental contamination of water and soil linked to second-hand clothing is substantial.<sup>85</sup>

### Box 8

#### Gender and textile trade in Kenya

The majority of employees in Kenya's garment making factories are women. The Government of Kenya, through the 2010 Constitution, has attempted to address this disparity by giving women the right to equal treatment and opportunities. To promote trade and gender parity in the manufacturing sector, the government has ratified a number of global frameworks and policies. Nevertheless, this has not guaranteed gender equity, because women still experience intimidation at workplaces, work for long hours, are paid low wages, and are sexually harassed ([Annex II](#)). Also, cultural barriers and ignorance have deterred the full implementation of gender equity as per the constitution.<sup>86, 87</sup>

81 P4G Partnering for Green Growth and the Global Goals 2030 (n.d) Closing the loop on textile waste in Kenya. (<https://p4gpartnerships.org/closing-loop-textile-waste-kenya>).

82 UNEP (2023). Sustainability and Circularity in the Textile Value Chain. (<https://www.oneplanetnetwork.org/sites/default/files/2023-10/Full%20Report%20-%20UNEP%20Sustainability%20and%20Circularity%20in%20the%20Textile%20Value%20Chain%20A%20Global%20Roadmap.pdf>).

83 UNEP (n.d) In Kenya, textiles get a second life (<https://www.unep.org/news-and-stories/story/kenya-textiles-get-second-life>).

84 UNIDO (2021) Study on plastic value chain in Kenya ([https://www.unido.org/sites/default/files/files/2022-01/Plastic\\_value\\_chain\\_in\\_Kenya.pdf](https://www.unido.org/sites/default/files/files/2022-01/Plastic_value_chain_in_Kenya.pdf)).

85 Changing Markets (2023). Trashion: The stealth export of waste plastic clothes to Kenya. (<https://changingmarkets.org/report/trashion-the-stealth-export-of-waste-plastic-clothes-to-kenya/>).

86 Trade and Gender: Issues and Interactions, OECD Trade Policy Papers, No. 24, OECD Publishing, Paris, Korinek, J., 2005 (<http://dx.doi.org/10.1787/826133710302>).

87 Kiriti-Nganga, T. (2015 ) Gender and trade liberalization in Kenya: The case of women retail traders, University of Nairobi, Nairobi. (<http://erepository.uonbi.ac.ke/handle/11295/86074?show=full>).

## IV. Trade policy linkages to the T&A value chain's sustainability and circularity

### Overview

Kenya has been an active member of the World Trade Organization (WTO) since 1995. As a member, Kenya is a signatory to all WTO agreements. These include the General Agreement on Tariffs and Trade (GATT), the Agreement on Agriculture (AoA), the General Agreement on Trade in Services (GATS), the Agreement on Textiles and Clothing (ATC) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

The country promotes an open economy as well as regional and international integration of value chains. Science, technology and innovation (STI) policies and strategies in Kenya are geared towards the realization of the country's long-term development goal of Vision 2030, through harnessing the opportunities and addressing the challenges affecting the sector. A national STI strategy's main objective is to facilitate the transformation of the economy from a factor-based to a knowledge-based and inclusive sustainable economy that is resilient.<sup>88</sup>

### Trade policy instruments impacting sustainability and circularity in textile value chains

Kenya has adapted the use of the international Harmonized System<sup>89</sup> and is part of the East African Community (EAC), which has a common external tariff (CET). CET is a uniform import duty that applies across the EAC member states to harmonize tariffs and trade policies in the region. Tariff exemptions provided by the Kenyan Government for the importation of clean technologies help to encourage uptake by industries, including T&A industries.

For example, it has zero-rated value-added tax (VAT) for solar and wind energy equipment, with an aim of encouraging a shift to clean and renewable energy.<sup>90</sup> Additionally, companies enjoy investment deductions on machinery, equipment and buildings related to investment in clean and renewable energy. Several manufacturing industries in Kenya have taken advantage of the tax incentives for installation of renewable energy.<sup>91</sup> These industries have thus saved resources used to run the more expensive and environmental polluting diesel generators.<sup>92</sup> Additionally, the companies can take advantage of off-grid renewable energy, and hence be less dependent solely on the unreliable grid power. However, this is not yet the case for T&A industries. Therefore, there is need for further research to establish the constraints the T&A industries are facing that have prevented them from taking advantage of the incentives given for renewable energies. Kenya has established a number of environmental standards for manufacturing, which also affect the T&A sector. The National Environmental Management Authority (NEMA) is responsible for enforcing environmental regulations and standards in Kenya. NEMA standards require that T&A manufacturers have environmental impact assessment (EIA) certificates before being allowed to operate.



88 NACOSTI (2021). Template: Institutional Science, Technology, and Innovation (STI) Strategy, National Commission for Science, Technology and Innovation (<https://www.nacosti.go.ke/nacosti/Docs/2021/STI/National%20STI%20Strategy%20Template.pdf>).

89 International Trade Administration (2022) Kenya – Country Commercial Guide, Import Tariffs, 2022 (<https://www.trade.gov/country-commercial-guides/kenya-import-tariffs>).

90 KPMG (2021) Analysis of the Finance Act (<https://assets.kpmg.com/content/dam/kpmg/ke/pdf/tax/2021/KPMG%20Analysis%20of%20the%20Finance%20Act%202021%20-%20Final.pdf>).

91 Okeyo, J. & Peter, M.K. (2022). Promoting the Use of Solar Energy in the Manufacturing Sector in Kenya, (<https://kippra.or.ke/promoting-the-use-of-solar-energy-in-the-manufacturing-sector-in-kenya/>).

92 Babajide, A. & Brito, M.C. (2021). Solar PV systems to eliminate or reduce the use of diesel generators at no additional cost: A case study of Lagos, Nigeria, *Renewable Energy*, 172, 209–218, (<https://doi.org/10.1016/j.renene.2021.02.088>).

## Box 9

## Circularity in Kenya's T&amp;A industry is addressed through several policies that target resource efficiency in general, but are not specific to circularity

The waste management regulations<sup>93</sup> policy provides a framework for sustainable management of waste. This includes transportation, recycling and recovery up to the disposal of waste. The National Solid Waste Management Strategy<sup>94</sup> lays a framework for improved solid waste management, inclusive of plastics in the country. The Kenya Green Economy Strategy and Implementation Plan<sup>95</sup> is a blueprint for enhancing low-carbon, resource-efficient, equitable and inclusive socio-economic transformation. This will promote sustainable infrastructure, build resilience, enable sustainable natural resource management, promote resource efficiency, social inclusion and sustainable livelihoods, as well as e-waste recovery and recycling in Kenya. This commits the government to put in place measures to reduce the amount of waste generated, and where waste is generated, to ensure that waste is reused, recycled and recovered in an environmentally sound manner. Other policy instruments include:

- 1 Climate Change Act
- 2 Nationally Appropriate Mitigation Actions (NAMAs) on the circular economy solid waste management approach for urban areas in Kenya
- 3 Bioenergy strategy 2020–2027
- 4 Kenya Climate Smart Agriculture Strategy
- 5 Kenya National Energy and Conservation Strategy

While there is no specific action plan requiring the Kenyan T&A industry to adopt circular models except for the multitude of strategies cited above, Kenya has implemented the Roadmap to Sustainable Development Goals (SDGs) (2016–2018).<sup>96</sup> This is a comprehensive strategy to promote sustainable development in Kenya. It includes measures to promote environmental sustainability in the economic, social and environmental sectors. Another strategy is the National Export Strategy (NES). This is a comprehensive strategy to promote exports from Kenya and addresses measures to promote circularity and environmental sustainability in the export sector. Finally, the National Industrialization Strategy (NIS) is a comprehensive strategy to promote industrialization in Kenya. It covers measures to promote circularity and environmental sustainability in the industrial sector.

93 NEMA (2006). Waste management regulations 2006 (<https://www.nema.go.ke/images/Docs/Regulations/Waste%20Management%20Regulations-1.pdf>).

94 NEMA (2015). The National Solid Waste Management Strategy (<https://www.nema.go.ke/images/Docs/Media%20centre/Publication/National%20Solid%20Waste%20Management%20Strategy%20.pdf>).

95 Government of Kenya (2015). Kenya Green Economy Strategy and Implementation Plan (GESIP). (<https://repository.kippra.or.ke/bitstream/handle/123456789/2797/MENR-Green-Economy-Strategy-and-Implementation-Plan-2016-2030-2016.pdf?sequence=1&isAllowed=y>).

96 Government of Kenya (2020). Roadmap to Sustainable Development Goals (SDGs), Kenya's Transition Strategy 2016–2018, (<https://www.planning.go.ke/wp-content/uploads/2020/11/Roadmap-to-Sustainable-Development-Goals-SDGs-Kenyas-Transition-Strategy-2016-2018.pdf>).



## Ecolabels and standards used on Kenyan T&A products

The use of ecolabels is adapted by T&A based on their clients' or group/parent company's requirements. For example, if a company is doing CMT and is part of an international manufacturing consortium, the factory in Kenya will comply with all the certification labels in the parent company in order to meet the requirements set by clients. In this case, the parent company is the entity that owns the subsidiary dealing with CMT as the major shareholder. The ecolabels used in Kenya's T&A sector include (see [Figure IV](#)):

**Figure IV:** Examples of ecolabels used for textile and apparel products in Kenya

	Worldwide Responsible Accredited Production (WRAP)
	Zero Discharge of Hazardous Chemicals (ZDHC)
	Global Organic Textile Standard (GOTS)
	Leadership in Energy and Environmental Design (LEED)

The EAC has launched an initiative to harmonize standards and labels used by its partner states. This effort is still hampered by differing national interests. For example, Kenya has more EPZ T&A companies that work on the CMT model and prefer to use labels from the parent companies that are abroad.

Additionally, the Ministry of Environment and Forestry also plays a role in setting environmental standards and regulations in the T&A sector. These include regulations on the use of organic cotton, sustainable sourcing and circular economy principles.<sup>97</sup> These standards have been consolidated under the Environmental Management and Coordination Act (EMCA) (2014) requirements on pollution and emissions by manufacturing sectors and subsequent legislations of environment impact assessments (EIAs) and environmental assessments (EAs).

Further, the Kenya Bureau of Standards (KEBS) operates the national enquiry point in support of the WTO Agreement on Technical Barriers to Trade (TBT).<sup>98</sup> The KEBS standards, like most regional standards, are not specifically about circularity in the T&A sector, although KEBS has reported plans to work on the grading of recycled yarns and repurposed textile items.

<sup>97</sup> Government of Kenya (2014). Kenya Subsidiary Legislation (2014), Kenya Gazette Supplement No. 14 ([http://kenyalaw.org/kl/fileadmin/pdf-downloads/LegalNotices/2014/LN34\\_2014.pdf](http://kenyalaw.org/kl/fileadmin/pdf-downloads/LegalNotices/2014/LN34_2014.pdf)).

<sup>98</sup> Information obtained during round-table meeting held on 25 October 2022 in Nairobi.

## Box 10

## East African Organic Products Standard (EAOPS) and Eco Mark Africa (EMA)

At the regional level, East African countries (Kenya included) adapted the East African Organic Products Standard (EAOPS) in 2007.<sup>99</sup> EAOPS was a key output of a joint UNEP and UNCTAD capacity-building task force on trade, environment and development. The ecolabel can be used to certify organic textiles and apparel made from organic wool, cotton, silk and other natural fibres.

Considering the continental level, the African Organisation for Standardisation (ARSO) is an intergovernmental standards body supported by the African Union (AU) and tasked to develop and implement the African Ecolabelling Mechanism programme. ARSO registered Eco Mark Africa (EMA) with the World Intellectual Property Organization (WIPO) in 2018.<sup>100</sup> EMA has set its mandate to include assisting African producers to access local and international markets for sustainably produced goods.<sup>101</sup> To date, EMA has certified a few companies in Kenya, the Republic of Zimbabwe, the Republic of Ghana, and Nigeria dealing with agricultural, forestry, fisheries and tourism. Kenya is an ARSO member country and is, therefore, one of the countries in which the EMA ecolabel can be used. Although, up to date none of the EMA-certified products cover the T&A sector. It is hoped that T&A companies will embrace the continental ecolabel. Therefore, a potential exists for creation of awareness about sustainable ecolabels in the Kenya's T&A sector.

## Non-tariff measures for imported textiles

Kenya also employs non-tariff measures (NTMs) as a trade policy instrument for imported textiles. NTMs are trade policy measures other than tariffs that can be used to restrict imports or regulate trade. They include:

- 1 Import and export licensing requirements
- 2 Technical barriers to trade (TBT), such as product standards and regulations
- 3 Sanitary and phytosanitary (SPS) measures that are used to protect human, animal and plant life or health
- 4 Customs procedures
- 5 Trade facilitation measures

The Kenyan Government requires that imported textiles meet certain standards for quality, safety and environmental performance in order to be allowed into the country. When evaluating imported textiles' environmental performance, environmental regulatory frameworks and standards, environmental health and safety measures, and the sustainable use of natural resources must all be taken into consideration.<sup>102</sup> Furthermore, textile importers are required to have certain licenses or permits in order to import these goods. The government also uses quantitative restrictions such as import quotas to limit the amount of certain textiles that can be imported into the country in order to protect the domestic textile industries.

99 UNEP (n.d). Aid for Trade Case Story: The East African Organic Products standard, retrieved on 11 April 2023 (<https://www.oecd.org/aidfor-trade/47719232.pdf>).

100 African Organisation for Standardisation (n.d). Eco Mark Africa., retrieved on 5 August 2022 ([https://www.arso-aran.org/?page\\_id=5617#:~:text=Objectives%20of%20ECO%20Mark%20Africa,well%20as%20credible%20implementation%20mechanisms](https://www.arso-aran.org/?page_id=5617#:~:text=Objectives%20of%20ECO%20Mark%20Africa,well%20as%20credible%20implementation%20mechanisms)).

101 United Nations Forum on Sustainability Standards (2022). Africa prepares to mainstream voluntary sustainability standards: launch of the African continental platform on voluntary sustainability standards (<https://unfss.org/2022/04/07/africa-prepares-to-mainstream-voluntary-sustainability-standards-launch-of-the-african-continental-platform-on-voluntary-sustainability-standards%EF%BF%BC/#:>).

102 Ministry of Trade and Enterprise Development (2020). Protocols for the importation of used textiles and used footwear into Kenya, ([https://www.kebs.org/images/notices/2020/PROTOCOLS\\_ON\\_IMPORTATION\\_OF\\_SECOND\\_HAND\\_CLOTHES\\_IN\\_KENYA\\_-\\_PUBLIC.pdf](https://www.kebs.org/images/notices/2020/PROTOCOLS_ON_IMPORTATION_OF_SECOND_HAND_CLOTHES_IN_KENYA_-_PUBLIC.pdf)).

## Box 11

## Environment-related notifications and measures reported by Kenya to the WTO

Kenya has made 128 environment-related notifications to the WTO, 128 environment-related measures and 42 environment-related Trade Policy Review (TPR) entries. Nearly half of them are manufacturing related. In terms of types of measures, technical regulations or specifications (123 in number) accounted for 96.1 per cent of the notifications, and 37.5 per cent were on conformity assessment procedures, 0.8 per cent on risk assessment and 0.8 per cent on import licenses.<sup>103</sup> In the T&A industry, for example, Kenya notified the WTO of new regulations on the use of hazardous chemicals or the disposal of textile waste. Kenya also provided information on how these regulations would help to protect the environment and any potential impacts on trade. These notifications help to ensure transparency and facilitate dialogue among WTO member countries, allowing other countries to provide comments and raise any concerns they might have regarding the potential impacts of these measures on trade. The notifications also help other countries to understand the measures' rationale and how they are intended to protect the environment. This helps in the discussion of technical regulations, testing and certification procedures.

## Investment management and incentives

The Kenyan Government, supported by partners and stakeholders, has implemented various investment management and incentives policies, plans and initiatives. These provide an enabling environment for investment in Kenya's T&A sector. The government's investment promotion agency, the Kenya Investment Authority (KIA), provides investment support services such as market intelligence, business linkages facilitation and investment advisory services to investors interested in the sector.<sup>104</sup>

In addition, the Government of Kenya has implemented various fiscal incentives, such as tax holidays and duty exemptions, to attract investment in the sector.<sup>105</sup> For example, the Kenyan Government offers tax incentives to investors in the manufacturing sector. These include a corporate tax rate of 25 per cent, an investment deduction of up to 150 per cent of the cost of machinery and equipment, and an investment allowance of up to 100 per cent of the cost of buildings used for manufacturing. The Kenyan Government has taken a deliberate measure to introduce a policy framework that incentivizes the manufacturing sector to:<sup>106</sup>

- 1 Undertake life cycle assessment (LCA) in order to access green financing
- 2 Innovatively use efficient production systems that include optimal use of material and energy
- 3 Prioritize the use of ecolabelled goods

103 WTO Environmental Database (WTO-EDB) (<https://edb.wto.org/>).

104 Ministry of Industrialization, Trade and Enterprise Development (2021). Investing in Kenya's fibre, textiles and apparel industry (<https://www.invest.go.ke/wp-content/uploads/2016/10/KenInvest-Fibre-Text-App-IP-PDF-version.pdf>).

105 US Department of Trade (2023). 2023 Investment Climate Statements: Kenya (<https://www.state.gov/reports/2023-investment-climate-statements/kenya/>).

106 Government of Kenya (2022). Draft National green fiscal incentives policy framework (<https://www.treasury.go.ke/wp-content/uploads/2023/01/Draft-Green-Fiscal-Incentives-Policy-Framework.pdf>).



The T&A industry can take advantage of the aforementioned incentives. Additionally, the government has introduced measures aimed at reducing the cost of doing business in Kenya. These include the introduction of a single business permit that allows companies to obtain all necessary licenses and permits in one application process. The Kenya Revenue Authority provides preferential corporate tax rates dependent on the percentage of listed shares. These incentives apply to newly listed companies, both local and foreign owned. The government also provides a range of other tax incentives. These include exemptions from customs duties and value-added tax (VAT) on imported machinery and equipment, raw materials and other inputs used in production. These exemptions can help to lower production costs for companies in the sector. This will make them more competitive in both domestic and international markets.<sup>107</sup> When it comes to environmental sustainability, newly listed companies in the T&A sector can access funding and technical assistance from various programmes and initiatives aimed at promoting ecological sustainability. For example, the sustainable conversion of waste to reduce GHGs in Kenya was funded by UNIDO.<sup>108</sup> Companies in the T&A sector can apply for such funding and technical assistance to support the adoption of sustainable practices in their operations. There are also initiatives for the generation of electricity from renewable energy sources such as wind, solar and biomass.<sup>109</sup> The government aims to expand generation of renewable energy by generating 852 MW by 2037 and establishing the Kenya National Energy Efficiency and Conservation Strategy (NEECS) to coordinate energy efficiency in other energy sectors. The Energy Act, No. 1 of 2019<sup>110</sup> provides a feed-in tariff (FIT) system aimed at diversifying the generation of electricity through renewable energy sources, encouraging innovations in renewable energy technology and reducing GHG emissions. This will ensure that the country generates and uses quality energy that is environmentally friendly. Hence, the T&A sector will

be a beneficiary in using renewable energy and reduce production-related emissions.

Further, the government established the Kenya National Cleaner Production Centre (NCPC) in 2000 in collaboration with UNIDO to promote sustainable production practices in various sectors, including the T&A sector. NCPC has worked with other stakeholders and continues to reach out to all industries (including T&A industries) to ensure optimal resource usage, especially with reference to energy efficiency and is adversely affecting the environment.<sup>111</sup> The NCPC provides technical assistance and training to industries to help them adopt cleaner production practices. More studies should be carried out to establish the reason for lower uptake than expected of such initiatives by the T&A industries in Kenya.

**The establishment of EPZs and SEZs has contributed to increased activities in the T&A sector, but they lack sustainable waste management strategies.** The Kenyan Government established EPZs under an Act of Parliament in 1990. SEZs were established to broaden the type of economic activities and to allow for sale of goods to local markets where necessary. The development of EPZs and SEZs<sup>112</sup> in Kenya is important for the achievement of the Kenya Vision 2030. While EPZs target local and foreign investors, SEZs target foreign textile firms with a view of attracting FDI from countries such as the Republic of South Africa, the Republic of the Union of Myanmar, the Socialist Republic of VietNam, and China.<sup>113</sup>

The Kenya Revenue Authority implements the issuance of the fiscal (tax) incentives in collaboration with other regulators and facilitators. These include the Capital Markets Authority and the Export Processing Zones Authority (for issuance of EPZ incentives), among others, as provided under the Income Tax Act, Laws of Kenya.

107 Government of Kenya (n.d). VAT act 2013 (revised 2016).([https://www.kra.go.ke/images/publications/ValueAddedTax\\_ActNo35of2013.pdf](https://www.kra.go.ke/images/publications/ValueAddedTax_ActNo35of2013.pdf)).

108 UNIDO (2023). Sustainable conversion of waste into clean energy to reduce GHG emissions in Kenya (<https://open.unido.org/projects/KE/projects/120568>).

109 Githinji, M.E. (2021). Tax Incentives on Renewable Energy (<https://cleanenergy4africa.org/tax-incentives-on-renewable-energy/>).

110 Government of Kenya (2019). The Energy Act, No. 1 of 2019 ([http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/EnergyAct\\_No.1of2019.PDF](http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/EnergyAct_No.1of2019.PDF)).

111 UNIDO (2015). National Cleaner Production Centres 20 years of achievement. ([https://www.unido.org/sites/default/files/2015-10/NCPC\\_20\\_years\\_0.pdf](https://www.unido.org/sites/default/files/2015-10/NCPC_20_years_0.pdf)).

112 Special Economic Zones Authority (n,d) Investment Opportunities (n.d.) (<https://sezauthority.go.ke/>).

113 From expert consultation sessions with the Ministry of Industrialization, Trade and Enterprise Development.

Tax incentives are mainly in the form of capital deductions. These deductions are made at the point of computing the gains or profits of a person/company for any year of income.<sup>114</sup> Investors in any sector (including T&A) can take advantage of any of these incentives and set up a sustainable manufacturing factory or modernize an existing one. The EPZ and SEZ Acts are not clear on sustainability and circularity. In fact, the EPZ Act does not allow waste generated in the T&A factories to be recycled outside the EPZ area. This creates a poor waste disposal practice of burning and dumping.<sup>115</sup>

### Capital allowances:<sup>116</sup>

Capital allowances can provide significant incentives for investment in Kenya's T&A sector. Specifically, the Kenya Revenue Authority provides tax incentives for capital expenditures, which include: (i) wear and tear allowances; (ii) investor deductions; (iii) industrial building deductions; and (iv) equipment and machinery upgrade. In the T&A sector, capital allowances can facilitate investments in new technology and machinery that can improve production efficiency and reduce environmental impacts, such as water and energy consumption, and waste generation. Similarly, investments in water-efficient dyeing and finishing technologies can help to reduce water consumption and wastewater pollution. The WTO indicated that certain investments can restrict or distort trade<sup>117</sup> Therefore, Kenya needs to ascertain the impact of its capital allowances to ensure that trade in T&A goods is not adversely affected. At the same time, the country must ensure that environmental matters are dealt with to ensure sustainability. For example, the government can provide tax incentives for businesses that adopt sustainable production practices or meet sustainability standards such as the Global Organic Textile Standard (GOTS) or the Better Cotton Initiative (BCI).

The government can also promote sustainability through regulations and standards that address environmental and social issues in the T&A sector. Examples include the restriction of hazardous chemicals in textile production or labour rights in apparel manufacturing.

Another example is the Kenya Association of Manufacturers (KAM) project, the Sustainable Use of Natural Resources and Energy Finance (SUNREF),<sup>118</sup> which offers greening opportunities. SUNREF covers 70 per cent of costs of factory audits that aim at changing to potential energy and cost savings. Also, the project provides free business plan assistance to assist in applications for concessionary loans offered by specific banks engaged by SUNREF, which have low interest rates of approximately 5 per cent. The programme also facilitates matchmaking with potential buyers. Hence, the T&A sector can leverage this opportunity to purchase new equipment and technologies and reduce production-related costs and emissions. Further, it is recommended that, to provide buyers with assurance that 'greening' has happened, Kenyan firms, including those in the T&A sector, should seek to attain certifications that provide credibility. This can include green certification for buildings, manufacturing operations and business management. These include Leadership in Energy and Environmental Design (LEED), the Green Business Bureau, Green Business Certification and Green Plus Certification, which are offered by many companies. The Government of Kenya, through the state Department of Energy, has put in place strategies to encourage companies to carry out energy audits.<sup>119</sup> Additionally, the environmental hotspots in the dyeing sector can be mitigated by using waterless dyeing techniques,<sup>120</sup> and the environmentally polluting standby generators can be replaced by investing in renewable energy.<sup>121</sup>

114 Kenya investment Authority (n.d). Incentives. (<https://www.invest.ke/ke/incentives/>).

115 De Cruz, I. & McGuckin, R., (2021). How a Partnership in Kenya Recycled 100,000 Kilograms of Fashion Waste, World Resources Institute, (<https://www.wri.org/insights/closing-loop-textile-waste-recycling-kenya>).

116 Kenya Revenue Authority (n.d). What Incentives do Investors get?(<https://www.kra.go.ke/ngos/incentives-investors-certificate/investing-in-kenya/incentives-investors>).

117 World Trade Organization (n.d) Agreement on Trade Related Investment Measures ([https://www.wto.org/english/tratop\\_e/invest\\_e/invest\\_info\\_e.htm](https://www.wto.org/english/tratop_e/invest_e/invest_info_e.htm)).

118 Kenya Association of Manufacturers (n.d) AFD, KAM Provide Green Energy Financing in East Africa., (<https://kam.co.ke/afd-kam-provide-green-energy-financing-in-east-africa/>).

119 Government of Kenya (2020). Kenya National Energy Efficiency and conservation strategy (<https://unepccc.org/wp-content/uploads/2020/09/kenya-national-energy-efficiency-and-conservation-strategy-2020-1.pdf>).

Mahmud, I. & Kaiser, S. (2020). Recent Progress in Waterless Textile Dyeing, *Journal of Textile Science & Engineering*, 10. 1-3.

120 Mahmud, I. & Kaiser, S. (2020). Recent Progress in Waterless Textile Dyeing, *Journal of Textile Science & Engineering*, 10. 1-3. ([https://www.researchgate.net/publication/345669188\\_Recent\\_Progress\\_in\\_Waterless\\_Textile\\_Dyeing/link/5faa5f0b458515157bfc13fe/download](https://www.researchgate.net/publication/345669188_Recent_Progress_in_Waterless_Textile_Dyeing/link/5faa5f0b458515157bfc13fe/download)).

121 Mwirigi, C., (2022). Solar auctions to replace feed-in tariffs in Kenya, *pv magazine*, (<https://www.pv-magazine.com/2022/07/26/solar-auctions-to-replace-feed-in-tariffs-in-kenya/>).

Other sector-specific interventions include valorisation of sisal biomass<sup>122</sup> and pre-treatment of industrial effluent from dyeing factories.<sup>123</sup> These can be implemented by individual companies or clusters of companies. The aforementioned interventions can be implemented through grants and low-interest loans or tax rebates and would go a long way to support sustainable business models, while simultaneously averting environmental degradation.

### Support programmes for the T&A sector:

The Kenyan Government has put in place several support programmes aimed at the T&A sector. In 2018, the government established various institutions and programmes to support the T&A sector's growth and development. For example, the Kenya Industrial Transformation Programme (KITP) aims to promote the growth of manufacturing and other productive sectors of the economy by providing technical assistance, financial support and other incentives to businesses in these sectors.<sup>124</sup> In another example, the government has published the Cotton Industry Development Bill to promote sustainable cotton production and provide support to cotton farmers and all other stakeholders in the cotton value chain.<sup>125</sup>

The bill provides a framework for regulating the production, processing, and marketing of cotton and cotton products. Kenyan T&A stakeholders can also work with other international partners like Better Cotton, who work with cotton farmers to promote sustainable cotton production practices.<sup>126</sup> The BCI has provided training and support to farmers to help them adopt sustainable farming practices that reduce the environmental impact of cotton production.

### Trade agreements

Kenya is a member to a few regional and preferential trade agreements. These include the African Growth and Opportunity Act (AGOA), the African Continental Free Trade Area (AfCFTA), the East African Community (EAC), and the Common Market for Eastern and Southern Africa (COMESA). It also signed and ratified the EU-UK Trade and Cooperation Agreement in 2021.<sup>127</sup> Sustainability is mostly absent in the trading arrangements that govern trade between Kenya and its main textile trading partners. FTAs that govern trade with Kenya's key T&A partners generally do not focus on sustainability and circularity of textiles production.



122 Food and Agriculture Organization (FAO) (n.d). Future Fibres, , retrieved 3 August 2022 (<https://www.fao.org/economic/futurefibres/fibres/sisal/en/#:~:text=Sisal%20waste%20products%20%2D%20By%2Dproducts,-pharmaceutical%20ingredients%20and%20building%20material>).

123 Shindhal, T., Rakholiya, P., Varjani, S., Pandey, A., Ngo, H.H., Guo, W., Yong Ng, H. & Taherzadeh, M.J. (2021).

A critical review on advances in the practices and perspectives for the treatment of dye industry wastewater, *Bioengineered*, 12:1, 70-87. (<https://www.tandfonline.com/doi/full/10.1080/21655979.2020.1863034>).

124 Government of Kenya (2012). Sessional paper no. 9 of 2012 on the National Industrialization policy framework for Kenya 2012-2030 (<https://repository.kippra.or.ke/xmlui/bitstream/handle/123456789/1037/the-national-industrialization-policy.pdf?sequence=3&isAllowed=y#:~:text=This%20policy%20framework%20focuses%20on,the%20sector%20growth%20and%20development>).

125 Government of Kenya, (2023). The Cotton Industry Development Bill 2023, Government printers, Nairobi. ([http://kenyalaw.org/kl/fileadmin/pdf-downloads/bills/2023/TheCottonIndustryDevelopmentBill\\_2023.pdf](http://kenyalaw.org/kl/fileadmin/pdf-downloads/bills/2023/TheCottonIndustryDevelopmentBill_2023.pdf)).

126 Better Cotton (n.d.) (<https://bettercotton.org/>).

127 The deal is a translation of the terms previously agreed between the EU and the East African Community (EAC). It includes clauses to allow other EAC states to join in the future. See: UK-Kenya Economic Partnership Agreement enters into force, Government of the United Kingdom, 2021 (<https://www.gov.uk/government/news/uk-kenya-economic-partnership-agreement-enters-into-force>).



## Selected trade agreements relevant to textile value chains in Kenya

### African Growth and Opportunity Act (AGOA)

AGOA has been a critical enabler of Kenya's garment industry. AGOA allows T&A products to enter the United States free of import duties, which, for some textile products, can be as high as 32 per cent. There are conditions attached to receiving such preferential access. For example, products must meet the rules of origin, which tend to be lenient, as well as respond to other requests relevant to trade liberalization. AGOA does not contain any references to sustainable or circular production. In 2017, Kenya and three other EAC countries sought to introduce a ban on the import of used clothing to ensure that imported used clothing would not stifle its domestic garment industry or end up as waste materials. In response, a US lobby filed a petition accusing the four EAC countries of violating AGOA rules. Hence, Kenya did not introduce the said import ban.<sup>128</sup>

AGOA is set to expire in 2025. In the meantime, the United States and Kenya have been conducting negotiations for a potential future regional trade agreement (RTA). Should it come to fruition, Kenya could leverage such an agreement to ensure that it can continue to benefit from duty-free market access into the United States, and to enhance sustainable and circular textiles and garment production. Relevant provisions would include trade facilitation, technical barriers to trade, intellectual property, and goods and services schedules. To enhance trade in sustainable textiles, there might also be a scope for provisions that seek to enhance cooperation on circular economy.

128 Olingo, A. (2017). Secondhand clothes ban shelved to save Agoa trade agreement, (<https://www.theeastafrican.co.ke/tea/news/east-africa/second-hand-clothes-ban-shelved-to-save-agoa-trade-agreement--1368264>).

### African Continental Free Trade Area (AfCFTA)

The recently adopted African Continental Free Trade Area (AfCFTA) presents an important opportunity to increase Kenyan exports to the rest of the continent. Inter-African trade is low, at 14.4 per cent. The AfCFTA could boost inter-African trade by approximately 33 per cent.<sup>129</sup> Specifically, members agreed to liberalize tariffs on 90 per cent of products, including garments. While schedules are yet to be finalized, the offers submitted by various regional economic communities in Africa, including the Economic Community of Central African States (CEMAC), the EAC and the Economic Community of West African States (ECOWAS), indicate that anticipated tariff reductions will be on garments (from 22 per cent to 0.1 per cent, from 18.8 per cent to 7.7 per cent, and from 16.4 per cent to 6 per cent, for CEMAC, EAC and ECOWAS respectively).<sup>130</sup> Whether these lower tariffs would significantly increase inter-African trade in part depends on the stringency of the rules of origin for garments and textiles that will be adopted, which continue to be under negotiation. The AfCFTA contains only minimal environmental references, such as preambular language highlighting the relevance of the environment or exception clauses that justify violations of other AfCFTA provisions. However, it does not contain an environmental chapter or other provisions that seek to strengthen the link between trade and the environment. However, there are still various ways in which the AfCFTA could be leveraged to foster the development of a sustainable textiles industry. These include strategically implementing provisions on trade, services, trade facilitation, intellectual property, e-commerce and competition.<sup>131</sup>

129 Grynspan, R (2021). New opportunities for accelerating pan-African trade, UNCTAD. (<https://unctad.org/news/blog-new-opportunities-accelerating-pan-african-trade#:~:text=Intra%2DAfrican%20trade%20is%20currently,continent's%20trade%20deficit%20by%2051%25>).

130 Bylers, B., Apiko, P. & Karkare, P., (2021). The AfCFTA and industrialisation: From policy to practice, (<https://ecdpm.org/work/the-afcfta-and-industrialisation-from-policy-to-practice>).

131 Van der Ven, C. & Signe, L. (2021). Greening the AfCFTA: It is not too late, Brookings Institute, ([www.brookings.edu/wp-content/uploads/2021/09/21.09.15-Greening-the-AfCFTA.pdf](http://www.brookings.edu/wp-content/uploads/2021/09/21.09.15-Greening-the-AfCFTA.pdf)).

## Common Market for Eastern and Southern Africa (COMESA)

The Common Market for Eastern and Southern Africa (COMESA) is a regional economic community in Africa with 21 member states. The COMESA Treaty<sup>132</sup> incorporates many provisions on the environment and sustainability. It recognizes the importance of using standards to protect the environment.<sup>133</sup> The treaty also provides for cooperation in many areas and sectors linked to sustainability. It dedicates a chapter to cooperation on natural resources, the environment and wildlife, which provides for the sustainable use of natural resources and the correct management of hazardous waste,<sup>134</sup> as well as on agricultural matters.<sup>135</sup> Further, it provides for cooperation to analyse and disseminate information to achieve environmental objectives.<sup>136</sup>

### Trade finance

In Kenya, trade finance is provided by a variety of financial institutions. These include banks, development finance institutions (DFIs) and export credit agencies (ECAs). These institutions offer a range of trade finance products and services to help businesses with the costs and risks associated with international trade.<sup>137</sup>

#### Commercial banks:

Commercial banks are major providers of trade finance services for the T&A sector in Kenya. They offer a wide range of trade finance products and services, such as letters of credit, import financing, export financing and supply chain financing. Commercial banks in Kenya that provide trade finance services to the T&A sector include Standard Chartered Bank, Equity Bank and Co-operative Bank of Kenya.

#### Development finance institutions (DFIs):

DFIs are government-owned or government-supported institutions that provide financing and other support to businesses in order to promote their economic development. They provide trade finance services to SMEs and businesses in under-served or underdeveloped areas. Some of the DFIs in Kenya that provide trade finance services to the T&A sector include the Kenya Institute of Business Training (KIBT), the Micro and Small Enterprises Authority (MSEA) and the Kenya Industrial Property Institute (KIPI).

#### Export credit agencies (ECAs):

ECAs are government-owned or government-supported institutions that provide trade finance services such as export credit guarantees and export credit insurance. In Kenya, the Export Credit Insurance Corporation (ECIC) is the main ECA that provides trade finance services to the T&A sector, including export credit insurance and guarantees, as well as trade-related technical assistance.

#### International financial institutions (IFIs):

IFIs such as the World Bank, the African Development Bank, the Asian Development Bank, the Inter-American Development Bank and the International Monetary Fund operate in Kenya and offer financial support for investment in clean technologies. They provide lending services, risk mitigation services and technical assistance. T&A industries can take advantage of several initiatives to invest in sustainable and environmentally friendly manufacturing technologies. Some examples are the Clean Technology Fund,<sup>138</sup> the Sustainable Energy Fund for Africa,<sup>139</sup> and the Climate Investment Funds.<sup>140</sup>

132 Uganda is also party to the Treaty Establishing the Common Market for Eastern and Southern Africa.

133 COMESA (n.d). Treaty Establishing the Common Market for Eastern and Southern Africa, Article 112. ([https://www.comesa.int/wp-content/uploads/2019/02/comesa-treaty-revised-20092012\\_with-zaire\\_final.pdf](https://www.comesa.int/wp-content/uploads/2019/02/comesa-treaty-revised-20092012_with-zaire_final.pdf)).

134 Ibid., Chapter 16.

135 Ibid., Chapter 18.

136 Ibid., Chapter 19.

137 International Trade Administration (n.d). Kenya – Country Commercial guide. (<https://www.trade.gov/country-commercial-guides/kenya-trade-financing>).

138 The World Bank (n.d). Financial Intermediary Funds: Clean Technology Fund. (<https://fiftrustee.worldbank.org/en/about/unit/dfi/fiftrustee/fund-detail/ctf>).

139 Sustainable Energy Fund for Africa, African Development Bank Group (<https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/sustainable-energy-fund-for-africa>).

140 Climate Investment Fund (n.d). Kenya. (<https://www.cif.org/country/kenya>).

Furthermore, multilateral development banks (MDBs) have invested in renewable energy and other clean technologies in Kenya to reduce the textile value chain's environmental impacts. The African Development Bank (AfDB) has provided funding to the private sector to support generation of clean energy, which aims at increasing the share of renewable energy in the country's energy mix.<sup>141</sup> The International Finance Corporation (IFC) has provided financing and advisory services to help Kenyan companies and financial institutions invest in renewable energy and energy efficiency.<sup>142</sup>

The AfDB and the IFC have also invested in and supported, through technical assistance, the development of renewable energy projects in Kenya. One of these is the Lake Turkana Wind Power Project. This project generates 300 MW of clean energy and reduces carbon emissions by approximately 16 million tons per year.<sup>143</sup> Another renewable energy project is the Kipeto Wind Power Project, which generates 100 MW of clean energy and reduces carbon emissions by approximately 160,000 tons per year.<sup>144</sup>



141 African Development Bank Group (AfDB) (n.d). Menengai Geothermal Power Project. (<https://projectsportal.afdb.org/dataportal/VProject/show/P-KE-FZ0-003>).

142 IFC (2022). Green Bond Framework (<https://www.ifc.org/content/dam/ifc/doc/2023/IFC-Green-Bond-Framework-Jan-2023.pdf>).

143 Lake Turkana Wind Power Project: The largest wind farm project in Africa, African Development Bank (AfDB), 2015 (<https://www.afdb.org/en/projects-and-operations/selected-projects/lake-turkana-wind-power-project-the-largest-wind-farm-project-in-africa-143>).

144 IFC (2016). IFC Client Kipeto to Sell 100 MW of Wind Energy to Kenya Power (<https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=16616>).



## V. Main players and initiatives in trade policy affecting Kenya's T&A value chain

Kenya stands out from other countries in Sub-Saharan Africa in the T&A sector. This is due to the support it has received from national government agencies, regional and international organizations, trade finance institutions, industries, companies, business associations and partnerships (see [Annex IV](#)).

National agencies have supported formulation and coordination of policies that facilitate improvement of how T&A companies work and integration of SMEs to become key industries. This has facilitated T&A's access to markets and capacity building.<sup>145</sup> EPZs have supported large companies and SMEs through its export business accelerator incubation programme to enhance export-oriented production.<sup>146</sup>

The T&A sector in Kenya has also benefited from several associations that have lobbied for the formulation and implementation of favourable policies and laws for the cotton sub-sector and ginners. Several associations linked to T&A in Kenya have provided an essential link for cooperation, dialogue and understanding with the government by promoting trade and investment, upholding standards and representing members' views, concerns and interests. There are also quality assurance agencies that work together with regional and international agencies. These support the local T&A sector to gain global competitiveness and sustainability through quality assurance of inputs for cotton farmers and providing standardization for the T&A products. For example, the 'Made in Kenya' brand mark has promoted locally manufactured goods in the local and global markets.

145 Micro and Small Enterprises Authority (MSEA) (<https://msea.go.ke/functions-of-the-authority/>).

146 Export Processing Zones Authority (<https://epzakenya.com/about/>).



### Government agencies:

Government agencies play a key role in the T&A value chain by setting trade policies, providing support and incentives to T&A manufacturers, and facilitating exports. Some of the government agencies that play a key role in this value chain are the Ministry of Trade, the Investments and Industry, the Ministry of Cooperatives and Micro, Small and Medium Enterprises (MSME) Development, the Ministry of Foreign Affairs, the Ministry of East African Community, Arid and Semi-Arid Lands (ASALs), the Regional Development, the EPZA, KenInvest. and NEMA.

### Trade associations:

Trade associations are important players in the T&A value chain. Examples include the Kenya Association of Manufacturers (KAM), the Textile, Leather and Apparel sector of the Kenya National Chamber of Commerce and Industry (KNCCI-TLA), and the Kenya National Chamber of Commerce and Industry (KNCCI). They represent the interests of T&A manufacturers, traders and exporters, and provide services such as advocacy, training and networking opportunities.



### Training research institutions:

Training institutions recognize the T&A sector's importance. Examples of some are the Kenya Agricultural and Livestock Research Organization (KALRO), the Kenya Industrial Research and Development Institute (KIRDI), universities, national polytechnics and technical training institutes. See [Annex IV](#) for an extended list.

### Civil societies:

Civil societies are important players in the T&A sector's sustainability. An example is Africa Collect Textiles (ACT Ltd), which is a social enterprise. ACT supports the circular fashion industry through promoting collection, sorting, recycling, upselling and reselling of used textiles. In the long run, this will minimize textile waste being landfilled. The processed products are sold both in Kenya and in the international market. There are several other civil society organizations working to address sustainability and gender issues in Kenyan exports, particularly in the textile sector. A good example is Solidaridad Network, which is an international civil society organization that works to promote sustainable production and trade in various sectors, including textiles. In Kenya, Solidaridad works with smallholder cotton farmers to improve their production practices and ensure gender equality.<sup>147</sup> Another such organization is Made in Africa, which is a non-profit organization that works to promote sustainable development in Africa through trade and investment. In Kenya, the organization is working to promote sustainable textile production and reduce the sector's environmental impact.<sup>148</sup>

The Clean Clothes Campaign is a global network of civil society organizations that works to promote fair and sustainable textile production.

In Kenya, the organization works with local partners to promote workers' rights, gender equality and responsible waste management in the textile value chain.<sup>149</sup> These organizations are among the many civil society organizations working to promote sustainability and gender equality in the Kenyan textile sector. By addressing these issues, they are helping to create a more sustainable and equitable future for the industry and the communities it impacts.

### The International Centre for Research on Women (ICRW):

The ICRW is a global strategy consultancy that supports organizations to become more gender equitable across their full value chains. The ICRW has developed an online resource hub.<sup>150</sup> It is a textile, clothing and footwear manufacturing sector tool that manufacturers can use to identify opportunities to enhance gender integration, and how to better integrate gender through their operations and supply chains. The ICRW has also partnered with KAM to champion for an enabling environment that encourages increased women participation in manufacturing, including in the T&A sector.<sup>151</sup>

147 Solidaridad, (2023). Sustainable cotton hub exposes urgent realities of unsustainable cotton sector (<https://www.solidaridadnetwork.org/news/sustainable-cotton-hub-exposes-urgent-realities-of-unsustainable-cotton-sector/>).

148 MIA Team (n.d). Made in Africa (<https://www.madeinafrica.com/>).

149 Clean up Kenya (2023). Clean Up Kenya Requests for Statements on the illegal exportation of waste plastic clothing to Kenya (<https://cleanupkenya.org/clean-up-kenya-requests-for-statements-on-the-illegal-exportation-of-waste-plastic-clothing-to-kenya/>).

150 Gender Equity in Textile, Clothing, and Footwear Manufacturing Resource Hub, International Center for Research on Women (ICRW), retrieved on 12 March 2023 (<https://www.icrw.org/gender-equity-in-textile-clothing-and-footwear-manufacturing-resource-hub/>).

151 Mugenyi, C., Nduta, N., Ajema, C., Afifu, C., Wanjohi, J., Bomett, M., Mutuku, C. & Yegon E. (2020). Women in Manufacturing: Mainstreaming Gender and Inclusion. Nairobi, Kenya. International Center for Research on Women (ICRW) and Kenya Association of Manufacturers (KAM) (<https://www.icrw.org/wp-content/uploads/2020/09/Women-in-Manufacturing-Africa-9.17-ICRW-KAM.pdf>).

## Box 12



## The InTex project

Innovative Business Practices and Economic Models in the Textile Value Chain (InTex)<sup>152</sup> is a three-year project funded by the European Union and implemented by the United Nations Environment Programme (UNEP). The project has five components. Two components have a global reach and three components focus on national implementation in three African countries where textile is a key economic sector and where companies, including SMEs, are part of multinational value chains. In Kenya, Moi University was selected as a technical intermediary (TI) to work with other key stakeholders to implement the project. The three key outputs of the project are; (i) the identification and strengthening of eco-innovation and circularity policies; (ii) the implementation of circularity and eco-innovative solutions by textile SMEs; and (iii) the implementation of life cycle approaches by textile SMEs. The TI works with key stakeholders, which include:



01. State Department for Industry
02. Kenya Bureau of Standards (KEBS)
03. Export Processing Zones Authority (EPZA)
04. National Environment Management Authority (NEMA)
05. Kenya Industrial Research and Development Institute (KIRDI)
06. SME Advisory Unit, Executive Office of the President
07. Kenya National Chamber of Commerce and Industry (KNCCI)


The project is expected to provide mentorship and training in eco-innovation and on Product Environmental Footprint (PEF) to at least 10 Kenyan T&A companies. It will also create awareness of sustainable manufacturing and consumption to 40 companies and institutions in Kenya. Moi University is also reaching out to training and research institutions in Kenya and Africa. Here, it is expected to create awareness and synergies with respect to the importance of including sustainable production and consumption in T&A curricula.

152 InTex, UNEP, retrieved on 12 March 2023 ([www.unep.org/intex](http://www.unep.org/intex)).


## VI. Conclusions and recommendations

The case study examined environmental hotspots in Kenya's textile value chain and trade policy instruments that could have an impact on textile value chains' sustainability and circularity. The case study identified environmental hotspots by mapping the exports and imports of T&A products in Kenya and studying different factors (including sustainability and circularity). The role of regional integration and its impact on trade was also investigated.

According to this case study's findings, Kenya is a net importer of T&A goods, with its leading import partners being China, India and Pakistan. In Sub-Saharan Africa, Kenya is the leading exporter of apparel to the United States. Other export partners for Kenya include the EU and Nigeria. Some of the environmental hotspots identified in the Kenyan T&A value chain include:



Decortivating (processing) of sisal leads to GHG emissions and water pollution



Dyeing and printing processes cause chemical pollution

Emission of GHGs and air pollution due to reliance on standby generators during production

Microfibre and microplastic water pollution caused by washing of T&A products

Environmental pollution and value loss caused by production and end-of-life waste

Kenya does not have a standalone policy on circularity in the T&A sector, but there are several policies that govern sustainability and circularity in the manufacturing sector. While there are incentives for adoption of clean energy such as solar and wind power, there are a few on waste management. In Kenya's T&A sector, use of ecolabels is driven by external factors such as markets in developed countries. Policies on finances need to be restructured to encourage investment in greening the T&A sector.





## Conclusions and recommendations

Kenya has joined several free trade agreements with its neighbouring countries and other countries such as the United States. These have opened up markets, especially in EAC and AGOA. However, these agreements have little in terms of sustainability and environmental issues and circularity. There is need to re-look at these agreements with the aim of a paradigm shift towards sustainable production and consumption. However, more Kenya-specific data on sustainable production and consumption for the T&A sector is needed. This Kenya-specific data is partially being collected through the InTex project, although more research is needed.

While the aforementioned environmental hotspots in Kenya's T&A sector are well known, more specific and comprehensive data on the sector is still needed to identify additional hotspots and promote eco-innovation. UNEP is currently implementing the InTex project in Kenya, which aims to promote sustainable production practices and eco-innovation in the T&A sector. The project involves conducting environmental hotspot analyses and supporting the adoption of cleaner production practices in selected T&A companies. However, further research and collaboration among stakeholders, including the government, private sector and civil society organizations, will be necessary to fully address the sector's environmental impacts in Kenya. This will require a coordinated effort to collect more specific and comprehensive data on the sector's environmental impacts and to identify opportunities for sustainable production practices and eco-innovation.

Finally, it is worth indicating that more Kenya-specific data and analyses are needed to fully understand the sector's environmental impacts. This includes detailed assessments of specific factories and supply chains, as well as a comprehensive analysis of the entire sector. In addition, more research is needed on eco-innovation, and the development of sustainable technologies and practices that can help to mitigate these environmental impacts.

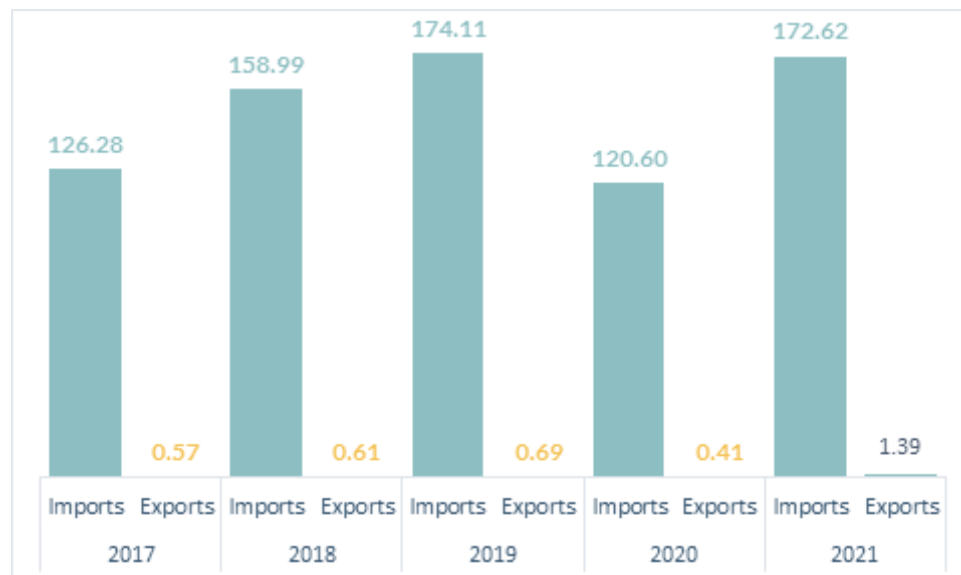




## Annex I: Second-hand clothing in Kenya's T&A value chain

Purchase of second-hand clothing seems to have taken a sizeable percentage of the Kenyan clothing purchasing culture, with more than 91.5 per cent of households purchasing second-hand clothing worth \$10 or less.

**Figure V:** Trade of second-hand clothing in Kenya.



Source: Trade Map, International Trade Centre (ITC), 2022<sup>153</sup>

The Kenyan population spends 2.5 per cent of private consumption expenditure on clothing and footwear. This adds up to \$40 per person per year for clothing and footwear. Purchase of second-hand clothing and footwear accounts for 40 per cent of the aforementioned expenditure.<sup>154</sup> However, there is little information about end of life of imported second-hand clothing. Therefore, there is a possibility that the clothing is dumped in the landfills or incinerated. There was a ban on the importation of second-hand clothing by the East African Community, on which Kenya backtracked. In 2020, there was another ban on the importation of second-hand clothing during the COVID-19 pandemic,<sup>155</sup> which was lifted a few months later. Kenya's importation of second-hand clothing has caught the attention of other players. These include the US Secondary Material and Recycled Textiles (SMART) Association, the UK's Textile Recycling Association (TRA), the European Recycling Industries' Confederation (EuRIC) and the Bureau of International Recycling (BIR), who reported that Kenya plays a critical role in recycling T&A products at a global level.<sup>156</sup> In Kenya, the inspection of second-hand goods trade is undertaken by the Kenya Bureau of Standards (KEBS). KEBS give protocols to be followed when importing second-hand clothing.<sup>157</sup> The Kenya Revenue Authority and other government agencies provide guidelines on taxes and other levies to be paid.

153 Data obtained from ITC's Trade Map ([https://www.trademap.org/Country\\_SelProductCountry\\_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1](https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c404%7c%7c%7cTOTAL%7c%7c%7c2%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1)).

154 Institute of Economic Affairs, (2021). The State of Second-Hand Clothes and Footwear Trade in Kenya. (<https://ieakenya.or.ke/download/the-state-of-second-hand-clothes-and-footwear-trade-in-kenya/>).

155 Katende-Magezi, E. (2027). The Impact of Second Hand Clothes and Shoes in East Africa, CUTS International, Geneva. ([http://repository.eac.int/bitstream/handle/11671/1848/Impact%20of%20Second%20Hand%20clothes%20and%20shoes%20in%20EAC\\_FINAL%20STUDY.pdf?sequence=4&isAllowed=y](http://repository.eac.int/bitstream/handle/11671/1848/Impact%20of%20Second%20Hand%20clothes%20and%20shoes%20in%20EAC_FINAL%20STUDY.pdf?sequence=4&isAllowed=y)).

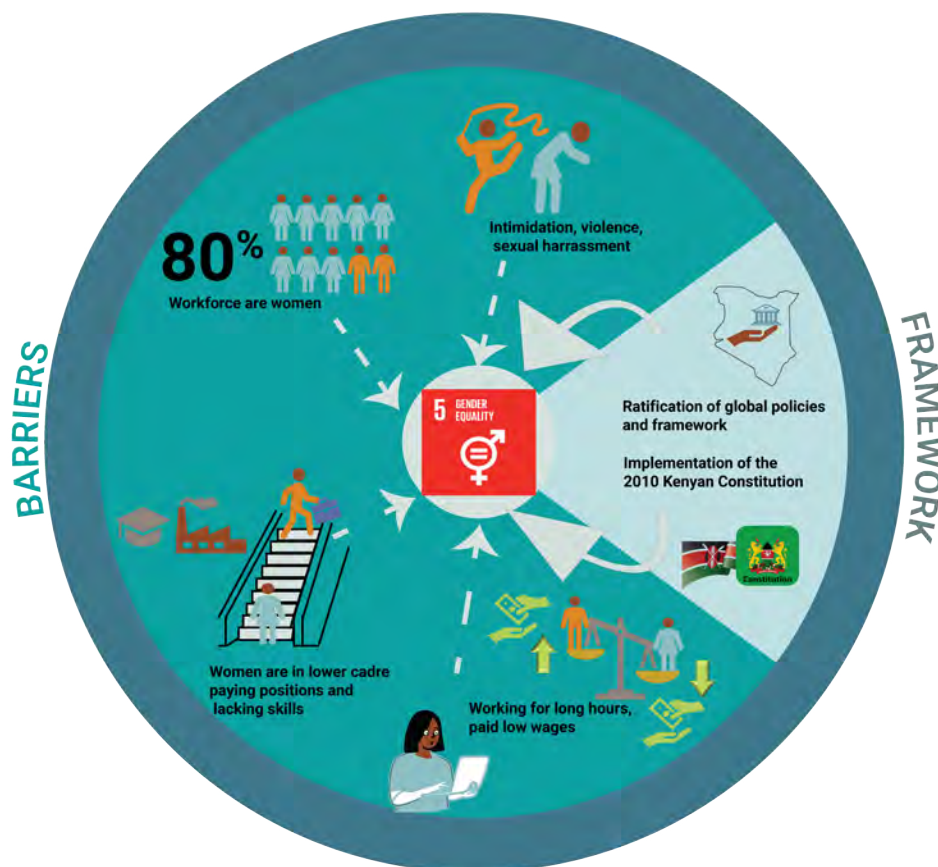
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## Annex II: Gender and textile trade in Kenya

The United Nations indicates that 66.67 per cent of the workforce in developing countries' apparel sector is female. As shown in the figure below, in Kenya, women (62–81 per cent) are predominant compared to men (19–38 per cent) in the garment-making factories. In contrast, women leaders in executive positions as employees or owners of a T&A manufacturing unit are 13 per cent compared to 78 per cent male leaders. The Government of Kenya, through the 2010 Constitution, has attempted to address this disparity by giving women the right to equal treatment and opportunities. To promote trade and gender parity in the manufacturing sector, the government has ratified a number of global frameworks and policies. Nevertheless, this has not guaranteed gender equity, because women still experience intimidation at the workplace, work for long hours, are paid low wages and are sexually harassed (see [Figure VI](#)). Cultural barriers and ignorance have also deterred the full implementation of gender equity as per the constitution.

**Figure VI:** Barriers and framework for gender parity in T&A in Kenya

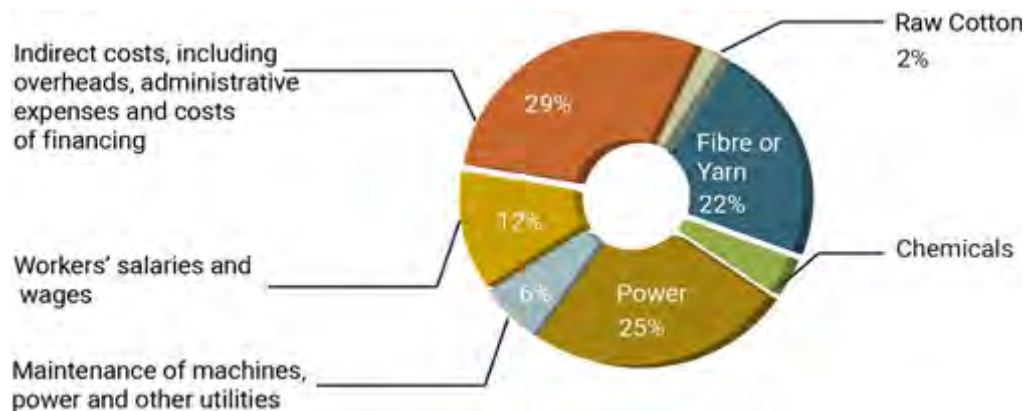


Source: Author.

## Annex III: Costs of producing fabric in Kenya

The cost of electricity is high in the T&A sector, accounting for 25 per cent and 5 per cent of production costs for textile and garment factories respectively (see [Figure VII](#)). From 1990 to 2018, GHG emissions and related impacts by processing and manufacture of fibre-based products indicated that GHG emissions increased by 142.8 per cent, from 0.3 million tons CO<sub>2</sub> eq. in 1990 to 0.7 million tons CO<sub>2</sub> eq. in 2018. In 2018, CO<sub>2</sub> had the largest share in total emissions in the sector (0.6 million tons CO<sub>2</sub> eq.), followed by N<sub>2</sub>O (0.1 million tons CO<sub>2</sub> eq.), and CH<sub>4</sub> (0.0 million tons CO<sub>2</sub> eq.). Kenya's T&A sector needs to consider use of more energy efficient machinery. The elimination of frequent power outages will go a long way to reducing the use of diesel-powered standby generators. This will lead to less GHGs and air pollution.

**Figure VII:** Cost distribution for Kenyan-made fabric



Source: Adapted from Global Development Solutions, 2014, cited in Krishnan, Were and te Velde, 2019

## Annex IV: Main players in trade policies and instruments

No.	Player	Role	Website
01	Micro and Small Enterprises Authority (MSEA)	<i>Formulating and coordinating policies to promote SME development.</i>	<a href="https://msea.go.ke/">https://msea.go.ke/</a>
02	Export Processing Zones Authority (EPZA)	<i>Promoting export-oriented production in EPZs.</i>	<a href="https://epzakenya.com/">https://epzakenya.com/</a>
03	Kenya Agricultural & Livestock Research Organization (KALRO)	<i>Catalysing the sericultural industry growth and sericultural research, and growing fibre crops such as cotton and sisal.</i>	<a href="https://www.kalro.org/">https://www.kalro.org/</a>
04	Agriculture and Food Authority (AFA)	<i>Promoting best crop farming practices such as of cotton and sisal, and regulating their production, processing and marketing of products.</i>	<a href="https://www.agricultureauthority.go.ke/index.php/en/">https://www.agricultureauthority.go.ke/index.php/en/</a>
04	Kenya Plant Health Inspectorate (KEPHIS)	<i>Quality assurance of agricultural inputs and produce to promote sustainable manufacturing.</i>	<a href="https://www.kephis.org/">https://www.kephis.org/</a>
06	Kenya Industrial Estates (KIE)	<i>Offering incubation, accelerator and business advisory services, and financing and developing industrial parks.</i>	<a href="https://kie.co.ke/">https://kie.co.ke/</a>
07	Kenya Export Promotion and Branding Agency (KEPROBA)	<i>Promoting locally manufactured T&amp;A products in the local and global markets.</i>	
08	Kenya Bureau of Standards (KEBS)	<i>Providing standardization in industry and commerce.</i>	<a href="https://www.kebs.org/">https://www.kebs.org/</a>
09	International Centre of Insect Physiology and Ecology (ICIPE)	<i>Promoting the sericulture project to promote silk research and capacity building for creating sustainable activities.</i>	<a href="http://www.icipe.org/">http://www.icipe.org/</a>
10	Kenya Investment Authority (KenInvest)	<i>Accelerating investments by providing information on investment opportunities and sources of capital.</i>	<a href="http://www.invest.go.ke/">http://www.invest.go.ke/</a>
11	Local banks	<i>Offering trade finance to support local and international trading by offering products such as guarantees.</i>	<a href="https://www.trade.gov/country-commercial-guides/kenya-trade-financing">https://www.trade.gov/country-commercial-guides/kenya-trade-financing</a>
12	Kenya Cotton Growers Association	<i>Lobbying for the formulation and implementation of favourable policies and laws for the cotton sub-sector.</i>	
13	Kenya Cotton Ginners Association	<i>Providing support and lobbying for ginners.</i>	
14	Kenya Association of Manufacturers (KAM)	<i>Advocating for the formation of industrial policies for economic development.</i>	<a href="https://kam.co.ke/">https://kam.co.ke/</a>



No.	Player	Role	Website
15	Kenya Apparels Manufacturers Exporters Association (KAMEA)	<i>Representing the interests of all manufacturers in the cotton textile industry under KAM.</i>	
16	Kenya Private Sector Alliance (KEPSA)	<i>Offering business training and mentorship, networking, financial linkages and access to markets by working closely with global partners.</i>	<a href="https://kepsa.or.ke/">https://kepsa.or.ke/</a>
17	Kenya Industry and Entrepreneurship Project (KIEP)	<i>Strengthening innovation and the entrepreneurship ecosystem in Kenya.</i>	<a href="http://www.kiep.go.ke/">http://www.kiep.go.ke/</a>
18	Kenya's Industrial Transformation Programme (KITP) of 2015	<i>Developing Kenya into an industrial hub by increasing manufacturing.</i>	<a href="https://www.tralac.org/images/docs/8097/kenyas-industrial-transformation-programme-2015.pdf">https://www.tralac.org/images/docs/8097/kenyas-industrial-transformation-programme-2015.pdf</a>
19	Green Economy Strategy and Implementation Plan (GESIP)	<i>Accelerating the creation of green jobs by establishing schemes to support green businesses.</i>	<a href="https://www.fao.org/faolex/results/details/en/c/LEX-FAOC170764/#:~:text=The%20Green%20Economy%20Strategy%20and,competitive%20low%20carbon%20development%20path">https://www.fao.org/faolex/results/details/en/c/LEX-FAOC170764/#:~:text=The%20Green%20Economy%20Strategy%20and,competitive%20low%20carbon%20development%20path</a>
20	The Green Bonds Programme – Kenya	<i>Financing green investments to promote sustainable development.</i>	<a href="https://www.greenbondskenya.co.ke/">https://www.greenbondskenya.co.ke/</a>

Learn more:

<https://www.unep.org/sustainabletextiles>

