
From Collection of Used Clothes in Sweden to Reuse in Kenya

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes



Report number: C10063

Author: Amanda Martvall & Mathias Gustavsson

Date: 2025-05-20

Commissioned by: Humana Lt

ISBN number: 978-91-7883-715-1

Photo front: Photo of retail shop selling mitumba (second-hand clothes) in Nairobi, Kenya

Photos in report: All photos in the report by the authors

Illustrations in report: All illustrations by the authors, icons generated with ChatGPT (OpenAI)

This report has been reviewed and approved in accordance with IVL's audit and approval management system

Executive Summary

The consumption of textiles has increased in the European Union during recent years, and so is the amount of textile waste generated. The EU Strategy for Sustainable and Circular Textiles aims to increase resource efficiency and contribute to strengthening the circular economy in the textile sector. Consumers should have access to high-quality and sustainable textiles, and that used textiles should be managed according to the waste hierarchy. Textiles should primarily be reused and thereby extend the life of the textiles. This can be achieved by continued use through resale as second-hand clothes, sharing, or rental. When textiles are worn out, material recycling should be opted for while incineration and landfilling are the least favoured options.

This report examines the value chain for collected textiles in Sweden that are exported to Humana Lt in Lithuania for further sorting for reuse. Further it explores how the textiles are traded through the group companies in Oman and Kenya, until the textiles reach the Kenyan *mitumba* market (Figure 1). The study maps how this trade functions in practice and what environmental, social, and economic significance it has, with a particular focus on Humana Lt's operations. The overarching research question the report seeks to answer is: What does the value chain look like for collected used clothing in Sweden that is exported to Humana Lt and then further processed within the group's companies, until it reaches the Kenyan *mitumba* market – and how this trade can be considered from a circular economy perspective? The scope of this study is on post-consumer textiles.

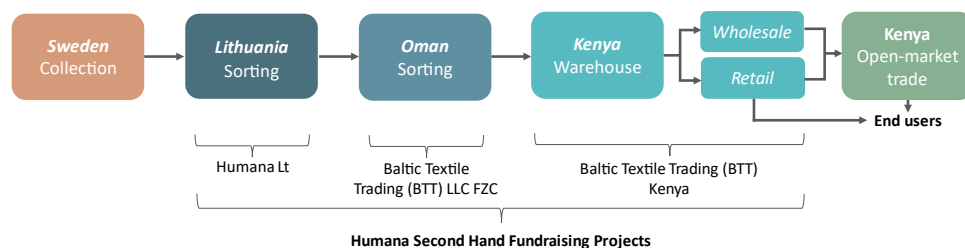


Figure 1. The studied value chain

Since the introduction of separate collection, the municipalities in Sweden are responsible for collecting used textiles. The collection is either managed by the municipal waste management company, which in turn can hire external contractors to

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

handle the collection. Humana Lt purchases textiles from five collection actors in Sweden: three municipal waste companies and two social enterprises. Of these, Human Bridge accounts for the largest share and handles approximately 80 percent of the textiles exported from Sweden to Humana Lt.

Some of the textiles collected in Sweden are sold on the domestic second-hand market, but the majority are exported. This is partly because manual sorting, which is necessary to ensure the quality of garments offered to consumers, is costly, and profit margins for this business model is low. Furthermore, is there an insufficient demand for the large volumes of second-hand clothing within Sweden, making it difficult to absorb these quantities domestically.

The centralised sorting hubs in Lithuania and Oman purchase used textiles that meet the requirements of downstream customers and end markets for further sorting. When sourcing the incoming textiles, knowledge of market demand and what can be resold is crucial. The textiles are mainly sourced from European countries and are purchased at prices ranging between EUR 0.40 and EUR 0.70 per kilogram. These facilities handle large volumes in a centralised system and sort textiles into over 400 categories for reuse and recycling. In 2024, approximately 38,000 tons of used textiles were sorted, including 11,000 tons sourced from Sweden. Of the total volume, 76% was sorted for reuse and 16% for recycling. A certain amount of waste is generated during the sorting process, as the incoming textiles have typically only undergone a preliminary (first) sorting, with no assessment made of their reusability. However, the volume of waste generated from the sorting is relatively small and for Humana Lt sorting facility it amounted to about 8% of the incoming used textiles in 2024. Most of this waste was then used in incineration with energy recovery or in industrial processes, or landfill.

Kenya is one of the largest importers of second-hand clothing in East Africa, where more than 60% of the population purchases all or part of their wardrobe on the so-called *mitumba* market. In Kenya Baltic Textile Trading (BTT) Kenya operates two branches: i) wholesale and ii) retail. In the wholesale segment, 45 kg bales of second-hand clothing, imported as well-defined product categories and quality grades, are sold. BTT Kenya also operates the retail branch *Think Twice*, which runs a total of 42 second-hand shops across the country.

Both branches are based on strict quality control and follow national regulations and customs requirements. Each bale imported to Kenya is a well-defined product made up of sorted and quality-assured textiles and offered to customers at fixed prices.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

The textiles must not be dirty or damaged, and the bales must contain a clear specification of contents. Import and quality regulations exist as national standards. Importers and sellers in Kenya are highly quality-conscious and purchasing *mitumba* bales that cannot be resold results in income loss. Therefore, traders are very selective about which goods they choose to buy, as the goal is to resell at a profit. If the bales contain low-quality garments that are unlikely to be resold, traders avoid those suppliers and instead seek out those with better-quality stock. The *mitumba* market consists of a large number of small-scale actors. With an import share of around 5%, BTT Kenya is a major player on the market.

Mitumba is an attractive option to acquire affordable clothing and not really seen as opposed to new clothes or clothes from a tailor. What the consumer chooses to buy depends on needs and ability to pay for a particular garment, but also fashion statements and style. *Mitumba* is often perceived as good value for money, and the quality is generally as good as, or even better than, new garments at the same price.

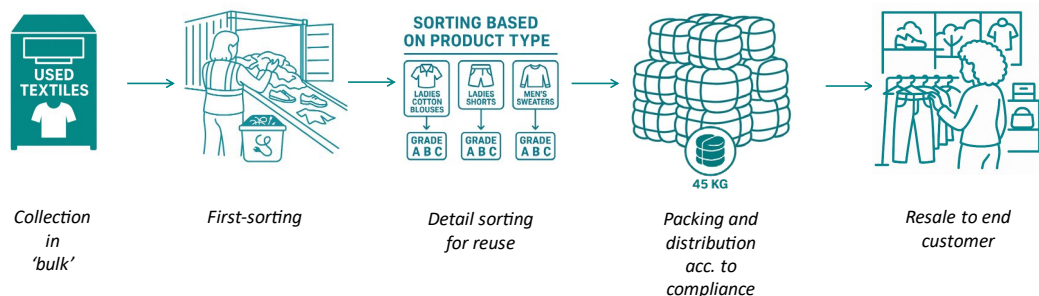


Figure 2. Illustration of how collected used textiles 'in bulk' are refined into a well-defined product for sale on the second-hand market.

In summary, the value chain is based on commercial principles and a well-defined product specification system. At each step along the chain, the clothing is bought and sold, and each step adds value that drives the business forward. End-user demand and expectations are communicated upstream in the chain to ensure that functional and attractive products are sorted, packaged, and delivered in accordance with market needs.

The second-hand clothing trade creates jobs along the entire value chain, from collection in Sweden to sales in market stalls in Kenya. The model contributes both to climate benefits, by enabling reuse instead of incineration or landfill in Sweden or elsewhere in the EU, and to social development by extending the life of textiles while

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

also creating low-threshold jobs in countries where the need for employment is high. Revenues from sales are used by actors such as Human Bridge and Humana Second Hand Fundraising Project to fund aid efforts and social projects, including in Africa and Eastern Europe.

To avoid undermining the already narrow margins in this trade, it is crucial that collection in Sweden is organised in a way that supports reuse. The introduction of separate collection of textiles from January 1, 2025, aims to increase the volume of collected textiles from households. However, there is a risk that this could reduce the quality of the collected textile stream. Since collected textiles are intended for different end uses—i) reuse and ii) recycling—they should be collected in separate containers to avoid quality mixing between these two fractions. This is important to ensure that reusable textiles, just like before the introduction of separate collection, can be sorted, valued, and resold on the second-hand market.

A common criticism of exporting second-hand clothing to African countries is that it constitutes the dumping of low-quality garments to avoid waste handling, recycling, or other associated costs within the EU. However, the findings of this report contradict that claim. Considering the high taxes on *mitumba* in Kenya, amounting to approximately 40% of the total shipment cost, or roughly EUR 0.62 per kilogram of imported used clothing, importing textiles with the purpose of dumping in Kenya is not a viable business model.

The study shows that clothing in this value chain is carefully inspected, sorted, and valorised in Lithuania and Oman, and that waste or unsellable items are removed before being exported to Kenya. Furthermore, wholesalers, retailers, and consumers in Kenya are highly conscious of the value and quality of the *mitumba* they buy. Low-quality garments are unattractive, especially for those with limited budgets, and if they cannot be resold, it leads to financial loss, making quality a critical factor throughout the chain. At the same time, it is important to acknowledge that all textiles, regardless of quality or origin, will eventually reach their end-of-life which also applies to *mitumba*. Waste management in Nairobi, and much of Kenya, is inadequate, which leads to significant negative environmental, climate, social, and economic effects. This is a broader problem applies to *all* waste streams and not just *mitumba*.

The *mitumba* market represents an important opportunity to extend the life of used clothing from the EU—clothing that would otherwise already be classified as waste and risk being incinerated. Current measures being implemented within the EU to

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

promote a circular textile economy aim to increase reuse and extend the lifecycle of used textiles in line with the waste hierarchy. There are valuable lessons to be learned from how value is created and managed along this value chain, from collected used clothing to a well-defined, reusable product offered to end users in Kenya.

Abbreviations

BTT	Baltic Textile Trading
EoW	End of Waste
EPR	Extended Producer Responsibility
ESEM	Eskilstuna Energi och Miljö
EU	European Union
HS	Harmonized Commodity Description and Coding System
IVL	IVL Swedish Environmental Research Institute
KEBS	Kenya Bureau of Standards
MCAK	Mitumba Consortium Association of Kenya
OECD	Organisation for Economic Co-operation and Development
PVoC	Pre-Export Verification of Conformity
RDF	Refuse-derived fuel
VAT	Value Added Tax
WFD	Waste Framework Directive

Contents

Contents	xiii
1 Introduction	1
2 Reuse of Post-consumer Textiles – market and the EU framework	6
2.1 Collection of Used Textiles	6
2.2 Reuse Business Model Dynamics	8
2.3 European Actions on a Circular Economy for Textiles	10
2.4 Humana Lt –Textile Sorting Centre for Reuse & Recycling	13
3 Method	15
3.1 Research Design and Data Collection	16
3.2 Site visits and Activities	17
4 The Value-Chain of Reuse of Second-Hand Clothes – Sweden to Kenya	19
4.1 Sweden – Collection of Post-Consumer Textiles and a First Sorting	21
4.1.1 Separate Collection of Post-Consumer Textiles	23
4.1.2 Human Bridge – Primary Organisation for Collection	24
4.2 Lithuania – Sorting Facility and Hub for EU and International Textile Trade	25
4.3 Oman – Sorting Facility and Hub for International Textile Trade	29
4.4 Kenya – Warehouse, Wholesale and Retailers	33
4.4.1 Regulations for Mitumba	35
4.4.2 Import volumes and Market Structure	36
4.4.3 Warehouse	37
4.4.4 Think Twice Second-Hand Shops	39
4.4.5 Wholesale and Open-Market Trade	41
4.4.6 End-users and the Consumers of Mitumba	42
4.5 Economy along the value chain	43
5 Discussion	46

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

6	Conclusion	50
	References	52
	Appendix 1: Source and explanation of estimated volumes in Figure 8	56

1 Introduction

Each year, citizens in the European Union (EU) consume around 19 kg of textiles. This is an increase from 17 kg in 2017, and a production and a consumption pattern that continues to cause environmental impacts, from usage of resources to emissions and microplastic pollution (Duhoux et al. 2025; Lingås et al. 2023). Most of the textiles that consumers in European Union (EU) today are consuming are not reused or recycled – most are shipped to a landfill or incinerated. To address this, the EU have a strong ambition to better integrate used textiles into a circular economy, guided by the waste hierarchy (European Parliament 2023). This vision spans the entire lifecycle of a textile product—from sustainable design and reduced consumption to well-designed waste management systems that promote reuse and, eventually, recycling into new textile fibres, that can be used in new clothing production. The challenges, however, is that at present a very small fraction of the used textiles are reused or recycled to prolong the life.

In discussion about used textiles that are subject for reuse, recycling or being discarded it is common to also indicate from which stage in the supply chain these textiles originate. In the second-hand clothing market it is mainly the post-consumer textiles that are considered, but with increasing number of returns in for example online shops as well as need for large chains to offer new items to customers there are increasing amount of pre-consumer items that are disposed of and collected as pre-consumer textiles (Figure 1).

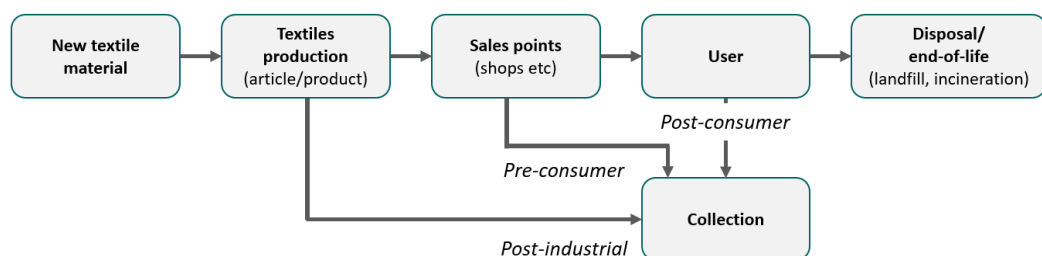


Figure 1: Origins of textiles for reuse and recycling.

With a circular economy it is meant that the resources clothes and textile products are made of, constituting of both renewable and synthetic fibres, are recovered after use and made into new products. A circular economy for post-consumer textiles will include actions to avoid unnecessary textile consumption, secondly actions for reuse

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

in different ways to prolong the life of the article, and thirdly recycling of textiles. At present much of the textiles put on the market in EU are discarded after use and end up at landfills or incinerated (energy recovery). The environmental benefits from prolonging life and reducing the demand for new textile products on the market is well documented (Huygens et al. 2023; Nellström et al. 2025). Virgin materials required for new textile products will have substantial higher associated emissions and environmental impacts than those associated with putting a textile article that can be reused on the market again. For example, if a polycotton t-shirt that are to be used 52 times would be put on the market either as a post-consumer second-hand item, or as a new item the second-hand item would have only 5% of the associated emissions as compared to a new polycotton t-shirt (Figure 2).



Figure 2: Climate change impact (Trzepacz et al. 2023).

The number of textiles that are consumed per person in the EU is increasing. New players are entering the market with fast- and ultrafast fashion business models. Much of the discarded textile and clothes are of good quality and fit for more uses but are discarded for other reasons such as making room in the wardrobe for new items, change in style or that the fit is not good. In many cases the textiles have not reached their end-of-life. From a material management point of view there are two distinct differences here:

- Materials for reuse: these are products or articles that are fit for further use for the same purpose or use which they were conceived.
- Materials for recycling: where the materials are reprocessed into products, materials or substances for original or other purpose.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

The distinction of reuse or recycling becomes relevant especially for textiles since much of the collected post-consumer textiles are fit for reuse, whereas other waste streams, such as food, electronics and plastics, may be very well suited for recycling, but not so much for reuse. From a waste management, and circular economy point of view, reuse is favoured before recycling and when end-of-life has been reached and the product is no longer fit for reuse, it should be recycled. Most textiles in the EU are not handled according to these principles. In 2019 about 89% of the post-consumer textiles were either landfilled (37%) or incinerated (52%) and about 11% was separately collected of which most was reused or recycled (Huygens et al. 2023). The ambition of the EU circular textile strategy (European Parliament 2023) is to increase reuse and recycling of textiles which is now also supported when introducing textiles as one part of the forthcoming recast of Waste framework directive (European Commission 2023a).

One of the main challenges in textile reuse is finding suitable markets for the items identified as reusable. The problem is that the existing market for second-hand clothes and textiles in the EU is quite limited. Vintage items and high-quality items are certainly possible to sell, but much of the items with lower quality, fast fashion and other less attractive items will have limited markets in the EU. Market uptake for much of the post-consumer reusable textiles has been on export markets in Africa and Asia. Collected items in EU are sorted and shipped to markets in Africa and Asia where there is a demand and willingness to pay for the second-hand clothes. By transporting the reusable textiles, sorting, and adding quality control, a market for the reused textiles can be found.

Sweden has a long tradition of separate collection of post-consumer clothes and other textiles. There are shops for second-hand clothes around the country, often run by organisations that can support other charitable activities by these sales. Post-consumer textiles are also collected through other means, and then later sold in second-hand shops or other channels in Sweden. Exports of textiles from Sweden reach up to more than 30,000 tons per year and have increased during the last 10 years (Figure 3).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

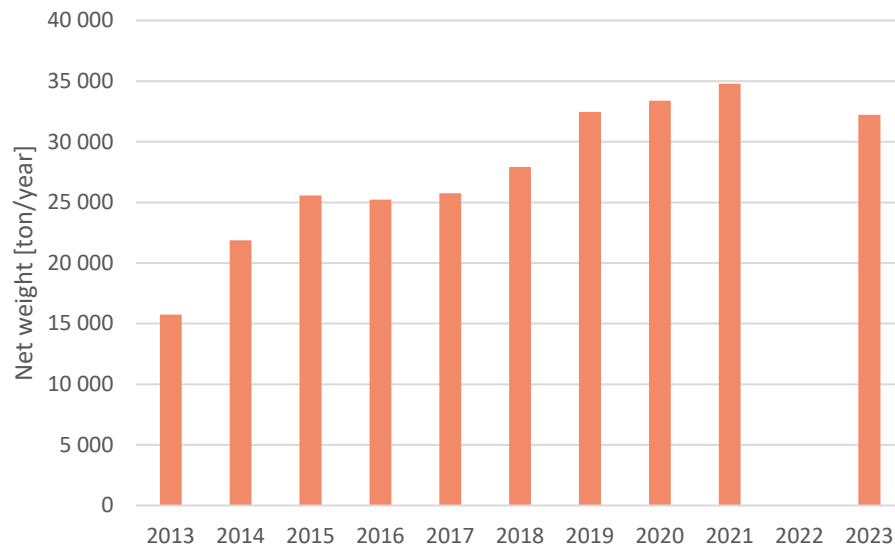


Figure 3: Export of worn textiles and other textile products (HS 6309) from Sweden. No data available for 2022(UN Comtrade 2025).

In parallel to the opportunities to prolong life of textiles in accordance with circular economy ambitions, there is a discussion on dumping pre-consumer and post-consumer textiles in countries in Africa and Asia. The idea of this narrative is that collected textiles from EU to Africa or Asia can be disposed of at a lower cost in those countries than would be the case if handling them in Europe. This is based on the assumption that there is no trade, quality control, import restrictions and of course increased valorisation of the collected and managed second hand clothes in the value chain. For the post-consumer second hand clothes from the EU *this dumping narrative does not hold true* as the value chain includes several steps of quality control, increased valorisation and product categorisation up to the point of sales, there are also standards and quality checks that the goods must comply with. On the receiving end, buyers in African markets base their profits on purchasing products (for example bales of second-hand clothes) with known quality and content, which they then resell to end-users at a markup. Prices are set according to market conditions and reflect factors such as product quality, appeal, and the specific market where the goods are sold.

The Kenyan market for second-hand clothes is one of the places where second-hand textiles from Sweden and EU ends up (Dahlbom, Johansson, and Billstein 2023; Huygens et al. 2023; IEA and MCAK 2021; USAID 2017; Walsh, Bakowska, and van Duijn 2023; Watson et al. 2016). Since the late 1980s, used clothing has steadily gained market share in the region. By 2017, approximately two-thirds (67%) of the population

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

were purchasing at least some of their clothing from the second-hand market (USAID 2017). Kenya is the largest importer of used clothing in East Africa, with imports totalling USD 124 million in 2016. This was equivalent to 6,000 40-foot containers carrying approximately 144,000 metric tons of clothing (USAID 2017). The distribution chains and market dynamics in Kenya follow a highly organised system, where buyers are often highly specialised in specific types of garments and target end markets and provides an opportunity to prolong the life of collected textiles from EU and other parts of the world.

The aim of the report is through a case study to present and study the value chain of collected second-hand clothes from Sweden that are aimed for the Kenyan second-hand clothing market. Further, to describe these markets' dynamics and the potential impacts in terms of jobs and other economic activities and socio-economic impacts that result from this. The report provides a presentation of the value chain of second-hand clothes collected in Sweden and the different steps for sorting in Lithuania and Oman to import and resale on the Kenyan second-hand clothing market. The main research question is how this value chain of second-hand clothes can be considered from a circular economy perspective? To close in on this there are a number of underlying questions:

- What is the value chain for second-hand clothes - from collection in Sweden to end-users in Kenya?
- What are the barriers and drivers along the value chain? What actions take place along the different steps of the value chain to ensure quality and benefit for the end-user?

This study *does not* include the trade of pre-consumer textiles or post-industrial textiles. The focus is on the post-consumer textiles, collected separately through different collection points, and handled by some companies specialised in this trade.

2 Reuse of Post-consumer Textiles – market and the EU framework

This chapter provides a background to the market of second-hand textiles. The market has developed under a long period of time which has seen both changes in how the collected post-consumer textiles are considered at the source, as well as the part of a global trade and in the end a consumer commodity in another market. The value chain is based on a business trade where the goods are defined and further valorised in different steps as part of sorting and packaging. The trade provides important benefits such as tax and import duties, income opportunities, access to attractive and affordable clothing and support to extend life of textiles and thereby reduce environmental impacts in the textile sector.

2.1 Collection of Used Textiles

The collection actors of used textiles can be grouped into three main segments. First, charity organisations and social enterprises, which have traditionally played and continue to play an important role in the collection, sorting and resale of textiles in the second-hand market (Sandberg and Pal 2024; Watson, Moora, et al. 2020). Second, commercial, profit-driven, and thirdly, waste management companies, which are either controlled by or contracted through municipalities to manage the separate collection of used textiles (Sandberg and Pal 2024). As of January 1st, 2025, the obligation for separate textile collection came into force across the EU. In Sweden, this responsibility now falls to the municipalities (European Commission 2023a; Regeringskansliet 2023).

Prior to the obligation of separate collection, only reusable items were typically accepted in collection bins, and out of all the discarded used textiles, only 30 to 35% of the post-consumer textiles were collected. Among the collected textiles, the proportion deemed suitable for reuse varies in the literature, with estimates ranging from 50-70 % (Dahlbom, Johansson, and Billstein 2023; Sandberg and Pal 2024), while other sources suggest this figure can be as high as 90% (Dissanayake and Pal 2025). The remaining share is hence subject to recycling or incineration. With the new collection obligation, the total volume of collected post-consumer textiles is expected to increase, as non-reusable clothing and textiles will be collected as well. As a result, the responsibility of waste management companies in the textile value chain is also expected to increase, as more low-quality, non-reusable damage items e.g., textiles waste are to be collected (Dahlbom and Martvall 2025; Sandberg and Pal 2024).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

After post-consumer textiles are collected, they undergo sorting, which can be done for either reuse or recycling. In Sweden, an estimated one fifth of the collected textiles are reused through local second-hand markets (Miliute-Plepiene and Fjellander 2024). Substantial shares of the collected textiles in the Nordic countries, including Sweden, is typically sold and subjected to cross-border movement, to sorting hubs in Eastern Europe (Miliute-Plepiene and Fjellander 2024; Sandberg and Pal 2024; Watson, Hvass, et al. 2020).

This includes both unsorted textiles ("original") and pre-sorted items, where higher-quality garments have already been filtered out for resale in the collection country (Watson, Hvass, et al. 2020). According to Avfall Sverige, the used textiles were sold from Sweden to Lithuania, in 2024, at an average price of EUR 0.5 per kilogram (Avfall Sverige 2024).



Figure 4: Collection point for post-consumer textiles in Gothenburg, Sweden.

The sorting hubs in Eastern Europe function as centralised systems where used textiles are visually inspected to assess their quality and attractiveness of garment for end-users. Items are then sorted into approximately 300 categories for reuse, recycling (often downcycling), or incineration (Nellström et al. 2025). According to the Swedish Environmental Protection Agency (Naturvårdsverket), of the sorted textiles

at these sorting hubs, approximately 60–70 % are prepared for reuse, around 20–30 % go to material recycling, and about 7–10 % become waste used for incineration (Naturvårdsverket 2025).

2.2 Reuse Business Model Dynamics

The trade in used textiles plays an important role in accelerating the EU's textile strategy, which aims to reduce consumption, improve material quality, and to prolong the lifespan of textile products through reuse and recycling (European Commission 2022). Since substantial parts of the European textiles sector consist of international value chains, cross-border trade is essential for enhancing circularity (EuroCommerce 2025). It enables collected textiles to be reused or recycled where the infrastructure and demand exist.

Reuse offers environmental benefits and should be prioritised over recycling whether it takes place within or outside Europe (Nellström et al. 2025). Facilitating international trade not only increases reuse but also ensures that used textiles remain in circulation for as long as possible. When textiles are no longer suitable for reuse, they can then be reintegrated into the circular economy through recycling (Ellen MacArthur Foundation 2024; Nellström et al. 2025).

The UN Comtrade database compiles detailed annual and monthly trade statistics by product and trading partner (United Nations n.d.), allowing for the tracking of trade flows and the movement of collected used textiles across borders. In 2015, the global total volume of used textiles exported under the category "worn clothing and other worn articles" (6309) reached nearly 4.2 million tons, with a net traded value of USD 4.2 billion. The export from EU alone was 1.3 million tons with a value of almost USD 1.0 billion. The trade show that there is a decrease of the price per weight from 2014 up to 2024 (Figure 5).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

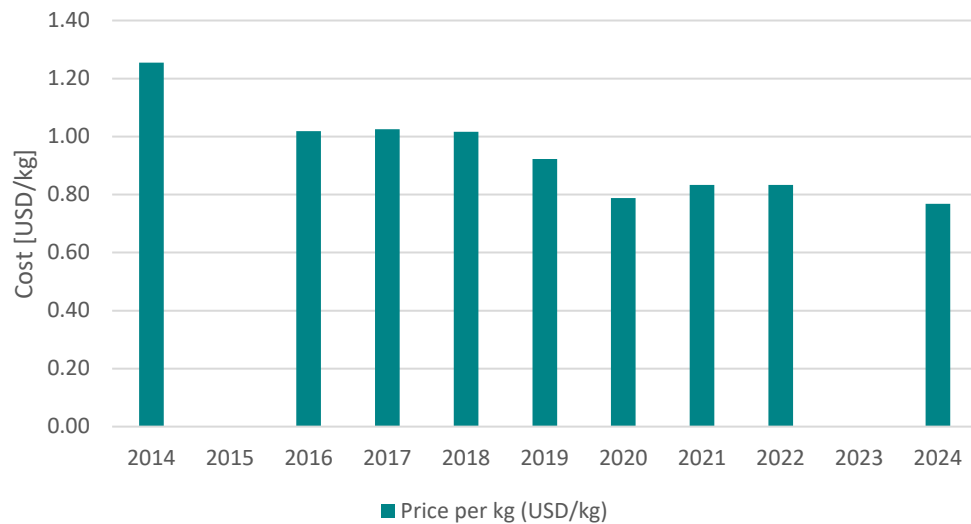


Figure 5: Value per weight of the exported worn textile products (6309) in USD/kg exported from EU. No data available for 2015 and 2023 (United Nations n.d.).

The decrease of value seen can have different explanations, one is that the trade volumes are increasing along with the textile production and hence potential second-hand materials. The trade of used textiles and the second-hand clothing market form a global system, involving multiple actors before a garment reaches its new owner. Similarly, the trade of used textiles from Sweden to the Kenyan market includes several stakeholders.

The process of collecting, sorting, and preparing used textiles for reuse is highly manual and labour-intensive and require considerable hands-on handling. Collection bins need to be emptied, the textiles reloaded and protected from moisture, and each textile item carefully sorted and evaluated for its potential resale on the second-hand market (Avfall Sverige 2024; Nellström et al. 2025).

For this system to be economically viable, a significant share of reusable clothing is essential. This is since the revenue from the sale of these higher-quality items helps to cover the costs of the entire operation including the collection, transportation, sorting, and eventual end-of life treatment non-reusable textiles (Sandberg and Pal 2024)

In the Swedish context, one of the reasons used textiles are exported is the high cost of domestic sorting. Another contributing factor is the country's high consumption of new textiles, which results in large volumes of used clothing (Miliute-Plepiene & Fjellander, 2024). At the same time, demand for second-hand clothing within

Sweden remains limited, making it difficult to absorb these volumes domestically (Miliute-Plepiene & Fjellander, 2024; Sandberg & Pal, 2024).

Sandberg & Pal (2024) further explain the economic dimension of the reuse model, noting that sorting low-value reusable textiles and non-reusable clothing currently represents a negative business case. These fractions typically do not generate revenue due to weak market demand for reuse or recycling. Instead, they incur significant costs related to collection, transportation, sorting, and eventual incineration. Given these economic constraints, centralized sorting hubs that are capable of processing large quantities, are often better equipped to achieve the economies of scale necessary for financial sustainability (Sandberg and Pal 2024). For instance, a study by Petersen (2024) describes how a Swedish municipal waste company maintains financial viability by selling and exporting used textiles to a sorting hub in Lithuania.

Another growing challenge is the increasing presence of low-value textiles, often linked to the fast, and ultra-fast fashion retail. These garments, frequently made of synthetic materials, are typically of poor quality and have limited reuse potential due to their short lifespan. Even when they can be reused, their resale value is low because their original market price was already minimal.

Beyond economic considerations, the reuse business model is also interlined with social effects. In the Global North, sorting and resale of used clothing is frequently carried out by charitable organisations and combined with work training programs and other initiatives that promote social inclusion and create additional social value (Sandberg & Pal, 2024). Furthermore, Nellström et al. (2025) describe how the sale of used clothing plays an important role in generating funds for charitable and social enterprises. These revenues can, for example, support humanitarian aid efforts by financing medical equipment or providing clothing donations to people in vulnerable situations.

2.3 European Actions on a Circular Economy for Textiles

The European waste legalisations is under revision to also include textile and food. This includes enforcing the updated Waste Framework Directive (WFD), which mandates the separate collection of waste in all EU member states (European Commission 2023b).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

One central component of the legislation is the End-of-Waste (EoW) criteria, which is the process where waste-based raw materials are administratively categorised as secondary raw materials. This change will systematically classify collected used textiles as waste by default and require reuse and recycling actors to reclassify the material through agreed-upon criteria. This work is being carried out to prevent illegal shipments of waste, create awareness among Member States and economic operators. This distinction is especially important to separate between textiles waste for disposal and second-hand textile products. Further to improve the traceability of exports of used textiles and textile waste over trade-boarders (European Commission 2022, 2023b).

Currently, the EU is developing a harmonised End-of-Waste (EoW) criteria for used textiles, one for reuse and one for recycling, with the expected introduction in the coming years. For reuse, the details of these EoW criteria have not yet been decided but it will require some sort of control that any garment or textile is fit for reuse. This will also require administrative routines to ensure that the criteria are met (L. Egle et al. 2025; Lukas Egle et al. 2025; European Parliament 2023).

In parallel with other development of a harmonised EoW criteria, an updated version of the EU Waste Shipment Regulation entered into force on 20 May 2024, with provisions extending until 2027. The regulation aims to ensure that the EU does not export its waste-related challenges to countries in the global south, while promoting environmentally sound waste management practices. It also seeks to strengthen enforcement to prevent illegal shipments of waste, both within the EU and to non-EU countries, and to improve the traceability of waste movements across borders in order to support recycling and reuse efforts (European Commission 2025).

Under the new waste shipment framework, new rules will apply. These rules for cross-border trade of waste will differ depending on whether the trade is between countries part of Organisation for Economic Co-operation and Development (OECD) or non-OECD countries. The export of used textiles that are classified as waste at the point of collection—and are intended for disposal (such as energy recovery), are classified as hazardous, or consist of mixed textile waste, will still be permitted to OECD countries. However, this is only allowed if prior consent is obtained from all relevant authorities in the countries involved, including the country of origin, any transit countries, and the destination. In contrast, the export of hazardous textile waste to non-OECD countries will be fully banned from May 2027 onwards (European Commission 2025) (Table 1).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
 A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
 May 2025

Further, shipments of non-hazardous textile waste, so-called “green-listed” waste, are prohibited from being exported to non-OECD countries for recovery (e.g., reuse, recycling, or disposal) unless these countries formally request eligibility and demonstrated their ability to manage textile waste sustainably. For example, such restrictions on OECD countries like Sweden and Lithuania to export such waste to non-OECD countries like Kenya are in place, even if the purpose of the shipment is recycling (European Commission 2025) (Table 1).

These changes place a restriction on the movement of waste materials across borders, particularly when it involves trade with countries outside the OECD (European Commission 2025). However, if used textiles are sorted and prepared for reuse and meet the EoW criteria, exports to OCED and non-OCED countries will be allowed. This distinction makes the classification of used textiles and its compliance with the EoW criteria important for international cross-border trade of second-hand clothing (Table 1).

Table 1. Potential implications for the trade of waste material to OCED versus to non-OCED countries a results of new waste shipments regulation (European Commission 2025) and its compliance to the harmonised End-of-Waste (EoW) criteria for reuse and recycling

Export classification	Cross-Border Trade Rules
Waste for disposal, e.g., energy recovery, hazardous waste, or mixed waste	To OECD countries: Allowed with prior consent from all relevant authorities (origin, transit, destination) To non-OECD countries: Continued to be banned from May 2027 onwards. Example: Waste textile shipments for energy recovery or disposal may be allowed to OECD countries with necessary documentation but are and will continue to be banned to non-OECD countries (Kenya and Oman).
Non-hazardous waste (“green-listed”), destined for recovery (e.g., reuse or recycling)	To OECD countries: Allowed with information requirements To non-OECD countries: Tightening of the restrictions on exports from May 2027 onwards. Example: Textile waste designated for reuse or recycling may continue to be exported to OECD countries (Sweden and Lithuania) but are prohibited from export to non-OECD countries (Kenya and Oman) from May 2027, unless

	these countries formally request eligibility and demonstrate their ability to manage textile waste sustainably.
Compliance with EoW criteria for reuse and recycling of textiles	To OCED Countries: Allowed if compliant with EoW To non-OCED countries: Allowed if compliant with EoW Example: Used textiles meeting EoW criteria, for reuse or recycling, can continue to be exported to non-OECD countries (Kenya or Oman) under regular trade regulations.

2.4 Humana Lt –Textile Sorting Centre for Reuse & Recycling

Humana Lt is a sorting centre that was founded in 1998 and is a subsidiary under the social organisation Humana Second Hand Fundraising Projects (HUMANA n.d.). They purchase used textiles from Scandinavian markets, that are later sorted for reuse and recycling. In 2024, 76% of the sorted used textiles were directed toward reuse, 16% were allocated for recycling (mainly open-loop applications such as wipers and insulation), and the remaining 8% were classified as textile waste for disposal (Figure 6). Within the reuse segment, 38% are sold in Europe, 27% are distributed to African markets, and 12% are sold to Asia, including Pakistan.

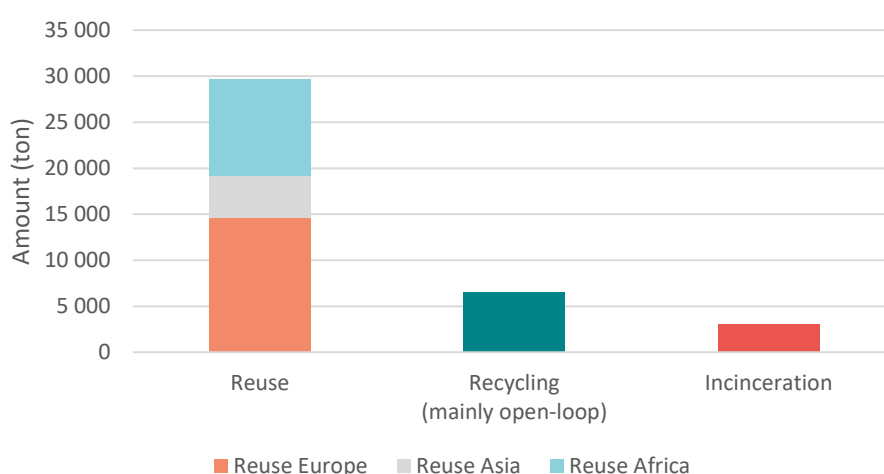


Figure 6: Markets for Used Textiles (Reuse, Recycling, and Incineration) Purchased by Humana Lt in 2024 (Humana Lt 2025)

Humana Lt is part of a broader corporate structure that includes several group companies involved in sorting and retail, all of which are subsidiaries of Humana

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

Second-Hand Fundraising Projects. Additional sorting centres are operated by group companies in Oman (BTT LLC FZC), Türkiye and Estonia. Downstream, the group runs wholesale and retail businesses through Baltic Textile Trading (BTT) Kenya and a sister company in Uganda, and it carries out further sorting and resale in a number of Southern African, and West African countries.

Under the wider corporate structures, there are also a wide network of second-hand retail stores. In Lithuania alone, there are approximately 64 stores. Across the entire organisation, including operations in Africa, there are over 280 retail shops, enabling access to affordable, quality second-hand clothing. In Africa, the second-hand stores are operated under the branch, *Think Twice*. They also operate a vintage retail line and an online store under the brand *Think2* (HUMANA n.d.; Humana People to People Baltic 2024).

The organisational structure of Humana Lt is designed to ensure that surplus revenue from the sale of second-hand textiles is directed to Humana Second Hand Fundraising Projects, which is defined as a social organisation, and the company acts as a not-for-profit entity. Humana Second Hand Fundraising Project supports sustainable development projects that address poverty, disease, and social inequalities around the world, including countries across Africa, Asia, and Latin America (Humana People to People Baltic 2024). One of Humana People to People's key fundraising goals is to support vulnerable communities through various development projects, focusing on both education initiatives and the distribution of essential supplies. In 2024, Humana Second Hand Fundraising Project and all its branches collectively contributed about EUR 14,500,000 for development initiatives supporting activities across Africa, Asia and Latin America (Humana People to People Baltic, 2024).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

3 Method

This study focuses on the value chain of collected post-consumer textiles from the collection point in Sweden to the point of sales in Kenya. The analysed value chain includes the import, cross-border export, sorting, and resale of used textiles for the second-hand clothing market in Kenya. It focuses on key activities carried out by subsidiaries under Humana Second Hand Fundraising Projects, including Humana Lt, BTT LLC FZC, and BTT Kenya (Figure 7).

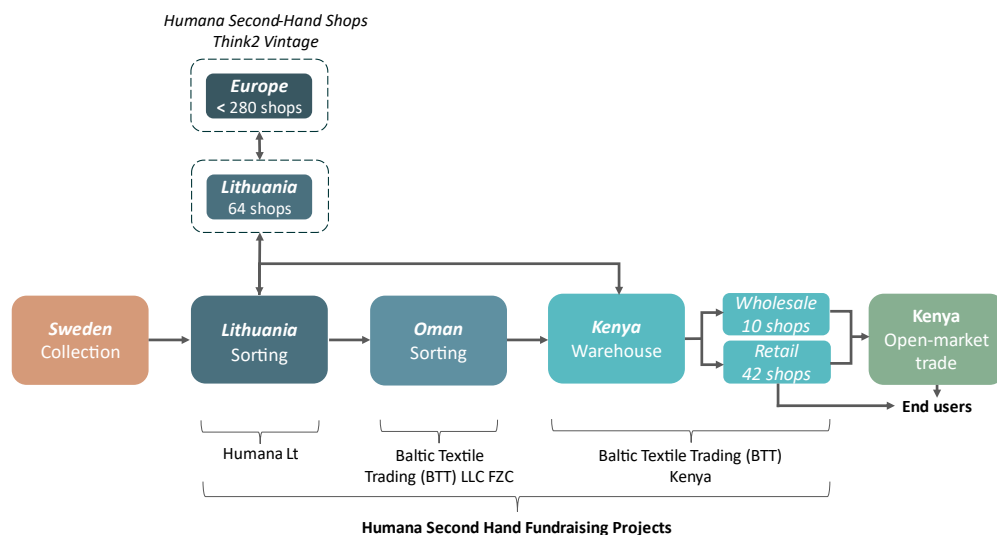


Figure 7. The studied value chain of used textiles collected in Sweden to the Kenyan second-hand clothing market.

In this report the concept of second-hand clothes and second-hand textiles are referred as the materials handled from Sweden up to the port of Kenya. In Kenya the concept of *mitumba* is used to refer to the products. *Mitumba* is the word used in Kenya to refer to these clothes and literally mean 'bales' or 'bundles' in Swahili. The use of words also illustrates that the *mitumba* on the Kenyan market is a product similar to any new pants, t-shirt or other¹ - it is a secondary product ready for a new user. The scope of the study is on post-consumer textiles. In the value chain studied

¹ In Sweden the correct wording would have been waste second-hand textiles or similar since the collected items are considered a waste presently. In this report we have used second-hand textiles for referring to these materials.

there are small volumes of pre-consumer items that have been donated by some shops. The main part of the volume is post-consumer items.

3.1 Research Design and Data Collection

The research combined qualitative methods, including semi-structured interviews, site visits, and participant observations. Fieldwork was conducted between late February and early March 2025 in Holsbybrunn, Sweden; Salalah, Oman; and Nairobi, Kenya. These site visits are the main collection points, sorting centres and sales point in the studied value chain. Additionally, a visit to Humana Lt's sorting facility in Vilnius, Lithuania was conducted as part of a previous study by one of the authors, (A Martvall).

In total, 31 semi-structured interviews were conducted with stakeholders involved at various stages of the value chain. These included representatives from collection organisations, sorting facilities, importers, market traders, industry experts and waste management experts (Table 2).

Table 2: Organisations and informants visited.

Organisation	Key-informant
Sweden	
Human Bridge	Lars Råsberg (Director) & Christofer Ståhlgren (Logistics & Sales Manager)
Eskilstuna Energi och Miljö (ESEM)	Benny Björk (Process Coordinator)
Telge Återvinning	Hasan Dincer (Supervisor)
SYSÄV	Lars Persson (Business Developer)
Oman	
BTT LCC FCZ	Pradeep Muniweera (Program Manager) & interviews with sorting staff and management staff
Kenya	
BTT Kenya	Örjan Österdal (CEO), Sven Pedersen (Director), Getrine Muzembi (Wholesale Manager), Martin Gitau (Communication and Social Media), Simon Maina (Business Developer Retail), Dinah Mwani (Wholesale Manager Shops), Richard Musyoka Muvea (Sales)

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
 A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
 May 2025

Open-air markets	Interviews and discussions with traders at <i>Gikomba Market</i> and <i>Toi Market</i> .
Moi University	Prof. Josphat Mwasiagi
Institute of Economic Affairs	Kwame Owine (CEO)
Taka Taka Solutions	Daniel Paffenholz (CEO)
Consultants	Jennifer Wang (Waste Management Consultant) and Liya Mango (Environmental Consultant)
Mitumba Consortium Association of Kenya (MCAK)	Teresia Wairimu Njenga (Chairperson)

The field work for this study was conducted during a time when changes was seen in the rules linked to collection and selling of second-hand clothes in Sweden. New rules set at national level linked to how households were expected to sort their used textiles resulted in more textiles put in the collection bins and much of these was argued to have low-quality or being not suited for reuse but rather to be of recycle quality. The authors included several questions on these aspects in the interviews, but data is mainly for the years up to 2024. This mainly affects the value chain in Sweden and trade to Lithuania.

3.2 Site visits and Activities

In Holsbybrunn, Sweden, the authors visited the main operation of Human Bridge. In addition, phone interviews were held with representatives from Eskilstuna Energi och Miljö (ESEM), Telge Återvinning, and SYSAV, all of whom are representing companies exporting collected used textiles from Sweden to the sorting facility in Vilnius, Lithuania.

In Salalah, Oman, the authors visited the BTT LCC FCZ sorting facility. Observations followed the process of clothing arriving from Lithuania and the subsequent sorting stages before the items were packed and exported for reuse in Kenya. Over the course of two days, the authors engaged in discussions with the site managers, as well as with the workers to gain an understanding of how the manual sorting process operates and to further understand how the quality checks, dynamics in the sorting process and challenges are managed.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

In Nairobi, Kenya, the study examined the operations of BTT Kenya, from the offloading of trucks with bales of second-hand clothing for storage, to the resale in *Think Twice* second-hand shops and the wholesale distribution of bales. Visits to three *Think Twice* second-hand shops were done, two of which are located in satellite towns to Nairobi and one inside Nairobi. During these visits, interviews were held with workers and customers. Further participant observations were conducted at a wholesale shop located next to *Gikomba Market*, which included following the purchased bales to the market and interacting with customers. Visits to the *Gikomba Market* as well as the *Toi Market* was also done, which included discussions with salespersons, observations of the trade and products offered. As part of the work visit to Dandora waste dump was also done to discuss and see the waste management first-hand. The team also visited the company TakaTaka Solutions, which specializes in material recycling. TakaTaka Solutions shared their first-hand experience in sorting and handling waste collected in Nairobi, with the aim of recycling as much waste material as possible.

Data on trade, sales, and sorting activities was collected from various stakeholders along the value chain. These data have been used to assess the trading volumes and quantifying certain aspects of the value chain. The study also includes consideration of results from other studies, particularly those focusing on the quality of items sold in second-hand textile markets in Kenya and other East African countries.



Figure 8. Market place for mitumba in Nairobi

4 The Value-Chain of Reuse of Second-Hand Clothes – Sweden to Kenya

The export and trade of used textiles for the second-hand clothing market is a well-structured system driven by economic factors and market characteristics. In 2024, the volume of used textiles purchased by Humana Lt, from Sweden, corresponded to 11,000 ton, equivalent to approximately 490 containers (Figure 9).

Along the studied value chain, the centralised sorting hubs in Vilnius, Lithuania and Salalah, Oman play an important role in categorising used textiles into product types and quality for the Kenyan second-hand market, including assessing the attractiveness of the garments for the different specific markets. Both in Lithuania and Oman, used textiles are sourced from various nearby EU-markets. However, the sorting facility in Lithuania has a larger capacity, sorting up to 40,000 tons of used textiles in 2024, whereas the facility in Oman handled about half of that volume, corresponding to 16,500 tons. At these sorting centres, used textiles are manually sorted depending on their quality (A, B and C) and whether they are fit for reuse or recycling. The textiles suitable for reuse are then further categorised into specific product groups such as ladies' blouses or winter trousers.

In addition to the general classification of second-hand clothing into quality grades such as A, B, and C, the system is more complex. Within each product category, there are multiple quality levels. This dynamic quality grading system is regularly reviewed and monitored to ensure that the product flow is optimised and directed toward the markets willing to pay the highest prices.

Of the total volume of used textiles sorted in Lithuania in 2024, 38% was resold on the EU second-hand clothing market through Humana's second-hand stores (Figure 9). A 10 % portion was exported directly to the Kenyan second-hand clothing market, while another 7 % portion was sent to Oman for further sorting. Generally, items intended for sale within the wholesale segment in Kenya are sorted in Lithuania, whereas used textiles requiring additional handling and further sorting and categorisation are sorted in Oman and then sold through *Think Twice* second-hand shops.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

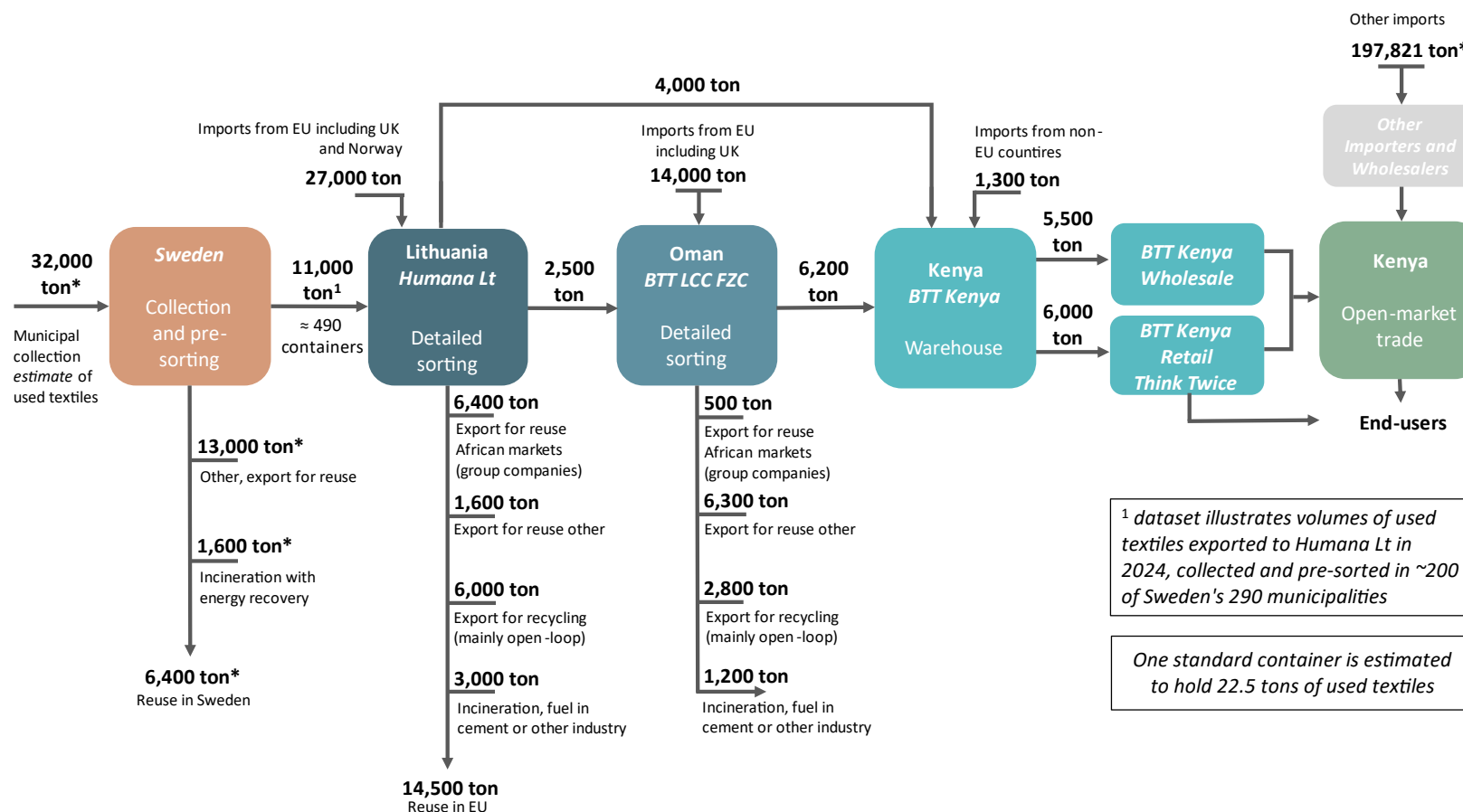


Figure 9. The value chain of collected post-consumer textiles from municipal collection points in Sweden, up to end customer in Kenya in 2024, with flows in each of the key activities carried out by subsidiaries under Humana Second-Hand Fundraising Project, for sources and explanations of estimated volumes marked with * (tons) see Appendix 1. Other datasets are based on internal from Humana Lt.

4.1 Sweden – Collection of Post-Consumer Textiles and a First Sorting

In Sweden, a variety of organisations collect used textiles, and as each municipality independently contracts collection services, the methods of collection and subsequent downstream handling vary depending on the selected service provider. In total, five collection actors have agreements with Humana Lt sorting centre in Vilnius, Lithuania. These organisations are Human Bridge, Telge, Sysav, Eskilstuna Strängnäs Energi och Miljö (ESEM), and Artikel 2. Among them, Human Bridge and Artikel 2 are social enterprises, while Telge, Sysav, and ESEM are municipal waste management companies. Together, they manage the collection of used textiles in approximately 200 of Sweden's 290 municipalities. All actors collect the textiles in a single stream, and from January 1, 2025, this will include the collection of both reusable and non-reusable textiles in bulk.

Human Bridge is the organisation that collects and manages the largest share of used textiles among all these collection actors, accounting for approximately 80% (Figure 10). They have agreements with approximately 160 Swedish municipalities to manage the collection of used textiles at recycling stations, as well as emptying and transportation.

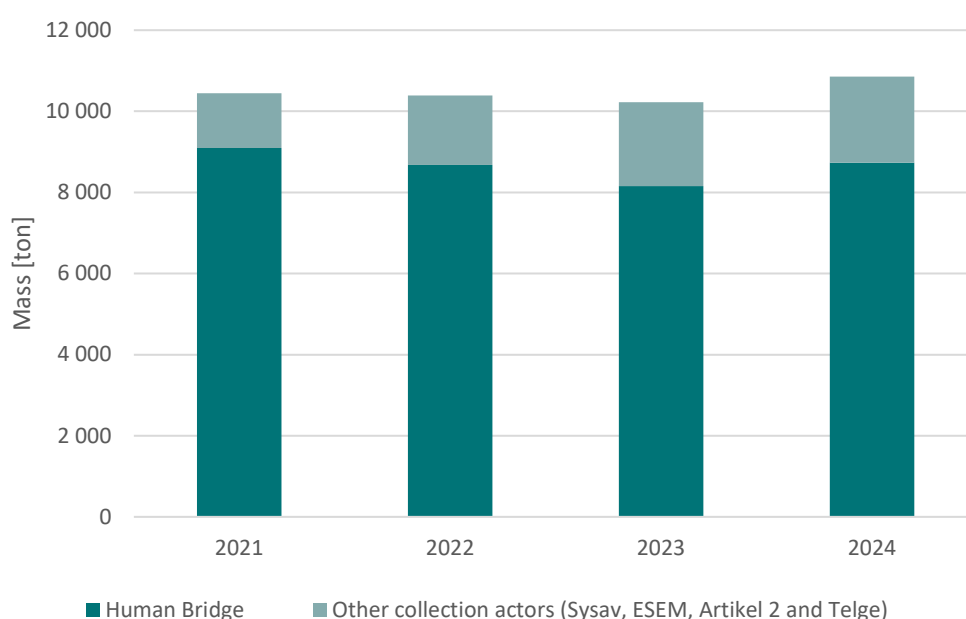


Figure 10. Volume of exported used textiles from Sweden to Humana Lt's sorting centre in Vilnius, Lithuania (tons), 2021-2024, per Swedish collection actor.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

Human Bridge operates its own second-hand stores under the name Lindra Second-hand. Approximately 1% of the total collected amount is specifically sorted for these stores. Despite the small volume (around 80 tons), not everything is sold locally. This sorting process is thorough, with each garment being individually evaluated. However, the majority of the volume is exported and only undergoes a pre-sorting in Sweden.

Pre-sorting means that the collected textiles have undergone an initial sorting process to remove non-textile material and contaminated wet fractions (Figure 11). During this process, items are separated into the category's textiles (including both reusable and damaged items), paired shoes, toys, belts, and bags. However, no differentiation is done whether these used textiles are reusable or not, as achieving cost-efficiency through manual sorting in Sweden remains challenging. In 2024, approximately 6% of the total pre-sorted volumes at both pre-sorting facilities in Holsbybrunn and Rosersberg consisted of non-textile waste that was removed. The pre-sorted batches are exported as waste (green-listed) under the waste code B3030. The reason the textiles only undergo a pre-sorting process is that labor costs are high as sorting for reuse is primarily a manual process.

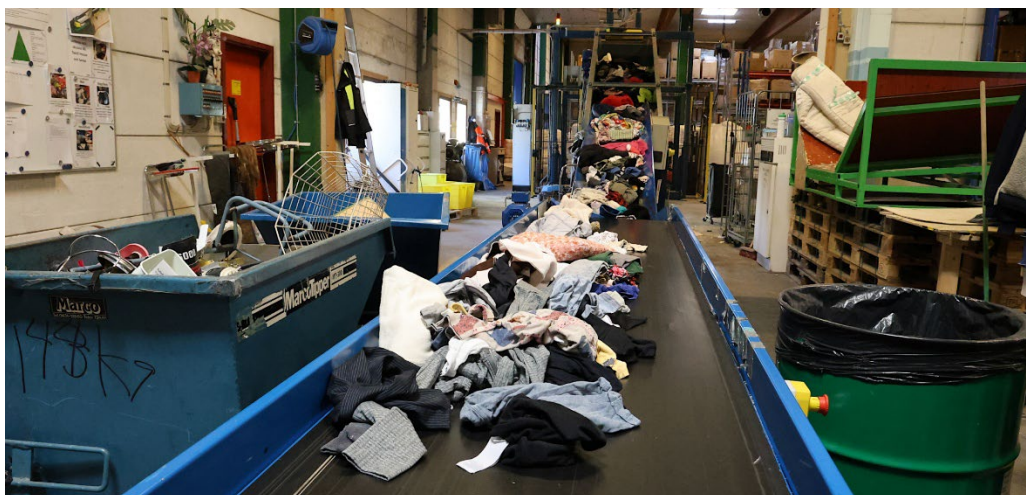


Figure 11. The pre-sorting process of collected used textiles by Humana Bridge separating non-textile materials and wet-fraction from category textiles.

Sysav uses a different model and has contracted a subcontractor responsible for transshipment and an initial inspection of the collected used textiles to remove non-

textile items. The used textiles are then exported to Humana Lt as waste (yellow-listed²) due to lower textile purity levels.

Unlike Human Bridge and Sysav, Telge Recycling launched a textile sorting facility in Södertälje in 2025. At the facility, used textiles are inspected and separated into fractions for reuse, recycling, or energy recovery. In addition to collecting textiles from Södertälje, they plan to purchase collected textiles from around 30 other municipalities. Reusable items such as clothing, shoes, home textiles, and accessories can thereby be exported to Humana Lt as products under HS code 6309.

Overall, collected textiles are managed differently across municipalities, and when exported to Humana Lt, they are classified based on their textile purity levels (Table 3). For ESEM and Artikel 2, no data could be shared and is hence unclassified.

Table 3. The export of used textiles from Sweden to Humana Lt and classification (waste, product, or unclassified) of the products exported. "Unclassified" indicates that information was not retrieved within the project and the classification could not be determined

Collection actor	Export classification
Human Bridge	Waste
ESEM	Unclassified
Sysav	Waste
Telge	Product
Artikel 2	Unclassified

4.1.1 Separate Collection of Post-Consumer Textiles

From 1st of January 2025, used textiles are to be separately collected, and in Sweden, municipalities have been designated as responsible for this collection.

The difference since this requirement was introduced is that, before 2025, mainly reusable textiles were collected, whereas from 2025, all textiles, both reusable and non-reusable (e.g., textile waste) are to be collected. This shift, results in second-hand textiles with market value being mixed with used textiles that may have no resale potential, and the sorting has shifted from being done by the consumer to being the

² Yellow listing is a lower degree of ensuring that the containment does not include other items than textiles. For green-listed it should be more that 90% textiles.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

responsibility of downstream actors in the reuse value chain. This, in turn, creates challenges for the economic viability of the system, as it is the sale of reusable fractions that has until now generated revenue to collect and handle the textiles.

4.1.2 Human Bridge – Primary Organisation for Collection

Human Bridge carries out textile collection in collaboration with municipal waste companies through collection containers placed across large parts of Sweden. Under contract to manage these collections, they provide the collection containers, handle transportation, and perform preliminary sorting of textiles. The sale of used textiles finances the costs associated with these operations.

The collection and sale of the textiles have been a means to fund their main purpose, which is providing medical aid and equipment (Human Bridge 2024). Thanks to the additional revenue from textile sales, they can cover the costs of collecting, quality-assuring, and transporting medical supplies to people in need. They collaborate with about half of Sweden's regions, who donate medical equipment or packaging materials that are to be replaced. The organisation receives this material from hospitals, health centres, maintenance departments, and private companies, and then repairs and quality-assures the equipment at their facility in Holsbybrunn. The equipment, which includes everything from operating tables to X-ray machines and childbirth kits, is donated to various healthcare facility around the world.



Figure 12. Human Bridge's business model, illustration how revenue from the collection of used textiles and their resale—both local and through export—generates funds to finance their primary objective supporting humanitarian aid projects.

Until January 1, 2025, the sale of collected used textiles funded Human Bridge's aid operations. However, since the beginning of 2025 collection volumes have nearly doubled over a 4-week period compared to the same time in 2024 (Figure 13). With the increased volumes come additional logistical challenges, such as more frequent emptying of collection containers and a greater need for personnel to pre-sort the textiles. In addition to the higher volumes, an increasingly significant portion of the collected textiles consists of low-quality, damaged and wet items, which have no market. This, in turn, affects the price at which Human Bridge can sell the collected textiles to Humana Lt, and consequently, the revenue available for the company to fund its humanitarian aid efforts.

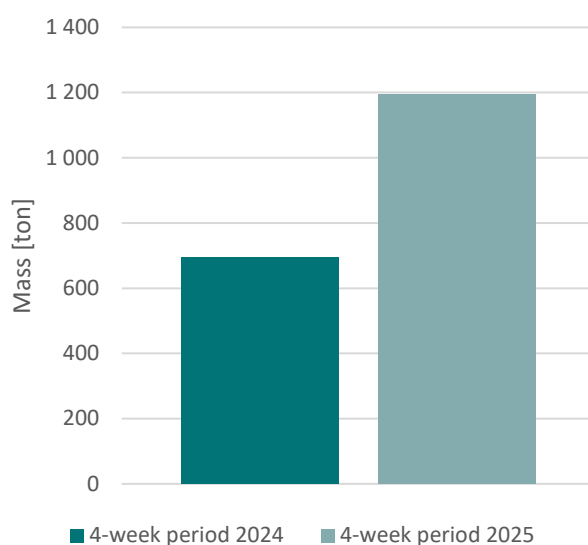


Figure 13. Volume in tons of collected used textiles by Human Bridge in Sweden, illustrating how the collection volume has doubled over a 4-week period 2024 compared to the same period in 2025, as a result of the new obligation of separate collection.

4.2 Lithuania – Sorting Facility and Hub for EU and International Textile Trade

Humana Lt's sorting centre is the largest of Europe's largest facilities for used textiles. The textiles are sourced from various European countries. Before purchasing, Humana Lt assesses the quality of the used textiles from potential suppliers.

Likewise sourcing new items, this upstream quality control is crucial to ensure that the purchased textiles are marketable and have potential downstream buyers. Cross-border trade in used textiles takes place across many European countries, with used

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

clothing from Sweden accounting for approximately 30% of the total imported volume to Humana Lt's sorting facility. This was equivalent to approximately 10,000 tons annually (Figure 14). Used textiles are purchased at a price ranging from EUR 0.45 to EUR 0.50 per kilogram on average. The prices will be depending on the quality of the post-consumer textiles.

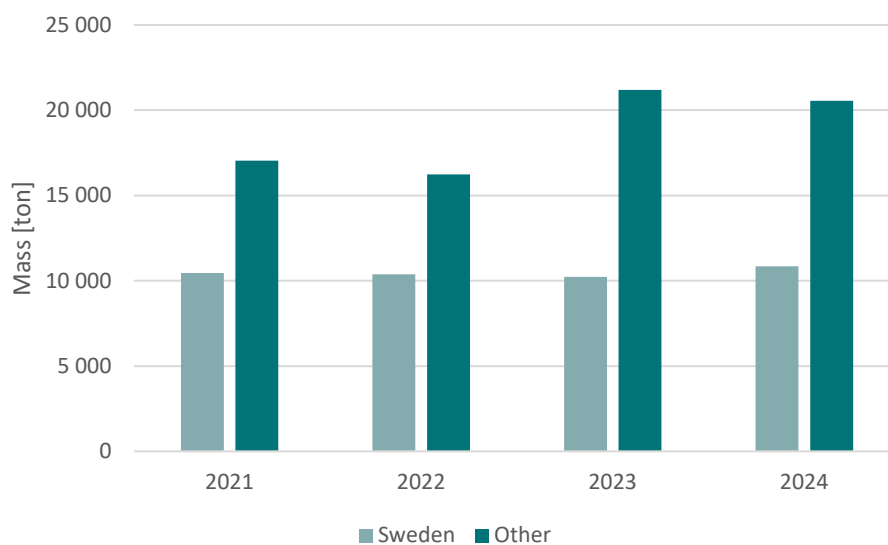


Figure 14. Volume in ton of imports of used textiles to Humana Lt in 2021, 2022, 2023, and 2024.

The sorting centre employs over 500 people who manually sort textiles for reuse and recycling. On average, 140–160 tons of textiles are sorted daily, with a maximum capacity of 200 tons per day operating across two shifts. The textiles are sorted into more than 400 categories to serve various reuse and recycling markets. In addition to its sorting operations in Lithuania, Humana Lt operates 64 second-hand stores within the country, as well that over 280 second-hand stores in Europe, where used textiles are given new life through resale. This centralised reuse system, which has been built up over decades, enables economic viability through a business model that many Swedish actors currently find challenging, particularly due to the high costs associated with manual sorting.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025



Figure 15. The post-consumer textiles purchased by Humana Lt for sorting into reuse and recycling.

Textile sorting is done based on a market-driven basis, meaning items are sorted based on downstream buyers' willingness to pay to reuse the textiles. Hence, the sorting categories are dynamically reviewed based on the market demand. For reuse, the sorting is done on product type, and each garment is manually inspected to ensure it meets quality criteria for reuse. This includes checking for elements like arm-pits, seams, and signs of wear and tear. Dirty textiles or garments with stains are also cleaned and there is a laundry station where used textiles are washed.

In addition to product type, the textiles are sorted based on their quality. To ensure consistency, Humana Lt has developed a set of general quality criteria for reuse, recycling, and waste (Figure 4). However, beyond these general quality criteria, the sorting process is more complex. Sorting is primarily done by product type, and within each product type, there are different quality levels.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

Table 4. Description of quality criteria and explanation of end-market segmentation.

Quality criteria's	General description	End-market
A quality	Fashionable and stylish garments (from good and popular brands, middle to high end) in the trend-segment, are made of quality fabrics (e.g. cotton, linen, viscose, silk, wool), are clean with original shape, full colour and no defects.	A portion of the sorted clothing is directed to <i>Think Twice</i> second-hand stores in Kenya. But due to the high price sensitivity of Kenyan consumers, this higher-quality grade is primarily sold in second-hand clothing stores in Europe.
B quality	Slightly less fashionable but still clean, still in good quality fabrics and yarns (e.g. cotton, linen, viscose, silk, wool) in good conditions with no defects.	The majority of this grade is directed to the Kenyan second-hand clothing market.
C quality	Less fashionable and slightly more worn, could have easily repairable defects.	The majority of this grade is directed to the Kenyan second-hand clothing market.
Recycling	Worn and washed out, out of shape, discoloured, nonremovable stains or dirt, but consists of materials demanded.	Directed for recycling in and outside for Europe if market demand exists. Not exported into Kenya due to regulations and import taxes.
Waste	Worn and washed out, out of shape, discoloured, with nonremovable stains or dirt, holes, missing buttons, defective zippers as well as those damaged during handling e.g. mouldy and smelly from being wet.	Incinerated, where fuel is used in the cement industry.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025



Figure 16. Manual sorting of used textiles in Humana Lt sorting center in Vilnius, Lithuania

After sorting for reuse in the different categories, the second-hand clothes are packed for two distinct ways to cater to different market demands. For second-hand stores in Europe and *Think Twice* in Kenya, textiles are packed into mixed bales that contain a variety of garments from different product types and quality levels, offering a diverse selection for customers. In contrast, export for wholesale, textiles are sorted into single-product bales, where each bale contains only one type of garment (a requirement to import *mitumba* into Kenya). Additionally, bales intended for wholesale are packed more tightly to optimize space during transport, which can result in more wrinkling of the garments, a factor less desirable for second-hand stores that prioritize presentation and quality.

4.3 Oman – Sorting Facility and Hub for International Textile Trade

In Oman, the sorting centre is located near the port in Salalah strategically situated within an economic trade zone, where used textiles from Lithuania and other European markets are shipped for further sorting. The centre is smaller than the one in Lithuania, but the sorting processes and methods are similar. The sorting center imports used textiles mainly from countries within the EU, including the UK. In

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

2024, approximately 2,000 tons were imported from Humana Lt for further sorting, with the remaining volumes coming from other sources (Figure 17).

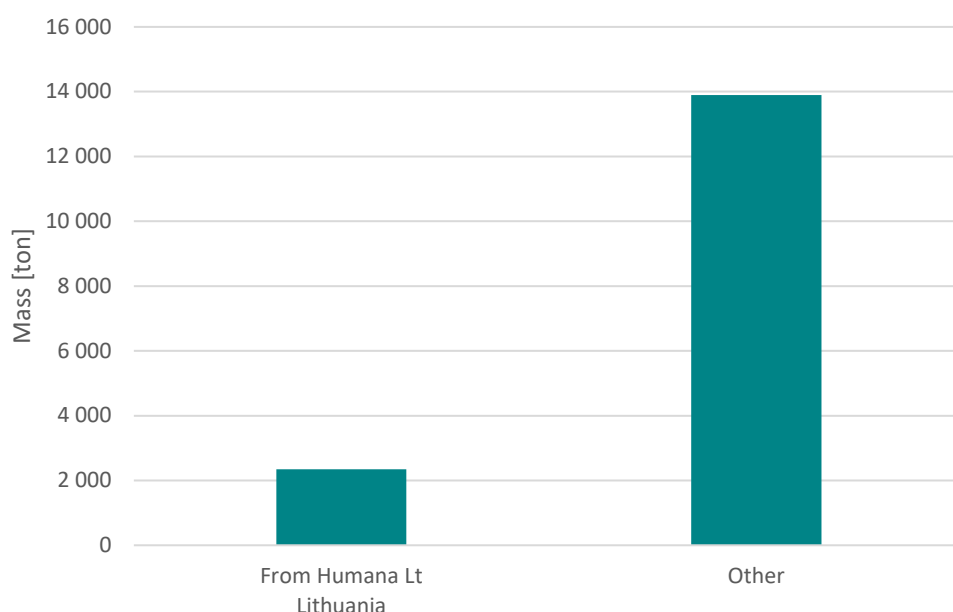


Figure 17. Volume in tons of imported used textiles to BTT LLC FZC in Salalah, Oman, in 2024

The used textiles are transported by truck from the dock to the sorting centre, where they are first sorted at the main sorting stations. This main sorting involves separating the used textiles into 15 different product categories, as illustrated in Table 5.

Table 5. Main sorting categories in sorting centre

Main sorting categories	
1 Shirts & blouses	9 Bags
2 Dresses & skirts	10 Shoes
3 Jackets	11 Toys
4 Sweaters	12 Textiles (household)
5 Children's clothes, underwear & socks	13 Singel shoes
6 T-shirts and polo shirts	14 Books & papers
7 Sports clothes as well as nightwear (bathrobes, tights etc.)	15 Polyethylene bags
8 Pants	

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

After the main sorting, the textiles are further categorised by product type. For example, the main category "Shirts & Blouses" is divided into 40 different subcategories. These 40 subcategories include key attributes such as separating summer and winter blouses, long-sleeved and short-sleeved items, as well as those with different patterns or within specific trend segments.

The trend category consists of items that are currently fashionable and have a high fashion value. To determine what qualifies as 'trend', a mood board is used to showcase current styles and colours. Items in the trend category are then further sorted by a dedicated sorter who focuses exclusively on this category.



Figure 18: Manual sorting into the 15 main sorting categories

Within these 40 subcategories, there are also specific categories for waste and recycling. There is very little waste generated from the plant, and if the sourced post-consumer textiles in the containers arriving to the sorting centre are not according to agreed quality e.g., what the sorting centre is expecting to arrive this is tracked and reported back to the origin if this continues. There is a shredded fraction that will be sold as a Refuse-derived fuel (RDF) to cement industry.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

Likewise, as the sorting centre in Vilnius, all the sorting in Salalah is done manually. It is not possible to have the required level of sorting automated since there are so many aspects considered. Certain things such as colour and material compositions could to some extent be handled, but the sorting is much more on quality, sizes, design, ensuring the textile is clean and level of wear. Each staff will have a training that typically takes 2-3 weeks. In the end of this period, they are expected to be able to sort the textiles in the different categories. The quality of the sorting is crucial since any items of lower quality than stipulated according to the category description and quality will reduce the attractiveness for potential customers of the bales later in the value chain. The managers of the sorting centre have weekly meetings with representatives from the organisations in the value chain where aspects of sorting quality and desired categories are discussed. This manual labour is a key-element of the quality assessment later in the value chain and to be able to export the bales of sorted second hand textiles to Kenya.



Figure 19: Staff sorting and quality checking blankets and other textiles in the Salalah sorting centre.

The staff at the Oman sorting centre is largely from Sri Lanka. The share of foreign workers constituted in the Oman labour market in 2020 was 77%, and even higher shares of foreign workers are found in the private sectors (ILO 2022). The location of Salalah sorting centre is strategic in terms of shipment with a large harbour close by.



Figure 20: Textiles not suited for re-use or recycling as wipes or other materials are shredded for RDF.

Likewise, as in Lithuania, the sorted textiles intended for reuse are packed according to downstream compliance rules. For export to wholesale segments, each bale contains only one type of product. In contrast, for second-hand stores, the sorted clothes are handled more generally, with a mix of different product types to ensure a wider variety and distribution.

4.4 Kenya – Warehouse, Wholesale and Retailers

A 40-foot container reaching the warehouse in Nairobi is up to EUR 36,000. Taxes, import duty, insurance, levies, and Value Added Tax (VAT) on the imported *mitumba* reaches around EUR 14,000, which corresponding to about 40% of the total shipment cost or EUR 0.62 per kilogram of the imported clothing. BTT's operations consist of two main branches: wholesale and retail (Figure 21).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

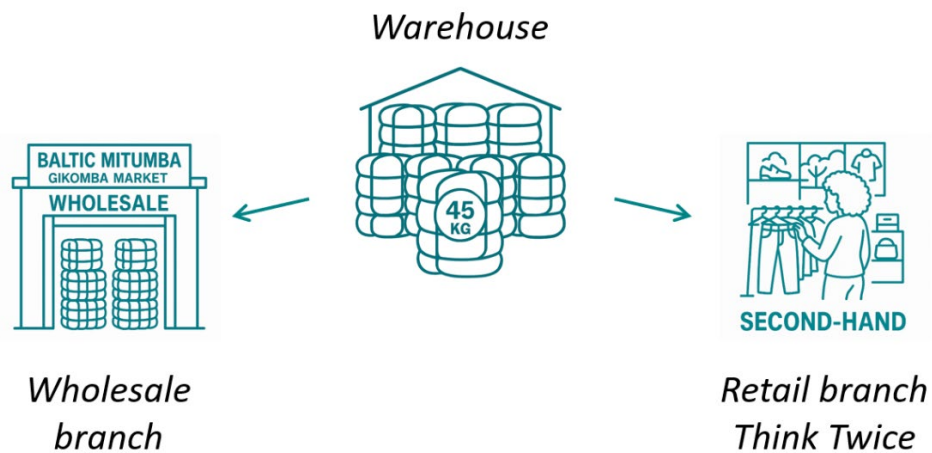


Figure 21. BTT operations in Kenya and the two branches: wholesale and retail through Think Twice second-hand shops.

The retail branch, *Think Twice*, operates a total of 43 second-hand shops, whereas there are a total of 10 wholesale shops. One wholesale shop is located in Nairobi, next to *Gikomba Market*, East Africa's largest open-air market for *mitumba*. In the wholesale shop, bales of *mitumba* are sold at fixed prices depending on quality and season. These bales are either sold at *Gikomba Market* or transported to other markets all around Nairobi.

In Kenya, the import of *mitumba* is controlled and regulated. In order to import, one needs to pay import duties and be compliant with the requirements for imports such as packaging requirements and quality standards. The imported bales of *mitumba* need to be sorted in categories for different specified products, meaning that it is not allowed to import un-sorted bales of second-hand clothes. The content and way of packaging each bale needs to comply with the import regulations and standards which will be checked upon arrival to the port of destination.

BTT Kenya's bales of *mitumba* are mainly sourced from the sorting facilities in Lithuania and Oman, where the used textiles have been sorted into defined product categories depending on their quality. There is also a small share of used clothing imported from other countries (Figure 22).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

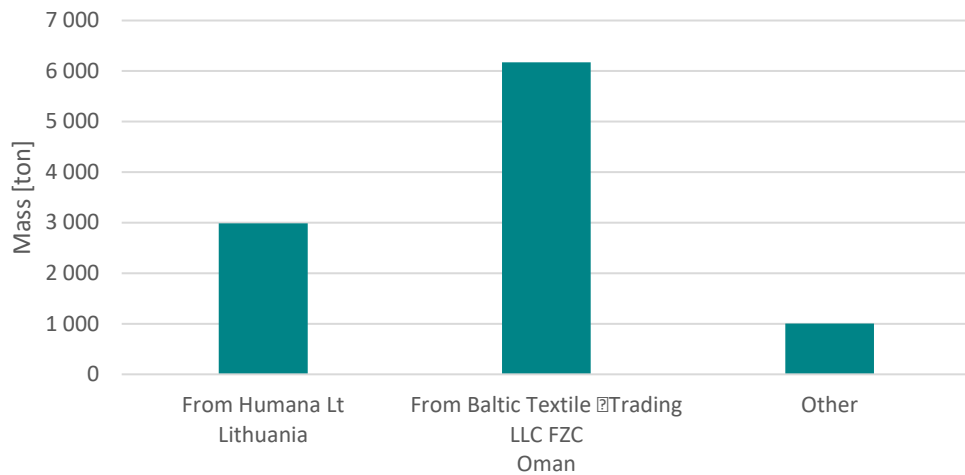


Figure 22: Mass of imported used textiles to BTT Kenya in 2024.

The bales of *mitumba* are transported by sea in 40-foot containers, containing around 500 bales each, to Mombasa Port, and then transported by truck to the warehouse in Nairobi. The transport from Lithuania to Kenya takes around 8 weeks, whereas from Oman to Kenya, approximately 1 week. Each transport is carefully planned to maximise space in the containers, and the total cost of importing a container, including the value of the second-hand clothes, transport costs, and taxes, is approximately EUR 30,000.

4.4.1 Regulations for Mitumba

The imports are regulated by the Kenya Bureau of Standards (KEBS), which ensures compliance with environmental and market requirements while protecting consumers. KEBS oversees quality, hygiene, and import regulations, inspecting bales upon arrival to prevent excessively worn-out clothes from entering the country. Additionally, it enforces labelling and packaging standards, allowing only transparent bales of 45 kg (KEBS 2019).

Before the bales of *mitumba* (or any regulated products) are shipped to Kenya, they must pass a Pre-Export Verification of Conformity (PVoC). This means that inspectors from an approved PVoC agency check the second-hand clothing bales before export, at the supplier's location, as well as upon arrival at the port in Kenya (KEBS 2019).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

4.4.2 Import volumes and Market Structure

In 2023, the total volume of imported used clothing into Kenya under harmonized commodity description and coding system (HS) code 6309 was 197, 821 tons. More than half originated from suppliers in China, while 15,991 tons (approximately 8%) originated from the EU (including exports from Lithuania). Of the total imported used clothing in Kenya, 11,500 tons (approximately 5%) were second-hand clothing imported by BTT Kenya, while the rest originated from other importers (Figure 23).

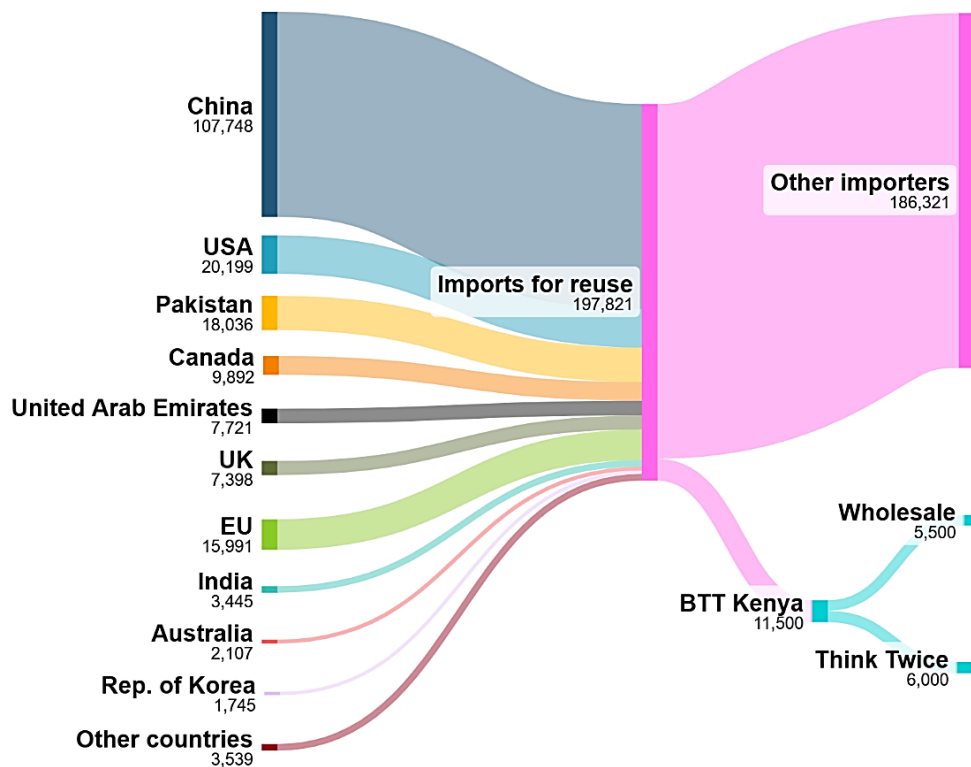


Figure 23. The volume in ton of HS 6309 'Used Clothing. Textiles; worn clothing and other worn articles' imported to Kenya 2023 from world, and the share of second-hand clothes imported by BTT Kenya versus other importers (UN Comtrade 2025)

The trading of second-hand clothes to the Kenyan market is very diversified with several players importing goods from all over the world. With a 5% share, BTT, represent one of the biggest actors. There is no actor that controls a substantial part of *mitumba* market. An association, Mitumba Consortium Association of Kenya (MCAK), strives to be the voice of this heterogenous group towards authorities. The trade is in this sense driven by several stakeholders, but with a common market structure to comply with. The trade with bales of a certain size, categories with

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

specified content as well as the quality (whole clothes fit for reuse) are all the same. This is regulated by the standards and import regulations, but also by the market – there is little room for any player putting low-quality items on the market since no trader in the next stage of the value chain would opt to buy bales from this supplier and the company would soon run out of business.

4.4.3 Warehouse

The warehouse serves as a central hub in BTT Kenya's operations, where bales for the wholesale shops are unloaded and stored. Next to the main storage area, there is an equally sized space used to store bags destined for distribution to the retail stores. Buyers who wish to purchase bales in bulk can also come directly to the warehouse but need to buy a minimum of 20 bales.



Figure 24: BTT's warehouse in Kenya where mitumba bales are stores before distributed to wholesale shops.

In the warehouse as well in the wholesale shops there is a fixed price list where second-hand clothing is categorised using a colour schemes. White corresponds to Grade A, which includes seven household textiles product categories. Pink represents Grade B, covering 53 product categories. Blue corresponds to Grade C, with 28 product types, and finally, green is used for winter clothing and includes up to 70 product types. Bale prices range from EUR 40-180 per a bale (approximately KSH 6,000-25,000), depending on quality (Table 6).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

Table 6. BTT's fixed price list for wholesale

Grade	Quality and product types	Price per 45 kilograms bale
A	An assortment of 7 different product types within the category household textiles	EUR 100-180 (approx. KSH 14,000-25,000)
B	An assortment of 53 different product types within the categories: children, ladies, men, unisex, and textile rummage	EUR 60-140 (approx. KSH 9,000-20,000)
C	An assortment of 28 different product types within the categories: children, ladies, men, and unisex	EUR 50-100 (approx. KSH 7,000-13,000)
Cold season	An assortment of 65 different product types within the categories: children, ladies, men, unisex, and textile rummage	EUR 40-120 (approx. KSH 6,000-17,000)

The warehouse will receive its goods by truck from Mombasa and the harbour there. The trucks will take the containers with the bales packed in Oman, Lithuania and other places and off-load it. The warehouse will be the hub for further distribution to retail shops and wholesale.



Figure 25: Off-loading and arranging bales at the BTT warehouse in Nairobi

4.4.4 Think Twice Second-Hand Shops

Think Twice's second-hand shops are located in both smaller towns and urban areas across Kenya, offering affordable, quality second-hand clothing for all income levels.

The stores follow different sales models, with some operating on 2-week cycles and others on 4-week cycles, each offering varying product quality and pricing strategies. Stores with 4-week cycles sell higher-quality items, equivalent to Grade A. In these stores, prices are gradually reduced each week over the 4-week period. During this time, the store is restocked with Grade B items. Every fifth week, the store completely restocks with a new selection of Grade A second-hand garments, marking the start of a new cycle. Over these four weeks, the customer groups, and those who shop in week 3 tend to be households with smaller budgets compared to those who shop in week 1 (Figure 26).

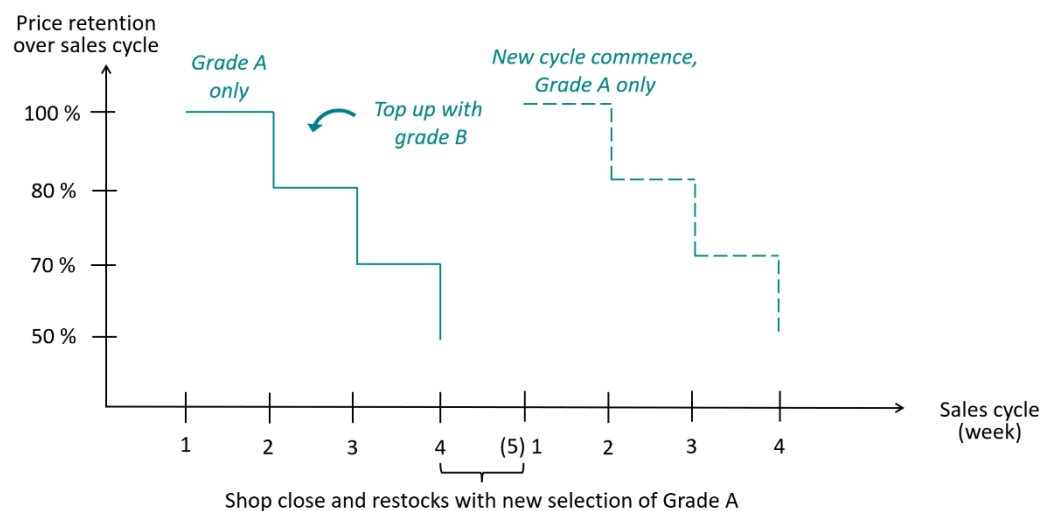


Figure 26. The 4-week cycle stores selling second-hand clothing equivalent to Grade A, and how the prices decrease over the cycles.

Stores with 2-week cycles cater to households with lower budgets and offer Grade B and C quality clothing. These are the more common stores and here a fixed price reduction is applied during the second week, and the inventory is fully replaced every third week. During the first day of the second week prices are maximum EUR 1.07 (approx. KSH 150) per item whereas at the last day prices are only EUR 0.18 (approx. KSH 25) per item.

For both cycles, clothes that are not sold within the cycle are taken down, packed, and sent back to the warehouse. These unsold clothes are sold in bundles of 300 items

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

to other customers purchasing second-hand clothes in bulk. This retail business model resembles how trade naturally occurs at the open markets, where these cycles take place over a much shorter period, typically days.



Figure 27: Think Twice (T2) shop entrance where the signs on Next opening and present fixed price (KSH 150) are displayed.

The business model will attract different customer groups depending on in which phase of the price cycle the shop is in. In the beginning of the cycle customers that have a better economy will be the main target group, whereas customers looking for cheap clothes and textiles will opt for the last stages in the price cycle. This means that positioning of the retail shops is typically done in areas where a broader segment of customers can be found.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025



Figure 28. One of Think Twice 2-week cycle second-hand clothes shop.

4.4.5 Wholesale and Open-Market Trade

At BTT's wholesale shop near *Gikomba Market*, customers purchase bales that can take different trade routes before reaching the end consumer. The customer base ranges from individual small-scale traders to larger buyers purchasing multiple bales. Customers that have their stalls at *Gikomba Market*, usually transport the bought bales there, for opening and trading. *Gikomba Market* functions as a central hub for *mitumba* in Kenya, and clothes from here makes its way to markets and shop all over Kenya. Traders frequently visit this market to source individual garments to build their inventories. Clothes purchased at *Gikomba* are often resold at other markets across Nairobi, such as *Toi Market* or *Maasai Market*.

At these markets, the bales are transported to the stalls, where the trade takes place. In a bale of second-hand clothing (excluding shoes), the number of items varies. On average, there are approximately four items per kilogram. For heavier outerwear such as jackets, a bale may contain around 50 items, while a bale of mixed baby clothes can contain up to 500 items. Once the bale is opened, customers gather in the stalls to purchase individual garments. Within this system, there is a practice known as *camera* a ranking system where those designated as the *first camera* are allowed to

shop first. However, this means that they must pay up to a substantial cost of the bale.

Buying *mitumba* that cannot be sold e.g., textiles waste is a loss of income, and results in bad business. Hence traders are highly selective about the items they choose to purchase, as they aim to resell at a good price. If the bales contain "bad" or low-quality items that are unlikely to generate profit, traders will typically avoid them and seek suppliers with better-quality stock.

During field visits to *Gikomba Market* and *Toi Market*, traders explained what happens to garments that they don't sell. There is a commonly known lowest quality category referred to as *Fagia*. *Fagia* is sold at a reduced price and is an economic loss for traders. These items are either resold in rural areas or, if the material is suitable, processed into rags or cleaning cloths (wipers) for factory cleaning or other applications such as stuffing. In addition to traders buying *fagia*, there is also a network of seamstresses and tailors connected to these open-air markets. During field visits, several explained how they upcycle and transform damaged or end-of-life clothing into wearable garments. Repurposing is also common for garments that are less attractive to the average buyer—such as oversized clothing. These items are often creatively altered or tailored to better suit local preferences, making them more marketable and wearable.

4.4.6 End-users and the Consumers of Mitumba

Mitumba plays a substantial role in the textile market in Kenya. The trade provides all types of customers with clothes that fit their own purpose. This can be seeking for fashionable items, functional clothing for different work situations and of course also providing good low-cost clothes for the population. Everyone, more or less, will have *mitumba* in their wardrobes, it is easy to find and with a good variety and experienced being a good value. For the end-users the *mitumba* provides clothes with a very large variety since there are rarely different sizes of the same garment, if a certain item does not fit you cannot ask for the same item in a smaller or bigger size.

There are shops selling non-mitumba (new clothes) clothes, but the trade of second-hand clothes dominates the market. Some items are difficult to buy as *mitumba*, examples are school uniforms and traditional clothes. Based on discussions on the experience of *mitumba* it seems that consumers see it as one product alongside other clothes, the choice of what to opt for is depending on your needs and possibilities to buy a certain item. *Mitumba* is good value, and quality is often as good as new items,

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

or even better for the same price. The consumers are very conscious about their purchases and value of the things bought. Low quality items will not be very attractive, especially if your budget is limited, and there are many shops and market vendors offering *mitumba*.

The clothes that are in circulation will be inherited or given away when they are not wanted any more. If there is a garment that can be given to someone that would appreciate it or sold again this is an opportunity for further extending the life of the textile.

Eventually textiles will reach an end-of- life. The waste management in Kenya is often very rudimentary where waste end up at a dumpsite, open-air burning or just dumped in the environment (Catapult 2021; NAMA 2016). The lack of proper waste management is a huge problem causing environmental, health, social and economic problems. The waste challenge would be similar independent on whether it is *mitumba* or corresponding new garments that have reached the end-of-life. *Mitumba* generally have an appreciated higher quality than corresponding new textiles of the same price. Actions for proper waste management and recycling in Kenya is strongly motivated but based on the results in this study it is a challenge that is not directly linked to the *mitumba* trade but rather a general societal challenge linked to household, industry and public institution waste generation.

4.5 Economy along the value chain

From used textiles, being collected in 'bulk' in one single stream, it passes through several manual steps, to make sure that the used textiles are well-defined products for resale at the second-hand clothing market, in Europe, or as *mitumba* in Kenya (Figure 29). After being collected, the used textiles are pre-sorted (reusable and reusable mixed) and exported for further sorting. Some actors, in Sweden, also separate textiles based on whether they are reusable or non-reusable. The exported used-textiles, subjected to cross-border trade, are then carefully sorted based on quality and attractiveness to end customers. Depending on the end market, and whether the assessed garments are intended for second-hand stores or for sale in bales, they are packed according to import requirements. For second-hand stores, the garments are typically packed with a defined number of varied items to ensure a wide selection. In contrast, for wholesale purposes, each bale contains one specific type of garment. In each case, the sorting centre controls and ensures that there are always some higher-quality garments included in the bales, to make sure that buyers receive good value and remain interested. Finally, the products are resold to the end customer.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

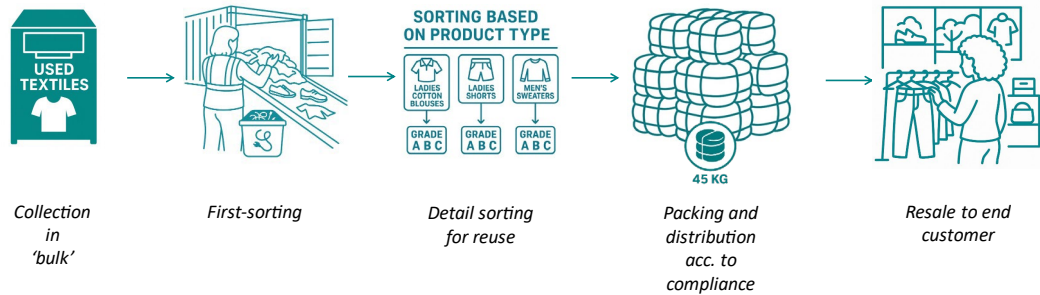


Figure 29. The process turning collected used textiles in Sweden to a well-defined Mitumba product in Kenya.

Along the value chain for second-hand clothes, from collection in Sweden to reuse in Kenya, the value of the used clothes increases along with the increased level of sorting and quality specification for the end-customer (Figure 30). Textiles collected in Sweden are sold to Lithuania at EUR 0.5 per kilogram, then to Oman for further sorting at a price between EUR 0.6-0.7 per kilogram. In Oman, additional sorting for the Kenyan market raises the price to EUR 1.2 per kilogram.

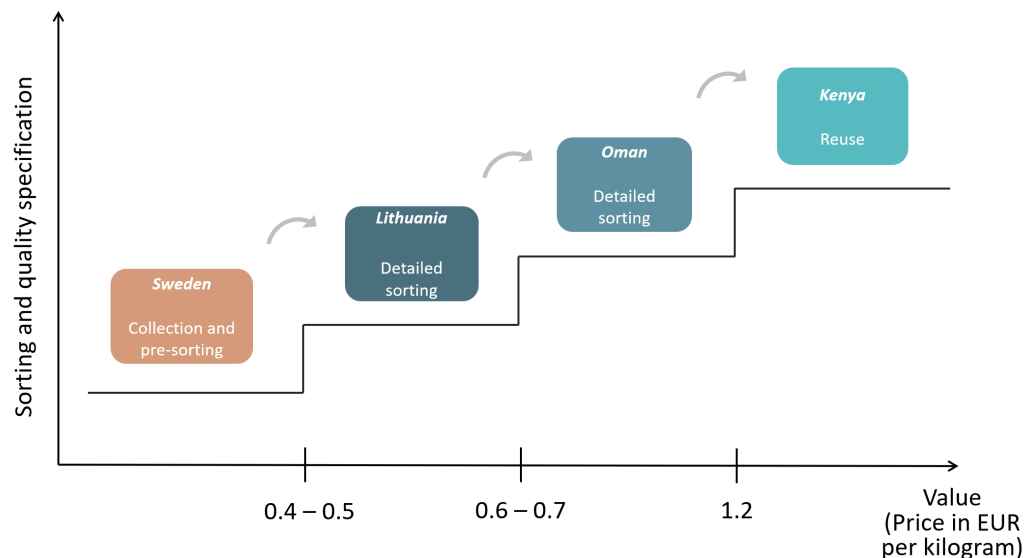


Figure 30. Indicative value (price per kilogram) along with value chain, illustrating increase in level of sorting, and quality specification. Prices are at trading stages between countries.

In Kenya, the second-hand clothing market is both price-competitive and diversified, and selling mitumba is common even outside the open-air markets. Sellers

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

adopt different pricing strategies depending on the bale's purchase price and the quality of the textiles. Once a bale of mitumba from BTT Kenya has been acquired, the items are typically sold individually.

According to BTT's fixed price list, bale prices range from EUR 40 to EUR 180, and the average price per item depends on the type of clothing. For jackets, the average price per item is between EUR 1 and EUR 4, depending on quality. However, these figures do not fully reflect the sales strategies used in open-air markets. For example, the *first camera* the person who gets first pick must purchase half of the items at the full bale price. This means that if a bale costs EUR 60, the remaining half sold after the first camera represents pure profit.

5 Discussion

This value chain, from collection of used textiles in Sweden to the final selling of *mitumba* in Kenya illustrates a process where low value items are turned into attractive and marketable products. At present the textiles collected in Sweden are categorised as 'waste' and gradually sorted, quality assessed and categorised according to a market-based system, turning it to products.

There are several guides and standards that the sorting and valorisation will adhere to, as well as ensure that products comply with national rules and regulations for cross-border trade. In the latter case the EU and Swedish legislation on waste is playing a crucial role. The study shows how the first step in the value chain, where the textiles are collected around Sweden in special collection boxes or other collection points, have been a functional system up to recent changes in waste regulations where citizens are now expected to put *all* textiles in these boxes. This means mixing items for reuse with non-reusable and thereby reducing the quality of the collected items for reuse.

This quality reduction will have an impact on the price that the first sorting facility are interested to pay for the items. Increased volumes of collected post-consumer textiles will result in increased transport costs from collection point to the first sorting centre in Sweden, but the higher volumes collected does come with a reduced quality and subsequently the price the next stage in the value chain will want to pay for the textiles. Municipalities are presently the bodies responsible for that post-consumer textiles are collected and they should look for options to have a collection that enables textiles unfit for reuse to be sorted separately. This would also align with the upcoming actions for circular textile economy with EoW criteria for reusable items and recyclable items respectively. Keeping these two waste streams apart would support circularity in the resource management.

The collection of second-hand clothing for reuse within the EU and beyond has been taking place for a relatively long period of time. Many of the organisations involved in collecting, sorting, and reselling used clothing are social enterprises, where these activities support community development and individual empowerment in various ways. Human Bridge and Humana Second-Hand Fundraising Project are examples of such organisations. As a consequence of changes in waste legislation and the solutions to ensure that used textiles are collected at municipal level, these companies in the waste sector are now providing post-consumer textiles to the value chain. The value chain as such is demonstrating a business-to-business trade where prices are

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

negotiated, and each company will act on commercial terms. The prices are set on the ground of market prices, an evaluation of the products (post-consumer textiles of a certain quality) and volumes available. Any deviation, or sub-standard materials, will have an impact on future price setting.

One of the main challenges is the lack of a market for all collected post-consumer textiles in Sweden. The volume of textiles collected far exceeds the demand in second-hand shops—there simply isn't sufficient local demand to absorb it. According to interviews, post-consumer textiles from Northern Europe, generally known for their higher quality, are attractive in certain EU countries where such second-hand items are appreciated. However, the capacity of these second-hand markets to absorb large volumes is limited. As a result, the solution has been to identify markets with a demand for these clothes. One such market is Kenya, where the items are sold as *mitumba*. Without such markets, many of these textiles would otherwise reach end-of-life in the EU, through incineration or landfilling, since textile recycling options remain very limited today. By redirecting these garments to markets where they can be reused, the lifespan of the textiles is prolonged. Ensuring that these textiles meet specific standards, such as being clean, intact, and showing only acceptable levels of wear and tear, is essential for their resale. Furthermore, sorting categories are dynamically updated to match the requirements of the end markets. In future systems governing end-of-use, this assessment of quality and reuse potential will be a key step in the EoW criteria. Once approved, the textiles are reclassified as secondary products³, ready to be placed back on the market.

The question is if this change of geographic market is a challenge for the circular economy solution. The study illustrates how this value chain is efficient and provides attractive and price competitive reused products prolonging the life of the textiles. This is in line with the circular economy strategy. The study also illustrates that the present EU market lacks adequate absorption capacity for the collected second-hand clothes. However, this does not mean that it cannot have this in the future. Along the value chain and market for second-hand clothes many job opportunities are created. In Kenya, *mitumba* is a way for many people in Kenya to afford clothes and get clothes in the first place. It is however a relevant point that Kenya can vastly improve their waste management system to ensure that disposed waste is recycled and taken care of in a way that minimize environmental and other societal impacts. This is a general challenge for the country and not one that is caused by the *mitumba*

³ In analogy with secondary raw materials which are the result from recycling materials and use them in manufacturing processes.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

trade. Only very small parts of the *mitumba* in the studied value chain is disposed, traders want to maximize their profit from the sales and the price system has been developed to enable this. The price drops over the time from premium products at a higher price in the beginning and lowered prices as the stock change provides a system whereby most items will find a final use. It is interesting that the *Think Twice* retail shops have adapted the system found on the markets for their operations. This approach has been taken up by other retail shops as well.



Figure 31. Sorting at the first stage sorting in the sorting centre in Salalah.

The value chain for second-hand textiles from the collection, in this case in Sweden, to the final sales as *mitumba* in Kenya displays an increase in the cost for the second-hand items. At each stage of the value chain, activities such as sorting, quality control, and transportation are required to bring the used textiles closer to suitable end markets. Although the final selling price of the items is relatively low, it is sufficient to make the entire chain economically viable. This allows a wide range of actors, from companies to individual entrepreneurs, both women and men, to participate and generate income through their involvement in the reuse and resale of second-hand textiles.

The textiles sorted in Lithuania and Oman are primarily sourced from EU countries. After sorting, they are resold through BTT's business operations in Kenya, where they reach end consumers on the local second-hand market. The recent change in waste legislation illustrates how new administrative rules may risk the economic

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

viability of the business case in Sweden since it adds costs or change the content of the collected textile and clothes. Still, the transition to further scale up the textile circular economy will have to include certain safeguards to ensure that the textile products that are handled are categorised, quality assured and fit for reuse, or recycling. At present there is no extended producer responsibility (EPR) for textiles put on the EU market, but it is expected that this will be the case. With an EPR in place the responsibility for the collection will be with the sector and not with the municipality as it is now. This will possibly change the conditions for the organisations and companies involved in collection of post-consumer textiles.

6 Conclusion

This study focuses on the value chain of collected post-consumer textiles in Sweden, following the different stages where the used textiles are transformed into valuable and attractive products ready for new users. It is based on a case study of a specific value chain and, it aims to provide insights and perspectives from this particular example of value creation and trade, illustrating how reuse in a circular textile economy can be organised.

The export of post-consumer textiles imported the Kenyan second-hand clothing market through BTT value chain, is based on commercial principles and with a well-defined product specification system. Each step of the value chain adds value to the textiles which is the basis on which the companies involved run their businesses. The end-users' demand, and expectations, are communicated upwards in the supply chain to ensure that functional and attractive products are sourced and packaged.

Prolonged life of textiles by reuse is more climate efficient than providing new textile products. The textiles collected in EU might not have a demand in EU but are appreciated in other markets – the alternative to reuse outside EU is thus recycling into new textiles fibres or end-of-life in Europe. When it comes to fibre recycling this is a very limited activity in EU today, and still, it is more favourable to *first* prolong life through reuse. The post-consumer textiles' life is prolonged in this new use phase and provides affordable *mitumba*. The trade system provides options for the highest quality of mitumba (gold), to second and third quality making people also with very low incomes purchase these goods. Along the whole value chain, added value is created. Both in monetary terms, but also job creation and, especially in Kenya, opportunities for small businesses with relatively low requirement for capital to start are created.

Based on this study the risk of dumping of post-consumer textiles from EU on the Kenyan market to avoid paying for waste disposal in EU is low as the cost for the bales of second-hand clothes is relatively high. The clothes and textiles imported comes to good use as it does not make any economic sense to import un-sellable clothes into Kenya and to add it is neither allowed to import *mitumba* that do not comply with standards and regulations so un-sorted used textiles cannot be imported. Any actor selling sub-quality items will soon run out of business as the competition is hard and many options to source better quality second-hand clothing exists.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

The last stage of the value chain, where second-hand clothing finds a new owner in Kenya, is quite complex with different prices set during a period that an item is for sale – going from high price to lower. If not sold, there are alternative markets and uses (wipes, brooms and other downscaling options) and there are several detailed studies supporting this.

The separate collection in Sweden was until recently providing a high-quality mix of second-hand clothes and other textile items. Recent changes to have source separation of all textiles from households by 1st of January 2025, have resulted in higher volumes and more textiles un-fit for reuse in the collected items. Textiles collected from the households have two different uses; i) reuse and ii) recycling but at present they are collected in one single stream (bulk). As of now there is a risk that a structure, where mixing of two different types of secondary raw materials/products, is created. The value chain of textiles is operating under tight margins and any additional labour costs, administrative or for getting rid of unwanted post-consumer textiles in the value chain, will negatively affect the business profitability in the trade. The trade is genuinely global with second-hand clothes from EU, North America, China and Asia competing on the same market in Kenya with similar prices on similar goods of same quality.

Eventually all clothes and textiles will reach end-of-life – new high or low quality as well as *mitumba*. The waste management in Nairobi, and most part of Kenya, is rudimentary and causes major negative direct and indirect environmental, climate, social and economic impacts. This is something that is a problem for all types of wastes and not specifically for textile waste. Nevertheless, the market for *mitumba* provide an important opportunity to prolong the life of second-hand clothes from EU that otherwise would have reached end-of-life and presently ended up incinerated or disposed at landfill. The actions seen by EU on a circular textile economy aim to increase reuse of textiles and there are important lessons to learn from how the value creation is handled and managed in value chain of post-consumer textiles and the *mitumba* trade.

References

- Avfall Sverige. 2023. *Svensk Avfallshantering*. https://www.avfallsverige.se/media/mdnj3dpy/svensk_avfallshantering_2023.pdf (April 18, 2025).
- Avfall Sverige. 2024. '2024:18/Kommunal textilinsamling'. *Avfall Sverige*. <https://www.avfallsverige.se/rapporter-utveckling/rapporter/2024-18-kommunal-textilinsamling/> (April 10, 2025).
- Catapult. 2021. *Nairobi. Solid Waste Management & Storm Water Drainage and Flooding*. Urban Links Africa (ULA). Global Challenges Research Fund (GCRF).
- Dahlbom, Maja, Ida Aguilar Johansson, and Tova Billstein. 2023. *Mapping of Textile Actors in Sorting and Recycling of Textiles in Europe*.
- Dahlbom, Maja, and Amanda Martvall. 2025. 'Maturity of Fibre-to-Fibre Recycling in Europe'.
- Dissanayake, Kanchana, and Rudrajeet Pal. 2025. 'Toward a Just Circular Economy: Exploring Societal Implications of Used Clothing Supply Chains'. *Societal Impacts* 5: 100101. doi:10.1016/j.socimp.2024.100101.
- Duhoux, Tom, Anse Smeets, Lea Kress, and Lars Fogh Mortensen. 2025. *Measuring Europe's Textiles Circularity – through the Lenses of the EEA Circularity Metrics Lab*. Copenhagen: European Topic Centre on circular economy and resource use.
- Egle, L., Z. Pérez Arribas, H. G. M. Saveyn, and E. Pierri. 2025. *Developing EU-Wide End-of-Waste Criteria for Textile Waste*. JRC Technical Proposals. Brussels: Joint Research Centre (JRC), European Commission. Draft version for consultation.
- Egle, Lukas, Zahara Pérez Arribas, Hans Saveyn, Erika Pierri, and Vincenzo Gente. 2025. *Developing EU-Wide End-of-Waste Criteria for Textile Waste*. Brussels: Joint Research Centre (JRC), European Commission. Third stakeholder workshop - presentation.
- Ellen MacArthur Foundation. 2024. *Pushing the Boundaries of EPR Policy for Textiles*. Isle of Wight: Ellen MacArthur Foundation.
- EuroCommerce. 2025. *European Textiles' Global Value Chain*. <https://www.eurocommerce.eu/app/uploads/2025/03/european-textiles-global-value-chain-final-1.pdf> (April 11, 2025).
- European Commission. 2022. *EU Strategy for Sustainable and Circular Textile*. Brussels: European Commission.

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA
A Case Study of Humana Lt's Value Chain for Second-Hand Clothes
May 2025

- European Commission. 2023a. *DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Amending Directive 2008/98/EC on Waste*.
- European Commission. 2023b. *Proposal for a Directive of the European Parliament and of the Council Amending Directive 2008/98/EC on Waste. Including Commission Staff Working Paper and Impact Assessment Report (Part 1-4)*. Brussels: European Commission.
- European Commission. 2025. 'Waste Shipments -'. https://environment.ec.europa.eu/topics/waste-and-recycling/waste-shipments_en (April 10, 2025).
- European Parliament. 2023. *EU Strategy for Sustainable and Circular Textiles - European Parliament Resolution of 1 June 2023 on an EU Strategy for Sustainable and Circular Textiles (2022/2171(INI))*. Brussels: European Parliament.
- Human Bridge. 2024. *Årsberättelse Med Årsredovisning 2023*. Stockholm: Human Bridge. Annual report.
- HUMANA. 'History'. <https://www.humanafundraising.lt/about-us/> (March 4, 2025).
- Humana People to People Baltic. 2024. *Annual Reports 2023*. Vilnius: Humana People to People Baltic (Humana PP). Annual Report.
- Huygens, D., J. Foschi, D. Caro, C. Caldeira, G. Faraca, G. Foster, M. Solis, et al. 2023. *Techno-Scientific Assessment of the Management Options for Used and Waste Textiles in the European Union*. Luxembourg: Joint Research Centre (JRC), European Commission.
- IEA, and MCAK. 2021. *The State of Second-Hand Clothes and Footwear Trade in Kenya*. Nairobi: Institute of Economic Affairs (IEA) and Mitumba Consortium Association of Kenya (MCAK).
- ILO. 2022. *Skills Needs in the Oman Labour Market: An Employer Survey*. Beirut: International Labour Organization (ILO). <https://www.ilo.org/publications/skills-needs-oman-labour-market-employer-survey>.
- KEBS. 2019. *Textiles - Requirements for Inspection and Acceptance of Used Textile Products*. Nairobi: Kenya Bureau of Standards (KEBS). Kenya Standard.
- Lingås, Dina, Saskia Manshoven, Lars Fogh Mortensen, and Freja Paulsen. 2023. *EU Exports of Used Textiles in Europe's Circular Economy*. Copenhagen: European Topic Centre on Circular economy and resource use.
- Miliute-Plepiene, Jurate, and Liv Fjellander. 2024. *Hur Många Kilo Extra Har Du i Garderober?*

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

- NAMA. 2016. *A Circular Economy Solid Waste Management Approach for Urban Areas in Kenya*. Nairobi: Nationally Appropriate Mitigation Action (NAMA), Ministry of Environment and Natural Resources, Kenya.
- Naturvårdsverket. 2025. 'Textilavfall'. <https://www.naturvardsverket.se/amnesomraden/avfall/avfallslag/textilavfall/> (April 11, 2025).
- Nellström, Maja, Matilda Lidfeldt, Amanda Martvall, Gustav Sandin, and Simone Andersson. 2025. *Sustainability Assessment of Textile Reuse and Recycling in and Outside of Europe. Environmental, Economic, and Social Implications*. Stockholm: IVL Swedish Environmental Research Institute. Report.
- Regeringskansliet. 2023. 'Regeringen Driver På Omställningen till En Mer Cirkulär Textilhantering'. *Regeringskansliet*. <https://www.regeringen.se/pressmeddelanden/2023/12/regeringen-driver-pa-omstallningen-till-en-mer-cirkular-textilhantering/> (April 10, 2025).
- Sandberg, Erik, and Rudrajeet Pal. 2024. 'Exploring Supply Chain Capabilities in Textile-to-Textile Recycling – A European Interview Study'. *Cleaner Logistics and Supply Chain* 11: 100152. doi:10.1016/j.clscn.2024.100152.
- Trzepacz, Steffen, Dina Bekkevold Lingås, Lise Asscherickx, Karolien Peeters, Hilde van Duijn, and Marieke Akerboom. 2023. *LCA-Based Assessment of the Management of European Used Textiles*. Brussels: Norion Consult, commissioned by EuRic Textiles.
- UN Comtrade. 2025. 'UN Comtrade'. *UN Comtrade*. <https://comtradeplus.un.org/> (March 3, 2025).
- United Nations. 'United Nations Commodity Trade Statistics Database (UN Comtrade)'. *UNCCD*.
- USAID. 2017. *Overview of the Second-Hand Clothing Market in East Africa. Analysis of Determinants and Implications*. United States Agency International Development. East Africa Trade + Investment Hub.
- Walsh, Saoirse, Ola Bakowska, and Hilde van Duijn. 2023. *Destinations of Dutch Used Textiles. Uses and Risks after Export*. Amsterdam: Circle Economics, commissioned by Rijkswaterstaat agency.
- Watson, David, Kerli Kant Hvass, Harri Moora, Kristiina Martin, Viktorija Nausėdė, Inga Gurauskiene, and Dace Akule. 2020. *Post-Consumer Textile Circularity in the Baltic Countries. Current Status and Recommendations for the Future*. Copenhagen: Nordic Council of Ministers.
- Watson, David, Lord Moora, Kerli Kant Sharp, and Kristiina Martin. 2020. 'Post-Consumer Textile Circularity in the Baltic Countries'. <https://pub.norden.org/temanord2020-526/> (March 10, 2025).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

Watson, David, David Palm, Louise Brix, Maria Amstrup, Frode Syversen, and Rasmus Nielsen. 2016. *Exports of Nordic Used Textiles. Fate, Benefits and Impacts*. Copenhagen: Nordic Co-operation. TemaNord.

Appendix 1: Source and explanation of estimated volumes in Figure 8

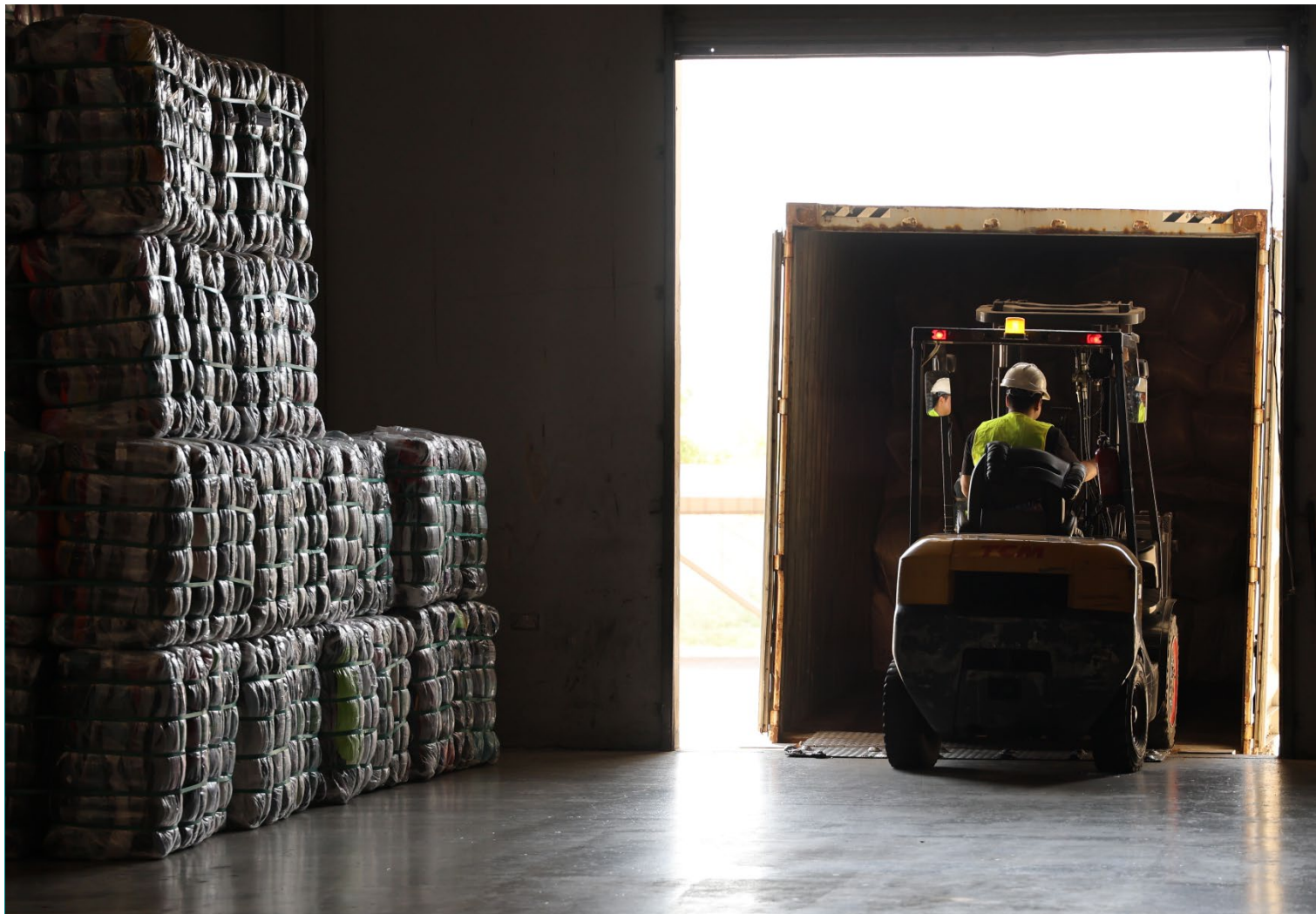
Mass (tons)	Description	Source	Explanation
32,000	Collected used textiles in Sweden 2024	(Avfall Sverige 2023)	Avfall Sverige (2023) reported that 22,000 tons of textiles were collected for reuse in 72% of Sweden's municipalities. When adjusted to represent 100% of Sweden's municipalities, and accounting for the fact that approximately 5% of the collected material is non-textile, the total amount is estimated to be 32,000 tons. However, this dataset may not reflect the complete volume collected, as a substantial portion of used textiles in Sweden is collected directly by charities or social organisations. Additionally, textile collection volumes are expected to increase significantly due to the new mandatory collection requirement that takes effect on January 1. This requirement will not only require the collection of reusable textiles but also include damaged textiles.
6,400	Reuse in Sweden	Miliute-Plepiene and Fjellander. (2024).	Dataset based on that 20 % of the collected textiles in Sweden are reused on the Swedish second-hand clothing market.
13,000	Other, export for reuse		The dataset represents the remaining quantity of used textiles estimated to be exported to countries other than Lithuania (Humana Lt) for further sorting. According to Miliute-Plepiene and Fjellander (2024), 80% of collected textiles are exported, which aligns closely with the calculated 76% (23,000 out of 30,000 tons).

FROM COLLECTION OF USED CLOTHES IN SWEDEN TO REUSE IN KENYA

A Case Study of Humana Lt's Value Chain for Second-Hand Clothes

May 2025

1,600	Other, large part incineration with energy recovery	Human Bridge. (2025). <i>Internal data.</i>	This dataset reflects the volume of non-textiles removed during pre-sorting in Sweden, corresponding to 5%.
11,000	Exports to Lithuania (Humana Lt)	Humana Lt. (2025), <i>Internal data.</i> UN Comtrade. (2025).	Based on internal dataset from Humana Lt and validated in UN Comtrade.
197, 821	Imports from other suppliers to the <i>mitumba</i> market in Kenya	UN Comtrade. (2025).	Based on statistics of imported worn textiles and other textile products (HS 6309) to Kenya from World.

**STOCKHOLM**

Box 21060, 100 31 Stockholm

GOTHENBURG

Box 53021, 400 14 Gothenburg

MALMÖ

Nordenskiöldsgatan 24
211 19 Malmö

KRISTINEBERG

**(Center for Marine Research
and Innovation)**

Kristineberg 566
451 78 Fiskebäckskil

SKELLEFTEÅ

Kanalgatan 59
931 32 Skellefteå

BEIJING, CHINA

Room 612A
InterChina Commercial Building No.33
Dengshikou Dajie
Dongcheng District
Beijing 100006
China

© IVL SWEDISH ENVIRONMENTAL RESEARCH INSTITUTE LTD. | Phone: 010-788 65 00 | www.ivl.se

This report has been reviewed and approved in accordance with IVL's audit and approval management system.