

Trashion:

The stealth export of waste plastic clothes to Kenya



This information presented in this report has been prepared using best practices and due diligence, using information available at the date of publication believed to be reliable. All information is subject to change. All data, unless otherwise specified, is obtained from public or government sources including but not limited to customs data, company websites, annual reports or includes company information provided directly to Changing Markets. If you represent a company that appears in this report that you believe is not correctly represented, supplemental information can be sent to contact@changingmarkets.org. The authors accept no liability whatsoever for any direct or consequential loss arising from the use of this document or its contents.

This report was researched and written by the Changing Markets Foundation with field-work executed by Wildlight and Clean Up Kenya.

www.changingmarkets.org

Authors:

Urska Trunk

George Harding-Rolls

Ximena Banegas

Nusa Urbancic

Mario Rautner

Veena Holkar

Design: Pietro Bruni - toshi.ltd

Published in February 2023



Contents

Executive summary	6	5.2.1. Fees that drive real change	37
Key findings	7	5.2.2. Set performance targets that respect the waste hierarchy	37
1. Introduction: Fashion's waste crisis	11	5.2.3. Support closed-loop recycling, instead of downcycling	37
1.1 A waste-making machine	11	5.2.4. Transparent governance and reporting on the EPR scheme's performance	38
1.2 There is no 'away'	12	5.2.5. One EPR system for textiles won't fit all	38
1.3 Fashion's toxic afterlife	12	5.2.6. Data accuracy	38
2. The waste trade	14	5.3 Other measures to support EPR and limit overproduction that underpins the waste crisis	38
2.1 The Kenyan waste clothing trade	15	5.3.1. Virgin plastic tax	38
3. The investigation	18	5.3.2. Progressive fees	39
3.1 Arrival in port	18	5.3.3. Eco-modulation for non-physical or emotional durability	39
3.2 The markets	20	6. References	40
3.3 Fagia	22		
3.4 The end of the runway for fashion	25		
4. Conclusion	31		
5. Recommendations	35		
5.1 Encourage the use of non-toxic, circular materials and introduce eco-design measures	35		
5.2 Set up an EPR scheme for different types of textiles	37		

List of figures

Figure 1.1: Global fibre production.	13
Figure 2.1: 2020–2019 UN Comtrade Database figures.	16
Figure 2.2: Comtrade data 2021: Imports of used clothing to Kenya from the EU and UK as percentages of the total.	16
Figure 3.1: Map showing Kenya and (insets) Nairobi and Mombasa.	18
Figure 3.2: Comtrade data between March and August 2022, figures are as a percentage of Pakistan’s used clothing exports.	19
Figure 3.3: Satellite map of the Nairobi River as it passes by Gikomba Market.	26
Figure 3.4: An overview of Dandora, showing the proximity of housing, schools and the Nairobi River.	28
Figure 3.5: Labels of clothing found in Dandora dumpsite of brands including M&S, Nike and Yves Saint Laurent.	29

List of tables

Table 1: Comtrade data for 2019 and 2020 looking at EU and UK exports of used textiles (worn clothing and other worn items)	15
Table 2: Comtrade data 2021 looking at imports of used textiles to Kenya from Europe, by country	17

List of Boxes

Box: The investigation	9
Box 1: Key finding	19
Box 2: Key finding	22
Box 3: Links between Kenya’s used clothing trade and brands, charities and recycling companies	24
Box 4: Key finding	30
Box 5: EU EPR: Lessons learned from the French EPR scheme	35





Executive summary

Our report exposes the hidden export of plastic waste to the Global South, fuelled by the growing production of cheap, synthetic clothing made by brands in the Global North. Despite restrictions on plastic waste export around the world, an overwhelming volume of used-clothing shipped to Kenya is waste synthetic clothing, a toxic influx which is creating devastating consequences for the environment and communities. Our estimates suggest that in recent years over 300 million items of damaged or unsellable clothing made of synthetic - or plastic - fibres are exported to Kenya each year where they end up dumped, landfilled or burned, exacerbating the plastic pollution crisis.

As the production of clothing has skyrocketed in the past two decades, an increasing proportion of clothing is made from cheap synthetic fibres. Synthetics account for 69% of all fibre production and have become the backbone of fast fashion. The Global North is using the trade of used-clothing as a pressure-release valve to deal with fast fashion's enormous waste problem.



Our previous research exposed the links between synthetics and fast fashion and has taken us from the oil wells and refineries of polyester production to the brands lack of action on fossil-fuel-derived fibres. Now we finally reach the end of the runway for fossil fashion: The used-clothing trade on its inexorable journey to becoming waste.

Key findings

The report finds that the system of used-clothing trade is currently at breaking point. It finds that export of used clothing is, to a large extent, the export of plastic waste, burdening communities and the environment in the receiving countries.

- Although exporting of plastic waste is restricted under the Basel Convention and to be banned in the EU,¹ our assessments suggest more

than 1 in 3 pieces of used clothing shipped to Kenya contains plastic and is of such a low quality that it immediately becomes waste. In 2021, over 900 million items of used clothing is estimated to have been exported to Kenya. Of these, up to 458 million used clothing items are estimated to be have been waste, and up to 307 million of these are likely to contain plastic-based fibres.^A

- People employed in the trade report that the amount of waste (unsellable used clothing) in bales arriving from abroad has increased significantly in the last few years, reflecting the increase of cheap, disposable fast fashion.
- Traders that we interviewed are caught in a lottery where 20-50% of the used-clothing in bales they buy is unsellable. EU- or UK-based used-cloth-

^A Calculations are based on annual total imports of used clothing to Kenya of 183,505,631kg for 2021 (UN Comtrade, 2021) and the following fieldwork investigation findings: a 40kg average bale weight, an average of 200 items of clothing per bale, an upper estimate of 50% waste per bale. Our calculation for synthetic content is based on market research of over 4,000 products showing an average of 67% of clothing contains synthetics, sometimes in blends with natural fibres or with other synthetic fibres (Synthetics Anonymous, 2021).

ing exporters are packing bales with clothing unsuitable for the destination country, due to being damaged, too small, unfit for the climate or local styles, and sometimes even with clothing that is covered in vomit, stains or otherwise damaged beyond repair.

- Sorting at the source is failing, as it results in exporting companies skimming off the high-quality clothing for resale in Europe, while the rest is sent outside its borders. Despite this fact, the export of used clothing goes through substantial inter-European trade, likely for grading and sorting purposes, before being re-exported to its final destination. The investigation also revealed that some countries, such as Pakistan, act as sorting hubs due to lower labour costs, a fact that muddies the data and may be giving a false picture of clothing reuse and recycling from Europe.
- High volumes of imported lowest grade used clothing, colloquially referred to as *fagia*, were found strewn around markets or dumped in the Nairobi River, being used as fuel, such as for roasting peanuts, causing locals to inhale smoke from the burning synthetic clothing with the risk of damaging health impacts.
- Baltic Textile Trading, owners of Think Twice, were found to have sold tonnes of unsellable used clothing to *fagia* traders, who cut these into pieces which are then supplied as industrial rags and later used as industrial fuels, further contributing to air pollution and emissions.
- We found clothing from several global fashion brands among the *fagia*, dumped on landfills or burnt, including Guess, H&M, M&S, Next, Old Navy, Ralph Lauren and Superdry, among others.
- Many recycling companies are known to be involved in the used-clothing trade, and many of these are members of high-profile sustainability initia-

tives alongside fashion brands. For example, JMP Wilcox is part of Fashion for Good's 2021 Sorting for Circularity Campaign, and East London Textiles, JMP Wilcox, Nathan's Wastesavers, and Savanna Rags are all signatories of WRAP's Textiles 2030 initiative. Many of these initiatives and recycling companies make lofty claims about driving greater circularity, reducing waste or diverting textiles from landfill. These however sound hollow in light of the levels of waste clothing being exported by many of the same companies, which in turn is creating serious consequences for the environment and communities in the Global South.

- A large proportion of used clothing ends up dumped on continuously growing landfills in Kenya and polluting the Nairobi River, polluting the watercourse and eventually entering the ocean. As the lion's share of dumped clothing contains synthetics, the impacts of microplastic leaching and environmental contamination of water and soil are likely to be significant. In this way, waste synthetic clothing represents a less-recognised but substantial element of global plastic pollution.
- Recycling companies are often masking the trade of used clothing as a way to reduce waste and help the Global South by suggesting the clothing is re-worn or recycled. However, globally enough used clothing is sent to Kenya for 17 items of clothing per Kenyan annually, up to 8 of which are too damaged, stained or inappropriate to be used. Not only does the sheer volume constitute a surfeit of clothing on Kenya, but as 20-50% of this is waste clothing, it will end up significantly contributing to waste and plastic pollution.

With this investigation, we reach the end of the line of an enormously labour-intensive and fossil-fuel-reliant supply chain that produces fast fashion from cheap materials and finally disposes of it in the least responsible way possible. Abdication of responsibility for waste is not an accidental outcome of the fast-fashion system;

it is integral to it. It is also clear that it cannot be effectively addressed by tokenistic voluntary schemes or symbolic projects. Clearing up the mess that the fashion industry has created and ensuring the sector is pulled onto a more sustainable track will require comprehensive legislation.

We are now at a critical crossroad. In its Textile Strategy, published in March 2022, the European Commission promised a significant overhaul of the fast fashion business model. Upcoming policies at the EU level create a critical opportunity to ensure that brands and retailers, which are profiting from cheap fast fashion, take responsibility for their fashion waste. Through well-designed Extended Producer Responsibility, producers must be made financially responsible for the management and cost of end-of-life treatments of the products they place on the market, which includes sorting. However, we also must redesign the system, as it will not be possible to recycle our way out of this problem. While the EU must propose design criteria to encourage that products be reusable and recyclable from the start, and mandate recycling and reuse targets for the sector, we must also adopt measures, such as plastic taxes, to deal with cheap synthetics, which have become a major driver of the fast fashion industry. Strong EU legislation on the end-of-life management is also the only way to put an end to the export of waste plastic-based clothing to the Global South, which as our investigation shows, is already at the breaking point and cannot be allowed to deteriorate further. The report includes a set of policy recommendations.

Box. The investigation

The aim of our investigation was to illustrate what happens to used clothing upon export from the EU and the UK and to identify what proportion may be going straight into landfill sites and the wider environment, for example, into rivers and other watercourses, bypassing reuse and recycling/downcycling sectors. Kenya was chosen as an investigation destination because it receives a significant volume of UK and EU used-clothing exports, which seem to contribute to domestic landfill and environmental pollution issues. National customs trade data also allowed us to connect the downstream end of the export supply chain to the upstream actors. Unlike previous investigations, this report contains a level of granularity and specificity as to the actors that have a crucial role in the supply chain. We also dig into the supply chain for used clothing to reveal a level of detail on elements such as design and quality, which can provide insight when creating good policy.

Through this short report we first assess fashion's problem with waste - how it has got to the current state of affairs and what the environmental consequences are. We look at the waste trade itself and analyse customs data to establish the main exporters and importers of used clothing. To illustrate the issue in an up-close manner, the Changing Markets Foundation commissioned Wildlight and Clean Up Kenya to conduct an on-the-ground investigation, inspecting and documenting the trade of used clothing in plastic-wrapped bales (referred to in Swahili as *mitumba*) through Kenya, from the port to the storeroom, to the market traders, *fagia* (waste textiles) workers and on to its final destination in dumpsites, backyard burning and spilling into waterways.

We have also, where possible, identified the names of exporting and importing companies implicated in the trade, and the brands of clothing we discovered (see Box 3). The latter reveals a roster of household names that will be familiar to EU and UK consumers and has been included to demonstrate the ubiquity of donated clothing in the waste trade.

WHAT HAPPENS TO USED CLOTHING



WIPING RAGS STUFFING RAW MATERIALS FOR OTHER INDUSTRIES

DOWNCYCLE

REUSE

SECOND-HAND CLOTHING STORES



CONSUMER



RECYCLING BANKS

VINTAGE SHOPS

CHARITY SHOP

FASHION BRAND TAKE BACK SCHEMES

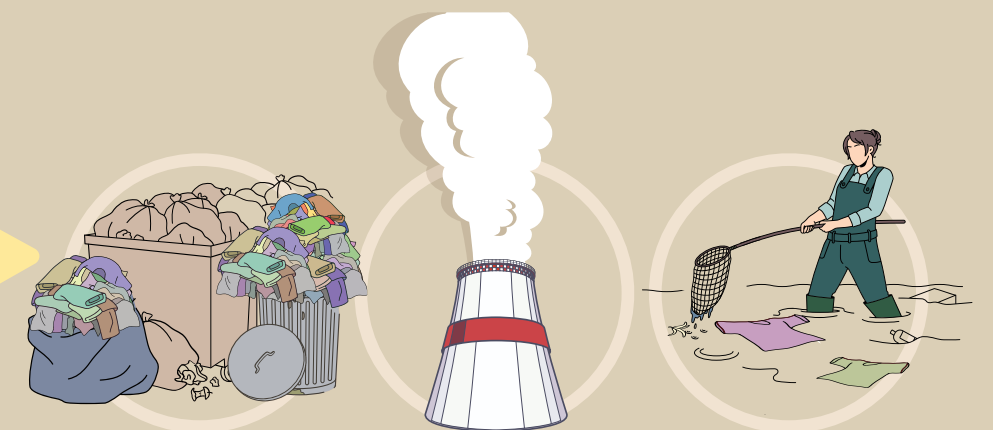
SORTING PROCESS



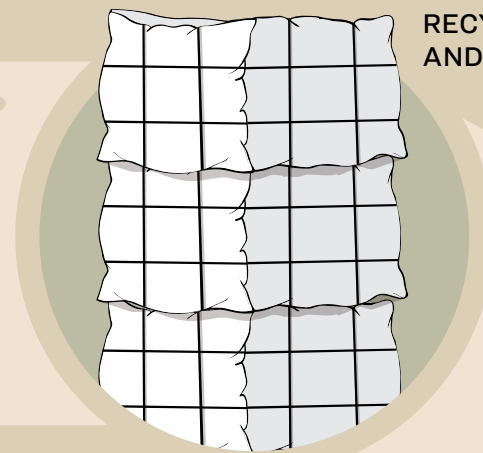
LANDFILL

INCINERATED

DUMPED



RECYCLING COMPANIES AND EXPORTERS



EXPORT



MITUMBA TRADERS



GODOWNS



IMPORTER



KENYA



LANDFILLED



DUMPED



RESOLD CLOTHES



FAGIA SELLERS



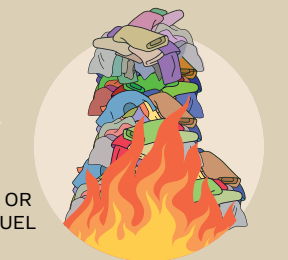
LOW QUALITY CLOTHING



RAGS



FUEL



BURNED OR USED AS FUEL



| Discarded clothes on the banks of the Nairobi River

1. Introduction: Fashion's waste crisis

1.1 A waste-making machine

When discarded, the overwhelming majority of clothing becomes waste. The modern fashion industry's obsession with growth without consideration for the end of life of its products has resulted in systemic overproduction. Fashion brands have also promulgated a narrative that it is acceptable, and even encouraged, to purchase an ever-updating array of new clothing, and their marketing - from partnerships with influencers and the creation of micro-seasons and trends, to so-called 'dark patterns' on e-commerce sites that pressure consumers to checkout² - have created an overconsumption craze. Overproduction and overconsumption in the fashion industry feed each other in a never-ending loop, the product of which is untenable volumes of waste clothing.

Fossil-fuel-based fibres are a key enabler of this business model driving today's overconsumption of fashion. They represent over two-thirds of textiles, a share that is growing, and shows no sign of abating. Between 2000 and 2014 clothing

production doubled and is expected to nearly double again in the next decade.³ The cost of clothing in the EU as a proportion of household expenditure has decreased markedly from 30% in the 1950s to 12% by 2012 and just 5% by 2020^{4,5} and yet we are buying 60% more clothing than 15 years ago.⁶ Studies also suggest that each item of clothing is now kept for half as long,⁷ with the average EU textile consumption per person per year amounting to 15kg in 2020.⁸ Some estimates suggest that consumers treat the lowest-priced garments as nearly disposable, discarding them after just seven or eight wears.⁹ In short, we are producing and buying more clothing than ever, and it is cheaper, worn less and thrown away sooner.

1.2 There is no 'away'

A 2017 report by the Ellen MacArthur Foundation, with modelling by McKinsey, estimates that while 73% of waste clothing is directly landfilled or incinerated, 87% of all clothing material is eventually lost to the system in some way when overstock liquidation and process losses are included; however, the modelling counts 'cascaded recycling', such as for rags, stuffing and insulation, as recycling, even though these materials will also be discarded at the end of life. When considering all these waste streams, the figure for waste from clothing rises to 99%. Estimates for closed-loop recycling - clothing that is turned into new clothing - range from 1% to 0.1%.

So, what happens to waste clothing that's not directly landfilled or incinerated? A declining volume of clothing is suitable for second-hand sale in the country where it is collected, a fact likely to be directly related to the proliferation of cheap clothing. In the same way that high-income countries offload the burden of plastic waste by exporting it abroad, of the approximately 25% of clothes that are 'reused' or resold,

75% of this volume is destined for other countries, causing a waste problem and placing an enormous burden of pollution on the Global South.¹⁰ For example in Ghana 40% of all textiles that are sent to the country's largest second-hand market are waste.¹¹

What is deemed good enough quality is sold by market traders and the remainder becomes waste, either discarded within the market or its surroundings, sold on as scrap, rags or fuel and eventually dumped onsite or at countless dumpsites across the Global South, such as Dandora in Kenya, Kpone in Ghana and even parts of Chile's Atacama Desert.

1.3 Fashion's toxic afterlife

Much of this clothing is synthetic or plastic. While plastic pollution for packaging and beverage containers is what most people associate with the plastic crisis, research by the International Union for the Conservation of Nature found that the greatest proportion of microplastics in the ocean (35%) originates from synthetic textiles.¹² Given that 69% of textiles are synthetic, with the most used fibre being polyester, it is not surprising that the majority of traded second-hand clothing is synthetic.

When they are eventually discarded, these plastic materials do not biodegrade in landfill. Much of this will gradually fragment over hundreds of years, releasing microfibres, leaching toxic chemicals into the soil and groundwater and releasing methane into the atmosphere. Where formal incineration exists, emissions from incinerators include many heavy metals, acid gases, particulates and dioxins, which are all extremely harmful to human health and contribute to various cancers, birth

FAST FASHION AND THE RISE OF POLYESTER

THE MAJORITY OF FIBRE PRODUCTION IS SYNTHETIC AND COMES FROM FOSSIL FUELS

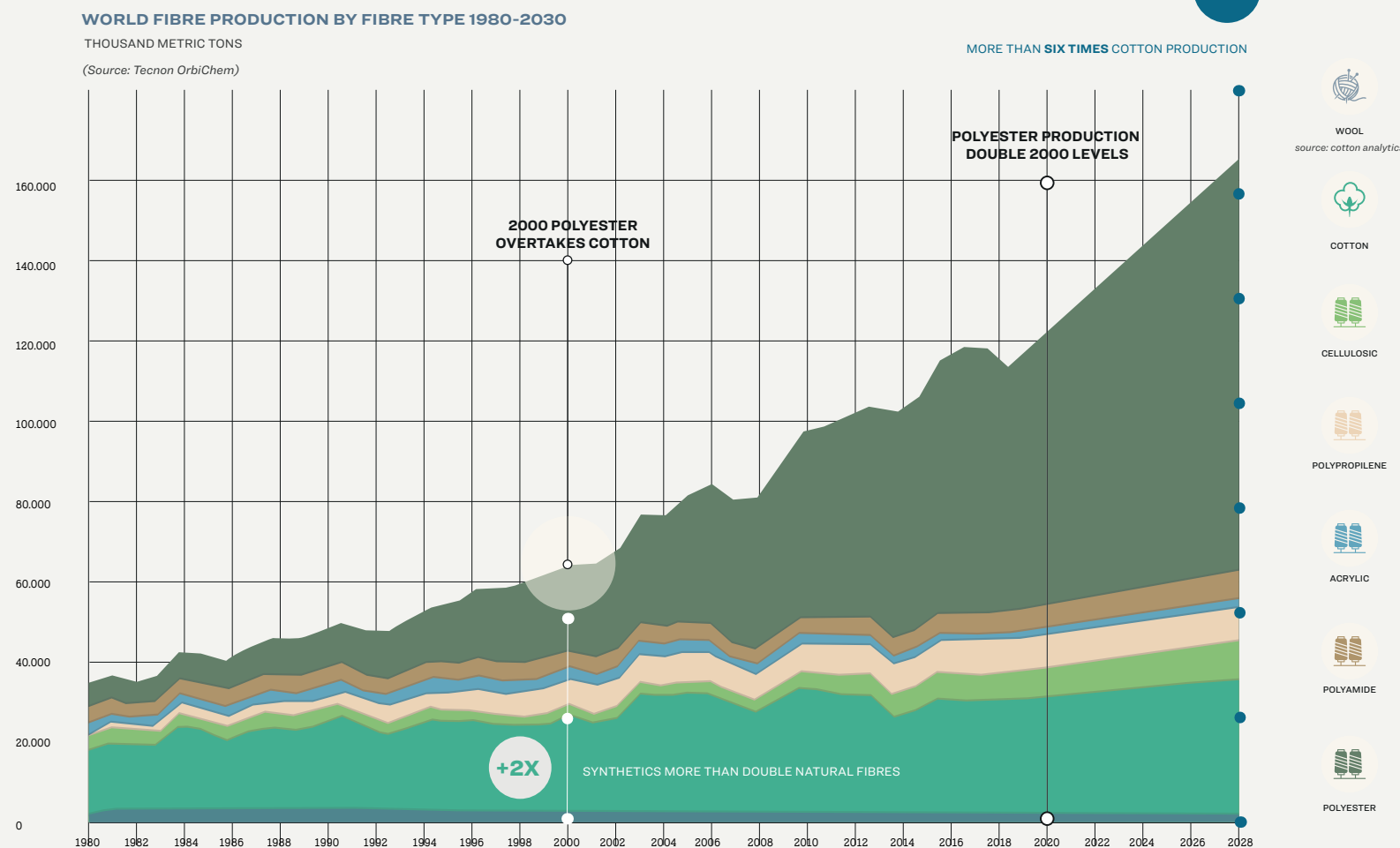


Figure 1.1: Global fibre production.

Source: Tecnon Orbichem

defects, lung and respiratory diseases, stroke and cardiovascular diseases - to name but a few.¹³ Even at the high-tech end, where incinerators claim greater controls on emissions and pollution, a large body of evidence demonstrates significant short- and long-term negative effects for workers, communities and ecosystems and the unavoidable problem of disposing of large quantities of toxic fly ash, sludge and effluent.¹⁴ At the low-tech end of the spectrum, unwanted garments in low- and middle-income countries without a formalised waste management infrastructure, or where existing systems are overburdened, are either landfilled, dumped or destroyed through open burning and backyard fires, which is highly toxic and contributes to air pollution as well as a myriad of health problems.¹⁵

Waste clothing made from 100% plastic fibres

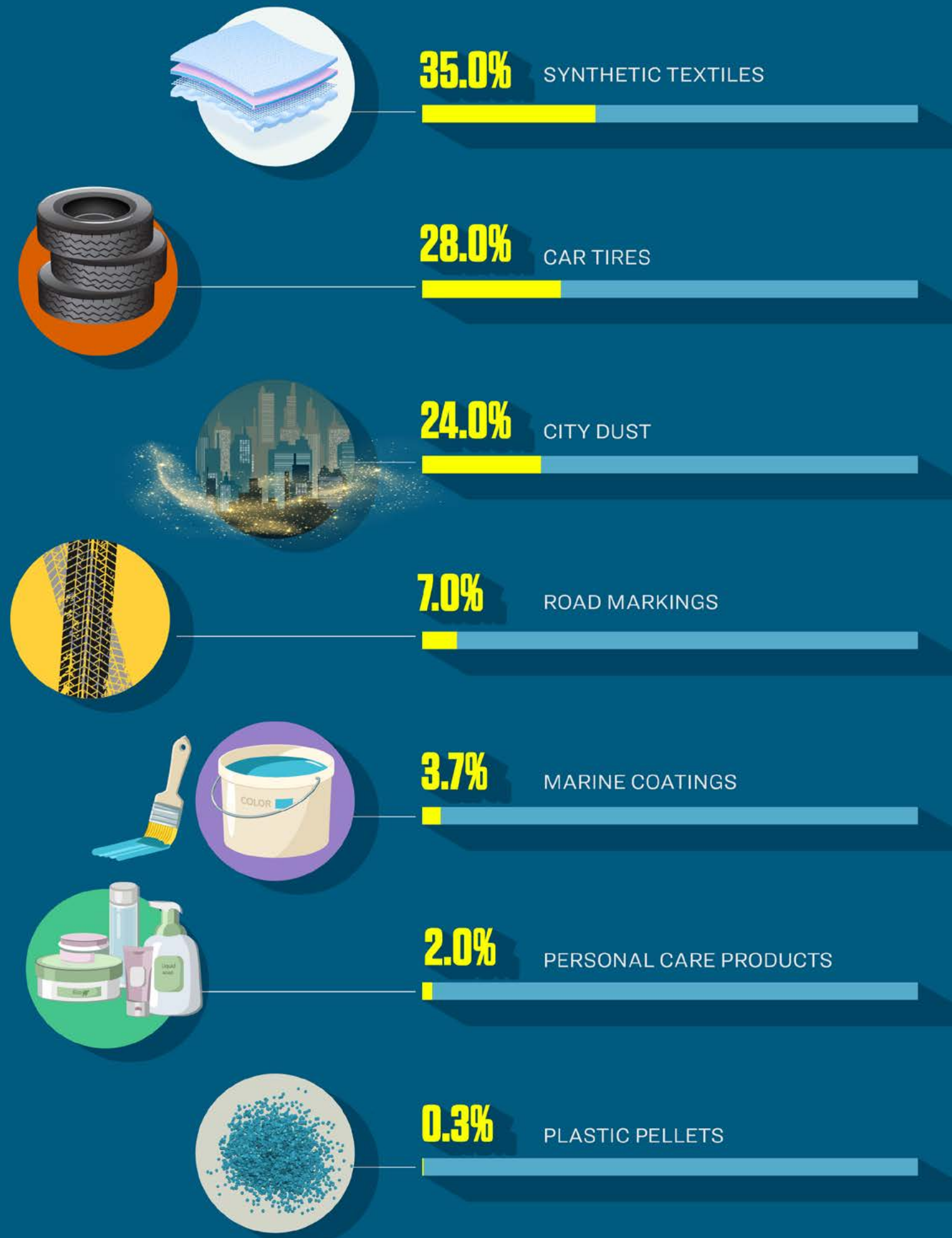


A label on a scrap of clothing at Kongowea market

The EU has introduced rules on the shipments of plastic waste, implementing the decision taken under the Basel convention.¹⁶ Although shipping plastic waste is restricted under the convention and illegal in the EU, no such measures exist for plastic fibres. Our research estimates that 1 in 3 clothes exported contains plastic and is damaged, stained or of such a low quality that it immediately becomes waste. After disposal, these microplastic fibres continue to leach into the environment and finally end up in the human food chain. Microplastic fibres are also released into the air by burning clothes, a common practice in the countries of import (see Figure 1.2).

WHERE THE OCEAN'S MICROPLASTICS COME FROM

Estimated share of total microplastics in the world's oceans, by source



2. The waste trade

For highly industrialised nations, exporting waste such as plastic packaging, used clothing and e-waste has been a key way to mitigate the deleterious effects of managing large volumes of potentially toxic waste from piling up in high-income countries.¹⁷ Yet, while high-income countries have developed infrastructure for managing waste, such as sorting and recycling facilities - and even sanitary landfills and incinerators - low-income countries often have no such facilities, in part due to a lack of investment by the very companies selling their unrecyclable products to consumers in these countries. The waste trade today has become a constant flood of waste from the Global North to the Global South in a situation that has been deemed 'toxic colonialism' or 'waste colonialism'.¹⁸ Estimates by the OR Foundation assessed that as many as 15 million garments arrive in the main second-hand market in Ghana per week.^{19,20}




The global trade in used clothing can be seen as a pressure-release valve of the Global North's addiction to fast fashion. Although the trade of second-hand clothes in many parts of Africa has existed since before the 1980s, liberalisation policies that reduced tariffs in the 1990s allowed

cheap imported clothes to compete with locally produced garments in countries such as Kenya.²¹ As high-income countries consume more clothing - estimated by the Ellen MacArthur Foundation to be 60% more between 2000 and 2015 - the amount of textile waste generated per capita has increased.²² Much of this used clothing is donated to charity in exporting countries as a method of disposal and is an important revenue stream for some charities to finance their work; however, the waste trade is in fact a lucrative industry and second-hand clothing can be sold for as much as €400-1,000 per tonne.²³

The UN Comtrade Database data for 2019 and 2020 looking at EU and UK exports of used textiles (worn clothing and other worn items) reveals the top exporters of used clothing around the world. The total tonnage of waste clothing exported by the EU and UK amounted to 5,019,451 tonnes.

Table 1: Comtrade data for 2019 and 2020 looking at EU and UK exports of used textiles (worn clothing and other worn items)

	Exporter	Weight (tonnes)	% of total weight
	Germany	1,026,525.6	24.20%
	United Kingdom	700,335.5	16.51%
	Poland	377,869.0	8.91%
	Netherlands	334,191.7	7.88%
	Italy	333,775.6	7.87%
	Belgium	326,804.5	7.71%
	France	290,343.1	6.85%

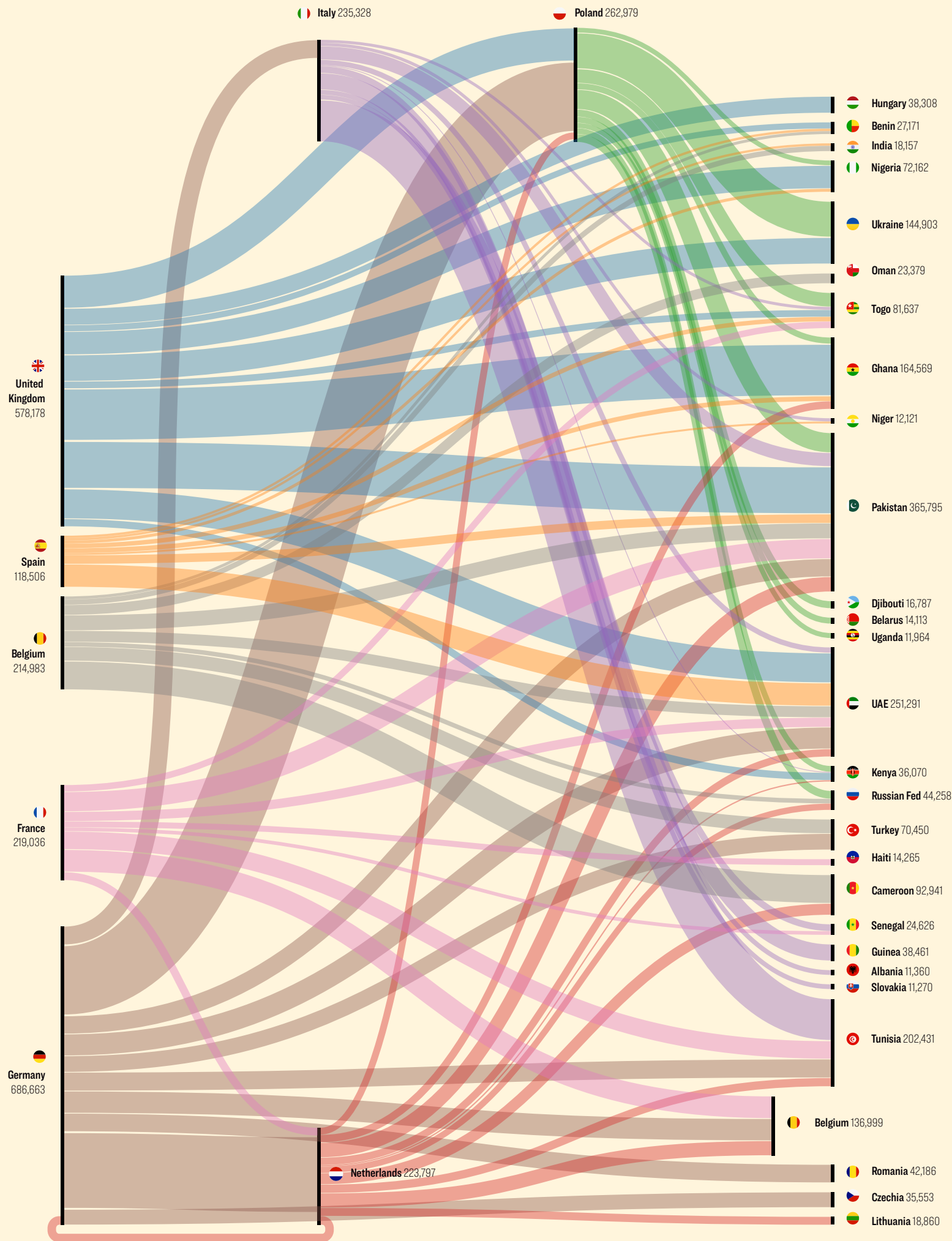
	Spain	157,682.8	3.72%
	Lithuania	95,711.9	2.26%
	Hungary	95,070.9	2.24%

An analysis of Comtrade exporter data (Table 1) suggests a high level of inter-European trade of used textiles, likely for grading and sorting purposes, before re-exporting them to their final destination. For example, Germany exported 179,000 tons to the Netherlands in 2019 and 2020, an unusually high volume for a high-income European country. This figure is the equivalent of 53% of the Netherlands’s total export of used clothing, suggesting this country could be a stop-over point in the clothing trade. Destination countries for these exporters varied, with the key destinations being Ghana, India, Kenya, Nigeria and Pakistan. Well over a quarter of all EU and UK used clothing (27.9%) is exported to African countries. Having assessed the risks and advantages of on-the-ground investigation in these countries - including ease of access, risk to investigators, quality of trade data and links to exporting countries and companies - we opted for Kenya.

2.1 The Kenyan waste clothing trade

According to 2021 customs data, Germany (41.27%), Poland (24.68%), UK (23.05%), Hungary (3.28%), Italy (2.53%), Belgium (1.82%), Lithuania (1.42%), Estonia (0.67%), France (0.53%) and Ireland (0.42%) account for 95% of all second-hand clothing exports from the EU to Kenya. The total value of these exports was USD\$26,018,014 (€24,838,617).

2019 - 2020 UN COMTRADE DATABASE FIGURES



Values are in tonnes. Top 10 export destinations for each European country are included only, those importing fewer than 10,000 tonnes have been excluded.

Figure 2.1: 2020-2019 UN Comtrade Database figures.

COMTRADE DATA 2021: IMPORTS OF USED CLOTHING TO KENYA FROM THE EU AND UK AS PERCENTAGES OF THE TOTAL EU AND UK IMPORTS

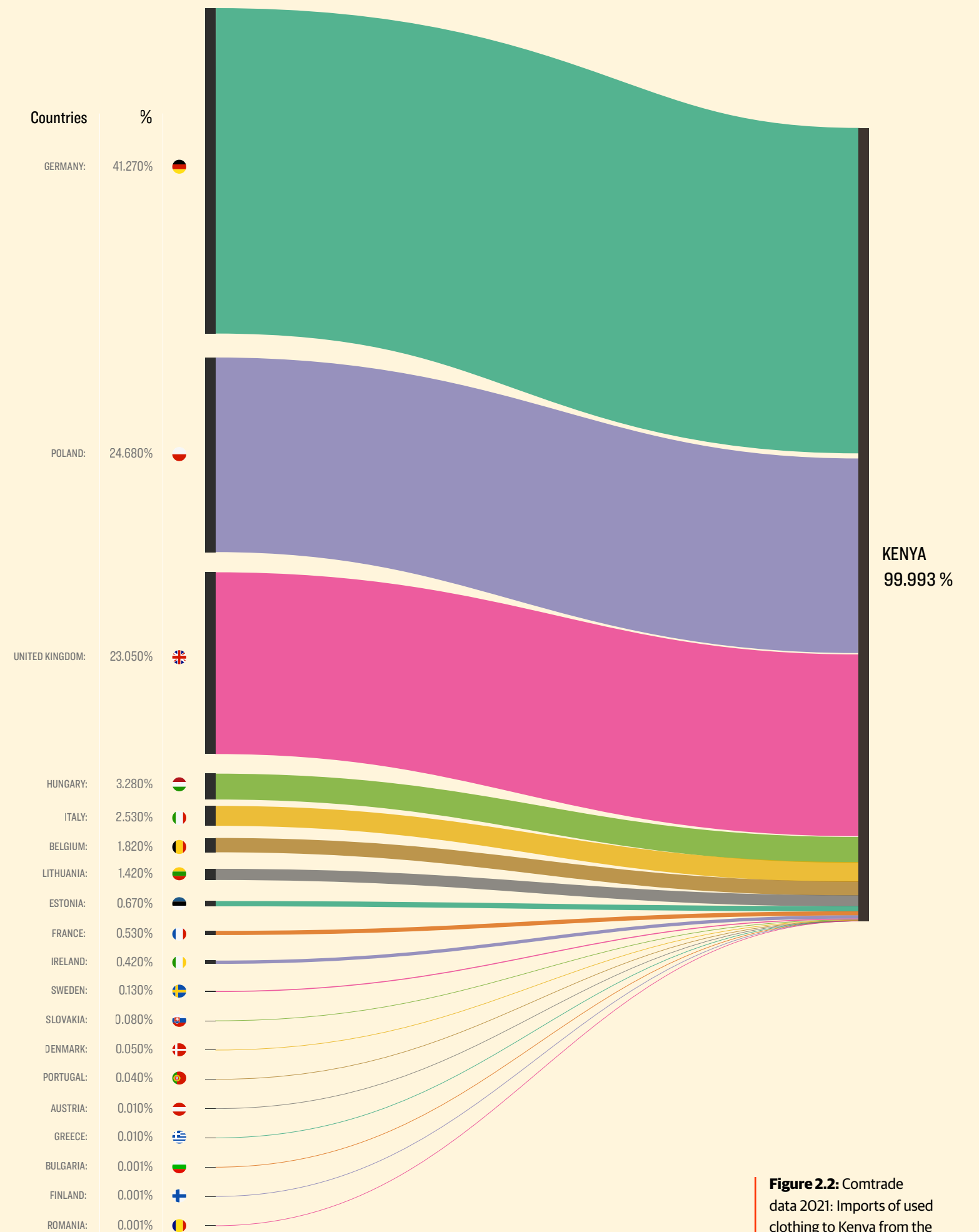


Figure 2.2: Comtrade data 2021: Imports of used clothing to Kenya from the EU and UK as percentages of the total.

Kenya has a thriving second-hand clothing industry involving many key actors along the value chain, including importers, wholesalers, retailers, sub-retailers (hawkers or street sellers) and downcyclers (such as mop makers and furniture upholstery makers). Supporting actors include clearing and forwarding agents, transporters, *godowns* (large warehouses, often located within an industrial park or specific warehouse zone of a city) and warehouse owners, middlemen, porters and value-addition people such as tailors, cobblers and finishers (such as laundry and ironing).

Several sources indicate that the second-hand clothing business employs up to 2 million people in Kenya.^{24,25,26} The 2021 customs data of European imports, shows that there are around 500+ importers, many of whom are marginal. Of the 500+ companies, just five companies controlled around 50% of the USD\$26 million European imports in 2021, including Baltic Textile Trading, Humana and SOEX, which are featured in this report.

However, even Kenya’s extensive second-hand clothing industry cannot deal with the volume of clothing imported to the country. Nearly over 900 million items were sent to Kenya from around the globe in 2021. Out of these, nearly 150 million items came from the EU and the UK (112,350,000 and 36,640,890, respectively). While recycling companies are often masking the trade of used clothing as a way to reduce waste and help the Global South, this sheer volume constitutes a massive dump of clothing on Kenya. Given that the lion’s share of it is waste, it will end up markedly contributing to the environmental disaster in the country.

Table 2: Comtrade data 2021 looking at imports of used textiles to Kenya from Europe, by country

	Country	Total exports (kg)	Value (USD)	Number of bales*	Number of items	Of which waste	Of which plastic based
	EU	22,470,000.00	\$13,406,509.00	561,750.00	112,350,000.00	56,175,000.00	37,637,250.00
	Germany	10,125,357.00	\$8,737,385.00	253,133.93	50,626,785.00	25,313,392.50	16,959,972.98
	Poland	7,417,167.00	\$7,024,720.00	185,429.18	37,085,835.00	18,542,917.50	12,423,754.73
	UK	7,328,178.00	\$4,751,348.00	183,204.45	36,640,890.00	18,320,445.00	12,274,698.15
	Netherlands	1,086,975.00	\$939,407.00	27,174.38	5,434,875.00	2,717,437.50	1,820,683.13
	Italy	735,878.00	\$712,508.00	18,396.95	3,679,390.00	1,839,695.00	1,232,595.65
	Lithuania	689,485.00	\$563,235.00	17,237.13	3,447,425.00	1,723,712.50	1,154,887.38
	Belgium	613,308.00	\$385,102.00	15,332.70	3,066,540.00	1,533,270.00	1,027,290.90
	Estonia	202,530.00	\$173,246.00	5,063.25	1,012,650.00	506,325.00	339,237.75
	France	156,324.00	\$88,717.00	3,908.10	781,620.00	390,810.00	261,842.70
	Latvia	124,335.00	\$363,349.00	3,108.38	621,675.00	310,837.50	208,261.13
	Ireland	107,552.00	\$102,567.00	2,688.80	537,760.00	268,880.00	180,149.60
	Switzerland	54,757.00	\$44,162.00	1,368.93	273,785.00	136,892.50	91,717.98
	Spain	44,592.00	\$43,971.00	1,114.80	222,960.00	111,480.00	74,691.60
	Sweden	36,262.00	\$15,552.00	906.55	181,310.00	90,655.00	60,738.85
	Slovakia	24,172.00	\$21,663.00	604.30	120,860.00	60,430.00	40,488.10
	Austria	17,663.00	\$16,996.00	441.58	88,315.00	44,157.50	29,585.53
	Croatia	14,950.00	\$8,074.00	373.75	74,750.00	37,375.00	25,041.25

*Calculations are estimated based on the following figures and fieldwork findings: a 40kg average bale weight, an average of 200 items of clothing per bale, an upper estimate of 50% waste per bale. Our calculation for synthetic content is based on market research of over 4,000 products showing an average of 67% of clothing contains synthetics

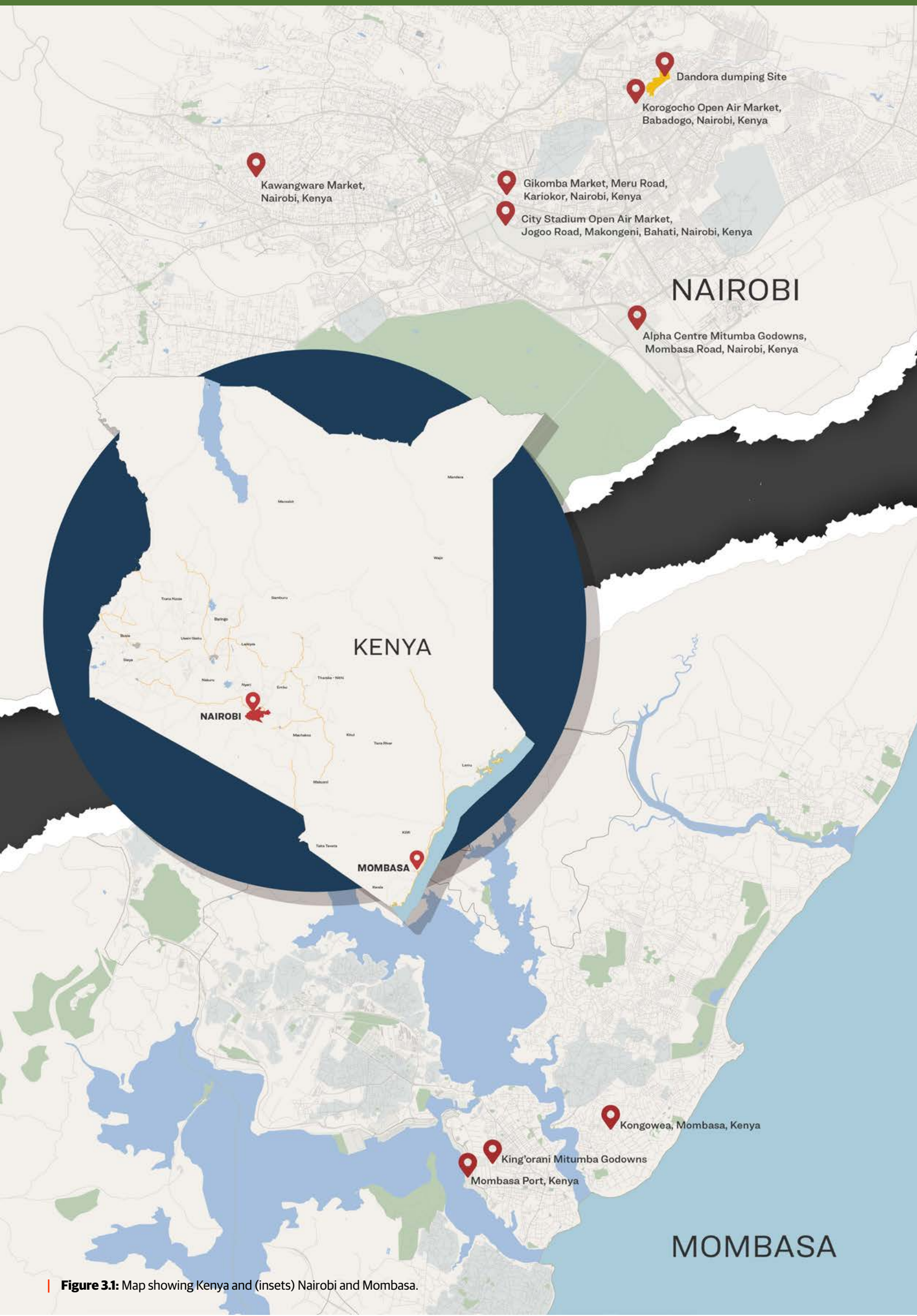


Figure 3.1: Map showing Kenya and (insets) Nairobi and Mombasa.

3. The investigation

Following a period of scoping and desk-based research, fieldwork was commissioned by the Changing Markets Foundation and executed by Wildlight with assistance from Clean Up Kenya. The work took place in September 2022, in key in-country locations around Nairobi and Mombasa. Using a combination of audio or filmed interviews, visual documentation and gathering of testimonial evidence, the objective of the fieldwork was to establish how a proportion of used clothing traded into Kenya is processed as second-hand clothing and what happens to it within the waste stream.

3.1 Arrival in port

The majority of used clothing imported to Kenya comes through Mombasa freight port on Kenya's coast where it arrives by shipping container. Mombasa itself has many markets for used clothing; however, our team revealed that a significant

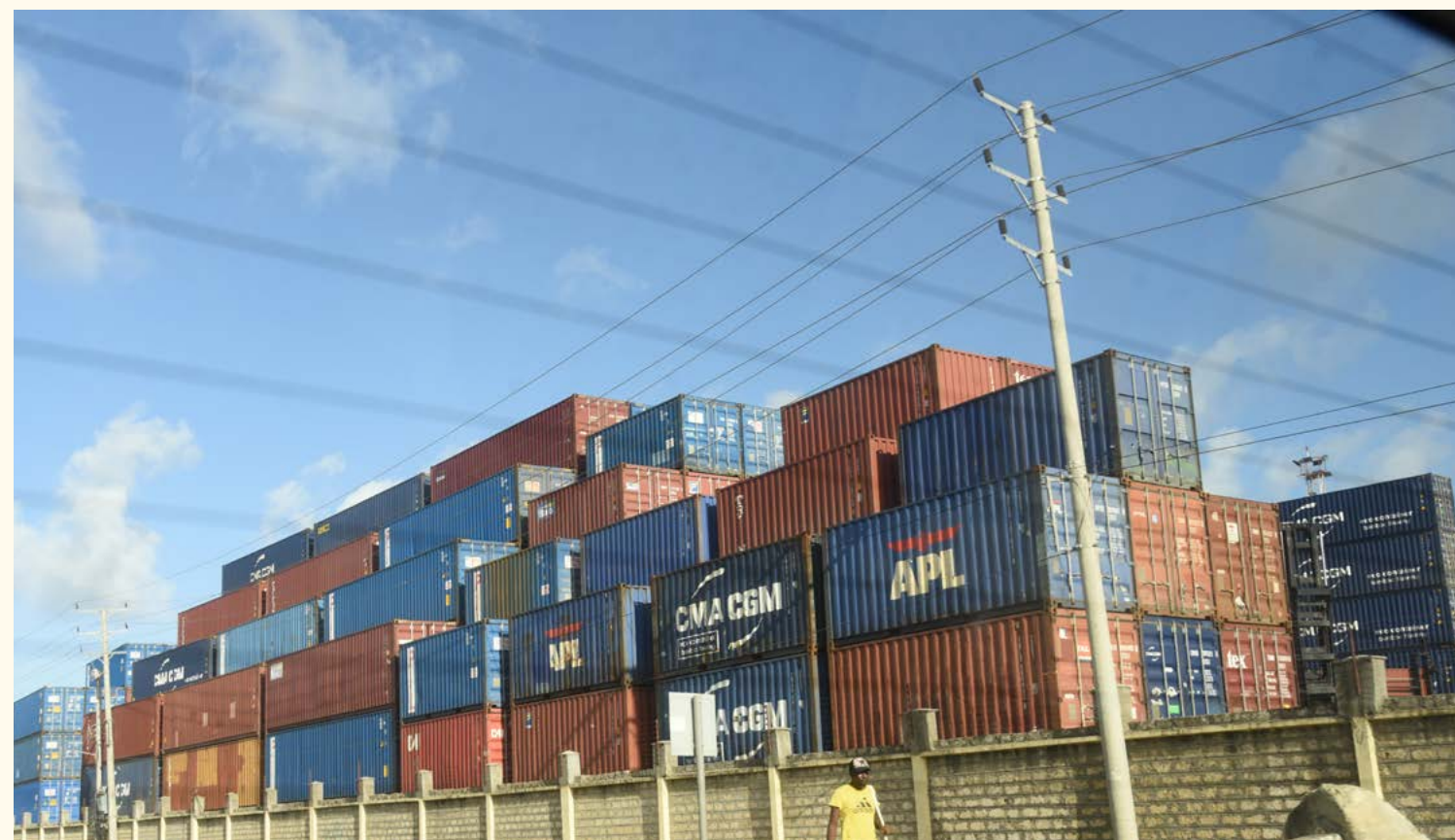
number of the containers are sent directly onto Nairobi, which is where many of the UK and EU brokers are based. The main UK exporter seen at Kongowea market was Savor Textiles, and the team were told that bales from Cookstown, SOEX and Wilcox (companies pre-identified as of interest due to their supply chain links) are generally taken direct to Nairobi after clearing, rather than being sold locally. The

godowns visited by the team in Mombasa in King'orani Godowns contained clothing from many countries including Australia, Canada and the US. One trader told us that Canadian mitumba was preferred due to it being pre-sorted into clothing types such as men's lightweight trousers, allowing Kenyan traders to select the stock relevant to them.

Box 1. Key finding

From our investigation, it emerged that Pakistan, one of the biggest importers of EU and UK used clothing, is an important transit hub for used clothing, p due to lower labour costs for sorting, where it is then possibly re-baled, re-branded and export- ed to Kenya. The team were told by various brokers that bales originally from the UK were re-exported through Pakistan by Gold Star, Kasuku, Noble Impex, SAFQA and Vertex. By looking at customs data for the period between March and August 2022, we can see that 761.5 tonnes (5.13% of Pakistan's used-clothing exports)

were destined for Kenya. A similar situation is likely for the United Arab Emirates, a major destination for EU/UK used clothing; however, trade data were unavailable at the time of research. European exporters to Pakistan included SOEX, East London Textiles and TEXAID, in turn linked to many brands and part of Fashion for Good's 2021 Sorting for Circularity project.



Shipping containers at Mombasa Freight Port

COMTRADE DATA BETWEEN MARCH AND AUGUST 2022, FIGURES ARE AS A PERCENTAGE OF PAKISTAN'S USED CLOTHING IMPORTS.

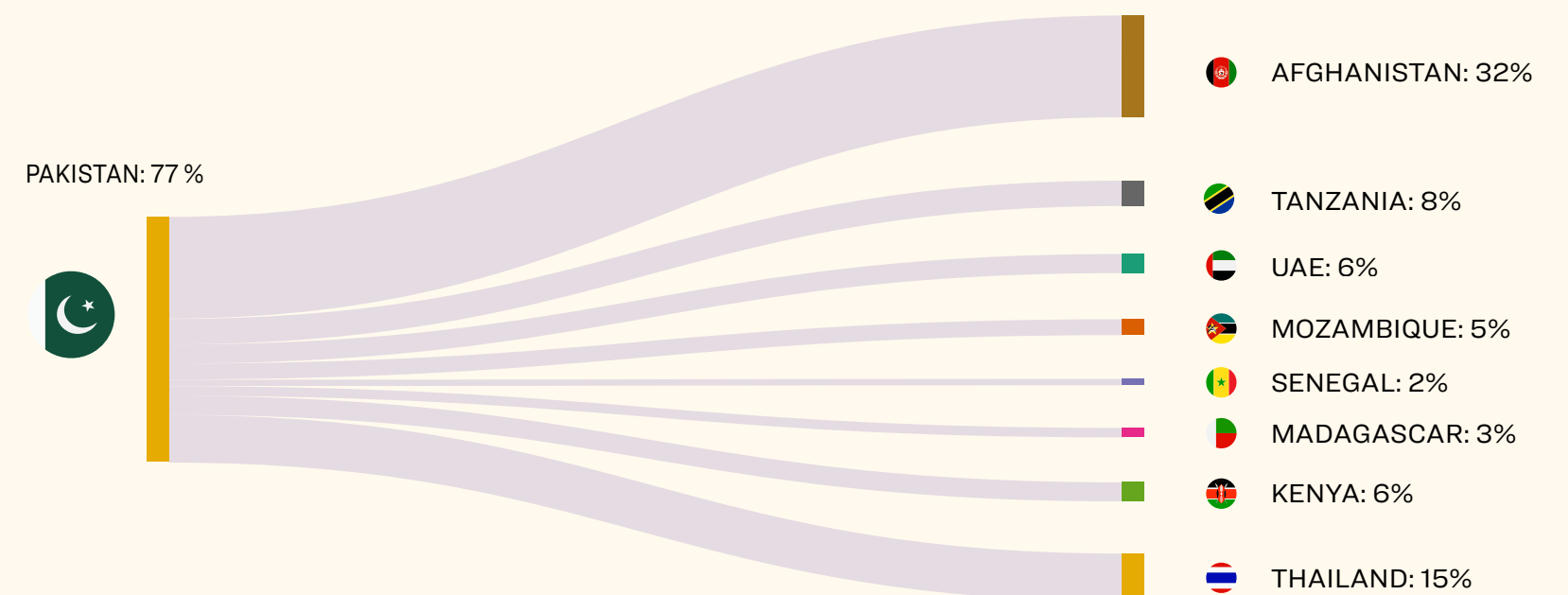


Figure 3.2: Comtrade data between March and August 2022, figures are as a percentage of Pakistan's used clothing exports.

3.2 The markets

The covert team visited a variety of *godowns* - which are where the containers are opened and bales removed. From here, they are transported to warehouses, alternatively called stockrooms, storerooms or lockups, situated adjacent to the larger mitumba markets, where traders buy the bales without being able to assess the contents. It is at these markets that bales are opened for the first time since being imported by the market traders who have purchased them. The contents of the bales are sorted by the market traders into higher-quality items, known as first camera and second camera, which are often sold direct to other buyers for higher-end mitumba markets, such as in some areas of Toi Market. The quality of these bales varies hugely and there is often a rush among buyers to get the best items, even resorting to violence. What is left is now deemed to be *fagia*.



| Clothing labels in a market trader's stall.

A comprehensive interview with a market trader in Gikomba - the largest market in Nairobi - showed items of clothing from her bales that were unsellable due to being damaged, stained, too small, heavy fabrics unsuitable for the climate or styles that Kenyan women would not wear, with identifiable brands, including George at Asda, New Look, Nike and River Island.



| Clothing bales being loaded onto a truck at Gikomba



| Oversized clothing deemed unsellable by the market trader

Another market trader confirmed that the bales are often full of clothing in the wrong sizes for Kenyan women, and how some are stained, spoiled and unsellable. These items are usually given away for nothing. She estimated that around 20% of the bale is unsellable from the outset.

A spot assessment of a Cookstown Textile Recyclers & Tradecrest bale bought by 'Joseph' (whose name has been changed to protect his identity) in Kawangare Market, another Nairobi *mitumba* market, for 10,000 Kenyan Shillings (KES) (€78) found that in one bale, 202 items could be graded as first and second camera, whereas 173 (46%) items were low grade and would be sold cheaply at a daily discount before going to waste. Overall, 121 (32%) items were low-grade branded items, including clothing from Adidas, Atmosphere, Dunnes, F&F, Gap, H&M, M&S, Next, New Look, Nike, Pep & Co., Primark Cares, Red Herring and Shein, and most, if not all, of these items contained high proportions of synthetics. Joseph estimated that he would make 3,000 KES profit on the bale (€23). Another trader in the same market showed the team clothing from a new bale, pulling out garments with vomit on, some covered in animal hair and stains. This tallies with investigations done by the OR Foundation in Kantamanto Market, Ghana, which found clothing covered in hydraulic fluid, period blood and clothes smelling of faeces. The piles in this stall included items from H&M, Lands' End and North Face, with many made from synthetics.

A similar story emerged at Gikomba market, with around 50% of a Wilcox bale opened by one trader being inferior quality - such as thin synthetic items and even old uniforms from Tesco and Lidl. He said he would attempt to sell the lower quality items for 30-50 KES (24-29 euro cents) or would sell them as *fagia* for 10 KES (7 cents) per item, of which the *fagia* trader would make 5 KES (4 cents) profit. A female trader at the same market had a bale from Wilcox containing brands such as Atmosphere, Dorothy Perkins, F&F, Forever 21, George, H&M, M&Co, M&S, New Look, Primark, Tommy Hilfiger and Zara.



Opening a bale of mitumba at Kawangare market |



A McDonald's uniform with the name badge still attached |

Box 2. Key finding

Estimates from those interviewed range from 20-50% of clothing bales being unusable, culturally or climatically unsuitable, size inappropriate, unsellable, soiled or damaged beyond repair. Bales are a lottery. Market traders have no way of knowing what comes in the bales and how much of it is waste. They also have no way to make a claim or a refund once the bale is bought and can risk going into debt this way. There is no option but for unsold clothing to be turned into rags, dumped or burnt.

With waste clothing accounting for 20-50% of clothing imported, on a global level that means that out of around 900 million used items of clothing exported to Kenya, up to 450 million are waste. Up to 300 million of these are likely made from plastic-based fibres.^B In other words, more than 1 in 3 pieces of used-clothing shipped to Kenya is a form of plastic waste in disguise and a substantial element of toxic plastic pollution in the country.

3.3 Fagia

The Swahili term *fagia* refers to the lowest grade of used clothing - consisting of unsellable garments of clothing material, it is the last port of call for usage of clothing. While *fagia* sellers will try and sell items as cut-price clothing, our investigation found that most are destined for rags or burnt as fuel.

Our investigative team visited Jogoo Road, the *fagia* section of Gikomba market. A *fagia* trader, 'Christopher', revealed that much of the clothing would not find a buyer and this he disposed of either by simply throwing it on the ground around his stall or by burning it. In the space of ten minutes the team found items of clothing in the heap with labels for Bershka, Calvin Klein Jeans, Dorothy Perkins, Gap, H&M, Hollister, Sandro, Topshop, Vera Moda and Zara. 'Christopher' explained the unsuitability of most of the clothing for his customers, due to sizing, staining, style etc. He reached down to the ground and tugged at a half-buried piece of fabric and began pulling up a mat of tangled discarded clothes, which he estimated went down

^B Calculations are based on annual total imports of used clothing to Kenya of 183,505,631kg for 2021 (UN Comtrade, 2021) and the following fieldwork investigation findings: a 40kg average bale weight, an average of 200 items of clothing per bale, an upper estimate of 50% waste per bale. Our calculation for synthetic content is based on market research of over 4,000 products showing an average of 67% of clothing contains synthetics, sometimes in blends with natural fibres or with other synthetic fibres (Synthetics Anonymous, 2021).



| Clothing waste on the ground at Gikomba Market, Nairobi.

for at least two feet. Tallying with other anecdotal evidence about waste, another trader in the area said he estimates about 25% - or around 50 out of 200 items per bale - to be waste and sent to the *fagia* traders.

The team were introduced by 'Joseph' to a Jogoo Road *fagia* trader named 'Christine' (name changed). She buys *fagia* from 'Joseph' for as little as 30 KES (€0.24) per kilo, selling it as industrial rags for a maximum of 100 KES (€0.79). Typically she would



Textile waste pulled from the ground at Jogoo Road

Labels of *fagia* clothes at Jogoo Road



A pile of *fagia* at Jogoo Road

process 2-2.5 tonnes of *fagia* a month. This is shredded with a knife before selling it on, either to brokers who then sell in bulk on to industry customers for use as fuel for their boilers or for rags when soaked with engine oil (including allegedly for Kenya Power & Lighting Company) or to traders in another sector who use it to pack used tyre interiors, which then become the wheels of wheelbarrows. This account was corroborated by another Jogoo Road rag trader. Brands of *fagia* found in 'Christine's' store were Fruit of the Loom, George at Asda, Guess, H&M, Next, Old Navy, Superdry and Tezenis.

Among the clothes in her bales the team observed items from Baltic Textile Trading's Think Twice stores; the subsidiary of the Humana Second-Hand Fundraising projects, a Lithuanian not-for-profit organisation, part of the global Humana People to People Network. Baltic Textile Trading and Humana combined represented 32.5% of used clothing imports to Kenya in 2021 from the EU.²⁷ During earlier research, the local team had been told by Think Twice staff that all the unsold stock from their shops was returned to their *godowns* and that the organisation had been unwilling to state what happened to it after that. It is clear from this visit that many tonnes of their unsold stock is ending up here to be shredded into rags and ultimately burnt or landfilled.

A similar story was found in the *fagia* section of Kongowea Market in Mombasa. A *fagia* trader showed the team how he divided his clothing - whatever was cotton or absorbent synthetics was put on a pile at the back of the stall and would be sold for industrial rags to factories. Whatever was at the front, almost entirely synthetic fabric clothing, he would try and sell at 10 KES (€0.10) per item, and whatever did not sell he would sell to the nearby peanut roasters at 30 KES (€0.24) per kilo to use as fuel - in other words it is not just offcuts of clothing that are being burnt as fuel here, but entire items of clothing, including synthetics. Labels filmed included Banana Republic, New Look, Ralph Lauren and Yessica.



A fagia trader shredding clothing at Jogoo Road



Labels of clothes at a fagia trader on Jogoo Road

Box 3. Links between Kenya's used clothing trade and brands, charities and recycling companies

Recycling companies importing clothing into Kenya are also part of high-profile sustainability initiatives alongside fashion brands. For example, JMP Wilcox is part of Fashion For Good's 2021 Sorting for Circularity Campaign, an 18 month project which claimed to be "driving the industry towards greater circularity" and listed several major fashion brands including Adidas, Zalando, Inditex and the H&M Group.²⁸ The project concluded in September 2022.²⁹

East London Textiles, JMP Wilcox, Nathans Wastesavers, and Savanna Rags are all signatories of WRAP's Textiles 2030 initiative. Textile Recycling International, of which a subsidiary is Cookstown Textile Recyclers, is also a signatory, as well as A-Tex (formerly SOEX UK).³⁰ All these companies were found to be involved in the used textile trade through our investigation: from analysis of Kenyan import customs data between January and December 2021; from labelled bales seen on sites during the trip; and with links confirmed by traders who had dealt with them recently. East London Textiles also lists charities Sue Ryder, Cancer Research, and British Heart Foundation as official partners.³¹

Some recycling companies go beyond these initiatives and make claims of their own. Textile Recycling International (TRI) is the holding company for three of the UK textile recycler companies with export links to Kenya: JMP Wilcox, Nathan's Wastesavers, and Cookstown Textile Recyclers. They claim "an industry-leading 70% reuse rate",³² and that "TRI sustainably reduces waste generation by promoting reuse over recycling and disposal" and that "diverting clothing and shoes away from landfill protects land and air quality degradation."³³ Nathan's Wastesavers claims to help customers divert textiles from landfill and specifically state that textiles which

do not meet the standard are recycled in the UK.³⁴ Their charity partners include Bernardos, British Red Cross and Marie Curie.³⁵

JMP Wilcox goes further to claim that only 0.2% of the textiles they process goes to landfill,³⁶ yet throughout our investigation we found Wilcox bales with poor quality or damaged clothing destined to be waste. Given the implication of these companies in our investigation and the levels of waste witnessed on the ground, it is impossible for TRI, Cookstown or Wilcox to be able to give any assurances around landfill diversion, while their assurances on reuse seem to suggest flawed accounting.

The high-level ambitions and lofty words of these initiatives should be viewed in light of the levels of waste clothing being exported by many of the same companies, which in turn is creating serious consequences for the environment and communities in the Global South – a far cry from the circularity these initiatives espouse.

3.4 The end of the runway for fashion

Once used clothing has either had a final use as rags or stuffing, there's nowhere else for it to go but the landfill or backyard burning. At Konogowea Market, the team witnessed volumes of *fagia* being shredded and burnt beneath a large metal wok to dry-roast peanuts. A local peanut roaster mentioned issues with smoke inhalation from the fumes, which was being stoked with scraps of synthetic clothing, including identifiably from M&S. The label on one M&S scrap even stated 'Recycle with Oxfam'.

A far bigger problem, according to locals, was overflowing dumpsites and landfills. Back in Gikomba, the team explored down by the Nairobi River, which flows along one side of the



A peanut roaster using clothing scraps for fuel



Labels of brands such as M&S and George at Asda ready to be burnt

market. They noted that the ground around the riverbank became noticeably spongy, seeming to be composed primarily of compressed clothing waste going down several metres to the river level. The banks were covered with whole and shredded clothing, interspersed with plastic ties used for the bales, all of which falls into the watercourse and obstructs the current, but also flows downstream. A man interviewed nearby explained how the market was previously further away but had expanded towards the riverbank over time. Elsewhere on the site waste clothing was being burnt and traders were boiling water to wash jeans for resale.

At Kawangware Muslim dumpsite, the team found hills of plastic and used clothing, flooding up to the doorstep of the local church. An adjacent steep hillside, which at a first glance seemed to be composed of the local red earth, on closer inspection was revealed to have waste clothing woven through it below ground level - it was the site of an earlier informal dumpsite that had been bulldozed; however, the clothing remains firmly embedded within the soil.

A similarly sobering story was witnessed at Dandora, Kenya's - and possibly the whole of Africa's - largest dumpsite. Dandora occupies over 30 acres, with an esti-

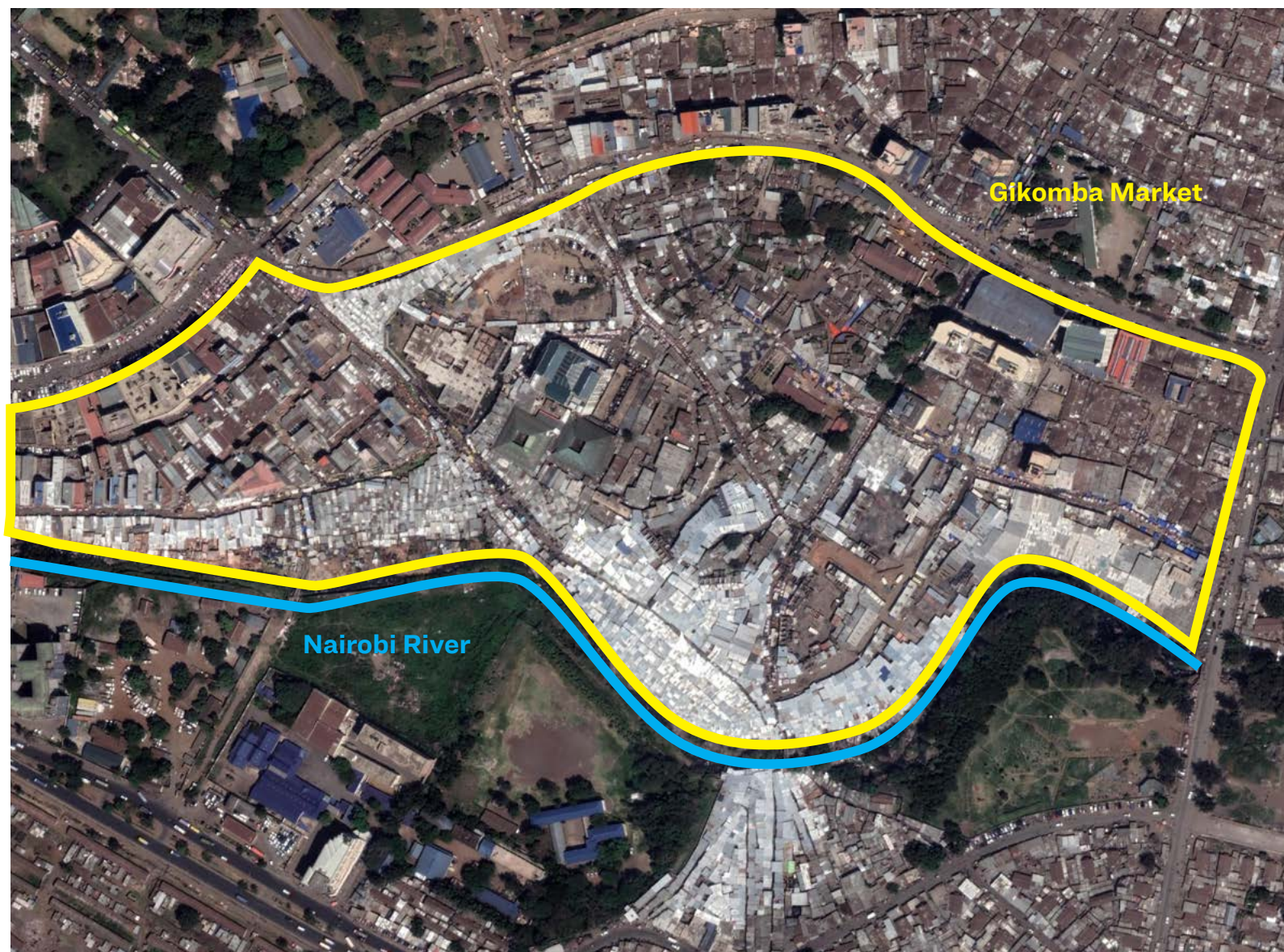


Figure 3.3: Satellite map of the Nairobi River as it passes by Gikomba Market.

The Nairobi River strewn with waste textiles as it passes by Gikomba Market



The banks of the Nairobi River consisting of textile waste



Waste garments within the flow of the river

mated 4,000 tonnes of waste from Nairobi city being piled into it daily.³⁷ It is still fully operational despite having been declared full in 2001.³⁸ It was reported by Clean Up Kenya that even though the management of the dumpsite falls under the Nairobi county government, the county cannot decommission the dumpsite because of the huge cost involved without the financial backing from the national government, which has not shown any interest in supporting this in recent years. The site is run by cartels and the team was given a fixed time window of two hours and had to pay to have three escorts from one of these groups to take them around.



Waste threatens to overwhelm a shack at Kawangware Muslim dumpsite

The site is enclosed by housing and a junior and senior school are directly adjacent. There is a constant pall of smoke over the area, some coming from fires lit on the surface of the mountains of rubbish, some from waste combusting deep inside. A constant procession of trucks arrives to pile yet more waste on the site every minute of the day, throughout the night and all week, as the dump is open 24/7.

The team filmed clothing waste lying on the ground and running layers deep through the sides of the giant hills of waste that lined the truck access road. Brands of all types were found, including M&S, Nike and high-end Yves Saint Laurent. The team also found that the clothing that remained identifiable was principally synthetic.



Figure 3.4: An overview of Dandora, showing the proximity of housing, schools and the Nairobi River.

Groups of waste pickers of all ages (including young children) were seen working through the waste, picking out plastic bottles, glass, scrap metal and other salvageable items for resale. These waste pickers were even working in the middle of the operations area where heavy excavator-type machinery moves waste from lorries up onto the hillsides, so that they can be the first to pick out the items of value as soon as the excavator drops each load from its bucket. Locals reported breathing issues such as asthma, and the river here was still and stagnant, principally choked with plastic, which had effectively dammed it at one end, however there was also

Textile waste embedded into the soil surrounding Kawangware dumpsite

clothing visible woven down through the riverbanks. Raw sewage was running into the water from the housing settlement; potentially the clothing waste might have clogged up the sewage channel and caused it to overflow.



Trucks arriving at Dandora



Burning waste clothing on Dandora dumpsite



Figure 3.5: Labels of clothing found in Dandora dumpsite of brands including M&S, Nike and Yves Saint Laurent.

Box 4. Key finding

A large proportion of used clothing ends up dumped on continuously growing official and informal landfills in Kenya and polluting the Nairobi River, spreading further downstream. The team were tasked with assessing the material composition of waste clothing that could be identified, either through labels or physical assessment, with a significant amount found to be synthetics. As such, the impacts of microplastic leaching, environmental contamination of water and soil and health issues for local communities are likely to be substantial. Some of the lowest quality clothing is burnt as a fuel to roast food, causing locals to inhale smoke from the burning of plastic, inevitably causing a health hazard. Testimonies given during our investigation from *fagia* workers and dumpsite waste pickers attest to breathing problems and asthma caused by burning waste. Some landfills are managed by criminal networks, with the government overburdened by growing imported waste at the dumpsite, and responsibility falling between national and local authorities.



A waste picker stands in the landfill at Dandora



4. Conclusion

4.1 A scourge of plastic fashion

With this investigation, we reached the end of the line for fossil fashion. When we throw away clothing, this is what ‘away’ actually means: Burnt into the atmosphere with ashes in the ground, swept into waterways and deep oceans and compacted into man-made mountains of toxic plastic waste. A large proportion of clothing donated to charity by well-meaning consumers ends up this way. Unless the fashion industry is fundamentally changed, what we have seen in Kenya and around the world will be just the beginning. Clothing production is projected to double again in the next decade, with 73% made from synthetics by 2030, and far exceeding population growth.

Our investigation on the ground in Kenya not only revealed the overwhelming effects of fast fashion at the very end of its life cycle, but exposed a hidden but substantial element of global plastic pollution - export of waste synthetic clothing. With an estimated 1 in 3 pieces of used-clothing shipped to Kenya containing plastic that will continue polluting the environment for centuries, the trade of used textiles is in fact a thin disguise for export of plastic waste.



The Nairobi River runs through waste clothing at Gikomba market

Our research put us in contact with those living and breathing used clothing, giving us vital insights into what needs to change and how it can be done equitably.

What we have presented here is a granular, up-close look at how the trade of used textiles operates. Throughout the investigation, those interviewed were universally of the view that the amount of waste (unsellable used clothing) in bales arriving from abroad has increased significantly in the last 5 years. These items are variously described as dirty, stained, torn or otherwise damaged, unsuitable fabrics for the climate, culturally inappropriate styles, unfashionable and unsuitably sized. Moreover, a large proportion is waste containing plastic-based materials, and is contributing to a mounting environmental crisis in the country.

It is clear from our investigation that sorting used clothing before it is exported should become a legal obligation to remove unsellable waste clothing, in particu-

lar synthetic clothing, which saddles import countries with toxic environmental pollution. Textile recyclers and the brands in partnership with them cannot offer or rely on any assurances that they are diverting from landfill or zero waste; the picture on the ground and the implication of recycling companies in the supply chain render these claims indefensible.

The team on the ground also noted the high proportion of synthetic textiles present at all stages of the trading process. Notably, the 20–50% of items sorted as the lowest grade or unsellable in each unbaling witnessed by the team, were principally cheap, synthetic clothes. It was reported that some of the *fagia* traders ended up with almost entirely synthetic materials as far as the team could ascertain. As these are the clothes that are then used for fuel, burnt or dumped in rivers and dumpsites, this is highly concerning. This is ground zero for plastic fashion, and the nexus of the toxic effects of burning plastics on human health, their persistence in the natural environment and their ability to enter watercourses and the ocean and break down into microplastics. This is where the consequences of fossil fashion come home to roost; the Global North's fast-fashion addiction exported away to communities now drowning under the sheer volume of waste clothing and living daily with its toxic consequences.

4.2 Making the trade of used clothing fit for purpose

It is tempting to conclude, when confronted with the scale of the waste problem in countries such as Kenya, that the entire used-clothes waste trade must end; however, this fails to give credit to the efficiency and creativity with which traders use *mitumba* and the value they place in second-hand clothing; they will clean, repair, repurpose, resize and recycle clothing to give it a second life and extract as much value from it as possible - something that many high-income countries



An excavator at Dandora

could learn from. The solution is not to shut down the export of used clothing but to reform it so that exported clothing can be given an extended life, rather than sending clothing of such bad quality that it immediately becomes waste for another country to deal with. It is important that this problem is addressed holistically, not just as an afterthought to deal with the end of life in a system that is dramatically overproducing. We need a system overhaul with eco-design criteria, plastic taxes and Extended Producer Responsibility (EPR) fees, as well as obligations such as living wages for workers across the fashion industry's supply chain (including those dealing with its end of life).

To do this we must address the sheer volumes of cheap clothing - particularly poor-quality synthetic items - entering the system. It is categorically unacceptable that countries such as Kenya should bear the clean-up cost of fashion's overproduction. Across fashion's value chain, low-income workers face serious health risks and poor conditions, such as from toxic chemicals in wet processing. Here too at the end of life, those burdened with health and environmental risks are those not profiting from the business. Invariably it is the small market traders of *mitumba* as well as *fagia* who lose out. Much needs to change, and our investigation has given clearer indicators as to where to start.

- **Sorting for quality** must improve with the export destination in mind. Some traders and the Mitumba Association are pushing for sorting to be done in Kenya; however, we believe this must happen at the source - before the clothes are exported - as it is unfeasible that destination countries will send waste back to the countries of origin. The real goal of this is for destination countries to get higher-quality used clothing that has value, while the waste clothing is recycled in countries of origin (which are currently developing recycling capacity) or processed in a less environmentally harmful way. At present, the best quality items are creamed off and sold at profit in the EU

and UK, whereas clothing that has no market in these countries is exported, even though 20-50% is deemed unsellable on arrival and will end up as waste. Traders are at the whim of importers and have no ability to appeal if most of the bale is waste. Such waste should stay, and be more effectively managed, in the EU/UK, as once the waste is exported, there's no going back.

- **Sorting to prevent plastic pollution;** in line with restrictions on export of plastic waste packaging under the Basel Convention, sorting should weed out plastic-based clothing, to ensure it does not create plastic waste and microplastic pollution and related health impacts in destination country. Sorting for suitability must also be a priority. Good quality clothing that is unsuitable for the destination country - such as thick puffers in hot climates and short skirts in conservative countries - is also not currently sorted out, and therefore ends up as waste.
- **EPR** with eco-design requirements (see below). It is important that fees for items that get exported to third countries get passed on to market traders, *fagia* traders and waste pickers in the destination countries. Funding made available from EPR for textiles should be invested in better sorting in the country of origin as well as in improving repair, reuse and recycling capacity. In addition, a proportion should be made available for those working on the ground in the Global South's second-hand clothing trade. Our full recommendations for EPR for textiles can be found in section 5.
- **Eco-design criteria** are critical. If more waste clothing remained in exporting countries for management due to better sorting, this would still result in large volumes going to landfills or incineration, without better eco-design of clothing. For example, while fibre-to-fibre recycling is rapidly scaling up for cellulosic fibres such as cotton, viscose and wool,³⁹ recycling for synthetics such as polyester is extremely limited. Complex blended materials also hamper recycling efforts and should be disincentivised. Better eco-design

would mean clothing is made to last longer, is more likely to be reused and recycled and would lead to a reduction in waste shipped abroad. Given that most emerging facilities for fibre-to-fibre recycling are in high-income countries, it is therefore even more important that this recyclable textile waste is sorted at source so that it remains in these countries where it has a chance at circularity.



Textile waste at the Nairobi River

- **Emergency waste mitigation** in destination countries should be addressed in the short term. While the goal should be curtailing waste export, overflowing landfills such as Dandora are a near-term peril to local communities and should be phased down, with properly managed new sites opened as a stop-gap. EPR funds should be used to remediate any damage caused to people's livelihoods and health. This could include corrective actions around clothing landfills - also with consideration for a just transition of workers and waste pickers in clothing disposals.
- **Export transparency** must be improved to avoid 'laundering' through another re-exporting country, such as our investigation found in Pakistan. This laundering hides the identity of the country of export which was the original source of the waste and makes it harder to track and address the situation.

4.3 Who needs to be involved?

Our investigation clearly shows that Global North must act to stop sending textile waste to the Global South. However, the role these countries play in a circular economy for used clothing should not be unilaterally decided by exporting countries. We recommend that the affected communities in importing countries are thoroughly consulted and their opinions are taken into consideration.

Furthermore, it is important to remediate the damage already done. A starting point would be a close examination of health impacts, soil, water and air contamination and degradation linked to high volumes of synthetic clothing disposal in environments where communities live - for example in the river and soil adjacent to Gikomba Market in Nairobi and Dandora dumpsite, both of which are densely populated areas.



5. Recommendations

5.1 Encourage the use of non-toxic, circular materials and introduce eco-design measures

This will prevent material mixing and blending and eliminate substances of concern, all of which hinder circularity. Ensure that any legacy toxic chemicals are eliminated to prevent recycling them into new products. Chemicals should be regulated in groups (rather than individual chemicals) to avoid regrettable substitution of one toxic chemical with another. These measures are essential to influence product design and reduce the amount of waste.

Box 5. EU EPR: Lessons learned from the French EPR scheme

The European Commission is considering an EPR scheme as a regulatory measure to promote sustainable textiles and the treatment of textile waste in accordance with the waste hierarchy. This is a great opportunity for the EU to enforce the polluter pays principle and make producers responsible for the management and cost of end-of-life treatment of the products they place on the market. Our recent survey

found that there is an overwhelming support for EPR, also from global fashion brands, with 81% (31 out of 55 brands that completed the survey) in favour of it.⁴⁰ As the French EPR scheme for textiles is the only operating EPR scheme for textiles in the EU – while the Swedish and Dutch systems are under development – it is key to look at the early pitfalls and any lessons learned.

France first introduced a nationwide mandatory EPR scheme for textile products in 2008. The EPR was last updated in November 2022 and entered into force in January 2023.⁴¹ The new provisions raise the bar on collection, recycling and reuse rates. The public authorities set a new collection target of 60% for 2028, accompanied by a trajectory to achieve it. The new EPR also sets a reuse target of 120,000 tons of reused textile by 2024 with at least 8% of it being reused within 1,500km of the collection point and 15% by 2028. A recycling target of 70%, excluding reuse, was set by 2024 and of 80% by 2027. For the recycling of items made from at least 90% of synthetic fibre composition, the recycling target is set at 50% by 2025 and at 90% by 2028. In the absence of commercial-scale recycling technologies, it will require a big boost in investments and recycling infrastructure to achieve these targets.

Incentives for sustainable textile production were set through eco-modulated bonuses, rather than fees. This includes €500 per tonne for incorporated recycled materials from non-textile waste collected by the Producer Responsibility Organisation (PRO) or affiliated organisations, excluding food-grade plastic resin such as polyethylene terephthalate (PET) bottles, and a bonus of €0.70 per sustainable product for the first 100,000 products and €0.07 from then on. Alarmingly, the EPR rewards certification, despite the fact that many certifications in the textile sector have been found to be weak or to facilitate greenwashing and have not led to any progress in improving production practices. A bonus of €0.3 is set for the first 100,000 items

containing a set of eight environmental certifications^c and €0.03 from then on. As our report, *Licence to greenwash* has shown, there is wide variation of quality in certification schemes, and such inflation of labels is unlikely to improve sustainability performance of the sector.⁴²

Overall, the new eco-modulation bonuses increase the EPR fees per product from €0.01 to €0.03, according to calculations from PRO Refashion.⁴³ This makes the modulation incentives very limited in their effect, as the bonuses are too small to drive change regarding the products that companies place on the market. Moreover, the scheme sets no penalties for using unsustainable practices or textiles, without which fast-fashion brands can carry on business as usual without repercussions.

The French EPR scheme also sets no bonus-malus system related to the number of products placed on the market, which has annually, grown more than GDP or population growth. Measures for increasing the sustainability and circularity of textiles will only be effective together with measures to limit overproduction and taking action on the use of synthetic fibres – which underpins fashion's soaring rate of textile production and waste problem – by introducing a virgin plastic tax.

If the EU is to be the leader in establishing a market for sustainable and circular textiles, it is crucial that the EU EPR scheme goes beyond the French EPR, addresses its pitfalls and sets more ambitious targets, eco-modulation criteria and fees that will drive change. Accordingly, the EU EPR should be set in line with our recommendations (see sections 5.2 and 5.3), alongside minimum eco-design requirements, as well as a ban on the use of substances of very high concern in textile products.

^c The certifications included are Bluesign, Demeter, Ecocert Textile, Ecolabel, Fairtrade, GOTS et Bioré and Oeko-tex Made in Green.

5.2 Set up an EPR scheme for different types of textiles

This should be done based on our recommendations for EPR, our 2022 policy briefing *A new look for the fashion industry*⁴⁴ and Eunomia's study *Driving a circular economy for textiles through EPR*.⁴⁵ This includes:

5.2.1 Fees that drive real change

EPR schemes for textiles must be more than pricing exercises where producers pay for the cost of waste management. The 'polluter pays' principle must be respected, but EPR schemes that simply allow brands to 'pay to pollute' for a small fee run the risk of propping up the status quo; the fees should be sufficiently high to cover the full costs of collection and to meet targets for reuse and recycling. The EU already has legislation in place for separate collection of textile waste by 2025. EPR schemes should support this by making sufficient collection points available so that collection truly serves the whole population and not just people living in cities.

The fees should also be designed in a way to drive change in product design. Regulators can incentivise the uptake of particular products and practices by modulating fees on certain environmental criteria, such as durability and recyclability. In this way, companies that sell non-recyclable products (currently around a third of everything on EU the market)⁴⁶ will pay higher fees. Eco-modulation should be set at the EU level to ensure policy harmonisation.

Lastly, the EPR scheme must ensure that fees paid by producers to the PROs benefit and are distributed among those managing and carrying the burden of end-of-life-management in the Global South. It should be clearly defined which actors in the import countries are eligible to benefit from the revenues generated by the eco-modulated fees.

5.2.2 Set performance targets that respect the waste hierarchy

A circular economy does not mean a recycling economy and EPR schemes should respect the waste hierarchy and always prioritise waste prevention and reuse over recycling. This can be achieved through integrating minimum targets on prevention and reuse set at the EU level. Waste prevention could also be supported with minimum criteria for durability and repair. The reuse sector must be protected and retain access to used textiles. Recycling targets should be set as a proportion of material that is not reused to comply with the waste hierarchy; however, when clothes are sent for reuse to third countries, it is essential that they are properly sorted to ensure that any low-quality textiles (essentially waste) is retained in the EU and, if possible, recycled or properly disposed of. Sorting should also address the suitability of garments sent to other countries, as discussed earlier.

5.2.3 Support closed-loop recycling, instead of downcycling

It is vital that EPR schemes have the correct incentives to encourage recycling of clothes back into clothes and not false circularity, for example by using polyester from recycled plastic bottles. Targets for EPR schemes set at the EU level will be essential to drive improvements of used and waste textile management in member states. Eunomia's study recommends specific targets for collection, preparation for reuse and recycling, which should be periodically reviewed to ensure that they are sufficiently ambitious. Currently, open-loop recycling (such as the recycling of clothing into rags, insulation material and fuel) is the principal means through which 'recycling' takes place. This supports a reduction in materials going to disposal and reduces the use of virgin material in these products; however, closed-loop recycling (such as clothing-to-clothing recycling) and associated targets will be required to support a truly circular economy for textiles. As such, targets must evolve in a stepwise manner to steadily increase the proportion going to closed-loop recycling.

These measures can also be supported through eco-design requirements. For example, fibre-to-fibre recycling could be supported by introducing an obligation to include a small percentage of recycled materials from old textiles in new products placed on the market. Eco-modulated fees could also incentivise increased recyclability to ensure that the loop is continuous and to ensure that non-recyclable textiles pay a higher fee.

5.2.4. Transparent governance and reporting on the EPR scheme's performance

Due diligence and appropriate enforcement by the EPR scheme are of crucial importance to provide transparent and accurate information and to mitigate non-compliance. Eunomia recommends that the EPR scheme must be responsible for carrying out regular audits on the data supplied by producers and textile waste management operators to ensure it is accurate and verifiable. Member state governments must also be responsible for commissioning independent, third-party audits of the EPR scheme, producers and waste management operators to ensure all parties are discharging their responsibilities accurately and in accordance with national policies and targets. Eunomia also recommends that governments coordinate and consult with expert advisory groups, such as waste management operators, academics, civil society organisations, policymakers and used-clothing trader associations in importer countries.

5.2.5. One EPR system for textiles won't fit all

Textiles are more than just fashion and apparel. EPR schemes should be set up for other groups of textile products such as carpets and mattresses and for other applications such as furniture. Europe is the second-largest market for carpets and one of the largest producers (an estimated 65% of EU demand for carpets is

fulfilled by EU-based companies). The carpet EPR toolkit, developed by Eunomia in 2018, outlines suggested criteria for mandatory eco-design measures (or 'essential requirements'), including phasing out harmful substances, setting minimum levels for recycled content, recyclability requirements and product passports.⁴⁷ Other policy options set out include a graded 'Green Carpet Mark' (similar to the EU energy efficiency label) to help inform and empower consumers and Green Public Procurement to rapidly increase the market share for better designed and more recyclable products.

5.2.6. Data accuracy

The EPR scheme should ensure more transparency around the export process, including the intermediary countries and companies in the export process to ensure accuracy of data and improve traceability and accountability. It is critical that we do not repeat the same mistake as with the packaging EPR, where many EU countries counted all exported packaging as 'recycled'.

5.3 Other measures to support EPR and limit overproduction that underpins the waste crisis

5.3.1. Virgin plastic tax

Tackling overproduction of fashion and the mounting export of waste synthetic clothing found in this investigation also means taking action on the use of synthetic fibres that underpins the soaring rates of textile production and its worsening waste crisis. A virgin plastic tax could help shift the market away from over-reliance on fossil-fuel-derived synthetics, account for the negative impacts of such materials

(microfibre release, fossil fuel extraction and non-biodegradability at the end of life) and level the playing field with other fibres. Polyester costs half the price of cotton and the exponential growth of this cheap fibre has been a key enabler of fast fashion since 2000. A virgin plastic tax has already been considered by other NGOs. For more details, we recommend this study by Rethink Plastic.⁴⁸

5.3.2. *Progressive fees*

One way to set EPR fees that would meet the Circular Economy Action Plan's objective of addressing fast fashion would be to investigate options such as progressive fees that are linked to the number of new items placed on the market every year. Brands should be incentivised for focusing on quality rather than number of items placed on the market and for favouring practices such as leasing, repairing and reusing items already on the market. The marginal cost of placing additional new items on the market would increase as more new items are placed on the market.

In addition, a specific threshold for the quantity of new items placed on the market should be set. Above that threshold, any bonuses linked to eco-modulated fees would be cancelled.

5.3.3. *Eco-modulation for non-physical or emotional durability*

The current short clothes durability cannot be explained by physical degradation only as most discarded clothes are still fit for their original purpose. Addressing premature obsolescence therefore means tackling the fast pace at which clothes become out of fashion. One ambitious way could be eco-modulated fees for emotional durability, such that would reward brands which encourage customers to increase clothing's emotional durability, for example by reducing the pace of collection renewal, discouraging overconsumption, or encouraging repair.



6. References

- 1 European Commission (n.d.) *Plastic waste shipments* [ONLINE] Available at: https://environment.ec.europa.eu/topics/waste-and-recycling/waste-shipments/plastic-waste-shipments_en
- 2 Rouge Media (2021) *Shein ranked most manipulative fast fashion brand in our dark patterns study* [ONLINE] Available at: <https://www.rouge-media.com/blog/shein-ranked-most-manipulative-fast-fashion-brand-in-our-dark-patterns-study/>
- 3 Global Fashion Agenda & The Boston Consulting Group (2017) *Pulse of the fashion industry 2017* [ONLINE] Available at: https://static1.squarespace.com/static/5810348d59cc68e529b7d9ba/t/596454f715d5d-b35061ea63e/1499747644232/Pulse-of-the-Fashion-Industry_2017.pdf
- 4 Sajin, N. *Environmental impact of the textile and clothing industry: What consumers need to know*. European Union. *European Parliamentary Research Service (EPRS)* [ONLINE] Available at: http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI%282019%29633143
- 5 Jackson, T. & Shaw, D. (2008) *Mastering fashion marketing*. London: Macmillan Education UK.
- 6 McKinsey & Company (2016) *Style that's sustainable: A new fast-fashion formula* [ONLINE] Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula>
- 7 McKinsey & Company (2016) *Style that's sustainable: A new fast-fashion formula* [ONLINE] Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula>
- 8 European Environment Agency (2022) *Textiles and the environment: the role of design in Europe's circular economy* [ONLINE] Available at: <https://www.eea.europa.eu/publications/textiles-and-the-environment-the>
- 9 McKinsey & Company (2016) *Style that's sustainable: A new fast-fashion formula* [ONLINE] Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula>
- 10 Chandran, M., Tamilkolundu, S. and Murugesan, C. (2020) Conversion of plastic waste to fuel. In T. M. Letcher (ed.), *Plastic waste and recycling*. Cambridge, Massachusetts: Academic Press, 385–399.
- 11 Cernansky, R. (2021) *The ugly side of fashion's take-back programs*, *Vogue Business* [ONLINE] Available at: <https://www.voguebusiness.com/sustainability/the-ugly-side-of-fashions-take-back-programmes>
- 12 IUCN (2017) *Primary microplastics in the oceans* [ONLINE] Available at: <https://portals.iucn.org/library/sites/library/files/documents/2017-002-En.pdf>
- 13 CIEL (2019) *Plastic & health: The hidden costs of a plastic planet* [ONLINE] Available at: <https://www.ciel.org/wp-content/uploads/2019/02/Plastic-and-Health-The-Hidden-Costs-of-a-Plastic-Planet-February-2019.pdf>
- 14 CIEL (2019) *Plastic & health: The hidden costs of a plastic planet* [ONLINE] Available at: <https://www.ciel.org/wp-content/uploads/2019/02/Plastic-and-Health-The-Hidden-Costs-of-a-Plastic-Planet-February-2019.pdf>
- 15 Chandran, M., Tamilkolundu, S. and Murugesan, C. (2020) Conversion of plastic waste to fuel. In T. M. Letcher (ed.), *Plastic waste and recycling*. Cambridge, Massachusetts: Academic Press, 385–399.
- 16 European Commission (n.d.) *Plastic waste shipments* [ONLINE] Available at: https://environment.ec.europa.eu/topics/waste-and-recycling/waste-shipments/plastic-waste-shipments_en
- 17 Blumm, M. (1992) *The fallacies of free market environmentalism* [ONLINE] Available at: https://lawcommons.lclark.edu/faculty_articles/127
- 18 Laura A. Pratt, L. A. (2011) *Decreasing dirty dumping? A reevaluation of toxic waste colonialism and the global management of transboundary hazardous waste* [ONLINE] Available at: <http://scholarship.law.wm.edu/wmelp/vol35/iss2/5>

- 19 The OR Foundation (2020) *Dead White Man's Clothes* [ONLINE] Available at: <https://deadwhitemansclothes.org/intro>
- 20 Kaledzi, I. (2022) *Used clothes choke Ghana's markets, ecosystem* [ONLINE] Available at: <https://www.dw.com/en/used-clothes-choke-both-markets-and-environment-in-ghana/a-60340513>
- 21 Greenpeace (2022) *Poisoned gifts* [ONLINE] Available at: <https://www.greenpeace.org/static/planet4-international-stateless/2022/04/9f-50d3de-greenpeace-germany-poisoned-fast-fashion-briefing-factsheet-april-2022.pdf>
- 22 Ellen MacArthur Foundation (2017) *A new textiles economy: Redesigning fashion's future* [ONLINE] Available at: https://www.ellenmacarthurfoundation.org/assets/downloads/A-New-Textiles-Economy_Full-Report_Up-dated_1-12-17.pdf
- 23 Chandran, M., Tamilkolundu, S. and Murugesan, C. (2020) Conversion of plastic waste to fuel. In T. M. Letcher (ed.), *Plastic waste and recycling*. Cambridge, Massachusetts: Academic Press, 385–399.
- 24 Citizen Digital (2022) *Inside the multi-billion shilling Mitumba business that employs 2M people and traders import 8K containers a year* [ONLINE] Available at: <https://www.citizen.digital/lifestyle/inside-the-multi-billionshilling-mitumba-business-that-employs-2m-people-and-traders-import-8k-containers-a-year-n299616>
- 25 MIRC (2022) *The global production networks of the second-hand clothing industry: Impact on Africa* [ONLINE] Available at: <https://secure-servercdn.net/160.153.138.204/1h4.f8a.myftpupload.com/wp-content/uploads/2022/04/The-Global-Production-Networks-Of-The-Second-Hand-Clothing-Report.pdf>
- 26 Mitumba Institute & Research Centre (2022) *The global production networks of the second-hand clothing industry* [ONLINE] Available at: <https://secureservercdn.net/160.153.138.204/1h4.f8a.myftpupload.com/wp-content/uploads/2022/04/The-Global-Production-Networks-Of-The-Second-Hand-Clothing-Report.pdf>
- 27 Kenya Used Clothing Imports (2021) Comtrade Data
- 28 Fashion for Good (2021) *Sorting For Circularity; Fashion for Good Launches New Project To Drive Textile Recycling* [ONLINE] Available at: https://fashionforgood.com/our_news/sorting-for-circularity-fashion-for-good-launches-new-project-to-drive-textile-recycling/
- 29 Fashion for Good (2022) *Sorting For Circularity Europe: Project findings highlight immense opportunity to accelerate textile recycling* [ONLINE] Available at: https://fashionforgood.com/our_news/sorting-for-circularity-europe-project-findings/
- 30 WRAP (2022) *Who's signed up to transform UK textiles?* [ONLINE] Available at: <https://wrap.org.uk/taking-action/textiles/initiatives/textiles-2030/whos-signed-transform-uk-textiles>
- 31 East London Textiles (2022) *Charity Shop Collections* [ONLINE] Available at: <https://www.east-london-textiles.com/charities/charity-shop-collections/>
- 32 TRI (2022) *Core business* [ONLINE] Available at: <https://t-r-i.co.uk/core-business>
- 33 TRI (2022) *Sustainability* [ONLINE] Available at: <https://t-r-i.co.uk/sustainability/>
- 34 Nathan's Wastesavers (2022) *We Export* [ONLINE] Available at: https://www.nathanswastesavers.co.uk/textile_recycling_we_export.html
- 35 Nathan's Wastesavers (2022) *Charity Partners* [ONLINE] Available at: https://www.nathanswastesavers.co.uk/textile_recycling_charity_partners.html
- 36 JMP Wilcox about us. [ONLINE] Available at: <https://web.archive.org/web/20220629004140/https://jmpwilcox.co.uk/about-us/end-destination/>
- 37 Environment Justice Atlas (n.d.) *Dandora landfill in Nairobi, Kenya* [ONLINE] Available at: <https://ejatlas.org/conflict/dandora-landfill-in-nairobi-kenya>
- 38 *The Guardian* (2012) *Kenyan rubbish dump offers little money for much misery* [ONLINE] Available at: <https://www.theguardian.com/global-development/2012/sep/18/money-misery-nairobi-dandora-dump>
- 39 Just Style (2022) *Renewcell commercial-scale textile-to-textile pulp mill opens* [ONLINE] Available at: <https://www.just-style.com/news/renewcell-commercial-scale-textile-to-textile-pulp-mill-opens/>
- 40 Changing Markets Foundation (2022) *Synthetics anonymous* [ONLINE] Available at: <http://changingmarkets.org/wp-content/uploads/2022/12/Synthetics-Anonymous-2.0-Report-final-web.pdf>
- 41 Legifrance (2022) *Arrêté du 23 novembre 2022 portant cahiers des charges des éco-organismes et des systèmes individuels de la filière à responsabilité élargie du producteur des textiles, chaussures et linge de maison (TLC)* [ONLINE] Available at: <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000046600083>

- 42 Changing Markets Foundation (2022) *Licence to greenwash* [ONLINE] Available at: <http://changingmarkets.org/wp-content/uploads/2022/03/LICENCE-TO-GREENWASH-FULL-REPORT.pdf>
- 43 Re_fashion (2023) *Homepage* [ONLINE] Available at: <https://refashion.fr/>
- 44 Changing Markets Foundation (2022) *A new look for the fashion industry* [ONLINE] Available at: [Final-EPR-briefing_web.pdf](#) (changingmarkets.org)
- 45 Eunomia (2022) *Driving a circular economy for textiles through EPR* [ONLINE] Available at: <https://www.eunomia.co.uk/reports-tools/driving-a-circular-economy-for-textiles-through-epr/>
- 46 European Environment Agency (2022) *Textiles and the environment: The role of design in Europe's circular economy* [ONLINE] Available at: <https://www.eea.europa.eu/publications/textiles-and-the-environment-the/textiles-and-the-environment-the>
- 47 Eunomia (2018) *Policy toolkit for carpet circularity in EU member states* [ONLINE] Available at: <https://www.eunomia.co.uk/reports-tools/policy-toolkit-for-carpet-circularity-in-eu-member-states/>
- 48 Rethink Plastic (2018) *The price is right...or is it? The case for taxing plastic* [ONLINE] Available at: http://zerowasteurope.eu/wp-content/uploads/2018/09/PlasticsTax_FINAL.pdf

