



Thematic Review: Circularity and Morocco's Textile Industry

**LINEAR VS CIRCULAR PRODUCTION MODELS:
THE FUTURE THAT LIES AHEAD FOR THE MOROCCAN
TEXTILE INDUSTRY**

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IN PARTNERSHIP WITH



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This thematic report compiles insights collected between August and November 2022 and aims to provide insights into circularity trends in the textile and apparel sector, how these may be relevant for Morocco, and how the industry can capitalize on its existing advantages to grow the sector toward circular production.

The IFC commissioned New Narrative, a strategic communications consultancy with expertise in producing thought leadership content, to conduct desktop research, analyses, and in-depth interviews with select stakeholders. Insights from this research are summarized in the present publication. The report was written by Robert Carmichael and edited by David Line of New Narrative, and IFC's Eleonore Richardson and Txomin Goitia.

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1. The global textile industry

1.1 MORE FOR LESS

Although the mass production of clothing and other textiles like carpets and car upholstery has brought numerous benefits in recent decades, it has also come with significant costs. At the heart of the problem is the largely linear production model that sees vast volumes of nonrenewable resources extracted for clothes that are used briefly before being discarded as waste—with the bulk ending up in landfills or being incinerated.¹

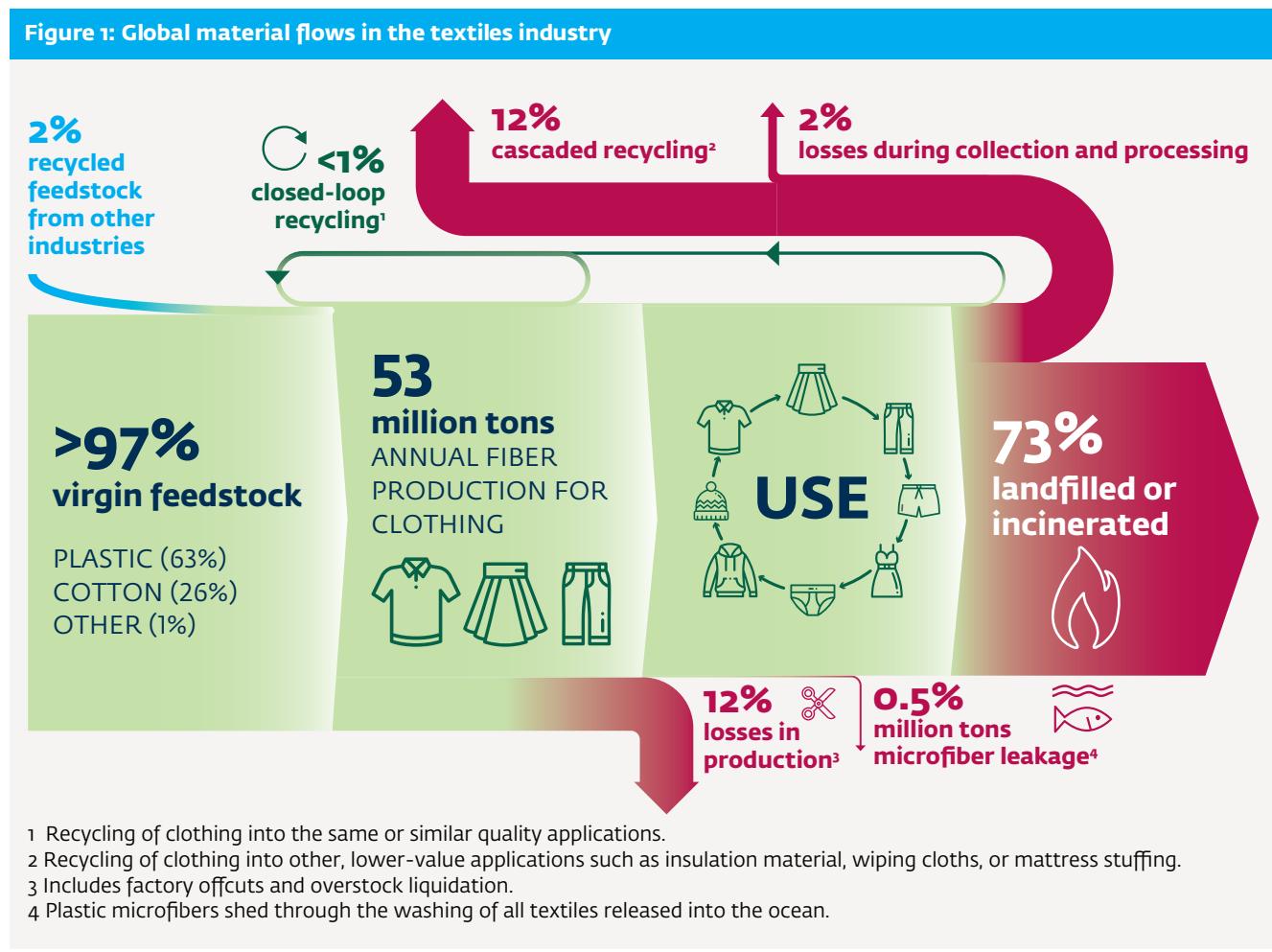
The costs of such waste are immense. By one estimate, the underutilization of clothes and a lack of recycling costs US\$500 billion annually—and that is before factoring in huge environmental costs in terms of water use, fertilizers, and greenhouse gas (GHG) emissions (with GHG emissions estimated at 1.2 billion tons of CO₂ equivalent in 2015, more than was emitted by international air travel and maritime shipping combined).²

Other burdens include the use of substances harmful to workers and the environment, the release of plastic microfibers into oceans from washing clothing whose nylon and polyester fabrics are derived from oil, and social impacts, including dangerous working conditions and poor pay.

On top of that, the world is producing ever-more clothing: 100 billion units were made in 2015, double that of 2000, with fast fashion—a business model that has been described as the “cheap and speedy production of low-quality clothing”³—central to this increase.⁴ Additionally, garments are worn less: during the 15-year period to 2015, the number of times a garment was worn—its utilization rate—dropped more than one-third.⁵

All this feeds into hugely wasteful global material flows for clothing, with the industry using largely virgin feedstock and a minimum of recycled material.

Figure 1: Global material flows in the textiles industry



Source: [A New Textiles Economy: Redesigning Fashion's Future](#), Ellen MacArthur Foundation. 2017. Adjusted for the IFC.

For apparel brands and manufacturers, the surge in production, which is set to increase further, with total clothing sales expected to more than triple to 160 million tons by 2050,⁶ has been extremely lucrative. The likelihood is that it will become even more so: in 2016, the global apparel market (defined as clothing and footwear for consumers) generated nearly US\$1.5 trillion in revenues; by 2026, that figure is expected to reach nearly US\$2 trillion.⁷

Like many industries, the global textile industry has to date been able to ignore the significant negative externalities behind its business model—the costs for which workers, society, and the environment foot the bill. While those are hard to calculate, they are easily in the tens of billions of dollars annually. They also have a huge climate impact, with the apparel and footwear industries alone responsible for at least 8 percent of GHG emissions.⁸

1.2 ALL CHANGE: THE NEED FOR CIRCULARITY

What the textile industry needs, then, is a wholesale makeover. Or, as the then-head of the C&A Foundation (now the Laudes Foundation), Leslie Johnston, put it in 2019, "changing the underlying business model of this complex, global industry from one that is extractive to one that is regenerative."⁹ Circularity will be a big part of that.

Important though circularity is, it remains a minority pursuit: just over 8 percent of the world's economy operates on this basis, according to the Circularity Gap Reporting Initiative (CGRI).¹⁰ Doubling global circularity, in conjunction with countries meeting their nationally determined contributions (NDCs), which are their action plans to cut emissions and adapt to climate change¹¹, would ensure the world's temperature rise remains below 2 degrees Celsius, the CGRI says.¹²

Box 1: What is circularity, and what does it require of the textiles industry?

A recent McKinsey report notes that circularity is one of 10 key themes for the fashion industry in 2022.⁴³ But what is it and how does it apply to the broader textiles industry?

Briefly, a circular economy is one in which waste is not produced in the first place—a clear improvement on the predominant "take-make-dispose" model of production and consumption. As the Ellen MacArthur Foundation points out, three design-driven principles underpin the circular economy:

- Eliminate waste and pollution.
- Circulate products and materials (at their highest value).
- Regenerate nature.⁴⁴

At the heart of a circular economy is the transition to renewable energy and materials. In this way, a circular economy decouples "economic activity from the consumption of finite resources," building a resilient system that works for the world and tackles some of humanity's most pressing problems: climate change, biodiversity loss, waste, and pollution.⁴⁵

Importantly, transforming to a circular economy is about far more than putting solar on factory rooftops or increasing the scale of recycling of textile waste (though they are key, too). More fundamentally, it will require the industry to manufacture better and with less primary materials.

Circular models of production will be essential, and will foster innovation in how the industry makes, dyes, and reuses materials. These will also encourage investments in new technologies and machinery and will enable traceability throughout the product's life cycle.

Suppliers that can meet these requirements will find increasing numbers of brands keen to partner with them, as those brands seek to address their own challenges—not the least ones that require collaboration and a shared vision along the value chain.

“We can, if we move to circular systems, reduce our dependence on virgin raw materials. We can keep the inherent value and resources that were used in making textiles, keeping them in use longer.”

Karla Magruder, the founder of Accelerating Circularity,

Going circular would also bring significant financial gains. The World Economic Forum has calculated that switching to a circular economy from the take-make-dispose model could generate as much as US\$4.5 trillion in economic benefits by 2030.¹³ Going circular, then, is crucial for humanity—and markets like the European Union (EU) are fully behind it. Brands and textile manufacturers should prepare accordingly.

An industry veteran with a leading global brand, who asked not to be named in order to speak candidly, says textiles needs a “root and branch” change to deal with its carbon and climate impact. Despite the pressing need, he adds, the textile and apparel sectors “are still entrenched in conventional garment-making modes.”

“On the other hand, many companies—ours included—have set forward targets and objectives which are quite bold,” he says. “For example, we are taking two or three of our biggest global products and they will be circular processes by 2025. We’re talking huge volumes—and using measurable Key Performance Indicators.”

Overall, though, the apparel sector is only now starting to think about the constraints involved in setting up circular systems, and how to construct these in a scalable way.

Some of what this would require was revealed by the boom in online purchasing during the pandemic. One large US-based company saw about 40 percent of purchased items returned but found it had very limited means to reprocess those garments, in what is likely representative of where the industry is at the moment.

“So, if you explode that theory to wanting to dismantle a garment, take off all of the componentry, put it back through a process again—there’s a lot of work in that space,” says

the industry veteran. His company trialed systems in 2021 to improve its recycling approach. But, although the intent, concept, and management were strong, there were shortfalls in terms of the technical expertise needed to manage the desired outcomes.

“What we’ve got to be careful about is that if you open the doors to the returns of garments —whether that be to shops or returns to centers—without understanding what we can do going forward with those items commercially, you’ll end up giving yourself a real headache,” he says.

Avoiding those headaches is what Karla Magruder, the founder of Accelerating Circularity, a nonprofit whose goal is to transform textile waste into mainstream raw materials, seeks to achieve. While circularity is crucial, she says, it is only one element of what the industry needs to do in terms of taking responsibility for its climate impacts.

“People like to look at any one thing—like circularity—as the answer. And there is no one answer, and I think that’s incredibly important,” Magruder says. “With textile-to-textile circularity, we still talk about taking products, recycling them and then making new products out of them—but there’s still energy, dyeing and water that are going to be used. And so, while the circular process is great, there needs also to be [a focus] on our energy use, on our water use, and moving to circularity won’t totally change that.”

That said, she adds, “circularity is really important.”

“We can, if we move to circular systems, reduce our dependence on virgin raw materials. We can keep the inherent value and resources that were used in making textiles, keeping them in use longer.”

2. The EU's drive for change

2.1 A SHARPER FOCUS

Around the world, some of the necessary changes are underway—though, as Magruder notes, circularity remains in its infancy everywhere.

Many more changes are set to come, driven in large part by the European Union, the world's leading importer of apparel by value,¹⁴ and whose Green Deal (see box 2.1) is central to its ambition to make Europe the world's first carbon-neutral continent by 2050. The Green Deal's focus on sustainability will have profound implications for numerous industries, including textiles.

Box 2: The EU's Green Deal

The language of the Green Deal, which was launched in 2019, is direct: "climate change and environmental degradation," it states, "are an existential threat to Europe and the world".¹⁵ That realization lies behind the EU's shift from voluntary to mandatory measures in numerous areas in recent years.

The Green Deal's goal is to ensure the EU will become "a modern, resource-efficient and competitive economy" that will, among other things, generate no net GHG emissions by 2050 and will decouple economic growth from the use of resources.¹⁶

In other words, the EU is demanding circularity, and of crucial importance is that exporters to the world's third-largest economy (after the US and China, as measured by gross domestic product [GDP])¹⁷ will have to adhere to its evolving rules on sustainability and circularity.

The Green Deal is a broad canvas that covers a range of areas including climate, energy, environment and oceans, transport, agriculture, and industry, and is expected to bring numerous benefits (see figure 2). Several of these will directly affect how the textiles industry operates.

Figure 2: The benefits of the Green Deal



fresh air, clean water, healthy soil and biodiversity



renovated, energy efficient buildings



healthy and affordable food



more public transport



cleaner energy and cutting-edge clean technological innovation



longer lasting products that can be repaired, recycled and re-used



future-proof jobs and skills training for the transition



globally competitive and resilient industry

Source: The European Commission.

In the nearer term—and also of great relevance to the global textiles industry—the 27-nation bloc has adopted proposals to ensure that its policies on climate, energy, transport, and taxation are designed to cut GHG emissions by at least 55 percent by 2030 from the 1990's levels.¹⁸

The EU's 2020 Circular Economy Action Plan and its 2022 Strategy for Sustainable and Circular Textiles (see below) are elements within the broader Green Deal and of profound importance for the textiles industry.

According to the European Commission (EC), the consumption of textiles in the EU ranks fourth in terms of the impact on the environment and climate change, eclipsed only by food, housing, and transport.¹⁹

This goes a long way to explaining why the EC has focused on the textiles industry as a priority sector. That is most clearly seen in its *Strategy for Sustainable and Circular Textiles*, a 14-page document that—when the underpinning laws are passed by the EU's legislative bodies—will redefine access to the market for brands and manufacturers. Companies that cannot meet its requirements will eventually find themselves excluded from access to the 27-nation trading bloc.

The *Strategy for Sustainable and Circular Textiles* was adopted by the EC in March 2022, and follows its adoption two years earlier of the [Circular Economy Action Plan](#), which is one of the Green Deal's main building blocks and which will drive the EU's transition to a circular economy.

2.2 FROM AMBITION TO ACTION

For its part, the Circular Economy Action Plan aims to make "almost all physical goods on the EU market more friendly to the environment, circular, and energy efficient throughout their whole lifecycle from the design phase through to daily use, repurposing and end-of-life."²⁰

The goal of the *Strategy for Sustainable and Circular Textiles*, which is also part of this broad legislative push, is to ensure that the textiles sector is greener, more competitive, and "more resistant to global shocks."²¹

As such, its vision is that by 2030, "all textile products placed on the EU market are durable, repairable and recyclable, to a great extent made of recycled fibers, free of hazardous substances, [and] produced in respect of social rights and the environment."²²

Its goals do not end there. Among the additional aims are to ensure that by 2030:

- Fast fashion becomes unappealing to consumers and hence becomes economically unviable (with the EC's environment commissioner, Virginijus Sinkevičius, saying the EC wants fast fashion "to get out of fashion."²³ Given, as

we shall see later, Morocco's overreliance on fast fashion, this cannot be ignored.)

- Consumers benefit from affordable textiles that last longer and are of high quality.
- Reuse and repair services are widely available.
- Circularity is the norm, and incinerating clothes or dumping them in landfills is minimized.
- Producers take responsibility for their products "along the value chain with sufficient capacities for recycling, and minimal incineration and landfilling."²⁴

These are ambitious goals, and to meet them the EC will derive actions based on circularity principles that will, among other things: set design requirements to ensure textiles last longer and can be more easily repaired and recycled; bring in better information about textiles and a Digital Product Passport (DPP); combat greenwashing; end overproduction and overconsumption; "discourage the destruction of unsold or returned textiles," including via a proposal that would oblige brands to disclose how much unsold merchandise ends up in the landfill; deal with waste—an important consideration given that nearly 6 million tons of textiles are discarded each year in the bloc; and harmonize EU rules on Extended Producer Responsibility (EPR).²⁵

Moreover, given that the Green Deal will look at the entire carbon footprint of products entering the EU, the way textiles are produced—including their yarn and fabric—will prove fundamental to ensuring continued access.

An EC official working on the textiles strategy says the strategy provides a framework for future legislative initiatives and, as such, outlines the goals the EC wishes to achieve.

"We have now started to work on the legislation, but it will take time," he says, underlining that the proposed legislation must still be adopted by the European Parliament and the Council of the European Union.

"We are also working with stakeholders in the textiles ecosystem on a transition pathway. The aim is to come up with specific actions to make the ecosystem more sustainable and digital, and to strengthen the resilience of the ecosystem," he says, adding that a policy report will be published in the first quarter of 2023.

The EU's 2030 ambitions, as outlined in the *Strategy for Sustainable and Circular Textiles* are clear, the EC official says, with several initiatives being developed. Among these is a proposal for a Regulation on Ecodesign for Sustainable Products, which will establish binding design requirements for textiles to make them more sustainable.

Empowering consumers to make more sustainable choices is an important aspect of the textile's strategy and, in this context, the textiles labelling regulation will be amended to add compulsory elements to labels. Other initiatives listed in the *Annex to the Strategy for Sustainable and Circular Textiles* include revising the EU Ecolabel criteria, introducing a DPP for textiles (with more on that below), and bringing in measures covering the release of microplastics from clothing.

And, the EC official adds, while the language of the strategy about forthcoming initiatives is naturally broad, details are becoming available as laws are drafted and passed—for example, product information requirements.

"These will be absolutely essential—aspects like reliability, durability and carbon footprint," he says. "All of these product aspects should be addressed, but then the exact content of the information required for each product aspect will have to be defined through carefully fine-tuned technical studies, consultations and assessments."

One complication is that part of this process will require trade-offs.

"For example, one of the product aspects is recycled content—we want recycled content in products. But the industry tells us – and it's becoming increasingly clear—that if you increase the recycled content, durability may go down," he says.

Another is the environmental impact. The assumption that synthetic textiles have a bigger environmental footprint than natural materials like cotton is not always accurate.

"Cotton also has a big environmental footprint," he says. "On the other hand, synthetics have great potential for more durability and reliability. So, there are trade-offs."

"At the moment, there are very few rules that apply to textiles, apart from the general rules on goods—so, these standards need to be very specific and objective to allow for market surveillance and controls."

EC official

However, while many details are yet to be determined and agreed, the EU "is not going to lower the ambition," he says, adding that member states and parliament support it.

Nonetheless, there could be delays. First, primary legislation must pass the European Parliament and the Council of the European Union, "and there is always a degree of uncertainty in discussions by the co-legislators." That said, given the level of support from member states, "we don't expect many surprises there."

Second, few of the standards that are currently available can underpin the legislation.

"At the moment, there are very few rules that apply to textiles, apart from the general rules on goods—so, these standards need to be very specific and objective to allow for market surveillance and controls," the EC official says.

"To do this, we need a lot of standards on measuring, as well as testing schemes which are not there yet. And standardization mandates will be issued for where we need them," he says. "These are done by standardization bodies, and it's very complex and detailed work—so, there could also be a delay here. It's fully possible that, even when the delegated act is adopted and in force, its application on the ground is delayed because the standards are not there yet."

That said, 2030 "seems realistic," he adds, "even for application on the ground ... and factoring in the decisions [by the bloc], standardization requirements and the time lag that we need to give the industry in general to adapt to implementation."



And when it comes to industry, the EC official says, there is broad support.

"We've met a lot of industry stakeholders, and they seem very engaged, and they see clearly the problem," he says. "They really want to be part of the solution, not part of the problem."

One of those keen on the changes is the industry veteran interviewed for this research, who says the steps the EU is taking are "the best thing that's happened in my time in the industry—by a long way." Over the years, he adds, there has been much conjecture and rumor about what might be coming, but little clarity. That is changing.

The reason I like it is because it's exactly the kick that the industry needs to get going, because it can do it – it's the same with the car industry. They can do it if the incentive is there, and the incentive is: you can't supply if you don't comply."

When it comes to Morocco, then, the inescapable conclusion is that the industry must transition to a circular system. For textile and apparel companies, the crucial questions are:

- How will the EU's ambitions affect them?
- What steps can they take to ensure they meet the requirements demanded by the Kingdom of Morocco's largest market for textile exports?

2.3 THE IMPACT ON MOROCCO

Morocco's textiles industry is central to its economy: in 2021, it accounted for 15 percent of industrial GDP and 11 percent of exports, while employing 200,000 people directly—60 percent of whom are women (an important consideration given Morocco has one of the world's lowest female workforce participation rates).²⁶ Hundreds of thousands more people benefit indirectly by providing services to this workforce.²⁷ Morocco's textile industry is therefore highly significant in societal, economic, and industrial terms.

Most of the textiles that Morocco makes are sent overseas, the bulk to the EU. Per the latest official figures for the first three quarters of 2022, Morocco will have exported €3.8 billion of textiles to the bloc in 2022. This confirms the positive export trend that began after the COVID crisis. In 2021, Morocco exported €2.6 billion of textiles to the EU countries, up about 18 percent on the previous year and close to its 2019 pre-COVID high of €2.9 billion, according to the EC's Eurostat.²⁸

That secured the Kingdom a 2.4 percent share of the EU's textiles market.²⁹ However, although textiles exports to the bloc climbed nearly 40 percent to nearly €2.9 billion between 2010 and 2019 (which excludes exports to the UK), Morocco's share of the EU market has declined since 2007—from 3.1 percent that year to 2.4 percent in 2021, according to Eurostat figures provided by *l'Association Marocaine des Industries du Textile et de l'Habillement* (AMITH), the country's trade body.³⁰

However, should Morocco prove able to meet the EU's increasingly stringent regulations on circularity and sustainability, the International Finance Corporation's (IFC's) view is that it will increase its exports to the EU and its share of the market as buyers shift sourcing strategies and brands seek closer proximity between suppliers and stores. That will also likely prove true for the US market, which imported US\$46 million of Moroccan textiles in 2021.³¹

AMITH identifies Morocco's geostrategic location at the cross-roads between Europe, the US, and Africa as one of its two key advantages, with the other being its recognized expertise in garment and home-textiles manufacturing.³² At the same time, AMITH recognizes that Morocco's textiles industry needs to improve its resilience in certain aspects, including:

- Diversifying its client base: Spain and France represent almost 80 percent of its textiles exports to the EU.
- 85 percent of the raw materials used are imported.
- Subcontracting comprises around 60 percent of its production.³³

AMITH drafted its assessment of the market after the COVID-19 pandemic exposed the vulnerability of Morocco's textiles sector in the face of violent external shocks. Among its findings was that its sector was affected worse than peers because of an overreliance on two of the markets that were most severely hit by the pandemic: Spain and France.

As AMITH notes, overcoming the array of challenges and boosting its competitiveness requires that the industry transforms to become more sustainable. It outlines the steps necessary to achieve this goal by 2035 in its "Dayem" strategy (which means "durable" or "sustainable" in Arabic).

Fatima-Zohra Alaoui, AMITH's Director General, says the name Dayem refers to the need for the industry to be sustainable in a range of ways: in terms of social sustainability, economic sustainability, and environmental sustainability, "and also sustainability through time."

"We have an industry that is very old in Morocco and that's been through so many crises. People buried us a lot of times, but we're still standing, and we intend to remain a strategic industry for Morocco for a very long time," she says.

The Dayem strategy notes several factors that are coalescing to create opportunity. It specifically highlights Europe's carbon taxes and the rise of sustainability and ethics in fashion, as well as the innovations associated with Textile 4.0, which refers to the use of smart factories that can, for instance, manufacture bespoke items that are better quality and cost competitive.³⁴ Importantly, and given that waste is a crucial focus for the EU in sustainable textiles, smart factories can ensure zero waste is generated during production.³⁵



Box 3: Eliminating waste from the cutting room floor

Dealing with waste at all stages of the textiles-manufacturing process is a key element of building a circular economy and making the industry more sustainable.

To that end, the IFC's initial focus is on post-industrial waste—which here refers to the offcuts that end up on the cutting-room floor, and specifically as this relates to cotton and other plant-based fiber inputs.

A study in the Tangier area, the hub of Morocco's textiles industry, assessed how this waste is collected and priced, and the potential market for it locally. The study—which estimates that about 15 percent of raw materials is wasted³⁷—aligns with IFC's objectives to provide financing that supports the development of this new value chain to achieve circularity in Morocco's textile sector.

Additionally, a project, based on the findings of the study, will look to support market development work to build the input supply chain of post-industrial waste.

In this way, IFC and local stakeholders can start building a circular economy for textiles in Morocco, benefiting the entire ecosystem and putting the industry in a strong position to meet some of the EU's stringent criteria that could start coming into effect as soon as 2026.

Although zero-waste production would go some way toward meeting the EU's requirements, the bloc's approach is broader: when it comes to finished products, for example, the EU has said it might require brands to disclose how much unsold or returned product is sent to landfills, and could even introduce "bans on the destruction of unsold products, including as appropriate, unsold or returned textiles."³⁶

In other words, waste is generated at every stage of the value chain and dealing with it sustainably is at the core of a circular economy. In textiles manufacturing this includes eliminating the large amounts of fabric that are currently lost as offcuts during production—a subject that the IFC is looking to tackle in Morocco (see box 3).

Figure 3 : Waste not, want not: Morocco's textile waste measured by sector



Source: Textile waste mapping in Morocco and Tunisia, SwitchMed & UNIDO. 2021.

The amount of waste that Morocco's textiles industry generates was outlined in a 2021 study by UNIDO and SwitchMed, an EU-funded program to drive sustainability in the Mediterranean region. It found the Kingdom generates 83,200 tons of textile waste annually, with three-fourths from just two areas: Tangiers and Casablanca.³⁸ The bulk of the waste, nearly 52,000 tons, comes from the cutting room (see figure 3).

The study also found that while one-fourth of the total textile waste is comprised of pure fibers, nearly one-half is cotton blends, which is harder to value. Most of the waste, the study concludes, could be recycled by setting up modern shredding lines. How well Morocco is doing currently, though, was hard to say as there is limited information on recycling facilities, collectors, and capacity. Clearly, improving this would go a long way to boosting circularity.

2.4 SOLUTIONS TO MOROCCO'S THREE KEY TEXTILE CHALLENGES

While tackling waste is vital, Morocco's textiles industry must also address a range of structural, capacity, and skills challenges. More specifically, three topics stand out.

The first is to move beyond the cut-make-trim (CMT) model of clothing which sees fabric imported (generally from Asia or Turkey) before being cut and assembled locally and then exported. This effort is already underway, says AMITH's Alaoui, whose organization is helping the industry move beyond CMT to full production package (FPP) by managing an engineering and design school that boosts local skills.

That is one part in a range of measures AMITH is taking. Others include holding trade fairs, supporting trade missions to meet buyers abroad, and tackling the financial constraints that come with moving from CMT to FPP—with the latter approach requiring money upfront to purchase fabrics and other value chain items.

"We're also working with the Moroccan government to provide suppliers with extra insurance that will reduce the financial risk on them in case of default from their customers," she says. "Basically, we try to address all of the issues of risk and fill in the gaps to make this transition from CMT to FPP production successful."

Moving away from the CMT model, which given the EU's comments on fast fashion could prove crucial, will in part require overcoming a second challenge: the lack of backward linkages available locally. Currently, Morocco imports much of what it needs in terms of upstream supplies—a long list that includes yarn, fabric, and accessories. The bulk of those items are sourced from Asia (though much comes from Turkey, too), with Asia's long lead times somewhat defeating the advantage of Morocco's proximity to Europe.

It is crucial, then, that Morocco invests in the upstream elements of the value chain—yarn, fabric-making, dyeing, and printing, for instance. Alaoui says that, as the Kingdom lacks these elements, building them constitutes an opportunity, as this process would need to start from scratch to create a fully sustainable upstream.

"Moroccan manufacturers, are waiting for the EU to clarify what is actually expected of them before they can take on the subject and start to work on it."

Alaoui, AMITH

"And it's probably easier today to start something from scratch with all the EU requirements that are coming up than have an existing facility and try to upgrade it to meet those requirements," Alaoui says. "So, for me, it's a real opportunity."

Additionally, such a system would give suppliers full traceability of their value chain, which today they often lack—and which the EU's rules will require. In a bid to ensure these upstream elements would be circular and sustainable, Alaoui has had discussions with the authorities about setting up new industrial zones that offer, for instance, renewable energy and wastewater treatment and recycling.

Building value chains locally links, in turn, to a third challenge on materials sourcing. The EU's strict clauses on what is called transformation mean the Kingdom has been unable to benefit fully from its free trade agreement with Europe under the terms offered via the Pan-Euro-Med (PEM) zone.³⁹

Under the PEM zone's rules of origin, clothing made in, say, Morocco typically needs to meet what is known as the double transformation rule. This means "two substantial stages of production" must take place in PEM-zone countries for that clothing item to be recognized as of preferential origin.⁴⁰ A shirt made in Morocco would meet the criteria if the weaving of the fabric from yarn took place in a PEM country—because the cutting and sewing took place in Morocco too. However, if the woven fabric is sourced from Asia, the double transformation rule is not met, and that means those clothes lack preferential access to the EU.

To avoid paying the 12 percent duty levied on products that do not meet the double transformation rule, Morocco sources inputs from Turkey, says Alaoui, and this makes local industry dependent to a degree on Turkey—a country that is also one of Morocco's major competitors in manufacturing garments for the EU market. A homegrown supply chain would remove that dependence and ensure Morocco could avoid paying a



"The garment industry generates so much waste, but if we can bring the manufacturers to systematically sort their waste at the end of the cutting table by color, by composition, and then send that to recycling facilities to make yarn from it—well, that could be done very quickly."

Alaoui, AMITH

duty, she says, adding that discussions with the EU to remove taxation on the Moroccan value added in the event of the use of non-originating fabrics are at a stalemate.

Resolving these three topics does assume that Morocco's industry grasps what the EU requires of it and the actions it needs to take to retain access. However, it appears many players do not fully understand what is needed, given the lack of clarity by the EU to date in terms of details and timelines. This has generated inaction.

"Moroccan manufacturers, [are] waiting for the EU to clarify what is actually expected of them before they can take on the subject and start to work on it," says Alaoui.

Her view is that Morocco should regard the EU's push to circularity as an opportunity to differentiate the Kingdom—not a threat. To that end, she says, Morocco should use the moment to invest in innovation and technology to boost its competitive advantage and further cement its geographical advantage.

"Because that's where Morocco can have real added-value—it's not so much about labor costs anymore. We need to move on to something else and bring real solutions to buyers," Alaoui says.

Such a change of mindset, as she puts it, would also see the industry do better when it comes to waste-recycling facilities.

"The garment industry generates so much waste, but if we can bring the manufacturers to systematically sort their waste at the end of the cutting table by color, by composition, and then send that to recycling facilities to make yarn from it—well, that could be done very quickly," she says. "And it wouldn't cost the manufacturers much. So, these are small steps that could be taken, but that could have big value later, given what's coming."

Ultimately, Alaoui says, the industry should not become complacent given its geographical position, because its competitors are already acting. And, she points out, Morocco's position as a leading producer of renewable energy means it has a further opportunity to pull ahead.

"If we could manage to reduce the energy bill, that would not only give us credit in terms of more sustainable production but would also represent a significant saving on the energy bill," Alaoui says. "And we all know that the upstream of the value chain—the spinning, the weaving, the knitting—are very energy-intensive."

A Brussels-based source with close ties to the textiles industry says resolving the double transformation issue will prove important for Morocco.

"The challenge is going to be getting ready for that second transformation of the textiles—so, not buying so much from Asia and then doing the final finishing in Morocco. They need

to get ready for that," he says. "And for that they will need to also change their supply chain. So, in the longer run, they have an interest in finding inputs beyond traditional suppliers—perhaps focusing more on Africa."

The industry, he adds, will likely be confronted with additional due diligence requirements. And, he notes, reliance on fast fashion "is not a very sustainable model," while buyers and brands will need assurances of improved controls along the supply chain.

Additionally, Morocco will need to strengthen its protection of intellectual property for brands—a particular concern for US companies. Indeed, the inadequate protection of intellectual property rights was flagged in 2022 by the Office of the United States Trade Representative as one of its main concerns in respect of trade and investment in Morocco.⁴¹

"The challenge will be for Morocco to target a number of textile sectors where they have a comparative advantage or the potential for one," the Brussels-based source says, adding that this could be in the realm of, for instance, textiles for the automotive or medical sectors. Fast fashion, though, is less likely to be a successful focus given the EU's push to ensure a more sustainable textile industry.

While Morocco is incorporating circularity into its broad economic focus, it has yet to succeed in creating what is needed in terms of circularity, including formalizing traceable waste and collection schemes.

To that end, stakeholders should reach out to see how the EU can help. The EU delegation in Morocco says when it comes to the textiles sector, its office has been asked for assistance on just one project—though it is ready to provide support to help the Kingdom set up mechanisms on the recycling side, for instance, as well as for related aspects like reporting.



3. Key steps toward a circular future

While the list of challenges and the EU's emerging requirements might seem daunting, they are manageable. Encouragingly, Morocco's government and its textiles industry are fully aware of the need to change and of what needs doing. What is less well understood are the actual steps required, which is what this section will look at.

3.1 PRIORITY FOCUS AREAS

The EC official working on the textiles strategy says the key is to focus on what will affect Morocco's industry directly. As he points out, some goals outlined in the strategy and the annex are more relevant to companies present in the EU and to EU buyers than to manufacturers in countries like Morocco. Recycling within the EU and empowering consumers, for example, relate largely to operations and marketing within the single market.

Far more important, he says, is the legislation around ecodesign and labelling, which is the key legislative initiative that will affect Morocco's textiles exporters.

"Although by definition these do not apply to third countries—they apply to the internal market—the fact is that they apply to products being placed on the internal market," he says. "And, in that way, there's a spillover effect for manufacturers worldwide and third countries that are part of global supply chains to the EU."

Given that there is every reason to believe the 2030 goal for the strategy's full implementation in EU law will be met, the clock is ticking for countries like Morocco to act on the areas it will need to tackle—with ecodesign crucial.

The ecodesign criteria are outlined in the Ecodesign for Sustainable Products Regulation (ESPR), which sits at the core of implementing the EU strategy. The ESPR, whose legal text was under discussion at the European Parliament and the Council of the European Union as of November 2022, and which covers far more than just textiles, will set out a general framework for the adoption of ecodesign requirements, including product-specific measures. As such, it will mandate performance and information requirements and—notably for the latter—the DPP.

"The main tool to implement the ecodesign requirements is the DPP," he says. "This is basically a traceability tool where all economic operators—starting with the manufacturers and even the producers of the raw materials in a way—will have to supply information to this IT system where it will all be recorded."

That information has three recipients: the companies themselves so they can be sure their supply chain meets EU requirements; competent authorities for market surveillance, with third countries having a specific link to customs control; and consumers who will be able to see information about the textile—where it is from, its eco-friendliness and its characteristics—via a unique identifier like a QR code, for example.

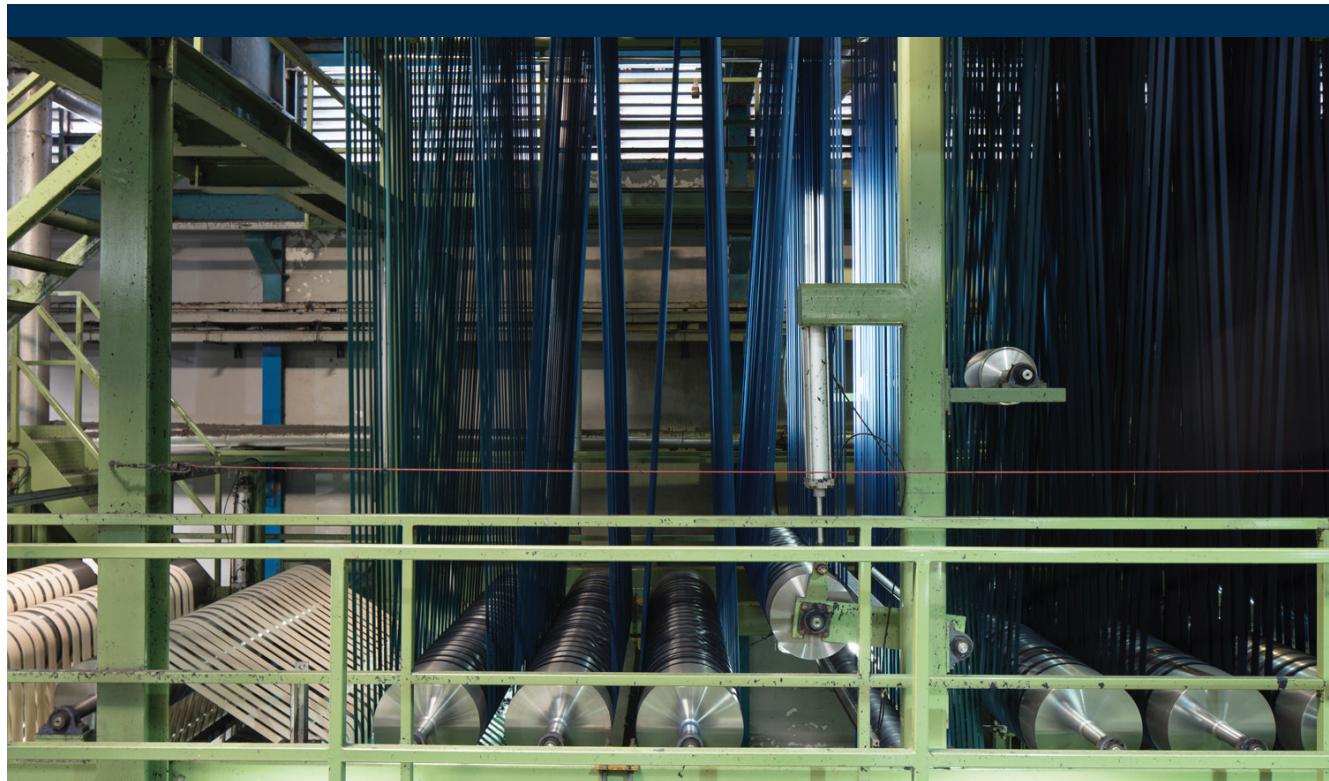
"And while we review the textile-labeling regulation, we are considering whether to likely include—on a mandatory basis—labeling on what we call sustainability and circularity aspects," the EC official says. "This should be based on that information on the DPP."

Although the EU's new access rules will require work from the industry in countries like Morocco, it can get ahead in terms of preparation by reviewing the ESPR, he says: the proposal for the product aspects that will appear in it is already available, and the strategy and the ESPR "pretty much set out what we're about to do."

"By reading the ESPR, for instance, you will know what the DPP will require of your company—meaning traceability—so factories can start putting in place this chain of communication throughout the supply chain that concerns them," he says. "I won't say they can start buying the IT equipment that they need to implement it, because the specifics for that will also have a delegated act, but they can start preparing in many ways."

Among the aspects yet to be fixed, he says, is the entry-into-force date. And, he adds, the EC will also need to weigh the needs of environmental action with the needs of industry to adapt to the change. Ultimately, though, he does not expect that these aspects will affect the objective of a 2030 date for full implementation.

Over the coming year or two, the EC official says, the industry in Morocco should ensure it takes an active role in the EC's



consultations on the coming changes—with the DPP consultation starting shortly—because “they surely have a role to play to determine what rules will impact them.”

“And second, they can start preparing in many ways that will make it easier to comply with this legislation. It doesn’t need to be a regulatory shock that hits them somewhere around 2028,” he says. “In other words, be attentive to the consultations and to the information fleshed out by the Commission.”

3.2 MAKING THE MOST OF MOROCCO’S ADVANTAGES

As AMITH points out, one of Morocco’s key strengths is its position on Europe’s border. The impacts of COVID-19, climate change, the move to circularity, global logistical challenges, and new consumption patterns mean brands are increasingly near-shoring production. Those factors, combined with Morocco’s well-established and flexible textiles industry, put the Kingdom in a strong position from the start.

Another advantage is that Morocco can benefit from the textile industry’s equivalent of technology’s shift to mobile, where countries that lacked fixed telephone line services were able to leapfrog their communications by installing mobile transmitters. Similarly, Morocco could look to build backward linkages—spinning yarn and producing fabric, for instance—which it lacks. In this way, it can turn what has long been a disadvantage (a lack of such capacity) to an advantage by creating a state-of-the-art part of the supply chain (integrated with efficient recycling facilities) that would go a long

way to meeting the EU’s needs for circularity, sustainability, and transparency.

AMITH’s Alaoui says a homegrown supply chain would help Morocco in several ways, not the least by bringing needed improvements to the industry’s environmental sustainability measures. In Morocco’s case, it would ensure traceability and a smaller carbon footprint, as fabrics and other inputs would not need to be shipped across the world.

Positively, she says, Morocco is doing reasonably well in other areas, not the least because up to 80 percent of its production is exported “and that means we are constantly audited by our clients” on social compliance.

“So, social compliance is not so much an issue,” she says. “We could always do better—I mean, there’s still room for improvement—but we are pretty much advanced on that.”

And, Alaoui points out, Morocco’s textiles industry has form in investing in sustainable solutions, “with investments in new technologies like ozone, e-Flow, laser technologies for denim, water recycling plants and so on.”

While improvements across this broad range of areas would help the industry to achieve circularity, Alaoui stresses that attaining them requires investment—and that is increasingly challenging in a world where input prices are rising, where purchase prices are dropping, where there is a significant imbalance of power between brands and manufacturers, and where consumers are reluctant to pay more.

"As a manufacturing country, what Morocco needs to do is be able to understand what's in their post-industrial waste—fiber content, colors, fabric construction—so that it can be put into a circular economy."

Magruder

A good start, Alaoui says, would be regulations that address these imbalances and take some pressure off manufacturers—including by mandating contracts rather than the current system whereby buyers simply place orders by phone. Additionally, there should be support for suppliers, and the rules should ensure that buyers and brands are accountable not just for their Tier 1 suppliers, but for the less visible suppliers further down the chain.

"Otherwise for the Tier 2 and Tier 3 suppliers, the buyers won't be accountable," she says. "So, the practices are not going to change because they're not accountable for it. They're only accountable for the suppliers they have contracts with which are very small in number."

Currently, says Alaoui, manufacturers are simply being told that they need to be compliant or risk losing access.

"So, you have to be compliant—and that means you have to make the necessary investments for traceability, for sustainability and so on so that [the buyers] can check that your products are effectively sustainable. But guess what, we're not going to help you financially. And we can't increase prices because consumers don't want to pay more," she says.

That approach, she adds, could and should be improved. But, she points out, with the right assistance from within Morocco and outside the Kingdom, and with the right mindset from the industry, there is a window of opportunity that the country can and should seize—and the place to start is in ensuring the industry is built on a circular economy basis.

"Everybody is looking at this as a constraint, as a problem, whatever is coming up in terms of regulations," Alaoui says. "I think they need to see as an opportunity. And there are things that need to be done quickly and easily that are not very costly."

As Accelerating Circularity's Magruder notes, Morocco's textile industry has a long way to go to become circular. However, that is the case with its competitors too—and they lack some

of its strengths. Given Morocco's position as a manufacturing country, Magruder says, a good place to start is by dealing with its textile waste, which falls into two categories: post-industrial waste and pre-consumer waste (unsold goods).

The first is what is left of the fabric after the stacks have been cut to pattern; this varies depending on the type of fiber, with the UNIDO/SwitchMed report estimating that it constitutes about 15 percent of cutting waste.⁴² The second is when a factory makes the garments and the brand then no longer wants them—"it's been made into something, but it's not been sold at retail," Magruder says.

Both offer useful entries for Morocco's circular initiatives, she says, with mechanical textile-to-textile recycling providing the ideal start.

"Mechanical recycling is taking those fabrics and scraps that are left over and sorting them to make sure you've separated them into fiber, color and fabric construction," she says. "The ability to sort it into those fractions decides what can be made and its quality."

The simpler form of mechanical recycling sees shredders turning the fabric into shoddy, which is used in items like felt and insulation. The more advanced option requires investment into higher quality "soft" mechanical recycling, which shreds the textile and pulls it into longer fibers; these longer and stronger fibers are of higher value and can be used in more ways.

"As a manufacturing country, what Morocco needs to do is be able to understand what's in their post-industrial waste—fiber content, colors, fabric construction—so that it can be put into a circular economy," Magruder says.

In other words, circularity starts by thinking about the factory-to-recycler system that needs to be in place: how material is collected, whether it is separated by the factories (which, for post-industrial textile waste is relatively easy to do), and how it is sorted and aggregated. In this way, the recycler can

understand what volumes of fabric it can get, how it will be received, and how regularly.

"In Morocco, [this system] might require several factories, or as many factories as you can get regionally, and aggregate these materials in a way that they can be fed to a recycler," she says.

Once the reprocessed textiles emerge from the recycler, they need to be spun into yarn, either locally or shipped elsewhere depending on capacity—and this includes having the capacity to card the yarn, which differs in this instance from carding virgin fibers. After that, there needs to be the capacity to produce fabric from that yarn.

In Morocco's case, given it is primarily a manufacturing country that does not produce fiber, Magruder says, it might want to build some of this capacity locally to ensure a domestic circular system for woven fabrics. A simpler approach, Magruder adds, is circular knits. The machines are relatively simple to set up, and the process is not overly intensive.

Morocco benefits from a government with the drive to achieve best-in-class—but that alone is not always sufficient.

Also key is to ensure the banking infrastructure can cope by funding processes that the country's existing rules and regulations are not set up to recognize—for example, import-export duty mechanisms that are not designed to allow secondhand apparel to re-enter the country for processing in a circular system. In Morocco's case, the customs regulation system for textiles is set up to import materials—though not finished garments that might come in for reprocessing.

"It doesn't have systems to import garments that are going to be reprocessed and exported again," one interviewee says. "Currently, those garments—if they come into the country—must have duty imposed, because they're garments and they are therefore deemed to be for retail. There's no system for importing garments that are not going to be retailed, and there's no system that says those garments can be reprocessed and sent out again as new garments."

Fixing that, he says, is largely a matter of implementing new regulations and then training customs and excise staff.

"So, the garments for reprocessing should be brought in via a completely different channel. One shouldn't bolt it on to an existing materials and fabrics channel, because that makes it too complicated. My suggestion is to call it a circularity channel, and customs and excise manage it like that."

Such an approach would help Morocco, as would taking advantage of the Kingdom's key value added compared to its competitors—speed, which is today a top-three requirement for business, along with circularity and sustainability. Maintaining this advantage and ensuring Morocco can meet the circularity requirements mean that a logical first step is to revamp its customs and excise rules to ensure it is agile enough to import and export goods that are garments.

"The second is to move beyond the ready-made garment mechanism and add some key parts of the supply chain—it needs a fabric mill, and ideally it needs suppliers for thread, buttons, accessories, elastic, linings and the like within the country because it's a much, much easier process to manage once you have that," says the industry veteran we spoke to.

One option is that Morocco develops its supply chain for raw materials in a focused manner—which was the approach that Jordan took. He says Jordan, which lacks water to grow cotton, focused on teamwear for firms like adidas, Nike, and Under Armour using manmade fibers that do not require large volumes of water.

"And they built a two-billion-dollar textile and apparel sector in a country of seven million people, and it's the darling of those entities, so, it can be done, and focusing on a segment or a part of the industry that's required is how to do it."

And, there is little doubt that Jordan will go down the circularity route soon, too, in order to maintain that advantage and its lucrative relationships.

4. Conclusion

Although these are early days, it is clear that—for some markets at least—the era of the textiles industry's hugely wasteful, linear production model is starting to come to an end.

Driven by the EU via its Green Deal and related legislation, and with other markets likely to follow in due course, this change means the textiles industry will increasingly need to embrace circular and sustainable production models.

The EU's goal is that, by 2030, all textiles "placed on the EU market are durable, repairable and recyclable, to a great extent made of recycled fibers, free of hazardous substances, [and] produced in respect of social rights and the environment." The bloc has also positioned itself firmly against fast fashion, which to date has been a mainstay of Morocco's industry.

For Morocco, the need to transform its textiles industry to one based on the principles of circularity is clear—given that the EU is the Kingdom's largest textiles market by far—and will become increasingly pressing as 2030 draws closer.

Transformation, though, is about much more than using renewable energy or boosting recycling rates (though both are part of a sustainable approach). Ultimately, success will see Morocco use fewer inputs (including fabric, dyes, water, and energy) to manufacture textiles more efficiently.

In the coming years, the Kingdom will need to take several crucial steps. These should include:

- Boosting the recovery of post-industrial waste (particularly offcuts from the cutting-room floor) and pre-consumer waste and establishing improved collection and recycling facilities locally that can turn waste into yarn and fabric, and that can reprocess unsold garments imported from abroad (though the last would require new customs regulations).
- Building a sustainable, state-of-the-art industry locally that provides upstream elements like yarn, fabric, printing, and dyeing, and that offers traceability for brands. Improving the availability of local backwards linkages would also help Morocco meet the PEM zone's rules-of-origin requirements for preferential access to the EU.
- Moving away from fast fashion and the CMT model that sees fabric imported from abroad to a model that instead sources more materials locally and that offers buyers an FPP.



- Working closely with the EU and its trade offices to secure advice (particularly in areas like production information requirements, legislation around ecodesign, and labelling) and, where available, seeking funding to help with the transition.
- Considering targeting areas for textile manufacture in which the Kingdom has a comparative advantage.
- Investing further in innovation and technology to improve the Kingdom's competitive advantage.

As AMITH's Fatima-Zohra Alaoui suggests, Morocco should view the push to circularity as an opportunity, not a threat, and one the Kingdom can use to differentiate itself from its competitors. Buyers in the EU are shifting to sourcing that is more circular, less logically fraught, and that can meet new consumption patterns. This means that countries like Morocco providing near-shored production and meeting EU's sustainability rules will reap rewards.

By working to comply with the EU's stringent new requirements on circularity and sustainability, Morocco can enjoy outcomes that include increased exports to the bloc, a higher market share—as buyers source more from the Kingdom and seek to shorten supply chains—and the ability to position itself for better access to the vast US market.

Although these steps will take significant effort by Morocco's textile industry, the Kingdom is in a strong position to succeed, for the following reasons:

- The government and industry are acutely aware that change is coming, and that the opportunity is Morocco's to seize.
- There is a clear sense of urgency about the need to act.
- Its competitors are in the same boat, yet few enjoy the advantages Morocco does, not the least its proximity to the EU.

Acting to retain and expand access into the EU market is not the only reason to take the initiative. The industry is of vital national importance and building a circular economy for the textiles ecosystem would also create more jobs and build new value chains.

Moreover, lessons learned in the textile industry could be applied to other parts of the country's economy to further expand the Kingdom's access to the EU. And, of course, creating carbon-neutral industries would help Morocco to cut its carbon footprint, with concomitant benefits for population health, the economy, and the environment.

In summary, achieving true circularity requires that Morocco look at the entire textiles value chain, from design to sourcing to disposal, and including waste at different stages, to ensure the industry can meet the EU's requirements. Although there is little time to spare, the good news is that Morocco can achieve what is needed in time—and emerge stronger and more competitive than many of its rivals.



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