







I. What

The SwitchMed program, an initiative funded by the European Union, aims to promote circular value chains in the Mediterranean by changing how goods and services are produced and consumed.

As part of the SwitchMed / MED TEST III project, the United Nations Industrial Development Organization (UNIDO) is committed to improving the environmental performance, profitability and strategic value of the textile and clothing industries in the region.

The SwitchMed Initiative contributes to the achievement of several UN Sustainable Development Goals (SDGs)









Textile waste valorisation in local circular value chains

International fashion brands demand more recycled fibres in their collections, and the market for materials from recycled sources is buoyant.

Post-industrial textile waste, such as cutting scraps, defective pieces, unsold collections, and second-quality garments from the fashion supply chain, is an untapped resource to align with the new market scenario.

In Morocco, 83,2 thousand tons of post-industrial and pre-consumer textile waste are generated annually, from which 14% are 100% cotton, 42% are cotton rich, and 10% are 100% polyester. Most of this huge amount is landfilled, a small part exported as low-cost scraps and a minimal share downcycled in low value materials.

Technical expertise and know-how in waste sorting, collection, and classification are prerequisites for efficient, high-quality recycling and the development of circular value chains.

Proper and advanced technologies and business models are essential in transforming textile waste from a potential to an actual and profitable business.

II. Why

Benefits from textile waste valorisation

To manufacturers

- Lower production costs, turning the textile waste from an expense for landfilling into a new source of revenue and retaining its value in the local economy
- Reduce the environmental impact and the relevant remediation costs
- Reduce the dependency on limited virgin stock
- Create new business and employment opportunities within the textile recycling ecosystem.
- Increase the local industry competitiveness and meet the growing demand for products with recycled content from international brands
- Anticipate expected development in eco-design regulations in Europe.

To institutions, and other stakeholders

- Effectively improve textile waste management, in line with national and international norms
- Support the local industry's international competitiveness
- Improve strategic supply chain relations and enhance international cooperation

III. How

Textile waste management improvement

Improving textile waste segregation and collection is essential to the recycling value chain. Proper management at waste-generating factories improves waste quality and cuts waste management costs.

Trace waste handling and connect waste suppliers with recyclers

Tracking and tracing waste handling improves waste trade and is critical to ensuring an efficient and transparent market.

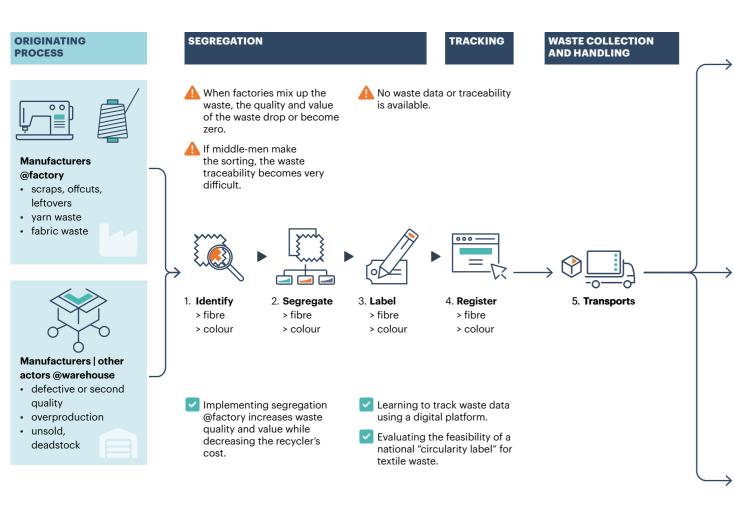
Select the most appropriate technology

Not all textile waste is created equal. Different types of waste are suited to different end-users and need different technologies.

Modernise recycling production capacity

Recycling technology is progressing at a fast pace. Innovation enhances the quality of recycled fibres, the flexibility of processes and widens the scope of textile fibres and blends, suitable for recycling.

IV. The post-industrial textile recycling value chain



Legend

Additional information

A Critical issue

Advantages that the SwitchMed Pilots want to capture

CHOICE OF RECYCLING TECHNOLOGY RECLAIMED INTERMEDIATE MATERIALS MATERIALS According to type of material, market demand and technology A. CHEMICAL This is the new frontier of recycling "virgin grade" technology, with few operational plants yet. ✓ It turns textile waste back into raw materials for producing virgin-grade fibres: cellulose pulp (for cellulosic fibres) or chemicals monomers (for synthetic fibres). It can also separate mixed fibres (such as polycotton) to recover the individual components Synthetic A It is capital and energy-intensive. The minimum investment size is very large. "virgin grade" Plastic products for other sectors **B. THERMO-MECHANICAL** (PET bottles, other packaging. This technology is established and automotive. readily available. furniture, ...) A It works with pure (monomaterial) feedstock only. The reclaimed material Synthetic degrades with the recycling process. home fibres Reclaimed fibres are primarily used in textiles, .. industries other than textiles. C. MECHANICAL Mixed fibres Blend with The textile waste is shredded down to its fibre virgin fibres "lower grade" state. It is an established technology. ✓ Latest generation equipment has dramatically improved productivity and output quality. The Paddings, investment size is much lower compared to insulating chemical recycling. materials, .

Natural fibres

"lower grade"

A The process shortens the fibres and degrades

fibres are downcycled into non-wovens for

non-textile products.

the output material. Pure fibres (such as 100% cotton) can only be used in spinning. Mixed



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SwitchMed Program co-operation partners in Morocco

Royaume du Maroc Ministère de l'Industrie, de l'Investissement, du Commerce et de l'Economie Numérique



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