

# ECAP and used textiles

This document is aimed at professionals engaged in used textile collection and processing in municipalities, waste companies, charities and private textile collectors across Europe. It provides an overview of relevant issues and links to useful resources where you can find out more.

Topics covered include relevant policy, collection methods and quantities and developments. It will equip you with useful information, but please contact your national and local authorities if you need information for a specific situation.

The document was produced under the European Clothing Action Plan. ECAP's goal is to engender a circular and sustainable approach to fashion and textiles in Europe and is supported by EU LIFE funding. Find out more about ECAP

[www.ecap.eu.com](http://www.ecap.eu.com)



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## Why textiles?

The consumption of clothing and textiles has a large environmental footprint. In Europe it's footprint is only exceeded by food, housing and mobility. The production of clothing and other textiles utilises vast quantities of water, energy, chemicals and raw materials. Washing and care during the use phase also has high energy and water demands and contributes to microplastics in the oceans. Most textile products end up in a landfill or are incinerated after users discard them.

Reducing consumption and recirculating discarded textiles and the materials they contain to new uses is critical in reducing this impact. This embraces the concept of the circular economy where products are repaired, (re-)used for as long as possible, re-manufactured and finally recycled.

Collection, reuse and recycling of post-consumer clothing are key elements in a circular economy strategy. In this document we focus on the collection of discarded textiles from households.

The European Commission's Circular Economy Action Plan will be a key driver in encouraging a circular economy in Europe. One step in implementing the Action Plan has been a revision of the Waste Framework Directive. Under the revised Directive, EU Member States will be obligated from the beginning of 2025 to arrange the separate collection of textile waste. The Commission will develop guidelines on how to organise this and (local) governments are likely to have a key role to play.

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### More information

- > [European Parliament Briefing on the environmental impact of textiles](#)
- > [European Commission's Circular Economy Package](#)
- > [Revised Waste Framework Directive](#)
- > [The transition towards a circular consumer goods economy](#)
- > [On the road towards Dutch circular textiles](#)
- > [WRAP - UK: Sustainable Textiles](#)
- > [Environmental Audit Committee report to the UK parliament](#)
- > [Ellen MacArthur Foundation - A New Textiles Economy](#)



## Used textile collection from households

Many players are involved in the collection of used textiles and textile waste across Europe using a wide range of collection methods. There is no one-size-fits-all solution nor a silver bullet to ensure success but there are some general aspects that should be taken into account.

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### Organisation

Many different kinds of players are involved in the collection of used textiles and textile waste in cities: charitable and commercial collectors, municipalities, public or privately owned waste companies, clothing brands/retailers or a collaborating combination of these.

In many countries, municipalities play a role in used textile collection. This role can be hands-on or relate to the setting of frameworks. By diverting textiles from mixed waste to separate collection streams, they can reduce waste collection and management costs as well as meet their own environmental targets. It is typically the municipality that controls who may collect used textiles on public land. There is an increasing use of more formal qualification/vetting procedures for issuing permissions. Some municipalities limit permission to one or two used textile collectors to gain greater control over collection activities, diminish litter and reduce confusion among citizens. Municipalities can also undertake used textile collection themselves before donating/selling all or part of the collected textiles to charities or professional collectors.

*When deciding on how to get involved and who to engage with, municipalities should consider the following questions:*

- What are the goals: economic, social, environmental or all three?
- How can you increase collection, reuse and recycling and which players can ensure this?
- What criteria should collectors of used textiles meet?
- How can you ensure that there are economic incentives for all the players involved?
- When are textiles defined as waste and who may collect waste and non-waste textiles?
- Are there markets for non-reusable textiles?
- What will happen to the textiles after collection and how can you ensure positive social/environmental impacts?



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### Waste prevention and reduced consumption

The first rule of good waste management and the circular economy is preventing waste in the first place. Citizens can do this by buying less clothing, buying second-hand instead of new, repairing and sharing, and washing less often. Municipalities have a direct interest in waste prevention and can take on a role in influencing consumer behaviour by informing citizens on the impact of textile production and giving good examples for reducing textile waste. This can be done via campaigns, in cooperation with interest organisations or otherwise. Here are some examples of campaigns:

- > [Love your clothes](#)
- > [Love not landfill](#)

### Getting to know the citizen

The success of waste collection often depends on the behaviour of consumers/citizens. Do they know where they can hand in used textiles and what types of textiles they can hand in? Do they have the opportunity, capacity and motivation to do so? In order to design collection systems that work, municipalities and collectors need to understand the citizens' behaviour, opinions and motivation. This may not only affect how a collection system should be set up, but also which partners are important and how money raised from textile collection and processing is used – to reduce taxes, for humanitarian aid or for local social/environmental projects.

Feedback to the citizen on for instance what happens with collected clothes or how much was collected is also important but should be designed with a clear understanding of the citizen. Some examples of communication are given below:

- > [Love your clothes](#)
- > [How to run a social media textile campaign](#)
- > [Household textiles; consumer research and business opportunities](#)
- > [Guidance consumer behaviour](#)
- > [Textile recycling communications campaign](#)



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### Facilities / infrastructure

There are many different ways to collect used textiles, for example by door-to-door collection, street-side containers, in-store collection and collection via bins in housing associations, schools and workplaces. Using a spectrum of collection methods in a city or municipality helps reach different segments of a population. The more convenient an individual collection method is for the citizen, the more expensive it is for the collector, but contamination by non-textile waste may diminish. In general, when bins and collection sites are close to mixed waste containers, in quiet places and less distinctly marked, contamination of textiles increases. In addition to contamination, such placement can also encourage the delivery of low-quality textiles which can neither be reused or recycled.

- > [Textile collection in European cities](#)
- > [WRAP's Collection guide](#)

### Monitoring and transparency

To guide policy development and textile collection activities, local and national governments require information on the collection and processing of used textiles. What quantities are collected? What is the quality of the collected textiles and what share is reused, recycled, incinerated and landfilled? Where do collected textiles go after collection and how are they being treated/used?

It is typically only in situations where used textile collection is perceived as waste collection that this data is collected, or where there are Extended Producer Responsibility obligations (France). Otherwise the data is mostly not gathered. Some municipalities demand annual reporting from textile collectors as part of tendering processes for used textile collection and recently a handful of certification systems for collectors have also been established which include reporting requirements and transparency on a range of issues. After 2025, when textiles collection becomes mandatory, all EU member states will need to report on separate collection quantities.

- > [Mapping clothing impacts in Europe – the environmental cost](#)
- > [The Nordic textile reuse and recycling commitment – a certification system for used textiles and textile waste](#)
- > [French EPR system for clothing, linen and footwear](#)



# Sorting, processing, reuse and recycling

The textile industry is a global one, both in the production/retail of new textiles and the collection/sorting/reuse and recycling of used textiles. Collected used textiles are typically sold to large wholesalers for sorting, either without any processing or after the best-quality clothing has been removed for resale in the collector's own shops. Since unsorted textiles are considered waste under EU waste transport regulations, the sorting facilities are typically located within EU borders, often in countries with lower wage levels since all sorting is done manually.

After sorting, re-wearable clothing is sold on various global markets depending on

quality and type. Non-reusable textiles can potentially be recycled as industrial wipes, insulation material or in the automotive industry. However, these markets are relatively saturated and prices are low. Most recycling or downcycling only occurs because it can 'piggy-back' on textile reuse.

## > The textiles industry

The industry has a vision for large-scale textile-to-textile recycling in the future so that old clothing can be recycled into new. Significant research and piloting are being done but there are still a number of technological, economic and organisational barriers.

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## Export

The export of textiles for reuse in other countries can have both positive and negative environmental and social consequences. Export allows collectors to achieve far higher rates of reuse than if the textiles remain in the collection country, and reuse has much higher environmental, social and economic benefits than recycling. On the other hand, global reuse markets are becoming saturated, and in the longer term new circular solutions are needed along with a sharp decrease in consumption rates.

- > [Exports of used textiles from Nordic countries, Policy Brief](#)
- > [WRAP UK \(2019\) Fibre to fibre recycling: An economic & financial sustainability assessment](#)
- > [Developments in global markets for used textiles and implications for reuse and recycling](#)

## Sorting

Used textiles are initially sorted manually into typically more than 100 different types and qualities of clothing for sale on global reuse markets. The residual non-reusable textiles are normally sorted manually and recyclable/down cyclable textiles are picked out. The remainder is sent to a landfill/incinerator. However, there is a new generation of automatic sorting machines under development for the residual, non reusable, textiles to sort them by fibre type and colour for potential recycling.

- > [Fibersort](#)
- > [SIPTex](#)

## Reuse

Reuse by a new consumer is environmentally the most favourable route for discarded clothing and textiles. Better qualities can be sold locally in second-hand stores or by people themselves. Used clothing is also exported overseas to Africa, Asia or Eastern Europe for reuse there.

## Upcycling and redesign

The next best environmental solution for used textiles is upcycling, where fabrics are cut up and re-sewn to make new clothing, accessories and other textile products. This can be labour-intensive work, which is why it has remained rather a niche sector.



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## Recycling

Textile fibres can be used again through mechanical and chemical recycling. With mechanical recycling, machines pull the fibres apart (fiberizing) and these fibres are transformed into yarn by spinning. The disadvantage of mechanical recycling is that the fibre becomes shorter, reducing quality. After recycling a few times it becomes an issue. The process, on the other hand, requires relatively little energy.

Process mechanical recycling:

- > **Wolke**
- > **Texperium**
- > **Close the loop**

In chemical recycling, the fibres are dissolved into a liquid substance from which yarn can be made. Chemical recycling uses more energy than mechanical recycling, but the quality of this yarn is often high and there is wide range of uses for the yarn. Chemical recycling is new and large scale recycling is still being developed. Chemical recycling techniques are used for producing viscose, the product that comes from chemical cotton recycling.

Chemical recycling companies:

- > **Saxcell**
- > **Wornagain**
- > **Re:newcell**
- > **Lenzing**

Fibre-to-fibre recycling (F2F). As shown in the F2F projects of ECAP, this can be done successfully. A key success factor is collaboration across the value chain, from brand and retailers to garment makers to yarn and fabric suppliers, from collectors to recyclers. Fibre-to-fibre recycling of pre-consumer textiles (cuttings) is generally easier than that of post-consumer waste due to fibre lengths and detailed knowledge of the content of the waste.

- > **European business on circular textiles**
- > **F2F pilots and lessons learned**
- > **Nordic examples of textile to textile recycling**
- > **Remokey**
- > **EllenMacArthur Foundation; make fashion circular**
- > **EcoTLC; selection of interesting research projects into textiles recycling**



## Key recommendations for good textile collection

The ECAP report 'Used textile collection in European cities' is a study of used textile collection in seven cities/regions across Europe. Some key lessons have been drawn out that can inspire municipalities and used-textile collectors.

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### Recommendations

- Set measurable targets related to textile collection and then set up systems for monitoring them.
- Conduct a citizen survey before designing measures for meeting targets – the reasons for not handing in used clothing and textiles may be complex and include many hitherto unknown factors.
- Provide clarity in communications on non-reusable textiles.
- Consider increasing collection convenience if collection levels are low, by increasing collection point densities or collection at home or in the workplace.
- Consider providing a range of collection/hand-in options or ensure that such a range is provided by collectors.
- Collaboration between different players can strengthen collection, subsequent processing and sale. Map important players and get to know them before you start.
- Make use of existing players' experience and knowledge of textile collection, used textile processing and global markets, and do not reinvent the wheel.
- Consider a common brand for all types of collection activities, containers and players to reduce confusion/inactivity among citizens and reinforce collection communications.
- Ensure the economic viability of collection and processing for all players in the value chain, otherwise collection initiatives will not last.
- Ensure that collection and processing solutions comply with national legal frameworks.
- Be pragmatic about local solutions.
- Social, circular economy and environmental gains can be made by combining wage support for the long-term unemployed or disadvantaged groups in employment/training in collection, sorting, processing and sale of used textiles.
- Consider increasing/ensuring transparency in the processes for collected textiles and how the money that is raised by their sale, is used. For example, via an accreditation system such as the Nordic Reuse and Recycling Commitment.

> [Used textile collection in European cities.](#)