

# COTTON

- ▶ Cotton is an extremely water-intensive crop. For example, an average cotton t-shirt can require 2,700 litres of water.<sup>12</sup>
- ▶ Cotton accounts for 11% of all pesticides used every year, even though the area of production only covers 2.4% of the world's arable land.<sup>1</sup>
- ▶ The supply chains for cotton goods are often associated by the exploitation of workers, particularly young migrant women and girls.
- ▶ The EU has no recycling or reuse targets for cotton, which contributes to its low recycling and reuse levels.



Although the EU has established a voluntary “ecolabel” and is developing “green” public procurement policies for textiles including cotton,<sup>2</sup> these measures are inadequate when it comes to dealing with the over-consumption of cotton and its cradle-to-grave impacts. These include water depletion, the cultivation and impacts of genetically modified cotton, pesticide usage, and workers’ rights abuses in the garment supply chains.

Cotton is widely used throughout the European textile and clothing industry, which is now dominated by the import of finished garments, rather than home textiles, yarns or fibres.<sup>3</sup> This situation primarily came about as a result of the development of a substantial cotton textile producing industry in Britain during the Industrial Revolution. The UK is expected to retain its place as one of the world’s main importers of cotton clothing and home textiles, despite a recent slump in demand as a result of recession.<sup>4</sup>

In terms of European production, the five most populated countries: Italy, Germany, France, Spain and the UK account for around three quarters of EU-27 production of textiles and clothing.<sup>5</sup> However, in recent years there has been a decline in textile, clothing and fashion industries, primarily driven by the economic crisis. Competition with low-cost producing countries has also triggered an exodus of cotton production facilities to Eastern Europe and Asia.<sup>6</sup>

Overall, the EU’s increasing reliance on cotton imports raises particular concerns about human rights issues in clothing factories in exporting countries. Cotton production is highly concentrated in just a few countries, with the top four producers being China, the US, India and Pakistan.<sup>7</sup> China and India are also the largest cotton consumers, which is unsurprising given the fact that their populations both exceed one billion people.<sup>8</sup>

The US’s substantial and highly subsidised cotton industry has now out-competed many poorer developing countries operating in the international market, including West African states.<sup>9</sup>

The impacts of cotton cultivation and production are extensive, affecting people's livelihoods and lands. In 2011, Friends of the Earth Togo carried out on-the-ground analysis showing how cotton cultivation tends to restrict the ability of farmers to diversify their local food production. In Togo, cotton is mainly grown and handpicked by poor, low-paid family farmers, including children, who have had their environment degraded and health jeopardised by high levels of pesticide use. Peasant farmers have provided testimonies that cotton "kills" the soil and poisons local water supplies.<sup>10</sup>

Similarly in Cameroon, family farmers also dominate cotton production, which is mainly cultivated in monoculture plantations. This sector is similarly characterised by high pesticide usage and poverty (due to indebtedness from the high input costs and the low market price of cotton). Friends of the Earth Cameroon has observed how cotton production has driven the clearing of forests and grasslands, exposing soils to erosion and a loss of fertility<sup>11</sup>.

## Water

Some estimates indicate that cotton is the largest user of water among all agricultural commodities, representing more than half of the irrigated agricultural land globally.<sup>13</sup> Cotton production requires 550-950 litres per square metre planted, or 7,000-29,000 litres of water for each kilogram of cotton produced.<sup>14</sup> One cotton t-shirt can require 2,500 litres of water.<sup>15</sup>

European consumers and policy-makers have a major role to play in reducing these terrible impacts on water resources. 90% of the water footprint of UK clothing is overseas, often in countries that already face water stress or scarcity.<sup>16</sup> Clothing contributes up to 8% of the global water footprint of UK products and household use.<sup>17</sup> Moreover, cotton production and processing are also a major source of fresh water pollution.<sup>18</sup>

## Pesticides

Globally, cotton accounts for 11% of all pesticides used every year, even though the area of production only covers 2.4% of the world's arable land.<sup>19</sup> Field studies carried out in Vidharbha, the eastern region of the Indian state Maharashtra, by Navdanya (a network of seed keepers and organic producers spread across 16 states in India) also showed that pesticide use had dramatically increased. Bollworm pests that attack crops have become more resistant to GM cotton and new pests have emerged, leading to larger applications of pesticides.<sup>20</sup>

## GM cotton

During the last two decades, India has opened up its agricultural sector to the global market, which resulted in increased costs and lower profits for small farmers. A national agrarian crisis has ensued as farmers have fallen into spiraling debt. This dire situation has triggered the largest ever recorded suicide epidemic: in the past 16 years more than a quarter of a million farmers have committed suicide,<sup>21</sup> which is likely to be a significant underestimate considering the fact that women are often excluded from such figures due to their lack of land titles and recognition as farmers.<sup>22</sup>

This tragedy has blighted the Indian cotton sector, which is virtually monopolised by Monsanto's gene technology: 90% of the total area of cotton production is under Bt (*Bacillus thuringiensis*)<sup>23</sup> cotton, according to the Indian government.<sup>24</sup> Indeed, the highest rates of suicides coincide with the areas producing the highest amount of cotton.<sup>25</sup>

Since its first introduction in 1996, the use of Bt cottonseeds has expanded rapidly in several countries, including India. The higher costs associated with Bt cottonseeds and related pesticides have contributed to farmers ending up with crushing debts. Economic hardships faced by family farmers have resulted in suicides taking place on a massive scale, often by swallowing the poisonous pesticides that are used to spray their Bt cotton crops.<sup>26</sup>

## Emissions

The production, export and consumption of cotton generates around 0.8% of global CO<sub>2</sub> equivalent emissions.<sup>27</sup> Mechanised farming techniques, particularly in the US and Australia, cause emissions from combustion of fuel, as well as those resulting from fertiliser and pesticides.

Moreover, around one third of these emissions are associated with the international trade of cotton, given that most European countries have no cotton production, but import significant amounts in the form of clothes and other goods.<sup>28</sup> Indeed, it is calculated that the carbon emissions generated by the clothing of an “average” British household is the equivalent to driving a modern car 6,000 miles (9,656 kilometres) or 1.5 tonnes of CO<sub>2</sub> equivalent emissions per year.<sup>29</sup>

## Supply chains and human rights

Throughout South-East and East Asian countries including Thailand, Cambodia, Malaysia, India, China and Bangladesh, migrant workers – especially women and even more so teenage women – are relied upon as cheap labour to be exploited to produce clothing for companies like Marks & Spencers, H&M, Gap, Levi-Strauss and Zara.<sup>30</sup> Many Western brands and retailers have promised to abolish labour abuses at their suppliers, but continue to depend upon exploited child labour characterised by poverty wages, unhealthy working and accommodation conditions, and the absence of trade unions and basic workers’ rights.<sup>31</sup>

## RECYCLING

In places where textiles are not collected as part of the household recycling collection scheme, donations to charity shops and the use of commercial roadside collection bins can be used to ensure that textiles do not end up in landfill or incineration. Despite this situation, other options to ensure that textiles do not end up in landfill or incineration include donations to charity shops or the use of community roadside collection bins.

After collection, used textiles are usually separated by hand in waste treatment facilities and can be reused depending on their quality. On average, 40-50% of waste textiles are suitable for reuse as wearable textiles, 25-20% can be used for cleaning cloths, and 20-30% can be used as a secondary raw material by other industries, including through processes that fray out and mix inferior fibers with other substitutes to produce paper, board and fleece.<sup>32</sup> Unfortunately, the sector is suffering from a decrease in the quality of materials donated, as modern clothes frequently come from cheap producers.<sup>33</sup>

Improvements in the reuse of textiles are vital in both environmental and social-economic terms. The sector provides employment, including for those who are disadvantaged. In France, it costs €20,000 per year to support an unemployed person, but for work integration contracts in the field of textile collection, reuse and recycling, the state only pay half of this amount whilst boosting green jobs and developing the skill-sets of workers.<sup>34</sup> In the UK, about 50% of discarded cotton t-shirts, amounting to 120 million t-shirts (around 30,000 tonnes), are reused in some form every year. This avoids 450,000 tonnes of CO<sub>2</sub> equivalent emissions and each t-shirt can yield £1 (€1.25) of net revenue to reuse organisations.

Certain Member State textile recyclers have limited available information on aggregate amounts of textile recycling, but not specific data relating to cotton. However, in those EU countries where there are established trade associations for textile recyclers, certain data is aggregated for all textiles, although still not specifically for cotton. Around 4kg of textiles per capita per annum are collected in Belgium.<sup>35</sup> The Netherlands has set a target for textile collection at 5kg of textiles per capita per annum.

The Finnish Red Cross Recycling Department Store chain has specialised in the mass collection, sorting and sale of used clothes and textiles for reuse and recycling into rags.<sup>36</sup> In France, organisations that place clothing textiles onto the French market pay a financial contribution that funds an organisation called EcoTLC, which is responsible for the reuse and recycling of clothes.<sup>37</sup>

The largest tonnages of textiles have been collected in Germany.<sup>38</sup> This has involved engaging commercial establishments, charities and church organisations, all of which have collaborated with textile recyclers for decades.<sup>39</sup> Recycled textiles are used for a variety of purposes, such as for insulation in the automotive, furniture and building sectors.

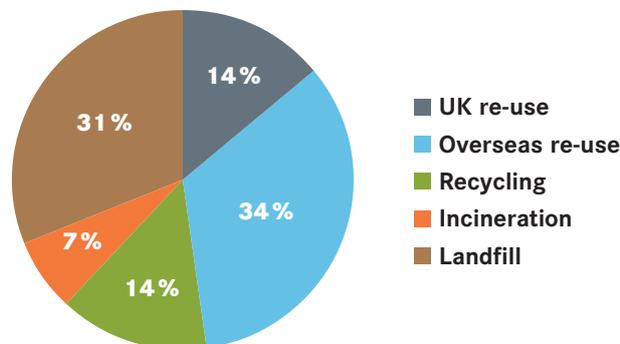
The donation of clothes that are exported to the Global South can provide cheaper clothing, but it can also have a negative impact on local textile markets.<sup>40</sup> Certain charity shops and not-for-profit projects, such as U-landshjälp från Folk till Folk in Finland, support the domestic recycling system and also donate both clothes and profits to development projects in poor countries.<sup>41</sup> It is important that quality control is maintained for second-hand garments that are exported, otherwise there is a major risk of transferring disposal costs to poorer countries.

## WASTE

Due to the lack of data specifically relating to cotton waste, recycling and reuse, the following sections frequently refer to textile recycling more broadly. Recent research shows that 31% of clothing ends up in landfill in the UK, amounting to around 350,000 tonnes of used clothing, with an estimated value of € 180 million (£140 million), every year.<sup>42</sup>

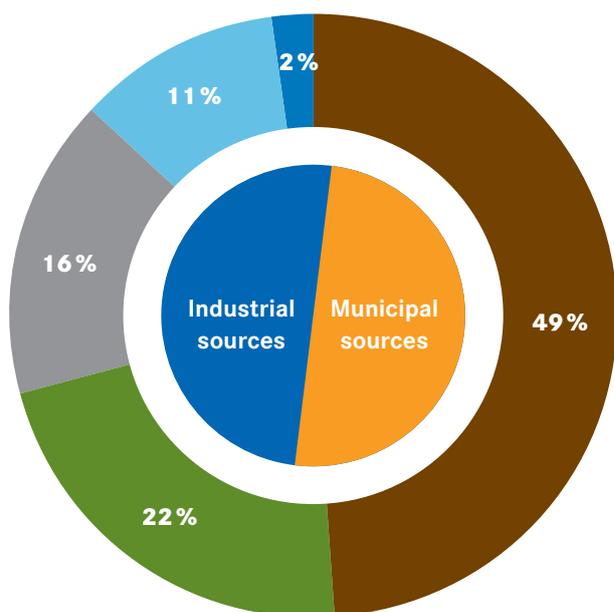


Figure 1: Destinations of end-of-life clothing in the UK<sup>43</sup>



According to the European Commission, EU consumers discard 5.8 million tonnes of textiles a year, with only 1.5 million tonnes (25%) of these post-consumer textiles being recycled by charities and industrial enterprises. The remaining 4.3 million tonnes goes to landfill or is burnt in municipal waste incinerators. There is no available data on what percentage of this is specifically cotton waste.

Figure 2: Estimated textiles waste generation by sources <sup>44</sup>



- Municipal solid waste (MSW), Bulky waste\*
- Worn clothing & miscellaneous textiles wastes\*
- Demolition & construction waste
- Production area (industrial sources)
- End-of-life vehicles

\* includes waste fractions from MSW



## COTTON REUSE, RECYCLING AND RE-SOURCING SHOULD BE A PRIORITY

Many European citizens are willing to purchase or receive second-hand clothes, especially if there is a broader and better quality range available. In the UK, two-thirds of people already use second-hand clothes.<sup>45</sup> Unfortunately, the sector is suffering from a decrease in the quality of donations, due to the growing consumption of cheap clothes.<sup>46</sup>

Unnecessary landfill and incineration of clothing and other textiles must be minimised. Therefore, legally binding national regulations for high collection rates and investment in recycling infrastructure need to be implemented.

The resource impacts of clothing sold to consumers needs to be reduced, which would involve raising awareness of the impacts of cotton on water, land and livelihoods. Alternative fibres with lower social and environmental impacts could be sourced. GM cultivation and import bans could be applied to Bt cotton as well as other GM fibres, fuel and feed crops that result in land grabbing, high pesticide usage and environmental damage.

The exploitation of workers in global supply chains has to be ended. The legal enforcement of principles based on equality, human rights and security would ensure workers receive a living wage, fair benefits such as maternity and sick pay, and the freedom of association to form trade unions.<sup>47</sup>

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