

# The Case for Organic Cotton

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ORGANIC COTTON ACCELERATOR

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Author: Alicia Urios Gracia

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## About the Organic Cotton Accelerator

OCA is a multi-stakeholder organisation dedicated to advancing farmer prosperity and ensuring a transparent, resilient, and responsible organic cotton supply chain. Established in 2016, OCA brings on-the-ground evidence from over 100,000 cotton farmers and 60 partner organisations, offering practical insight into how EU policy can drive both circularity and social impact.

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Rokin 102, 1012 KZ Amsterdam, The Netherlands  
[organiccottonaccelerator.org](http://organiccottonaccelerator.org)  
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# INTRODUCTION

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The [Ecodesign for Sustainable Products Regulation \(ESPR\)](#) constitutes an unprecedented effort to make products more sustainable across the European Union (EU). At the Organic Cotton Accelerator (OCA), we believe the forthcoming Delegated Act on textiles—which will set specific measures for the sustainability of textile products—should explicitly prioritise the evaluation of intermediate products like organic cotton, due to their significant impact on the sustainability of finished goods. The sustainability of the final product is critically influenced by the methods employed in cultivating the fibre. In fact, a significant portion of the environmental and social footprint of textiles is attributed to the production of raw materials, with cotton being the largest driver among natural fibres. Raw material extraction, whether from plants, animals, or the Earth (i.e., fossil fuels), accounts for 21% of the textile industry emissions (Circle Economy, 2024, p. 33).

OCA is calling for the recognition of organic cotton within the Delegated Act for textiles under the ESPR. The value of organic agriculture is well-recognised in the EU's Farm to Fork strategy, as a key element of sustainable agriculture. Furthermore, the EU Agriculture and Food Vision published in February 2025 recognises organic as best practice in generational renewal and protection of ecosystem services, reinforcing the need to integrate organic materials like cotton into sustainability regulations. Organic cotton offers significant environmental and social advantages over conventional cotton, including the lack of chemical pesticides use, lower water consumption, and enhanced soil health, making it a critical component in achieving sustainable textile products across the EU market.

We therefore urge the European Commission to recognise organic cotton in the context of the ESPR framework, by listing it in Annex 1 of ESPR as a "sustainable renewable material." This classification falls under the ESPR product aspects (Annex I) of "use or content of sustainable renewable materials." We recommend that the Delegated Act for textiles include specific information requirements on organic cotton to improve product aspects like resource efficiency, as outlined in Articles 5 and 7 of the ESPR. In short, organic cotton should be formally integrated into ESPR ecodesign information requirements to drive improvement in textile sustainability.

## Why organic cotton?

The textile industry significantly contributes to rising Greenhouse Gas (GHG) emissions through various processes, including the extensive use of fertilisers and pesticides for natural fibre production, land-use changes to expand agricultural areas, material production and finishing, and reliance on fossil fuels for both synthetic and natural fibre production. Organic cotton production, as compared to conventional methods, offers a more sustainable alternative by significantly reducing the environmental impact of tier 4 textile products. Organic cotton is cultivated through farming systems that prioritise ecological balance, soil health, and biodiversity. By avoiding synthetic pesticides, synthetic fertilisers, and genetically modified seeds, organic cotton represents a sustainable and regenerative approach to cotton production, that benefits farmers, ecosystems, and the climate.

As a multi-stakeholder organisation dedicated to advancing farmer prosperity and ensuring a transparent, resilient, and responsible organic cotton supply chain, OCA has been supporting farmers in India, Pakistan, and Türkiye in their transition to organic cotton through capacity building, access to resources, and market linkages. OCA's work, in collaboration with brands and retailers, suppliers and manufacturers, farm groups and civil society, has mobilised growing industry support and investment in organic cotton, benefiting the entire cotton supply chain. OCA also plays an important role in bridging data gaps and driving transparency in the organic cotton supply chain through data-driven insights. Organic cotton's documented benefits, combined with strong demand for sustainable fibres across the textiles value chain, underscore why organic cotton merits strong consideration in policy frameworks like ESPR.

## Research goals

In response to a request from the European Commission, this research was undertaken to substantiate the case that organic cotton significantly improves the environmental impacts of textile products compared to conventional cotton. Using the product aspects outlined in Article 5(1) of the ESPR<sup>1</sup> as a guiding framework, we analysed existing scientific literature and industry reports—including insights on consumer demand for organic textiles and broader sustainability trends within the textile industry to highlight how various product aspects could be improved by opting for organic cotton.

We acknowledge that for certain product aspects such as durability, recycled content, or recyclability, there is limited evidence distinguishing between organic and conventional cotton. Nevertheless, policymakers should recognise the proven advantages of natural fibres like cotton in the processing and manufacturing steps, beyond cultivation. Moreover, recent research has proven the harmful impact of microfibres emitted by synthetic materials during washing and at end-of-life in ecosystems (Kounina, et al., 2024; and Saadi & Boulay, 2025). The inherent benefits of organic cotton only grow the case for its inclusion into policy frameworks such as ESPR.

## Research methodology

This document uses a desk research methodology (a form of secondary research) to gather data from existing, credible sources. The primary goal was to provide a **comprehensive overview of the existing scientific evidence on the environmental impact of organic cotton and on consumer/industry interest in its use over conventional cotton and other fibres**. We primarily used life cycle assessments (LCAs), and studies conducted by organisations operating in the organic cotton value chain, as well as academic reports and surveys, all complemented by OCA's internal data and expertise. We identified sources through keyword searches (e.g., via Google Scholar), prioritising relevant and credible materials published in the last five years. Selected sources were chosen for their relevance to the ESPR product aspects and the clarity with which they compared organic cotton to conventional benchmarks.

This analysis complements the findings from **OCA's own regional LCA study**, which assesses the environmental footprint of organic and conventional cotton farming. The LCA study was conducted using a robust dataset collected at the farm level, including input and yield data from more than 18,000 farmers across multiple production systems and three growing seasons in India.

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# ANALYSIS

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## Product aspects

Currently, the percentage of organic vs. non-organic cotton in a product can only be determined through supply chain traceability and certification rather than chemical or physical testing, which is not accurate and shows little variations when it comes to fibre composition. Certification schemes verify organic content through audits, documentation, and tracking of certified organic cotton from farm to final product. As a result, some product aspects have specific implications for organic cotton while others apply generally to cotton fibre regardless of the farming method.

**Table 1: Product aspects definitions**

Table 1 below summarises key product aspects from Article 5(1) of the ESPR (Annex I) and explains how they are defined, either in the ESPR itself (Article 2), in other EU legislation (e.g., Waste Framework Directive) or official sources (notably the Joint Research Centre - JRC). These definitions provide context for the aspects of textile products that our analysis will explore, especially where organic cotton has a differentiated impact.

Parameter	Fibre	Definition
Durability	Cotton	The ability of a product to maintain over time its function and performance under specified conditions of use, maintenance and repair (ESPR Article 2)
Reliability	Cotton	The probability that a product functions as required under given conditions for a given duration without an occurrence which results in a primary or secondary function of the product no longer being performed (ESPR Article 2)
Reusability	Cotton	'Re-use' means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived (Waste framework Directive, Article 3(13))
Upgradability	Cotton	'Upgrading' means actions carried out to enhance the functionality, performance, capacity, safety or aesthetics of a product (ESPR Article 2)
Repairability	Cotton	'One or more actions carried out to return a defective product or waste to a condition where it fulfils its intended purpose (ESPR Article 2)
The presence of substances of concern	<b>Organic cotton</b>	Defined in multiple Regulations (see Article 2 (27) ESPR)  An item of textile apparel with good information on presence of substances of concern is accompanied with a comprehensive list of all the substances of concern that it contains (above specified thresholds, as appropriate). Substances are used in order to give specific characteristics to the product, facilitate the manufacturing process or to help during the treatment of the product when it becomes waste. Consequently, substances of concern could affect durability, recyclability and environmental impacts. (JRC, 2024, p. 8)
Energy use and energy efficiency	<b>Organic cotton</b>	'Energy efficiency' means the ratio of output of performance, service, goods or energy to input of energy (Energy Efficiency Directive, Article 2 (8))
Water use and water efficiency	<b>Organic cotton</b>	An item of textile apparel with low water use or high water efficiency should (1) be manufactured with low water consumption, (2) use materials which are not water intensive in their manufacturing stage, (3) allow to reduce the water consumption during the use phase in laundering activities, and (4) be treated at its end-of-life with non-water intensive techniques. (JRC, 2024, p. 98)

Resource use and resource efficiency	<b>Organic cotton</b>	An item of textile apparel with low resource use or high resource efficiency should, among other things, use materials that throughout its life cycle stages (1) consume raw materials produced in sustainable way, (2) indirectly use land assuring its future use with the same activity, (3) use ecosystems without damaging their biodiversity and general balance. (JRC, 2024, p. 8)
Recycled content	Cotton	An item of textile apparel with recycled content should contain recycled materials, in substitution of virgin materials. The recycled material should come from recyclable textile products to meet the fibre-to-fibre recycling objectives identified by the EU Textile Strategy. (JRC, 2024, p. 98)
The possibility of remanufacturing	Cotton	'Remanufacturing' means actions through which a new product is produced from objects that are waste, products or components and through which at least one change is made that substantially affects the safety, performance, purpose or type of the product. (ESPR, Article 2)
Recyclability	Cotton	'Recycling' means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations. (Waste framework Directive, Article 3 (17))
The possibility of the recovery of materials	Cotton	'Recovery' means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II sets out a non-exhaustive list of recovery operations. (Waste Framework Directive, Article 3 (15))
Environmental impacts, including carbon footprint and environmental footprint	<b>Organic cotton</b>	<p>An item of textile apparel with low environmental impact should have, among others, the following characteristics: in all life cycle stages it should (1) use a limited quantity of energy and water, (2) release directly and indirectly a limited quantity of pollutants (e.g. SO<sub>x</sub>, NO<sub>x</sub>, COD, microplastics) into the environment, use in the product and emit into the environment minimum possible amounts of substances of concern. (JRC, 2024, p. 99)</p> <p>'Environmental footprint' means a quantification of the environmental impacts resulting from a product throughout its life cycle, whether in relation to a single environmental impact category or an aggregated set of impact categories based on the Product Environmental Footprint method established by Recommendation (EU) 2021/2279 or other scientific methods developed by international organisations, widely tested in collaboration with different industry sectors and adopted or implemented by the Commission in other Union law. (Article 2 (24) ESPR)</p> <p>'Carbon footprint' means the sum of greenhouse gas emissions and removals in a product system, expressed as CO<sub>2</sub> equivalents and based on a life cycle assessment using the single impact category of climate change. (Article 2 (25) ESPR)</p>
Expected generation of waste	Cotton	An item of textile apparel with low expected generation of waste should have, among others, the following characteristics: (1) in all life cycle stages, it should generate minimal amounts of waste, (2) it should be designed and manufactured to prevent the generation of post-industrial waste, (3) ideally it should be designed to increase emotional attachment to the user to limit the demand for new products, (4) it should be durable to postpone the demand for new products. (JRC, 2024, p. 99)

## Industry demand for organic cotton and consumer perceptions

Current market trends indicate a growing demand for organic cotton, which, however, is currently not being matched by the available supply (German Environment Agency, 2025). In 2022-2023, cotton sourced through one or more of the 15 farm-level organic standards or programs present globally represented 2.9% of global cotton production, with an estimated production of 706 thousand tonnes (Textile Exchange, 2025). Organic cotton production has been growing approximately 4% per year over the last decade (Textile Exchange, 2022), but this steady growth still falls short of surging demand. Recent cotton trends and dynamics showed a greater demand for organic cotton in 2025 (Fibre2Fashion, 2025). This aligns with the 84% increase in demand for organic cotton by 2030 compared to a 2019-2020 baseline (Textile Exchange, 2021). Despite barriers such as the difficult transition period for farmers and limited resources, there is proven interest and increased capacity to grow organic cotton production, as well as untapped potential for organic cotton to capture a larger share of the global cotton market. Incentivising organic cotton is therefore critical to closing the supply-demand gap, ensuring the EU textile industry is better equipped to meet future market demands for sustainable materials.

Consumer perceptions also play a pivotal role in driving demand for sustainable textiles. Shifting consumer awareness and preferences are influencing purchasing behaviour: research shows that informing consumers of the positive impacts of organic cotton increases their interest in buying organic cotton products.

### Table 2: Industry demand for organic cotton and consumer perceptions

Table 2 below compiles diverse sources to provide deeper insights into industry demand for organic cotton and consumer perceptions of organic cotton and textiles.

Topic	Source	Key highlights
Industry demand for organic cotton	Textile Exchange. (2025). <a href="#">Materials Market Report</a>	In 2023/24, approximately 706 thousand tonnes of cotton were estimated to have been certified to one or more of the 15 farm-level organic standards or programs known to be used for cotton production that year, representing 2.9% of global cotton production. This marks an increase from the 574 thousand tonnes of cotton certified to organic standards in 2022/23, representing 2.3% of total production that year.
	Textile Exchange. (2022). <a href="#">Organic cotton market report</a> .	The report highlights India as the largest producer of organic cotton, accounting for approximately 51% of global supply, followed by China, Kyrgyzstan, and Türkiye. While overall production grows, challenges remain particularly in data transparency and supply chain traceability. The increasing demand for organic cotton underscores the importance of addressing these issues to maintain the integrity and sustainability of organic cotton production.

	Textile Exchange. (2021). <a href="#"><u>Organic Cotton Demand Insights Report.</u></a>	Overall, the findings indicate an 84% increase in projected organic cotton demand by 2030 compared to a 2019-2020 baseline.
	Organic Cotton Accelerator (2024) OCA Farm Programme Highlights	During the 2023-2024 season, OCA registered growth in the number of projects, the area under conversion, the amount procured, and net income per hectare. In 2024, a total of 89,761 metric tons of seed cotton were procured from OCA’s farm programme, compared to 87,255 metric tons in the previous year.
	German Environment Agency. (2025). <a href="#"><u>Cost allocation and incentive mechanisms for the environment, climate protection, and resource conservation along global supply chains: Roadmaps for the implementation of sustainable supply chain management approaches and instruments.</u></a>	This report provides an in-depth examination of current trends and future projections for organic cotton demand. It highlights a significant increase in consumer awareness of sustainable textiles, leading to a projected annual growth rate of 10% in organic cotton demand over the next five years. The report identifies key drivers of this demand surge, including environmental concerns, stricter regulatory frameworks, and the fashion industry's shift towards sustainable sourcing.
	Fibre2Fashion. (2025). <a href="#"><u>Top 10 biggest cotton dynamics and trends for exporters to look at in 2025.</u></a>	According to TexPro, a market intelligence tool, designed to inform sourcing and trade strategies, organic cotton growth is one of the top 10 global cotton trends affecting exporters in 2025. TexPro reported a steady rise in organic cotton production driven by greater concerns for sustainability in cotton farming a growing awareness around the cotton market price in India, which plays a significant role in farmers’ decisions to adopt organic practices.
Consumer perceptions on organic cotton/textiles	Mills, S., Sarkaria, S., & Harvey, A. (2020). <a href="#"><u>Organic Cotton: Consumer Perception and Knowledge</u></a>	Consumers indicated that knowing that a product was made sustainably, would increase their likelihood of purchasing it. While organic cotton products come at a higher price point, greater awareness of their benefits and responsible sourcing initiatives could further encourage consumer demand.
	Lenzing Group (Lenzing) (2020) <a href="#"><u>Global Consumer Perception Survey on Sustainable raw materials in Fashion and Home Textiles</u></a>	When asked to define sustainable clothing, respondents prioritised products made from natural, organic or botanic materials and those processed or manufactured using humane, eco-responsible processes. Over 80% of respondents expressed being “extremely interested” or “very interested” in sustainable fashion and purchasing clothing made from sustainable raw materials.

	<p>Han, T.-I. (2018). <u>Determinants of Organic Cotton Apparel Purchase: A Comparison of Young Consumers in the U.S.A. and South Korea.</u> Sustainability, 10(6), 2025. <a href="https://doi.org/10.3390/su10062025">https://doi.org/10.3390/su10062025</a></p>	<p>Forming positive attitudes towards purchasing organic cotton apparel is extremely important for motivating American consumers. This study suggests that the most effective way to form positive attitudes would be to increase injunctive norms (i.e., norms that communicate what people believe others should do, emphasizing a sense of social or moral obligation) related to organic cotton apparel. Thus, creating marketing strategies that highlight the positive social viewpoints and providing more information on environmental and social benefits of these products can play a key role in encouraging purchase behaviour.</p>
<p>Consumer perceptions on organic cotton/textiles</p>	<p>Hasan, M. N. U., Liu, C., &amp; Ahmed, B. (2021). <u>Organic Cotton Clothing Purchase Behavior: A Comparative Study of Consumers in the United States and Bangladesh.</u> Textiles, 1(2), 376-386. <a href="https://doi.org/10.3390/textiles1020019">https://doi.org/10.3390/textiles1020019</a></p>	<p>To form positive attitudes and purchase intent for American consumers, marketers should focus on educating them about the positive impact of Organic Cotton Clothing (OCC) and resulting environmental sustainability.</p>
	<p>Oh, K., &amp; Abraham, L. (2016). <u>Effect of knowledge on decision making in the context of organic cotton clothing.</u> International Journal of Consumer Studies, 40: 66-74. <a href="https://doi.org/10.1111/ijcs.12214">https://doi.org/10.1111/ijcs.12214</a></p>	<p>The results suggest that differentially knowledgeable consumers may focus on different types of information provided on product labels when evaluating organic cotton apparel products. While product-related information on product labels is essential, however, providing additional information on the benefits of using organic cotton and socially responsible business practices may improve consumers' knowledge and acceptance of organic cotton apparel products.</p>

## Product aspects most impacted by organic cotton

As noted, various product aspects can be improved by opting for organic cotton in the textile industry. Based on our analysis of multiple scientific sources, the areas where organic cotton has the greatest positive impact are:

- **Energy use and energy efficiency:** Organic cotton cultivation generally consumes less energy. It often requires less mechanical tillage operations and relies on organic fertilisers (like compost or manure) that are less energy-intensive to produce than synthetic fertilisers.
- **Water use and water efficiency:** Research suggests a consensus on the benefits of organic management techniques and methods for conserving water and reducing dependence on irrigation. Organic farming methods can improve water efficiency through better soil moisture retention and ecosystem management. While it is challenging to pin down a universal water savings figure (due to geographic differences), research indicates that organic techniques help conserve water and reduce dependence on irrigation.
- **Resource use and resource efficiency:** Organic farming promotes more mindful land use and protection of natural habitats. By prioritising ecological balance, organic cotton farming naturally supports biodiversity (healthy soils teeming with microbes, more pollinators and wildlife) and reduces pollution. Farmland under organic management often serves as a refuge for biodiversity, and careful land-use practices ensure the soil can continue to be productive for future cultivation.
- **Environmental impacts, including carbon footprint and environmental footprint:** Across its life cycle, organic cotton tends to have a smaller environmental and carbon footprint. It avoids the greenhouse gas emissions associated with manufacturing synthetic fertilisers and pesticides. Although exact climate impact reductions vary by region, studies consistently find that organic methods lead to lower greenhouse gas emissions and reduced soil and water toxicity compared to conventional methods, largely due to reduced chemical inputs and tillage.

This analysis is consistent with the findings from OCA's Life Cycle Assessment study for India, completed in 2025, which indicates that conventional farming systems have higher carbon footprints and environmental impacts compared to organic systems. As per OCA's LCA, on-field emissions dominated environmental impacts across key categories, including climate change, acidification and eutrophication. Moreover, the study showed fertiliser application (both mineral and organic) is a major contributor to these environmental impacts.

### Table 3: Product aspects impacted by organic cotton

This table compiles a range of scientific studies examining the environmental impacts of organic cotton. As determined in the first column, each source is aligned with the product aspects laid down in Article 5(1) of the Eco design for Sustainable Products Regulation (ESPR).

Product aspects	Source	Key takeaways
Energy use and energy efficiency	<p>Altenbuchner, C., Vogel, S., &amp; Larcher, M. (2020). <u>Community transformation through certified organic cotton initiatives—an analysis of case studies in Peru, Tanzania and India</u>. <i>Renewable Agriculture and Food Systems</i>, 1–16. <a href="https://doi.org/10.1017/S1742170519000462">https://doi.org/10.1017/S1742170519000462</a></p>	<p>Impacts of certified organic cotton initiatives (COCIs) on natural capital in the study regions:</p> <p>Peru:</p> <ul style="list-style-type: none"> <li>• Availability of improved seed varieties (of coloured cotton)</li> </ul> <p>Tanzania:</p> <ul style="list-style-type: none"> <li>• Improved soil conditions</li> <li>• Improved environmental conditions</li> <li>• Reduced demand for firewood, leading to slightly less deforestation and increased reforestation</li> </ul> <p>India:</p> <ul style="list-style-type: none"> <li>• Improved soil conditions in the region</li> <li>• Improved environmental conditions, including a rise in the number of beneficial insects and birds, along with reforestation</li> <li>• Increased biodiversity (India)</li> <li>• (-) Reduced fallow land and ecological compensation area</li> </ul>
Water use and water efficiency		
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Energy use and energy efficiency	<p>Mehmeti, A., Abdelhafez, A., Abdelwahab, M., Ellssel, P., Todorovic, M., &amp; Calabrese, G. (2024). <u>Performance and Sustainability of Organic and Conventional Cotton Farming Systems in Egypt: An Environmental and Energy Assessment</u>. <i>Sustainability</i> (2071-1050), 2024, Vol 16, Issue 15, p6637. Doi: 10.3390/su16156637</p>	<p><b>The findings revealed that organic cotton outperforms conventional cotton in net energy gain, efficiency, and profitability, with higher productivity and lower energy intensity.</b> Regardless of the functional unit used (mass- or land-based), organic systems demonstrate superior environmental performance in the local context, even when accounting for data uncertainty. This is due to lower input intensity and the use of less energy-intensive organic fertilisers and bio-fertilisers. Fertilisation and irrigation are key drivers of environmental impact, with fertilisation affecting midpoint impacts and irrigation affecting endpoint impacts. Therefore, precision fertilisation, efficient irrigation practices, and effective nutrient and soil moisture management are recommended to minimise environmental impacts.</p>
Water use and water efficiency		
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		

Energy use and energy efficiency		
Resource use and resource efficiency	Khatun, M. (2024). <u>Life Cycle Assessment of Jeans Production Using Organic and Conventional Cotton</u> . <i>Tekstilec</i> , 67, 139-150. <a href="https://doi.org/10.14502/tekstilec.67.2023073">https://doi.org/10.14502/tekstilec.67.2023073</a>	
Environmental impacts, including carbon footprint and environmental footprint		<p>When considering only raw materials, organic cotton has shown remarkable improvements across four impact categories—fossil resource scarcity (FRS) (-24.34%), global warming (GW) (-19.83%), terrestrial acidification (TA) (-11.31%) and terrestrial ecotoxicity (TE) (-36.45%) – relative to conventional cotton. When considering the entire life cycle of denim jeans, life cycle assessment results indicated that Scenario 2 had the lowest environmental impact. However, <b>organic cotton consistently demonstrates a lower environmental impact throughout the cotton-growing phase compared to conventional cotton.</b> Incorporating organic cotton as a raw material during the production process improves the sustainability of a pair of jeans.</p>
Environmental impacts, including carbon footprint and environmental footprint	Marquardt, S., Sciligo, A., Miller, E., & Batcha, V. (2024) <u>Pesticide, Fertilizer, and Genetic Modification Use in Conventional Cotton in the U.S. and Globally</u> <b>THE CASE FOR ORGANIC</b> . The Organic Center and On The Mark Consulting.	<p><b>Since conventionally grown cotton is also one of the most chemically intensive crops to produce, organic cotton production can make a big difference in protecting the environment and preventing exposure to toxic chemicals.</b> The extensive use of synthetic pesticides and fertilisers, as well as genetically modified seed, raises concerns about the environmental and public health impacts of the crop’s production practices today.</p>
Environmental impacts, including carbon footprint and environmental footprint	Şener Fidan, F., Kizilkaya Aydogan, E., & Uzal, N. (2022). <u>The impact of organic cotton use and consumer habits in the sustainability of jean production using the LCA approach</u> . <i>Environmental Science and Pollution Research</i> , 30(4), 8853–8867, doi: 10.1007/s11356-022-22872-6.	<p>The environmental impact categories—including global warming potential, eutrophication potential, terrestrial ecotoxicity potential, acidification potential, and freshwater ecotoxicity potential were analysed by the CML-IA method (a database that contains characterisation factors for life cycle impact assessment). The life cycle assessment results revealed that the lowest environmental impacts were obtained for scenario 4 with 100% organic cotton fibre with an improvement of 87% in terrestrial ecotoxicity potential and 59% in freshwater ecotoxicity potential. Across all scenarios, the environmental impact of a pair of jeans decreases when organic cotton is used. Moreover, <b>both the choice of organic cotton as a raw material in manufacturing processes, as well as consumer preferences—such as washing temperature and drying methods-</b> play a crucial role in extending the sustainability of a pair of jeans throughout its life cycle.</p>

Water use and water efficiency	<p>Delate, K., Heller, B., &amp; Shade, J. (2021). <a href="#">Organic cotton production may alleviate the environmental impacts of intensive conventional cotton production</a>. <i>Renewable Agriculture and Food Systems</i> 36 (4), 405–412. doi:10.1017/S1742170520000356</p>	<p>This study surveyed organic cotton producers and processors to document the specific approaches and techniques used in organic cotton production and processing, the environmental impacts, and the challenges faced by organic cotton growers. It explores the effects of organic management practices and strategies for conserving water and reducing reliance on irrigation. While most surveyed cotton producers rely on furrow or sprinkler irrigation, many are adopting or assessing the potential of drip irrigation to reduce water use and lower energy costs.</p>
Energy use and energy efficiency		
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Water use and water efficiency	<p>Fidan, F. S., Aydođan, E. K., &amp; Uzal, N. (2021). <a href="#">A comparative life cycle assessment of conventional and organic cotton in denim fabric</a>. <i>Tekstilec</i>. 139-150. 10.14502/tekstilec.67.2023073.</p>	<p>As a result of this LCA study, all environmental impacts of denim fabric decreased with the use of organic cotton. A significant reduction in fresh aquatic ecotoxicity with 96% was achieved compared to the use of conventional cotton. Moreover, in terrestrial ecotoxicity and photochemical oxidation potentials, quite remarkable improvements were gathered with 90% and 57%, respectively.</p> <p><b>This study concludes that the use of organic cotton as a raw material provides significant advantages, as the main reasons for environmental impacts in cotton cultivation, which is the hot spot of denim fabric, are the use of pesticides and synthetic fertilisers.</b></p>
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Environmental impacts, including carbon footprint and environmental footprint	<p>Imran, M. A., Ali, A., Ashfaq, M., Hassan, S., Culas, R., &amp; Ma, C. (2018). <a href="#">Impact of Climate Smart Agriculture (CSA) Practices on Cotton Production and Livelihood of Farmers in Punjab, Pakistan</a>. <i>Sustainability</i>, 10(6), 2101. <a href="https://doi.org/10.3390/su10062101">https://doi.org/10.3390/su10062101</a></p>	<p>The adoption of new agricultural technologies had a significant impact on agricultural productivity and resource use efficiency. The implications of the results are that conventional cotton farmers are less productive due to excessive and inefficient use of external inputs; cotton yield can be improved by adapting CSA practices and technologies. <b>The overall results showed the absolute advantage of CSA over conventional cotton farming. Hence, cotton production using CSA practices and technologies is financially, environmentally and socially far better than conventional cotton growing.</b></p>

Water use and water efficiency		
Resource use and resource efficiency	<p>Baydar, G., Ciliz, N., &amp; Mammadov, A. (2015). <u>Life cycle assessment of cotton textile products in Turkey</u>. Resources, Conservation and Recycling, Volume 104, Part A, 213-223, <a href="https://doi.org/10.1016/j.resconrec.2015.08.007">https://doi.org/10.1016/j.resconrec.2015.08.007</a></p>	
Environmental impacts, including carbon footprint and environmental footprint		<p>In the study, environmental impacts of Eco T-shirts produced from organically grown cotton and processed with green dyeing recipe were compared to that of conventional T-shirts, in terms of contributions to global warming, acidification, aquatic and terrestrial <u>eutrophication</u> and photochemical ozone formation using life cycle assessment methodology. The results reveal that Eco T-shirts have lower impact potentials across all inspected categories, with the most dramatic reduction in aquatic <u>eutrophication potential</u> (up to 97%) due to elimination of nitrogen and phosphorus containing chemical based fertilisers. The results also show that global warming potential is by far the largest environmental impact for both conventional and Eco T-shirts with the main impact coming from use phase, followed by cultivation and harvesting and fabric processing phases.</p> <p><b>The analysis underlines the importance of using sustainable raw materials in all life cycle stages of cotton textile products and the need to focus on the consumer behaviour and sustainable practices during the use phase.</b></p>
Water use and water efficiency		
Resource use and resource efficiency	<p>Thinkstep (2018). <u>Life Cycle Assessment of Cotton Cultivation Systems - Better Cotton, Conventional Cotton and Organic Cotton</u>. Study commissioned by C&amp;A Foundation</p>	<p><b>Ecotoxicity:</b> In Better Cotton and conventional cotton, the ecotoxicity was mainly due to use of pesticides having Profenofos as active ingredient. The ecotoxicity potential of Profenofos was 1.61E+07 CTUe per kg of element emitted. In organic cotton, no chemical fertilisers and pesticides are applied, hence, the results were mainly contributed by energy used in irrigation and emissions from tractor operations.</p> <p><b>Human toxicity:</b></p> <ul style="list-style-type: none"> <li>• 1MT of conventional seed cotton generates 12 000 CTUs (comparative toxic units) for ecotoxicity and 1.82E-06 CTUs for human toxicity</li> <li>• 1MT of organic seed cotton generates 0.14 CTUs for ecotoxicity and 4.44E-11 CTUs for human toxicity</li> </ul>
Environmental impacts, including carbon footprint and environmental footprint		<p><b>Water consumption:</b> the difference between conventional and organic cotton cultivation represents a 272%. 1MT ton of conventional seed cotton needs 663 m3 per ha of irrigation water, while 1MT ton of organic seed cotton needs 244 m3 per ha of irrigation water.</p>

Water use and water efficiency		96% of Fairtrade organic and in-conversion farmers avoid chemical pesticides use entirely, compared to 60% of non-Fairtrade conventional farmers. 73% of Fairtrade organic and in-conversion farms implement Integrated Pest Management, while only 44% of the non-Fairtrade conventional farms do.
Resource use and resource efficiency	Fairtrade International. (2024). <a href="#">Evaluating environmental impact of fairtrade certified cotton in India.</a>	Fairtrade organic and in-conversion farmers produce 20% more cotton from their water use, with a water productivity rate of 0.30 kg/m <sup>3</sup> compared to 0.25 kg/m <sup>3</sup> for non-Fairtrade farmers. The Fairtrade organic and in-conversion farmers use 14% less water than conventional farmers, with a water footprint of 4,410 litres/kg of cotton compared to 5,156 litres/kg, underscoring the more efficient resource use.
Environmental impacts, including carbon footprint and environmental footprint		Only 5% of Fairtrade organic and in-conversion farmers use synthetic nitrogenous fertilisers, compared to over 90% of conventional farmers. Instead, 76% of Fairtrade organic farmers use organic fertilisers, which enhance soil health, reduce water pollution, and lower carbon emissions.
Energy use and energy efficiency		
Water use and water efficiency	La Rosa, A. D., & Grammatikos, S. A. (2019). <a href="#">Comparative Life Cycle Assessment of Cotton and Other Natural Fibers for Textile Applications.</a> <i>Fibers</i> , 7(12), 101. <a href="https://doi.org/10.3390/fib7120101">https://doi.org/10.3390/fib7120101</a>	
Resource use and resource efficiency		<p><b>Currently, in the textile industry, the optimum solution to reducing the high environmental impact associated with cotton fibers is to shift towards organic cotton cultivation, as the amount of water and energy consumption is lower than that for the conventional cultivation.</b> However, since organic farming generally results in lower crop yields, it might not fully meet the market's demand. To mitigate this risk, it is advisable to develop, in parallel, new markets for other natural fibres suitable for textiles, such as hemp and jute. Hemp has proven promising, however, legal and regulatory barriers, together with the limited supply due to its early stage in the fibre market, block its broader adoption.</p>
Environmental impacts, including carbon footprint and environmental footprint		

Water use and water efficiency	Esteve-Turrillas, F., A., & de la Guardia, M. (2017). <u>Environmental impact of Recover cotton in textile industry</u> . Resources, Conservation and Recycling, Volume 116, Pages 107-115, <a href="https://doi.org/10.1016/j.resconrec.2016.09.034">https://doi.org/10.1016/j.resconrec.2016.09.034</a>	<p>Considering the average range values for each evaluated LCA category per functional unit, the environmental savings provided by the use of organic farming methods can be estimated as:</p> <ul style="list-style-type: none"> <li>• 0.53 kg CO2 eq for Global Warming Potential – GWP (26%)</li> <li>• 0.022 kg SO2 eq for Acidification Potential - AP (79%)</li> <li>• 0.028 kg PO4 3– eq for Eutrophication Potential - EP (93%),</li> <li>• and 4332 kg water for Water Use (79%).</li> </ul> <p><b>Therefore, it can be concluded that transitioning from conventional cotton cultivation to organic farming can lead to a considerable reduction of AP, EP and WU impacts, while GWP impact is slightly reduced.</b></p>
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Water use and water efficiency	Shah, P., Bansal, A., & Singh, R. K. (2018). <u>Life cycle assessment of organic, BCI, and conventional cotton: A comparative study of cotton cultivation practices in India</u> . In E. Benetto, K. Gericke, & M. Guiton (Eds.), Designing sustainable technologies, products, and policies (pp. 115-124). Springer. <a href="https://doi.org/10.1007/978-3-319-66981-6_8">https://doi.org/10.1007/978-3-319-66981-6_8</a>	<p>The LCA results indicate that organic cotton is better than both BCI (Better Cotton) cotton and conventional cotton production across all the environmental impacts categories. The following impact categories were considered of high relevance: GWP, PED, Acidification Potential (AP), Eutrophication Potential (EP) and Water Consumption (WC). The assessment was conducted using CML impact methodology (Institute of Environmental Sciences of the University of Leiden framework, CML2001, 2013).</p>
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Water use and water efficiency	Avadí, A., Marcin, M., Biard, Y., Renou, A., Gourlot, J.-P., & Basset-Mens, C. (2020). <u>Life cycle assessment of organic and conventional non-Bt cotton products from Mali</u> . Int J Life Cycle Assess 25, 678–697. <a href="https://doi.org/10.1007/s11367-020-01731-x">https://doi.org/10.1007/s11367-020-01731-x</a>	<p>Environmental impacts were generally higher for conventional than from organic cotton. The main hotspots are related to pesticide use, and therefore, efforts should focus on that factor, despite pesticide inputs being already relatively lower than in other regions. Climate change indicators for Malian cotton products were compared with values from other literature and were found to be of a similar magnitude.</p>
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Disclaimer: The agricultural phase of cotton production in Mali differs from that of the largest producing countries, in that it is non-irrigated and non-mechanised and that non-Bt varieties are used.		

Resource use and resource efficiency	<p>Bhullar, G., S., Bautze, D., Adamtey, N., Armengot, L., Cicek, H., Goldmann, E., Riar, A., Rüegg, J., Schneider, M., Huber, B. (2018). <u>"What Is the Contribution of Organic Agriculture to Sustainable Development?" A synthesis of twelve years (2007–2019) of the "long-term farming systems comparisons in the tropics (SysCom)"</u> Research Institute of Organic Agriculture (FiBL).</p> <p>Cotton is one of the crops studied</p>	<p><b>The findings show the additional benefits that organic systems provide to society and the environment when compared to conventional systems.</b> These include:</p> <ul style="list-style-type: none"> <li>i) Reduced pesticide residues in soils, crop products and run-off water (Kenya)</li> <li>ii) Higher concentrations of vital elements in food crops (India)</li> <li>iii) Enhanced flora and fauna diversity and abundance (Kenya, India, Bolivia)</li> <li>iv) Lower reliance on non-renewable energy resources used (Bolivia)</li> <li>v) Increased agroecosystem resilience (Bolivia).</li> </ul>
Environmental impacts, including carbon footprint and environmental footprint		
Resource use and resource efficiency		
Water use and water efficiency	<p>IFOAM Organics Europe (2022). <u>Organic agriculture and its benefits for climate and biodiversity.</u></p> <p>Lampkin, N. &amp; Pearce, B. (2020). <u>Organic farming and biodiversity.</u>, IFOAM Organics Europe.</p>	<p>Organic farming promotes farmland diversity through mindful land use and protection of natural habitats leading to:</p> <ul style="list-style-type: none"> <li>• 30% more species</li> <li>• 50% more individual organisms</li> <li>• 20-95% more plant species*</li> <li>• 150% higher abundance of plant species*</li> <li>• 23% more insect species</li> <li>• 30% more pollinators</li> </ul> <p>*In field and field margins</p> <p><b>Organic farming integrates beneficial practices like crop rotations and organic fertilisers, resulting in:</b></p> <p><b>Lower greenhouse gas emissions</b></p> <ul style="list-style-type: none"> <li>• No use of synthetic fertilisers reduces emissions</li> <li>• Potential to cut 20% of global agricultural GHG emissions</li> <li>• 40% less N2O emissions per hectare</li> <li>• Reduced reliance on fossil fuel-intensive external inputs</li> </ul> <p><b>Improved manure management</b></p> <ul style="list-style-type: none"> <li>• 70% lower methane emissions</li> <li>• 50% lower nitrous oxide emissions</li> <li>• Reduced GHG emissions and increased carbon sequestration</li> <li>• Additional 3.5 tonnes C/ha soil organic carbon stocks</li> <li>• Additional 450 kg C/ha/yr carbon sequestration</li> <li>• 15% less energy consumed per kg of product</li> </ul> <p><b>More resilient to changing weather conditions</b></p> <ul style="list-style-type: none"> <li>• 1082 kg CO2 eq/hectare/year average climate protection performance.</li> </ul>
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint		
Environmental impacts, including carbon footprint and environmental footprint		

Energy use and energy efficiency		
Water use and water efficiency		
Resource use and resource efficiency		
Environmental impacts, including carbon footprint and environmental footprint	<p>Sanders, J., Brinkmann, J., Chmelikova, L., Ebertseder, F., Freibauer, A., Gottwald, F., Haub, A., Hauschild, M., Hoppe, J., Hülsbergen, K., Jung, R., Kusche, D., Levin, K., March, S., Schmidtke, K., Stein-Bachinger, K., Treu, H., Weckenbrock, P., Wiesinger, K., ... Hess, J. (2025). <u><a href="https://doi.org/10.1007/s13165-025-00493-w">Benefits of organic agriculture for environment and animal welfare in temperate climates</a></u>. Organic Agriculture. <a href="https://doi.org/10.1007/s13165-025-00493-w">https://doi.org/10.1007/s13165-025-00493-w</a></p>	<p>This paper assesses the benefits of organic farming by analysing 528 scientific studies from the past 30 years, focusing on temperate regions worldwide. The findings align with previous reviews, confirming the positive impact of organic farming on water, soil, biodiversity, climate, resource use, efficiency, and animal welfare.</p> <ul style="list-style-type: none"> <li>• The positive effects of organic farming on <b>soil conservation</b> were clearly demonstrated by various biological, chemical and physical soil indicators (e.g., earthworm abundance, bulk density and penetration resistance, etc.).</li> <li>• The positive effects of organic farming on <b>biodiversity</b> were clearly demonstrated for the species groups studied. On average, fauna abundance was 23% (birds) and 26% (insects) higher under organic management, respectively.</li> <li>• The comparison of empirical results for <b>soil-derived greenhouse gas emissions</b> from organic and conventional agriculture in temperate climates showed positive effects from organic management. On average, N<sub>2</sub>O emissions were 24% lower in the organic variant according to the studies evaluated.</li> <li>• <b>Resource-use efficiency</b> was investigated based on nitrogen and energy. On average, nitrogen input at the crop rotation level was 22% lower under organic management, while nitrogen efficiency was 5% higher. Moreover, on average, 45% less energy was used under organic management and the energy efficiency was 10% higher.</li> </ul>
Environmental impacts, including carbon footprint and environmental footprint	<p>European Commission. (2024). <u><a href="#">Rough greenhouse gas footprint estimate of EU-18</a></u>.</p> <p>The scope of this study is limited to 19 CAP Strategic Plans (which correspond to 18 EU Member States).</p>	<p>The analysis indicates a potential annual reduction of 31.2 million tonnes of CO<sub>2</sub>e annually across the 18 EU Member States. Over the five-year implementation period, this amounts to a cumulative total of 156 million tonnes of CO<sub>2</sub>e. (...) Conversion to organic farming (O – Organic farming), the implementation of rotation or diversification of crops (R – Crop rotation and diversification), and the expansion of cover crops (S – Soil management) as required through GAECs or supported by the voluntary schemes account for over three quarters (i.e. 78%) of the estimated mitigation potential.</p>

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# CONCLUSION

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As demonstrated by this analysis, opting for organic cotton provides substantial environmental benefits and contributes to the improvement of multiple product aspects defined under ESPR framework. These include reduced energy use and energy efficiency, optimised water use, and water efficiency, lower resource consumption and higher resource efficiency, and a lower environmental footprint. Organic cotton represents a sustainable and regenerative approach to cotton production, that benefits the environment, consumers and the entire supply chain.

We urge the EU Commission to recognise organic cotton as an important information requirement within the context of the ESPR framework, listed in Annex 1 as a "sustainable renewable material." This classification falls under the ESPR product parameters (Annex I), which include "use or content of sustainable renewable materials." We recommend that the Delegated Act for textiles includes specific information requirements on organic cotton to improve product aspects like resource efficiency, as outlined in Articles 5 and 7 of the ESPR framework.

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# ANNEX I

## Article 5 of the Eco-design for Sustainable Products Regulation

### Article 5 Ecodesign requirements

1. In order to address environmental impacts and based on the product parameters referred to in Annex I, the ecodesign requirements in the delegated acts adopted pursuant to Article 4 shall be such as to improve the following product aspects ('product aspects') where those product aspects are relevant to the product group concerned:

- (a) durability;
- (b) reliability;
- (c) reusability;
- (d) upgradability;
- (e) repairability;
- (f) the possibility of maintenance and refurbishment;
- (g) the presence of substances of concern;
- (h) energy use and energy efficiency;
- (i) water use and water efficiency;
- (j) resource use and resource efficiency;
- (k) recycled content;
- (l) the possibility of remanufacturing;
- (m) recyclability;
- (n) the possibility of the recovery of materials;
- (o) environmental impacts, including carbon footprint and environmental footprint;
- (p) expected generation of waste.

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2. Ecodesign requirements shall, where relevant, ensure based on the product parameters referred to in Annex I that products do not become prematurely obsolete, for reasons that include design choices by manufacturers, the use of components which are significantly less robust than other components, the impeded disassembly of key components, unavailable repair information or spare parts, software that no longer works once an operating system is updated or software updates that are not provided.

3. The Commission shall select or develop tools or methodologies, as necessary, for the setting of ecodesign requirements.

4. Ecodesign requirements shall be set for a specific product group. They may be differentiated for any specific product that belongs to that specific product group.

5. Products whose sole purpose is to serve defence or national security shall be excluded from product groups.

6. The Commission may set ecodesign requirements also for those product groups or product aspects that have not been included in the working plan referred to in Article 18.

7. Where two or more product groups display one or more similarities allowing a product aspect to be effectively improved based on common information requirements or performance requirements, horizontal ecodesign requirements may be set for those product groups ('horizontal ecodesign requirements'). When considering whether to set horizontal ecodesign requirements, the Commission shall also take into account the positive effects of those requirements towards reaching the objectives of this Regulation, in particular the ability to cover a wide range of product groups in the same delegated act. The Commission may supplement the horizontal ecodesign requirements through the setting of ecodesign requirements for a specific product group.

8. An ecodesign requirement may cover products falling within the scope of a self-regulation measure included in the list contained in the implementing act adopted pursuant to Article 21(3), in the event that the self-regulation measure does not address the product aspects covered by that ecodesign requirement.

9. Ecodesign requirements shall include, as appropriate to improve the specific product aspects, either or both of the following: (a) performance requirements as set out in Article 6; (b) information requirements as set out in Article 7.

10. When preparing ecodesign requirements, the Commission shall ensure consistency with other Union law and shall:

(a) take into account:

- (i) Union priorities for the climate, the environment, energy efficiency, resource efficiency and security, including a non-toxic circular economy, and other related Union priorities and targets;
- (ii) relevant Union law, including the extent to which it addresses the relevant product aspects;
- (iii) relevant international agreements;
- (iv) self-regulation measures;
- (v) relevant national environmental law;
- (vi) relevant European and international standards;

(b) carry out an impact assessment based on best available evidence and analyses, and where appropriate<sup>1</sup> on additional studies and research results produced under Union funding programmes. The setting of ecodesign requirements concerning certain of the product aspects shall not be unduly delayed by uncertainties regarding the possibility of setting ecodesign requirements to improve other product aspects of that product. In the impact assessment, the Commission shall:

- (i) indicate the methodology used;
- (ii) ensure that all product aspects are analysed and that the depth of analysis of the product aspects is proportionate to their significance for the product concerned;
- (iii) ensure that interdependencies between the different product aspects are analysed;
- (iv) set out the changes expected in terms of environmental impacts, including quantified as a carbon footprint and an environmental footprint whenever possible;
- (v) analyse the availability of feedstock for the refurbishment sector, where appropriate;
- (vi) analyse any relevant impacts on human health;
- (vii) consider the minimum level of performance of a product or a product group needed to achieve in the future the Union's priorities as listed in point (a)(i);

(c) take into consideration relevant technical information used as a basis for or derived from Union law or instruments, including Regulation (EC) No 66/2010, Directive 2010/75/EU, technical screening criteria adopted pursuant to Regulation (EU) 2020/852 and EU green public procurement criteria;

(d) take into consideration the protection of confidential business information;

(e) take into account the views expressed by the Ecodesign Forum referred to in Article 19 and the Member States Expert Group referred to in Article 20.

11. Ecodesign requirements shall meet the following criteria:

(a) there shall be no significant negative impact on the functionality of the product, from the perspective of the user;

(b) there shall be no adverse effect on the health and safety of persons;

(c) there shall be no significant negative impact on consumers in terms of the affordability of relevant products, also taking into account access to second-hand products, durability and the life cycle cost of products;

(d) there shall be no disproportionate negative impact on the competitiveness of economic operators and other actors in the value chain, including SMEs, in particular microenterprises;

(e) there shall be no proprietary technology imposed on manufacturers or other actors in the value chain;

(f) there shall be no disproportionate administrative burden on manufacturers or other actors in the value chain, including SMEs, in particular microenterprises.

12. Ecodesign requirements shall be verifiable. The Commission shall identify appropriate means of verification for specific eco-design requirements, including direct checks of the product or on the basis of the technical documentation.

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13. The Commission shall publish relevant studies and analyses, including the impact assessments referred to in paragraph 10, point (b), used in the setting of eco-design requirements.

14. For each product group concerned by eco-design requirements, the Commission shall determine, where relevant, which substances fall under the definition in Article 2(27), point (d), taking into account, at least, whether:

(a) based on standard technologies, the substances make the reuse, or recycling process more complicated, costly, environmentally impactful, or energy- or resource-demanding;

(b) the substances impair the technical properties or functionalities, the usefulness or the value of the recycled material coming from the product or products manufactured from that recycled material;

(c) the substances negatively impact aesthetic or olfactory properties of the recycled material.

## ANNEX II

### Frequently asked questions

#### **1. How is organic cotton verified and traced?**

In the organic cotton supply chain, every step is audited by third-party verification. This includes information on the origin of the materials, quantities received and shipped, processing methods, and the final products. The EU's Organic Regulation 2018/848 sets stringent guidelines complemented by equivalency agreements with third countries. Industry-specific standards and traceability systems such as Textile Exchange (OCS) and the Global Organic Textile Standard (GOTS) provide further assurance at the manufacturing level.

#### **2. Can the percentage of organic vs. non-organic cotton in a product be determined?**

Currently, the proportion of organic to non-organic cotton in a product can only be reliably established through supply chain traceability and certification. Chemical or physical testing methods lack accuracy due to minimal variations in fibre composition. Certification schemes validate organic content through audits, documentation, and systematically tracking of the certified organic cotton from the farm through to the final product. Achieving traceability for commodities like cotton is challenging, given the limited origin data availability and difficulties in assessing detailed information.

#### **3. What is a segregated chain of custody system?**

Segregation is a chain of custody model that ensures certified products from certified sites are kept separate from non-certified sources. Materials from different certified sources may only be combined if they adhere to the same certification standard, maintaining their specific characteristics and grades<sup>1</sup>. This approach is commonly used in industries like food and agriculture, particularly for certified organic or fairtrade products, including organic cotton.

#### **4. What are the key challenges for the scalability of organic cotton?**

Scaling organic cotton production involves addressing several challenges such as price volatility and the substantial initial investments required for transitioning from conventional farming. However, these challenges present opportunities for innovation, stronger industry collaboration, and policy improvements. OCA actively works to tackle these barriers by empowering farmers through capacity building, access to resources and market linkages, by fostering industry commitment, and advocating for supportive policies to help farmers transition to organic production. Our mission is dedicated to accelerating organic cotton production by making the process sustainable, economically viable, and accessible for farmers globally.



**ORGANIC COTTON ACCELERATOR**

*Uniting the sector to realise the Organic Cotton Effect*