Introduction to more sustainable cotton

The Sustainable Clothing Action Plan (SCAP) is a collaborative agreement to improve the environmental impact of clothing. See wrap.org.uk/scap2020

When looking at the environmental impact of clothing across its lifecycle, the fibres and materials used within the garment account for a significant proportion of its overall impact.

Fibre selection is an area under a brand's control and therefore represents a key point in which it can shift to more sustainable alternatives.

The environmental issues related to conventional cotton

Cotton farming especially in developing countries is associated with a range of social and environmental sustainability issues. Cotton is considered to be a very thirsty crop, requiring large amounts of water. It is estimated that up to 20,000 litres of water are used to produce one 1kg of cotton (WWF). Farmers also use a range of synthetic pesticides and fertilisers which can seep into water ways and pollute the surrounding environment.

For brands looking to integrate more sustainable forms of cotton, there are a number of options available, three are explored here: Organic Cotton, Better Cotton and Cotton Made In Africa.

Organic Cotton

What is it? Organic cotton farming differs in several key-ways to conventional farming. Firstly, organic cotton is grown without the usage of synthetic pesticides, herbicides or fertilisers. Organic cotton also bans the usage of genetically modified seeds, meaning that farmers can collect and replant cotton seeds.

Overall, benefits from the organic cotton farming approach include a reduction in water as much of organic cotton is rain fed, as well as a reduction in both carbon emissions and chemicals.

What would I need to do? For brands looking to source and communicate about their usage of organic cotton, certification is a key consideration as it verifies that the cotton purchased is organic.

There are a number of standards available for brands to engage with, these include the Organic Content Standard and the Global Organic Textile Standard (GOTS).

Certification and segregation of Organic Cotton through the supply chain, together with the ability to label end product means that this alternative often comes at price premium.

What are the environmental savings?

Using the SCAP Footprint Calculator, it is possible to calculate potential carbon, water and waste savings that could arise should a brand switch its conventional cotton usage to a more sustainable alternative, organic cotton.

	Carbon	Water	Waste
5% *	1.3%	2.6%	0%
20%	5.2%	10.5%	0%
50%	12.6%	26.2%	0%
100%	24%	52.3%	0%

* Percentage of organic cotton integrated

Better Cotton

What is it? Better Cotton, developed by the Better Cotton Initiative, seeks to be a mainstream more sustainable cotton option that does not come at a price premium.

Better Cotton is produced by farmers that meet the initiative's series of environmental and social requirements. It is therefore grown by farmers that adopt resource efficient farming techniques, minimising their usage of pesticides and fertilisers. BCI states that farmers also benefit through achieving better yields and by reducing their input costs.

What would I need to do? To be able to monitor the volumes of Better Cotton purchased, a brand would need to join BCI and pay a membership fee.

For brands looking to claim the Better Cotton improvement option within the SCAP Footprint Calculator, they would need to monitor and check the volumes of Better Cotton purchased.

Better Cotton currently operates a mass balance traceability system, meaning at this time it is not possible to trace better cotton content to a specific product and therefore communicate its use on products.

What are the environmental savings?

Using the SCAP Footprint Calculator, it is possible to calculate potential carbon, water and waste savings that could arise should a brand switch its conventional cotton usage to more sustainable alternative, Better Cotton.

	Carbon	Water	Waste
5% *	1.1%	0.6%	0%
20%	4.2%	2.5%	0%
50%	10.1%	6.3%	0%
100%	19.1%	12.6%	0%

* Percentage of Better Cotton integrated

Cotton Made in Africa

What is it? Cotton made in Africa (CmiA) is an initiative of the Aid by Trade Foundation. CmiA specifically focuses on supporting cotton farmers within sub-Saharan Africa to improve their livelihoods and to promote a more environmentally friendly approach to cotton farming.

To grow CmiA, farmers need to meet a series of minimum requirements. These include not using GMO seeds, practicing solely rain fed cotton cultivation and social requirements such as no child labour.

Similar to BCI, CmiA also aims to produce a more sustainable cotton that does not come at a price premium. CmiA also offers an organically grown option of its standard.

What would I need to do? Brands that wish to source CmiA must pay a license fee. CmiA offers two forms of traceability, mass balance, where overall volumes purchased are tracked and a hard identity preserved system (HIP), which can trace CmiA content to specific products.

What are the environmental savings? Using the SCAP Footprint Calculator, it is possible to calculate potential carbon, water and waste savings that could arise should a brand switch its conventional cotton usage to more sustainable alternative, CmiA.

	Carbon	Water	Waste
5% *	1.2%	0.6%	0%
20%	4.8%	2.5%	0%
50%	11.3%	6.3%	0%
100%	20.6%	12.6%	0%

* Percentage of CmiA integrated

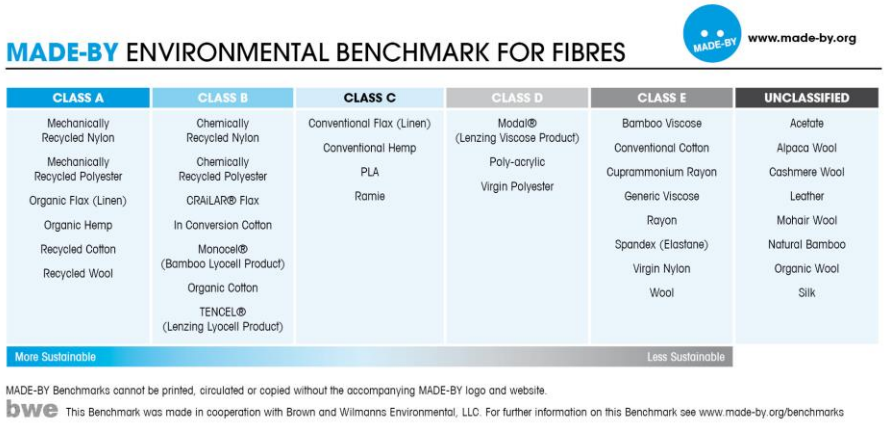
MADE-BY's Environmental Fibre Benchmark

According to MADE-BY's Fibre Benchmark Organic cotton is Class B, whereas conventional cotton is Class E. The benchmark compares the environmental impact of the most commonly used fibres in the garment industry, supporting you to shift to more sustainable alternatives.

The benchmark ranks 28 fibres on six common parameters. The six parameters have been given different weights in terms of impact. Greenhouse gas emissions, human toxicity and eco-toxicity are weighted to 20% each, while energy, water and land use have been given a 13.33% weighting.

Based on these parameters, each fibre is scored and placed into one of five classifications: Class A (best) to Class E (less sustainable).

An additional category, 'Unclassified', is included. Fibres listed here are not (yet) part of the Benchmark due to a lack of available robust data.



MADE-BY ENVIRONMENTAL BENCHMARK FOR FIBRES

www.made-by.org

CLASS A	CLASS B	CLASS C	CLASS D	CLASS E	UNCLASSIFIED
Mechanically Recycled Nylon	Chemically Recycled Nylon	Conventional Flax (Linen)	Modal® (Lenzing Viscose Product)	Bamboo Viscose	Acetate
Mechanically Recycled Polyester	Chemically Recycled Polyester	Conventional Hemp	Poly-acrylic	Conventional Cotton	Alpaca Wool
Organic Flax (Linen)	CRAiLAR® Flax	PLA	Virgin Polyester	Cuprammonium Rayon	Cashmere Wool
Organic Hemp	In Conversion Cotton	Ramie		Generic Viscose	Leather
Recycled Cotton	Monocel® (Bamboo Lyocell Product)			Rayon	Mohair Wool
Recycled Wool	Organic Cotton			Spandex (Elastane)	Natural Bamboo
	TENCEL® (Lenzing Lyocell Product)			Virgin Nylon	Organic Wool
				Wool	Silk

More Sustainable — Less Sustainable

MADE-BY Benchmarks cannot be printed, circulated or copied without the accompanying MADE-BY logo and website.

bwe This Benchmark was made in cooperation with Brown and Wilmanns Environmental, LLC. For further information on this Benchmark see www.made-by.org/benchmarks

View MADE-BY's publicly available Environmental Fibre Benchmark at made-by.org/benchmarks

WRAP's vision is a world where resources are used sustainably. It works in partnership with governments, businesses, trade bodies, local authorities, communities and individuals looking for practical advice to improve resource efficiency that delivers both economic and environmental benefits.

Our mission is to accelerate the move to a sustainable resource-efficient economy through:

- **re-inventing** how we design, produce and sell products;
- **re-thinking** how we use and consume products; and
- **re-defining** what is possible through recycling and re-use.