

# TEXTILES & FIBRES

## SEARCHING FOR SUSTAINABILITY

A JUST TRANSITION TO A NET POSITIVE WORLD



**RSB**  
Roundtable on  
Sustainable Biomaterials  
[www.rsb.org](http://www.rsb.org)



*The textiles and fibres industry is woven into the fabric of our lives, with its products covering our bodies, homes, workplaces and more – in forms ranging from apparel and footwear to paper and packaging, upholstery, and furnishings.*

*A massive industry of this kind, where the apparel and footwear segment alone accounts for a **\$1.7 trillion market**<sup>1</sup> representing over 2% of the global GDP, requires tremendous amounts of raw material input on a daily basis – from both natural and synthetic sources. The global paper and packaging industry was estimated to be worth \$268.8 billion in 2018 and growth continues to be driven by growing demand for packaging paper.<sup>2</sup>*

*The sector has, unsurprisingly, a dramatic footprint in terms of social and environmental sustainability. Consumers, NGOs and companies around the world are increasingly aware of the impacts of the textiles and fibres they use and the industry is looking for solutions to key concerns, including:*



*“We need to transform global markets if we are to build a sustainable future. RSB is key to setting biomaterials on a more sustainable footing.”*



**Jim Leape, Director General (Former), WWF International**



**HUMAN AND  
LABOUR RIGHTS**



**WATER AND  
CHEMICAL USAGE**



**DEFORESTATION**



**TRACEABILITY OF  
COMPONENTS**



**GHG EMISSIONS ACROSS  
THE PRODUCT LIFECYCLE**



# WHY SUSTAINABILITY IN THE TEXTILES AND FIBRES INDUSTRY?

The industry is looking to address sustainability challenges in feedstock production, processing, transport and end-of-life.

Global trends driving the need for urgent change include the complexity of supply chains and consumption patterns.



**Apparel and footwear** accounts for 60%<sup>3</sup> of the textiles and fibres industry and 97%<sup>4</sup> of the feedstock it uses comes from **virgin sources** (89% of that from cotton and plastics<sup>5</sup>). This one segment alone generates 8.1% of global greenhouse gas (GHG) emissions – the equivalent of 3,990 million metric tons of CO2 per annum<sup>6</sup>.



In the paper and pulp industry, **184 million tonnes** of the pulp produced globally for paper is of **virgin wood fibre origin** – with 92 million tonnes of that coming specifically from ancient and endangered forests<sup>7</sup>.



Many of the **218 million child-workers** (ages 5 to 17) in the world today work in fields and sewing rooms as part of the **textile and fibre industry**<sup>8</sup>.



All over the world, **consumers are demanding better**. Over 80% of millennials (consumers aged 25-35) from Australia, Canada, China, India, the UK and the US expect companies to **take decisive ethical action** in mitigating environmental damage, and these young consumers are expected to spend 150 billion US dollars on sustainable goods by 2021<sup>9</sup>.

3 <https://www.euromonitor.com/apparel-and-footwear-in-2016-trends-developments-and-prospects/report>  
4 [https://www.ellenmacarthurfoundation.org/assets/downloads/publications/A-New-Textiles-Economy\\_Full-Report\\_Updated\\_1-12-17.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/publications/A-New-Textiles-Economy_Full-Report_Updated_1-12-17.pdf)  
5 <https://www.euromonitor.com/apparel-and-footwear-in-2016-trends-developments-and-prospects/report>  
6 [https://fashionforgood.com/wp-content/uploads/2019/10/FashionForGood\\_Investing-in-Textile-Innovation\\_October.pdf](https://fashionforgood.com/wp-content/uploads/2019/10/FashionForGood_Investing-in-Textile-Innovation_October.pdf)

7 <https://canopyplanet.org/wp-content/uploads/2020/01/SURVIVAL-Next-Gen-Pathway.pdf> (page 8)  
8 <https://www.ilo.org/global/topics/child-labour/lang--en/index.htm>  
9 <https://www2.deloitte.com/in/en/pages/about-deloitte/articles/millennialsurvey2018.html>



## CURRENT INDUSTRY TRENDS

*Focusing on production, the industry is taking innovative steps towards utilising alternative fibre sources to reduce impacts. Regenerative and recycled feedstocks are now looking to compete with traditional sources for the textiles and fibres industry – helping innovators move away from environmentally and socially destructive paths of previous decades.*

### KEY TRENDS AND INNOVATIONS INCLUDE:

 <b>BIOSYNTHETICS</b> such as PLA and PHA.	 <b>REGENERATED FIBRES</b> such as algae and chitin.	 <b>MAN-MADE CELLULOSICS</b> such as cotton linters and viscose rayon.
 <b>NATURAL FIBRES</b> from wood and agricultural residues being used in new applications.	 <b>REGENERATIVE AGRICULTURE</b> to improve soil health, biodiversity, and climate impact.	 <b>LAB-BASED, BIO-BASED</b> and alternative leathers.

*However, while these solutions have great potential, they do not automatically guarantee sustainability. They can still be produced and processed in a carbon-intensive, environmentally and socially destructive manner – sometimes more so than the materials they have replaced.*

## DRIVING TRANSFORMATION



1.

Increase the use of sustainably-certified bio-based materials.



2.

Enhance the circularity of production, through minimal reliance on virgin fossil inputs.



3.

Reduce GHG emissions along the supply chain.



4.

Ensure fair workplace practices.



5.

Support use of sustainable innovative technologies and materials.



## CHALLENGES TO TRANSFORMATION

- 1** *Scaling up of feedstock certification at farm level.*
- 2** *Difficulty in finding a certification solution to handle complex supply chains and feedstock combinations.*
- 3** *Complexity in selecting sustainable feedstock options when there is no 'one size fits all' approach for real sustainability. Physical location, climate, socio-economic realities, and many more factors can impact sustainability, meaning a sustainable feedstock in one context, isn't necessarily sustainable in another.*
- 4** *Fragmented consumer awareness means consumers are flooded with confusing claims about the sustainability of products.*
- 5** *Poor traceability impacting ability to identify exactly where a product came from as well as the exact impact its production entails.*



## WHERE THE RSB STANDARD COMES IN

*The RSB Standard can help guide transformation in the textiles and fibres industry – encouraging innovation in new and novel feedstock development while supporting sustainability in existing products. By offering a powerful framework applicable to all bio-based and recycled content feedstocks for achieving and demonstrating genuine sustainability, RSB's uniquely credible and robust standard bolsters trust and awareness from consumers and end users.*

*RSB enables the certification of sustainable supply chains for textiles and fibres –from the production of raw materials to the end product – with sustainability requirements mandatory for biomass production and for industrial processing (including textiles manufacture).*



## THE RSB APPROACH

*RSB's unique approach to Advanced Products enables companies to demonstrate clearly that their products are produced more sustainably, with fewer fossil resources and reduced greenhouse gas emissions.*

*RSB's approach for Advanced Products enables the certification of three product categories: bio-based, recycled, and products from systems that mix these with virgin fossil inputs.*

### BIO-BASED PRODUCTS (Category I)

This category includes feedstocks of agricultural, forest, marine, and aquatic origin, including by-products, end-of-life products, and residues.

### RECYCLED-CONTENT PRODUCTS (Category II)

Category II products have recycled content, and feedstocks can include non-biogenic end-of-life products, by-products, or residues, as well as recycled biogenic materials.

### BIO-BASED OR RECYCLED FOSSIL CARBON MIXED WITH FOSSIL CARBON PRODUCTS (Category III)

Products in this category include those from a production system that processes bio-based feedstock or non-bio-based end-of-life products or residues, in combination with virgin fossil feedstock.

**Under Category III**, the RSB Advanced Products Standard allows the mixing of RSB- certified material with virgin fossil material at the manufacturing site and enables the manufacturer to attribute the RSB-certified sustainability label to their output material based on production data and yields — creating greater flexibility for manufacturers in how they bring their products to market.





## RSB'S CERTIFICATION SOLUTIONS FOR THE TEXTILES AND FIBRES INDUSTRY

### MULTI-FEEDSTOCK:

RSB certification is suitable for any feedstock, material, or supply chain — on a global level — meaning that brands can use one certification solution, with one set of claims, for all of their products. One uniform standard can be used for textiles and fibres produced from agricultural and forest settings, as well as recycled and waste materials. RSB certification works for both existing infrastructure and new and innovative processes and facilities, thereby building on highly efficient supply chains while unlocking the potential of new technology.

### NGO ENDORSEMENT:

RSB certifications contains robust sustainability criteria recognised and trusted by WWF, IUCN, and NRDC. The RSB Standard is approved through a multi-stakeholder, consensus-based process which is compliant with ISEAL.

### SUSTAINABILITY ACROSS THE ENTIRE SUPPLY CHAIN:

RSB's environmental and social sustainability requirements apply to industrial operators as well as feedstock producers, ensuring high levels of confidence in social and environmental claims along the entire supply chain.

### BEYOND FIBRES:

RSB's approach can be applied to fuel used in logistics and energy for both factories and other locations, meaning that one solution can give sustainability assurance to the whole range of different activities within a brand's operations.

### POWERFUL CLAIMS BASED ON POSITIVE IMPACTS:

With RSB's unique Positive Impacts approach, Textiles and Fibres Certified to RSB's Advanced Products Standard demonstrate that they are:

1. Sustainably produced.
2. Mitigate climate change.
3. Reduce the risk of fossil depletion.

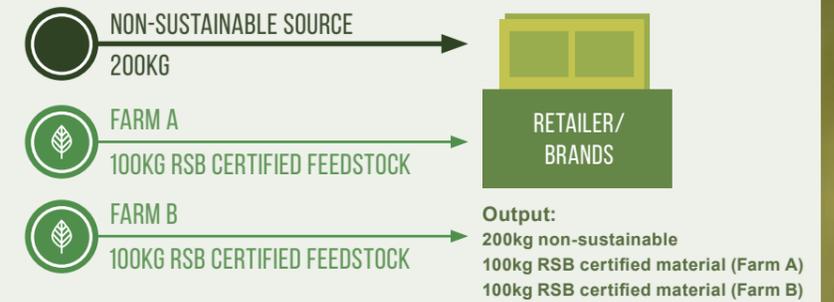
In their latest report, launched at Davos 2020, **Canopy Planet recommends RSB certification** for agricultural fibre products – in order to ensure sustainable removals, maintain soil carbon, and ensure overall social and environmental sustainability<sup>10</sup>.

### TRACEABILITY

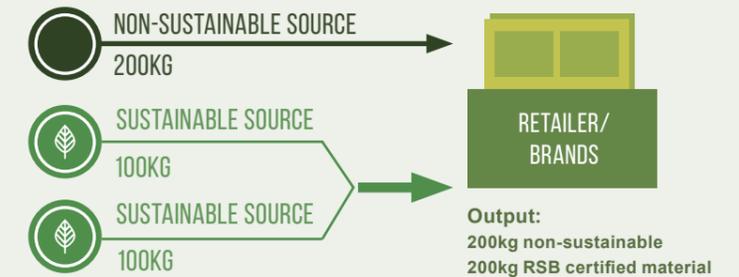
RSB certification gives four different options for traceability, depending on the material, market and manufacturing.

RSB can certify supply chains and products using the following traceability options:

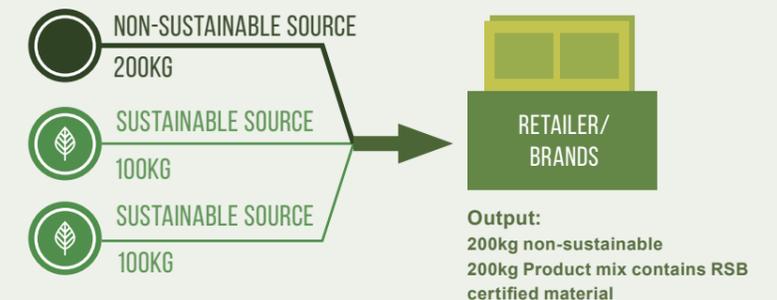
#### IDENTITY PRESERVED



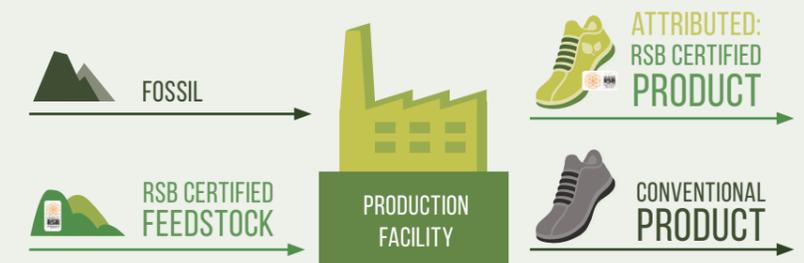
#### PRODUCT SEGREGATED



#### MASS BALANCE



#### ATTRIBUTION





**1**  
**SUSTAINABLE PRODUCTION**

The RSB's 12 Principles & Criteria are used to evaluate production sustainability for certification along the entire supply chain.

**2**  
**CLIMATE CHANGE MITIGATION**

Certified products demonstrate at least 10% lower lifecycle GHG emissions – calculated on a cradle-to-grave basis relative to the lifecycle greenhouse gas emissions of a comparable fossil product – whenever they are intended to replace fossil-derived products.

**3**  
**FOSSIL DEPLETION REDUCTION**

Certified products demonstrate a minimum of 25% fossil replacement.

**Principle 1**  
Legality

**Principle 2**  
Planning, Monitoring & Continuous improvement

**Principle 3**  
Greenhouse Gas Emissions

**Principle 4**  
Human and Labour Rights

**Principle 5**  
Rural and Social Development

**Principle 6**  
Local Food Security

**Principle 7**  
Conservation

**Principle 8**  
Soil

**Principle 9**  
Water

**Principle 10**  
Air Quality

**Principle 11**  
Use of Technology, Inputs & Management of Waste

**Principle 12**  
Land Rights

## TEXTILES AND FIBRES CERTIFIED BY RSB THEREFORE CARRY POWERFUL CLAIMS BASED ON POSITIVE IMPACTS

This RSB compliant product leads to a x% substitution of fossil resources through waste recycling in the production system.

Delivering socially and environmentally ethical products, certified by the Roundtable on Sustainable Biomaterials (RSB)

Over its production lifecycle, this material provides [x] % greenhouse gas savings compared to a fossil fuel equivalent.



# Why Work With RSB?



RSB's Standard for Advanced Products is a truly groundbreaking piece of work. By focusing on the Positive Impacts of different types of advanced products, the Standard supports companies on the cutting edge of sustainability and the circular economy to make clearer, more credible claims that will help consumers make better choices.



**Panu Routasalo, Vice President, UPM Biofuels**



In a review of the best-known sustainability standards for products from biomass, Germany's oldest eco label, **Blauer Engel (Blue Angel)**, found that RSB is the strongest certification system for biomass and the only one they can recommend without constraint.



With credible solutions, global expertise, partners across the spectrum from government to industry, academia and NGOs, and an extremely robust approach to sustainability, **RSB is the partner of choice** for the textiles and fibres industry as it seeks to fulfil its global commitments to greenhouse gas reduction while also ensuring social development and environmental protection.



RSB is a member-led organisation which represents a **worldwide movement of businesses, NGOs, academics, government, and UN organisations** that have demonstrated their commitment to the development of the sustainable bioeconomy by working together to create our most-trusted Standard.



**The RSB Standard is the strongest and most trusted of its kind**, recognised as such by the World Wildlife Fund (WWF), International Union for Conservation of Nature (IUCN) and Natural Resources Defense Council (NRDC).



# What Is RSB



*RSB offers trusted, credible tools and solutions for sustainability and biomaterials certification that mitigate business risk, fuel the bioeconomy, and contribute to the UN Sustainable Development Goals — in order to enable the protection of ecosystems and the promotion of food security.*



*Through its most trusted **sustainability Standard**, RSB enables companies across the bio-based and circular economy — incorporating liquid fuels, energy and material products from bio-based and recycled carbon, including fossil waste — to demonstrate real and credible sustainability.*



*RSB provides expert advice and support through its **advisory services**, which are grounded in the highest levels of social and environmental sustainability and are designed to support our clients' most crucial needs throughout their supply chains — as they seek to transition to a positive impact and circular economy. We bring our deep and multifunctional expertise, which helps to unlock opportunity and overcome the challenges of transforming a business for operation and growth within our planetary boundaries.*



*By building **partnerships** across sectors, RSB is using the power of its sustainability standard through driving collective action to address the systems changes required to enable people and the planet to thrive. In bringing together business, civil society, and government in regional and global coalitions, RSB maximises the impact of its network.*



*RSB engages in targeted **advocacy** to support policy makers around the world in embedding meaningful and trusted sustainability — as outlined in the RSB Standard — into legislation, policy, and regulations. By providing expertise and guidance at the national and global levels, as well as for specific sectors, RSB uses its resources to support awareness, knowledge sharing, and action with multiple stakeholders.*



*WWF Germany acknowledges RSB as having best practice among sustainability standards for water stewardship in agricultural supply chains.*



*RSB is leveraging its community, resources, and best-in-class sustainability standard as part of a global movement to create a world of positive impacts and a thriving planet with:*



MAXIMUM CIRCULARITY



ASSURED GLOBAL NUTRITION AND WATER ACCESS



FOSSIL FUELS LEFT IN THE GROUND



1.5°C WARMING CAP ACHIEVED



GUARANTEED HUMAN AND LABOUR RIGHTS



PRODUCTIVE AND HEALTHY ECOSYSTEMS

*This transition to a new, climate resilient society is done with the voices of all people — particularly the marginalised and workers in affected industries — at its core.*



*The German Öko-Institut has benchmarked sustainability standards for cotton supply chains in Ethiopia and RSB has scored best.*



*The RSB Standard for Advanced Products will be a critical standard supporting both the development of a circular and bio-based economy. It is unique in that it covers a broad range of possible feedstocks and supply chain options including bio-based products, carbon recycling and the use of bio-based feedstocks in complex integrated production systems and supply chains.”*



**Susanne Veith, EU Government Affairs Manager,  
DowDuPont Specialty Products (DuPont) Division**

## ARE YOU READY TO TRANSFORM THE TEXTILES & FIBRES INDUSTRY?

REACH OUT TODAY

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