



# Fashions change, Forests stay:

How sustainable forest management can help the fashion industry reduce its carbon footprint

# Foreword

Ben Gunneberg, CEO of PEFC

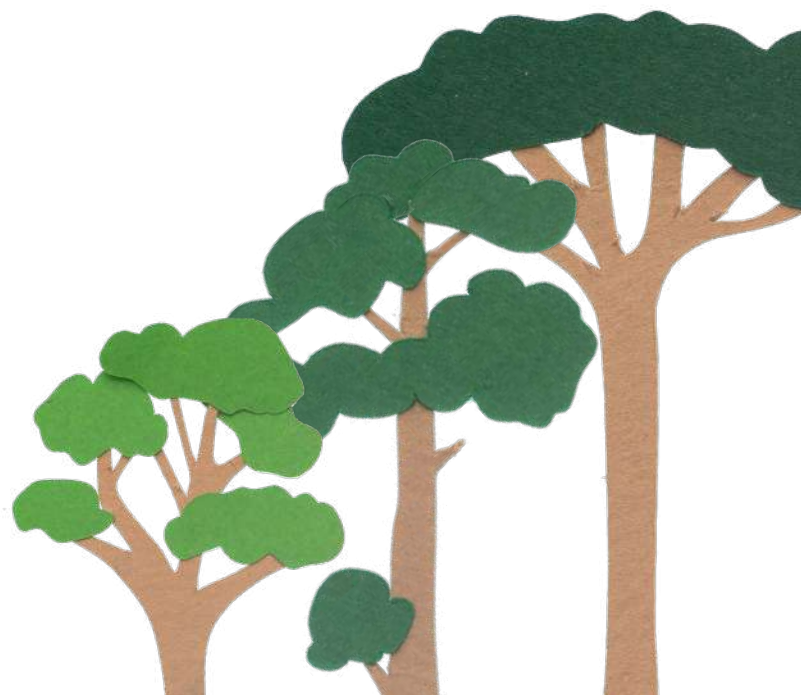
**In 2018 a remarkable fashion event took place during a high-level UN meeting on sustainable development. Attendees witnessed a world's first, the launch of a unique collection entirely derived from sustainably managed forests.**

This unprecedented event was part of “Forests for Fashion”, an initiative backed by PEFC and UNECE (the UN Economic Commission for Europe), to showcase a wonderful collection by Spanish designer María Lafuente, a regular on the runway at Madrid Fashion Week. The launch event did not just look beautiful, but by using wood-based fibres, the delicate garments on show reduced carbon emissions, protected ecosystems and created jobs for forest communities.

It is now widely recognised by the business community that consumers expect brands to be environmentally friendly. According to a recent Nielsen study, 73% worldwide would change their consumption habits to reduce their impact on the environment. Corporations are increasingly expected to play their part, with carbon reduction strategies to support the Paris Agreement goal to keep global warming well below 2°C and as close to 1.5°C as possible.

**Across the world, the fashion industry is responding. More than 100 brands have now signed up to the UN Fashion Charter for Climate Action, committing to cut greenhouse gases through their global supply chains by 30% by 2030. The Charter sets out an inspiring long-term vision of a net zero emissions fashion industry by 2050.**

**Encouragingly, around 250 brands - have signed up to the Fashion Pact, pledging to take actions consistent with limiting global warming to 1.5°C and a “just transition” to achieve net zero by 2050. They specifically recognise the importance of maintaining natural forests and restoring ecosystems through their supply chains.**



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**Forest fibres are low-carbon materials, which appeal to today's eco-conscious consumers, so it is no wonder that their use is growing exponentially.**

Forest fibres come from a renewable source and, thanks in part to recent technological innovations, they consume relatively low levels of water and energy. Crucially, even after trees are harvested they continue to store the carbon that has been captured. And, provided they are sourced sustainably, the use of wood-based materials helps to preserve and enhance forests' ability to capture carbon. Viscose, acetate, lyocell and other forest fibres now make up about 6.2% of global textile production.

There are many opportunities to make positive changes and any progress, no matter how small, is vital. The UN Intergovernmental Panel on Climate Change (IPCC) has warned that we have just 10 years to keep global warming to 1.5°C. Even half a degree beyond this will cause irreversible damage to our societies, economies and the natural world. Urgent action is needed, and fortunately, when it comes to fashion, a powerful solution is at hand and plenty of momentum for new ideas.

Fashion brands and retailers are looking closely at how wood-based materials can support improvements in their own environmental impact. Many have developed and implemented policies on cotton and other common materials, but are still evolving their approach to forest fibres. The world's forests already store more carbon than all exploitable fossil fuel deposits, so increasing their ability to mitigate climate change is an obvious option.

**This white paper; 'Fashions Change, Forests Stay' is designed to help you to understand more about the role of forests in mitigating climate change, explaining the value of sustainable forest management, and the assurance that PEFC certification brings. We invite you to join us in protecting and restoring this vital global resource, and in doing so, supporting your customers and safeguarding our collective futures.**



# The Value of Forests

Nearly a third of the world's landmass is covered by forests - a total area of more than 40 million square kilometres (4.06 billion hectares) – and they play a vital role in managing any changes to our climate.

Forests act as carbon sinks, absorbing roughly two billion tonnes of carbon dioxide (CO<sub>2</sub>) a year. Trees, like other plants, use the energy of sunlight to take CO<sub>2</sub> from the air and water from the ground and convert it into nutrients in a process called photosynthesis. As they grow they store carbon in their trunks, roots, branches and leaves, releasing oxygen into the air. They also help soil capture significant amounts of carbon.

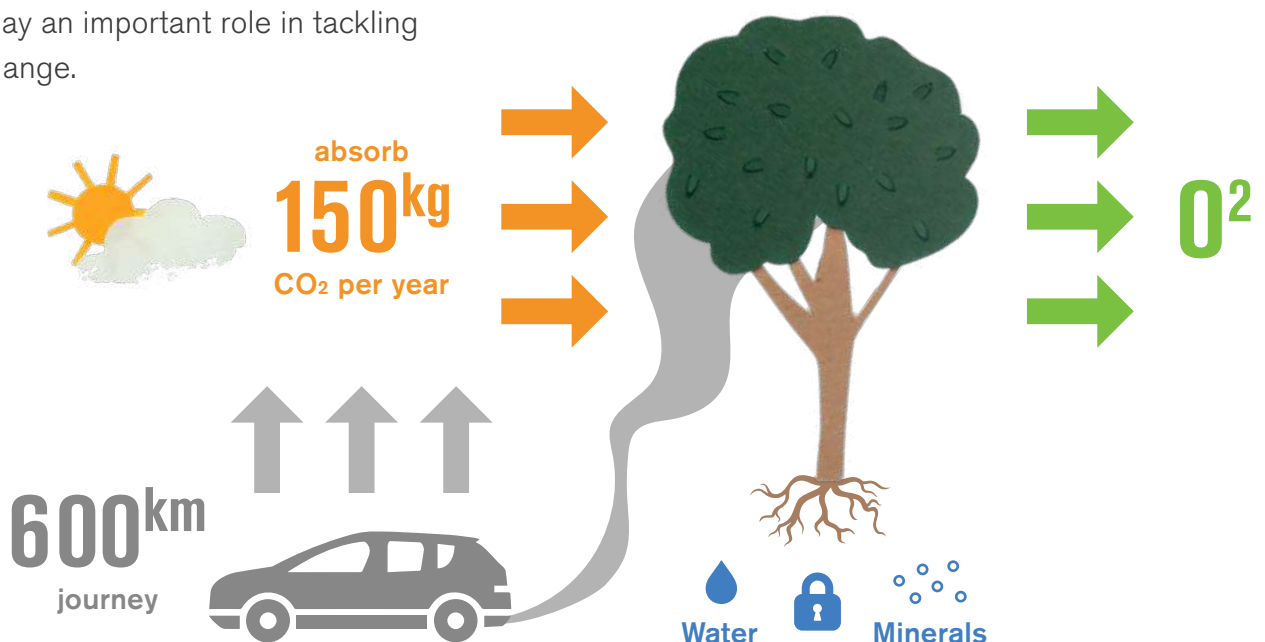
A tree can absorb up to 150kg of CO<sub>2</sub> per year, which is the equivalent of emissions generated from a 600 kilometre journey driven by an average passenger vehicle.

Trees also continue to store this carbon even after being transformed into a product, such as clothing made from forest fibres or packaging. This means forests can be managed for productive purposes and still play an important role in tackling climate change.

This is significant, because if a forest is economically sustainable, it is less likely to be cleared for other uses. Nearly half the world's forests are either managed primarily for the production of wood and other forest products (28%) or designated for multiple use, which often includes production (18%). Just over a quarter (27%) are largely untouched by human activities.

Landmark research by the Crowther Lab, at ETH Zurich, highlighted restoration of the Earth's forests as “our most effective climate change solution to date” with the potential to capture two thirds of man-made carbon emissions.

Simply put, forests help mitigate climate change through the three S: Sequestration, Storage and Substitution.



# The Value of Forests



## Forests purify the air and regulate temperature.

Trees absorb the dust and toxic chemicals that settle on their leaves and they release water vapour, cooling the surrounding air and regulating rainfall.



## Forests support an extraordinary range of biodiversity.

Forests are home to more than 80% of all terrestrial species of animals, plants and insects.



## Forests support livelihoods.

Close to 1.6 billion people rely on forests for timber, food, fuel, jobs and shelter, including around 60 million indigenous people who are almost wholly dependent on them.



## Forests feed the world.

Globally, 76 million tonnes of food comes from forests, 95% of which is plant-based. Half of the fruit we eat comes from trees.



## Forests maintain water quality.

Trees filter out pollution, stabilising soil with strong roots and absorbing sediment. 75% of our fresh water comes from forest watershed areas.

The UN Food and Agriculture Organisation (FAO) recognises the critical importance of not just preserving but restoring our forests. In its 2020 report on the State of the World's Forests it says:

*“Forest restoration, when implemented appropriately, helps restore habitats and ecosystems, creates jobs and income and is an effective nature-based solution to climate change.”*

# Deforestation & its Consequences

Our forests are a vital global resource, but they are shrinking at an alarming rate, posing real risks to our climate, biodiversity and the wellbeing of people all over the world.

Each year since 2010, the world has lost an average 47,000 square kilometres of forest – an area larger than Denmark – although the rate of loss has slowed by 40% since the 1990s.

Farming is the main cause of deforestation. Large-scale commercial agriculture, including cattle ranching and soya and palm oil cultivation, accounted for 40% of tropical deforestation from 2000 to 2010. Subsistence farming accounted for another 33%. Unsustainable and illegal logging also play a significant role.

Forests that are cleared for agriculture or destroyed for other purposes are no longer able to absorb carbon or provide vital services such as maintaining water quality, purifying the air and regulating temperature. Deforestation and forest degradation contribute about 12% of the world's greenhouse gas emissions, according to the World Bank.



**-47,000<sup>km</sup>2**  
of forest lost  
every year since  
2010

# Deforestation & its Consequences

Climate change also threatens forests, increasing the frequency and intensity of wildfires, storms and damaging insect outbreaks.



Nearly a million square kilometres – an area nearly twice the size of France - was damaged by fire in 2015 (the latest year for which data is available).



In the same year, insects, diseases and severe weather events damaged another 40,000 square kilometres - an area the size of Switzerland.

Fashion brands and retailers can support global efforts to protect and restore the world's forests and maintain them as a vital solution in the fight against climate change by ensuring their sources of wood-based products are managed sustainably. If they cannot verify their sources, however, they risk contributing to deforestation and its damaging social and environmental consequences.

# Sustainable Forest Management as a Climate Change Solution



**Sustainably managed forests play an essential role in helping the world avoid the worst impacts of climate change.**

As the IPCC stated in its fourth assessment report: “In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit.”

The FAO defines sustainable forest management as a “dynamic and evolving concept, which aims to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations”.

In other words, sustainable forest management is about optimising forests’ many benefits for people and the planet, while conserving and maintaining their ecosystems. An important part of this is ensuring that forests can fulfil their potential as a natural climate change solution.

In practice, sustainable forest management increases tree cover to help the forest store more carbon and creates healthy soils that are more productive. It can also promote demand for timber products that continue to store carbon through their life, and maintain the forests by giving them a commercial value.

Healthy forests are also more resilient to global warming because they are better able to cope with stress, recover from damage and adapt to change.

**The FAO’s 2020 report on The State of the World’s Forests finds that sustainable management of forests can make forests less vulnerable to the impacts of climate change, by increasing their resilience to pests and helping to conserve biodiversity.**

It stated: “Solutions that balance conservation and sustainable use of forest biodiversity are critical – and possible. Not all human impacts on biodiversity are negative, as shown by the many concrete examples... of recent successful initiatives to manage, conserve, restore and sustainably use forest biodiversity.”

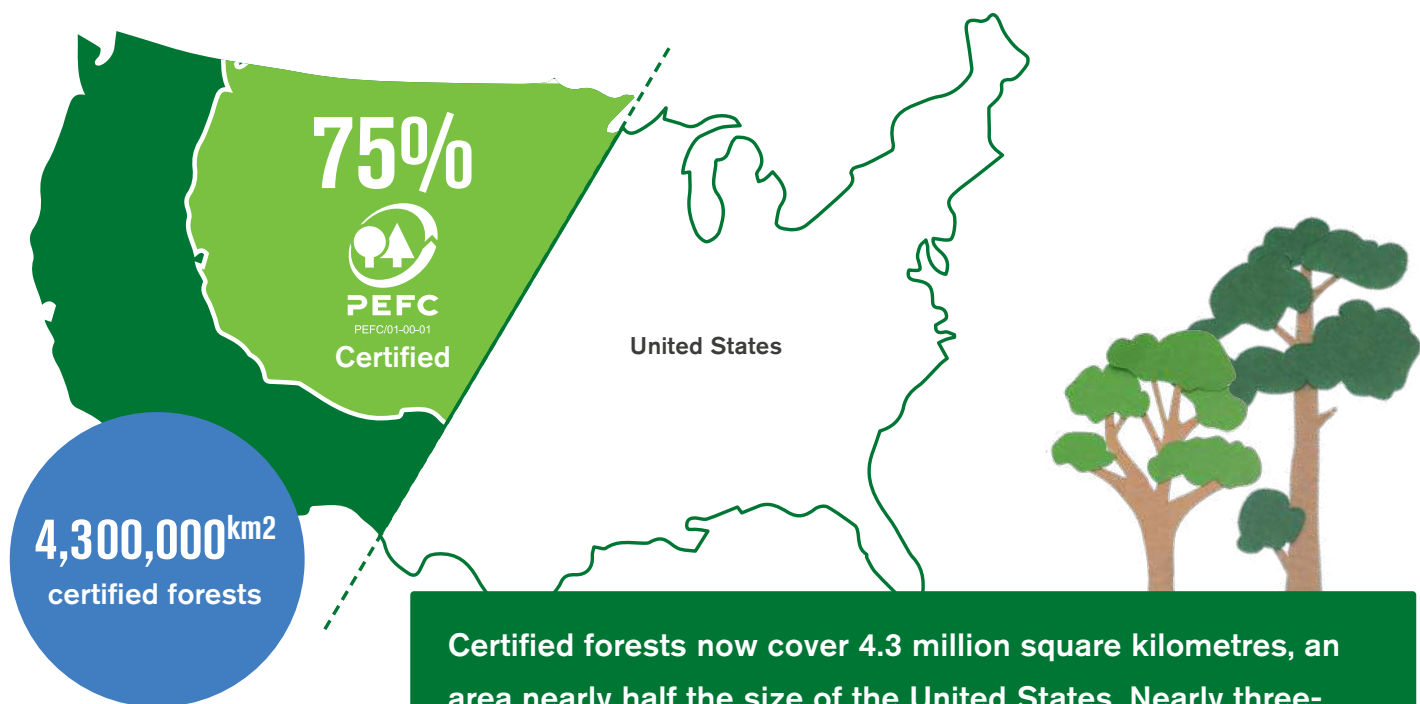
The 2019 IPCC special report Climate Change and Land confirmed that planting forests and protecting existing forests is at the heart of many of the goals of the Paris Agreement. In this special report it states: “By providing long-term livelihoods for communities, sustainable forest management can reduce the extent of forest conversion to non-forest uses.”



# Sustainable Forest Management as a Climate Change Solution

The UN has set out a global framework for action to support sustainable forest management in its Strategic Plan for Forests, which demonstrates that this not only supports the climate targets of the Paris Agreement but also **13 of the 17 Sustainable Development Goals**.

The good news is that sustainable forest management has grown enormously in the last two decades as its benefits have become better understood. Since 2000, the proportion of the world's forests certified to be managed sustainably has grown from 1% to 13%.



Certified forests now cover 4.3 million square kilometres, an area nearly half the size of the United States. Nearly three-quarters of this, 75%, is certified to PEFC standards. It is our mission to continue this growth at pace.

# About PEFC

**PEFC, the Programme for the Endorsement of Forest Certification, was founded by small and family forest owners in 1999 and is now the world's leading forest certification system.**

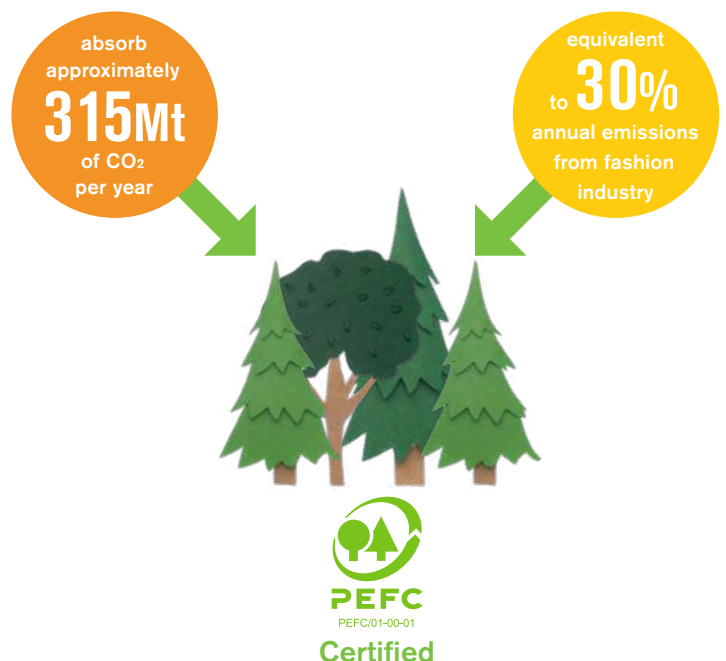
We work to protect our forests by promoting sustainable forest management, and enabling forest owners to demonstrate their sustainable management through certification. We also help companies source wood-based materials responsibly from certified forests and suppliers. We provide support for their suppliers to gain certification. We advise brands and retailers on how to communicate the benefits of renewable forest fibres to consumers. And we collaborate with them on projects that are helping to ensure the area of sustainably managed forest grows each year.

More than **3.2 million square kilometres** of forest area is PEFC certified – an area larger than India - as well as more than **20,000 companies** in the supply chain operating in 76 countries. These include producers of wood pulp and fibre supplying more than half the global viscose market.

**PEFC-certified forests are estimated to absorb 315 million tonnes of CO<sub>2</sub> every year – equivalent to roughly 30% of annual emissions from the global fashion industry or 85% of the UK's emissions in 2018.**

PEFC certification gives fashion brands and retailers the assurance that they are using wood-based fibres that have been sourced sustainably from thriving forests that are playing their part in tackling climate change. It provides evidence that companies are not contributing to deforestation or illegal logging, nor intensifying the accompanying social and environmental problems.

We are proud to have created the PEFC Sustainable Forest Management standard, setting out 140 criteria to safeguard forests and protect their diverse functions, which are implemented into PEFC-endorsed national standards in 47 countries, through a standard setting stringent process of 110 requirements. It requires certified forest owners to manage their forests in a way that maintains or enhances the ecological, social, cultural, and economic values of their resources.

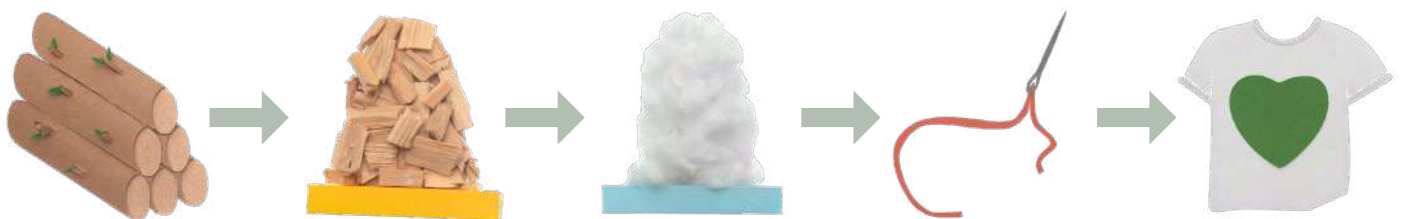


# PEFC Standards

**PEFC forest management certification ensures that forest owners meet the requirements set by the PEFC-endorsed national standard in their country, including key criteria designed to protect and enhance forests' ability to mitigate climate change.**

**Certified forest owners are required to<sup>1</sup>:**

- 🌿 Maintain or increase the full range of ecosystem services provided by forests including carbon sequestration;
- 🌿 Safeguard the capacity of the forest to capture and store carbon in the medium and long term, by balancing harvesting and growth rates;
- 🌿 Protect forests from illegal logging degradation and conversions;
- 🌿 Maintain the capability of forests to produce a range of wood and non-wood forest products and services on a sustainable basis;
- 🌿 Implement afforestation, reforestation and other tree planting activities to improve and restore the forest ecology.



As timber moves from certified forests into the value chain, the next steps are integrated into the Chain of Custody.

**PEFC chain of custody certification tracks forest-based products from their origin to the final product. This includes the process from logging to fibre production, spinning, dyeing and weaving, and garment manufacturing through to the final labelled product<sup>2</sup>.**

<sup>1</sup> Here are just a few examples of some of the criteria. The full set of requirements can be found within the PEFC Sustainable Forest Management standard.

<sup>2</sup> The full set of CoC requirements can be found within the PEFC Chain of Custody standard and to find more about benefits contact us by email.

# PEFC in Action – Example

One of the examples is Finland, where over 84% of forests have been managed to PEFC endorsed national standards since 2000 and the country's forest growth exceeds harvesting.

In 2019, 73.3 million cubic metres of roundwood was produced in Finland, while the forest's growing stock increased by about 108 million cubic metres. The same year, growing stock volume in Finland's forests totalled 2.5 billion cubic metres, which is 1.7 times the volume recorded in the 1920s. Finland's forests net sink was 25.6 million tonnes of CO<sub>2</sub> in 2019, compensating for 48% of the country's emissions. This is 1.5 times more CO<sub>2</sub> than was absorbed in 2000, providing additional carbon sink capacity that could neutralise the annual electricity consumption of over 1.5 million homes.

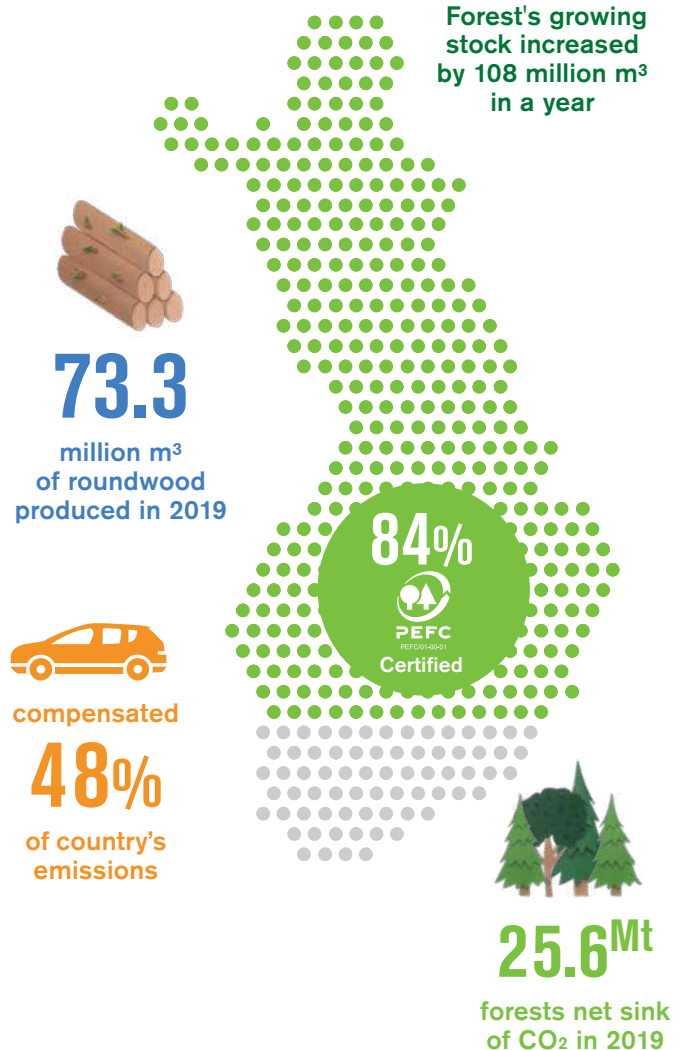
## Collaboration beyond certification

PEFC not only enables fashion brands and retailers to safeguard forests by supporting its robust standards, it also gives them the opportunity to go beyond certification and actively collaborate on joint projects. These projects are making a difference around the world by building the infrastructure needed to expand sustainable forest management.

From its launch in 2011 to 2018, the PEFC Collaboration Fund has awarded over 900,000 Swiss Francs and leveraged co-funding of more than one million Swiss Francs for 39 projects. The investment has been used for many valuable activities, including establishing national certification systems, training on sustainable forest management and developing new products and services for certified forests.



Forest's growing stock increased by 108 million m<sup>3</sup> in a year



By working in partnership with us, fashion brands and retailers can support the health and vitality of the world's forests. This increases the land under sustainable management, helping to combat climate change, preserving biodiversity and supporting rural livelihoods.

# Benefits for Business

**PEFC certification allows brands and retailers to make responsible procurement choices and support sustainable management of forests around the world.**

PEFC Certification prevents products from illegal logging or linked to deforestation from entering your supply chain. Third party verification also gives you a credible tool to measure and monitor progress in sourcing raw materials against your sustainable sourcing targets.



## **Meet your climate targets**

by using renewable forest fibres that store carbon and can be recycled into new fabrics;



## **Support the UN Sustainable Development Goals,**

because sustainably managed forests support 13 of 17 SDGs, for example supporting smallholder farmers and biodiversity;



## **Respond to consumer demand and reduce the risk of reputational damage**

by using sustainable materials that are produced ethically and do not harm the environment;



## **Increase your business resilience**

by sourcing from sustainably managed forests, ensuring continuity of supply;



## **Reach your social and environmental targets**

related to deforestation, responsible sourcing and compliance with timber legislation, because PEFC certification gives you the security of internationally recognised guidelines (ISO, ILO, IAF, UN).

# PEFC Collaboration Roadmap – 5 Steps by 2025

The power of the fashion industry to create positive change and lead the way is clear. When we work together we can solve our greatest challenges.

Fashion brands and retailers have shown many times just how resourceful and responsive they can be. Looking ahead, it is now vital to harness its energy to tackle the climate emergency.

As we have demonstrated, protecting and restoring the world's forests and managing them sustainably is perhaps our best climate change solution, and one that brings huge additional rewards.

It is no exaggeration to say the decisions and actions companies take now will have an impact on our planet. Therefore, we would like to invite you to join us and work together to promote sustainable management of the world's forests.

Many of you are at different stages of developing forest fibre policies. Whatever your stage of development or implementation, our five-step road map to a sustainable forest management policy can help support your forest sustainability goals. This road map can also be aligned easily with your other forest-related policies.

The time to increase your positive impact is now. Together we can make a difference for the future of the fashion industry, our forests and our world.

- 1. Engage with PEFC** to learn more about how sustainably managed forests store carbon, protect biodiversity, support rural communities and the fashion industry.
- 2. Develop a responsible sourcing policy** for wood-based fibres and other wood-based materials – from clothing to packaging and point of sale.
- 3. Map your supply chain** and collaborate to implement procedures that trace wood-based products back to origin to ensure they are sustainable.
- 4. Increase your sourcing of wood-based products** from sustainably managed forests and recycled sources and set ambitious targets to achieve 100% sourcing from certified sustainably managed forests.
- 5. Collaborate with PEFC** and our global network of over 750,000 forest owners, from the small to the large to meet your environmental goals through projects that protect and restore forests.

Contact us: [textile@pefc.org](mailto:textile@pefc.org)

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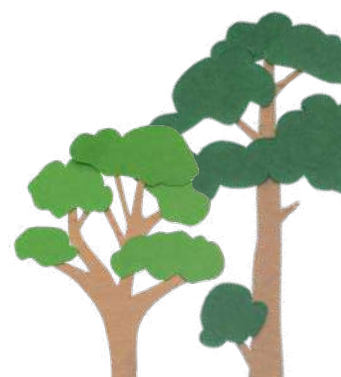
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Forests stay.**

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[#FashionsChangeForestsStay](https://www.instagram.com/pefc)