The position and opportunity for FSC™

in the global transition to a circular bioeconomy.

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Letter of the FSC circularity hub

This paper is an invitation to begin a conversation - and with it hopefully, a new chapter for FSC. One in which forest production and the recirculation of forest fibres work seamlessly together.

Our stakeholder community has made it clear: advancing the circular agenda is urgent. At FSC, we agree. As the world accelerates toward a circular economy, regenerative materials – including forest-based ones – are essential to replacing finite, fossil-based resources. But rising demand brings growing pressure on forest ecosystems, which are already strained. Multiple sources, including the World Bank, have warned for years that we are on a path to consume forest resources faster than they can regenerate.

This gives FSC a potential added role in our mission: beyond safeguarding forests and the livelihoods that depend on them, we must also help shape how forests can underpin a sustainable, circular bioeconomy.

This paper marks the beginning of a dialogue on FSC's role in enabling and certifying circular performance. We explore the shifting policy landscape and the growing demand for verified circular transitions, new business models, and resilient material flows across value chains and across the globe.

While FSC was a pioneer in circularity 15 years ago with the FSC Recycled label and has been built on the fundamental principle of ensuring that forests are truly regenerative, our system today lacks the tools and incentives needed to scale the circular use of forest-based materials.

To bridge this gap, we propose exploring:

- **Certification of reused and repaired products -** expanding the FSC Chain of Custody system with credible requirements and a distinct label to differentiate reuse from recycling.
- **A royalty system for forest owners -** creating a financial model that rewards forest owners when fibres from their forests are reused or repaired, linking circularity directly to new income streams for forest owners..
- **Recognition of non-forest bio-based fibres -** allowing responsibly certified agricultural residues and by-products to contribute to FSC claims, with safeguards to ensure they do not compete with food, biodiversity, or higher-value uses.
- **Voluntary tools for cascading use -** providing companies with guidance and assessment tools to help them apply cascading principles in practice and prepare for emerging legislation.
- **Data and traceability innovations -** building on FSC's work with satellite monitoring, isotope mapping, and digital systems to support circular business models and provide verified information across complex supply chains.

These ideas are exploratory and non-exhaustive. The solutions presented may appear unconventional or radical; they are proposed with the understanding that the ultimate mission of the FSC - to protect our forests and relieve the pressure on forest ecosystems - will likely necessitate innovations and changes in our operations and supply chains.

No solutions have been adopted, and no decisions have been made. The circular future for FSC will ultimately be evaluated and decided by our members through our democratic processes. Therefore, we invite FSC members and stakeholders to dive into our circular visions and help shape what comes next – for FSC, businesses and forests across the globe.

We need to understand what works on the ground, where the opportunities lie, and how we ensure the transition is equitable, practical, and impactful. The transition to a circular economy will only work if it can scale, and for that to happen, FSC and our members must again lead by developing solutions that work for forests, for business, and for people. We hope you will join us in making FSC and the future more circular!

Loa Dalgaard Worm

Global Lead, FSC Circularity Hub, 2025

Welcome to a circular economy future

Imagine a world where challenges like biodiversity loss, global warming, resource scarcity, and waste have diminished and we are living comfortably within the planetary boundaries.

In this world, thousands of new equitable jobs have been created and humans across the globe report that they live happier, fuller lives. The transition to this reality has been achieved by a shift from a traditional linear economy to a thriving circular economy.

This global circular economy is organized like the ecosystem of nature. We have created ways to work together so we can share resources, experiences and skills. A greater emphasis on regionality and optimal use of resources lead to resilience and natural, healthy growth.

Our thinking and actions are not aimed solely at increasing value for companies and their customers but at the long-term preservation of human and non-human wellbeing.

Circular economy principles are integral to core business practices, and sectors like repair, sharing, and reuse attract the highest level of investors and financial interest. The concept of 'waste' has been abandoned, as everything, even after its lifetime, becomes a resource for something else. This is possible because our industries and lives have transitioned to a natural fibres first paradigm, where fossil fuel based and mixed fibre types with low re-use and recycling potential have been close to phased out. This means bio-based materials of all sorts, such as agricultural residue or mushroom mycelium, work alongside forest-based materials in various applications.

Our houses, food, clothing, furniture feel different, work differently. All materials are used at their highest possible environmental and economic value for as long as possible.

New types of jobs have emerged from this shift, focused on different skill sets and a more diverse set of workforce talent. On top of this more workers – formally and informally organized ones - benefit from improved social protection.

Companies and organizations adhere to circular economy standards and regulations to operate legally and maintain their license to operate. This has enabled them to meet greenhouse gas reduction targets and do business within the planetary boundaries.

Meanwhile, consumer attitudes have transformed: people love the products they use and are not driven by consuming and owning more and more things. Repairing and reusing items has become routine and socially mainstream at every level of society worldwide.

In this world, certification schemes have evolved from primarily focusing on responsible resource extraction of materials to also being drivers for a smart use of fibres across the natural fibre space, with mutual recognition and data exchange as natural extensions of the service offering.

Because it is mainstream to repair, reuse and refurbish, and certification schemes now offer solutions for this, there is less pressure on the forests and they can thrive as biodiverse, regenerative ecosystems.

Robust data make it easy and possible to track back where resources come from and give back to the source for the continued ecosystem services, which forest managers protect. Because of new inventions of organisations like FSC, forest owners are financially rewarded each time a fibre from their forests are reused and recycled, creating a lasting incentive for responsible management of the forest area. In this world, forest ecosystems are now in balance and have moved out of the danger zones for climate and biodiversity collapse.

They are still utilized for resources and responsibly managed for production. But despite a massive increase in use of forest-based fibres due to the transition away from fossil fuel-based materials, much longer lifespans for each extracted tree through multiple use cycles help reduce the pressure on forests to a level, where they still thrive. They as a result continue to be a cooling engine for the planet, halting temperature increases and storing carbon as massive sinks.

This means that forest ecosystems are now in balance and ultimately that the valuation of nature including forests has shifted. Forests are valued for their full contribution to ecological and social resilience.

What if, this was the future FSC stewarded?

The circular economy (briefly) explained

So far, the global economy has been based on a linear model, in which resources are extracted from supposedly infinite sources to produce things that, after being used, are thrown away. This throwaway culture and model of the economy are problematic, since neither natural resources nor the resilience of our ecosystems are infinite.

Circular economy has been created as an alternative paradigm for our economy and society designed with nature as the main source of inspiration.

In nature, there is no such thing as waste as residue generated from one process is the input of another. No one takes more than they need and many beings, like mushrooms, bees and worms, even give more back to the environment than they extract. The system works because of networks of synergetic relations and exchanges.

Circular economy is about the creation of an entire economic system that balances the needs of the humans that live on earth with the natural world that supplies the economy with resources.

Achieving a circular economy means redesigning business models, products, and services so that waste and pollution are avoided, products are kept in use as long as possible, and nature is regenerated. It requires a fundamental systems change with implications for the way we consume, the business world and the financial system that enables it.

Circularity is more than recycling

For many people, the idea of maintaining raw materials and products in loop often equals recycling waste as the primary tactic. To some extend this notion is correct. Recycling is undoubtedly an important cycle in the circular economy, and the FSC was ahead of its time, when the FSC Recycled Label for wood and paper products was launched more than 15 years ago.

However, it is becoming more or and more apparent, that recycling on its own is by no means enough to address the global environmental challenges. Organisations pioneering circular economy work with a way more systemic approach, where focus is placed on reducing material extraction and production / use cycles to respect planetary boundaries.[1]

For example, ECOS, the Environmental Coalition on Standards, is in its 2024 position paper to the European Union calling for a stronger political focus on absolute resource reduction and argued that the only way to achieve this is to keep the products that have already been made in use, rather than focusing on recycling solutions.

"Recycling on its own will not be enough: we need to slow down, substantially limit our production and consumption and change the established patterns if we are to reduce the mounting pressure on natural ecosystems."

(ECOS 2024[1])

With this call they are joining a movement for a different way of producing and consuming. A path, which can be based on three principles: Eliminate waste and pollution, circulate products and materials at their highest possible value and regenerate nature.

In other words: we will need to rethink which fibres we use – regenerative or finite -, how we use them, reuse them and reassemble them to a much larger extend before we recycle, if we aim to keep within planetary and climate boundaries.

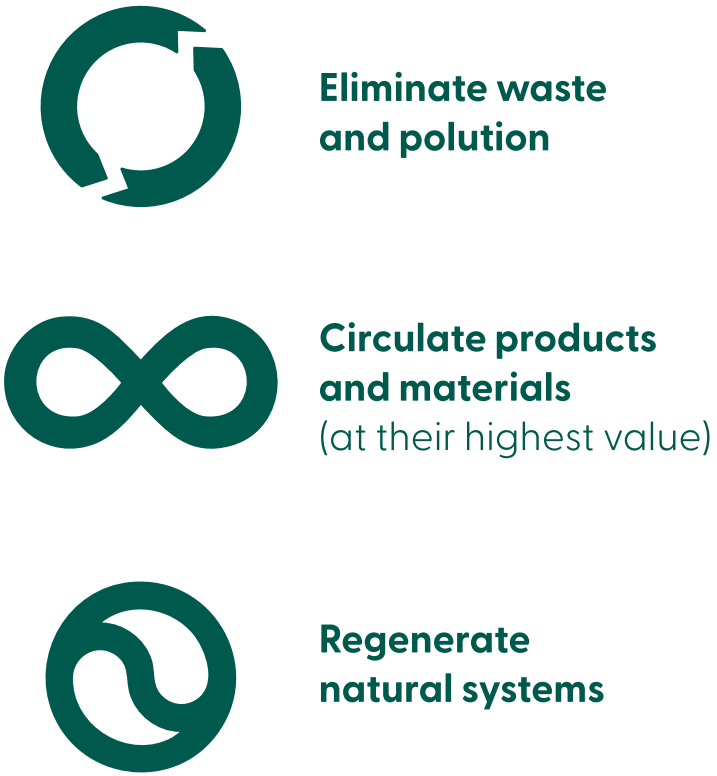


Figure: Three principles of circular economy

Using our resources more wisely

Fortunately, wood and wood-based products fits well into the circular economy if sourced and used with care. They come from renewable systems, if these are not overexploited and they can often replace finite fossil fuelled resources without major impact on product performance. If left untreated, raw materials harvested from forests will ultimately decompose and can safely be returned to the earth to nourish future growth.

In a circular economy, it is however not enough that we simply replace fossil materials with renewables. We must also design out waste by using materials at their highest possible level. This means that reusing a product (or material) is preferable to recycling it (illustrated by the hierarchy of circular strategies in the "9R figure" figure 3) and that applying cascading principles is front and centre in any circular strategy.

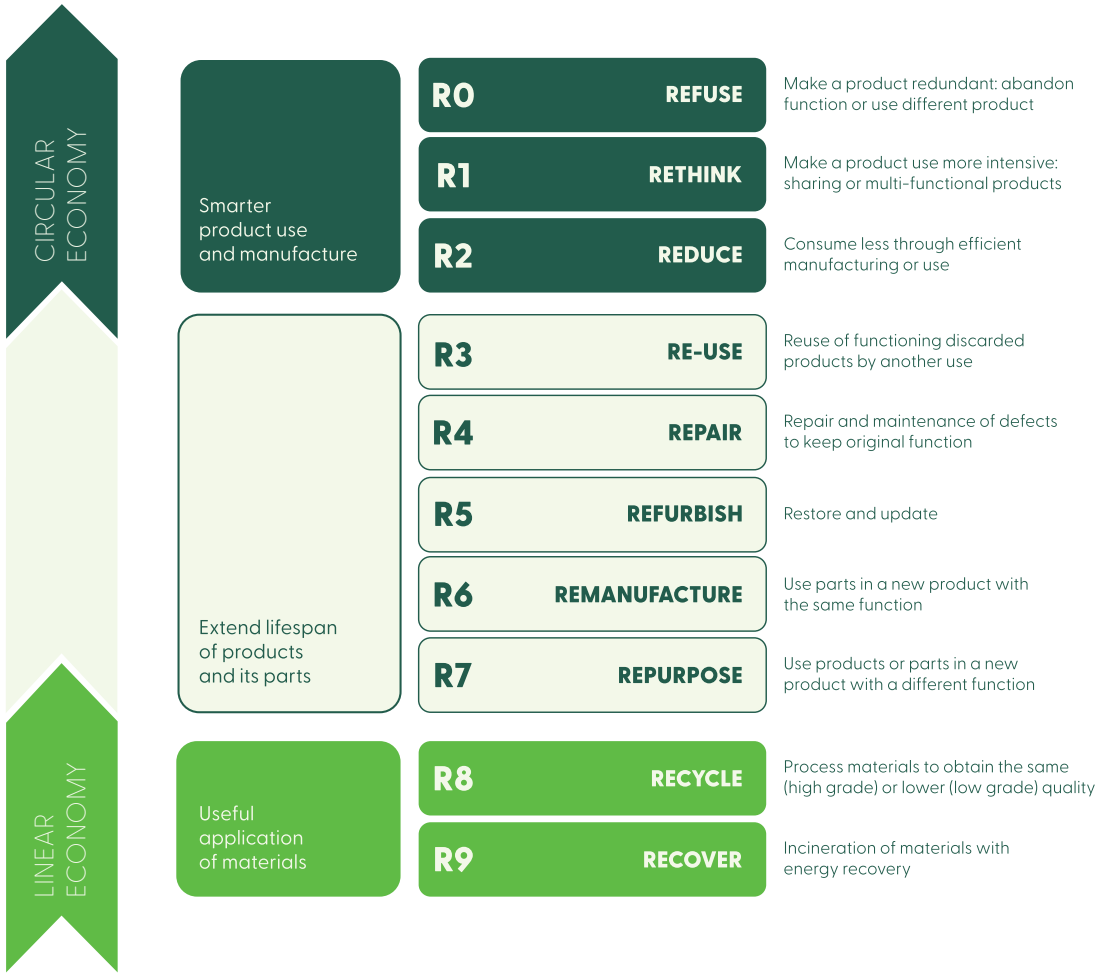


Figure: The 9Rs

Cascading use of wood means making the most out of wood and other natural materials by using them several times, each time for the purpose where they bring the highest value.

The idea is to extend the material's life, reduce waste, and create as much benefit as possible before it is finally returned to the energy cycle.

In practice, this often starts with using the strongest and most durable part of the tree - the heartwood - for long-lasting products such as buildings. The softer outer wood, which is less durable, may be turned into items like packaging or lower grade furniture. Even the bark can be used, for example in energy production or to make composite products.

When a building containing wood products is later renovated or dismantled, the wood does not go to waste: it can be reused in furniture or in non-structural building components. After this stage, the same wood can be processed into materials such as fibreboard, and eventually, at the very end of its useful life, it can be used as fuel for energy.

This cascading approach allows wood to contribute value at many stages, supporting a more efficient use of forests, creating more with fewer resources, and leaving space for natural regeneration. Applying cascading principles across industries will be a key step in achieving circular economy transition.

The question is then, which role organisations like FSC play in enabling this shift?

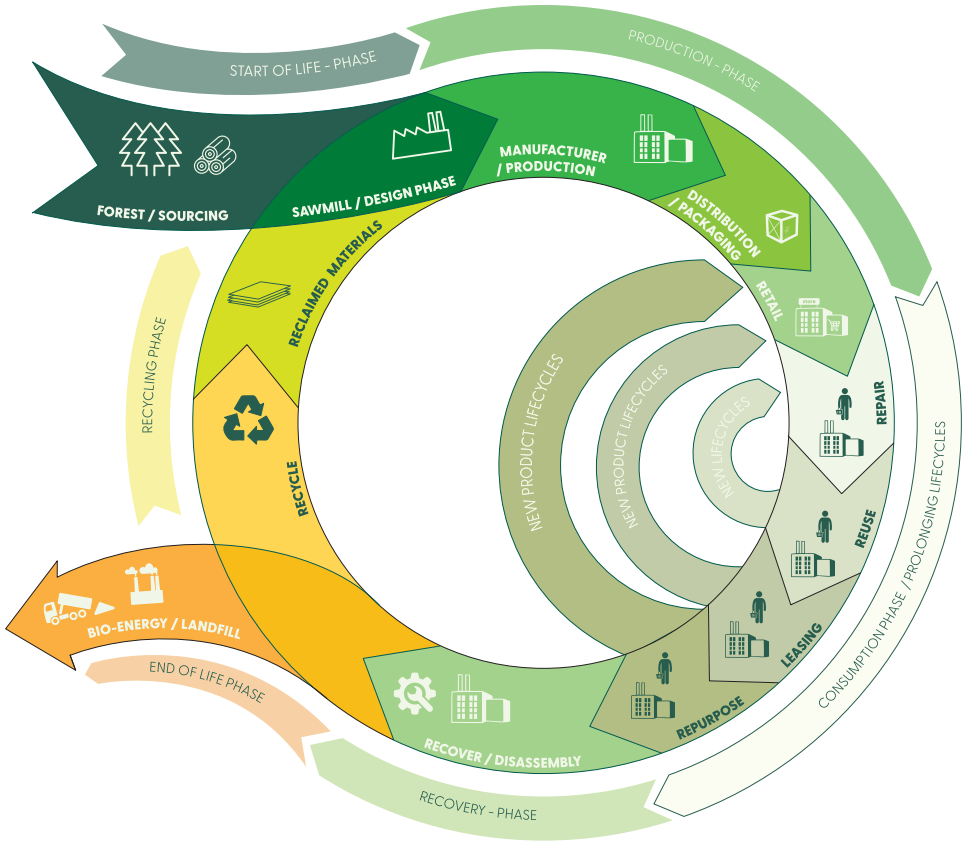


Figure: The circular economy loops

Delivering on FSC's mission requires a new approach to circular economy

FSC has a legacy to be proud of.

Over 15 years ago, we were pioneers in recognizing the importance of recycled materials, launching the FSC Recycled label well before circularity became a mainstream concern.

We also led the way in establishing Chain of Custody (CoC) certification at a time when many believed it was too complex to achieve - laying the foundation for responsible sourcing of renewable forest-based materials. And we introduced now widely accepted concepts like High Conservation Value (HCV) forest areas and the ecosystem services procedure also known as Verified Impact, pushing the boundaries of what forest certification could stand for.

Now, FSC is in a good position to pioneer again.

To support our members and the wider market in a meaningful circular economy transition, FSC should move beyond recycling and sourcing of renewable materials alone and adopt a holistic approach to circularity - one that aligns with the full spectrum of circular principles and embraces both the technical cycle of enabling a multitude of product, material, and fibre cycles, and the biological cycle of enabling regenerative ecosystems, which thrive[3]. This means developing systems and incentives to ensure that forest-based fibres are used at their highest possible value, for as long as possible, before returning to nature or being cascaded into new uses. This could be our most impactful means to reduce pressure on forests while unlocking new value in circular business models.

Transforming our strategic ambitions into tangible change requires FSC to adapt our systems and standards to enable all circular business models at scale, from large-scale repair and reuse to leasing and sharing platforms. Just as importantly, we need to make our position and roadmap clear on key issues such as using alternative inputs from agriculture and other bio-based waste streams, as well as the cascading use of fibres.

The goal is to ensure that natural resources are kept in use for as long as possible and directed toward the most valuable purposes at each stage - before finally ending up in disposal or energy recovery.

Currently, no other scheme possesses as many of the foundational elements needed to become the circular certification scheme of the future as FSC does.

This presents us with an opportunity for growth and the chance to truly deliver on our mission to halt deforestation and ensure forests for all, forever. But to seize this opportunity, we will have to act now.

Our transition will necessitate partnerships with leading organizations, members, and stakeholders to scale the market and demand for circular use of fibres. It also requires FSC to establish market incentives for the uptake of circular use, making it less demanding and costly to use fibres already in circulation than to obtain new ones.

In other words, if FSC is to deliver on its mission to safeguard forests and remain relevant for future generations as a solutions provider, we will need to prioritize the development of circular solutions and consider the adjustments to the FSC system that make this possible.

Moving in this direction not only helps reduce pressure on forests but also creates opportunities for companies to comply with legislation, strengthen their business models, and lead the way in operating within planetary boundaries.

Is the world ready for circular economy?

There is no doubt that the circular economy has reached a megatrend status.

Over the past five years, the volume of discussions, debates and articles addressing the topic of circular economy has almost tripled[4], reflecting a heightened awareness and interest in circularity all over the world. At the same time, material consumption continues to accelerate and at a global level, more than

90%

of the extracted materials entering the economy are virgin.[5]

The International Resource Panel estimates that raw material processing and extraction are responsible for around 50% of global greenhouse gas emissions and 90% of global water stress and land-use-related biodiversity loss comes from raw material processing and extractionw.

In other words: despite the chatter, circular practices of using less, using longer and circulating are by no means mainstream but there has never been more attention to and pressure for transitioning from our current linear economy to a circular economy on a global scale.[7]

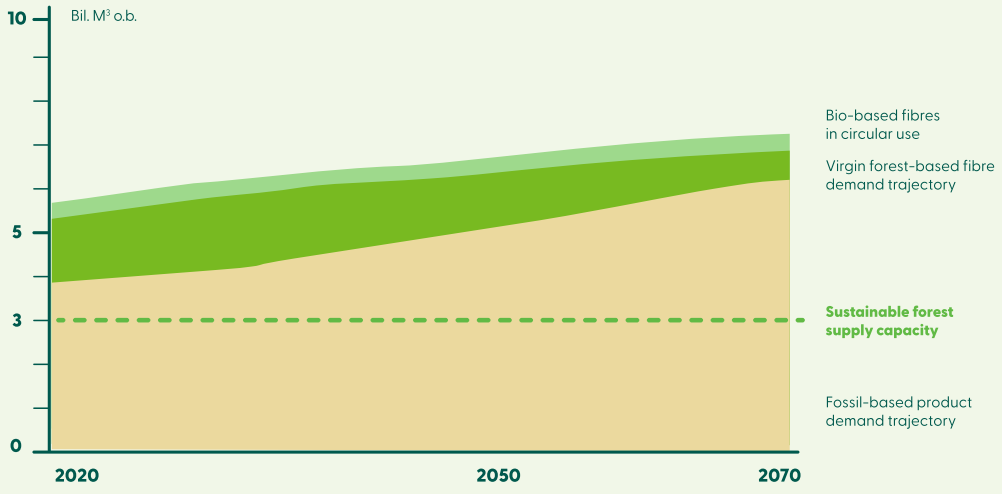
400% increase in demand ahead

“We need to find ways to increase the efficiency of use of wooden products to maintain a healthy wood supply in the long term.”

(Ramboll, Realising the potential of a circular economy for wood-based materials (2024)[10]

Wood is a renewable, recyclable, and naturally biodegradable material that in many cases can serve as a viable alternative to CO^2-intensive materials and products, such as plastics, steel, and cement. According to the World Bank, the global demand for forest-based products is predicted to increase by 400% by 2050[8]. This growth is fuelled by existing megatrends, such as population growth, urbanization, and the drive to net-zero across industries and nation states.

Global wood production is already at record levels, and it is being questioned whether our forests can supply raw materials at the anticipated increased demand and be managed sustainably at the same time. Considering that climate change is adding additional stress to forests, from wildfires to pest infestations, it is becoming increasingly evident that we need to find ways to increase the efficiency of use of wooden products to maintain a healthy wood supply in the long term.[9]



FSCs rendering of graph by University of Kassel and WWF Germany[10]

Will our forests save us?

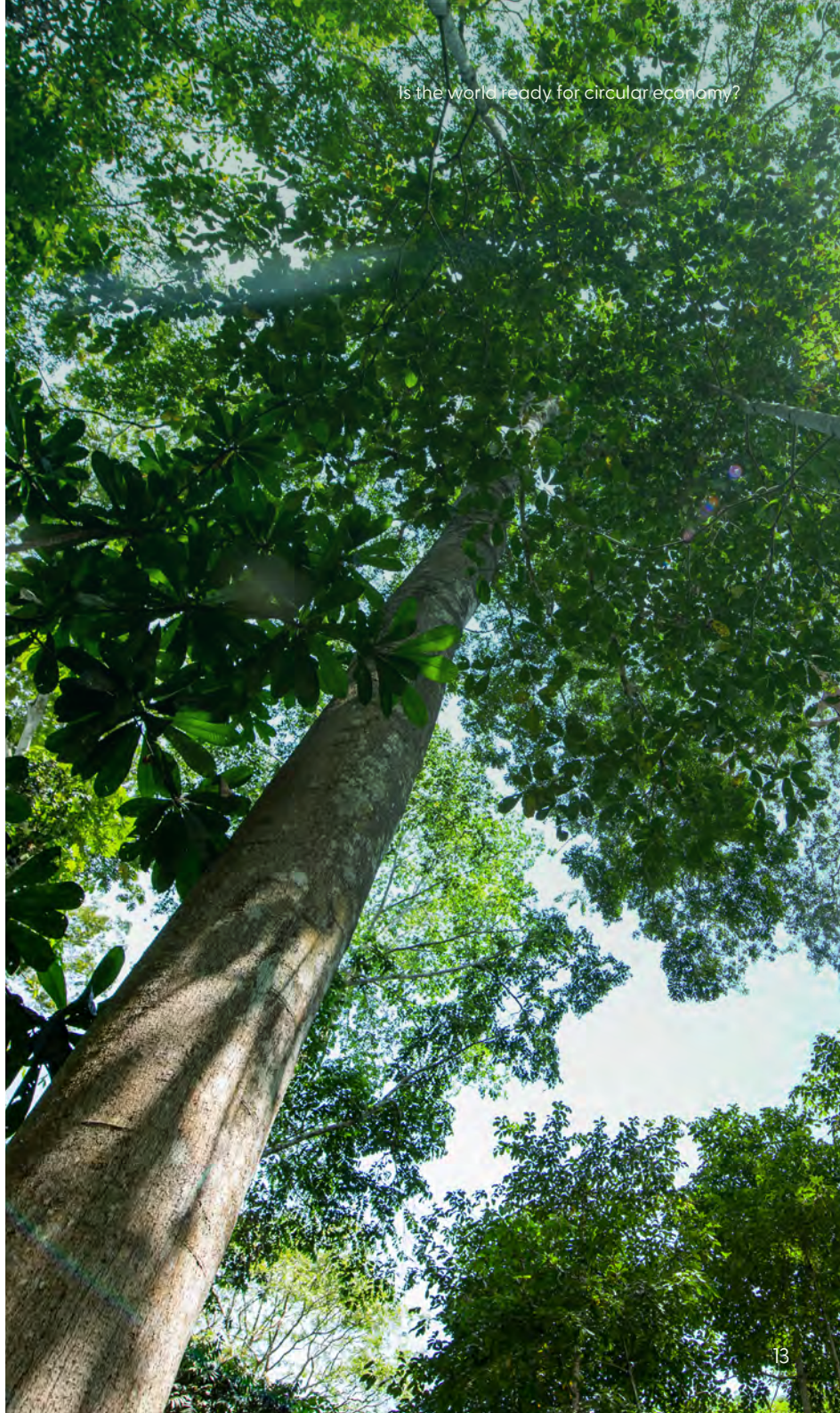
The urgency of transitioning to a circular economy becomes even more pressing when forests are viewed not just as sources of raw materials, but as critical ecosystems underpinning all life on Earth.

Forests are key providers of ecosystem services, including carbon storage, water regulation, climate moderation, erosion control, nutrient cycling, and habitat for the vast majority of terrestrial species. These services depend on biodiverse, resilient ecosystems, particularly old-growth and primary forests with complex, interdependent relationships between species.

What are Ecosystem Services?

Ecosystem services – the array of values derived from natural capital – span several categories including provisioning, supporting, regulating, and cultural functions. Forests provide multifaceted ecosystem services not limited to the provisioning of wood, fibre, and fuel, but also erosion prevention, nutrient cycling, water purification, climate regulation, and serve as a basis for recreation and tourism. Forests also deliver substantial benefits for the planet from the richness of their biodiversity.

Primary or old growth forests with diverse landscapes generally provide a greater variety of ecosystem services, partly due to the abundance of biodiversity present in these ecosystems.[11]



In the context of the planetary boundaries' framework – a scientific model identifying the ecological limits within which humanity can safely operate – biosphere integrity (i.e., biodiversity) is among the boundaries already critically breached. This breach undermines the resilience of natural systems, threatening cascading effects such as shifts in forest structure, reductions in carbon absorption, and increased vulnerability to drought, pests, and fires.[12]

One of the starkest examples of this risk is seen in the Amazon, where scientists warn that continued deforestation and biodiversity loss may tip the forest into a savannah-like ecosystem. This would not only result in vast carbon emissions and the collapse of regional rainfall systems but also represent an irreversible loss of ecosystem services and indigenous cultural values.[13]

Global drivers such as deforestation, land-use change, overextraction of materials, and climate change are accelerating biodiversity loss. Yet it is biodiversity that enables forests to adapt, regenerate, and continue delivering life-supporting functions. Forests regulate and stabilize our climate, generating oxygen and storing carbon, while providing healthy soil and fresh water upon which life is built. Forests house vital ecosystems that are home to 80% of the world's terrestrial biodiversity. Forests provide the life support systems for hundreds of millions of Indigenous Peoples. They also provide the non-material benefit that contributes to the development and cultural advancement of people.

In reality it is very simple: Without healthy ecosystems, circular systems cannot be sustained. So maybe it is time that we stop leaning into the renewability of forest and start thinking about forest-based raw materials as a critical and finite resource.

The pivoted mindset makes it clear: resource extraction must be drastically reduced to remain within planetary boundaries. A truly circular economy must prioritize keeping products and materials in use longer – through repair, reuse, and cascading use – before turning to virgin inputs. Doing so reduces pressure on forests, allowing them to regenerate and continue supporting both human and planetary wellbeing.

It is not only scientists and NGOs that now point to the necessity of protecting the critical ecosystem services forests provide and thus call for a rapid transition to circular economy and regenerative forestry. It is also industry players like Metsä Group, Essity, Tetra Pak and SCH Chemicals:

"Leading companies across the forest-based sector are increasingly acknowledging the necessity of safeguarding the vital services that forests provide. They are united in advocating for a rapid shift towards circular and regenerative approaches to forestry, emphasizing that such a transition is essential for both environmental sustainability and long-term business viability."[14]

Joint statement from Metsä Group, Essity, Tetra Pak and SCH Chemicals

Leading corporates are stepping up their commitment to reduce virgin material use

- Net-zero pledges now cover 92% of GDP and 88% of emissions worldwide. They have been adopted by 48% of the World's largest publicly traded companies and 42% of the countries of the World . To achieve these net zero targets there is no way around reducing virgin material use.

- Stora Enso, one of the World's largest pulp manufacturers, has set the target of being 100% circular by 2050 to be achieved by 1/ Efficiency and waste reduction, 2/ designing for recycling and 3/ by offering recycled materials rather than virgin resources at a larger scale.

- IKEA, one of the world's largest furniture companies, has committed to becoming 100% circular by 2030 by focusing on reuse, refurbishment, remanufacturing and recycling.

- In textiles, many global brands including Adidas, H&M, Inditex (Zara), Kering Group have made circular economy central to their business strategy including commitments to 100% recycled or sustainably sourced materials and 100% reprocessing of textiles for reuse or recycling.

Legislation leading the way?

Governments around the world are increasingly turning to legislation as a lever to accelerate the transition from linear to circular economies.

This shift is being driven by the need to strengthen resource resilience, increase national and regional economic security and competitiveness, reduce emissions, and ease pressure on biodiversity.

The European Union continues to lead in regulatory ambition. In 2025, even as the EU pursues a deregulation agenda to cut red tape and reduce administrative burdens[1], it has clearly signalled that the circular economy remains a strategic priority and will be aiming to adopt the new Circular Economy Act (CEA) in 2026. The CEA aims to strengthen the EU resource resilience and help create sufficient supply and demand for secondary raw materials through both legislative and non-legislative measures. The CEA could entail everything from reformation of end of waste criteria, simplification, digitalisation and extension of Extended Producer Responsibility (EPR) schemes, and setting mandatory, targeted, impactful, and implementable criteria for public procurement of circular goods.[2]

The CEA will complement the existing Circular Economy Action Plan (CEAP) as well as central regulatory frameworks like the Eco-design for Sustainable Products Regulation (ESPR), the Waste Framework Directive and various EPR-related directives. It will ultimately contribute to the ambitions set out in the Competitiveness Compass and the Clean Industrial Deal to make the EU a world leader on the circular economy and to double the EU circularity rate by 2030.[3]

In parallel, initiatives like the Corporate Sustainability Reporting Directive (CSRD), the Corporate Sustainability Due Diligence Directive (CSDDD), and the EU Taxonomy for Sustainable Activities are transforming corporate accountability and reporting norms. While recent amendments may reduce the number of companies in direct scope, the expectations on transparency and responsible practices are increasingly passed down through supply chains as part of a reinforced risk management approach among brands and large companies.[4]

Furthermore, these legislative frameworks maintain a global reach: non-EU companies with substantial operations or turnover in the EU (e.g., over €150 million annually) are still required to comply with sustainability disclosure requirements under the CSRD. This reinforces the EU's broader objective of ensuring that companies contributing to its internal market also align with its environmental and social values.[5] Furthermore, these legislative frameworks maintain global reach: non-EU companies with substantial operations or turnover in the EU (e.g., over €150 million annually) are still expected to comply with sustainability disclosure requirements under CSRD. This reinforces the EU's broader objective of ensuring that companies contributing to its internal market also align with its environmental and social values.[17]

While the EU has taken a leading role in shaping circular economy legislation, governments in other regions are also advancing rapidly through dedicated national strategies, legislation, and ambitious reduction targets.

In some cases, these initiatives are being implemented at a faster pace than in Europe and could even set new benchmarks if the EU does not maintain momentum.

Same as in EU, they are anticipated to drive growth, create jobs, and reduce emissions - but they also demonstrate that leadership in circular transition will ultimately be a joint and global effort.

In May 2025, Brazil formally passed their National Circular Economy Plan (PLANEC), which outlines a systemic transformation of Brazil's economic model, emphasizing the reuse, refurbishment, remanufacturing, and recycling of materials – all controlled under a national Green Seal verification initiative.[10]

Similarly, India, through its Resource Efficiency and Circular Economy initiatives, is aiming to create market value for over $2 trillion and create close to 10 million jobs by 2025.[18] South Korea announced a Circular Economy Policy Roadmap in

2023, seeing it as a model not only to reduce emissions but also to function as an export growth engine.[19] Similarly, Colombia has implemented a National Circular Economy Strategy, embedded within its Green Growth Policy, to promote product durability, reusability, and resource efficiency.[20]

Chile has adopted a national Circular Economy Roadmap 2040, which outlines a transition toward a regenerative and inclusive economy focused on waste prevention, circular business models, and innovation.

In China, the 14th five year cycle of Circular Economy Development Action Plan is coming to an end in 2025[22], and is expected to be replaced with a 15th version similarly focusing on aggressive waste reduction targets, utilization of bi-products currently going to waste streams and eliminating emission.
Unsurprisingly, in parts of global south, Circular Economy Strategies are seen as a pathway out of the waste challenge.

Indonesia has committed to banning key categories of single-use plastics by the end of 2029, including plastic bags, straws, and Styrofoam containers, as part of broader efforts to reduce marine debris and transition to sustainable packaging.[24]

In the United States, while there is no overarching federal circular economy law, legislation is being built on a state level. California has emerged as a leader in circular economy policy. Its Plastic Pollution Prevention and Packaging Producer Responsibility Act (SB 54), passed in 2022, mandates that by 2032, all packaging sold in the state must be recyclable or compostable, and requires producers to take responsibility for managing packaging waste. This law represents one of the most comprehensive EPR programs in the U.S., aiming to drastically reduce single-use plastic pollution while accelerating circular product design.

Despite regional variations, these legislative efforts have several things in common, e.g., financial incentive structures and trade regulatory tools, but they also commonly propose ambitious timelines, many targeting partial or full implementation by 2030.

Likewise, in Canada, the Canadian Council of Ministers of the Environment supports the move towards greater producer responsibility, including work to transform "product stewardship" initiatives into full EPR programs, in particular for plastics.

Their national Action Plan for Extended Producer Responsibility was introduced in 2009, and the Canadian government continues to play an active leadership role in addressing national and global waste challenges.

This puts pressure on companies to act quickly. Across regions, businesses are being pushed to increase supply chain transparency, ensure accurate and auditable product data, and embrace new models of ownership and reuse. The transition to circular systems is not optional – it is becoming a license to operate.

Figure: **circulareconomy.earth / Ellen McArthur Foundation / Chatham House 2025**

The role of verified circular transition

Creating a competitive and level circular playing field requires both targeted economic incentives, a conducive legislative framework, and strong verification and compliance mechanisms.[29] These premises are widely recognized by governments across regions; however, deployment tactics vary from country to country, especially in terms of verification conditions and instruments, ranging from development of new national frameworks, like Brazil's Green Seal, to compliance systems building on existing and global frameworks.[30]

While FSC as a certification leader applaud the general push for documentation and verification of circular performance, it is strongly encouraged, that existing labels and third-party verification systems like FSC are recognized as solution providers rather than the establishing of new national labels and frameworks, duplicating existing compliance and verification and ultimately adding to the compliance burdens for businesses and complicating flow of secondary materials across markets. As a global and recognized verification framework for not only virgin but also recycled fibres, FSC is in a unique position to become an integral part of the global verification system for circular bioeconomy, both with its existing frameworks and solutions like the ones suggested in this paper.

As businesses seek to recapture raw materials, reduce exposure to regulatory risk, and find circular value in existing assets, FSC can become a key enabler of a more resilient, documented and verified, and data-driven circular economy.

In regions and countries where FSC is formally recognized as a framework for verification of circular performance, stakeholders would be able to rely on the FSC system to help validate circular material flows, enable agile and compliant business models, and offer traceable, third-party verified materials.

Making action the easy choice

The issue of overconsumption and its direct link to planetary overshoot and ecological breakdown is increasingly surfacing in public discourse - particularly in high-income countries currently operating far beyond ecological limits.[31]

Recent research by McKinsey & Nielsen IQ confirms that after years of high consumer awareness around sustainability, buying behaviours are beginning to align. In the U.S., products making ESG-related claims are growing at a significantly faster pace than those that don't[32], with household paper products showing especially strong uptake.[33]

Across markets like the U.S., Germany, the UK, Australia, the Netherlands, and India,

64% of consumers now identify environmental sustainability as one of their top three purchasing considerations, and willingness to pay more for 'green' products has risen from 35% to 54% in 2024.[34]

Notably, the construction and consumer goods sectors report an even higher share of consumers willing to pay a premium.[35]

In Asia, McKinsey reports a value-driven shift as well, with consumers placing a growing emphasis on health, sustainability, and transparency - favouring brands that combine sustainable production with affordability.[36]

Yet, these positive shifts exist in parallel with a meteoric rise in ultra-low-cost consumption models. Platforms like Shein and Temu have rapidly gained traction across both Asia and the Global North, capitalizing on economic uncertainty and consumer demand for convenience and low price. In today's volatile economic environment, affordability remains a significant barrier to scaling sustainable consumption models.

What this tells us is clear:

Circular economy solutions must be designed to meet consumer expectations on both price and convenience.

If circular options are inaccessible or economically unfeasible, they will fail to displace linear consumption models at scale.

In other words: The transition to a circular economy will only work if we design it for scaling to a point where it can compete with the convenience and easy access of consumer goods today. If it doesn't scale, it won't become mainstream, and it will not generate the impact needed to bring us back within planetary boundaries.

The question facing us now is: What role will FSC - and likeminded organizations - choose to play in ensuring that circularity scales effectively?

Our impact in the coming decade will be measured not only by how we enable circular flows of forest-based materials, but by how we contribute to the broader system shift - delivering on our mission to ensure Forests For All Forever, and supporting thriving humans, nature, and ecosystems alike.

Good news: Circular consumers are on the rise

According to a 2024 Deloitte survey, 58% of UK consumers have reduced the number of new products they buy and 56% had fixed or repaired a product rather than replacing it.[37]

According to a 2023 Ipsos study on behalf of FSC, 63% of consumers claim they try to buy products packaged with renewable materials such as paper instead of plastic.[38]

According to the same study, 64% expect information about sustainability on products should be certified by an independent organization.

In recent years, there has been an explosive rise in the second-hand market. Platforms like Vinted, ThredUp, Poshmark, Depop, and Vestiaire Collective have seen significant growth as consumers opt for pre-owned goods, particularly in fashion and electronics.

Zero-waste and upcycling practices are gaining traction in countries like Japan, where minimalist lifestyles (e.g., KonMari method) and the philosophy of reusing and repurposing items are closely aligned with sustainability values.

Zero-waste stores and refill stations are becoming more popular in urban centres across Europe and Southeast Asia.

Four pressing challenges – and ideas for how to overcome them

As we embark on the journey to future-proof the Forest Stewardship Council (FSC™) system through the Circularity Hub initiative, the following solution proposals serve as a preliminary exploration of potential strategies and ideas.

The solutions presented may appear unconventional or radical; they are proposed with the understanding that the ultimate mission of the FSC - to protect our forests and reducing the pressure on them - may necessitate innovations and changes in our operations and supply chains.

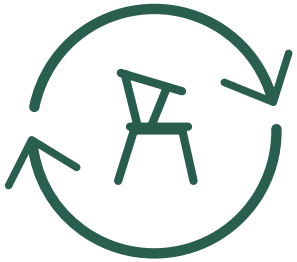
This document marks the beginning of a critical dialogue and is designed to provoke thoughtful discussion on challenging questions.

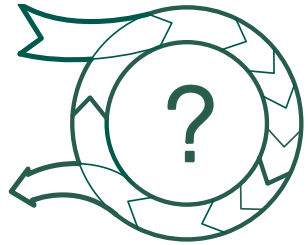
It should be viewed as a 'sandbox' where ideas are tested and refined.

Not all suggestions may be implemented, but they are essential for opening a space for innovative thinking and discourse among our membership.

We appreciate your engagement and insights as we consider these necessary yet potentially disruptive changes to reduce pressure on our forests and align more closely with our core mission.

If you would like to be part of the conversation, we welcome you to reach out to us on circularity@fsc.org. If you would like to dive deeper into each suggested solution, please visit fsc.org/circularity, where we offer more explanation on each.






FSC
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How might FSC ensure products are kept in use?

1

There is a growing need across industries to shift products from single-use to multiple-use cycles through models like repair, take-back, refurbishment, and reuse. Yet in FSC's current system, there are no mechanisms or certification pathways that support this transition - neither in packaging, textiles, furniture, nor construction. This is despite the clear opportunity to extend product life and reduce waste.

Take the construction sector as a striking example: up to 30% of materials used on an average construction site are temporary elements, employed only during the building phase. These include items like fencing, temporary doors, support beams, and concrete moulds - many of which are wood fibre-based and could carry FSC certification. Today, these materials typically end up as waste, even though they could be recovered, reused, or repurposed. Without solutions embedded in the FSC system to enable such circular flows and verification of them, the potential to keep valuable forest-based materials in use is largely untapped.

What could solutions look like?

The solution we suggest

We suggest boosting the FSC Chain of Custody (CoC) system by integrating circular business models -such as repair, takeback and leasing of FSC-certified products – in FSC's CoC standards and providing companies with guidance on how to adapt them.

On top of this, we propose expanding the FSC system with an option to certify reuse, alongside recycling, and to introduce a new label that enables companies and consumers to clearly differentiate between reused and recycled products. All of the solutions are optional, as is the case with FSC Recycled.

What problem would this solve?

Recycling is important, but it is not enough on its own to deliver the transition to a circular economy. Extending the lifespan of products through reuse, repair, and refurbishment and other product retention concepts is one of the most effective ways to reduce waste, lower demand for virgin fibre, and ease pressure on forests. Yet today, there are very few documentation requirements connected to recycled or reused claims, leaving the door open to misuse and market confusion. If demand for recycled and reused forest-fibre claims grows without safeguards, these risks could emerge for bio-based and forest-based materials as well.

At the same time, regulation is moving quickly around the world pushing in the direction of larger uptake of recycled and reused materials. The EU is advancing frameworks such as the Eco-design for Sustainable Products Regulation (ESPR) and the Circular Economy Act, while Brazil's PLANEC (National Circular Economy Plan) and Colombia's Green Growth Policy are shaping circular transitions in Latin America. All these legislative drivers place a strong emphasis on the use of recycled and reused materials as a means of resource resilience and stable economies.

What would this look like?

Imagine a global furniture brand with FSC certification. Instead of only certifying products made with virgin or recycled materials, the company could also certify refurbished or reused desks, supported by clear FSC requirements for auditing and labelling. Customers could then choose between a virgin, recycled product or a reused product, all carrying distinct FSC labels that communicate their contribution to circularity. Guidance from FSC would help companies design take-back systems, adopt retention models, and integrate these practices into their supply chains in a credible way.

Why should FSC launch this solution?

FSC already has long-standing experience certifying recycled materials and tracking products through supply chains. Expanding into product retention is the logical next step - one that no other certification system has yet claimed at scale – and in line with FSC's strategic commitment to circularity.

This solution would:

- **Support companies** with a credible, global framework and practical guidance for adopting circular business models, while helping them comply with diverse regulations.
- **Strengthen FSC's system** by expanding the certification scope from responsible sourcing and recycling to also include reuse - and by providing new labels that enhance clarity and trust for companies and consumers.
- **Deliver real impact** by extending product lifespans, reducing waste, lowering demand for virgin fibre, and helping societies move closer to climate and biodiversity goals.

The expansion of the FSC CoC standard to include circular business models such as leasing, takeback and repair is already underway. By expanding this work with the introduction of a reuse certification option with clear differentiation from recycling, FSC could position itself at the forefront of the global circular economy transition. Certification of product retention business models remains a space without a dominant or leading independent third-party verification, presenting a unique opportunity for FSC to take the lead in shaping standards for circularity in forest-based supply chains.

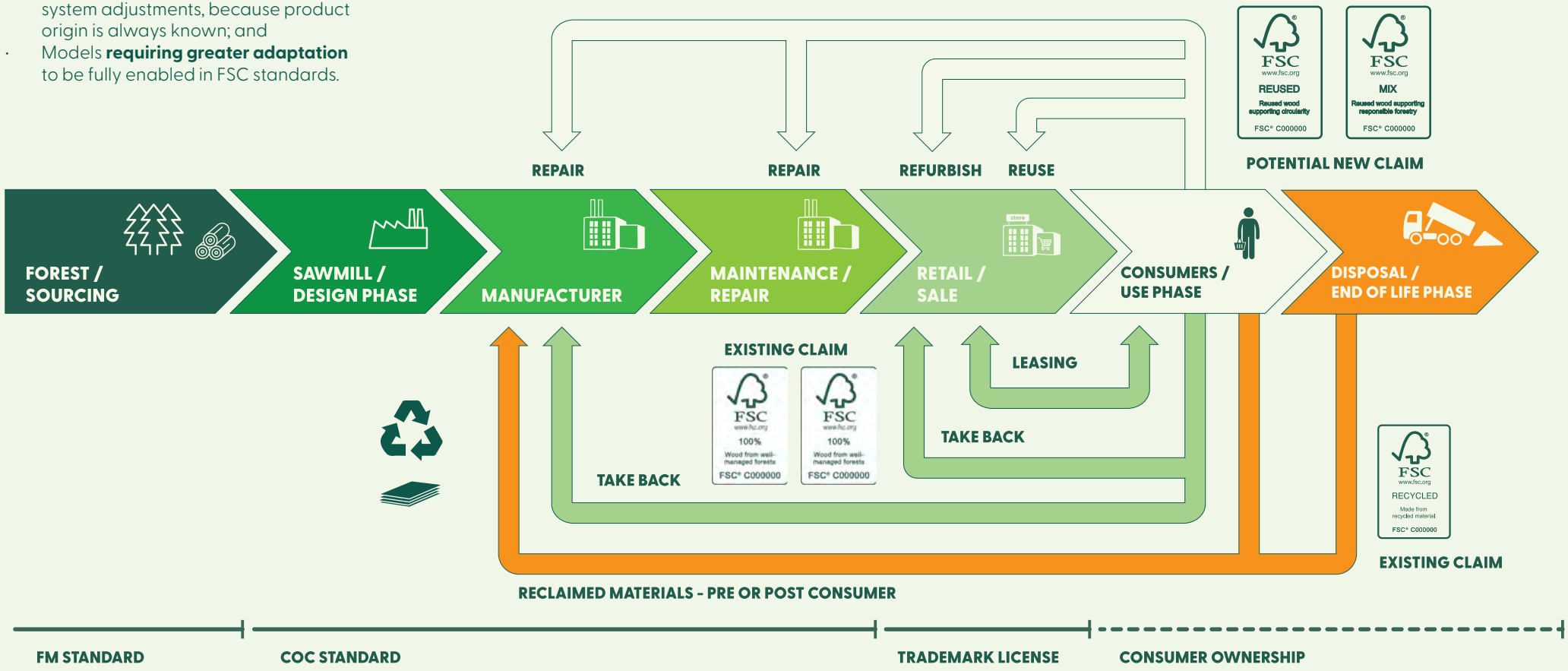
The solution in detail:
Product retention concepts in FSC

When discussing product retention, seven retention models apply. As shown in the illustration, they fall into two categories within the FSC system:

- Models that **fit within existing FSC labels and claim types** with only minor system adjustments, because product origin is always known; and
- Models **requiring greater adaptation** to be fully enabled in FSC standards.

The models that require minor changes appear below the supply chain in the illustration and are already part of the ongoing FSC CoC revision. The remaining models – those requiring further system development –appear above the supply chain.

Figure: **Product retention concepts in FSC**



Take-back
Take-back models enable manufacturers or retailers to recover products after use and reintroduce them into the market, extending product lifespans and reducing the need for new production. Within the FSC system, take-back can be enabled by integrating specific requirements into FSC-STD-40-004 that ensure returned products originally carried an FSC claim and continue to meet Chain-of-Custody requirements upon resale.

Because the product origin remains known and unchanged, no new FSC claims or labels are required; products retain their original FSC claim and take-back of FSC-certified products is already included in the ongoing CoC revision process.

Leasing
Leasing allows customers to use a product for a defined period without transferring ownership, creating incentives for longer product lifespans and improved resource efficiency. In an FSC context, leasing would require companies to ensure that FSC-certified products remain under Chain-of-Custody control throughout the leasing period and continue to meet all relevant certification requirements.

As leased products retain the FSC claim they had at the time of manufacture, no new claims or labels are needed. The leasing concept has been assessed as feasible and is included in the current CoC revision process.

Reuse
Reuse refers to using a product again for its original purpose with minimal treatment, such as cleaning or inspection, and without altering its form or function. An FSC reuse concept would enable companies to certify, claim, and label reused products, drawing on FSC's experience with FSC Recycled and similar verification processes, including supplier validation, material inspection, and source eligibility criteria.

Eligibility could initially be limited to products that originally entered the market with an FSC claim, with the option to later include additional post-consumer sources if acceptable risk levels and safeguards are defined. Clear requirements would be needed to mitigate fraud and reputational risks. Because reuse differs fundamentally from recycling, introducing reuse would require either a new FSC claim or adapted label text, potentially evolving into a dedicated FSC Reused label.

Further work is required to define acceptable sources, risk levels, and documentation requirements.

Repair and Maintenance
Repair and maintenance restore a damaged or defective product to functional condition and may involve replacing or renewing components. In the FSC system, repair would be eligible for certification only when forest-based materials are added during the repair process and these inputs meet FSC eligibility requirements.

If repairs involve only non-forest-based components, the product would instead qualify as FSC Reuse. To ensure transparency and credibility, FSC repair would likely require a new claim or adapted label text, with eligibility linked to a defined threshold for newly added FSC-certified material.

Next steps include defining input requirements and ensuring alignment with take-back and resale mechanisms.

How might FSC enable non-forest bio-based fibres?

2

Many companies already see that they will become resource- and raw material-constrained in the future, as their current sourcing streams come under growing pressure and demand. To stay competitive, they are exploring how to diversify beyond forest-based fibres, which are expected to become more expensive as global demand increases. By integrating alternative materials into their supply chains, companies aim to secure long-term availability, stabilize costs, and reduce exposure to resource risks.

Non-forest bio-based fibres (NFBFs) - such as agricultural by-products and residues including straw, flax, hemp, sugarcane bagasse, meadow grass, miscanthus, sugar beet pulp, and silphia - are part of this exploration. Used responsibly, these fibres can help reduce pressure on forests by ensuring high-quality forest fibres are preserved for the most valuable and durable applications.

Today, it is already possible to include NFBFs in FSC-certified products - for example, a paper cup containing just 10% forest-based fibre can carry an FSC label. But as demand for mixed bio-based products grows, FSC must ensure its system promotes systemic, circular solutions. That means developing clear rules and safeguards so that NFBFs can contribute to FSC claims in a credible, transparent, and future-oriented way.

What could solutions look like?

The solution we suggest

The suggested solution is a recognition framework for non-forest bio-based by-products and agricultural waste streams, certified under other credible sustainability schemes.

Through this framework, fibres such as straw, flax, hemp, sugarcane bagasse, meadow grass, miscanthus, sugar beet pulp, and silphia could be recognized within the FSC system on par with FSC-certified material.

This would allow companies to integrate responsibly certified non-forest fibres into FSC supply chains, while ensuring strict safeguards: only genuine by-products and residues would qualify, and only when verified against credible standards. In practice, this means FSC could provide companies with a clear and trusted pathway to diversify their raw material base without undermining forests - while maintaining the integrity of FSC claims and labels.

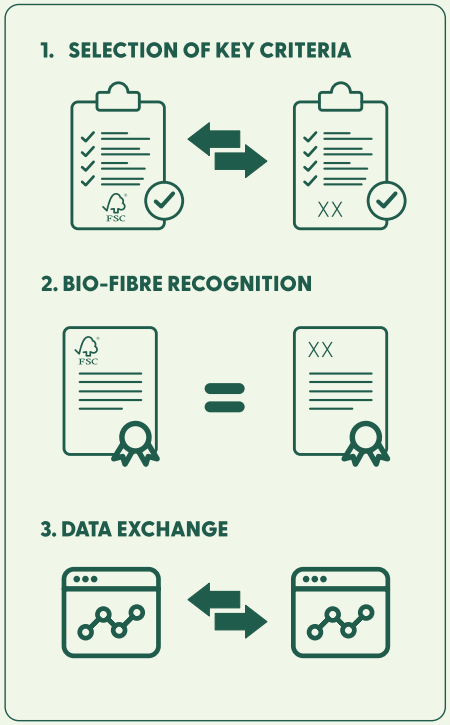
The bio-fibre recognition framework

A bio-fibre recognition system must be structured and governed to ensure FSC maintains control, credibility, and alignment with its standards. The framework would rest on three core elements:

Eligibility criteria: FSC sets clear environmental, social, and governance requirements that external schemes must meet, including strict rules for defining and verifying true by-products rather than primary crops or materials diverted from higher-value uses.

By-product classification and verification: Only fibres proven to be residues, secondary outputs, or genuine by-products qualify. Recognized schemes must demonstrate robust classification and verification processes and prevent materials linked to land-use change. Additional FSC risk assessments may apply if classifications are uncertain.

Regular evaluation: Each recognized scheme undergoes a periodic review – likely every three years – to confirm its standards, governance, and assurance systems continue to meet FSC expectations and to assess changes made since the previous review.



What problem would this solve?

Companies are already integrating non-forest bio-based fibres into their products today. But because these fibres do not come from forests, they are treated as neutral inputs in FSC standards. This means FSC currently places no requirements on their origin, and they could come from systems linked to deforestation, poor social conditions, or heavy pesticide use - issues that FSC does not otherwise allow for forest-based materials. We simply would not know.

Yet products containing these fibres can still carry an FSC label, without any clear signal to companies or consumers that the product contains non-forest materials or to what extent. This creates confusion, weakens transparency, and risks undermining trust in FSC.

At present, the use of NFBFs in most companies is still at an exploratory stage, but only a few steps away from scaling to industrial levels. We are already seeing strong signals of an upcoming surge in demand, especially in the construction, furniture, and paper and packaging sectors. Without safeguards, this leaves a gap and a growing risk: for companies buying these products, who may unknowingly support unsustainable practices, and for FSC, whose integrity could be questioned if our label is applied without meaningful oversight of these materials.

The solution in detail:
New circular reality, new fibers

How can the solutions benefit supply chain actors?

A hygiene products manufacturer could combine FSC-certified pulp with wheat straw verified under a credible agricultural certification scheme. Under the FSC recognition framework, the product could be marketed under the FSC MIX label, accompanied by clear communication that part of its fibres come from certified agricultural by-products.

The same approach could apply in packaging, textiles, or construction, giving companies a reliable way to integrate NFBFs while maintaining consumer trust and reducing forest pressure.

Why should FSC launch this solution?

Non-forest bio-based fibres are already present in FSC-certified products today but treated as neutral inputs.

This leaves FSC with a choice: either prohibit them to eliminate the risks or recognize them as a vehicle to help reduce pressure on forests in the future. By choosing recognition, FSC can set safeguards and clear rules so that these fibres strengthen, rather than undermine, both the integrity of the FSC label and the resilience of forests. This will also provide the market with a certification solution for mixed bio-based fibres – something that currently does not exist.

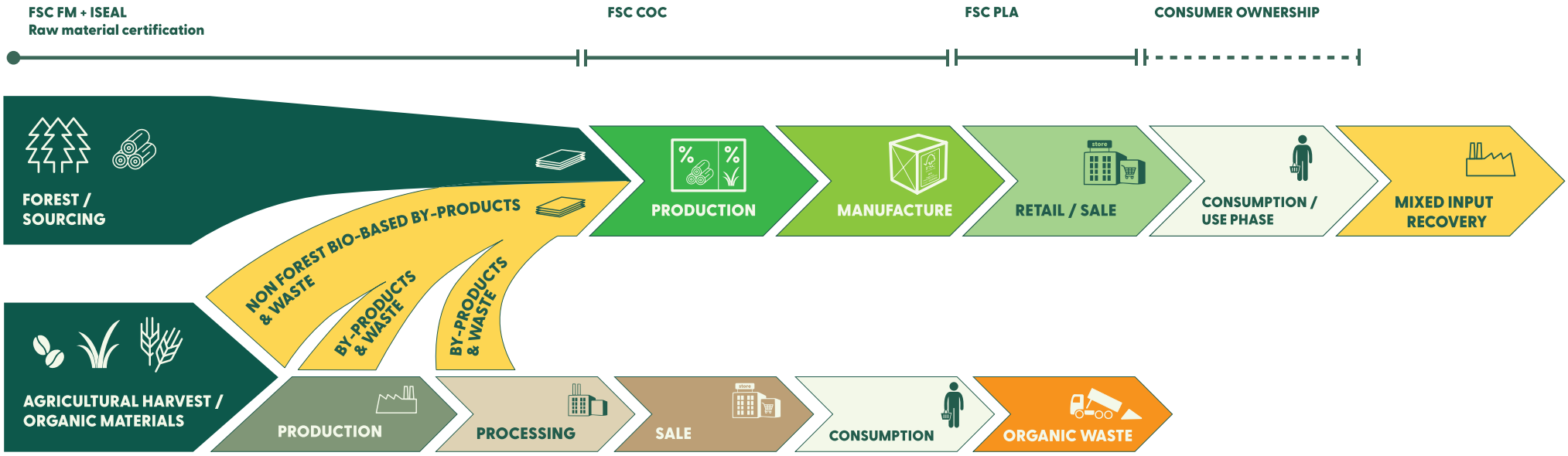


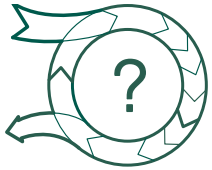
Figure: **Enabling non-forest bio-based fibres in an FSC valuechain**

What don't we know and need to find out?

Before enabling and encouraging increased use of non-forest bio-based fibres, FSC must ensure that their integration does not create unintended systemic impacts. We need to confirm that introducing more fibre mixtures will not disrupt existing recycling systems, which are often designed for mono-material streams. We also need to evaluate whether products containing NFBFs are genuinely better for the planet - not just in terms of carbon, but also regarding biodiversity, water, and social conditions.

In addition, there may be regional variables that shape how NFBFs can be sourced and integrated responsibly, and these must be understood before setting global rules. For this reason, the solution should be developed through iterative pilot projects, broad market engagement, and academic partnerships to evaluate systemic impacts and design safeguards that ensure the solution delivers real sustainability benefits.

How might FSC integrate cascading principles?



3

Cascading principles mean that fibres should always be used for the highest possible value first - for example in construction or furniture - and only later for lower-value or short-lived purposes such as packaging, energy, or biofuels. In short, it is about ensuring that each unit of fibre delivers the maximum possible benefit before it becomes waste.

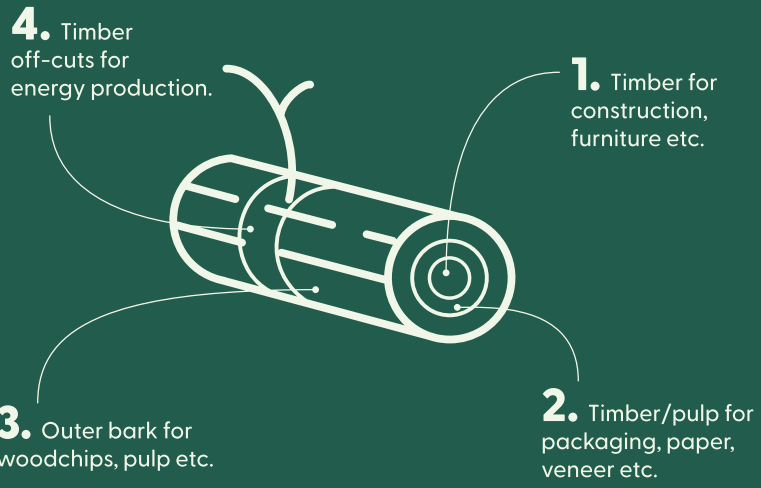
This approach is gaining attention because global demand for forest-based materials is projected to increase by up to 400% by 2050. Such growth raises urgent questions about how fibre can be used efficiently and responsibly to avoid waste and unnecessary pressure on forests.

Environmental and advocacy groups are already calling for stricter application of cascading use across all bio-based products and are urging policymakers to phase out certain uses such as woody biomass for energy. In response, governments are beginning to act.

While no binding global legislation exists yet, signals are clear: in the EU, the Circular Economy Act is under development alongside the implementation of RED III, the Waste Directive, and the Eco-design Regulation. Brazil has adopted PLANEC as its national circular economy plan, and similar circular action plans are emerging across Asia and Africa.

This creates a unique window of opportunity for FSC.

We are ahead of the curve, with the ability to define what responsible fibre use looks like and to provide companies with practical tools that will make regulatory compliance easier. By acting now, FSC can give companies a head start - helping them prepare for legislation before it arrives and ensuring they are ready to demonstrate compliance across multiple markets. In other words: this is FSC's chance to shape what cascading principles will look like within our system and to define our role in supporting companies. But it requires that we begin developing the solution now.



Cascading principles

Mean that fibres should always be used for the highest possible value first - for example in construction or furniture - and only later for lower-value or short-lived purposes such as packaging, energy, or biofuels. In short, it is about ensuring that each unit of fibre delivers the maximum possible benefit before it becomes waste.

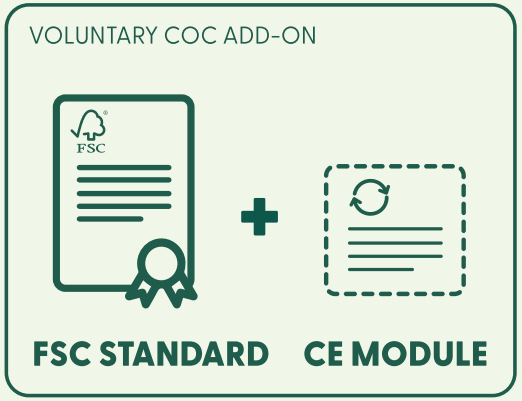
What could solutions look like?

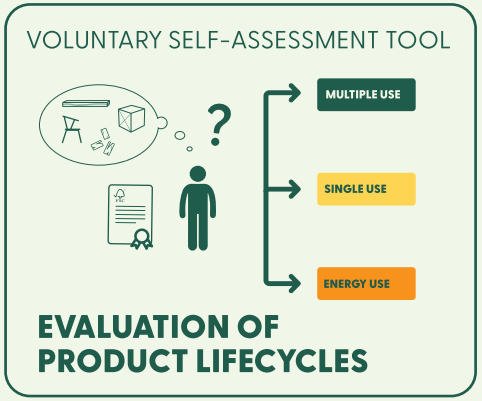
The solution we suggest

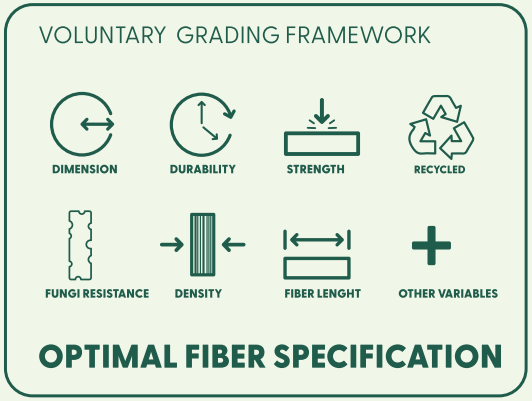
We suggest developing a voluntary add-on module for circularity reporting to the FSC Chain of Custody (CoC) standard. This certification module will enable companies to track and report their performance against circular economy targets and related legislative requirements and have it third party verified.

To support this, FSC would provide practical tools and guidance: a voluntary self-assessment tool for evaluation of product lifecycles, and a voluntary grading framework for optimal fibre specifications - so companies can apply cascading principles in practice.

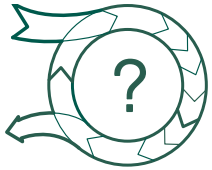
This would help ensure that high-quality forest fibres are directed first toward long-lived, high-value applications (such as construction and furniture) and only later toward single-use or short-lived products (such as packaging, tissue, or bioenergy).







The solution in detail:
Right fiber for the right use



What problem would this solve?

Demand for forest-based products is projected to increase significantly in the coming decades, placing growing pressure on global forests. As a society, we must begin to use resources more wisely and ensure that fibres are directed to their highest value applications.

Today, for example, around 20% of the logs used for energy production in the European Union could have been used more efficiently in sectors such as construction or packaging. These logs are transformed into wood chips in Asia, Africa, Latin America, and North America and then shipped to Europe for energy production. While the extent of this challenge in other sectors is less well documented, knowledge of material flows across industries remains limited.

The case for action is clear: Legislation will increasingly require companies to demonstrate more efficient fibre use. In the European Union, the Circular Economy Act is under development alongside the implementation of RED III, the Waste Directive, and the Eco-design Regulation. Brazil has adopted PLANEC as its national circular economy plan, and similar circular action plans are being developed across Asia and Africa. Companies will soon be expected to comply with these requirements, regardless of sector.

Despite this, there are few tools available to guide companies in applying cascading principles. Most procurement teams are not forestry experts. How should a global brand's purchasing manager decide which grade or species is optimal for a given product and lifetime?

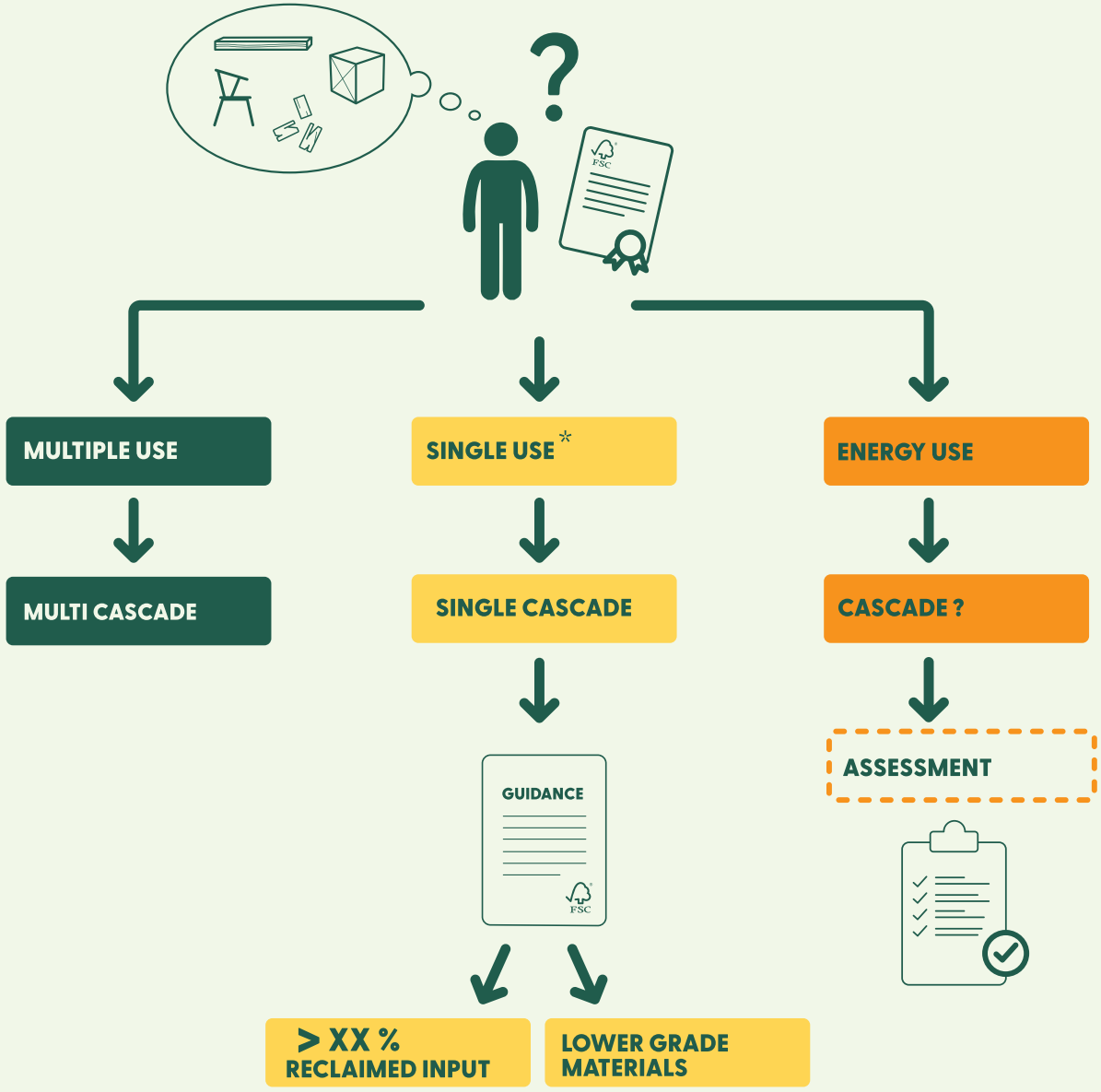
How do they specify those requirements down the supply chain in RFQs and contracts - and verify what they receive? And how can they better assess the lifespan of their products and potential reuse and recycling of them and make the most circular purchase decisions and specifications?

The absence of clear guidance and simple verification pathways leads to inconsistent decisions, missed opportunities to prioritize long-lived uses, and growing scrutiny from regulators and stakeholders who increasingly ask not only where fibres come from, but also how they are used.

How can the solutions benefit supply chain actors?

A large brand that primarily sells single-use products and fast-moving consumer goods could use the voluntary add-on module for circularity reporting to document how the brand performances according to metrics for circularity policy, strategy, actions and target and thus meeting reporting legislation for circular material use and customers' demand for insights into this area.

Through the self-assessment tool for evaluation of product lifecycles, the brand would identify specific areas for improvement to ensure that their products can be reused and repaired and - if not - that they are not made of high-value materials. In addition, if desired, the band could have its assessment third-party assessed to support compliance with upcoming legislation.



* Except for products with legally mandated use of virgin fiber

The grading framework for optimal fibre specification would provide the brand practical guidance for pushing more optimal fibre choices down the supply chain. For example, the assessment might reveal that the brand cannot confirm whether it is currently using fibres of a higher quality/value than necessary for the expected lifespan of its products – in other words, whether it may be over-specifying.

With the FSC toolset, the brand would gain guidance on selecting fibres better matched to the product's actual performance needs and could use FSC recommendations to request the appropriate specifications from its producers.. If the brand chose to verify its fibre specifications through third-party assessment, this could enable them to makepromotional statements about improving the fibre performance of their single-use products in support of a broader transition toward more durable, long-lived solutions.

Why should FSC launch this solution?

Cascading principles are quickly moving from advocacy into policy, with governments across regions preparing legislation that will require companies to demonstrate more efficient fibre use. FSC has the opportunity to move ahead of these developments by offering a credible module that helps companies prepare for compliance before regulatory requirements take effect. FSC would go from not only be a catalysator for forest stewardship but also for material stewardship.

Currently, no certification schemes have managed to support companies in meeting these requirements or in providing third-party verification of their transition to cascading use of fibres at scale across the forest-based material sectors. FSC therefore has a unique opportunity to create a globally recognised framework that is practical, scalable, builds on top of their already existing systems and is trusted by both companies and consumers.

By integrating a voluntary cascading principles module into its system, FSC can strengthen the integrity of its label, provide companies with the tools they need to measure and demonstrate efficient fibre use, and position itself as the leading certification system operationalizing circular principles for the bio-based economy.

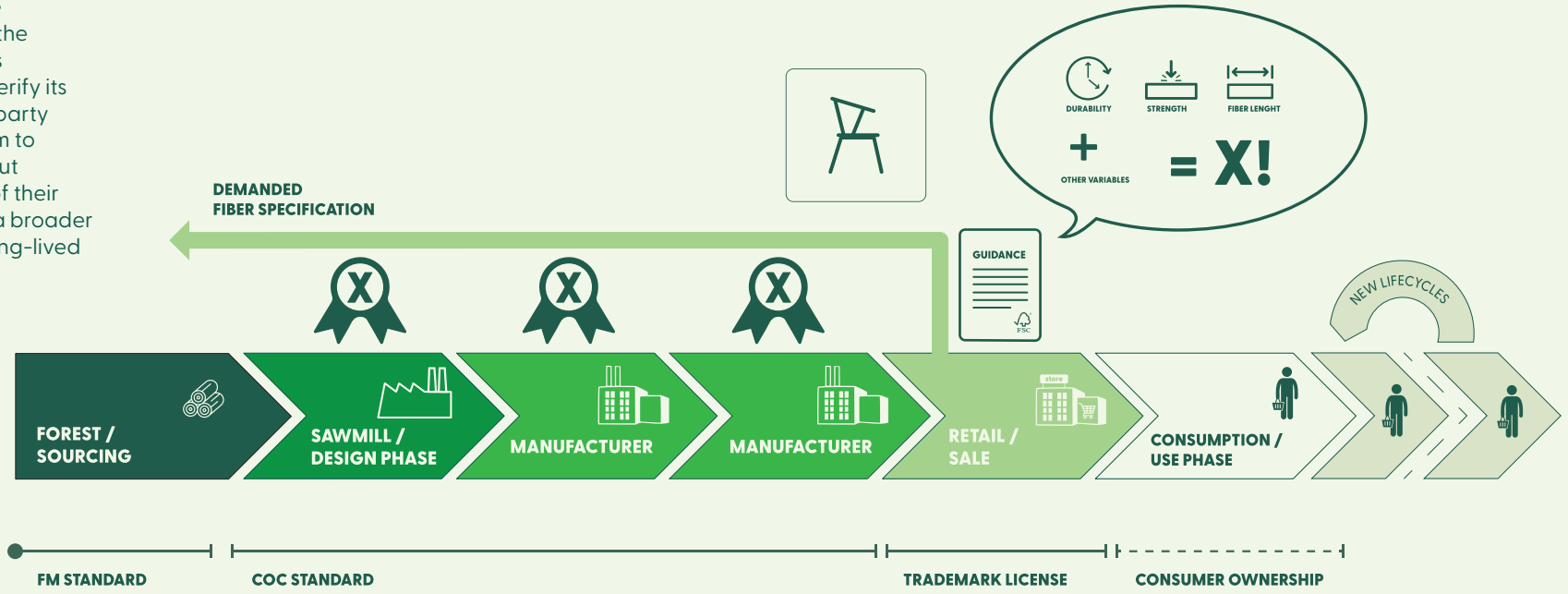


Figure: **Grading framework for optimal fiber specification**

Acting now allows FSC to shape what cascading principles mean within our system and ensure that companies and consumers benefit from clear, credible guidance before legislation sets the rules.

What don't we know and need to find out?

FSC must consider how to reflect and respond to increasing external pressure – including legislative momentum around resource optimization, circularity, and material justification – especially in light of geopolitical shifts and upcoming regulations such as CSRD, ESPR, and REDIII. At the same time, FSC should explore which existing grading schemes or quality metrics from sectors like forestry, pulp, construction, and furniture could support implementation without adding unnecessary complexity.

How might FSC unlock the full value of forests in a circular economy?

4

Forests provide far more than raw materials - they are vital for ecological resilience, carbon storage, and biodiversity protection. Yet the true value of forests is rarely reflected in market systems, and forest owners often rely almost exclusively on income from timber extraction.
This creates a structural imbalance: the wider societal benefits of forests remain uncompensated, while the costs of responsible forest management fall largely on forest owners.

In a world increasingly shaped by data, transparency, and circular economy requirements, FSC has a unique opportunity to redefine how the value of forests is measured and rewarded.

By exploring a royalty system, FSC can link responsible forest management to new income streams, ensuring that forest owners are not only recognized for harvesting responsibly, but also for the ongoing contributions their forests provide to people and the planet.

What could solutions look like?

The solution we suggest

We suggest developing a voluntary royalty system within FSC that rewards forest owners whenever fibres from their forests are reused or repaired. Companies would pay a fee for access to verified data about fibre origins, and that payment would be redistributed to the forest owners. In this way, forest owners could receive ongoing income as their fibres circulate through multiple use cycles, reflecting the broader ecological and social value their forests provide.

What problem would this solve?

Today, forest owners earn income almost exclusively from harvesting timber, even though forests provide much wider benefits: carbon storage, biodiversity protection, clean water, and cultural values. These ecosystem services remain largely invisible in economic terms, leaving forest owners dependent on fluctuating timber markets and discouraging long-term stewardship.

FSC is currently the only certification system that verifies ecosystem services. However, the business model for this relies largely on sponsorships and companies' willingness to "do good." It is not directly connected to supply chains and therefore does not provide companies with a strong return on investment beyond making marketing statements. As a result, demand for ecosystem services certification has remained limited and the potential to reward forest owners more systematically has not yet been realised.

At the same time, companies face growing regulatory and market pressure to provide verified data on the origin and sustainability of their materials. Collecting and validating this information across multiple use cycles is complex and costly. Without a system like this, companies risk compliance gaps, reputational risks, and inefficient reporting processes, while forest owners remain unrewarded for maintaining healthy forests .

How can the solutions benefit supply chain actors?

A global furniture manufacturer taking back used FSC-certified desks for repair and resale could use FSC's system to access verified data on the fibre's origin. In return for this data, the company would pay a fee, which is distributed back to the original forest owner. Over time, forest owners would receive continuous income each time their fibres are reused, recycled or repaired,

while companies benefit from streamlined data for sustainability reporting, taxonomy alignment, and impact disclosure.

This example reflects a relatively simple supply chain. Many supply chains are more complex and may involve multiple product types, intermediaries, and forest sources. For such cases, FSC could explore the use of **mass balance systems,** where fibre origin proximity is identified through fibre testing and the data extrapolated across a defined area, which may cover more than one certified forest. This would allow the royalty mechanism to remain credible and scalable even in more fragmented supply chains.

Why should FSC launch this solution?

FSC is uniquely positioned to design such a system. Its existing data infrastructure, certification network, and ecosystem services framework provide a solid foundation to link forest stewardship with ongoing payments. No other organisation can combine trusted forest certification with verified supply-chain data in this way. FSC is also ahead of the curve when it comes to innovative means of identifying the origin of forest-based fibres. Through our involvement in projects such as World Forest ID, and our collaboration with some of the largest satellite monitoring and technology companies in the world, we are building strong capabilities in origin verification.

If implemented correctly, this solution could also contribute to the creation of an isotope map of FSC-certified forests - a long-standing ambition of FSC, the scientific community, World Forest ID, and authorities implementing anti-deforestation regulation. For the first time, forest owners would have both an incentive to provide samples and a financial model linked to that contribution. By launching a royalty system, FSC can strengthen the business case for responsible forest management, particularly in the Global South, by providing new, stable income streams for forest owners; give companies access to credible, verified data that reduces reporting burdens and supports compliance with sustainability regulations; and reinforce FSC's role as a leader in circular economy solutions by linking fibre reuse directly to financial incentives for forest protection.

If FSC chooses to explore this idea further, it would be an opportunity to bring together the areas where we have already dared to innovate and lead - ecosystem services certification, traceability systems, impact monitoring, and isotope mapping - into a solution that unlocks the true value of healthy forest ecosystems, including financial returns for the forest owners who steward them.

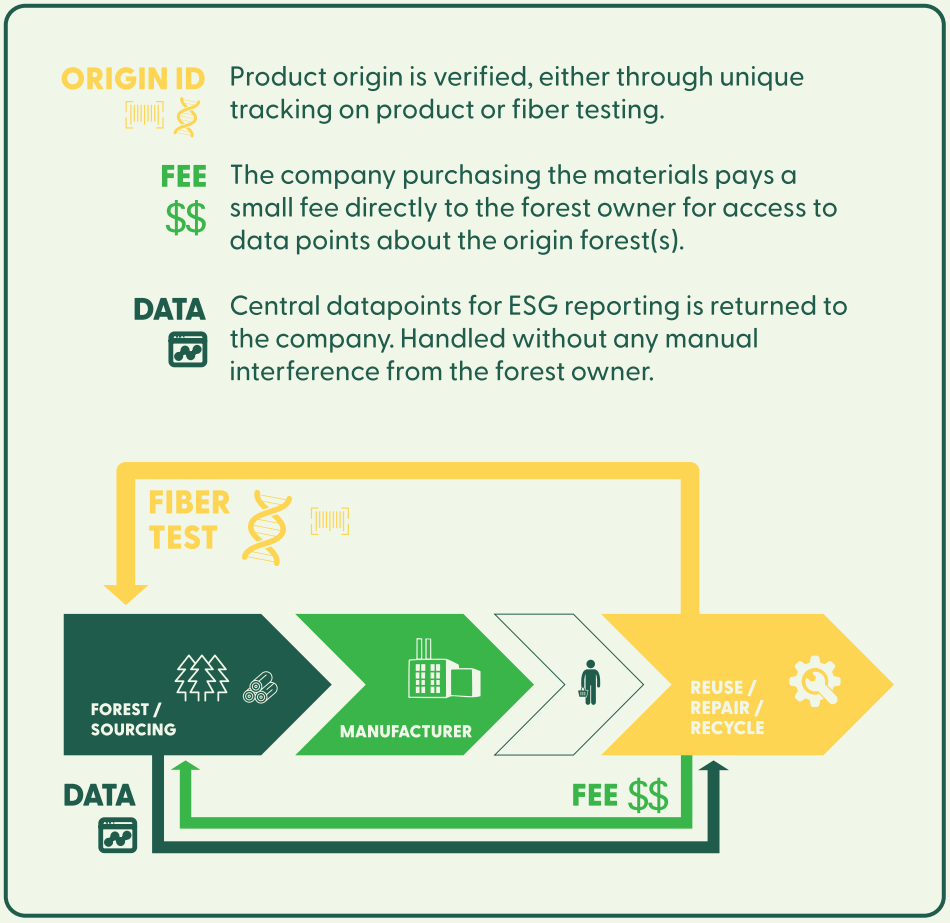


Figure: **Royalty concept in the FSC system**

Creating incentives for forest owners to maintain healthy ecosystems

What don't we know and need to find out?

Several open questions must be addressed before such a system can be designed and launched. FSC needs to determine the most appropriate mechanisms for setting royalty levels and distributing payments fairly across diverse forest ownership models. We must ensure that the administrative costs of running the system do not outweigh its benefits, and that payments reach forest owners in a transparent and equitable way.

It is also critical to assess whether a royalty system could inadvertently create perverse incentives - for example, encouraging overuse of certain fibres to maximise royalty flows - and how to prevent this through careful design. Regional variations must also be considered, as forest tenure systems, legal frameworks, and data availability differ widely.

Finally, FSC must identify which data points hold sufficient value for companies to pay for access in the second or third use cycle. These are likely tied to legislative compliance, sustainability reporting, or impact investment requirements, but must be confirmed through strong market engagement and piloting.

To address all these questions, the solution should be developed iteratively, using pilot projects, extensive stakeholder engagement, and independent academic evaluation.

We are actively seeking:

- Partnerships to co-develop and pilot circular solutions
- Input on where FSC's standards and systems need to evolve
- Feedback on emerging ideas before they become formal proposals
- Collaboration on designing systems that serve both forests and people

An invitation to co-create the future

This paper is not the end of a journey – it's the beginning of a conversation. We are standing at a crossroads. The transition to a circular bioeconomy is accelerating, and FSC has a unique opportunity to once again be a pioneer.

But the questions we face are complex, and the path forward is not one we can – or should – define alone.

No decisions have been made. The ideas and solution proposals presented in this document are exploratory by design. They are meant to provoke, inspire, and invite. Invite what? Your experience. Your creativity. Your challenges and your ideas.

We want to understand what will work on the ground – and what won't. Where are the barriers? Where can we take the next bold leap? Where could we pilot – and what? What ideas can we build together that are credible, impactful, and scalable?

Whether you represent a certificate holder, an environmental or social NGO, a market innovator, a policymaker, or a community – based organization – we need your voice.

You can engage with us now by reaching out through circularity@fsc.org to start the conversation.

This is our moment to shape what FSC becomes in the next decade. To reimagine certification for a circular economy. And to ensure our systems reflect the values we've always stood for: forests for all, forever.

Let's build this together.

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Want to get in touch?

Do you want to get in touch with the FSC Circularity Hub to discuss, learn from each other or collaborate?

Feel free to reach out to us on **circularity@fsc.org.**

Learn more about what we are doing on **fsc.org/circularity**

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