PSU INTERNAL CIRCULARITY REPORT

(BACKGROUND ANALYSIS PAPER)

FSC-STD-40-007 Revision Process

FSC FORESTS FOR ALL FOREVER™

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Objective of document:	The objective of this report is to inform decision making on the potential integration of new circularity concepts into the FSC system in the ongoing revision of the chain of custody standards	
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Intended audience	☐ Internal (FSC)	☒External
Personal data included?	☐ Yes	☒ No

A. EXECUTIVE SUMMARY

This report examines the potential integration of circularity concepts into the FSC system. The report covers leasing, take-back programmes, repair, and reuse of FSC-certified products, and claim contribution for pre-consumer reclaimed wood. The report assesses the current FSC Chain of Custody standards and circularity, highlighting areas for improvement. Additionally, the report assesses the potential risks, benefits, and implications for FSC in promoting sustainable forest management and resource use within the context of circular economy. Finally, the report summarizes pertinent international standards and emerging frameworks on circularity (ANNEX 1), which could serve as a context for FSC's circularity initiatives in the ongoing revision process.

B. Background

The Forest Stewardship Council (FSC) is committed to promoting sustainable forest management and use of resources. As part of its efforts to support the circular economy, the FSC Circularity Hub has developed recommendations to enhance the FSC Chain of Custody (CoC) standards. This report summarises the FSC Circularity Hub report, which explores the potential integration of new circularity solutions into FSC's CoC certification system. It focuses on three key circularity concepts: leasing, take-back, and repair and reuse of FSC-certified products. The report, which draws on consultations, workshops and interviews conducted by the FSC Circularity Hub, provides insights into the current state of FSC standards regarding circularity and makes recommendations for including other circularity concepts. The objective of this report is to provide a summary and an evaluation of the proposed circularity concepts for consideration by FSC to strengthen its role in promoting circularity. This report assesses the potential benefits and challenges of integrating these circularity models within the FSC framework. It identifies opportunities for enhanced resources efficiency and new economic opportunities, while also addressing challenges such as integrity risks, technical difficulties, and regulatory compliance issues. Additionally, a key area of focus in this report is a proposal to grant a claim contribution status for pre-consumer reclaimed wood. These materials are increasingly being recognised as valuable resources by companies seeking to promote circularity. The report reviews the impact of this proposal within the FSC system, weighing up the benefits, potential risks, and stakeholder concerns. The report also examines the evolving principles and standards on circular economy. It presents relevant ISO standards on circularity, as well as other international frameworks such as Association Française de Normalisation (AFNOR XP) X30-901 and the British Standards Institution's (BSI) BS 8001. These standards could provide context for FSC's efforts to integrate circularity into its certification schemes.

Contents

1. FSC Normative Framework and Circularity

Circular economy models are essential frameworks in sustainable development, emphasizing the reduction of waste and the continual use of resources. These models, which form the backbone of the circular economy, aim to close the loop of product lifecycles through greater resource efficiency and waste minimization. This contrasts sharply with the traditional linear economy, which follows a 'take-make-dispose' pattern. Circularity models include strategies, such as takeback, leasing, recycling, reusing, and refurbishing, are increasingly vital in various sectors, including sustainable forest management and certification schemes. Moreover, circularity models support sustainability and promote economic gains for stakeholders. By creating value from waste and promoting innovative business models, such as product-as-a-service, they open new revenue streams for companies and local communities. This economic incentive encourages adherence to sustainable practices and investments in certified forest products. Additional benefits of circularity models in forest certification are the optimization of resource use. By prioritizing the reuse and recycling of forest-based products, circularity models reduce the pressure on natural forests. This can lead to a decrease in deforestation rates, preserving ecosystems and biodiversity. For instance, wood waste from construction or manufacturing can be repurposed into new products, extending the lifecycle of the material, and reducing the need for raw timber extraction. Circular economy models also align with the environmental and social goals of forest certification. Socially, circularity models can enhance community involvement and job creation in the recycling and refurbishment sectors, fostering sustainable livelihoods.

The Forest Stewardship Council (FSC) has made significant strides in promoting circular solutions within its normative frameworks. Specifically, the FSC chain of custody (CoC) standards FSC-STD-40-004 V3-1 and FSC-STD-40-007 V2-0 establishes requirements for responsible sourcing of reclaimed materials such as pre- and post-consumer reclaimed materials for use in FSC-certified product and projects. A notable contribution is the Recycled claim and label, enabling stakeholders to incorporate certain categories of reclaimable materials into their products, aligning with the principles of circularity and promoting the reuse and recycling of materials. There is a growing consensus that FSC could leverage additional circularity models to further promote sustainable forest-based product usage and increase its relevance and market share in the circular economy. Stakeholders believe that absence of clear-cut requirements and enablers of these other circularity models, such as the product-as-a-service, potentially limits FSC in the following ways, by:

- Decreasing the organizations' documentation of responsibly sourced forest-based materials for, re-use and repair, take-back and leased products;
- Decreasing FSC's market share and relevance;
- Limiting FSC's influence connected to circular business solutions; and
- Decreasing FSC's influence in incentivizing reuse and minimizing waste at the level that FSC has the potential to achieve.

The ongoing revision of FSC's CoC standards presents an opportunity for enhancement to better facilitate additional circular business models and promote sustainable practices. While the standards provide guidelines for responsible sourcing of reclaimed materials for use in FSC system, they do not explicitly address certain circularity-related models such as leasing, repair and reuse, and take-back programs. To align with the growing demand for circular solutions and enable companies to maintain FSC certification while embracing these models, stakeholders recommend that FSC consider revising the CoC standards to incorporate specific provisions and requirements for the following:

- Leasing of FSC-certified products: Establishing guidelines that allow companies to lease FSC-certified products while maintaining their certification status would enable new business models that promote extended product life cycles and resource efficiency.

- Take-back and resale of unused FSC-certified products: Developing requirements and guidelines that regulates take-back and resale of unused FSC-certified products with maintained certification would facilitate closed-loop systems and reduce waste.
- Repair and reuse of FSC-certified products: Incorporating provisions that support the repair and reuse of FSC-certified products could extend their usable life and contribute to a more circular economy.

By addressing these gaps, FSC can empower organizations to actively participate in circular business models while maintaining the integrity of the FSC certification system. This would not only promote the adoption of sustainable practices but also potentially enhance the visibility and appeal of FSC-certified products in the marketplace.

2. PROPOSED CIRCULARITY SOLUTIONS

2.1 Leasing of FSC-certified Products

Being a product certification scheme, the CoC standards have focused primarily on the legal ownership transfer, and therefore do not regulate circular business models such as leasing. However, owing to the growing legislations on circularity and consumers demand, stakeholders have recommended FSC to introduce a leasing model for interested organizations.

A lease is a contractual agreement between a user and an owner, where the user pays a specific amount over a set period to use the owner's asset. The proposed leasing solution would mean that certified products leased to other parties would retain their original certification status. Therefore, no additional claim would be created for leased products, however promotional use of FSC trademarks could be used for leased product (off product statements). Leasing FSC-certified products is a business model that could significantly contribute to the circular economy by extending the lifecycle of products, reducing waste, and promoting the extended use of materials.

Currently exclusive service provision certification is excluded from the FSC CoC standards, thus organizations with this business model are not encouraged to apply for FSC CoC certification. Stakeholders assert that including the leasing circularity model could create a pathway for product-as-a-service certification and offer potential benefits to organizations. However, the inclusion may also present some risks and challenges as outlined below.

Table 1 examples of products for leasing

Product Category	Examples	Potential Applications
Furniture	Tables, chairs, bookshelves	Office spaces, event rentals
Construction Materials	Beams, posts, structural elements	Temporary structures, scaffolding
Musical Instruments	Wooden guitars, violins	Music schools, recording studios
Watercraft	Wooden boats, canoes	Recreational rentals, tour operators
Shipping Materials	Wooden pallets, crates	Logistics companies, warehouses
Industrial Equipment	Wood processing machinery	Small-scale manufacturers, workshops

2.1.1 Potential Benefits of Leasing

- Access to new markets, especially those focused on cost-efficiency, such as the hospitality sector and public procurement;
- Support sustainability strategies by promoting the reuse of products, reducing waste, and encouraging responsible resource use;
- Enable companies to use FSC certification as a promotional tool for leased products;
- Increase FSC's market share by connecting FSC certification directly to circular economy practices; and
- Reactivate interest from stakeholders who may have previously dropped out of FSC certification.

2.1.2 Potential Risks Associated with Leasing

- Risk of non-certified products entering the FSC system during leasing processes;
- Challenges in maintaining traceability and certification integrity throughout the leasing;
- Adapting systems to incorporate leasing may incur additional costs, especially for products without existing identification measures; and
- Potential misuse of the concept, e.g., unauthorized sales of leased products.

2.1.3 Recommended Solution

To facilitate the adoption of leasing for FSC-certified products, it is recommended that FSC integrates leasing into its standards by adapting requirements to ensure continuous traceability and certification integrity. This could involve setting new requirements or adjusting existing ones, such as:

- Modifying annual volume summaries to include leased products;
- Adapting requirements to account for financial transactions and claims related to leasing;
- Establishing guidelines for maintaining FSC certification status throughout the leasing period, including provisions for tracking and monitoring leased products;
- Developing protocols for the return of leased products after their lease term, ensuring they can be reintroduced into the FSC supply chain;
- Implementing measures to prevent the unauthorized sale or misuse of leased FSC-certified products during the lease period; and
- Defining clear responsibilities and obligations for lessors(owners) in upholding FSC certification requirements.

2.1.4 PSU Conclusion

The results from the consultations, workshops, and interviews organized by the Circularity Hub indicate that most stakeholders endorse the leasing solution as a viable concept for inclusion into the FSC system. Integrating leasing into FSC standards offers significant benefits, such as market expansion and enhanced sustainability, aligning with FSC's commitment to promoting sustainability and circular economy principles. However, it is important to acknowledge that this solution also presents challenges that require careful consideration and mitigation strategies. Potential risks, such as maintaining traceability and certification integrity must be addressed to ensure the practical implementation of leasing models within the FSC framework.

2.2 Take-Back of Unused FSC-certified Products

The current CoC standards do not specify requirements to facilitate the take-back of unused certified products which is already or potentially being practiced by many organisations within FSC supply chains. However, the growing emphasis on circular economy principles, driven by evolving legislation and consumer demand, has prompted stakeholders to propose the introduction of a formal take-back options with a set of requirements within FSC's framework. Take-back programs are a circularity model aimed at

recovering unused FSC-certified products to ensure their proper reuse and integration into FSC product groups. Thus, customers could return unused volumes or portions of products to an organisation with the certification status of the product remaining valid (e.g., unused certified logs, plywood, paper etc, can be return to organisations for resale in the FSC supply chain). To effectively implement take-back programs, stakeholders have proposed that FSC CoC standards should be updated to include specific requirements for the traceability and eligibility of returned products. In theory, this would ensure that the certification integrity is maintained throughout the take-back process, allowing for the seamless reintroduction of unused products into the FSC supply chain.

Table 2 Examples of products for a take-back model

Product Category	Examples	Potential application
Paper Products	Office paper, packaging materials	Unused or partially used reams/boxes returned
Wood Construction Materials	Lumber, plywood, engineered wood	Excess or unused materials returned to supplier for resale or reprocessing
Furniture	Wooden tables, chairs, shelving units	Unused items returned for resale
Wooden Pallet	Shipping pallets	Unused or pallets returned for resale
Wood-based Textiles	Cellulose-based fabrics	Unused fabric rolls returned for reprocessing
Paper-based Packaging	Cardboard boxes, paper bags	Excess or unused packaging returned for resale
Wood Flooring	Hardwood planks, engineered flooring	Unused or excess flooring materials returned for resale or reprocessing
Wooden Crafting Materials	Wood blocks, dowels, sheets	Unused portions returned for resale or repurposing

2.2.1 Potential Benefits of a take-back model

- Enhances resource efficiency by facilitating the reuse of products, reducing the need for virgin materials;
- Supports waste reduction initiatives by ensuring that unused products are effectively managed and reintroduced into the market;
- Increases customer trust and satisfaction by offering responsible end-of-life solutions for products; and
- Helps companies meet their sustainability goals and regulatory requirements related to waste management and circular economy practices.

2.2.2 Potential risks associated with a take-back

- Ensures the traceability of returned products can be complex, particularly for items without unique identifiers;
- Maintains the quality and certification status of returned products requires stringent quality control measures; and
- Implements take-back programs may involve additional costs for companies, such as logistics and verification processes.

2.2.3 Recommended Solution

To effectively implement take-back programs for FSC-certified products, the FSC standards should be updated to include specific requirements for the traceability and eligibility of returned products. This could involve:

- Ensuring that take-back products maintain their FSC-certification status through appropriate documentation and verification processes;
- Outlining requirements for organizations participating in take-back programs; and
- Establishing procedures for assessing eligibility of returned products for resale with an FSC claim.

2.2.4 PSU Conclusion

Incorporating take-back programs into the FSC system presents a significant opportunity to align with circular economy principles and meet the growing demand for sustainable and responsible business practices. By facilitating the reuse of unused certified products, FSC may not only incentivize reduction of waste, but also promote resource efficiency and contribute to the overall environmental sustainability of the forestry sector. The stakeholders engaged in the workshops, consultations and interviews organised by the Circularity Hub favour this circularity solution and thus propose that FSC sets requirements in its normative framework to incorporate the concept. However, the implementation of take-back programs may also present challenges, such as maintaining traceability, addressing liability concerns, and risk of mixing with in-eligible inputs. Stakeholder consultations and collaboration with industry experts will be crucial in developing comprehensive guidelines and standards that address these potential risks while maximizing the benefits of take-back programs.

2.3 Repair and Reuse of FSC-certified Products

Initiatives focused on repair and re-use endeavour to prolong the functional lifespan of products, mitigate waste generation, and conserve natural resources. This concept is rapidly gaining traction across various sectors globally, driven by evolving regulatory measures spanning Europe, America, and other regions worldwide (e.g. the directive to make all packaging reusable or recyclable by 2030 in the EU Green Deal). The proposed solution is to facilitate repair and reuse options for FSC-certified products by integrating regulatory requirements into the FSC normative standards. At present, the CoC standards lack specific requirements to regulate repair and reuse initiatives for repairable and reusable forest-based products. Nonetheless, the growing emphasis on circular economy principles, fuelled by evolving legislative landscapes and consumer demands, has triggered the interest of stakeholders to advocate for the incorporation of repair and reuse in FSC's standards. Research, stakeholder engagement and workshops indicate that the following potential benefits and risks associated with a repair and reuse program:

2.3.1 Potential Benefits Associated with Repair and Reuse

- Extend product lifespans, reducing the need for virgin materials and conserving resources;
- Support waste minimization efforts by promoting the repair and reuse of products instead of disposal;
- Help meet the growing consumer demand for sustainable and circular products, especially among younger generations;

- Help companies comply with emerging regulations focused on circular economy and waste reduction; and
- Contribute to the development of a more resource-efficient and environmentally responsible economy.

2.3.2 Potential Risks Associated with Repair and Reuse

- Verification of product origin and quality could be challenging and resource intensive;
- Market resistance to reused products, especially in high-standard sectors;
- Significant company expenses for repair and reuse certification systems;
- Challenges in tracking CoC for multi-stage repaired/reused products;
- Risk of mixing certified and non-certified materials during repair/reuse processes;
- Difficulty maintaining segregation of certified materials in mixed-inventory facilities; and
- Potential compromise of FSC certification credibility without proper controls for repaired/reused items.

Table 3 Examples of products for repair and reuse model

Category	Examples	Repair/Reuse Methods
Furniture	Tables, chairs, bookshelves	Refinishing, repairing
Flooring	Hardwood flooring	Sanding, refinishing
Construction Materials	Beams, posts, structural elements	repairing, repurposing
Musical Instruments	Guitars, violins	Repairing, restoring
Watercraft	Wooden boats, canoes	Repairing, refinishing
Shipping Materials	Pallets, crates	Repairing, repurposing
Paper Products	Paper bags, cardboard boxes	Reusing multiple times before recycling

2.3.3 Recommended Solution

To facilitate the adoption of repair and reuse initiatives for FSC-certified products, it is recommended that FSC integrates these circular models into its standards by adapting requirements to ensure continuous traceability and certification integrity. This could involve setting new requirements or adjusting existing ones, such as:

- Changing the definition of reclaimed materials to include reused products;
- Introducing a new ‘FSC Reused’ claim and label to differentiate from recycled products;
- Setting requirements for verification and control of reused and repaired products, including those involving the use of virgin or reclaimed materials;

- Establishing guidelines for maintaining the CoC and documentation throughout the repair and reuse processes, including unique product identifiers and tracking mechanisms;
- Implementing measures to prevent the mixing or substitution of certified materials with non-certified or unknown materials during repair and reuse processes;
- Outlining responsibilities and obligations for organizations participating in repair and reuse programs, including procedures for repair, labelling, and documentation.

2.3.4 PSU Conclusion

The introduction of an 'FSC Reused' claim and label could drive market acceptance of repaired and reused products, supporting the transition to a circular economy. However, this solution presents potential concerns that need to be addressed. The proposed concept may require a post-consumer audit program, where the eligibility and composition of proposed products to be repaired and reused needs to be ascertained (does the product come with the original composition intact or has some component been substituted?). Once an entity or individual purchases a certified product for consumption, the chain of custody is broken, and the product leaves the certified supply chain. Thus, a repair and reuse model could warrant an independent assessment of the eligibility of the returned product to be repaired or reused (with a 'reuse claim/label') within the FSC supply chain. A post-consumer audit program could be a significant challenge, as such used products could already be considered as post-consumer reclaimed material for inclusion into products via a supplier audit program for FSC Recycled claims. Additionally, some stakeholders argue that the solution may be of less benefit considering the existing post-consumer reclaimed and recycled claims. The solution could also warrant the classification of consumers into different categories, such as institutions, construction sectors, furniture sectors, offices, and individual consumer with a set of requirements. Addressing verification challenges, such as traceability and material composition, is crucial for the successful implementation of this solution. Robust guidelines are needed to ensure certification integrity and prevent the risk of mixing with non-certified materials. While the introduction of an 'FSC Reused' claim and label can drive the transition to a circular economy, this solution needs broader consultations and careful considerations before being adopted into the FSC system.

3. PRE-CONSUMER RECLAIMED WOOD

The use of pre-consumer reclaimed material in the FSC system has been a topic of significant interest and debate among stakeholders. Pre-consumer wood, which includes, cut-offs, scraps, leftovers, sawdust, and chippings from secondary manufacturing processes are seen as valuable resource by companies to promote circularity. This is particularly evident in sectors such as furniture and construction, where these materials can be repurposed into new products rather than being burned for energy. For instance, in the furniture sector, pre-consumer wood is used to produce board materials, while in the clothing industry, textile waste from fibre is repurposed into new products. Currently, pre-consumer reclaimed wood has no claim-contribution under the CoC system. However, some stakeholders argue that pre-consumer wood is normally regarded as waste material similar to pre-consumer reclaimed paper which has a claim-contribution status and therefore request that it be granted a claim-contribution status. The economic stakeholders consulted in workshops and research conducted by the FSC's Circularity Hub strongly favour recognizing pre-consumer wood as a claim-contributing material within the FSC system, citing various potential benefits and minimal risks that are already managed by existing FSC mechanisms. Despite the enthusiasm from some stakeholders, there are critical opinions and concerns regarding the inclusion of pre-consumer wood as a claim-contributing material. Some stakeholders argue that it should meet stringent traceability requirements to mitigate risks related to its origin and avoid potential greenwashing. Others question whether the environmental benefits are genuine or merely a result of increased business efficiency. Additionally, stakeholders argue that FSC should focus on reusing and recycling of post-consumer materials to achieve true circularity. Moreover, stakeholders consider the risks associated with pre-consumer reclaimed wood as greater than those for pre-consumer reclaimed paper, necessitating different regulatory approaches. The discussion underlines the need for a balanced approach that considers both potential benefits and associated risks of integrating pre-consumer wood into the FSC system. Below provides detail of some benefits and risks associated with the inclusion of claim contribution for pre-consumer reclaimed wood in the FSC system.

3.1 Potential Benefits

- Harmonize valuation between pre-consumer reclaimed wood and paper, addressing stakeholder concerns about fairness;
- Expand FSC products supply, and market share, especially in regions with low FSC-certified forest sourcing options;
- Help FSC align with circular economy principles by reducing waste streams;
- Contribute to alleviating pressure on forests and reducing reliance on virgin wood;
- Encourage greater use of pre-consumer materials in FSC-certified products; and
- Allow companies exclusively using pre-consumer reclaimed wood to participate in the FSC system.

3.2 Potential Risks

- Consumer confusion between FSC Recycled and FSC Mix reclaimed inputs, reducing transparency;
- Greenwashing risk if changes do not yield real environmental benefits;
- FSC reputation threat from non-traceable or illegal pre-consumer wood origins and overproduction;
- Potential misalignment with regulations like EUTDR waste definition;
- Risk of losing market share if FSC's reclaimed material definition becomes overly restrictive;
- Decrease in demand for FSC-certified virgin wood from sustainably managed forest and post-consumer reclaimed materials.

3.3 Recommendations

Considering the potential benefits and risks, the proposal is for FSC to include pre-consumer wood as a claim-contributing material in its system, subject to the following conditions:

- Conduct a comprehensive study to evaluate the risks, impacts, and opportunities associated with changing the classification of pre-consumer reclaimed wood to a claim-contributing input;
- Develop a clear and consistent definition of pre-consumer reclaimed wood, along with specific examples and guidelines for its acceptance;
- Establish robust traceability and verification mechanisms to ensure the origin and legality of pre-consumer reclaimed wood sources;
- Implement measures to mitigate potential risks, such as greenwashing, controversial sources, and over-production of pre-consumer materials; and
- Align the inclusion of pre-consumer wood with the principles of the circular economy and waste reduction efforts.

3.4 PSU Conclusion

FSC has specific guidelines regarding the use of virgin and recycled materials within its certification system. According to FSC standards non-certified virgin wood can be used as controlled material if it is subjected to a Due Diligence System (DDS). This controlled material can then be used as input into the FSC system, but it does not carry a certification status as FSC-certified material.

In 2014, FSC published ADVICE-40-004-12, introducing due diligence requirements for the control of pre-consumer reclaimed wood (except paper scraps) in the EU market, thus aligning with the EU Regulation No 995/2010 (known as the 'EU Timber Regulation' or 'EUTR'). Granting a claim contribution status to pre-consumer reclaimed wood on the grounds of its similarity with pre-consumer reclaimed paper would present a potential inconsistency between FSC and the Regulation. Some stakeholders also agree that the risk of greenwashing, integrity risk and consumer trust associated with this proposal is high and should, therefore, be carefully considered. FSC recognizes the market demand and the limited supply of FSC-certified materials. However, regulations do not recognize these types of materials as waste (i.e., considered 'by-products', similar to co-products in the FSC system). Thus, granting a claim-contribution to pre-consumer wood, could be considered as a drawback for FSC. While the potential contribution of pre-consumer reclaimed wood to circularity is significant, FSC must carefully consider this proposal in the context of emerging legislation with a balanced group of stakeholders concerned in the future.

4. CIRCULARITY, OPPORTUNITIES AND BARRIERS (SUMMARY).

The integration of circularity solutions can significantly contribute to the FSC's mission. By embracing circular approaches, FSC can reduce the demand for virgin materials, alleviate pressure on forests, and minimize environmental impacts. Additionally, it can create new economic opportunities, increase market share, and incentivize sustainable practices among businesses. Circularity models promote resource efficiency, waste reduction, and responsible consumption, aligning with the UN's Sustainable Development Goals. Utilizing pre-consumer and post-consumer materials diverts waste streams, extends product life cycles, and reduces the need for resource extraction. Furthermore, circularity solutions support local communities by generating employment in waste management, recycling, and repair activities, fostering social equity. Overall, the integration of circularity solutions enables FSC to drive sustainable resource use, expand market influence, incentivize responsible forest management, and contribute to its long-term vision of a world where forests thrive, biodiversity flourishes, and local communities' rights are upheld.

The following sections highlight and summarize some of the opportunities and barriers to the integration of circularity solutions in the FSC system.

4.1 Barriers

Risk of Greenwashing

- There is a risk that circularity initiatives may be perceived as greenwashing if they do not lead to substantial environmental benefits.
- The inclusion of claim contribution for pre-consumer reclaimed wood could lead to integrity and reputational issues if not properly managed, such as the use of non-traceable or illegal materials.

Technical Challenges

- Implementing circular business models can be technically challenging, requiring significant changes in production processes and supply chains.
- Ensuring the traceability of pre-consumer can be difficult, complicating certification processes.

Regulatory and Compliance Issues

- Potential misalignment between FSC's definitions and existing regulations, such as the EU's waste definitions, can create compliance challenges.
- Non-compliance with accessibility and environmental regulations can result in legal issues and damage to reputation.

Economic and Market Barriers

- Transitioning to circular business models can involve high initial costs for organizations, including investments in new technologies and infrastructure.
- Convincing consumers and businesses to adopt circular products and services can be challenging, especially if they are accustomed to linear models.

Operational Challenges

- Managing a circular supply chain can be complex, requiring coordination among multiple stakeholders and ensuring the quality of recycled materials.
- Maintaining the quality of products made from recycled materials can be challenging, potentially affecting consumer trust and satisfaction.

4.2 Opportunities

Enhanced Resource Efficiency

- Circular business models reduce waste by promoting the reuse, repair, and recycling of materials, thereby minimizing the need for virgin resources.
- Leasing, take-back, and repair models extend the life of products, reducing the frequency of new resource extraction.

Environmental Benefits

- By reducing the demand for virgin materials, circularity solutions help mitigate deforestation, habitat loss, and biodiversity degradation.
- Circular models can lower greenhouse gas emissions associated with the production and disposal of materials.

Economic Opportunities

- Circular business models create new economic opportunities, such as product-as-a-service models, repair services, and recycling operations.
- Increased demand for FSC-certified products incorporating reclaimed materials can expand FSC's market share.

Social Benefits

- Circularity solutions can generate employment opportunities in waste collection, recycling, and repair activities, supporting local communities.
- Promoting access to affordable products through leasing or sharing models can enhance social equity.

Alignment with Sustainable Development Goals

- Circularity aligns with the UN's Sustainable Development Goals, particularly those related to responsible consumption and production (Goal 12), climate action (Goal 13), and life on land (Goal 15).

4.3 Evaluation and Recommendation

Table 4 captures a brief evaluation of the proposed circularity concepts, their feasibility within the FSC systems, and recommendations.

Table 4.Evaluations and Recommendation's on Circularity Proposals

Concept	PSU Evaluation	Recommendations
Leasing	The leasing of FSC-certified products is a concept that can be incorporated into the FSC's normative framework with minimal changes. This concept could help FSC position itself in the products-as-service model. The concept of leasing FSC-certified products presents minimal risk to the FSC's system and integrity.	It is recommended that stakeholders be consulted about including and regulating leasing as a circularity model within FSC's normative framework. Additionally, it is advisable to gather further inputs and feedback from stakeholders during the conceptual phase of the CoC standards revision to ensure acceptance and effective implementation.
Take-back	Risks associated can be identified rapidly and mitigated with normative requirements. FSC could incentivize organizations to participate in the take-back model for unused certified products. Take-back is a concept that is already being practiced by many organisations, thus the inclusion presents the opportunity for FSC to set clear-cut requirement to regulate the re-entry of unused certified product into FSC supply chains.	Consultation with stakeholders to gather insights on acceptance, implementation of the concept and how unused certified product can be tracked and incorporated back into the supply chain with minimal risks.
Repair and Reuse	The concept of repair and reuse of certified products may present high risks to the FSC systems. Among other requirements, it may require a post-consumer audit program, which could be very challenging for FSC to implement. Developing requirements for this process could be complex. Further research and feasibility studies could be conducted on the repair and reuse model and its applicability within the FSC's system.	Broader research and stakeholder consultation can be employed as a further step to gather different perspectives on the inclusion of the repair and reuse concept. Stakeholders may identify additional impacts, benefits, and risks associated with this solution. Their input would be invaluable in determining the feasibility and potential implementation strategies for this circularity model within the FSC's normative framework.
Pre-consumer reclaim wood	The rationale behind the proposal to count pre-consumer reclaim wood as a claim-contributing input within the FSC system seems to be driven by economic interest. However, approving this proposed solution may incentives the demand for non-certified material. Furthermore, current legislations do not recognise this material as waste. The risks associated with this proposal are significantly high and may require stringent requirements to ensure its inclusion. The potential for pre-consumer reclaim wood to undermine FSC's integrity and credibility is high.	The next step should be a consultation to gather inputs from environmental and social perspectives, given that the economic perspective dominated the output from the circularity report. Further research and alignment with existing and emerging legislation would also be needed to comprehensively assess the feasibility of granting pre-consumer reclaim wood a claim contributing status.

ANNEX 1. OTHER SCHEMES AND CIRCULARITY

The value of understanding the approaches of other systems and certification schemes lies in the potential to adapt requirement and control systems to ensure harmony. Thus, geopolitical alignment ensures consistency across schemes and prevents certificate holders (CHs) from having to implement diverse processes for the same purpose especially when operating different schemes in their activities.

Currently, there is limited information available on how other certification schemes or systems regulate the proposed circularity models. However, ongoing research reveals the emergence of circularity standards and schemes aimed at regulating circular economy practices in business activities. FSC is committed to continuing its research and monitoring efforts in this area. FSC will strive to align its requirements with relevant national and international standards to ensure consistency within the evolving geopolitical landscape of circularity. This approach will enable FSC to maintain its position as a leader in sustainability while adapting to the emerging paradigms of circular economy practices. By doing so, FSC aims to create a more harmonized certification environment that facilitates efficient implementation for certificate holders. The sections below give an overview of emerging standards on circularity.

1.1 AFNOR XP X30-901

The AFNOR XP X30-901 is a French standard developed to provide guidelines for implementing circular economy projects. The XP X30-901 standard is designed to assist organizations in integrating circularity principles throughout their operations and value chains, thereby contributing to a more sustainable and regenerative economic system. The standard outlines a framework that addresses three key dimensions of sustainable development (environmental, economic, and social), as well as seven areas of action that align with the principles of the circular economy:

- Eco-design
- Industrial symbiosis
- Product-service systems
- Responsible consumption
- Life extension
- End-of-life management.

1.1.1 Key aspects on circular economy:

- Promotes resource efficiency and waste reduction;
- Encourages closed-loop systems and circular business models;
- Emphasizes collaboration and stakeholder engagement;
- The tool provides a systematic framework for the planning, implementation, and assessment of circular economy projects;
- Offers common terminology and definitions for circular economy concepts;
- Serves as a practical guide for organizations transitioning towards a circular economy model; and
- The XP X30-901 influences the development of the 59000 ISO series on circularity standards.

1.1.2 RINA Circular Economy Certification (XP X30-901)

RINA, a certification body, offers a circular economy certification based on the XP X30-901 standard developed by AFNOR, the French standardization body. The certification process involves an assessment of the organization's circular economy project management system against the requirements of the XP X30-901 standard. The circular economy certification helps organizations to:

- Demonstrate leadership in circular economy management;
- Align with the United Nations' Sustainable Development Goals;

- Comply with the European Green Deal and circular economy action plans; and
- Implement a circular economy management system.

1.2 ISO Standards on Circularity

The ISO/TC 323 technical committee is developing a comprehensive set of standards for circular economy implementation, covering frameworks, guidance, and requirements for organizations. Below a summary of the published standards and those under development:

1.2.1 ISO 59020:2024 (Published)

ISO 59020:2024 provides guidelines for measuring and assessing circularity performance within defined economic systems. It aims to standardize the process of collecting and calculating data using circularity indicators, ensuring consistent and verifiable results.

Key features:

- Establishes requirements for measuring circularity performance
- Provides methodology for setting system boundaries and selecting indicators
- Supports data interpretation at various levels (regional, organizational, product-specific)
- Aligns with UN Agenda 2030 and Sustainable Development Goals
- Enhances transparency in environmental reporting
- Facilitates decision-making for sustainable resource management
- Complements other sustainability assessments
- Applicable to organizations of all types and sizes

1.2.2 ISO 59010:2024 (Published)

ISO 59010:2024 (complements IS0 59020:2024, 59004:2024) standards provides guidance for organizations transitioning from linear to circular business models and value networks.

Key features:

- Focuses on business-oriented strategies for circular economy implementation
- Complements ISO 59004 with detailed guidance on value creation models
- Helps assess current models and map value chains/networks
- Addresses environmental risks and resource depletion
- Enhances resource efficiency and economic opportunities
- Improves adaptability to regulatory and market changes

1.2.3 ISO/DIS 59040 (Under Development)

ISO 59040 is a standard focused on the Product Circularity Data Sheet (PCDS), providing a framework for communicating circularity characteristics of products. ISO/DIS 59040 aims to standardize the way product circularity information is shared across value chains.

Key features:

- Establishes a common format for reporting product circularity data.
- Facilitates transparent communication of circular attributes.
- Supports informed decision-making for circular product design and procurement.
- Enables comparison of circularity performance across products.
- Covers material composition, recyclability, repairability, and other circular features.
- Promotes data consistency and reliability in circular economy reporting.
- Applicable to various product types and industries.

1.2.4 ISO 59004/2024 (Published)

ISO 59004/2024 serves as a foundational Standard for transitioning towards a circular economic model. It provides a framework for understanding and implementing circular economy principles.

Key features:

- Defines key terms and concepts related to circular economy.
- Establishes six interconnected principles: systems thinking, value creation/sharing, resource management/tracking, and ecosystem resilience.
- Prioritizes actions like refuse, rethink, reduce, repair, reuse, recycle, and recover.
- Supports improved stakeholder relationships and regulatory compliance.
- Contributes to climate change mitigation and adaptation.
- Applicable to various types and sizes of organizations

1.3 The British Standards Institution (BS 8001)

BS 8001, developed by the British Standards Institution (BSI), provides a framework for implementing principles of the circular economy within organizations. The standard's objective is to guide businesses in the transition from a linear to a circular business model, with an emphasis on resource efficiency and sustainability.

Key features:

- Flexible framework adaptable to various organizations
- Six principles: systems thinking, innovation, stewardship, collaboration, value optimization, and transparency.
- Eight-stage flexible implementation approach.
- Guidance on circular economy concepts and business models.
- Tools for measuring and assessing circularity.
- Emphasis on stakeholder engagement and value chain collaboration.
- Alignment with other sustainability standards and initiatives.
- Focus on practical implementation and continuous improvement.
- Consideration of economic, environmental, and social impacts.
- Support for decision-making and risk management in circular transitions.

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