SUST CERT 4 BIOBASED
SUSTAINABILITY CERTIFICATION FOR BIOBASED SYSTEMS

D5.5

Thematic briefs to industrial biobased value chain actors

CIRCE

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AUTHORS (Organisation)	Víctor Fernández Ocamica (CIRCE), Paula de la Sen de la Cruz (CIRCE)
REVIEWERS	Laura Väyrynen (ECOS), Iris Vural Gursel (WFBR)
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0.4	28/05/2025	Final deliverable integrating reviewer comments	CIRCE
1.0	30/05/2025	Final check and Submission by the coordinator	WR

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ABBREVIATIONS

CSLs	Certification schemes and labels
GCD	Green Claims Directive
RED	Renewable Energy Directive
SCAR	Saturated-Absorption Cavity Ring-Down
SMEs	Small and medium-sized enterprises
WP	Work package

Executive Summary

This deliverable has been prepared under Task 5.4 “Recommendations to industrial biobased value chain actors” in the Work package (WP) 5 – Synthesis and recommendations. The objective of Task 5.4 was to derive recommendations for industrial biobased value chain actors for enhanced adoption of effective and robust sustainability certification schemes and labels (CSLs). The goal was to identify strategies to promote the adoption of sustainability certification schemes and labels (CSLs), build trust among industrial value chain actors and certification bodies, address impediments to implementation and uptake, and translate the findings into actionable recommendations for the biobased industry in the European Union. The compendium of the recommendations is presented in the format of this thematic brief. To facilitate effective communication and engender understanding and acceptance among the industries, stakeholders were involved through a series of workshops in alignment with WP6 activities.

The research design for developing recommendations involved a stakeholder survey across five sectors: waste management, construction, chemicals, textiles, and plastics. The survey was supplemented by semi-structured interviews and two capacity-building workshops. These discussions allowed for the collection of quantitative and qualitative data on prevailing certification practices, reasons for uptake, perceived barriers, and areas of desired improvement.

Findings indicate that although use of biobased raw materials is widespread, the actual adoption of sustainability certifications remains limited. One-third of surveyed companies had adopted a certification scheme, with the main barriers being high costs, complex administrative processes, a fragmented certification landscape, and uncertainty concerning a return on investment. Traceability and monitoring requirements were considered as burdensome by SMEs and firms with complex supply chains due to insufficient digital infrastructure and technical support provided by schemes.

Each stakeholder group recognised a need for administrative and technical changes in the certification adoptions process as well as for stronger supportive policies and market signals that encourage and reward sustainability activity. Stronger communications of value from certifications, simpler procedures, economic incentives, and harmonisation between schemes were listed as primary areas for action. Additionally, common definitions, transparent sustainability criteria, and greater market visibility for certified products were called for.

To enable the wider and more effective adoption of sustainability certification schemes by the EU biobased industry, the following recommendations are directed at companies and industry actors across biobased value chains:

- Invest in digital and high-quality traceability and monitoring systems to enable compliance.
- Explore group and phased certification models to reduce upfront costs and lower the barrier to entry, especially for SMEs.
- Engage in certification schemes that are moving towards harmonisation and mutual recognition, to avoid redundancy and gain increased credibility.
- Promote certified products through transparent sustainability communication, consumer labelling, and participation in green procurement opportunities.
- Seek public funding or co-financing alternatives (e.g., national or EU innovation funds) to finance the cost of certification and digitalisation.
- Leverage technical support and capacity-development initiatives, including training and advisory services, to prepare for certification requirements and build in-house skills.

1. Introduction

This deliverable has been prepared under Task 5.4 “Recommendations to industrial biobased value chain actors” in the WP5 – Synthesis and recommendations. The aim of WP5 is to review and analyse the results generated in the preceding WPs and employing them to extract recommendations and guidance for the implementation of efficient and robust sustainability standards and certifications.

This report presents the recommendations developed based on the lessons learned and feedback received through workshops, surveys, and direct engagement with end-users of the certification schemes (industrial biobased value chain actors). These activities provided deeper insights into how to promote adoption, build trust, overcome obstacles, and facilitate broader deployment of sustainability CSLs within the biobased industry in the EU. Following this, the report also draws on the development and testing of the BIOBASEDCERT Monitoring Tool on selected CSLs applicable for industrial biobased systems in WP3, as well as the development and testing of the Cost Benefit Analysis (CBA) methodology on three selected biobased value chains in WP4 to assess the feasibility of adopting certification schemes.

The deliverable is structured as follows:

- **Chapter 2** describes the methodology followed to carry out this work, including the process for collecting insights from real-use cases and stakeholder engagement.
- **Chapter 3** presents the key findings from the interaction with end-users, highlighting the main challenges and opportunities identified.
- **Chapter 4** outlines the set of recommendations developed, structured in thematic briefs.
- **Chapter 5** provides the conclusions of the work carried out.

2. Methodology

To gather insights from industrial stakeholders regarding their perspectives on sustainability CSLs, a structured methodology was developed. The methodology combines quantitative and qualitative research techniques to ensure a comprehensive understanding of industry viewpoints.

First, a questionnaire was developed for industrial stakeholders to collect feedback on their perceptions of and experiences with sustainability CSLs. The questionnaire was designed to cover key aspects such as awareness, applicability, benefits, and challenges associated with these certification systems. In addition, the work done in other tasks of the project, most notably Task 5.1, which collated recommendations categorised by stakeholder group, including industrial actors, was used to inform the questionnaire design and guide subsequent interactions with industrial stakeholders.

To maximize outreach and accessibility, the questionnaire was distributed through social media channels, allowing stakeholders to complete it independently at their convenience. This approach facilitated the collection of a broad spectrum of responses from different industry actors.

In addition to the questionnaire, eight one-to-one interviews were conducted with industrial stakeholders. These interviews provided deeper insights into their experiences with sustainability certification schemes, complementing the survey findings. The one-to-one interactions enabled a more detailed exploration of specific concerns, expectations, and suggestions from industry representatives.

Workshops were also organised to gather further input. These workshops allowed for direct engagement with stakeholders, providing a collaborative space to discuss findings of the surveys and interviews conducted with industrial actors, exchange perspectives, and further elaborate on key issues related to sustainability certification. These included topics such as adoption barriers, traceability challenges, and the practical implementation of certification systems identified throughout the project. Two workshops were held. The first one was an in-person workshop that took place in Zaragoza (Spain) in collaboration with the Redol European Project (see Figure 1). The event brought together approximately 30 participants from diverse backgrounds, including industrial stakeholders from the textile, plastics, and construction sectors, as well as waste management professionals and researchers from technical research centres and academia. The objective was to discuss various concerns of industrial stakeholders, including certification schemes and the development of a regional hub.

Figure 1. Workshop held in Zaragoza, in collaboration with Redol project.

The second workshop was organised in collaboration with the STAR4BBS project and was held online. The audience consisted mainly of industrial stakeholders from Italy, as the workshop was promoted through the Italian Chamber of Commerce. Approximately 50 people attended. The goal of this workshop was to inform industrial actors about new and upcoming EU legislation to address greenwashing, and the role BMT could play in this regard. This was followed by a Q&A and discussion with the audience. The agenda for this event is provided in Figure 2.

Navigating the new EU legislations to address greenwashing:

how standards and research projects can support the bio-based industry

Organized by STAR4BBS with the support of SUSTCERT4BIOBASED Project.

Duration: 2 hours (online)
Date and Time: March 25th 2025, 09:00 - 11:00 (CET)

Registration Form: https://www.surveymonkey.com/r/greenwashingtraining

Timings	Title/ Speaker
9.00-9.10	**Welcome and Introduction** *Elena Mocchio - UNI Ente Italiano di Normazione*
9.10-9.35	**Understanding the EU legislation addressing greenwashing: the Empowering Consumers Directive (EU) 2024/825 and the Green Claims Directive** *Margaux Le Gallou - ECOS*
9.35-9.50	**The analysis of bio-based fashion materials towards SCAR spectrometry: a weapon against greenwashing** *Gustavo Adrián Defeo - Convenor CEN TC289 WG2 and WG3*
9.50-10.00	*Q&A session*
10.00-10.25	**BIOBASEDCERT Cluster: Tackling greenwashing through robust and effective sustainability certification for bio-based systems (25 min)** *Luana Ladu and Nikola Matovic – TU Berlin* *Laura Vayrynen - ECOS*
10.25-10.35	*Q&A session*
10.35-10.55	**Panel Discussion and Q&A**
10.55-11.00	**Final remarks**

Figure 2. Agenda of the online workshop, in collaboration with STAR4BBS

The information received through the questionnaire, interviews, and workshops was grouped to identify common themes and trends across different industry sectors. This categorisation allowed for a structured interpretation of the results, highlighting key takeaways and emerging patterns related to perceptions of industrial actors about sustainability certification in biobased industries.

Combining the survey data with qualitative insights from the interviews and workshops ensured a well-rounded assessment of industry perspectives on sustainability CSLs.

3. Results

3.1 Surveys and Interviews

To obtain a better understanding of barriers and opportunities to certification adoption, a survey was conducted among major stakeholders in the biobased industry (see Annex 1 for the full survey questionnaire). The survey gathered opinions from 19 Spanish industry stakeholders across various sectors, including waste management, construction, chemicals, textile, and plastics. It covered topics such as the nature of biobased raw materials used, adoption of sustainability certification schemes, motivations for implementation, challenges encountered, and suggested improvements.

Additionally, eight in-depth interviews were conducted with companies from various sectors including chemicals, textiles, plastics, packaging, and renewable fuels, providing qualitative insights into the aims, challenges, and best practices surrounding CSLs.

It should be noted that although this project is focused on CSLs for industrial biobased systems, it was difficult to get interviews all within this scope. Therefore, also insights from the biofuel/energy sector were considered that similarly utilise sustainability certification for biomass used.

The combined results are detailed in this section, giving an overall picture of the current situation and future improvement potential of certification.

3.1.1 *Biobased raw materials used*

The survey collected information on the type of biobased raw materials used the by companies in their production processes (Figure 3). Half of respondents primarily use dedicated primary raw materials[1]. A quarter reported using primary residues from fields. Nearly 20% of firms utilize secondary residues originating from industrial processes, and 6% use tertiary residues and waste, showing the low degree of integration of end-of-life material recovery in current biobased value chains.

[1] Biological resources that are specifically cultivated or harvested for industrial biobased production, rather than being by-products or residues.

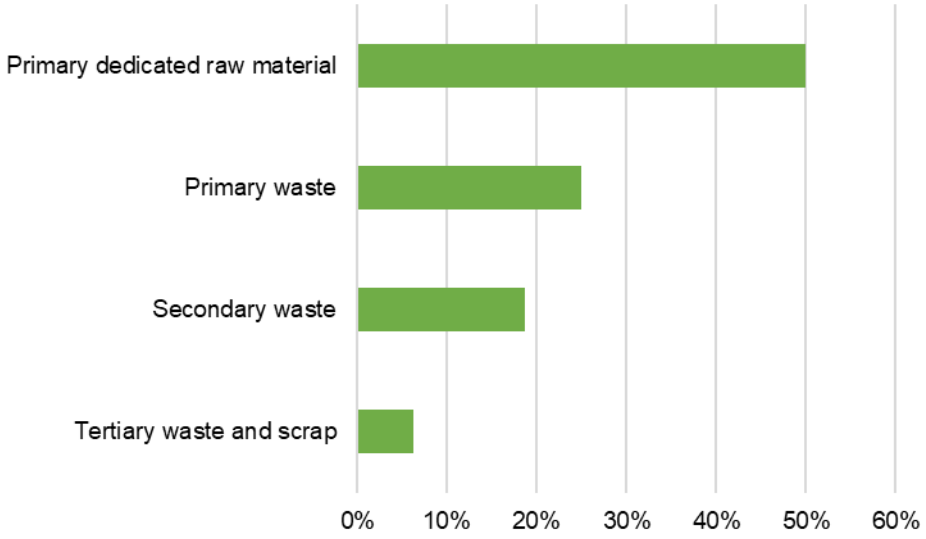

Figure 3. Distribution of raw materials used

These results show that, although most companies are still dependent on primary sources, there is a chance to move towards a circular economy by increasing secondary and tertiary waste utilization. This opportunity was also supported by interviews, where several interviewees stressed that clearer guidelines and stronger incentives are necessary to promote the use of residue or waste-based raw materials.

3.1.2 *Adoption rates of sustainability certifications*

Based on the results of the survey, the use of sustainability certification in the biobased industry is relatively low; only a third of companies have adopted a certification for their biobased products or biomass raw material used.

A possible explanation for why so many companies choose not to adopt certifications is that currently there is no incentive to do so as it is voluntary, and no specific regulation exist regarding sustainability requirements for biobased products. Additionally, some companies utilising primary raw materials already may consider themselves in line with industry standards or other voluntary sustainability commitments, and therefore certification may seem redundant and/or unnecessary. Companies utilising secondary and tertiary residues may not be able to or be interested in certifying these materials due to complex traceability, or they consider these sources already sustainable and do not require verification of it. Thus, the companies might not see CSLs as accessible and/or attractive. Therefore, to facilitate the adoption of sustainability certification schemes, companies across the biobased industry chain should improve traceability practices by collecting more complete and accurate data on the origin and flow of resources.

Interview findings confirm that certification adoption is sector dependent. In highly regulated industries such as bioenergy and biofuels, certification is perceived as necessary for compliance with the Renewable Energy Directive (RED) III and to ensure market access. In contrast, in voluntary sectors for biobased products, certification is used more for marketing and competitive advantage.

3.1.3 *Certification Adoption and Challenges*

Results of the survey indicate that while there is interest in sustainability certification, the level of uptake is low. The prime motivations for applying for certification (see Figure 4) are product

differentiation (25%), improving environmental and social reputation (20%), and new markets (18%). For sectors such as biofuel/energy, compliance with regulation is also a strong incentive. These results affirm a strong market-oriented motivation, with an emphasis on competitive positioning and brand image.

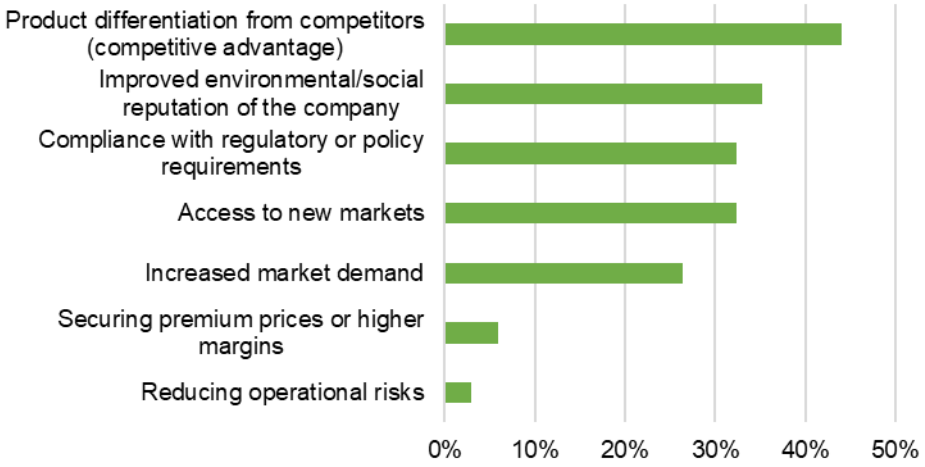

Figure 4. Primary motivations for certification

When asked about the main challenges in adopting sustainability certification schemes for biobased raw materials or products, companies identified some key barriers (Figure 5). The most frequently cited barriers were high certification costs, administrative burden in monitoring and traceability, and lack of harmonisation among certification schemes (all 17%, respectively). In addition, 13% of the respondents mentioned the lack of return on investment. Other issues that were raised included difficulties meeting certification requirements along with lack of market demand for certified products. These challenges suggest that, beyond technical and economic hurdles, there is also a critical need to raise awareness and strengthen market incentives, so that certification is not only feasible, but also perceived as valuable by both producers and consumers.

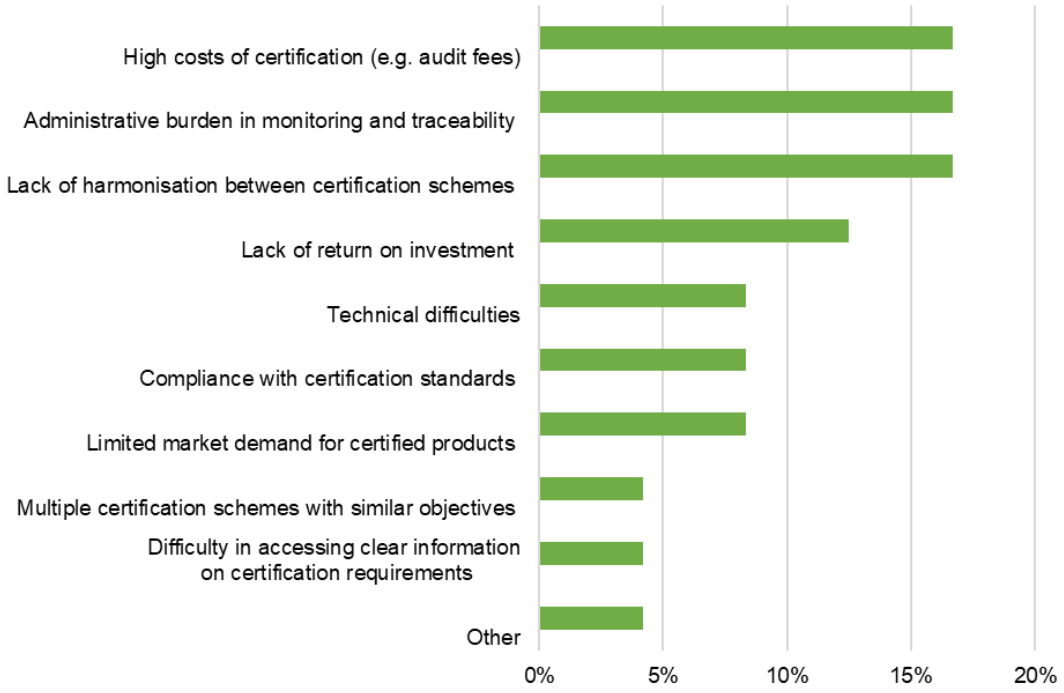

Figure 5. Challenges faced in certification adoption

Interview participants echoed these concerns. High costs, including audit fees, technical system upgrades, and personnel investment, were seen as especially burdensome for small and medium-sized enterprises (SMEs). Administrative complexity was another recurrent theme, particularly in companies with long and multi-tier supply chains.

In addition to adoption barriers, companies also struggle with monitoring compliance against certification requirements. Figure 6 shows the survey results, revealing that 29% of companies incur high costs related to auditing and monitoring and 25% face technical challenges regarding traceability. Other challenges include difficulty in accessing reliable performance data (17%), lack of access to proper digital tools (13%), and difficulties in integrating the new compliance-related systems and processes with their existing production systems (13%).

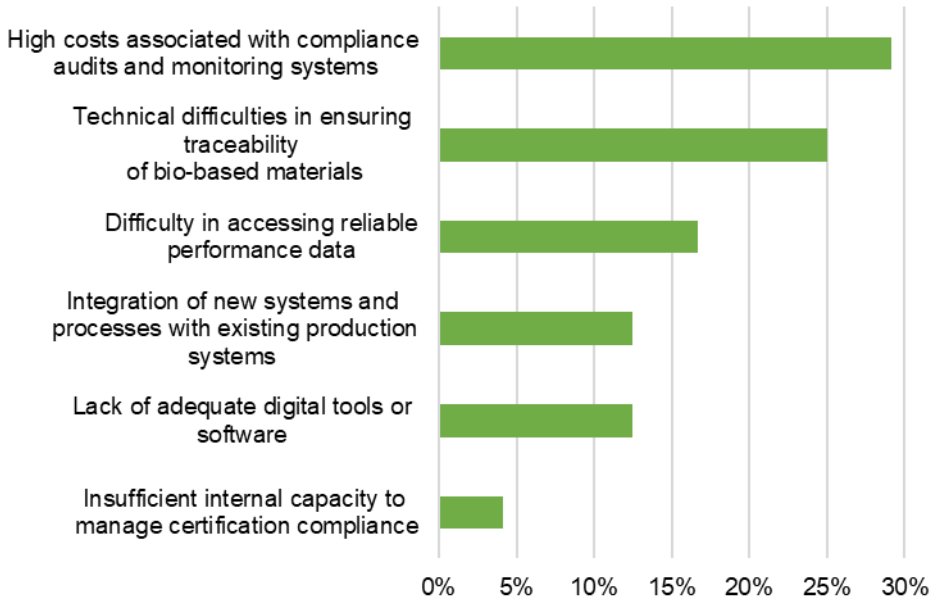

Figure 6. Challenges companies experience in maintaining compliance

Interviews confirmed that assurance practices vary by sector. In regulated industries, third-party audits are structured and frequent. In less regulated sectors, self-verification is common, but this leads to inconsistencies. Several firms still rely on manual or paper-based methods, increasing administrative load and error risk. Interviewees highlighted the need for wider adoption of digital tools to consolidate traceability and automate reporting. These findings highlight the need for targeted improvements to support certification uptake.

3.1.4 *Areas of improvement for CSLs*

In the survey, responders selected from a predefined list of improvement points for CSLs (see Figure 7) . The most selected options were increased market recognition of certified products (23%), simplification of certification procedures (21%), and reducing certification costs or offering financial support (17%). Additionally, more open standards were proposed, meaning publicly available, transparent, and developed through inclusive stakeholder participation. Other proposed improvement points include greater harmonisation of criteria between schemes, and increased collaboration with authorities.

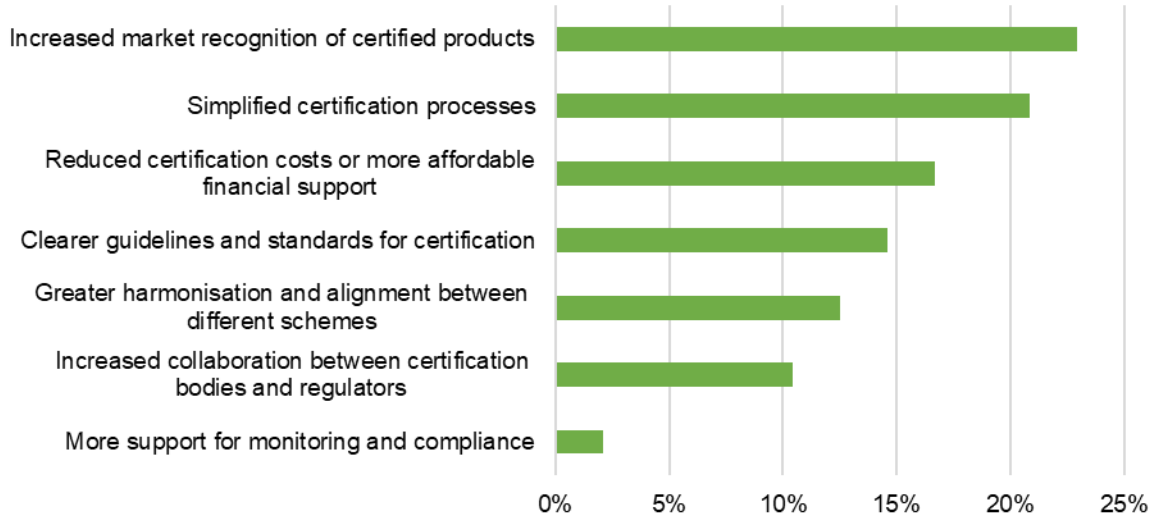

Figure 7. Suggested improvements

These results indicate that the biobased industry requires not only administrative and technical support, but also policy and market signals legitimizing and rewarding sustainability improvements. Interview respondents echoed the results of these surveys in indicating that better communication, simplified procedures, and a less fragmented certification landscape would significantly facilitate certification uptake in the biobased sector.

Specifically, stakeholders emphasised the importance of:

- Developing more cost-effective certification schemes and financing mechanisms.
- Enhancing traceability systems with better digital tools and performance data.
- Promoting harmonisation among sustainability certification schemes.
- Simplifying certification processes to reduce administrative burden.
- Increasing market awareness and demand for certified biobased products.

To address certification expenses, finding funding support programs such as grants or subsidisation programs, and group certification options that allow companies to share audit and compliance costs are crucial. Pursuing phased certification routes could also lower the upfront cost hurdle by allowing companies to meet certification levels progressively.

Simplification of administrative processes is another major potential solution. The application of uniform digital tools for data capture, traceability, and audit would reduce administrative burden. Adoption of common audit processes, where firms can be certified under several certification systems in one go, would further reduce efforts and reduce complexity.

The lack of harmonisation among certification schemes is a key obstacle, and more alignment is a necessity. Mutual recognition agreements between certification systems and developing a shared base of fundamental sustainability criteria would reduce duplicative work and enhance the credibility of certification systems. This would not only simplify adoption but also improve CSL credibility. Moreover, demonstrating a clear return on investment for certified goods is necessary to improve the attractiveness of CSL adoption. The promotion of successful examples and clear evidence of economic and environmental benefits associated with certification can increase perceived value. Enhanced market visibility for certified products through consumer awareness initiatives and purchasing policies would also raise demand, creating a virtuous circle for large-scale adoption.

Finally, tailored technical support and training programs would help firms overcome technical and operational barriers to certification. Pre-certification advisory services and capacity-building training

workshops could ensure that even small business enterprises or new market entrants can readily negotiate certification terms.

3.2 Insights from capacity-building workshops and compliance

In addition to the interviews and surveys conducted in the project, additional information was gained from targeted capacity-building events, including technical workshops, training, and expert presentations. These events focused on regulatory trends, scientific methodologies to validate sustainability claims, and operational practices for enhancing the credibility and integrity of biobased certification schemes. The following subsection identifies the most relevant insights derived from the interactions.

3.2.1 *Regulatory insights: The Green Claims Directive*

The forthcoming EU Green Claims Directive (GCD) aims to combat greenwashing and render voluntary sustainability claims transparent, credible, and verifiable. Among the most important regulatory changes with implications for biobased industrial actors are [1]:

- Ban on generic, imprecise, or unverifiable environmental claims, including those merely based on offsetting (e.g., "climate neutral").
- Third-party independent verification of any environmental claims to consumers.
- Claims substantiation on a lifecycle basis, considering all important environmental impacts.
- More regulation of environmental labelling schemes to promote transparency, inclusiveness, and harmonisation.

These changes can imply significant changes for industrial actors, particularly those using self-declared claims or some certification schemes. It is to be noted that the GCD is still under negotiation, so some details may change.

3.2.2 *Technological insights: SCAR spectrometry for verifying biobased content*

From the technological standpoint, during the online training “Navigating the new EU legislation to address greenwashing: how standards and research projects can support the biobased industry”, presentations highlighted the role of Saturated-Absorption Cavity Ring-Down (SCAR) Spectrometry as an emerging method to verify the renewable carbon content of biobased materials [2]. SCAR allows for direct assessment of fossil versus renewable carbon proportions with the help of isotope analysis. This can enhance traceability and the scientific validation of product sustainability attributes, as well as identify and prevention misleading “eco-friendly” or “plant-based” claims in cases where the content is in fact heavily fossil-based.

Tools such as SCAR can strengthen certification schemes by providing empirical, standardised data on product composition and sustainability performance.

3.2.3 *Certification insights: BIOBASEDCERT Monitoring Tool (BMT)*

The BIOBASEDCERT Monitoring Tool (BMT) is a comprehensive framework for assessing the robustness, comprehensiveness, and effectiveness of certification systems developed by the BIOBASEDCERT cluster of which SUSTCERT4BIOBASED is a part of. A full description of the tool’s methodology and application is available in Deliverable D3.3 of the SUSTCERT4BIOBASED project [3]. It evaluates CSLs on three interconnected levels:

- System level: governance structures, standard-setting processes, assurance mechanisms, traceability policies.

- Content level: environmental, circularity, social, and economic sustainability requirements CSLs set for operators seeking certification.
- Outcome level: assessing the on-the-ground impact and the monitoring of impact of certification schemes.

The tool promotes harmonisation and transparency, supporting certification scheme owners and industry actors in identifying areas of improvement.

4. Summary of insights

This chapter consolidates the insights gathered throughout Task 5.4, with a specific focus on industrial biobased value chain actors. It draws on findings from stakeholder surveys, interviews, and workshops to provide a strategic perspective on how to enhance the adoption and impact of sustainability certification schemes in this sector. In addition, this synthesis builds upon the outcomes of Task 5.1, which identified industrial stakeholders as a key target group and structured a comprehensive set of recommendations derived from previous project deliverables accordingly.

4.1 Key observations

Across industrial biobased sectors, the adoption of sustainability certifications remains uneven. In the absence of binding regulatory requirements specifically targeting biobased products, many companies—particularly in packaging, textiles, and plastics—view certification primarily as a marketing tool or means of product differentiation, rather than a compliance necessity.

Many companies, particularly SMEs, cite cost and uncertainty of return on investment as key disincentives to certification. Traceability and monitoring requirements are especially challenging for businesses with multi-tier or international supply chains, as they frequently lack digital infrastructure to support such processes cost-effectively.

Data transparency is another critical issue. Many certification bodies provide limited publicly available data on certified production volumes or sectoral distribution. Without better data systems and transparency, stakeholders struggle to evaluate certification impact or identify improvement areas.

Finally, upcoming EU regulatory developments—such as the Green Claims Directive—will increase expectations for substantiated, evidence-based sustainability claims. For industrial actors, this represents both a challenge and an opportunity to align their certification strategies with robust, science-based frameworks.

4.2 Strategic Recommendations for Industrial Biobased Value Chain Actors

Based on the findings from stakeholder surveys, interviews, and workshops, this section presents a consolidated set of recommendations to support more widespread, effective, and credible adoption of sustainability certification schemes and labels (CSLs) across the biobased industry. These findings were further reinforced by previous project work, particularly the outcomes of Task 5.1, which collected and analysed a comprehensive set of recommendations derived from earlier project deliverables and stakeholder consultations [3]. These proposals aim to tackle key regulatory, operational, and market-related challenges identified during the project:

1. **Anticipate Regulatory Developments and Strengthen Sustainability Communication**

   Industrial actors should prepare for stricter regulatory oversight—such as the forthcoming EU Green Claims Directive—by aligning their sustainability communication with emerging transparency, substantiation, and verification requirements. Ensuring that claims are evidence-based and verifiable will help mitigate compliance risks and improve market access.

2. **Integrate Circularity and Full Sustainability Dimensions**

   Companies are encouraged to expand their sustainability practices to include circularity, end-of-life management, and cascading uses of biomass, alongside environmental and social metrics. This may involve adopting traceability systems that account for recycled or secondary raw

materials, improving waste valorisation, and demonstrating circular practices in certification processes.

3. **Strengthen Traceability, Verification, and Digital Monitoring**

Investing in digital traceability and monitoring tools will help companies prepare for future requirements for evidence-based sustainability claims, particularly in light of upcoming initiatives such as the Green Claims Directive, which—while not mandatory for all biobased products yet—signal a move toward stricter expectations.

4. **Align with Harmonised Standards and Metrics**

Where possible, companies should adopt certification schemes that align with harmonised EU definitions and metrics, to ensure consistency across markets and reduce audit duplication. Participation in sectoral or industry initiatives aimed at standardising sustainability criteria can also simplify compliance for businesses operating across multiple regions.

5. **Improve Usability and Practicality of Certification Adoption**

To reduce barriers to adoption, companies can explore phased certification routes, group certification schemes, or simplified processes offered by certain certification systems. Engaging in dialogue with certification bodies about practical implementation challenges can help improve scheme usability without compromising rigour.

6. **Enhance Market Visibility and Consumer Awareness**

Industrial stakeholders should actively promote the value of certified products in their communication and marketing strategies, helping to build market recognition and consumer trust. Participation in awareness-raising campaigns, labelling initiatives, and partnerships with downstream users can increase the market pull for certified biobased goods.

7. **Encourage Public Disclosure and Transparency**

Greater transparency on certified volumes, geographical coverage, and sustainability impacts would enhance trust among stakeholders and enable more informed policy, procurement, and investment decisions. Public disclosure also helps identify gaps, benchmark performance, and increase accountability within certification systems.

8. **Facilitate Certification by Seeking Targeted Support and Funding Opportunities**

Small and medium-sized enterprises often lack the internal capacity to manage complex certification processes. Companies are encouraged to actively seek available support mechanisms, including advisory services, pre-certification coaching, simplified procedures, and dedicated funding instruments, to lower adoption barriers and facilitate their participation in sustainability certification schemes.

9. **Localise Certification Strategies and Source Sustainably**

Where feasible, companies are encouraged to source raw materials locally and adapt certification strategies to regional contexts. This can improve traceability, support local economies, and enhance sustainability performance by reducing supply chain distances and associated environmental impacts.

10. **Invest in Innovation and R&D to Close Biobased Gaps**

In sectors with low levels of biobased innovation, companies are encouraged to direct resources towards research and technological development. This includes the exploration of alternative feedstocks, development of novel processing technologies, and design of sustainable products and packaging alternatives.

11. Internalise Externalities and Broaden Certification Impact Assessment

Businesses should work towards integrating environmental and social externalities into decision-making frameworks. This involves supporting certification schemes that incorporate impact valuation and participating in research or pilot initiatives to improve cost-benefit analysis of certification adoption.

5. Conclusions

The conclusions and results presented in this deliverable reflect a complex and evolving environment in which sustainability certification of biobased products plays an essential role. Certification schemes are increasingly recognised as central tools for enhancing market differentiation and, in some sectors like bioenergy, for meeting regulatory compliance requirements. For most biobased products, certification remains voluntary but increasingly encouraged by policy and market trends.

Industrial stakeholders continue to face significant technical and operational barriers, particularly related to traceability, monitoring, and the challenge of aligning with multiple certification schemes. SMEs in particular are disproportionately impacted by certification costs and uncertainty around return on investment, which limits wider adoption.

At the same time, emerging regulatory developments, such as the EU Green Claims Directive, present both a challenge and an opportunity for industry actors. These developments are expected to raise the bar for evidence-based sustainability claims, pushing companies to strengthen their alignment with harmonised, science-based certification frameworks.

To address these challenges, this deliverable recommends that industrial actors prioritise investment in traceability and digital monitoring systems, adopt certification schemes that are aligned with harmonised metrics, streamline certification processes through group and phased models, and actively promote certified products to stimulate market demand.

By addressing technical, administrative, and market-related barriers, EU biobased industries can not only improve their sustainability credentials and supply chain transparency but also position themselves competitively in a regulatory environment where expectations for robust, verifiable sustainability claims are increasing, even though specific legal obligations for biobased products are still under development.

6. References

1. DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Substantiation and Communication of Explicit Environmental Claims (Green Claims Directive).
2. Mocchio, E.; De Feo, G.; Le Gallou, M.; Väyrynen, L. Navigating the New EU Legislations to Address Greenwashing: How Standards and Research Projects Can Support the Bio-Based Industry Available online: https://star4bbs.eu/2025/04/04/recording-and-slides-of-the-25th-of-march-2025-on-addressing-greenwashing/ (accessed on 22 May 2025).
3. SUSTCERT4BIOBASED Deliverables Available online: https://sustcert4biobased.eu/resources/deliverables/ (accessed on 22 May 2025).

7. Annex

Annex 1

Interview in the framework of the Suscert4biobased Project:

Company:

Sector:

1. What type of biobased raw material does your company mainly use in its production processes?

☐ Raw materials ☐ Secondary waste

☐ Primary waste ☐ Tertiary waste and scrap

☐ Other (please specify)

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2. Has your company adopted any sustainability certification schemes for bio-based products or bio-based raw materials?

☐ Yes ☐ No

If you have it, please specify.

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3. What are the main reasons why your company would consider implementing sustainability certification schemes for its products or raw materials? (Please select all that apply)

☐ Increased market demand ☐ Access to new markets

☐ Improving the company's environmental/social reputation ☐ Product differentiation compared to the competition (competitive advantage)

☐ Ensure premium pricing or higher margins ☐ Reducing operational risks

☐ Compliance with regulatory or policy requirements ☐ Other (please specify)

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4. Do you use any tools (internal monitoring systems, third party audits, digital traceability tools, ...)?

- ☐ Yes ☐ No

If you have it, please specify.

---

5. What are the main challenges that your company has faced in adopting sustainability certification schemes for bio-based products or raw materials? (Select all that apply)

☐ High certification costs (e.g. audit fees)

☐ Compliance with certification standards

☐ Administrative workload in monitoring and traceability

☐ Lack of harmonisation between certification schemes

☐ Difficulty in accessing clear information on certification requirements

☐ Lack of return on investment

☐ Technical difficulties

☐ Multiple certification schemes with similar objectives

☐ Limited market demand for certified products

☐ Other (please specify)

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6. What challenges has your company encountered in monitoring and ensuring ongoing compliance with sustainability certification requirements? (Select all that apply)

☐ High costs associated with compliance audits and monitoring systems

☐ Lack of appropriate digital tools or software

☐ Difficulty in accessing reliable performance data

☐ Other (please specify)

☐ Technical difficulties in ensuring traceability of bio-based materials

☐ Insufficient internal capacity to manage certification compliance

☐ Integration of new systems and processes with existing production systems

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7. What improvements would you like to see in certification schemes to make them easier to adopt and more effective? (Select all that apply)

☐ Greater harmonisation and alignment between different schemes

☐ Reduced certification costs or more affordable financial support

☐ Increased recognition of certified products on the market

☐ Increased collaboration between certification bodies and regulators

☐ Clearer guidelines and standards for certification

☐ More support for monitoring and enforcement

☐ Simplified certification processes

☐ Other (please specify)

About SUSTCERT4BIOBASED

SUSTCERT4BIOBASED is an EU funded (Horizon Europe) project aiming at defining and promoting the adoption of effective and robust sustainability certification schemes and business-to-business labels for industrial biobased systems to support tracing the sustainability (environmental, social, economic) of biobased products along the value chains and trades within the EU and globally for responsible production and consumption. This objective is realised by the development of a monitoring system, mapping of the current situation in global trade flows of biological resources and biobased products, and feasibility assessment from the adoption of certification schemes and labels considering actual economic as well as internalized environmental and social costs and benefits. The results of the project are leveraged to provide recommendations to four key target groups: policy makers, sustainability system community, industrial biobased value chain actors, and regional bioeconomy stakeholders. These ambitions are addressed by a strong, well-balanced and multi-disciplinary consortium comprised of 5 complementary partners. SUSTCERT4BIOBASED thereby supports the development of harmonized system requirements, continuous improvement of sustainability certification schemes and labels and contributes towards establishing a circular, climate-neutral and sustainable biobased industry.

PARTNERS

Stichting Wageningen Research (WR)
www.wur.nl

Fundacion Circe Centro de Investigacion de Recursos y Consumos Energeticos (CIRCE)
www.fcirce.es

White Research SRL (WHITE)
white-research.eu

Environmental Coalition on Standards (ECOS)
www.ecostandard.org

Control Union Certifications Germany GmbH (CU)
www.controlunion-germany.com

CONTACT US

info@sustcert4biobased.eu

Sustcert4biobased
@SUSTCERT4BIO
SUSTCERT4BIOBASED
SUSTCERT4BIOBASED

VISIT

www.sustcert4biobased.eu