BIOBASEDCERT

Final Policy Brief

of the BIOBASEDCERT Project Cluster

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• *D7.9 (STAR4BBS)*	Star4bbs
• *D5.3 (SUSTCERT4BIOBASED)*	SUST CERT 4BIOBASED SUSTAINABILITY CERTIFICATION FOR BIOBASED SYSTEMS

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1. Key Messages

- **Addressing Policy Fragmentation:** Establish cohesive and sector-specific sustainability targets across the EU bioeconomy to resolve fragmentation and accelerate circular economy measures, particularly in product design.
- **Setting Clear Sustainability Goals:** Ensure sustainable transition to the bio-based economy, define comprehensive sustainability ambitions for bio-based materials and products with consideration of environmental, circularity, social, and economic criteria, with alignment in terms of sustainability requirements across different uses of biological resources to ensure a level playing field.
- **Tracking Trade Flows:** Develop robust mechanisms for the systematic monitoring of trade flows of bio-based materials and products, emphasising the importance of tracking certification levels.
- **Assessing Certification Performance:** Leverage innovative tools like the BIOBASEDCERT Monitoring Tool (BMT) to evaluate the effectiveness, comprehensiveness, and robustness of sustainability certification schemes and labels (CSLs).
- **Enhancing Certification Schemes:** Improve coherence of policy targets that can create a clear direction for CSLs and strengthen support infrastructure for their effective implementation.
- **Understanding Certification Costs and Benefits:** Prioritise research initiatives to quantify the costs and benefits of certification including internalising of externalities, offering actionable insights for stakeholders across the industry.
- **Fostering Collaborative Dialogue:** Promote continuous cross-sector discussions among CSLs owners, policymakers, and industry leaders to drive innovation, harmonisation, and long-term sustainability improvements.

2. Introduction

Sustainability certification schemes and labels (CSLs) play an important role in verifying and promoting the environmental, social, and economic sustainability of bio-based value chains. Their relevance is amplified by the intricate and international nature of these value chains, which often involve numerous intermediate products and stakeholders. The Mid-term Policy Brief of the BIOBASEDCERT Cluster highlighted the lack of harmonisation between CSLs for biological resources, bio-based materials, and products in EU markets. This lack of harmonisation and monitoring has resulted in knowledge gaps and uncertainties. The Mid-term Policy Brief emphasised the need for regulatory anchorage for CSLs, with appropriate guidelines to manage their uptake in line with EU policy priorities and international sustainable development ambitions. It also provided initial policy recommendations to promote the market uptake of certified bio-based products. These recommendations include defining sustainability ambitions for bio-based materials and products, setting concrete sustainability targets and strategies, clarifying future legislative requirements, ensuring coherence of sustainability requirements across different uses of biological resources and sectors, and supporting collaborative debate across CSLs for continuous improvement. This Final Policy Brief builds upon those initial recommendations and the cluster findings with the aim of enhancing the robustness[1] and effectiveness[2] of CSLs within the EU bioeconomy.

2.1 Objectives of the BIOBASEDCERT Cluster

The projects HARMONITOR[3], STAR4BBS[4] and SUSTCERT4BIO-BASED[5], awarded with Horizon Europe grants under the call ZEROPOLLUTION-01-07[6] form the BIOBASEDCERT cluster. The cluster aims to contribute to assessing the current state of sustainability certification, further the evolution of CSLs and support the goals of the EU Green Deal through four overarching objectives:

(i) Develop and test the BIOBASEDCERT Monitoring Tool (BMT) for assessing the robustness, comprehensiveness and effectiveness of CSLs for industrial biobased systems.
(ii) Provide quantitative, transparent data on bio-based value chains through the analysis of trade flows (certified and non-certified).
(iii) Quantify the direct and indirect costs and benefits of certification.
(iv) Involve relevant stakeholders, including scheme owners, policymakers, and industry, to co-create the BMT and set up a collaborative Roundtable Platform to promote continuous improvement and harmonisation of CSLs in the bio-based sector beyond the project timeline.

2.2 Fragmentation of EU Bioeconomy Policies

EU bioeconomy policies remain fragmented due to their independent development across sectors.[7] While numerous policies[8] address sustainability priorities aligned with key bioeconomy risks, there is a notable scarcity of sector-specific targets, particularly outside the energy domain. Additionally, delays in the implementation of circular economy measures, particularly in product design, have limited the impact of EU and Member State initiatives on industry practices.[9]

2.3 Role and Challenges of Certification Schemes in Addressing Policy Gaps

In specific areas of the EU bioeconomy, CSLs are utilised to support compliance with clearly defined policy requirements, with their application being predominantly policy-driven. For example, CSLs can be leveraged within due diligence systems to support EUDR alignment.[10] Conversely, in other sectors, certification is largely industry-driven, aimed at substantiating particular sustainability attributes of biobased products. For these sectors, CSLs hold the potential to address policy gaps. They have the capability to evolve more rapidly than formal regulations, adapting in response to advancements in science, technology, and the evolving perspectives and needs of stakeholders. As a result, CSLs can effectively guide operators toward sustainability across value chains and introduce novel sustainability frameworks that extend beyond existing legal stipulations. However, despite their advantages, CSLs face challenges such as their proliferation with diversity of scope and assurance models, which, together with insufficient oversight, undermine their reliability. In response to these challenges, the Cluster has developed the BMT to provide coherence and clarity for policymakers and support the continuous improvement of CSLs.

3. Cluster Findings

The BIOBASEDCERT Cluster has undertaken a detailed examination of key aspects influencing the bio-based sector, ranging from trade flow analysis to the assessment of CSLs and the costs and benefits of certification. This section elaborates on the major insights and observations derived from these efforts, shedding light on the challenges and opportunities in the EU bioeconomy landscape.

3.1 Trade Flow Analysis

The EU is a significant trader of bio-based products and resources, both within and outside the Union. However, there is limited information regarding the trade flows of bio-based products and the extent of their certification. This results in an insufficient understanding of the current state of the EU bioeconomy market and the role CSLs play in it.

Trade Volumes of Bio-Based Products

In 2021, the largest categories of bio-based value chain trade were biological resources and wooden products. The volume of intra-EU trade was higher than extra-EU imports and extra-EU exports combined. However, data on the trade volumes of bio-based value chains remains insufficient; there are challenges associated with

the accuracy and completeness of trade data, especially due to niche bio-based markets and inconsistencies in trade reporting between countries.

Certification Rates of Bio-Based Trade Flows

The BIOBASEDCERT projects aimed to find data on the certification rate of traded bio-based products at the global and regional level, which proved challenging. Available information indicated that certification levels are relatively high for palm oil products and wood in Europe, but lower for sugar and sugarcane.

Generally, certification schemes only publish lists of companies with valid or withdrawn certificates. Data on the volume of certified production, certified area and certified trade flows of the companies with a valid certification scheme is not easily accessible. There is no regular, aggregated monitoring of certified production and trade for bio-based production at a regional market level and/or sector level that is organised according to procedures of statistics like Eurostat or FAOSTAT. Additionally, many CSLs do not publish data on the topic and certification accounting lacks clarity. Compounding this lack of data is the fact that EU trade authorities do not systematically record whether imported goods carry sustainability certification. Further efforts are needed to calculate and monitor the proportion of certified products in the bio-based market.

3.2 Assessment of Relevant Certification Schemes and Labels

Prior to the development of the BMT, an extensive review of existing guidelines, assessment tools, benchmarks, and evaluations related to sustainability CSLs was conducted. They differed significantly concerning results visualisations, evaluation structures and scoring and weighting methodologies. Alongside the review of existing assessment and benchmarking tools, the BIOBASEDCERT projects conducted a comprehensive review of dozens of CSLs relevant to biological resources and bio-based products. This assessment encompassed aspects such as governance, scope, and coverage of sustainability topics. The assessment showed that CSLs differ considerably, particularly concerning how they are governed, the sustainability performance they require, and how they verify compliance with those requirements (assurance rules).

The review showed that CSLs make plenty of information on their systems publicly available; however, some information is more easily accessible than others. Assurance rules, for example, are generally disclosed in a clear and accessible manner, while information on how the system is governed (governance structure, composition, financial information, dispute resolution system, sustainability objectives, etc.) was often dispersed and required more time to find.

Based on the review, it was found that CSLs prioritise transparency, credibility, and accountability within their certification processes. Differences exist in the scope of assurance requirements and the accreditation/oversight processes for certification bodies and auditors. Land tenure and other legality requirements are not always subject to systematic verification. Some CSLs lack robust auditing protocols, risk-based approaches, and comprehensive monitoring, evaluation and learning frameworks. Nonetheless, impartiality in auditing is generally well-established across the assessed schemes. Many CSLs have already incorporated measures for transparency, stakeholder consultation, and adherence to recognised international conventions and treaties, demonstrating a foundational commitment to global sustainability norms.

The scope of different CSLs vary significantly (applicable feedstock, product groups, value chain actors and sustainability topics). In terms of their sustainability requirements, it was found that CSLs place considerable emphasis on environmental sustainability, with requirements aimed at sustainable land use, safeguarding biodiversity values as well as improving soil, water, and air quality. In addition, CSLs generally include social sustainability criteria addressing human and labour rights issues, such as child and forced labour, and healthy and safe working conditions. Other social aspects, such as employer-provided housing and the needs of rural,

local, and Indigenous communities, were not as prevalent. Requirements related to climate change adaptation were also not widely present, and neither were those related to circularity and economic dimensions.

3.3 Cost and Benefit Analysis

Measuring the feasibility of CSL adoption is crucial to adequately inform policymaking. This analysis must encompass not only economic implications but also environmental and social impacts, which are inherently more challenging to quantify. Significant knowledge gaps exist regarding the costs and benefits of specific CSLs across various sectors, products, and lifecycle stages. Addressing these gaps is essential for achieving a comprehensive understanding of the overall feasibility of certification.

Assessing Costs and Benefits of CSLs

The BIOBASEDCERT cluster sought to evaluate the feasibility of CSLs through cost-benefit analyses that incorporated externalities. Costs associated with certification vary considerably depending on the CSL, the company seeking certification, and its geographic region. Similarly, the benefits of certification fluctuate based on local contexts, standard stringency, and the patterns of certification adoption. Despite the initial costs, long-term benefits such as increased market access and improved sustainability outcomes can outweigh these expenditures.

Understanding Externalities

Externalities — positive or negative consequences of economic activities — remain critical to cost-benefit analyses. Internalising these externalities ensures that related costs and benefits are reflected in pricing mechanisms, a prerequisite for sustainable economic models. However, current methodologies rarely account comprehensively for externalities. Although several studies identify impacts of certification, very few quantitatively assess these effects.

Conducting cost-benefit analyses that account for externalities poses significant challenges. Data availability is limited, and obtaining robust information from companies is often complicated by the sensitive nature of economic data and a general reluctance to share it. Moreover, many companies do not collect this type of information systematically. These issues were examined in the BIOBASEDCERT projects, but the data scarcity problem persists, complicating future efforts to evaluate certification impacts.

Further research is required to improve cost-benefit analysis, particularly in internalising externalities and addressing the social impacts of certification. Potential solutions include ensuring anonymity in data collection, fostering trust among stakeholders, and exploring alternative methods for gathering information. CSLs could play a pivotal role in anonymising data and presenting transparent results through tools like the BMT.

Contextual Feasibility of CSLs

While CSLs can improve efficiency, market access, and sustainability outcomes, their impact varies significantly depending on contextual factors. Feasibility hinges on market conditions, environmental considerations, governance structures and policy support. Successful CSLs are typically backed by strong market demand, cost-effective implementation strategies, and regulatory incentives. However, the persistent challenge of data collection underscores the need for more refined CSL performance monitoring systems and processes.

3.4 BIOBASEDCERT Monitoring Tool (BMT)

Purpose and Target Audience

The BMT was developed by the BIOBASEDCERT Cluster to address challenges such as confusion, divergence, and mistrust among stakeholders by creating a harmonised, overarching monitoring system. The tool provides

coherence and clarity for policymakers while supporting the continuous improvement of CSLs. The BMT is intended to benefit various stakeholders, including EU policymakers, CSL owners, industry, civil society organisations, and researchers. For EU policymakers, the tool offers insights into the credibility and robustness of existing CSLs across markets, assesses how these CSLs contribute to EU sustainability priorities for the bioeconomy, and identifies CSLs that could fulfil regulatory requirements similar to RED III. For CSL owners, the BMT can support and incentivises them to improve their systems by identifying potential areas for improvement. The BMT could also facilitate the harmonisation of CSLs in terms of shared sustainability and governance criteria. Furthermore, the BMT is publicly accessible, enhancing its utility for groups such as civil society organisations and researchers. Its development included collecting stakeholder feedback through online workshops and in-person consultations. The tool aims not to compare CSLs but to conduct individual assessments, highlighting opportunities for CSL owners to enhance the ambition levels of their schemes. During the development process, two rounds of testing were conducted on in total nine CSLs, including seven certification schemes and two ISO 14024-compliant (Type I) ecolabels in close collaboration with associated CSL owners. These tests aimed to refine the tool's applicability, usability, and clarity while analysing the coverage of its requirements and deriving targeted recommendations for CSLs. The findings and recommendations were shared with the participating CSLs to encourage improvements in future standard revisions.

Description of the BMT Levels

The BMT comprises three distinct levels. Each BIOBASEDCERT project led the development of one of the levels: System Level (STAR4BBS), Content Level (SUSTCERT4BIOBASED), and Outcome Level (HARMONITOR). These levels assess the robustness, comprehensiveness and effectiveness of CSLs.

System Level

The System Level focuses on operational and procedural aspects of CSLs. It addresses four key categories: scheme governance and management, standard-setting, assurance, and traceability and claims. This level captures how a scheme is managed, evaluates the transparency and inclusivity of its standard-setting processes, assesses the reliability and independence of its assurance mechanisms, and examines the robustness of traceability and claims. Testing of this level revealed diverse practices among the assessed CSLs, with many demonstrating mature governance and assurance frameworks. However, differences were noted in transparency, stakeholder input, and documentation of traceability and claims. Ecolabels often relied on external certifications for assurance, limiting internal procedural details available for assessment. Recommendations included formalising multi-stakeholder participation, strengthening oversight mechanisms, and enhancing traceability and claim verification procedures.

Content Level

The Content Level assesses sustainability criteria under four overarching categories/dimensions: environment, circularity, social, and economic. Requirements are classified into mandatory, basic, and advanced levels. Mandatory requirements are those requirements expected to be covered currently by existing, credible schemes. They align with current legislation and established sustainability protocols, while basic requirements provide more prescriptive details, and advanced requirements are aspirational goals for continuous improvement. Applicable feedstocks and value chains actors are defined for each requirement to ensure the assessment remains relevant for the scope of each CSL. A significant challenge in designing this level was accommodating both sustainability certification schemes and ISO 14024-compliant ecolabels, which differ in scope and requirement phrasing. Ecolabels mostly refer to third-party sustainability certifications like RSPO, FSC, and Bonsucro to ensure the sustainable sourcing of biomass. Social and economic aspects, other than

consumer wellbeing, are generally outside the scope of ecolabels. Testing revealed high coverage of mandatory requirements among CSLs. The coverage of basic requirements varied significantly between the different CSLs, while most advanced requirements were found to be scarcely covered, as expected. Tested CSLs demonstrated strong coverage in Environmental and Social dimensions but had less focus on Circularity and Economic aspects. Recommendations for the Environmental dimension include more explicit requirements on GHG emission reporting, renewable energy use and energy use efficiency. For the Social dimension, it is advised to more explicitly address fair contract practices, the provision of social security benefits, and maternity leave. Regarding the Circularity dimension, it is recommended to include requirements beyond waste management, such as reuse or recycling of residual flows, resource efficiency, and, for bio-based end products, designing products for high-quality recyclability and incorporating product-life extension strategies. For the Economic dimension, CSLs are advised to implement more specific requirements on business plans and economic risk management.

Outcome Level

The Outcome Level assesses the effectiveness of a scheme's requirements and outcomes based on provided data and evidence from literature. This involves benchmarking, interviews with CSL owners, and structured analysis to evaluate whether CSLs yield positive, neutral, or negative impacts. Indicators were adapted to each CSL type (certification schemes or ecolabels), ensuring fair and relevant comparison. Testing revealed varied coverage of outcome-level indicators and impact monitoring practices. While CSLs generally strive for continuous improvement through standard updates informed by certificate holder performance, stakeholder input, and evolving policy priorities, ecolabels focus on hotspot analyses to target areas with the highest potential for environmental gains. Increasing attention is being paid to outcome monitoring, particularly regarding greenhouse gas emissions in supply chains, with some schemes integrating data verification into audit procedures. However, many CSLs report performance indicators (e.g. number of certified operators) rather than measurable sustainability outcomes. Data availability remains a key barrier, with single-crop or long-established schemes reporting more detailed progress than multi-crop schemes and ecolabels because of greater complexity and data gaps. Confidentiality concerns often limit analytical depth, especially in areas with few certificate holders. Regular evaluation of long-term sustainability impacts also remains limited. Independent studies are typically restricted to specific commodities and geographical areas or larger, more established schemes. Recommendations include investing in digital infrastructure, strengthening data-sharing mechanisms, and collaborating with research institutions and NGOs to enhance the measurement and communication of sustainability impacts.

3.5 Collaborative Roundtable Platform for Certification Schemes

The diversity of bioeconomy sectors, coupled with the crucial role of CSLs in supporting policy targets and addressing varying market and stakeholder demands, underscores the importance of close collaboration and continuous exchange among CSLs, policymakers, and other relevant stakeholder groups. Effective development and implementation of CSLs across the EU bioeconomy require such comprehensive engagement. To facilitate this collaboration, the BIOBASEDCERT cluster established a dedicated Roundtable Platform for CSLs and other relevant stakeholders. This Platform served as a forum for discussing proposed assessment tools, criteria, and indicators, as well as providing feedback and input on the BMT. Relevant trends and pertinent topics within the bio-based industries and sustainability certification domains were also explored. The Platform provided an informal structure for discussions on the design, market application, and adoption of CSLs.

Structure and Activities

The Platform incorporated approximately twelve certification schemes alongside various certification bodies and other entities. It hosted several meetings, each focused on a specific topic of interest, as determined by the inputs of the Roundtable participants. Key sessions included discussions on emerging trends in policies and industries relevant to CSLs, as well as an in-person event with representatives from DG GROW, DG RTD, DG ENV, and DG CLIMA. These sessions explored the role of certification in future policy frameworks.

Achievements and Way Forward

The successful establishment of the collaborative Platform for CSLs received widespread recognition from the Roundtable members, who expressed strong support for its continuation beyond the conclusion of the BIOBASEDCERT projects. Currently, various options and concepts for extending the Roundtable, including a co-ownership model for CSLs, are under discussion among members. The development of this collaborative Roundtable Platform has proven instrumental in fostering dialogue and cooperation among stakeholders, ensuring the effective implementation of CSLs in the bio-based sectors. Moving forward, its continuation represents a promising opportunity to further strengthen policy and market integration within sustainability certification frameworks.

4. Final Policy Recommendations

The Bio-Based Industry

I. The bio-based economy should not be assumed to be inherently sustainable. Comprehensive evaluations of the sustainability of bio-based products must include environmental, circularity and social and economic considerations, akin to assessments conducted for fossil-based products. Furthermore, robust and equitable methodologies are essential to facilitate comparisons between bio-based products and their fossil-based counterparts (e.g., EN 18027).
II. Policy efforts should focus on scaling up bio-based production within industries, such as chemicals, textiles, plastics, and construction, where bio-based options already have gained momentum.
III. Compared to production-based accounting, consumption-based accounting of the EU bioeconomy indicates higher GHG emissions, land use and water use. This indicates that the EU bioeconomy relies on imports and causes impacts elsewhere. To ensure a sustainable EU bioeconomy, more efforts to address impacts outside the EU are needed. Consequently, strategies aimed at fostering a sustainable global bioeconomy must prioritise addressing these externalities.

Certification Schemes and Labels

I. CSLs exhibit significant variability in scope, purpose, ambition, and implementation. This calls for harmonisation in legislative frameworks, guidelines, and defined policy objectives tailored to the bioeconomy to provide a clear direction for CSLs.
II. The implications of EU sustainability policies are not confined within the EU. This needs to be acknowledged and considered in the legislative process of developing regulatory frameworks relevant to CSLs.
III. Policymakers should encourage scientific studies and third-party impact assessments to produce independent results on the effectiveness of CSLs and enhance their credibility.
IV. Integrating certification requirements into procurement criteria has demonstrated efficacy in creating market incentives for producers. If incorporating certifications into public procurement, policymakers must ensure the recognised CSLs are robust, credible, and impactful.

V. Supporting the development of standardised metrics for sustainability, including external costs and benefits such as greenhouse gas emissions, water use, and social impacts is vital for improving transparency and accountability.

Sustainable Bio-Based Value Chains

I. Certain sectors, like the timber industry, stand to benefit significantly from the expanded use of locally sourced feedstocks. Such practices not only promote sustainable development but also stimulate local economies, create employment opportunities, and enable better regulation and oversight.
II. Engaging the waste management sector is integral to the bio-based economy transition. Improved collaboration and integration of bio-based products into waste collection, separation, recycling, and composting systems aligned with their end-of-life options are imperative.
III. Studies have identified high potential for advancing sustainable development in EU value chains utilising biomass residues. Examples include mulch film from organic waste, prefabricated buildings from wood and wheat straw, and adhesives derived from tall oil. Policy interventions are essential to foster innovation and scalability within these domains.
IV. Policy strategies should focus on alleviating supply chain complexities, addressing feedstock availability issues, and supporting the technological development of conversion processes, especially in sectors and regions grappling with demand surpassing production capabilities.

BIOBASEDCERT Monitoring Tool

I. The BMT provides a framework to assess the robustness, comprehensiveness, and effectiveness of CSLs for bio-based products in an environment where many actors are overwhelmed by the number of certification schemes and labels. The adoption of the BMT by the European Commission would help drive much needed transparency and direction.
II. The BMT can also serve as a resource for tracking CSL alignment with EU bioeconomy policy goals. The BMT could even be used as a mechanism to recognise certification schemes and labels that meet certain sustainability criteria.
III. If utilising the BMT for policy support or as a co-regulation mechanism, it is essential to account for differences in scopes of CSLs, such as applicable value chain actors, feedstock, and sustainability principles, to ensure fair and accurate assessments. Making the results of the assessment public is a good way to further transparency and encourage continued improvement.

Trade Flows

I. The trade volume of bio-based products and the extent of sustainability certifications remain inadequately monitored. Policymakers are encouraged to incentivise the systematic tracking of trade flows and certification levels. Collaboration with customs authorities and statistical agencies to introduce differentiated HS/CN codes for bio-based products would facilitate improved monitoring.
II. Incorporating questions on bio-based content and certification into material shipment and trade documents would enhance data accessibility and reliability, benefitting industries and countries alike.

Cost-Benefit Analysis and Externalities

I. Further research is necessary to identify the most effective support mechanisms, incentives, and motivations for companies to monitor and collect data on the costs and benefits of certification, especially concerning social impacts. Such evidence-based approaches will inform targeted and impactful policy design.

II. The limited availability and standardisation of data on environmental and social impacts hinder comprehensive cost internalisation analyses. Policymakers should advocate for consistent and transparent data provision across value chains, both within and outside the EU.

III. EU-wide measures, such as mandatory procurement quotas, differentiated VAT rates, or environmental levies on unsustainable products, could drive market shifts towards more sustainable alternatives. Legislation should also aim to mitigate potential disproportionate impacts on smallholders and companies in low-income countries when certification becomes a requirement for market access.

IV. Enhanced research methodologies are needed to better capture social impacts, including labour conditions, land rights of local communities, and health and safety of workers. A thorough understanding of these factors will facilitate the design of certification systems that ensure sustainability throughout the entire value chain.

5. Conclusions and Next Steps

The BIOBASEDCERT Cluster has made significant advancements in improving CSLs for bio-based systems. Collaborative efforts by HARMONITOR, STAR4BBS, and SUSTCERT4BIOBASED have yielded robust tools and methodologies to assess and enhance these schemes. Continued stakeholder collaboration — including policymakers, industry leaders, scheme owners and certification bodies — is essential for further harmonisation and efficacy improvements.

Next steps include implementing the recommendations outlined in this document, addressing identified gaps through further research, and promoting best practices across the bio-based industry. Such efforts will accelerate progress toward a more sustainable and transparent bioeconomy.

6. Further Reading

Relevant project deliverables		
BIOBASEDCERT Cluster		Midterm Policy Brief
		BIOBASEDCERT Monitoring Tool
HARMONITOR	D2.5.	Version 1.0 of the Platform for continuous review and improvement of certification schemes
	D3.5.	Trade flows synthesis
	D4.3.	Validation and final comparison study of selected CSLs
	D6.1.	Online database with (in)direct costs and benefits of certification
	D6.2.	Environmental Externalities of EU's Bioeconomy
	D6.3	Overall feasibility of certification schemes
STAR4BBS	D1.3.	Report on impact and contribution of existing SCS and B2B Labels
	D2.1	Concept and methodology for collecting volumes of biogenic feedstock
	D2.2.	Report on matching biogenic flows with certification systems

SUSTCERT4BIOBASED	D2.1.	Identification of the most representative biobased value chains
	D2.2.	Database of trade volumes for biological resources and biobased products
	D3.1.	Review of existing monitoring approaches for schemes and labels
	D3.2.	Evaluation of existing schemes and labels
	D4.1	Review of methodologies for cost benefit analysis and internalizing externalities for sustainability certification
	D4.4.	Assessment of feasibility of certification adoption in selected value chains

End Notes

[1] Robustness is the extent to which the assurance system of the CSL is credible. Robustness answers the question: Does the CSL deliver an accurate assessment of compliance (not prone to misinterpretation or fraud)?

[2] Effectiveness is the extent to which the CSL achieves, or is expected to achieve, its objectives and bring results. Effectiveness answers the question: Is the CSL achieving its objectives?

[3] Harmonisation and Monitoring Platform for Certification Schemes and Labels to Advance the Sustainability of Bio-based Systems. Grant Agreement Nº 101060133.

[4] Sustainable Bio-based Systems Through Effective Certification & Labelling. Grant Agreement Nº 101060588.

[5] Sustainability Certification for Biobased Systems. Grant Agreement Nº 101059785.

[6] ZEROPOLLUTION-01-07: International and EU sustainability certification schemes for bio-based systems.

[7] Agriculture, building materials, chemicals, consumer goods, energy, food and feed, forestry, and pharmaceuticals.

[8] Examples include the CAP reform, Taxonomy Regulation, Farm to Fork strategy, EU Forest Strategy, Circular Economy Action Plan, European Regulation on Sustainable products, recast of the Renewable Energy Directive, and the EU Strategy for Sustainable and Circular Textiles.

[9] ECAS (2023), Special report 17/2023: Circular economy – Slow transition by member states despite EU action.

[10] Webinar by HARMONITOR on how certification can support EU Deforestation Regulation (EUDR) alignment, https://www.youtube.com/watch?v=3t2VtWqPakU