



BIOBASEDCERT

Final Clustering Report for HORIZON-CL6-2021-ZEROPOLLUTION-01-07

Joint Deliverable: Final Clustering Report for HORIZON – CL6-2021-ZEROPOLLUTION-01-07

This deliverable is an output of the joint work of HARMONITOR, STAR4BBS and SUSTCERT4BIOBASED.

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List of Acronyms

BMT	BIOBASEDCERT Monitoring Tool
B2B	Business-to-business
EC	European Commission
CEN	European Committee for Standardization (Comitato Europeo di Normazione)
CSLs	Certifications Schemes and Labels
CSR	Corporate Sustainability Reporting
CSRD	CSR Directive
D	Deliverable
DG RTD	Directorate-General for Research and Innovation
ESPR	Sustainable Products Regulation
EUBCE	European Biomass Conference & Exhibition
HARMONITOR	Harmonisation and monitoring platform for certification schemes and labels to advance the sustainability of bio-based systems
JAB	Joint Advisory Board
NGO	Non-Governative Organization
REA	Research Executive Agency'
STAR4BBS	Sustainability Transition Assessment Rules for Bio-Based Systems
SUSTCERT4BIOBASED	Sustainability Certification for Biobased Systems
Q&A	Question-and-Answer
WP	Work Package

Executive summary

The call "Clean environment and zero pollution (HORIZON-CL6-2021-ZEROPOLLUTION-01)" sought proposals to support the development of climate-neutral circular bio-based systems that aim to establish a zero-pollution economy in line with the 2030 Climate Target Plan and Zero Pollution ambition. The focus is on enhancing transparency in international and EU trade for bio-based materials and products through certification schemes and business-to-business (B2B) labels. Proposals were expected to review and analyse existing certification schemes, assess their effectiveness, and analyse costs associated with their adoption in industrial bio-based value chains. Additionally, the call encouraged cooperation with international partners and organisations. The goal is to promote sustainable practices in the bio-based industry and contribute to environmental, social, and economic well-being.

The projects selected under the call "ZEROPOLLUTION-01-07: International and EU sustainability certification schemes for bio-based systems" include STAR4BBS (Sustainability Transition Assessment Rules for Bio-Based Systems), HARMONITOR (Harmonisation and monitoring platform for certification schemes and labels to advance the sustainability of bio-based systems), and SUSTCERT4BIOBASED (Sustainability Certification for Biobased Systems). These three sister projects have formed a project cluster named BIOBASEDCERT.

This report aims to:

- i) highlight the added value and purpose of the cluster;
- ii) summarise different clustering activities among the aforementioned three projects implemented during the second reporting period.

The clustering activities within the first reporting period was part of an earlier deliverable (D7.4 (HARMONITOR) / D7.4 (STAR4BBS) / D6.5 (SUSTCERT4BIOBASED)).

The clustering reports provide an overview of the work jointly conducted within the identified strategic areas of importance of the three sister projects and related cooperation activities in each area. Most prominently, the establishment of a Joint Advisory Board, the development of the BIOBASEDCERT Monitoring Tool, and collaboration in inter-project thematic areas are described in detail. The report builds on the close and ongoing collaboration of the three projects coordinators and the different inter-project teams. Overall, the cooperation among the sister projects avoid duplication of efforts, maximise impact, and facilitate the exchange of information and expertise.

1. Introduction

Overview of the BIOBASEDCERT Cluster

The HORIZON-CL6-2021-ZEROPOLLUTION-01-07 call – "International and EU sustainability certification schemes for bio-based systems" centers around supporting tracing of environmental, social and economic impacts along value chains and trades in the bio-based systems for business-to-business (B2B) communication to enable responsible production and consumption, in line with the 2030 Climate Target Plan and the Zero Pollution ambition. This call sought contribution to establishing circular bio-based systems to mitigate climate change, restore biodiversity and protect air, soil and water quality along the supply chain of biological resources and industrial value chains, within the EU and across borders. These topics align with several impact areas identified in the Horizon Europe strategic plan for 2021-2024. Project results are expected to contribute to the following expected outcomes: (I) bio-based value chains transparency in international and EU trade through B2B labels for biological resources and bio-based materials and products, and (II) harmonisation of existing international and EU certification schemes and the monitoring system and indicators of their effectiveness and robustness.

Projects funded under this topic include STAR4BBS (Sustainability Transition Assessment Rules for Bio-Based Systems), HARMONITOR (Harmonisation and monitoring platform for certification schemes and labels to advance the sustainability of bio-based systems) and SUSTCERT4BIOBASED (Sustainability Certification for Biobased Systems). These three sister projects have formed a project cluster named BIOBASEDCERT.

The objectives of the cluster are following:

- Gain a precise picture of existing **sustainability certification schemes** and **labels for industrial bio-based systems**;
- Gather data on **global trade flows** of biological resources and bio-based materials and products, differentiating between certified and uncertified flows;
- **Develop** and **test a monitoring system** to assess the effectiveness and robustness of existing sustainability certifications schemes and labels (CSLs);
- Assess **costs and benefits** from the adoption of CSLs in industrial bio-based value chains and perform a **feasibility** study on selected CSLs;
- **Develop** and **disseminate** findings and **recommendations** to promote the adoption of effective and robust sustainability CSLs by different categories of stakeholders.

The identified three Joint Strategic Areas are:

- Joint Advisory board
- BIOBASEDCERT Monitoring Tool
- Joint Dissemination

The STAR4BBS (www.star4bbs.eu) project aims to maximise the potential of sustainability CSLs to support a successful transition to a sustainable bio-based economy. It entails the development of indicators and a monitoring system for assessing the effectiveness and robustness of existing international and EU CSLs, B2B labels and related traceability systems applicable to biological feedstock and bio-based materials and products. This will create the foundations to support transparency and scheme harmonisation in global and EU trade flows.

The SUSTCERT4BIOBASED (www.sustcert4biobased.eu) project is set on defining and promoting the adoption of effective and robust CSLs and B2B labels for industrial biobased systems. This supports the overall goal of supporting responsible production and consumption by tracing the sustainability of biobased products along value chains and trades within the EU and globally.

The HARMONITOR (www.harmonitor.eu) project aims to improve the effectiveness of CSLs in different sectors of the EU bioeconomy and therefore strengthen the use of CSLs as a co-regulation instrument. Effective and robust CSLs can cope with some of the difficulties that public regulation faces and fill in policy gaps. The HARMONITOR project is devoted to establishing and testing a participative review platform concept that allows CSLs to identify commonalities and foster cooperation when operating in bio-based value chains within and across EU borders.

Purpose of this deliverable

To describe the work performed by the three projects together, with a coordinated and collaborative approach. This deliverable outlines several cooperation activities that the projects have undertaken to align their goals, avoid duplication of efforts, and maximise their impact. The work of sister projects was jointly conducted within the identified strategic areas for the three projects and related cooperation activities in each area.

The cooperation activities included thematic area discussions and decision-making, including establishing of a Joint Advisory Board (JAB), development of the BIOBASEDCERT Monitoring Tool (BMT), and collaborating in the dissemination and communication activities with stakeholders. By working together and coordinating efforts, the three projects ensured that their

work was aligned, complementary, and contributed to the overall goal of promoting sustainability in bio-based systems.

The coordination and management of the cluster activities was overseen by the three project coordinators (PCs). To facilitate the cooperation activities, five thematic inter-project teams were established, each consisting of institutions and researchers from the three sister projects.

These inter-project teams focused on five thematic areas:

1. Selection and review of CSLs for industrial bio-based systems;
2. Bio-based value chain selection and global trade flow analysis;
3. BIOBASEDCERT Monitoring Tool (BMT)
4. Analysis of costs and benefits and feasibility study;
5. Communication and dissemination of the results.

Within each area, synergies and cooperation opportunities were identified by the sister projects, maximising their impact on the EU's sustainability goals.

2. Integrated strategic collaboration

2.1 Structure of collaboration

2.1.1. Teamwork architecture

The cluster of the three projects includes: project coordinators (PCs) and inter-project teams (IPTs). The overall structure of the team was detailed in the previous mid-term clustering report.

2.1.2. Cluster exchange

The three cluster projects established regular communication and coordination through periodic meetings and extensive email exchange to meet these goals. Details of common means were described in the previous report:

- **Shared repository**
- **PC and IPT meetings**

Since the inception of the cluster, meetings have been held to ensure effective collaboration and coordination among the three sister projects. These meetings involve project coordinator calls, inter-project team calls, and meetings with Project Officer, among others. A variety of topics are discussed in these meetings, ranging from the selection of value chains and sustainability criteria to the development of the BIOBASEDCERT Monitoring Tool (BMT).

2.1.3. Added value of the collaboration

The collaboration between the sister projects offered several benefits, as detailed below:

Efficient resource utilisation: The sister projects can pool resources, expertise, and data. This allows for a more efficient use of resources and infrastructure. This shared resource pool can lead to cost savings and optimised research efforts.

Reduced duplication: By working together, sister projects can avoid duplicating research, development, and data collection efforts. This minimises redundancy, optimises the use of resources, and accelerates progress toward common objectives.

Synergy and innovation: Collaborative efforts often lead to the generation of novel ideas, methodologies, and solutions. The collective expertise and diverse perspectives from multiple and diverse project teams can spark innovation and creative problem-solving.

Comprehensive approach: Sister projects can address complex challenges from multiple angles. By combining their efforts, they can provide a more comprehensive and holistic understanding of the issues at hand, leading to more robust solutions.

Enhanced impact: Collaboration amplifies the influence and reach of the research, thereby contributing more effectively to the overarching goals.

Improved knowledge transfer: Collaborative projects facilitate the exchange of knowledge and best practices among research teams. This knowledge transfer ensures that insights, findings, and innovations are disseminated more widely, benefiting a broader audience.

Strengthened advocacy: When sister projects work together, they can present a united front when advocating for policy changes or promoting their findings.

Risk mitigation: Collaboration can help mitigate the risks associated with research and innovation projects. If one project encounters challenges or setbacks, others can step in to offer support or alternative solutions, reducing overall project risk.

Interdisciplinary integration: Collaboration encourages the integration of different disciplinary perspectives. This cross-disciplinary approach can lead to more holistic, well-rounded solutions that account for various aspects of complex issues.

Scalability and universality: Research findings and solutions developed through collaborative projects are often more scalable and more widely applicable, as they have been tested and refined in multiple contexts and under various conditions.

2.1.4. Joint Advisory Board

Joint Advisory Board (JAB) Overview

To enhance communication and expert input, three related projects have established a Joint Advisory Board (JAB) instead of separate boards. The JAB includes experts from academia and international organizations, selected from individuals contacted during project proposal phases, all of whom agreed to join.

Purpose and Benefits

The JAB provides strategic and technical guidance across topics such as sustainability certification, monitoring systems, and policy targets. It supports alignment with international efforts, enhances stakeholder engagement, and contributes to the dissemination and long-term impact of project outcomes.

Coordination and Activities

JAB members participate voluntarily in annual meetings and stakeholder events, offering feedback and expertise. Membership is non-contractual, spans the projects' 36-month duration, and can be withdrawn in writing. Meetings are held online or in-person, with agendas and invitations sent at least three weeks in advance. Confidentiality is maintained regarding non-public project information. The kick-off meeting with JAB members was held online on 24

February 2023. Details on JAB terms and members are available in the projects' deliverables (SUSTCERT4BIOBASED D7.2, STAR4BBS D8.1). Information on the JAB members is also available on each project's website and has been updated with any changes during the execution of the project. JAB members has been invited to cluster events and workshops, also participated as panellists during events.

2.2 Thematic areas for inter-project collaboration

To facilitate the cooperation activities, five thematic inter-project teams were established, each consisting of institutions and researchers from the three sister projects. These inter-project teams focused on five thematic areas:

1. Selection and review of CSLs for industrial bio-based systems;
2. Bio-based value chain selection and global trade flow analysis;
3. BIOBASEDCERT Monitoring Tool (BMT)
4. Analysis of costs and benefits and feasibility study;
5. Communication and dissemination of the results.

Within each area, synergies and cooperation opportunities were identified by the sister projects, maximising their impact on the EU's sustainability goals.

1. Selection and review of CSLs for industrial bio-based systems

The team for this area was responsible for establishing synergies in the selection and review of existing CSLs. It also reviews existing monitoring systems and benchmarking platforms with the purpose of identifying building blocks for the design of the BIOBASEDCERT Monitoring Tool.

2. Bio-based value chain selection and global trade flow analysis

The team in this area aims to identify synergies in the analysis of global trade flows of biological resources and bio-based materials and products. Additionally, they are responsible for coordinating the identification and selection of the most prominent biobased value chains.

3. BIOBASEDCERT Monitoring Tool (BMT)

The three projects work together to develop a monitoring tool to assess the robustness, comprehensiveness and effectiveness of CSLs. Following the acceptance of the proposal by the EU officials for the three projects to jointly work on the development of the monitoring system, the inter-project teams started working on identifying synergies in the conceptualization, development and testing of the BMT. The BMT is collaboratively designed to meet the needs of stakeholders and to facilitate the exchange of information and data. The BMT will also help to identify best practices, monitor progress towards sustainability goals, and enable more effective decision-making. Further details on BMT is provided in section 2.2.1.

4. Costs and benefits analysis (CBA) and feasibility study

The inter-project team collaborating within this thematic area works on aligning on methodologies for the quantification of direct and indirect costs and benefits of certification, as well as on assessing the feasibility of certification on selected value chains.

5. Communication and dissemination

The communications team works on the planning and implementation of the joint communication, exploitation and dissemination activities. The aim is to capitalise on established outcomes by developing a strong network through joint activities and by participating in various events.

In addition to the above specified thematic areas, the three projects are committed to supporting each other in the design and implementation of the activities specific to each project but that are beneficial to other projects as well. For example, STAR4BBS and SUSTCERT4BIOBASED collaborated with HARMONITOR by providing inputs and disseminating the public consultation on sustainability certification of bio-based products, launched at the end of February 2023.

2.2.1 BIOBASEDCERT Monitoring Tool (BMT) development

Central to our efforts under BIOBASEDCERT was the development of a monitoring system called BIOBASEDCERT Monitoring Tool – BMT. The goal of the three sister projects working together was to reduce confusion, divergences, and mistrust among stakeholders by creating a harmonised, overarching system. This will bring coherence and clarity for policymakers driving the transition to a bioeconomy in the EU. Working together allowed the projects to build on each other's knowledge and experience, subjecting the BMT to a higher level of scrutiny and maximising the effective use of resources. The BMT streamlined stakeholder consultations to maximize their impact and reduce fatigue while eliminating competition among the three projects and maximizing the synergies and impacts of the results. The creation of a BMT required extensive coordination to provide a more comprehensive and detailed tool, covering a wide range of bio-based sectors and products.

Actions undertaken to achieve the aforementioned goal are as follows:

- **Defining the scope of the BMT:** The first step was to define the scope of the BMT by clearly defining the products and sectors to be covered and the geographical regions to be included in the analysis. This ensures that all the sister projects have a shared understanding of the scope of the BMT.
- **Proposing the structure of the BMT:** The BMT was structured into three levels: system, content, and outcome, all with corresponding indicators (Figure 1). System indicators focussed on system characteristics, such as how a scheme is governed and

how the standards or labels are developed. Content indicators clarified the requirements of the CSLs vis-à-vis specific environmental, social, economic, and circularity priorities and targets. Outcome indicators aim at capturing the impact of the schemes and labels.

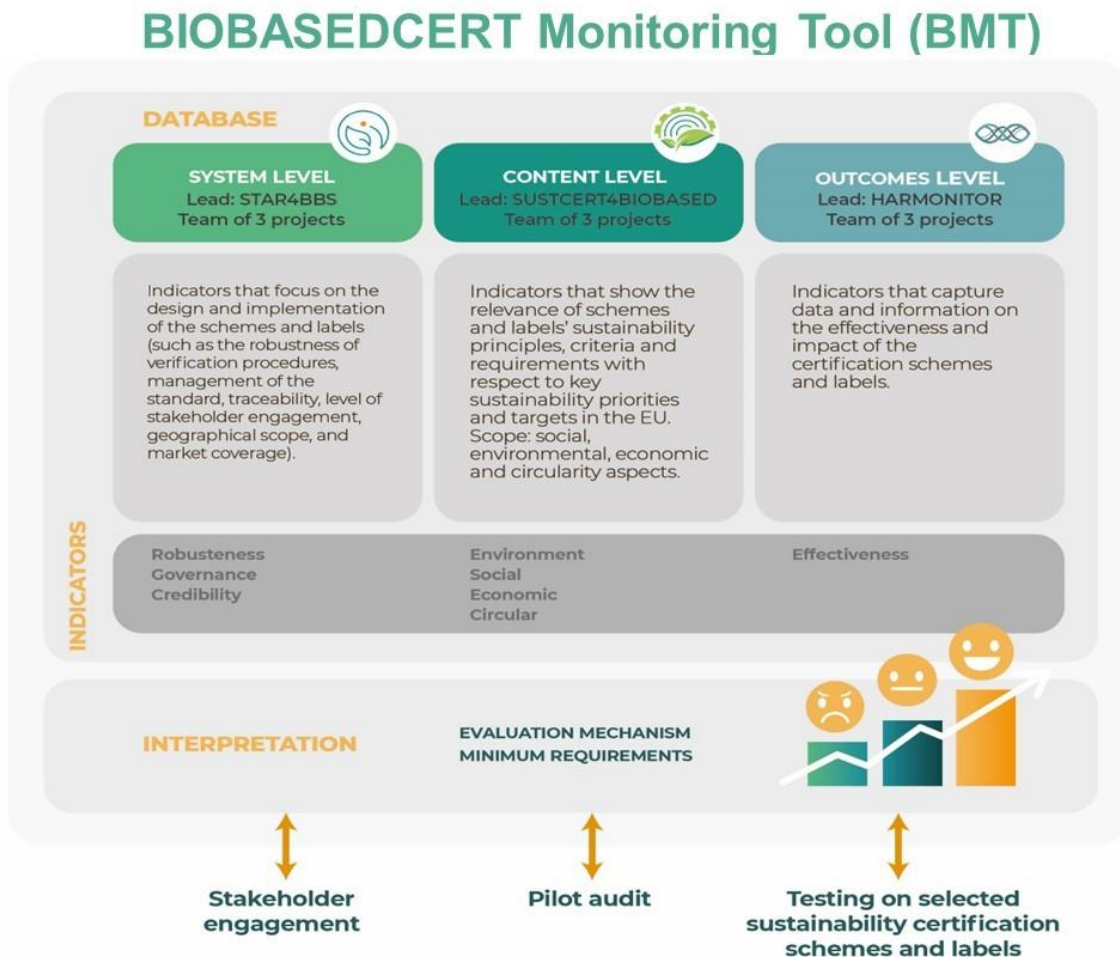


Figure 1: BMT structure

- **Testing and refining the BMT:** After the BMT framework was developed, the following step was to test and refine the system by applying it to a range of selected CSLs. This involved analysing the results and deriving recommendations for the tested CSLs.
- **Building stakeholder engagement:** Throughout the development and testing of the BMT, the stakeholder involvement was important to ensure that the BMT meets their needs. This was done by engaging with CSL owners, policymakers, industry actors,

NGOs, and other stakeholders to gather feedback and incorporate it into the BMT. In particular, joint events were organised by the three projects (further info in section 2.3).

- **Developing dissemination and communication strategies:** Once the BMT was developed and tested, the following step dealt with the dissemination and communication strategies to ensure that the BMT is widely adopted and used beyond the life of the sister projects. This includes developing outreach materials and engaging with key stakeholders to promote the use of the BMT.

The timeline of the development of the BMT and the testing process is depicted in Figure 2. The development of the draft BMT took place between June 2023 until February 2024. The testing was carried out in two phases. The first testing phase commenced in February 2024 and was completed in July 2024. The second testing phase started in September 2024 and was completed in February 2025. After completion of the two testing phases, a final revision phase of the assessment results took place from February until April 2025 incorporating the additional insights and feedback received.

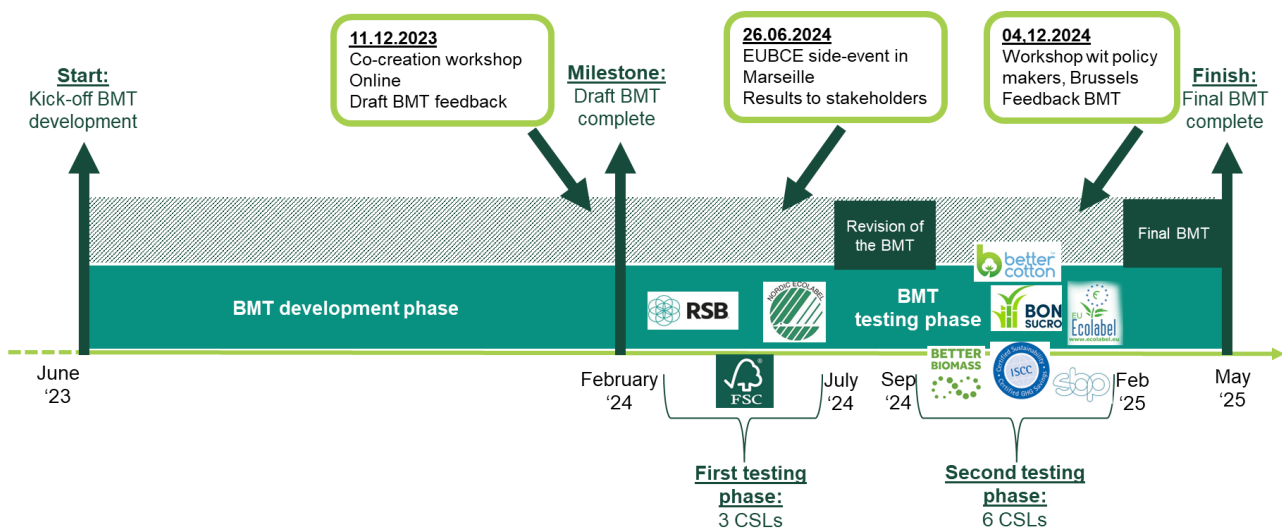


Figure 2. Timeline and activities around the BMT development and testing process

• Responsibilities among the three projects

To systematically collect the inputs from the three projects in a strategic way, it was considered important to have each project coordinate one level. Thus, the cluster proposed an allocation of the coordination roles based on the strengths of each project and the partners involved.

STAR4BBS led the development of the system level, supported by the knowledge and practical experience of project partner ISEAL in defining the credibility in sustainability systems. ISEAL's

Codes of Good Practice cover many relevant aspects such as standard-setting and credible assurance processes. SUSTCERT4BIOBASED led the content level, focusing on sustainability criteria with project partners WR and ECOS heavily involved. WR has been working on reviewing and analysing circularity criteria for biobased products to monitor progress seen in CSLs. As an environmental protection organisation working on, among others, EU sustainable product policy such as the Ecodesign for Sustainable Products Regulation, ECOS has strong expertise on environmental and circularity matters. Between 2020 and 2022, ECOS was also a member of the Platform on Sustainable Finance, and as an appointed circular economy expert, follows various bioeconomy-related activities to be included in Taxonomy delegated acts. HARMONITOR led the outcome level as the WP leader, and UU as an academic organisation tackled the assessment of the effectiveness of CSLs which is currently the least explored area in research and as such allows for methodological development and venturing beyond conventional methods.

Under the leadership of one sister project in each level (as described above), each sister project provided inputs and feedback on the development of other levels. Stakeholder engagement continued throughout different phases of the monitoring system development where the three projects joined forces in organising co-creation workshops and engagement events. The BMT was tested on a jointly selected set of CSLs. The intention was that this selection of CSLs covered the most prominent CSLs and a broad range of sectors in the biobased industry. The feedback from this testing process was used in optimising the BMT.

- ***Collaborative development of a Co-Ownership Agreement***

The three projects—SUSTCERT4BIOBASED, STAR4BBS, and HARMONITOR—actively collaborated to align their exploitation efforts, holding several meetings to explore shared approaches for asset management and joint ownership. As part of this collaboration, a draft Co-Ownership Agreement of BMT was prepared and circulated among the projects to serve as a common reference for defining rights and responsibilities. Feedback from all partners, including input from a Horizon Results Booster mentor, contributed to shaping the most updated version. Legal teams from each project were also engaged to review the terms and ensure consistency across the cluster.

2.3 Joint Activities

Effective cooperation among projects is crucial in achieving shared goals and maximising impact. The three projects can engage in various cooperation activities, such as exchange of information, thematic area discussions, coordination of activities, and dissemination and communication. The three projects worked together to disseminate their findings and results to a wider audience. This included joint workshops and engagement events with the goal of promoting the importance of sustainability in bio-based systems. This ensures that the three projects are aligned in their messages and that confusion and inconsistency are avoided.

As part of the dissemination and communication strategy, the three sister projects attended and organised various events, such as workshops and conferences, where they present their findings, activities, and outputs (Table 1 **Figure 3**). Working together, they create joint presentations that showcase the collective impact of their work, highlighting the importance of sustainability in bio-based systems.

List of joint activities undertaken:

- ✓ Establishing dedicated sections on each project's website referring to sister projects
- ✓ Incorporating exclusive entries in newsletters to promote sister projects
- ✓ Actively engaging with and promoting the social media accounts of and news concerning each project
- ✓ Collaboratively organising the first Joint Advisory Board meeting
- ✓ Collaborating on a joint application for the Horizon Results Booster services module A and B.
- ✓ Participation of all three project representatives in the SUSTCERT4BIOBASED Network of Interest. Featuring dedicated interviews with project coordinators on the SUSTCERT4BIOBASED project website.
- ✓ Co-hosting engagement and promotional events under the joint platform of the cluster (see Table 1)
- ✓ Supporting and attending events of other sister projects
- ✓ Developing a shared events calendar to effectively engage relevant stakeholders without overburdening them.
- ✓ Co-organisation of five meetings of the BIOBASEDCERT roundtable for CSLs
- ✓ Co-ownership Agreement (exploitation)

Our synergies...

Meet our sister projects, HARMONITOR and STAR4BBS! What do all three projects have in common? They aim to improve the certification systems of biobased products.



HARMONITOR's team aims to improve the effectiveness of certification schemes and labels in different sectors of the European Bioeconomy. Explore [more](#) about the project!

STAR4BBS's team works on the development of indicators and a new monitoring system for assessing the effectiveness and robustness of existing European Sustainability Certification Schemes and labels related to biological feedstock and biobased products. Explore more about STAR4BBS by following the project on [Twitter](#) and [LinkedIn](#).

All three projects work under the same vision and contribute to a faster green transition! Stay tuned to find out more about our joint events and activities!!



Figure 3: Cluster events disseminated through social media networks

The Table 1 below indicates the events co-organised, supported and participated in by all three projects.

Table 1: BIOBASEDCERT cluster events and workshops

Event	Description
Co-creation workshop	Prioritization of Sustainability Policy Targets for Certification Schemes and Labels. (online, 26 January 2023)
1st Joint Engagement Event on Sustainability Certification of Biobased Products	Co-organisation of the first engagement and promotional event in the framework of EUBCE 2023 (the 31st edition of the European Biomass Conference & Exhibition). (Bologna, Italy; 7 June 2023).
Robust and Effective Sustainability Certification for Bio-based Systems	BIOBASEDCERT cluster online co-creation event, the first draft of the BMT was be presented to stakeholders for their feedback. (online, 11 December 2023)

Event	Description
Certified trade in bio-based value chains	<p>This workshop aimed at gathering data on global trade flows of biological resources and bio-based materials and products, distinguishing between certified and uncertified flows, including also external stakeholder consultations.</p> <p>(Cologne, DE, 13 June 2024)</p>
Monitoring Sustainability Certification Schemes and Labels for Bio-based Products	<p>Co-organisation of the first engagement and promotional event in the framework of the EUBCE 2024 conference to present preliminary results from the BIOBASEDCERT Monitoring Tool (BMT)</p> <p>(Marseille, France, 13 June 2024)</p>
1st BIOBASEDCERT Roundtable Meeting	<p>Roundtable meeting with representatives from CSL owners</p> <p>(online, 12 July 2024)</p>
2nd BIOBASEDCERT Roundtable Meeting	<p>Roundtable meeting with representatives from CSL owners.</p> <p>(online, 27 September 2024)</p>
Driving Sustainability through Certification: Unveiling the Costs and Benefits of Certification Schemes in Bio-Based Industries and Products	<p>Co-creation workshop of the cluster to explore the economic impact of certification schemes in bio-based industries, focusing on costs, benefits, and externalities.</p> <p>(online, 11 November 2024)</p>
3rd BIOBASEDCERT Roundtable Meeting & Policy-maker workshop	<p>BIOBASEDCERT Workshop for stakeholder consultation</p> <p>Roundtable with representatives from CSL owners combined with BIOBASEDCERT Workshop with Policy makers on the role of BMT</p> <p>(Brussels, 4 December 2024)</p>
4th BIOBASEDCERT Roundtable Meeting	<p>Roundtable meeting with representatives from CSL owners.</p> <p>(online, 2 April 2025)</p>

Event	Description
Final event	BIOBASEDCERT Final Conference: “How can voluntary certification systems support the transition to a sustainable circular bioeconomy” (Brussels, 13/14 May 2025)
5th BIOBASEDCERT Roundtable Meeting	Roundtable meeting with representatives from CSL owners. (online, 26 May 2025)
Joint trainings and workshops	<ul style="list-style-type: none"> • Navigating the CSR Directive: Leveraging Voluntary Sustainability Standards and Research to Strengthen Bio-Based Industry Reporting (online, 14 March 2025) • Navigating the new EU legislations to address greenwashing: how standards and research projects can support the bio-based industry (online, 25 March 2025) • Sustainability Certification in the Dutch Bio-economy: an Exploration (online, 8 April 2025)

2.3.1 January 2023: “Prioritization of Sustainability Policy Targets for Certification Schemes and Labels co-creation workshops”

The first co-creation workshop was organized on January 26, 2023 by APRE and the technical partner NOVA. The topic was “Prioritization of Sustainability Policy Targets for Certification Schemes and Labels”.

General aim

The aim of this first workshop was to review the policy sustainability targets.

Specific objectives

- To present preliminary results of the identified policies and sustainability targets,
- To introduce the main criteria for their prioritisation,
- To identify any relevant policy or target that might be missing,
- To co-create additional potential criteria for the prioritisation of policy targets.

Methodology

The workshop included topic presentations followed by exercises to gather the insights from the participants, using SLIDO and Miro tools. The co-creation workshop design was developed in

collaboration with ISEAL with APRE handling the technical/organization aspects. NOVA held preparatory meetings with TUB and UNITELMA to plan the content and general structure of the workshop. Additionally, NOVA compiled a list of potential stakeholders to be invited and TUB facilitated the contact with the two sister projects (HARMONITOR and SUSTCERT4BIOBASED) to supplement the participant list.

The participants were engaged in two exercises:

- First, they chose whether to answer questions on quantitative or qualitative targets.
- Second, they voted on policy targets that could be supported by certification systems, addressing specific questions.

Results

In total, 20 people participated in the workshop. The final list of policies and policy targets was validated with the support of UNITELMA, ISEAL and TUB. NOVA also led the organization of the first STAR4BBS co-creation workshop, where stakeholder feedback on identified policies and sustainability targets was gathered and prioritization exercises were conducted. In addition to the input obtained during the co-creation workshop, NOVA prepared a post-workshop survey. The outcomes contributed to the finalization of the D1.1 deliverable¹, which was reviewed by UNITELMA and TUB.

The agenda of “Prioritization of Sustainability Policy Targets for Certification Schemes and Labels” workshop is presented in the Table below.

Table 2: Agenda of “Prioritization of Sustainability Policy Targets for Certification Schemes and Labels” workshop

TIME	TITLE	SPEAKERS
10 min	Section 1. Welcome and Introduction to the STAR4BBS Project - Welcome and presentation of the agenda - Brief Introduction to the Project Star4BBS - Introduction of Task 1.1 in the context of Star4BBS	<i>Speaker: Ladu, Luana – Technische Universität Berlin</i>
30 min	Section 2 – Policy Priorities and Targets - Objective and methodology of Task 1.1 - Identified policy priorities and targets	<i>Speaker: Proto Cassina, Luciano – nova-Institut GmbH</i>

¹<https://cordis.europa.eu/project/id/101060588/results>

	<ul style="list-style-type: none"> - Criteria for the prioritization of the policy targets - Interactive discussion on policies and selection criteria 	
60 min	Section 3 – Exercise <ul style="list-style-type: none"> - Explanation of the exercise + (Q&A) - Exercise: Policy targets prioritization on discussed criteria 	<i>Facilitator: Proto Cassina, Luciano – nova-Institut GmbH</i>
15 min	Coffee Break	
40 min	Section 4 - Presentation of the results of the exercise <ul style="list-style-type: none"> - Presentation of the results of the exercise - Interactive discussion on the exercise - Conclusion and close up 	<i>Speaker: Proto Cassina, Luciano – nova-Institut GmbH</i>
20 min	Section 5 – Consultation on the design of a monitoring system	<i>Speaker: Devisscher, Maira and Komives, Kristin – ISEAL</i>
5 min	Section 6 – Short conclusion and next steps	<i>Speaker: Ladu, Luana – Technische Universität Berlin</i>

2.3.2 June 2023: “Sustainability Certification of Bio-based Products co-creation workshops”

The consultation with stakeholders during the parallel event “Sustainability Certification of Bio-based Products” at the EUBCE on June 7, 2023, was organized with sister projects in Bologna, Italy. This event, was the 1st Joint Engagement Event of the BIOBASEDCERT cluster.

General aim

The aim of this workshop, organised within the framework of the cluster, was to present preliminary results from all three projects. The title of the Cluster event was “Sustainability Certification of Bio-based Products”.

Specific objectives

The main objective of the presentation was to provide an overview of policy priorities in establishing sustainability requirements.

Methodology

The workshop was jointly organised by SUSTCERT4BIOBASED, HARMONITOR, and STAR4BBS. It included presentations of the topic by representatives of each project, followed by a

roundtable for open stakeholder consultation. During this session, stakeholders were able to express their views on the potential roles of CSLs in the future European Circular Bioeconomy and on the design of a monitoring tool for CSLs.

Results

During this event, the cluster presented the outcomes of the HARMONITOR stakeholder consultation and gathered additional input on the requirements for the BMT. The subsequent roundtable featured an open discussion with stakeholders on the role of CSLs as a co-regulation instrument.



Figure 4. Panel discussion during the EUBCE 2023 side event “Sustainability Certification of Bio-based Products”

The event attracted over 75 participants, including industry experts, sustainability system actors, academic scholars, regional bioeconomy stakeholders, citizens, members of civic society, and representatives from other esteemed EU initiatives. This hybrid event provided an opportunity for the three sister projects to highlight their respective missions, areas of research, and approaches concerning sustainability certification.

The Agenda that was prepared for the “Sustainability Certification of Bio-based Products” Workshop is reported in the table below **Error! Reference source not found.**

Table 3: Agenda of “Sustainability Certification of Bio-based Products” workshop

TIME	TOPIC	SPEAKERS
15:00 – 15:05	Welcome	Moderator – Costanza Rossi (SQ Consult)
15:05 – 15:20	Short introduction of the three sister projects. SUSTCERT4BIOBASED STAR4BBS HARMONITOR	Iris Vural Gursel (Wageningen Research) Luana Ladu (TU Berlin) Sergio Ugarte (SQ Consult)
15:20 – 15:40	Policy priorities and mapping sustainability requirements	Luana Ladu (STAR4BBS, Technische Universität Berlin)
15:40 – 16:00	Credibility of CSLs for bio -based feedstocks and products – Outcomes of consultation	Birka Wicke (HARMONITOR, Radboud University)
16:00 – 16:15	Questions and Answers	
16:15 – 16:35	Biobased value chains and trade flows	Iris Vural Gursel (SUSTCERT4BIOBASED, Wageningen Research)
16:35 – 16:55	Joint Monitoring System	Martin Junginger (Utrecht University)
16:55 – 17:10	Questions and Answers	
17:10 – 18:10	Roundtable: Role of CSLs as Co-Regulation Instrument	Chair: Sergio Ugarte, SQ Consult <ul style="list-style-type: none"> • Gernot Klepper, ISCC Plus • Blanca de Ulibarri, RSB • Silvia Maltagliati, EC • Bernard de Gamber, CEFIC • Mariana López Dávila, ECOS • Loek Verwijst, Control Union
18:15 – 18:30	Closing Remarks	

2.3.3 December 2023: “Robust and Effective Sustainability Certification for Bio-based Systems”

General aim

The aim of this workshop, which included external stakeholder consultations, was to validate system level elements and select minimum requirements. The Cluster event was titled “Robust and Effective Sustainability Certification for Bio-based Systems”.

Specific objectives

- Highlight the current development and intermediate results of the BIOBASEDCERT Monitoring Tool (BMT) for CSLs for bio-based systems;
- Introduce a collaborative platform for sustainability certification schemes and labels;
- Gather stakeholders’ insights on defining indicators to be included in the BMT for assessing the robustness and effectiveness of sustainability certification schemes and labels;
- Collect stakeholders’ feedback on the collaborative platform for sustainability certification schemes and labels to promote synergy and efficiency in the industry.

Methodology

The workshop was based on topic presentations followed by exercises to gather the insights from the participants using Mentimeter tools. It was organized as a joint co-creation event of the cluster.

APRE handled the organizational aspects. For content and general structure of the workshop, TUB organised several meetings with the sister projects to align on technical content. NOVA held preparatory meetings with TUB and UNITELMA and facilitated a list of potential stakeholders to invite to the workshop. TUB also helped to complement the list of participants. Exercises were conducted to validate system level categories and potential evaluation structure, ensuring alignment with stakeholder needs and refining the criteria if necessary. After the BIOBASEDCERT cluster online co-creation event, a survey was sent to the participants to incorporate their comments and suggestions into the BMT. These methods proved successful in collecting external feedback and improving the indicators and monitoring system as a whole.

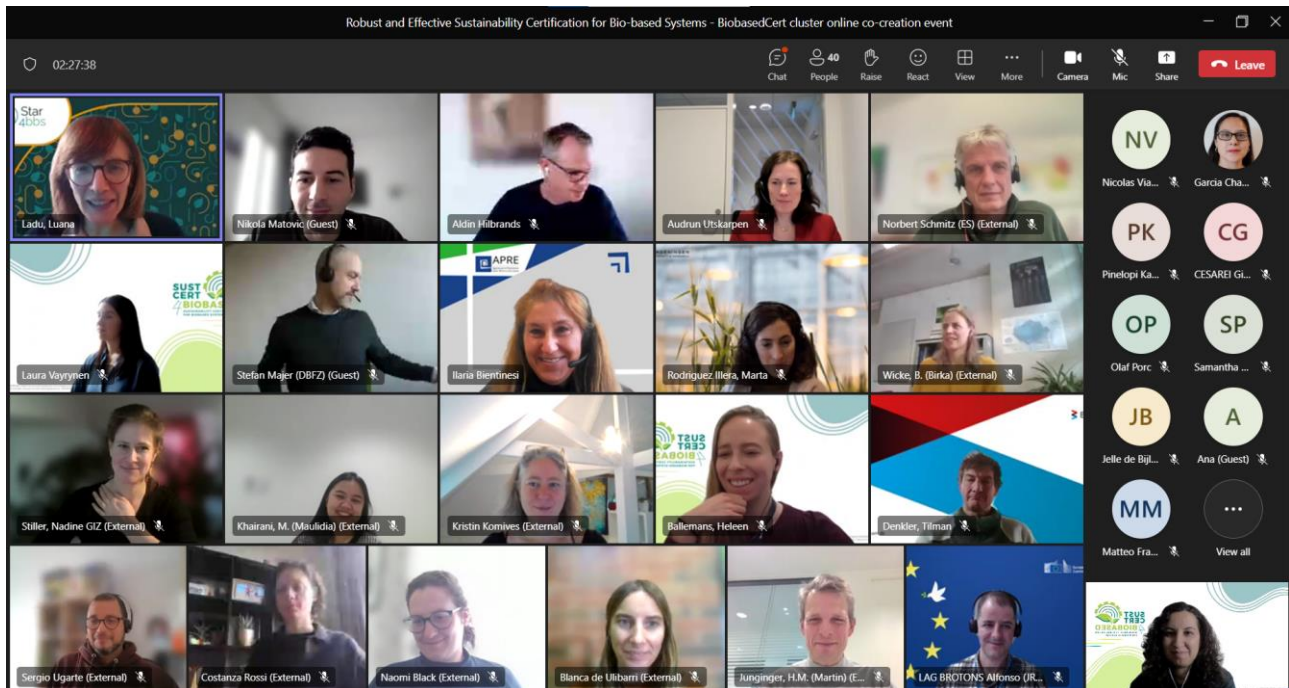


Figure 5. Screenshot of the participants to the co-creation workshop “Robust and Effective Sustainability Certification for Bio-based Systems”

Results

This co-creation workshop brought together stakeholders and experts to share key findings, receive valuable input and suggestions, and explore potential collaborations. 77 people participated to the workshop. External stakeholders indicated which indicators they would select as minimum requirements for considering schemes’ robustness. The main answers given for each category/subcategory according to stakeholders are summarized:

- System level: Due to the fact that several indicators are included in the system level, stakeholders were asked to identify which indicators should be considered as minimum requirement. The = answers that were mostly chosen are:
 - i) Continuous revision of standards;
 - ii) Inclusion of sustainability goals and objectives in the scheme;
 - iii) Requirement of third-party conformity assessment;
 - iv) Verification of traceability records by a certification body;
 - v) Easy accessibility of explanatory statements for graphic labels on products.
- Content level: Content level covers several principles and criteria covering sustainability pillars (environment, circularity, social, economic, cross-cutting). Stakeholders indicated which indicators should be minimum requirements for schemes to be considered robust in terms of sustainability requirements. The answers that received most votes were:

- i) Each selected criteria should include several indicators such as biodiversity management plan with target and timelines;
 - ii) Products durability should align with industry averages;
 - iii) Identification of legal and customary land and water rights;
 - iv) Prohibition of bribery, corruption, extortion.
- Outcome level: Outcome level focuses on the effectiveness of CSLs. Stakeholders were asked how schemes should monitor progress over time and which indicators would best capture data on the effectiveness of CSLs. The most important criteria indicated were:
 - Climate change management, considered the most feasible criteria to be quantified
 - Biodiversity protection.
- Evaluation Structure: The scheme performance for each indicator was considered as a key feature to support the continual improvement. Almost all stakeholders suggested that the BMT tool should be public and freely accessible, with a ranking feature to compare schemes, to support their continuous improvement; the “indicators level assessment of each scheme performance” and “highlighting schemes that do meet minimum thresholds” were identified as features that would best support policy-makers. The graph on scheme performance, shown during the presentation was commented as “not completely clear”, and suggestions dealt with the inclusion of additional details, such as reliability of certified biomass, impact category covered and a clarity of supervision, including a contact person.
- Platform: The platform is an additional product developed by the three projects to help certification schemes interact, exchange and cooperate based on the cluster’s results produced. Its three pillars are:
 - 1) Communication of results,
 - 2) Roundtable for CSLs and CBs to discuss project results with members,
 - 3) Additional elements to discuss selected results from different project activities and present them to wider audience.

According to the stakeholders enquired, communication of results should begin with information on specific BMS elements, followed by benchmarking of the activities and inventory analysis; the roundtable element should focus on the challenges for CLs and CBs in EU Bioeconomy.

2.3.4 June 2024: “Certified trade in bio-based value chains”

The co-creation workshop was held on June 13, 2024 during the Renewable Materials Conference in Siegburg. It focused on “Certified trade in bio-based value chains” and was organised by NOVA in collaboration with the sister projects.

General aim

The aim of this workshop was to gather data on global trade flows of biological resources and bio-based materials and products, distinguishing between certified and uncertified flows, including also external stakeholder consultations.

Specific objectives

- The workshop aimed to achieve the following key objectives: To disseminate project results to stakeholders
- To test findings with stakeholders
- To test recommendations with stakeholders
- To obtain suggestions from stakeholders for better data
- To disseminate project results to stakeholders

Methodology

The workshop was held in Siegburg/Cologne (Germany), June 13, 2024, during the “Renewable Materials Conference 2024: The Future Sustainable Chemical and Materials Industry will be Based Entirely on Recycling, Biomass and CO₂”.

Myrna van Leeuwen (WEcR) from SUSTCERT4BIOBASED, Marisa Groenestege (BTG) from HARMONITOR and Olaf Porc (Nova-Institute) from STAR4BBS presented the results of their respective projects related to trade flow analysis of biological resources and bio-based products.

Results

13 people participated to the workshop. At the end of the presentation of the three projects and their findings, several questions were posed to the participants, divided into three sets as reported below:

1. What is the role of sustainable certification for market upscaling of bio-based products?

- How does certification play a role in your business? (important, moderate, none; please explain your answer).

- Does certification lead to more trade of your business? (more, less, the same; please explain your answer).
- Do you believe obligatory sustainability certification of bio-based products, with minimum requirements similar to the RED III for biofuels (as mentioned in COM(2024)137, is a good idea? Please explain your answer.
- To what extent is sustainability certification needed to build consumer trust in bio-based products?
- What about national certification schemes and labels that may not meet the EU's minimum sustainability requirements? Should they also be recognised, or should these raw materials/products be considered uncertified, even if they have been certified by a national certification scheme in their country of origin?

2. What are obstacles and advantages to get products certified in practice?

- What is/are main obstacle(s) in getting production/trade certified? (e.g. 'paperwork'; voluntary character of labels and schemes; ...)
- What is/are main advantage(s) that certified production and certified trade could bring to bio-based business? (e.g. benefits to environmental sustainability; less Indirect Land Use Change (ILUC); others...)

3. How could monitoring of certified trade flows of bio-based products and biological feedstock be improved?

- What proportion of your bio-based business's production or trade is certified/labelled? (Provide an estimate; specify the scale you are considering.)
- Under what conditions would companies be willing to disclose information on production volumes of bio-based products, and the share that is sustainably certified?
- The EU has tools such as Eurostat and the PRODCOM database to record the production volumes of European products. But what about production figures for bio-based products from non-EU countries? For example, how many T-shirts (yarn, fabric) are produced in Bangladesh? What data sources could be used to obtain such information (as is possible for world trade with the UN Comtrade database)?
- How could we assess the certified share of biogenic feedstocks that a country produces or uses for the production of bio-based products? Established certification schemes such as RSPO for palm oil, FSC/PEFC for wood and Bonsucro for sugar are well known, but what about other feedstocks such as starch from maize, rice or cereals? And in particular, what about "2nd generation" feedstocks such as used cooking oil, glycerol and tall oil,

and feedstocks such as algae from aquaculture? Who certifies these and how can the certified proportion for these feedstocks be determined?

A key point of discussion was the importance of certification for market upscaling. Participants emphasised that mandatory certification for all biomass uses ensures fairness and builds consumer trust by preventing greenwashing. Barriers to certification included the complexity of choosing between different certification schemes, high costs and additional burdens for small businesses. Benefits of certified products include proof against greenwashing, improved market access and incentives for product improvement. Monitoring certified trade flows was also a critical issue. Participants highlighted the importance of standardised documentation and clear procedures for biomass traceability to meet EU requirements.

In summary, the workshop underlined that sustainable certification is crucial for the future of bio-based value chains, building trust, facilitating market access and promoting competition.



Figure 6: Workshop "Certified trade in bio-based value chains"

The agenda of the workshop is reported below:

Table 4: Agenda of “Certified trade in bio-based value chains” workshop

TIME	TITLE	SPEAKERS
13 JUNE 2024 11:00 – 12:30	The Role of Certification in Global Trade Flows in Bio-based Value Chains	ROOM 1 Olaf Porc, Nova-Institute (DE), Jurjen Spekreijse, BTG (NL) & Myrna van Leeuwen, WECR (NL),

2.3.5 June 2024: “Monitoring Sustainability Certification Schemes and Labels for Bio-based Products”

This side event, “Monitoring Sustainability Certification Schemes and Labels for Bio-based Products,” organized by the BIOBASEDCERT cluster, was held during the EUBCE 2024 conference in Marseille, France on June 26, 2024.

The event featured a roundtable discussion with panellists: Audrun Utskarpen (Nordic Swan Ecolabel), Rodrigo Rupérez (UN Trade and Development), Oliver Hurtig (European Commission), Jean-Marc Jossart (Bioenergy Europe), Mirjam Röder (Aston University), and Laura Väyrynen (ECOS). Moderated by Iris Vural Gürsel (coordinator SUSTCERT4BIOBASED), the discussion explored the integration of CSLs into regulatory frameworks and the development of effective monitoring mechanisms.

General aim

This co-creation workshop aimed at presenting preliminary results from the BIOBASEDCERT Monitoring Tool (BMT). The event focused on improving sustainability practices for bio-based products, particularly presenting preliminary results of the first BMT testing phase. In addition, the workshop included a roundtable discussion on the potential role(s) of CSLs for the future of the European Circular Bioeconomy and their use as a co-regulation instrument with relevant experts in the field.

Specific objectives

The aim of this workshop was to present preliminary results of the cluster and to refine the results on the BMS.

- Provide an overview of the BIOBASEDCERT monitoring tool (BMT) structure and content, focusing on the system, content and outcome levels.

- Present initial policy recommendations for leveraging the use of sustainability SCLs in promoting the market for sustainable biobased products.
- Introduce the collaborative platform for applying sustainability certification schemes and labels application to bio-based systems.
- Share the results and lessons learnt from the first pilot testing of the BMT.
- Collect stakeholder insights on updating the BMT based on testing results.
- Discuss with relevant experts the potential role(s) of CSLs for driving sustainability and their use as a co-regulation instrument.

Methodology

The co-creation workshop was organized as a side event of EUBCE 2024 in Marseille. The three sister projects jointly designed the event during different virtual meetings organized between February and June 2024. The design of the co-creation workshop was developed as a joint co-creation event of the cluster.

The first part of the event consisted of presentations from project partners, followed by an interactive section after each presentation to gather feedback from participants. White Research facilitated the Q&A sections.

The second part of the event featured a roundtable discussion with panellists representing different relevant institutions involved in sustainability of bio-based systems, such as eco-labels (Nordic Swan Ecolabel), academic institutions (Aston University), international organizations (UNCTAD-UNFSS), European Commission's science and knowledge service (JRC), industry associations (Bioenergy Europe), and NGO (ECOS). Moderated by Iris Vural Gürsel, the discussion explored the integration of CSLs into regulatory frameworks and the development of practical monitoring mechanisms.

After the panel discussion the participants were engaged in an open discussion on the potential role(s) of CSLs for the future of European Circular Bioeconomy and their use as a co-regulation instrument, as well as on the design of a monitoring tool for CSLs. The main key point raised are listed below:

- Currently limited sustainability goals and requirements for biobased products in policy. Should these be introduced and in what form?
- How to ensure the level playing field in terms of sustainability requirements across different uses of biological resources?

- What could be the role of CSLs for biobased products for this, what is your opinion in their use as a co-regulation instrument?
- How could such BMT tool be utilized for this purpose and what value could it bring?
- Would you think this can be useful in achieving harmonization of sustainability requirements of CSLs?

The panellists are listed below:

- Audrun Utskarpen (Nordic Swan Ecolabel)
- Rodrigo Rupérez (UN Trade and Development (UNCTAD)-The United Nations Forum on Sustainability Standards (UNFSS))
- Oliver Hurtig (JRC)
- Jean-Marc Jossart (Bioenergy Europe)
- Mirjam Röder (EBRI - Energy & Bioproducts Research Institute at Aston University)
- Laura Väyrynen (ECOS)

Results

In total 55 participants attended the event, including stakeholders from the scientific community, industry, and experts in the sustainability certification area. The event presented preliminary results from the BIOBASEDCERT Monitoring Tool (BMT), developed and tested by the cluster. The cluster also introduced the policy recommendations derived so far based on the cluster's findings. The roundtable provided an opportunity for stakeholders to share their views on the potential role(s) of CSLs for the future of European Circular Bioeconomy and their use as a co-regulation instrument, as well as on the design of a monitoring tool for CSLs. Interactive sessions allowed the audience to actively participate and shape future research developments.

The dedicated Q&A session facilitated an open and interactive dialogue, allowing attendees to engage directly with the panellists. The EUBCE conference featured talks on sustainability and biomass use, emphasizing the growing importance of these topics. The BIOBASEDCERT event stood out by addressing the crucial aspect of monitoring sustainability certification schemes and labels, contributing significantly to the broader discussion.



Figure 7: Side event “Monitoring Sustainability Certification Schemes and Labels for Bio-based Products”

The agenda of the “Monitoring Sustainability Certification Schemes and Labels for Bio-based Products” workshop is presented below.

Table 5: Monitoring Sustainability Certification Schemes and Labels for Bio-based Products agenda

AGENDA		
Time (CET)	Topic	SPEAKER
15:00 – 15:20	Introduction Session	
	Welcome and introduction to the BIOBASEDCERT cluster	Iris Vural Gursel (Wageningen Research)
15:20 – 16:00	Policy priorities and initial policy recommendations	
	Guiding policy priorities and initial policy recommendations for sustainable biobased systems and their certification Q&A	Luana Ladu (TU Berlin, BAM)
16:00 – 16:15	Coffee Break	
16:15 – 17:15	BIOBASEDCERT Monitoring Tool	

	<p>System level – STAR4BBS</p> <p>Delve into the foundational aspects of the System level, focusing on key indicators centered around governance and operational requirements.</p>	<p>Luana Ladu (TU Berlin, BAM)</p>
	<p>Content level – SUSTCERT4BIOBASED</p> <p>Explore the core criteria at the Content level, covering indicators on environmental sustainability, circularity, social responsibility, and economic viability.</p>	<p>Laura Vayrynen (ECOS), Heleen Ballemans (Wageningen Research)</p>
	<p>Outcome level – HARMONITOR</p> <p>Learn about the indicators designed to assess the impact of Certification Schemes and Labels</p> <p>Q&A</p>	<p>Maulidia Khairani (Utrecht University)</p>
17:15 –	Monitoring certification schemes and labels	
18:15	A roundtable dialogue for sustainable solutions	
	<p>Roundtable with panellists and Q&A with participants</p> <p>Discussion on the potential role(s) of CSLs for the future of European Circular Bioeconomy and their use as a co-regulation instrument, as well as on the design of a monitoring tool for CSLs</p>	<p>Moderator: Iris Vural Gursel (Wageningen Research)</p>
18:15 –	Closing Remarks	<p>Antonia Kalimeri (WHITE)</p>
18:20		

2.3.6 November 2024: “Driving Sustainability through Certification: Unveiling the costs and benefits of Certification Schemes in bio-based industries and products”

The co-creation workshop was held on November 11, 2024, organized by STAR4BBS (the technical partner AUA supported by APRE, together with sister projects). The topic was “**Driving Sustainability through Certification: Unveiling the costs and benefits of Certification Schemes in bio-based industries and products**”.

General aim

The aim of this workshop, which included external stakeholder consultations, was to explore the economic impact of certification schemes in bio-based industries, focusing on costs, benefits,

and externalities. The Cluster event was titled “**Driving Sustainability through Certification: Unveiling the costs and benefits of Certification Schemes in bio-based industries and products**”.

Specific objectives

- Look into the economic effect of Certification Schemes on the operation of a company by elucidating the costs and benefits that are associated with their implementation.
- Raise awareness of externalities and explore life cycle costing (LCC) as a tool to assess externalities by discussing how LCC can be used to assess the costs and economic implications of adopting certification schemes in bio-based industries.
- Analyze the challenges and opportunities: Identify key obstacles and potential benefits for businesses adopting sustainable certification schemes.
- Promote stakeholder collaboration: Facilitate discussion among industry stakeholders, researchers, certification scheme representatives and policymakers on the economic aspects and challenges of certification.
- Assess the economic impact of CSLs by evaluating their costs and benefits.
- Explore LCC as a tool to assess externalities and economic implications in bio-based industries.
- Identify challenges and opportunities for businesses adopting CSLs.
- Foster collaboration among stakeholders to address economic aspects and challenges of CSLs.

Methodology

The workshop was based on topic presentations followed by exercises to gather the insights from the participants using Mentimeter tools. It was organized as a joint co-creation event of the cluster, in collaboration with the sister projects. APRE handled the organizational aspects, from the invitation to the setup of the exercises. For content and general structure of the workshop, AUA organised several meetings with the sister projects to align on technical content.

Results

This co-creation workshop brought together stakeholders and experts to share key findings, receive valuable input and suggestions, and explore potential collaborations. In total, 66 people participated to the workshop.

External stakeholders gained insights into how life cycle costing can provide a comprehensive evaluation of the economic benefits and hidden costs associated with certification schemes.

Using the practical case study on bio polyethylene value chain stakeholder discussed on how certification affects the socio-economic and environmental impacts of a bio-based product and the cost and benefit items to be considered when evaluating the implications of certification.

A guided discussion started with the identification of most critical challenges that businesses and other actors face in adopting certification schemes (Identification of barriers and solutions) and was followed by the exploration of viable strategies to overcome them. These strategies should be the basis to write recommendations to the European Commission on how certification can be made more cost-effective.

The workshop emphasized the need for a holistic approach to sustainability, integrating financial performance with environmental and social externalities. The questions in Mentimeter were included in the presentation slides and were structured to be quick and to reinvigorate the discussion.

The results of the STAR4BBS questions provided key insights into stakeholder perspectives on sustainability reporting, regulatory measures, and the monetization of externalities. SUSTCERT4BIOBASED asked if the participants agreed in the statement “internal benefits of certification outweigh the internal costs”. The responses to this question suggest a significant knowledge gap regarding the internal cost-benefit dynamics of certification. This highlights the need for greater transparency and communication on the tangible advantages of certification, such as improved operational efficiency, market access, and risk mitigation. The responses collected by HARMONITOR during the workshop highlight key challenges faced by different actors in the certification process, particularly feedstock producers, traders, manufacturers, and retailers. Additionally, the discussion on potential solutions and the impact of mandatory certification provides valuable insights into stakeholder perspectives.

The responses given by participants indicated that while certification is widely recognized as an important tool, its effectiveness is hindered by **costs, bureaucracy, and inconsistencies** across different regions and sectors. Stakeholders prioritize **simplifying certification processes** and **ensuring credibility**, rather than relying on additional regulations or financial support. The positive view of mandatory certification suggests that clearer, standardized frameworks could help reduce uncertainty and facilitate broader adoption. Moving forward, efforts should focus on **harmonizing requirements, improving governance, and addressing market distortions** to enhance the impact and credibility of certification systems. The agenda of the workshop is presented below.

Table 6: Driving Sustainability through Certification: Unveiling the costs and benefits of Certification

TIME	TITLE	SPEAKERS
10:00	Opening and introduction	Sofia-Maria Ioannidou, Stamatia Skoutida (AUA); Luana Ladu (TUB) STAR4BBS
10:30	Sustainable Certification Schemes: Paving the way for a wider perspective of Life Cycle Costing 15 min presentation + 15 min interactive session	Stamatia Skoutida (AUA) STAR4BBS
11:00	Exploring Costs and Benefits of Sustainable Certification Schemes: the case of the bio-polyethylene value chain 15 min presentation + 15 min interactive session	Lusine Aramyan; Luuk Vissers SUSTCERT4BIOBASED
11:30	From Challenges to Certification: Breaking Down Barriers to Sustainability 15 min presentation + 15 min interactive session	Costanza Rossi (SQ-Consult); Birka Wicke <i>HARMONITOR</i>
12:00	Closing remarks	Stamatia Skoutida (AUA) STAR4BBS
12:20	End	

2.3.7 December 2024: 3rd BIOBASEDCERT Roundtable Meeting & Workshop with policy makers

The BIOBASEDCERT cluster organized two back-to back events on the 4th of December 2024 in Brussels.

General aim

The aim of this workshop, which included external stakeholder consultations, was to delve into the BIOBASEDCERT Monitoring Tool (BMT) and its potential to support the EU bioeconomy policy framework.

Methodology

The event was divided into two different events: in the morning event the third meeting of the Roundtable for Certification Schemes was held. The event brought together policy makers and certification schemes to discuss the evolving role of certification in the EU Bioeconomy. The afternoon event was a workshop for policymakers diving into the applicability of the developed BMT.

Results

Key Takeaways Morning Session

- The bioeconomy is a key element in driving the green transition and supporting the defossilization of the EU economy. To enable the development of a truly sustainable bioeconomy, a robust and well-defined policy framework is essential; such a framework should ensure the sustainable management of carbon sources, balancing the growing demand for land and biomass, resources, and promote responsible resource use to meet environmental and economic goals.
- Sustainability certification schemes have established comprehensive frameworks to ensure sustainable production practices across social, economic, and environmental dimensions in various sectors of the bioeconomy. While their rapid development in recent years has largely been driven by regulatory requirements, the growing demand for sustainable biomass and products is also expanding into unregulated markets.
- The further development of policy requirements for a sustainable bioeconomy presents several challenges. On one hand, it is essential to account for existing requirements and advancements in sectors such as bioenergy while addressing the evolving needs of other sectors. On the other hand, ensuring stakeholder participation and acceptance is critical for the successful implementation of new policy measures.
- Established sustainability certification schemes can play a key role in supporting the development and implementation of policy frameworks by acting as a bridge between policymakers at both European and national levels and market actors. Additionally, independent institutions, such as NGOs and organizations like ISEAL, can contribute by defining best practices and driving further advancements within the industry innovation.
- Further dialogue among EU and national policymakers, certification schemes, and NGOs is essential crucial to advance the a sustainable bioeconomy. This requires neutral platforms and well-structured formats to ensure effective communication and collaboration, fostering constructive engagement across all stakeholders.

Key Takeaways Afternoon Session

- While currently there is no EU regulation specific to biobased products that recognises a role for voluntary sustainability certification schemes, the BMT could support legislation by identifying suitable certification schemes for regulatory alignment. Best practices from legislation in other areas (e.g. Green Claims, renewable energy, timber), should be considered. This tool could help with the implementation of regulation for biobased products by showing which certification schemes could be recognized for this purpose.
- Certification schemes vary in scope, the BMT was designed to accommodate those differences. The BMT can help certification schemes strengthen the way they address circularity, a growing priority currently not well-covered by present requirements.
- The “Minimum biobased content” is a separate concept with own instruments on assessment. However, it is relevant for defining what is considered a biobased product to be analysed with the BMT.
- The EC cannot mandate the use of a certain tool but can offer it as an option/solution. Each certification schemes has its own cycle and procedures to review, re-evaluate and update in this timeline.

Participants also pointed out other potential applications of the BMT:

- Measuring progress toward objectives;
- Informing public procurers;
- Harmonisation of scheme assessment methodologies;
- Support competitiveness of certification schemes and labels;
- Reduce the burden of verification by EU Member States in those cases where sustainability requirements exist.

Participants acknowledged that the results of the benchmark should be presented in a way that satisfies the needs of the user audience, which will in turn depend on what they are using the tool for. No concerns were raised during the meeting with the proposed visualisations.



Figure 8. BIOBASEDCERT Roundtable Meeting and Workshop in Brussels

The agenda is described below.

Table 7: 3rd BIOBASEDCERT Roundtable Meeting & Workshop with policy makers

TIME	TITLE	SPEAKERS
09:30	Opening and Welcome Address Overview of the event's objectives and importance of certification in bioeconomy governance	Stefania Rocca – REA Stefan Majer – DBFZ
09:40	Tour de Table: Participant introductions	
09:50	Keynote 1: “The Bioeconomy in the Near Future”	Adrian Leip – DG RTD
10:10	Open Discussion based on Keynote and Guiding Questions. Dialogue on how certification schemes can support emerging regulatory needs.	
10:45	Summary of Discussion	
11:50	An introduction to the BIOBASEDCERT Monitoring Tool (BMT)	Iris Vural Gursel - WR
11:00	<i>Break</i>	
11:15	Keynote 2: “The Role of Certification – Possibilities and Limitations”	Maira Devisscher – ISEAL
11:25	Open Discussion Exploration of certification's strengths, challenges, and potential enhancements.	
11:50	Summary and Outlook to the Next Roundtable	

12:00	Break	
13:10	The value of monitoring tools for sustainability certification	Silvia Maltagliati – DG RTD Sergio Ugarte – SQ Consult
13:25	The BMT levels and how they were developed	Iris Vural Gursel -WR Nikola Matovic – TU Berlin Laura Väyrynen – ECOS Maulidia Khairani – UU
13:45	Open discussion on the potential uses of the BMT	moderated by Martin Junginger – UU
14:15	Consultation on the presentation of the BMT results	Maira Devisscher – ISEAL
14:50	Final remarks and way forward	Luana Ladu – TU Berlin

2.3.8 May 2025: “BIOBASEDCERT Final Conference: “How can voluntary certification systems support the transition to a sustainable circular bioeconomy”

The event, organised jointly by the three sister projects with the support of the Project Officer in the EC venue, saw the participation of 89 people for the first day and 39 the second one; Policymakers, Advisory Board members, schemes and label owners, industry actors, NGOs, academia, EU projects related to bio-based systems were present. The first day was with external stakeholders, and the second day was a closed event of the cluster.

Table 8: Final event participation statistics

		13th of May	14th of May
	N° Participants	81 over 93 subscriptions	42 over 40 subscriptions
project	HARMONITOR	12	13
	STAR4BBS	23	16
	SUSCERT4BIOBASED	14	8
	Others	31	2

		13th of May	14th of May
profile	Academia	29	23
	Industry	15	4
	Civil society, including NGOs	15	3
	Policymaker	9	2 (from EC)
	Other	25	10

During the first day key results from the BIOBASEDCERT cluster were shared, linking them to the broader European bioeconomy policy framework. The day featured:

- i) Interactive thematic sessions, including presentations by the cluster, panel discussions and co-creation activities involving key stakeholders;
- ii) Integrative sessions to reflect on and synthesize the insights gained during the day.

Discussions covered the BIOBASEDCERT Monitoring Tool (BMT), assessment of certification schemes and labels, trade flow analysis, and cost-benefit evaluations. The main focus was on exploring how voluntary sustainability certification systems can function as effective policy tools for a sustainable circular bioeconomy. Key takeaways and policy recommendations were documented, with the day concluding in an integrative session to synthesize findings. A highlight of the event was a European Commission DG RTD.B1-led workshop on: “Bio-based products in the frame of the Ecodesign for sustainable products Regulation and the Consumer empowerment Directive”.

Throughout the event, insights on how voluntary sustainability certification systems can serve as effective policy tools for a sustainable circular bioeconomy were explored. Key takeaways and policy recommendations were documented, with the day concluding in an integrative session to synthesize findings.

After the opening made by Luana Ladu, Astrid Ladefoged (Unit Green Transitions, DG Research & Innovation at European Commission) and Stefania Rocca (Project Officer, European Research Executive Agency, REA), the first session, named “**Exploring the applicability of the BIOBASEDCERT Monitoring Tool (BMT) as a co-regulation instrument**”, provided a short overview of the BMT, including its structure, core functionalities, and key findings from its two-phase testing process. The discussion focussed on the potential of the BMT to support EU policy objectives, particularly in fostering the uptake of sustainable bio-based materials. Special attention was given to the tool’s use as a voluntary or co-regulatory instrument within current or forthcoming EU legislative frameworks on bio-based products. The panel explored the BMT’s relevance to sustainability certification schemes and labels (CSLs), its potential alignment with regulatory instruments (such as REDIII), and its long-term integration in the broader EU sustainability governance landscape.

The day continued with the **Workshop: “Bio-based products and certification in the frame of the Ecodesign for Sustainable Products Regulation (ESPR) and the Consumer Empowerment Directive”**. The policy framework that designs and steers the pathway of the EU industry towards the green transition includes the Ecodesign for Sustainable Products Regulation and the Consumer empowerment Directive. This workshop explored the progress the bio-based industrial value chains along such pathway, bringing together experts from the projects’ consortia. Panellists examined how the Empowering Consumers Directive and the ESPR influence bio-based products (in scope of the legislation), particularly in areas such as sustainability claims, certification schemes, and labelling—including the introduction of digital product passports. Additionally, discussions focussed on the necessary developments, including research and innovation efforts, to align both traditional bio-based products—such as textiles, wood-based and bio-based construction materials, paper packaging, detergents, and lubricants—and innovative bio-based solutions with the requirements set by these regulations. Panel discussion was very animated highlighting both the challenges and opportunities in aligning bio-based products with evolving EU regulatory requirements; key challenges included the complexity and cost of certification, fragmented policy implementation, and the need to enhance the credibility of sustainability claims. At the same time, opportunities emerged through the adoption of digital product passports, the potential of co-regulatory tools like the BIOBASEDCERT Monitoring Tool, and the strategic use of voluntary certification schemes to improve transparency, facilitate market access, and support compliance with EU sustainability objectives.

The following session, **Session II: “Impact of certification on global bio-based value chains”** explored the critical role of certification schemes in shaping global bio-based value chains, highlighting their influence on sustainability, market access, and regulatory compliance. Key insights from sister projects were presented, showcasing the main results achieved and the lessons learned. The session also addressed the challenges, barriers, and opportunities faced by certification schemes across bio-based value chains. During the interactive segment participants shared their perspectives and collaboratively identify potential solutions to overcome existing barriers, fostering resilient and sustainable bio-based value chains.

Session III: “Assessing the feasibility of voluntary sustainability certification: costs, benefits, challenges and ways forward” addressed the overall feasibility of voluntary sustainability schemes, presenting key results from the cluster’s research on (economic) feasibility: key challenges of certification, important cost items and benefits, as well as enabling factors to address challenges and knowledge gaps identified. Panellists, representing several stakeholders, addressed strategies to overcome challenges and increase feasibility.



Figure 9. BIOBASEDCERT Final Event

The final session, **Session IV: “How can voluntary sustainability certification schemes drive the transition to a sustainable bioeconomy”** was a dynamic and interactive session to summarize the most valuable insights derived from the work and discussion of the day and the meetings of the Roundtable of Certification Schemes promoted by the BIOBASEDCERT cluster, focussing on key strategic recommendations. Participants engaged in translating project results into actionable future steps, identifying critical gaps, and providing inputs for shaping policies directions to drive the establishment of a sustainable circular bioeconomy.

A key element of the session was the presentation and discussion of the clusters joint policy recommendations. The discussion of the recommendations was supported by a short

mentimeter sessions, allowing the participants to provide feedback on the previous contributions during the session. The discussion around the mentimeter feedback session covered aspects such as:

from the mentimeter session:

- The meaningful implementation of the BMT
- The need for continuous information of policy makers regarding the complexity of CSLs and their potential application in policy frameworks
- How to further improve credibility and robustness of CSLs
- Improving the database for trade flow monitoring based on EU wide standardised guidelines for the collection and analysis of trade data

The agenda is reported below:

Table 9: BIOBASEDCERT final event agenda

09:00-12:30- Morning session	
9:00- 9:15 Opening	Opening Agenda and Objectives <ul style="list-style-type: none"> • Luana Ladu (TU Berlin) Welcome and introduction <ul style="list-style-type: none"> • Unit Green Transitions, DG Research & Innovation at European Commission - Astrid Ladefoged • Stefania Rocca (Project Officer, European Research Executive Agency, REA)
9:15 – 10:45- Session I “Exploring the applicability of the BIOBASEDCERT Monitoring Tool (BMT) as a co-regulation instrument”	
Moderator: • Iris Vural Gursel (Wageningen Research)	9:15 – 10:00 BIOBASEDCERT Monitoring Tool - BMT <ul style="list-style-type: none"> • BMT: Introduction and applicability (Luana Ladu, TUB) • System Level (Nikola Matović, TUB) • Content Level (Heleen Ballemans, WR) • Outcome Level (Maulidia Khairani, UU)
	10:00 – 10:10 Q&A from all participants
	10:10 – 10:40 Panel discussion with: <ul style="list-style-type: none"> • Jiannis Kougoulis (DG GROW) • Blanca de Ulibarri (RSB) • Audrun Utskarpen (Nordic Swan) • Martin Junginger (3-CO + BIOBASEDCERT Cluster) • Rodrigo Rupérez (UNCTAD)

	10:40 – 10:45	Summary – recommendations	
10:45– 11:00	<i>Coffee break</i>		
11:00- 12:30- Workshop: “Bio-based products and certification in the frame of the Ecodesign for Sustainable Products Regulation (ESPR) and the Consumer Empowerment Directive”			
Moderator: • Silvia Maltagliati (DG RTD at European Commission)	Panel discussion with: <ul style="list-style-type: none"> • Lara Dammer (nova-Institut) • Luca Boniolo (ECOS) • Maira Devisscher (ISEAL) • René Bethmann (VAUDE) • Ivana Krkljus (BASF) • Floris Akkerman (BAM) 		
12:30 – 13:30	<i>Lunch</i>		
13:30 – 17:30- Afternoon session			
13:30 - 14:30- Session II: “Impact of certification on global bio-based value chains”			
Moderator: • Lara Dammer (nova-Institut)	13:30 – 13:45	Presentations from the cluster (key results & recommendations) <ul style="list-style-type: none"> • Myrna van Leeuwen (WR) • Gabriela Lopez Camey (Preferred by Nature) • Luciano Proto Cassina (nova-Institut) 	
	13:45 – 14:10	Interactive session	
	14:10 – 14:25	Discussion of the project results, interactive session and conclusion	
	14:25 – 14:30	Key takeaways	
14:30 – 15:30- Session III: “Assessing the feasibility of voluntary sustainability certification: costs, benefits, challenges and ways forward”			
Moderator: • Birka Wicke (Radboud University)	14:30 – 14:50	Presentations from the cluster (key results & recommendations) <ul style="list-style-type: none"> • Costanza Rossi (SQ-Consult) • Lusine Aramyan (WR) • Sofia Maria Ioannidou (AUA) 	
	14:50 – 15:15	Panel discussion with: <ul style="list-style-type: none"> • Yuki Hamilton Onda Kabe (Braskem) • Laura Väyrynen (ECOS) • Harmen Willemse (Better Biomass) • Joyce de Wit (RVO) 	

	15:15 – 15:25	Q&A from all participants	
	15:25 – 15:30	Key takeaways	
15:30 – 16:00	<i>Coffee Break</i>		
16:00 – 17:20- Session IV: “How can voluntary sustainability certification schemes drive the transition to a sustainable bioeconomy”			
Moderators: <ul style="list-style-type: none"> • Sergio Ugarte (SQ Consult) • Stefan Majer (DBFZ) 	16:00 – 16:05	Welcome	
	16:05 – 16:15	Projects4Future Workshop Insights: Tools and Recommendations on Standards, Certifications, Labelling and Monitoring for the Bioeconomy <ul style="list-style-type: none"> • Susanna Albertini (FVA New media Research) 	
	16:15 – 16:30	Introduction and summary of key messages from previous sessions <ul style="list-style-type: none"> • Iris Vural Gursel (Wageningen Research) • Silvia Maltagliati (DG RTD) • Birka Wicke (Radboud University) • Lara Dammer (nova-Institut) 	
	16:30 – 16:45	Policy and platform recommendations <ul style="list-style-type: none"> • Stefan Majer (DBFZ) 	
	16:40 – 17:05	Discussion on recommendations <ul style="list-style-type: none"> • Piergiuseppe Morone (Unitelma la Sapienza) 	
	17:05 – 17:20	Q&A with all participants and key take aways	
	17:20 – 17:30	Closing remarks <ul style="list-style-type: none"> • Luana Ladu (TU Berlin) 	
17:30 – 19:00	Networking event		

2.3.9 Joint trainings/workshops

- ***March 14th 2025; Navigating the CSR Directive: Leveraging Voluntary Sustainability Standards and Research to Strengthen Bio-Based Industry Reporting***

The training session “Navigating the CSR Directive: Leveraging Voluntary Sustainability Standards and Research to Strengthen Bio-Based Industry Reporting” took place online on March 14, 2025, bringing together 52 registered participants (35 attending), between

professionals from across sectors. Organized by STAR4BBS and ENGAGE4BIO, with the support of SUSTCERT4BIOBASED, the session focused on the practical implications of the Corporate Sustainability Reporting Directive (CSRD) for the bio-based sector.

Presentations covered the key elements of the CSRD, the role of research in facilitating its implementation, and how life cycle thinking supports sustainable innovation. Speakers included experts from CISE, UNI, Universidade de Santiago de Compostela, and Metropolia.

The session concluded with a discussion moderated by Luana Ladu (TU Berlin), where participants exchanged insights on aligning sustainability reporting with EU taxonomy and industry needs. The event was well-received, reflecting growing interest in harmonizing reporting practices through research and voluntary standards.

- ***March 25th 2025; Navigating the new EU legislations to address greenwashing: how standards and research projects can support the bio-based industry***

The online training session “Navigating the New EU Legislations to Address Greenwashing”, organized by STAR4BBS with support from SUSTCERT4BIOBASED, was successfully held on March 25, 2025. The event gathered 59 registered participants (44 attending) participants from across Europe to explore the implications of the Empowering Consumers Directive (EU) 2024/825 and the upcoming Green Claims Directive, with a focus on how research and standards can help the bio-based industry combat greenwashing.

Key presentations included insights into EU legislation by Margaux Le Gallou (ECOS), innovative analytical methods for bio-based materials by Gustavo Adrián Defeo (CEN TC289), and the cluster’s collective efforts on sustainability certification from TU Berlin and ECOS representatives.

The session featured dynamic Q&A segments and concluded with a rich panel discussion, underscoring the need for transparent, evidence-based sustainability claims. The high level of engagement highlighted the relevance of the topic and the importance of continued collaboration among standardization bodies, research projects, and industry stakeholders.

- ***April 8th 2025; Sustainability Certification in the Dutch Bio-economy: an Exploration***

This regional workshop in the Netherlands was organised by SUSTCERT4BIOBASED, supported by the STAR4BBS project. The aim was to engage with key stakeholders from regional

bioeconomy networks (e.g., policymakers, partnerships, and branch organizations) to assess whether our findings align with the regional realities and needs. The goal is to:

- Share insights and recommendations from the BIOBASEDCERT cluster concerning sustainability certification of biobased products.
- Validate how applicable our recommendations are in practice, and explore opportunities to implement them as well as discuss perceived barriers within regional bioeconomy strategies and initiatives.

Seven invited experts joined the workshop including representatives from industry (Dutch Association of Biowaste Processors, BVOR), Dutch platform for the bioeconomy (i.e., Platform Bio-Economie), Dutch Ministry of Infrastructure and Water Management, Municipality of Arnhem and Province of Gelderland. The workshop featured presentations providing information about the BIOBASEDCERT cluster and its activities as well as the recommendations derived. Additionally Harmen Willemse from STAR4BBS presented on the Better Biomass standard. The discussions were targeted towards discussing on the recommendations, their relevance for the Netherlands, perceived barriers and opportunities.

The Dutch government is currently developing a regulatory sustainability framework for biological resources, based on REDIII requirements. This framework will become applicable to different biobased products (on top of biobased energy/ fuel), and lean on the use of voluntary CSLs. Although the Dutch government cannot prescribe which scheme/label a company must adopt, as this would lead to market distortion, they do intend to make a “white list” with CSLs that comply with the sustainability requirements in the regulatory framework, and can be used by operators to demonstrate their performance. In addition, a regional public stakeholder (i.e., province of Gelderland) confirms that CSLs can be used in the public procurement policies (e.g., in the areas of construction, manufacturing and waste management, which are all closely linked to the bioeconomy). A major challenge was seen to find a good balance between the comprehensiveness of the sustainability requirements of CSLs and the practical applicability by companies. Regulation was seen as the best driving force for driving the ambition level of the CSLs. The agenda is given in Table 10.

Table 10: Sustainability Certification in the Dutch Bio-economy: an Exploration agenda

TIME	TITLE	SPEAKERS
14:00-14:15	Opening, welcome and round of introductions	
14:15-14:30	Introduction to SUSTCERT4BIOBASED and BIOBASEDCERT () + Q&A	Iris Vural Gursel

14:30-14:40	Interactive exchange on sustainability certification	
14:40-15:00	Presentation of the Better Biomass standard + Q&A	Harmen Willemse, partner of STAR4BBS
15:00-15:40	Presentation findings and recommendations BIOBASEDCERT cluster + Q&A	Heleen Ballemans
15:40-15:50	Open discussion on the applicability of recommendations	
15:50-16:00	Conclusion and follow up	

2.3.10 BIOBASEDCERT Roundtable meetings

The Roundtable platform for CSLs organised five meetings throughout the duration of the joint Cluster (Table 10). The meetings have been used to disseminate different cluster results and to collect feedback from the roundtable participants. The following Figure provides an overview on the dates and topics of the different roundtable meetings.



Figure 10: Roundtable platform meetings

To satisfy the demand from the different institutions involved in the roundtable, the program of the roundtable meetings covered a wide range of topics. These included amongst others:

- The identification of relevant and pressing topics regarding standard development, mutual recognition, cooperation with certification bodies and policy makers from the perspective of the participating CSLs

- The presentation and discussion of results from the trade flow analysis conducted in HARMONITOR.
- Future trends and market demand from the industry (with invited external guest from different industries).
- Future policy instruments on the EU level, relevant for certification schemes (as an in-person meeting with representatives from DG Growth, DG Climate, DG R&I, DG Environment and RVO (an executive body from the Dutch Ministry of Economic Affairs)).
- The development, design and results of the Monitoring Tool developed by the BIOBASEDCERT cluster.

The topics discussed allowed an intense interaction with CSLs to discuss, test and improve selected HARMONITOR results and to improve their dissemination and uptake.

3. Conclusions

The consolidation of the BIOBASEDCERT cluster, encompassing the STAR4BBS, HARMONITOR, and SUSTCERT4BIOBASED projects, marks a significant stride in aligning with the objectives of the various projects. By establishing a collaborative framework and undertaking joint initiatives, the cluster has effectively fostered communication and development to better address the goals set forth in the Horizon Europe call for conducting research on sustainability certification schemes in bio-based systems. This report summarises the collaborative efforts outlined during the initial establishment of the cluster, coupled with the delineation of upcoming joint activities. These activities underscore the clusters' commitment to strengthening the interconnectivity between the three projects. Noteworthy strategic areas of shared importance are identified, each accompanied by specified cooperation activities. The inter-project teams are dedicated to the five thematic areas that were identified in the projects (selection and review of CSLs; bio-based value chain selection and global trade flows; Joint Monitoring System; analysis of costs and benefits and feasibility study; communication and dissemination of the results). The creation of a Joint Advisory Board and the Joint Monitoring System are standout features, facilitating the exchange of expertise and feedback, as well as boosted efforts, to enhance the robustness of sustainability certification schemes. By aligning on the scope, KPIs, and methodology for the BMT, and by engaging with stakeholders throughout the process, the three sister projects can work together to develop a tool that has the potential to be widely adopted and used beyond the life of the projects. The result will be a comprehensive and detailed tool that can be used to assess the sustainability of biobased products and support the transition to a bioeconomy in the EU. In conclusion, the establishment of the BIOBASEDCERT cluster reflects a positive progression aligned with the mid-term objectives and plans outlined in the clustering report. The sustained collaboration among project coordinators and inter-project teams is instrumental for effective implementation. The strategic identification of shared areas and cooperation activities serves as a guiding framework, outlining the necessary steps to fortify the connections between the three projects and realize desired outcomes. The BIOBASEDCERT cluster not only signals a united commitment to common objectives but also sets the stage for continued collaboration, ensuring the enduring impact of collective endeavours.



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