



Sustainability Transition Assessment Rules for Bio-Based Systems (STAR4BBS)

Sustainable bio-based systems through effective certification & labelling

Standards and R&I Projects: HOW TO SUPPORT THE BIO-BASED INDUSTRIES

14° December, 2023

Luana Ladu (TUB, BAM)





STAR4BBS: Sustainability Transition Assessment Rules for Bio-Based Systems

HORIZON-CL6-2021-ZEROPOLLUTION-01-07: International and EU sustainability certification schemes for bio-based systems

1st of September 2022 – 31st of August 2025

Aim: maximize the potential of Sustainability Certification Schemes (SCS) and labels to support a successful transition to a sustainable bio-based economy, assessing their effectiveness, robustness, and credibility.

Issue: Lack of **transparency** and **harmonization** (making comparability across products increasingly difficult for consumers)





PROJECT MAIN OBJECTIVES



ANALYSIS OF
EXISTING CSLs



EVALUATION OF
GLOBAL TRADE
FLOWS



HARMONITOR



DEVELOPMENT OF
INDICATORS AND A
MONITORING SYSTEM



DETERMINATION
OF THE IMPACT OF
CSLs

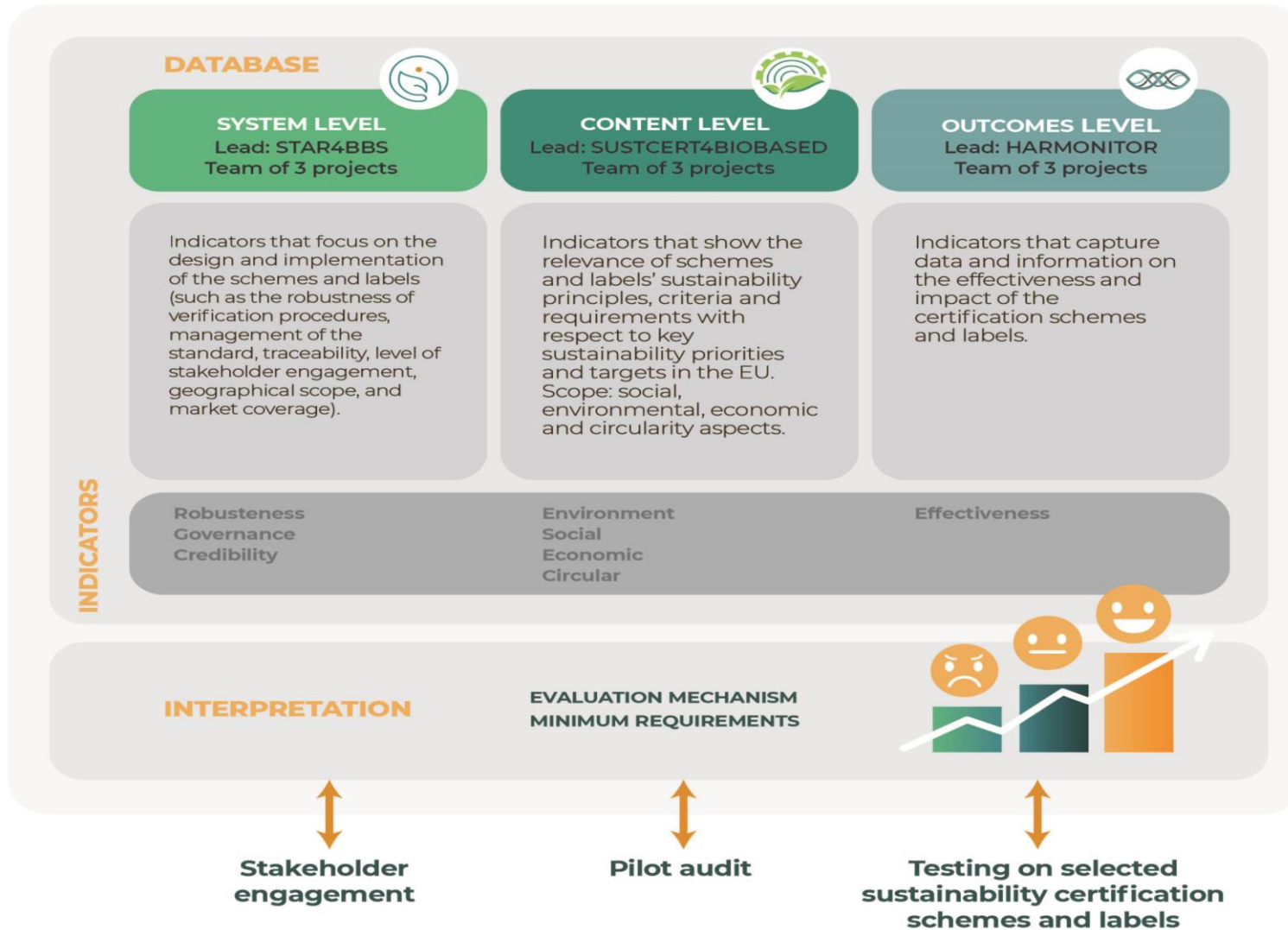


POLICY RECOMMENDATIONS
REGARDING THE ADOPTION
OF ROBUST CSLs





Joint Monitoring System levels





Joint Monitoring System



Purpose

- Increase the understanding of the **effectiveness** and **robustness** of the existing sustainability CSLs for biobased systems in the European market.
- Provide the EC and CSL owners with a **framework** to evaluate the potential of CSLs to contribute to sustainability goals
- Facilitate the **harmonization** of shared *sustainability* and *governance* criteria within existing SCLs

Audience

The European Commission/Policy Makers	The JMS will increase transparency regarding the performance of existing CSLs for biobased systems. The EC could use the tool as an Implementation mechanism to fulfil regulations (in analogy with REDII).
Certification Schemes and Labels Owners	The CSLs owners would have access to a harmonized system that would cover entire value chains. CSLs owners could potentially use the JMS as a benchmark to address the gaps in their own systems.

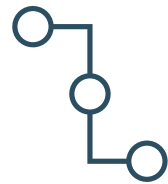




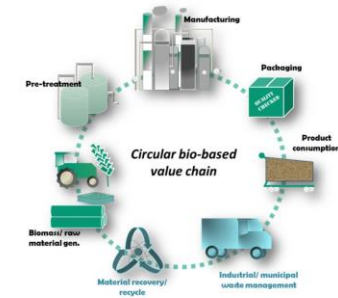
Scope of the JMS



Target: SCLs intended for **industrial biobased value-chains** and to **biobased materials** and **products**



Depth: Considering the **entire value chain**, capturing all aspects of a product's life cycle



Geographical range: Applicability to products produced & traded within the EU. Other geographical regions involved in the production and product handling will be considered.





Initiating the process of establishing a fast track standard

- ❖ During the project implementation, the process of establishing a fast track standard (e.g. UNI/PdR, CEN Workshop Agreement) around the final concept of the monitoring system, will be started by TUB, in collaboration with UNI and with the support of the other partners.
- ❖ The standardization related activities will provide the opportunities to present and discuss different aspects of the monitoring system with a wider range of experts. In particular, one aspect to be discussed is the sustainability of the system beyond the project.

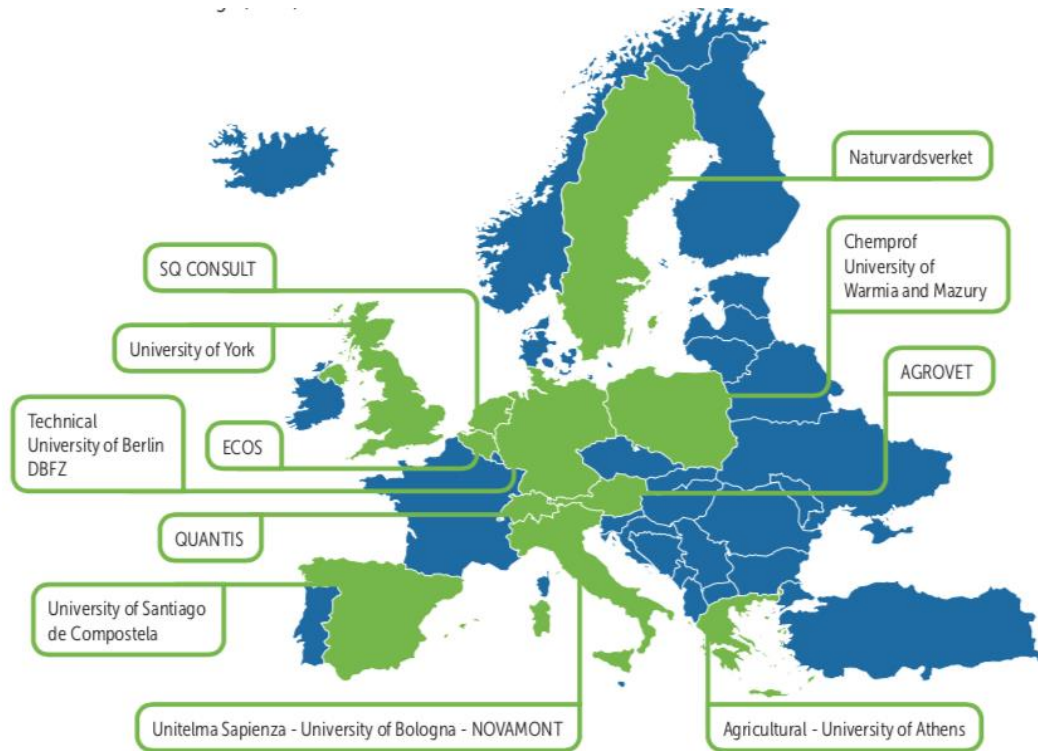




Prassi di Riferimento (UNI/PdR 135:2022)



BB 01- 2016: Sustainability schemes for the Bio-based economy



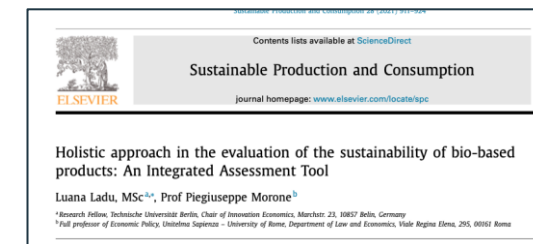
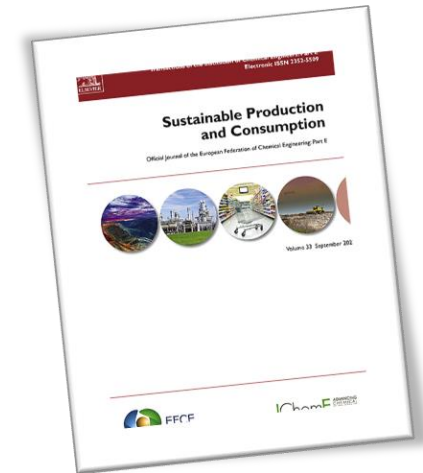
15 partners

3 years (May 2017 – April 2020)

Sustainability assessment toolbox

Policy scenario analysis

Market uptake and level playing-field





IAT Legacy: Prassi di Riferimento (UNI/PdR 135:2022)



Bio-based products - Organization and product application guidelines for environmental and social qualification (UNI/PdR 135:2022)



From theory to practice!



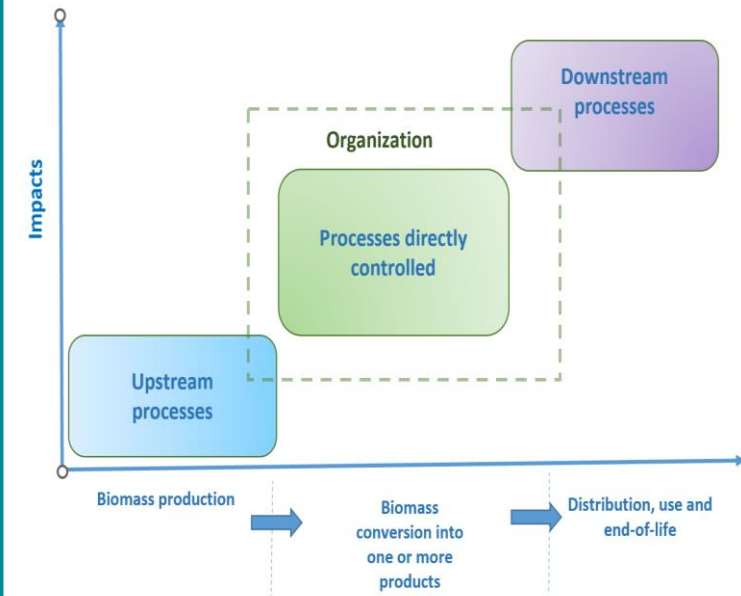
The STAR4BBS project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101060588





Purpose of best reference practice (UNI/PdR 135:2022)

- ❖ Developed by the working group “**Bio-based products Sustainability**”, guided by UNI and represented by 10 Italian experts from academia, industry, governmental and non-governmental organizations.
- ❖ Group leaders: Luana Ladu (TUB) and Piergiuseppe Morone (UNITELMA).
- ❖ Provides guidelines for the environmental and social qualification of bio-based products from a life cycle perspective, following the standard UNI EN 16751:2016 “Sustainability criteria for bio-based products” as the reference starting point.
- ❖ Guides the bio-based industry in assessing the most relevant aspects of the sustainability of bio-based products, with sustainability assessments, both at the organization and product level.
 - It is based on gaps related to the applicability of Standard UNI EN 16751:2016. In particular, the lack of methodological guidance on how to develop and apply metrics to demonstrate the indicators and requirements included in the standard.
 - This PdR provides producers of bio-based products with guidelines that describe how to operationally assess and use individual sustainability indicators. It is intended to allow the organization an easy connection with the requirements placed therein. Having UNI EN 16751:2016 as a reference, this practice provides, for the criteria in it, methodological guidance on how to develop and apply metrics.
 - The development of reference values for metrics are outside the scope of this practice. In line with UNI EN16751, the practice does not apply to the following categories of (bio-based) products: food, feed and energy.





Structure and content of the PdR



CLIMATE PROTECTION AND AIR QUALITY:

- Greenhouse Gases (certification UNI ISO 14001:2015/EMAS; or procedures used to identifying and reducing GHGs);
- Air Quality (procedures used to identify and reduce air pollutants; list and monitor air pollutants).

WATER QUALITY AND SUPPLY:

- Conserving and protecting water resources (procedures used to identify and reduce impacts: UNI EN ISO 14046/PEF e OEF/EMAS).

BIODIVERSITY:

- Promote Positive Impacts and Reduce Negative Impacts on Biodiversity: i) In the areas where operations are taking place, and in ii) protected areas. The PdR provides guidelines on how companies can identify potential impacts and on which measures can be taken.

CIRCULARITY:

Promote circular business models:

- Efficient and sustainable use of resources: the PdR provides a non-exhaustive list of indicators for measuring the efficient and sustained use of resources;
- Reduction, recovery, and utilization of waste or by products: the PdR provide guidelines on how companies can implement a prevention and management of waste that facilitates its recovery.

WORKERS' RIGHTS:

- Freedom of association and collective bargaining;
- Child labor;
- Forced labor;
- Equal opportunity and discrimination;
- Fair salary;
- Working conditions.

LOCAL DEVELOPMENT:

- Promote local development;

LAND USE RIGHTS AND LAND USE CHANGE:

- Respect for land-use rights;

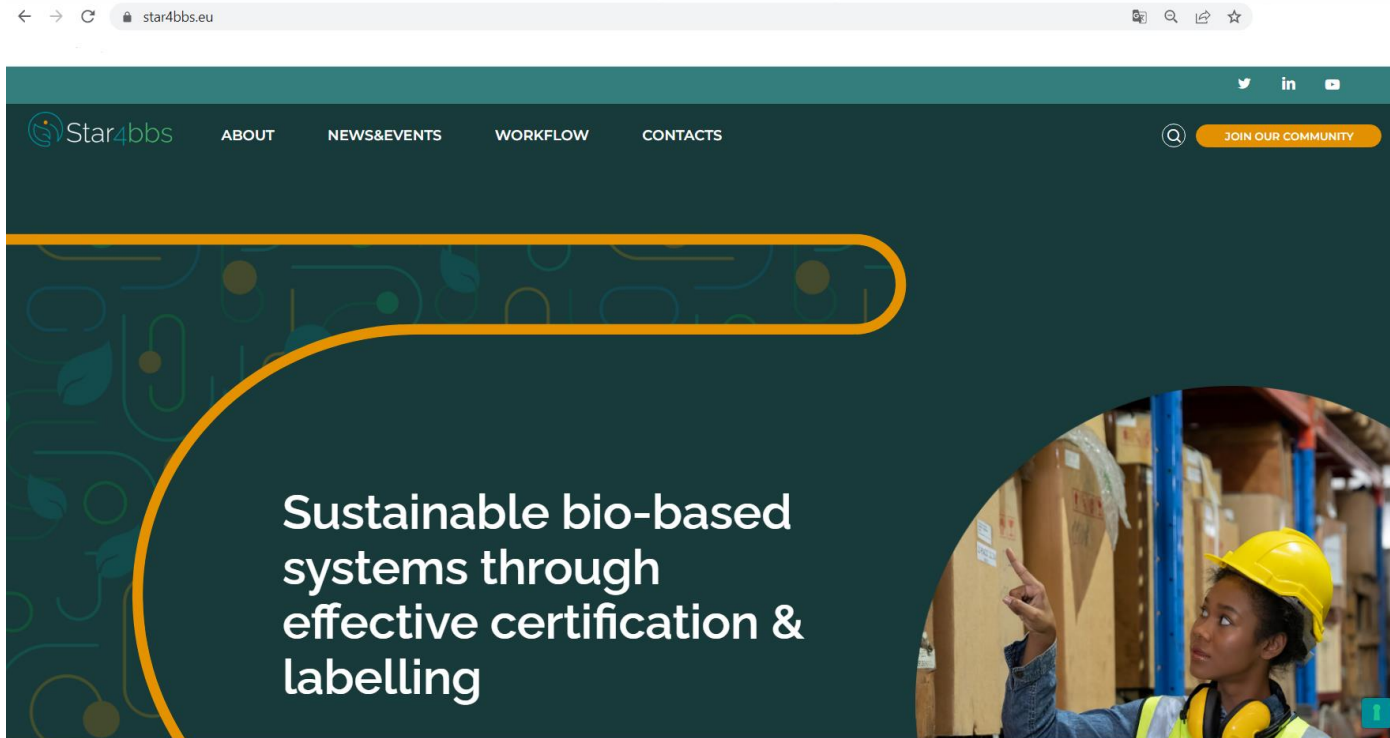
ECONOMIC SUSTAINABILITY:

- Fair business practices.



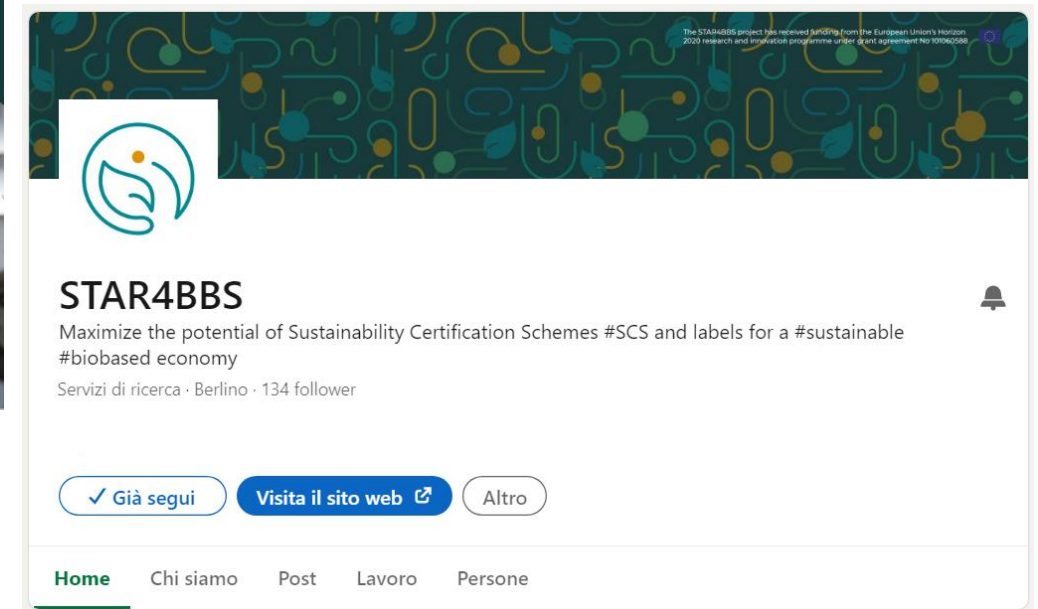


FOLLOW US



Website: www.star4bbs.eu

Social media: [Twitter](#)



Social media: [LinkedIn](#)





JOIN OUR COMMUNITY



ABOUT

NEWS&EVENTS

WORKFLOW

CONTACTS



JOIN OUR COMMUNITY

Join our community!



Newsletter
Subscription only

Database
Subscription

This consent form is designed to collect expressions of interest to be part of STAR4BSS Stakeholders Database, projects financed by the European Commission.

First name

Last name

Organization



Subscribe [here](#)



Luana Ladu^{1,2}, Nikola Matovic¹

¹Technische Universität Berlin

²Bundesanstalt für Materialforschung und –prüfung (BAM)

luana.ladu@tu-berlin.de

matovic@tu-berlin.de

Thank you for your attention!



 www.star4bbs.eu

 info@star4bbs.eu

#STAR4BBS

