Star4bbs

D8.4

Final Data Management Plan

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www.star4bbs.eu
info@star4bbs.eu

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D8.4

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Contributors

NAME	ORGANISATION
Marco Cardinaletti	UnitelmaSapienza
Ana Gabriela Encino-Munoz	UnitelmaSapienza
Enrica Imbert	UnitelmaSapienza

Peer Reviews

NAME	ORGANISATION
Nikola Matovic	TUB
Luana Ladu	TUB
Ilaria Bientinesi	APRE

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Partners short names

TUB	(Technische Universitat Berlin)
UNITELMA	(Università degli studi di Roma UnitelmaSapienza)
UNI	(Ente Italiano di Normazione)
AUA	(Geoponiko Panepistimion Athinon)
USC	(Universidad de Santiago de Compostela)
APRE	(Agenzia per la promozione della Ricerca Europea)
NOVA	(Nova - Institut fur politische und Okologische Innovation GMBH)
BAM	(Bundesanstalt fuer Materialforschung und Pruefung)
RSB	(Roundtable on Sustainable Biomaterials Association)
ISEAL	(ISEAL Alliance)
BB	(Better Biomass)

Abbreviations

DMP	Data Management Plan
EC	European Commission
EU	European Commission
PC	Project Coordinator
SCS	Sustainability Certification Schemes

Executive Summary

This document defines the overall strategy that guides the data management of the STAR4BBS Consortium during and after the completion of the project. According to the European Commission (EC), data management plans are fundamental elements for good data management. In fact, they describe the life cycle of data management, showing how data is collected, generated and processed. According to the EC, a data management plan (DMP) should include the following information:

- the handling of research data during & after the end of the project;
- what data will be collected, processed and/or generated;
- which methodology & standards will be applied;
- whether data will be shared/made open access;
- how data will be curated & preserved (including after the end of the project).

A preliminary STAR4BBS DMP has been developed by UnitelmaSapienza during the first months of the project as part of WP8 - Project Management and Internal Project Communication, led by TUB and now implemented in its final version. The present document outlines:

- purpose of data collection;
- DMP guiding principles;
- data management strategy;
- how to make data FAIR (Findable, Accessible, Interoperable, Reusable);
- allocation of resources;
- data security;
- ethical aspects related to data management.

This deliverable also presents the procedures of Data Management agreed to be used for the joint activities of the BIOBASEDCERT Cluster formed by three sister projects (STAR4BBS, HARMONITOR and SUSTCERT4BIOBASED) to ensure the correct use and handling of the materials following each projects' data management procedures.

1 Introduction

STAR4BBS is a three-year multidisciplinary and multi-actor collaborative project, involving six partners, four associated partners and one associated third party. The overall aim of STAR4BBS is to maximize the potential of Sustainability Certification Schemes (SCS) and labels to support a successful transition to sustainable bio-based economy.

At the core of the STAR4BBS project is the development of indicators and a new monitoring system for assessing the effectiveness and robustness of existing international and EU SCS, B2B labels, and related traceability systems applicable to biological feedstock and bio-based materials and products. This information will create the foundations to support achieving the much-needed harmonization between schemes and transparency in global and EU trade flows.

The project involves important stakeholders (including scheme owners, policy makers, and industry) in the design of research and the monitoring system and in the development of practical recommendations emerging from the research and analysis in order to ensure that the project achieves its ultimate goal.

This STAR4BBS Data Management Plan (DMP) is part of the WP8 - Project Management & Internal Project Communication. Particularly it is related to the Task 8.2 Ethical requirements and Data Management. This task deals with the management of data to be collected, processed and generated by STAR4BBS, with the aim of ensuring compliance with ethical and EC requirements.

UNITELMA, in collaboration with all partners, prepared the Initial Data Management Plan (DMP)[1]. The plan, developed following the recommendation provided by the EC and the Horizon Europe template for the DMP, includes information on: (i) what data will be collected, processed and/or generated; (ii) which methodology and standards will be applied; (iii) whether data will be shared/made open access; and (iv) how data will be handled and preserved (including after the end of the project). UNITELMA ensured that collected data will strictly comply with the Regulation (EU) 2016/6791 - the European Union's new General Data Protection Regulation

[1] This deliverable was submitted on M6 and it can be accessed at: https://zenodo.org/records/12771884

(GDPR). Transparency, legal and social implications of information and knowledge has also been considered.

Moreover, the Final Data Management Plan also presents the established guidelines for the data management of the BIOBASEDCERT Cluster's joint assets, describing the rules for the three projects that are part of the cluster (STAR4BBS, HARMONITOR and SUSTCERT4BIOBASED)[2].

2 Data Summary

2.1 Purpose of data collection and relation to the project objectives

The STAR4BBS Data Management Plan (DMP) serves as a strategic framework for the management of all key data generated and collected throughout the duration of the project. Conceived as a dynamic, living document, the DMP has been regularly reviewed and updated to reflect the evolving data management needs of the consortium.

The core objective of the DMP has been to ensure the accessibility, transparency, and intelligibility of project-related data. All datasets produced during the project were systematically assessed and classified by their respective owners into three categories: open, embargoed, or restricted, based on content sensitivity, intellectual property considerations, and potential for public dissemination.

Irrespective of their classification, all datasets were securely stored in the databases of the respective partner institutions as well as in the TUB Cloud, i.e. the internal data repository of the consortium. In line with FAIR principles and Horizon Europe guidelines, datasets designated as open or embargoed were made publicly accessible, either immediately or following the embargo period, via the public section of the STAR4BBS project website and the ZENODO repository[3] thereby ensuring broad dissemination and long-term preservation.

[2] The EU call "ZEROPOLLUTION-01-07: International and EU sustainability certification schemes for bio-based systems" funded three projects, i.e. the 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).

[3] STAR4BBS Community on Zenodo can be accessed at: https://zenodo.org/communities/star4bbs

In this context, and to further enhance the governance of data and shared results, the BIOBASEDCERT Cluster developed a co-ownership agreement that formally defined the joint ownership and long-term management of key assets, such as the BIOBASEDCERT Monitoring Tool (BMT), including its associated data, methodologies, and components.

The Co-Ownership Agreement (Annex A) establishes that the BMT is co-owned equally among the three consortia (each holding a one-third share), with STAR4BBS specifically responsible for the system-level dimension. The Technical University of Berlin (TUB), as coordinator of STAR4BBS, holds the full share of ownership on behalf of the project. Within this governance framework, each consortium retains autonomy over the internal distribution of its share.

Critically, the mentioned agreement outlines the use, licensing, and exploitation conditions for the shared data and tools, establishing the adoption of a Creative Commons Attribution-Non Commercial-Share Alike (CC BY-NC-SA) license for the BMT. It further defines procedures for dataset publication, including public availability through multiple repositories (e.g., Zenodo and each project's website) and joint responsibilities for long-term hosting and accessibility. Notably, STAR4BBS committed to hosting a web-based version of the BMT for five years after the project ends, ensuring continuous access and usability of the tool beyond the project's end.

The agreement also sets clear provisions for the use of results for non-commercial research, allowing partners to reuse data and models with proper attribution and notification. Furthermore, roles in data stewardship have been distributed across the projects, ensuring that each co-owner remains responsible for the integrity, updating, and relevance of their respective contributions.

This structured, multi-consortium governance model reflects the project's commitment to sustainable data management, open science, and the continuity of research results in line with the FAIR principles and Horizon Europe's long-term impact objectives.

Furthermore, in line with the outcomes described in Deliverable D7.8 *"Roadmap for STAR4BBS' Outputs Exploitation"*, the Final Data Management Plan integrates detailed insights concerning the alignment of datasets with the project's Key Exploitable Results (KERs). These KERs include:

- The BIOBASEDCERT Monitoring Tool (BMT)
- The Web-Based Self-Assessment Tool
- The Inventory of Sustainability Indicators

- The Trade Flow and Market Impact Analysis
- Policy Recommendations and Best Practices
- Capacity-building Training Materials

All these outputs are based on structured, curated datasets that have been made accessible under FAIR principles and Creative Commons licensing schemes, ensuring they remain reusable, interoperable, and valuable for future policy development, research initiatives, and stakeholder engagement.

2.2 Types and formats of the data

The data generated by the STAR4BBS project has been primarily sourced from a wide range of existing knowledge, including both scientific and non-scientific publications, as well as inputs from subject-matter experts. Throughout the project, the majority of the collected data has been organized into structured spreadsheets, typically in .xlsx (Microsoft Excel) format, comprising both numerical values and qualitative content such as short and extended text entries. Other data formats are text: documents (.pdf and .docx). Some complementary formats for graphical and audio-visual data have also been generated. Some examples include:

- .jpg (images);
- .ppt (Microsoft PowerPoint);
- .avi (video).

Where required, data produced using specialized software or modelling tools were stored in their respective proprietary formats. These specific data types have been documented and updated progressively as the project advanced, ensuring full traceability and transparency in alignment with the evolving dataset inventory of STAR4BBS.

2.3 Potential users of published research data

Datasets generated by STAR4BBS are intended to support a broad range of stakeholders and end-users, including:

- Members of the scientific and academic community involved in sustainability, bioeconomy, and certification research;
- Professionals and practitioners linked to bio-based product sustainability (e.g., consultants, auditors, CSR specialists);
- Researchers and analysts working within the specific domains addressed by STAR4BBS datasets, such as life cycle assessment, certification systems, and environmental monitoring;

- Other research projects and consortia that may integrate, extend, or build upon STAR4BBS data for comparative studies or policy analysis;
- Policy makers and regulators developing or updating sustainability frameworks and directives in the EU and internationally;
- Standardisation bodies and certification scheme owners (CSLs) using the datasets to benchmark, revise, or validate their schemes and indicators;
- Industrial actors and business associations interested in improving sustainability performance, transparency, and compliance with evolving EU standards (e.g., CSRD, Green Claims Directive);
- Non-governmental organisations (NGOs) and advocacy groups concerned with sustainability assessment, monitoring, and certification governance;
- Educational institutions and training providers, particularly those developing capacity-building programmes and courses on sustainability standards and certification tools.

These users represent a diverse but interconnected ecosystem of actors across policy, research, industry, and civil society, whose engagement is essential to ensure that the STAR4BBS outputs are widely disseminated, reused, and kept relevant beyond the project's completion.

3 FAIR (FINDABLE, ACCESSIBLE, INTEROPERABLE AND REUSABLE)

3.1 Discoverability of data (metadata provision)

Given its multi-disciplinary nature, the STAR4BBS project adopted a metadata management approach based on broadly accepted standards not limited to a single research domain. Throughout the project, the DataCite Metadata Schema was used as the default standard, as it is fully compatible with both the OpenAIRE platform and the project's primary open-access repository, Zenodo.

In cases where specific datasets were identified as particularly relevant to a specialized scientific discipline, the use of dedicated metadata standards was considered. However, by the end of the project, no such discipline-specific standards were deemed more suitable than the general framework applied.

To ensure transparency and facilitate understanding, all datasets composed of multiple files included a description detailing the content and structure of each file, along with the associated metadata. Metadata standards applied were recorded for each dataset within the key characteristics tables, in accordance with the structure outlined in Section 3.2.1 of the Initial DMP (Annex B of this deliverable). The public datasets generated by STAR4BBS project are presented in detail in Section 6.2 of this deliverable (Table 2).

Additionally, the Registry of Research Data Repositories (re3data.org) was consulted during the project to explore the possibility of depositing datasets in domain-specific repositories. However, it was concluded that Zenodo remained the most appropriate repository for all datasets produced within STAR4BBS.

Moreover, in line with the Co-Ownership Agreement established under the BIOBASEDCERT cluster, STAR4BBS committed to ensuring consistent metadata documentation and visibility across platforms managed by all three sister projects. This included shared hosting responsibilities and the requirement that metadata remain accessible and harmonised to support long-term discoverability and interoperability of joint assets, such as the BIOBASEDCERT Monitoring Tool (BMT). As part of this agreement, metadata curation practices were aligned across consortia to ensure coherence in the description, classification, and licensing of datasets published via common repositories like Zenodo.

3.2 Identifiability of data

In order to ensure transparency of file contents and versioning, the following naming convention was used for deliverables generated during the project:

STAR4BBS_D[x.y]_v[Version]_[ShortTitle]_[Type]_[Date]_[Status]_[Free].[ext

It consists of:

STAR4BBS	Project name, fixed
D[x.y.]	Deliverable identifier, if relevant
V[Version]	Version number in x.y format, should match a version number with a short description inside the document, such as the Document History table in this document

[Short Title]	Short descriptor for easy identification, maximum 40 characters
[Type]	Describes the type of data (e.g. publication, inventory, etc.)
[Date]	Date in format YYMMDD
[Status]	Draft, Final, Public, Restricted, Confidential
[Free]	Free text field for internal communication purposes (e.g. initials of reviewer). This field should not be included in the name of published files.
[extension]	File extension

For the completed individual datasets generated by the project, a specific file naming convention was used:

STAR4BBS_[Short Title]_v[Version] _[Type]

It consists of:

STAR4BBS	Project name, fixed
[Short Title]	Short descriptor for easy identification, maximum 40 characters
V[Version]	Version number in x.y format, should match a version number with a short description inside the document, such as the Document History table in this document
[Type]	Describes the type of data (e.g. publication, inventory, etc.)
[extension]	File extension

3.3 Approach towards keywords

For each dataset produced within the STAR4BBS project, the responsible beneficiary identified and assigned a set of targeted keywords designed to enhance dataset visibility and discoverability across research platforms. These keywords were selected to align with the thematic content of the dataset and to facilitate indexing within open-access repositories.

The default repository adopted by the project, Zenodo, supports keyword indexing through the DataCite Metadata Schema, ensuring

compatibility with established metadata standards. All selected keywords were systematically documented within the key characteristics tables for each dataset, as detailed in Section 3.2.1 (Table 1) of the Initial Data Management Plan. This practice contributed to improving the datasets' findability and reusability, in line with the FAIR data principles.

4 Making data openly accessible

4.1 Data to be made publicly available and rationale for keeping some data closed

As set out in the STAR4BBS Consortium Agreement, each beneficiary retained the right to publish their results generated, including datasets, under the principle of respecting partner contributions and ownership. Accordingly, any dataset involving multiple contributors required explicit consent from all involved parties prior to publication.

In full alignment with the open access obligations stipulated in the Grant Agreement, STAR4BBS adopted the Horizon Europe principle of "as open as possible, as closed as necessary." The default policy was to make datasets openly accessible, while allowing for embargo or restrictions only when justified by valid ethical, legal, or contractual considerations.

Examples of such exceptions included confidential data obtained through case studies, as well as responses gathered during interviews, expert consultations, or stakeholder engagement activities. In these instances, the project guaranteed anonymity to all respondents through informed consent procedures (see Annexes 1–3 of Deliverable D8.3). In cases where anonymised data were considered for open access publication, a second informed consent was required.

For every dataset produced, the responsible partner compiled a dataset characteristics record using the template provided in the Initial DMP (Annex B of this deliverable). This included any justification for non-publication, in line with the transparency and accountability principles of the DMP.

While most datasets were designed to serve project deliverables and stakeholder-relevant outputs, a clear distinction was made between those suitable for wider public use and those with limited external applicability. Datasets deemed too specific or context-bound to be of use beyond the project were not published, and their restricted status was explicitly documented.

For all publicly released datasets, the intended audiences and potential re-users were specified in the dataset records (Annex C). In total, seven datasets were published in open access through Zenodo, each assigned a DOI and licensed under Creative Commons terms.

Furthermore, for datasets and outputs developed jointly within the BIOBASEDCERT cluster, including the BIOBASEDCERT Monitoring Tool (BMT), additional governance and consent requirements were established under a dedicated Co-Ownership Agreement. This agreement stipulated that any dissemination or publication involving co-developed assets—such as the BMT or associated indicator matrices—would require cross-consortium coordination, shared licensing terms (e.g., CC BY-NC-SA), and approval mechanisms aligned with each project's internal governance structure. As such, decisions regarding publication and access were not limited to STAR4BBS alone, but reflected a collective, harmonised framework designed to ensure transparency, protect intellectual contributions, and promote sustainable access to shared results beyond the duration of the individual projects.

Finally, the dissemination of results beyond the officially declared deliverables complied with the internal procedures outlined in the STAR4BBS Consortium Agreement. This included the obligation to provide prior notice (at least 45 calendar days) before any planned publication, thereby allowing all partners a 30-day period to raise objections—particularly in cases where the publication might affect background knowledge, intellectual property rights, or legitimate interests.

In addition to the internal STAR4BBS provisions, a Co-Ownership Agreement has been drafted by the BIOBASEDCERT cluster, introducing complementary safeguards for jointly produced confidential materials and sensitive data. These provisions extend the principles of the Consortium Agreement to a multi-consortium level, ensuring that shared confidential information, such as unpublished methodological components, would be treated under strict confidentiality rules agreed among all cluster members.

Moreover, all confidential information exchanged throughout the project, when appropriately marked, remains protected for a period of five years following the official end of STAR4BBS, as established under Article 10 of the Consortium Agreement, which stipulates the rules for non-disclosure of information. This provision, reinforced by the BIOBASEDCERT agreement, ensures that sensitive data, especially that originating from external stakeholders or gathered during interviews, consultations, and workshops,

continues to be managed in accordance with the highest standards of data protection, confidentiality, and ethical integrity.

4.2 Approach to providing public access to datasets

Until a dataset was fully finalised and deemed ready for publication, the private area of the STAR4BBS project repository, hosted on the TUB Cloud, served as the default platform for internal data exchange among consortium members. Provided that all contributors to a dataset had reached consensus and any applicable restrictions related to sensitive or personal data were duly respected, alternative means of data exchange, such as institutional cloud services or secure email, were also permitted.

The default approach adopted by STAR4BBS was to make finalized datasets publicly available, unless they are part of sensitive deliverables or for other compelling and well-documented reasons justified otherwise. In alignment with Horizon Europe guidelines and the project's FAIR data strategy, STAR4BBS established a dedicated community space on Zenodo as the main open-access repository for public dissemination of datasets. Any deviation from this open access policy was required to be fully justified and documented in the dataset characteristics log (see Annex B). All datasets intended for publication included accompanying documentation such as metadata, references to methodologies, and other relevant contextual information, in order to ensure transparency, traceability, and potential reuse. A table with the shared content including deliverables, publications and datasets shared on Zenodo are included in Annex D.

Consortium partners were also encouraged to deposit datasets they authored or co-authored in their respective institutional repositories, and, where appropriate, on the public section of the STAR4BBS website. Zenodo has been selected for its numerous advantages, including:

- Support for all research fields and data types;
- Full open-access policy;
- Free and unlimited upload and download;
- Persistent Digital Object Identifiers (DOIs) for citation and referencing;
- Multiple licensing options, including Creative Commons;
- Ability to define embargo periods**,** allowing time for publication or intellectual property protection, during which access is limited to consortium members only.

For datasets classified as restricted, the default storage and access method for project partners remained the TUB Cloud private repository. In special

cases where restricted datasets could be made available under specific access conditions, Zenodo's request-based access function was used to manage external data sharing in a controlled and traceable manner.

In the case of datasets developed jointly with SUSTCERT4BIOBASED and HARMONITOR projects within the BIOBASEDCERT cluster, the dissemination and storage processes also reflected the terms of the Co-Ownership Agreement, which defined the joint hosting of public outputs such as the BIOBASEDCERT Monitoring Tool (BMT) across Zenodo and the websites of the three consortia. This agreement guaranteed shared responsibility for data accessibility and licensing, and ensured that datasets remained visible, citable, and governed by common usage conditions after the project's conclusion. With this purpose, a community for the jointly developed deliverables and other materials was created in Zenodo. The three sister projects have agreed on using this platform to upload the results and the publications derived from the projects' activities.

4.3 Long -Term Accessibility and Post-Project Maintenance

In addition to the operational procedures that governed dataset management during the project lifecycle, STAR4BBS implemented a set of forward-looking measures designed to ensure the long-term accessibility and sustainability of its key outputs. These measures were conceived as a safeguard to maintain the relevance, transparency, and reusability of the project's results well beyond the official end date, in line with the principles of open science and the FAIR data framework.

To this end:

- All public and EC approved datasets have been deposited on Zenodo, each assigned a DOI and accompanied by curated metadata;
- The STAR4BBS website will remain active and will also work as a platform to host materials such as deliverables, policy briefs, white papers, and training content for a minimum of three years after the project's conclusion;
- The Web-Based version of the BIOBASEDCERT Monitoring Tool (BMT) will remain available for five years after the project ends, as agreed within the cluster's exploitation roadmap, ensuring continued utility for policy makers, certification schemes, and industry;
- Additional dissemination and exploitation efforts will be maintained through platforms such as Evidensia, as well as via the official websites and institutional networks of the BIOBASEDCERT partner projects.

These measures underscore STAR4BBS's commitment to the durability, openness, and impact of its results, and to supporting ongoing innovation, policy development, and best practice in the field of bio-based sustainability certification.

5 Making data interoperable

It is essential that published datasets are unequivocally interpretable by third parties without any link to the project. Therefore, each dataset is accompanied with a description of the methodology, sources, definitions and scope of the data contained in it.

As discussed in section 2.1, whenever possible, datasets are structured in such a way that it can, in full or in part, be combined with another dataset, from the project or any other data source. For some fields of research specific definitions, metadata and/or vocabulary exists to enable this[4]. For each dataset, the responsible beneficiary determines if this exists for the relevant field(s) of research and comply with the relevant standards.

In order to ensure good interoperability of datasets, it is imperative that standards and methods commonly used in the same field are used. Fairsharing.org is a valuable resource where researches can identify relevant standards, as well as databases and repositories.

Moreover, the OpenAIRE guidelines for online interoperability, including OpenAIRE Guidelines for Literature Repositories, OpenAIRE Guidelines for Data Archives, OpenAIRE Guidelines for CRIS Managers based on CERIF-XML were consulted as they are a valuable resource to be consulted[5].

6 Increase data re-use (though clarify licenses)

6.1 Data licensing

To safeguard the ownership and proper use of the datasets produced within STAR4BBS, the consortium adopted the use of Creative Commons licensing. Specifically, for all datasets approved for public release, licenses such

[4] See RDA's Metadata Standards for more information at: https://rdamsc.bath.ac.uk/
[5] These guidelines can be found at: https://guidelines.openaire.eu/en/latest/

as CC BY-SA (Attribution-ShareAlike) and CC BY-NC-SA (NonCommercial-ShareAlike) were applied, depending on the nature of the data and the intended scope of reuse.

These licenses ensure that datasets can be freely accessed and reused by the broader research and policy community, while maintaining appropriate attribution to the authors and, where necessary, restricting commercial use. The selection of licensing terms was carried out in consultation with the data-owning partners and is clearly documented in the metadata accompanying each dataset published on Zenodo.

In alignment with Horizon Europe guidelines on open access and FAIR data management, an embargo period may be applied when datasets are linked to scientific publications that have not yet been accepted or published. The European Commission recommends a maximum embargo of six months; however, in cases where journal policies or peer-review timelines require more time, justified extensions are allowed.

Within STAR4BBS, some datasets were assigned a 12-month embargo, due to their direct use in ongoing scientific publications that are pending acceptance by peer-reviewed journals. These datasets and their information are presented in Table 1.

Table 1. Datasets associated with deliverables and their date of availability

Deliverable	**Associated Dataset(s)**	**Public Availability Date**
D1.2 Report on existing SCS and B2B labels for feedstock and bio-based materials and products	1 dataset	08/10/2025
D1.4 Report on existing monitoring schemes	2 datasets	08/10/2025
D3.1 Report on sustainability indicators for the monitoring system based on LCA	3 datasets	08/10/2025
D3.2 Report on additional indicators of monitoring system	2 datasets	08/10/2024

The rationale for these embargoes lies in the need to preserve the novelty and integrity of the scientific results prior to formal publication. Public release will occur immediately after the embargo expires or upon acceptance

and publication of the corresponding article, whichever comes first. All embargoed datasets are properly tagged in the metadata and registered in the dataset characteristics log (see Annex D).

Once released, datasets deposited on Zenodo will be accessible without restriction, subject to the licensing terms. Restrictions on reuse may apply only in the following cases:

- Embargo imposed by scientific journals under Green Open Access policies;
- Attribution requirement: users must credit the dataset authors and include the license;
- Non-Commercial clause: prevents use for commercial purposes without prior permission;
- Share-Alike clause: any derivative works must be shared under the same license terms.

These licensing and embargo policies were designed to balance the principles of openness with the need to protect intellectual outputs, ensuring legal clarity, academic integrity, and equitable access to knowledge.

6.2 Reusability during and at the end of the project

Final datasets have been uploaded to the dedicated STAR4BBS community on Zenodo ensuring their long-term preservation and accessibility. Zenodo guarantees indefinite archiving, with regular 12-hourly backups and replication across secure servers to prevent data loss.

Where applicable, selected datasets have also been made available via the STAR4BBS website, which will remain online for at least three years beyond the official end of the project, in line with Horizon Europe requirements for open data sustainability.

Throughout the project lifecycle, the responsible beneficiaries worked to make data publicly accessible as early as feasible—balancing timely dissemination with internal validation and ethical compliance. Publishing datasets on Zenodo enabled the assignment of DOIs and supported clear citation and traceability.

Moreover, for datasets jointly developed by the BIOBASEDCERT cluster, such as the BIOBASEDCERT Monitoring Tool (BMT), a shared hosting and licensing framework was established under the Co-Ownership Agreement, with STAR4BBS committing to maintain the web-based BMT tool for five years after project's completion.

In accordance with the project's exploitation strategy, a subset of datasets directly linked to Key Exploitable Results (KERs) was also published on Zenodo with persistent identifiers, descriptive metadata, and documentation supporting their reusability. These datasets are presented in Table 2. The full information of these datasets is presented in Annex C.

Table 2. Datasets associated with deliverables, their Persistent Identifier Number (PID) and their associated deliverables

Title	**DOI**	**Associated Deliverable**
Analysis of Sustainability Certification schemes and labels	10.5281/zenodo.14034459	D1.2 Report on existing SCS and B2B labels for feedstock and bio-based materials and products
Systematic literature review for benchmarking approaches	10.5281/zenodo.14008253	D1.4 Report on existing monitoring schemes
Analysis of existing monitoring tools	10.5281/zenodo.14008329	D1.4 Report on existing monitoring schemes
Environmental LCA Indicators dataset	10.5281/zenodo.13970556	D3.1 Report on sustainability indicators for the monitoring system based on LCA
Social LCA indicators dataset	10.5281/zenodo.13981489	D3.1 Report on sustainability indicators for the monitoring system based on LCA
Economic LCA indicators dataset	10.5281/zenodo.13981460	D3.1 Report on sustainability indicators for the monitoring system based on LCA
Analysis of reports applying LCA methodology and circularity analysis in bioeconomy	10.5281/zenodo.13981530	D3.1 Report on sustainability indicators for the monitoring system based on LCA

Set of Indicators of the Monitoring System - Content Level	10.5281/zenodo.12771638	D3.2 Report on additional indicators of monitoring system
Set of Indicators of the Monitoring System - System Level	10.5281/zenodo.13837255	D3.2 Report on additional indicators of monitoring system

All datasets are available in the STAR4BBS Zenodo community and are accompanied by license declarations, and standardised metadata. Their publication was strategically coordinated with open-access scientific articles and white papers to maximise visibility, interoperability, and reuse potential.

6.3 Re-usability duration

Given the fast-changing nature of both bio-based meta-sector and sustainability certification, the useful lifetime of the majority of STAR4BBS datasets is likely to be limited. This is especially true if the data sources used are subject to change, such as the rules guiding existing sustainability schemes. Inventories using scientific publications are more stable over time; future research can use published STAR4BBS data and build on it by updating and completing such data. The default STAR4BBS approach is for its datasets, once published, to remain re-usable indefinitely.

7 Allocation of resources

7.1 Costs for making STAR4BBS data FAIR

The costs associated with making STAR4BBS data FAIR were effectively negligible. All public deliverables and datasets were published through the Zenodo repository, which offers free and open-access archiving supported by the European Commission. As a result, no additional expenses were incurred for the publication and long-term preservation of project data on this platform.

In cases where partners chose to archive specific datasets—particularly those containing personal or restricted data, within their own institutional repositories, any associated costs were covered using internal partner budgets. These decentralized storage solutions were adopted only when

required by local policies or data protection protocols and did not impact the overall financial plan of the project. Instead, resources were used to grant free access through open scientific publications for the articles derived of the research activities carried out during the project.

7.2 Responsibilities for data management in the project

Each beneficiary leading Work Packages was responsible for preparing the datasets to make FAIR the data collected within its own activities, following the instructions provided in this Data Management Plan. TUB, as Project Coordinator, and UNITELMA, as responsible for the preparation of the different versions of the Data Management Plan, have overseen general coordination and supervision of data management across the consortium.

Furthermore, consortium partners have the responsibility to ensure that their activities comply with all applicable local, national, and international laws, regulations, and ethical guidelines, particularly in relation to data protection, open access, and intellectual property.

In addition, for datasets and results that are co-developed under the BIOBASEDCERT cluster, notably those associated with the BIOBASEDCERT Monitoring Tool (BMT), data governance responsibilities extend beyond the STAR4BBS consortium. As formally defined in the BIOBASEDCERT Co-Ownership Agreement, the three participating consortia (STAR4BBS, SUSTCERT4BIOBASED, and HARMONITOR) share joint ownership of the BMT and its three structural levels (system, content, and outcome).

Within this governance framework, STAR4BBS, and specifically TUB, which owns one third share of the BMT, the system level component, is designated as the responsible partner, including its preparation, dataset curation, and publication[6]. This allocation of responsibility reflects the internal distribution of roles and reinforces the principle of distributed stewardship among the cluster projects. The agreement also establishes a shared data governance model, referred to collectively as the BIOBASEDCERT Framework, which includes coordinated procedures for metadata harmonisation, licensing (e.g., CC BY-NC-SA), and long-term hosting across the respective repositories of the involved projects.

[6] As stated in the Co-Ownership Agreement, “the partners agreed to allocate 100% of the consortium’s project share to TUB, based on its role as coordinator of the STAR4BBS project and of leader of WP4 devoted to the preparation of the BMT.”

These provisions ensure that STAR4BBS data responsibilities, particularly regarding joint assets, are fully aligned with the collaborative and interoperable structure of the BIOBASEDCERT cluster and the long-term sustainability strategy endorsed by all participating partners.

8 Data security

To ensure a high level of data security throughout the STAR4BBS project, a series of operational guidelines was consistently applied:

- All datasets were stored in at least two separate locations to prevent accidental data loss;
- Where deemed necessary, data were encrypted by the responsible researchers to safeguard sensitive information;
- The use of USB flash drives was minimised to reduce the risk of unauthorized access or loss;
- Files were systematically labelled and versioned, following standardized naming conventions (see paragraph 3.2), to maintain clarity and traceability across the dataset lifecycle.
- All project data and deliverables were securely stored and exchanged via the TUB Cloud, a restricted-access platform available exclusively to STAR4BBS consortium members. This ensured that data remained protected during the internal collaboration phase.

Upon validation and approval, final datasets and related scientific outputs were published on Zenodo and, where appropriate, disseminated through additional open-access repositories. This facilitated broad accessibility and supported the FAIR principles, as outlined in the project's Data Management Plan.

Additionally, for key exploitable assets co-developed within the BIOBASEDCERT cluster such as the BMT, its associated matrices, and the Final Joint Policy Brief, access to data and resources is ensured through a multi-channel strategy defined in the Co-Ownership Agreement. Under this agreement, all three cluster projects have committed to providing access to shared outputs via their institutional platforms, Zenodo communities, and public websites.

To further mitigate the risk of unauthorised data disclosure or misuse, the Co-Ownership Agreement includes a binding confidentiality clause (Section 9), under which all partners agree not to disclose or use any confidential information received from the others for a period of five

years after the end of the project. Exceptions to this rule are clearly defined (e.g., prior publication, legal obligations), and require timely notification to the affected parties. This legal safeguard complements the technical measures outlined above, reinforcing the overall data protection framework and ensuring high standards of security for both project-specific and jointly managed datasets.

9 Ethical aspects to data management

Throughout the STAR4BBS project, expert knowledge and stakeholder input were gathered through a variety of methods, including interviews, questionnaires, and co-creation activities were developed. A broad and inclusive stakeholder engagement process was implemented through these activities in which via different types of information, including sensitive data, images, and recordings, were collected.

All activities involving personal data collection were conducted in strict compliance with ethical standards and the General Data Protection Regulation (GDPR – Regulation (EU) 2016/679). Particular care was taken to avoid sensitive issues, and when personal information was provided, researchers ensured that such data could not be directly linked to individuals.

As a rule, personal names and organisational affiliations were excluded from research outputs. In the case of interviews, minutes were anonymised using coded identifiers to facilitate document referencing while protecting participant identity. If individuals (e.g., interviewees, speakers, or attendees) explicitly agreed to be quoted, the consortium members confirmed the accuracy and validity of the quotes by seeking prior confirmation from the respondents before publication.

To manage personal and sensitive data responsibly, STAR4BBS employed dedicated consent and information formats, fully aligned with GDPR requirements. These documents appear in detail in the Ethical Issues Report (Deliverable D8.3[7]) and included the following:

- Annex 1 – Informed Consent Form
- Annex 2 – Information Sheet
- Annex 3 – Informed Consent Form for Processing Personal Data, Photographs, Videos, and Recorded Interviews

[7] The deliverable can be accessed at: https://zenodo.org/records/12771902

- Annex 4 – STAR4BBS Database Subscription Form
- Annex 5 – STAR4BBS Privacy Policy

These tools ensured that ethical compliance was maintained across all data collection and stakeholder engagement activities.

10 Continuous Reporting: Updates to the Initial DMP

After the mid-term review evaluation of the STAR4BBS project in M18, deliverables and their associated datasets, as well as open access publications, have been uploaded to the project's Zenodo Community[8]. This action has been carried out in compliance with the principles stated in the Initial DMP of the STAR4BBS project, including the rules stipulated under section 3.2.1 of this document.

A summary of the information of each public dataset is presented in Table 3. Detailed information of each of them is shown in Annex C.

Table 3. Summary of Public STAR4BBS Datasets

N.	Dataset Name	Partner	Task	Accessibility	PDI
1	Value chains under the framework of life cycle assessment indicators	USC	WP3 Open access Publication (DOI) 10.1016/j.clcb.2024.100072	Public	10.5281/zenodo.12731314
2	Process modeling, environmental and economic sustainability of the valorization of whey and eucalyptus residues for	USC	WP3 Open access Publication (DOI) 10.1016/j.wasman.2023.10.030	Public	10.5281/zenodo.12732714

[8] STAR4BBS Community on Zenodo can be accessed at: https://zenodo.org/communities/star4bbs/

	resveratrol biosynthesis				
3	Boosting the transition to biorefineries in compliance with sustainability and circularity criteria	USC	WP3 Open access Publication (DOI) 10.1016/j.jece.2024.113361	Public	10.5281/zenodo.12722647
4	Environmental and techno-economic assessment on the valorization of vine-side streams to produce resveratrol	USC	WP3 Open access Publication (DOI) 10.1016/j.jclepro.2023.139622	Public	10.5281/zenodo.12722368
5	STAR4BBS D1.3 Report impact and contribution SCS and Labels Appendix II dataset	ISEAL	T1.4	Public	10.5281/zenodo.12773112
6	STAR4BBS D3.2 Report on additional indicators of monitoring system_Appendix 6.2 System Level Matrix dataset	USC	T3.2	Public (embargo at the moment)	10.5281/zenodo.13837255

7	STAR4BBS D3.2 Report on additional indicators of monitoring system_Appendix 6.3 Content Level Matrix dataset	USC	T3.2	Public (embargo at the moment)	10.5281/zenodo.13837382

No additional public datasets are foreseen for the STAR4BBS project, however, if they should be required to accompany the planned scientific publications, the same rules will be followed, assuring also their compliance with FAIR principles.

ANNEXES

Annex A: Co-ownership agreement

Annex B: Template for the key information log for each dataset

Annex C: Datasets - Key information log

Annex D: STAR4BBS Zenodo's Community contents: Deliverables, Publications, Datasets and PDIs

Annex A: Co-ownership agreement

BIOBASEDCERT

Co-Ownership Agreement for BIOBASEDCERT cluster Asset

SUSTCERT4BIOBASED, HARMONITOR, STAR4BBS

22/5/2025

1

Table of Contents

Co-Ownership Agreement for BIOBASEDCERT cluster Asset

This Co-Ownership Agreement ("Agreement") is made and entered into force as of XXX by and between:

On behalf of SUSTCERT4BIOBASED project:

- **STICHTING WAGENINGEN RESEARCH (WR)** , located at DROEVENDAALSESTEEG 4, WAGENINGEN 6708 PB, Netherlands , from Project SUSTCERT4BIOBASED
- **ENVIRONMENTAL COALITION ON STANDARDS (ECOS)**, located at RUE DU COMMERCE 31, BRUXELLES 1000, Belgium from Project SUSTCERT4BIOBASED

On behalf of HARMONITOR project:

- **UTRECHT UNIVERSITY (UU)**, located at Heidelberglaan 8, 3583 CS Utrecht,the Netherlands from project HARMONITOR

On behalf of STAR4BBS project:

- **Technical University of Berlin (TUB)**, located at [Straße des 17. Juni 135, 10623 Berlin]

(collectively referred to as "Parties").

1. Representation and Authority:

Each Party acknowledges and agrees that it is solely responsible for determining its internal governance and ensuring that the person(s) signing this Agreement on its behalf have the full legal authority to bind all member organizations within their respective consortium, if applicable. By signing this Agreement, each signatory warrants that they are duly authorized to execute this Agreement and that such execution will bind all relevant entities in their consortium, without the need for additional signatures or approvals.

2. Internal Governance Disclaimer:

The Parties agree that no Party to this Agreement, including their consortia, shall bear any responsibility or liability for how another consortium manages its internal decision-making or signatory authorization process. Any disputes arising within a consortium regarding representation, internal governance, or decision-making shall not affect the validity, enforceability, or obligations of this Agreement as executed by the authorized signatory(ies).

3. Non-Interference:

The Parties recognize and respect each consortium's autonomy to organize and manage its internal governance and signatory process without interference or oversight from the other Parties to this Agreement.

1. Introduction

1.1 The Partners are engaged in the development and maintenance of the below Asset

- BIOBASEDCERT Monitoring Tool (BMT)

Description:

BMT is a tool designed to support policymakers, certification scheme owners, and the biobased industry in evaluating the robustness, comprehensiveness and effectiveness of sustainability certification schemes and labels for industrial biobased systems. 1.2 The purpose of this Agreement is to set forth the terms and conditions for the co-ownership of the cluster's Assets.

2. Definitions

2.1 BIOBASEDCERT cluster: A collaboration between the below Horizon Europe funded projects:

A. SUSTCERT4BIOBASED : Sustainability Certification for Biobased Systems , 101059785

B. HARMONITOR: Harmonisation and monitoring platform for certification schemes and labels to advance the sustainability of bio-based systems , 101060133

C. STAR4BBS : Sustainability Transition Assessment Rules for Bio-Based Systems, 101060588

2.1 Assets: all Intellectual Property and Results and any other assets developed or acquired during the course of the cluster's collaboration.

2.2 Confidential Information: Any non-public information related to the Project and its assets.

2.3 Intellectual Property: includes inventions (whether patentable or not), patents, patent applications, trademarks, registered designs, and applications thereof, copyright material including computer software, technical information, and know-how.

2.4 Results: means any (tangible or intangible) output of the project such as data, knowledge, or information — whatever its form or nature, whether it can be protected or not

— that was generated in the project, as well as any rights attached to it, including intellectual property rights.

3. Ownership and Shares

3.1 The Parties agree that all Assets of the cluster shall be co-owned equally by the three consortia, with each consortium holding a one-third (1/3) share of ownership of the BMT and its respective level they developed and were responsible for (system level for STAR4BBS, content level for SUSTCERT4BIOBASED, outcome level for HARMONITOR project). Each consortium's one-third (1/3) share shall be further divided among the contributing partners of the respective consortium, based on internal decisions regarding the allocation of project shares. Each consortium retains full autonomy to decide internally how their share will be divided among their members, according to the contributions and calculations agreed upon by the consortium partners.

3.2 To provide a clear overview of the ownership structure, Table 1 below illustrates the respective contributions of each co-owning Partner to each Asset, as per the agreements outlined in this Article.

Table 1. Overview of the ownership structure

Asset Name	SUSTCERT4BIOBASED – Content level (1/3 Share)	HARMONITOR – Outcome level (1/3 Share)	STAR4BBS – System level (1/3 Share)
BMT	WFBR (50%) ECOS (50%)	UU (100%)	TUB (100%)

Explanation of ownership calculations:

The division of shares within each consortium was determined based on internal partner decisions (Each consortium used its own methodology to divide its share, considering factors such as technical contributions, resource allocation, and time invested etc.)

SUSTCERT4BIOBASED: The partners agreed to allocate 50% of the consortium's project share to WFBR and 50% to ECOS, based on their substantial contributions to the development of the BMT.

HARMONITOR: The partners agreed to allocate 100% of the consortium's project share UU, based on their substantial contributions to the development of the outcome level methodology of the BMT.

STAR4BBS: The partners agreed to allocate 100% of the consortium ´s project share to TUB, based on its role as coordinator of the STAR4BBS project and of leader of WP4 devoted to the preparation of the BMT.

4. Rights and Responsibilities

4.1 Management: The Partners shall jointly manage the Assets. Any significant decisions regarding the management of the Assets must be approved by 2/3 majority of the Partners.

4.2 Use of Assets: The Project Assets shall be made available for use by the public, subject to any terms and conditions agreed upon by the Partners. For models and data, the Partners shall select users' rights from the catalogue of Creative Commons and select a repository of one of the Partners, that will host such data and models.

4.3 Maintenance: The Partners agree to share based on the division ownership in section 3, in the responsibility and cost of prosecuting Intellectual Property Rights pertaining to the Project Assets and the maintenance of the Intellectual Property Rights and the Assets.

5. Intellectual Property protection

The Parties that co-own a result may appoint one of them ("Managing Partner") to oversee the protection, filing and prosecution of the relevant Intellectual Property Right. The Managing Partner may prepare, file, and prosecute applications regarding the Intellectual Property Right of the Asset after consulting with the other Parties in good faith. Any such applications shall be registered in name of all co-owning Partners. The Managing Partner shall keep all patent notices, applications and correspondence filed in connection with any such applications and shall provide copies of such documents to the other Partners on reasonable request.

All costs resulting from the above procedures (including filing, prosecution, and renewal fees) shall be borne by the Partners in proportion to their respective shares of the relevant Result.

Each Partner shall inform the other Partners promptly of any infringement or suspected or threatened infringement of the Result of which it becomes aware, and the Partners shall promptly consult with each other in good faith with a view to reaching agreement on the action to be taken in respect of the infringement in question. A decision on the action must be approved by 2/3 majority of the Partners.

The Table below provides an overview of the IP protection measures foreseen for each of the assets produced by the cluster as agreed by partners at the time of the signature of the current agreement.

	Result	Protection Measure
ER1	BMT (BIOBASEDCERT Monitoring Tool)	Copyright, (CC BY-NC-SA)

6. Financial Contributions

6.1 The Partners agree that there will be no expectation of income from the Assets at this time.

6.2 Any necessary financial contributions towards the development, maintenance, and protection of the Assets shall be shared based on the division ownership in section 3 by the Partners.

7. Exploitation

Exploitation for Research Non-Commercial Purposes

Each Partner is entitled to use the results for research non-commercial purposes without compensation to the other parties. However, a 30-day advance notice should be provided to the other parties. This provision includes using the Asset as background in research projects such as HORIZON.

Acknowledgment and Attribution:

Partners utilizing the Results for research purposes must appropriately acknowledge and attribute the Result owners in all related publications, presentations, or other forms of dissemination. The attribution should follow standard academic and scientific practices, including citation of the original work and reference to the Result owners.

Disclaimer and Acknowledgment:

In all publications or presentations, the following acknowledgment should be included:

"This work is part of the BIOBASEDCERT cluster and is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike (CC BY-NC-SA) license. The authors

acknowledge the contributions of WFBR, ECOS, UU, and TUB in the development of this asset."

Public Access and Uploading:

All three consortia will upload the BMT to their respective websites. Additionally, the BMT will be uploaded to Zenodo for wider accessibility and dissemination.

Intentions for continuation:

The following outlines the anticipated continuation and further development of the BMT, based on preliminary discussions with relevant projects and stakeholders. These plans are **indicative in nature and do not represent binding commitments**:

- **HARMONITOR Project**: A PhD student from Utrecht University is expected to take over the further development of the Outcome level, supporting its continued development within an academic framework.
- **STAR4BBS Project**: The project has expressed intentions to further develop the System level of the Tool in a standardization output (e.g. CEN Workshop Agreement). In addition, STAR4BBS is preparing a Web-based version of the BMT Tool, incorporating the current version (date 31.05.2025) of the BMT. This Web-based tool will be hosted until the 31.08.2028 in the STAR4BBS webpage.
- **SUSTCERT4BIOBASED Project**: Through the involvement of the project's coordinator, who is a member of the Dutch Technical Standards Committee, SUSTCERT4BIOBASED intends to promote the Tool and explore its relevance within the committee's working group.

These plans reflect current intentions and may evolve based on project priorities, available resources, and emerging opportunities.

9. Confidentiality

8.1 Neither Partner will for five (5) years after the date of this Agreement disclose to any third party, nor use for any purpose except as expressly permitted by this Agreement, any of the other Partner's Confidential Information.

Neither Partner will be in breach of clause 8.1 to the extent that any information:

- is known to the receiving Partner before its receipt from the other Partner, and not already subject to any obligation of confidentiality to the other Partner;

- is or becomes publicly known without any breach of this Agreement or any other undertaking to keep it confidential;
- has been obtained by the receiving Partner from a third party in circumstances where the receiving Partner has no reason to believe that there has been a breach of an obligation of confidentiality owed to the other Partner;
- has been independently developed by the receiving Partner;
- is disclosed pursuant to the requirement of any law or regulation or the order of any court of competent jurisdiction, and the Partner required to make that disclosure has informed the other, within a reasonable time after being required to make the disclosure, of the requirement to disclose and the information required to be disclosed;
- is approved for release in writing by an authorised representative of the other Partner.

10. Dispute Resolution

9.1 This Agreement shall be governed by Belgian law.

9.2 In the event of any dispute related to this Agreement, the Partners shall first seek to negotiate and resolve the dispute amicably under principles of good faith.

9.3 If an amicable settlement cannot be reached, the dispute shall be referred to professional mediation in accordance with Belgian arbitration rules.

9.4 Should negotiation or mediation fail to resolve the dispute, legal proceedings shall be submitted to the jurisdiction of the Belgian courts.

11. Termination and Amendments

10.1 The Agreement will take effect on the Effective Date and (subject to the remaining sub-clauses of this clause 9) will continue in force until the moment on which the Partners jointly decide to abandon the Assets.

10.2 A Partner may terminate this Agreement with immediate effect by giving notice to the other Partners if:

(a) the other Partner(s) is/are in breach of any provision of this Agreement and (if it is capable of remedy) the breach has not been remedied within sixty (60) days after receipt of written notice specifying the breach and requiring its remedy. Upon termination the share in

the Asset owned by the Partner(s) in breach, shall be transferred to the other Partners without cost; or

(b) the other Partner(s) becomes insolvent, or if an order is made or a resolution is passed for its winding up (except voluntarily for the purpose of solvent amalgamation or reconstruction), or if an administrator, administrative receiver or receiver is appointed over the whole or any part of the other Partner's assets, or if the other Partner makes any arrangement with its creditors. Upon termination the share in the Asset owned by the Partner in insolvency, shall be transferred to the other Partners without cost.

9.3 Upon termination regarding a Partner for any reason, the Assets reside fully either with the other Partners, in which case the Partner no longer owning a share of the Assets will not use nor disclose to any third party any information regarding the Assets or this Agreement;

9.4 Upon termination regarding a Partner for any reason, that Partner shall immediately cease to use any confidential information relating to the other Partners, and shall return, or at the request of the disclosing Partners destroy such confidential information without undue delay;

12. Miscellaneous

11.1 Force Majeure: If the performance by either Partner of any of its obligations under this Agreement (except a payment obligation) is delayed or prevented by circumstances beyond its reasonable control, that Partner will not be in breach of this Agreement because of that delay in performance. However, if the delay in performance is more than 3 months, the other Partner may terminate this Agreement with immediate effect by giving written notice.

11.2 Amendments: Any changes to this Agreement must be made in writing and signed by all Partners.

11.3 Assignment: neither Partner may assign or transfer this Agreement as a whole, or any of its rights or obligations under it, without first obtaining the written consent of the other Partners

11.4 Entire Agreement: This document constitutes the entire Agreement between the Partners regarding the subject matter.

11.5 Severability: If any provision of this Agreement is found to be invalid or unenforceable, the remaining provisions shall continue to be in effect.

11.6 Notices: Any formal notices under this Agreement shall be in writing and delivered to the addresses specified above.

13. Signature Section

Disclaimer: This co-ownership agreement is currently a draft and remains subject to ongoing legal review. Final terms are pending verification and approval by the respective legal and compliance departments of the involved parties. No clause or condition herein should be considered legally binding until the final version is executed by all parties.

IN WITNESS WHEREOF, the Partners hereto have executed this Co-Ownership Agreement as of the Effective Date.

On behalf of SUSTCERT4BIOBASED project:

STICHTING WAGENINGEN RESEARCH

Iris Vural Gursel

SUSTCERT4BIOBASED Coordinator

Signature: _____

ENVIRONMENTAL COALITION ON STANDARDS

[Name]

[Position]

Signature: _____

On behalf of HARMONITOR project:

UTRECHT UNIVERSITY

[Name]

[Position]

Signature: _____

On behalf of STAR4BBS project:

Technical University of Berlin

Dr. Luana Ladu,

Coordinator of the STAR4BBS project

Signature: _____

Dr. Elke Gehweiler

Head of EU Office

Signature: _____

Annex B: Template for the key information log for each dataset

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS_[Short Title]_v[Version] _[Type]
Dataset name	
Dataset description	
Dataset DOI	
Dataset version history	
Key contact [Beneficiary]	
Dataset file format and size	
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	
Dataset (to be made) public?	[Yes/No]
If No, justification: Published version(s)	
Repository(-ies)	
Keywords	
Licence	[Default: Attribution-ShareAlike (CC BY-SA)]
Useful for whom?	
Key data sources	

Annex C: Datasets - Key information log

1

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS_Value chains under the LCA indicators_v1.0_dataset
Dataset name	Value chains under the framework of life cycle assessment indicators
Dataset description	Tables included in the article "Monitoring the bioeconomy: value chains under the framework of life cycle assessment indicators"
Dataset DOI	10.5281/zenodo.12731314
Dataset version history	1.0
Key contact [Beneficiary]	USC
Dataset file format and size	.xlsx (408 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP3 / Journal Article Publication (KPI Scientific publications)
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Sustainability monitoring; Bio-based; Ecosystem services; Social welfare; Sustainable development
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic / Certification bodies /Policy makers
Key data sources	ISO, UNEP-SETAC, UNE-EN, LCA

2

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS_Process modeling and sustainability of the valorization of whey and eucalyptus residues_v1.0_dataset
Dataset name	Process modeling, environmental and economic sustainability of the valorization of whey and eucalyptus residues for resveratrol biosynthesis
Dataset description	Tables included in the article "Process modeling, environmental and economic sustainability of the valorization of whey and eucalyptus residues for resveratrol biosynthesis"
Dataset DOI	10.5281/zenodo.12732714
Dataset version history	1.0
Key contact [Beneficiary]	USC
Dataset file format and size	.xlsx (279 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP3 / Journal Article Publication (KPI Scientific publications)
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Cheese whey; Forestry residues; Life cycle assessment; Techno-economic evaluation; Resveratrol; Biorefinery
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic Sector
Key data sources	ISO, LCA

3

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS_Boosting the transition to biorefineries in compliance with sustainability and circularity criteria_v1.0_dataset
Dataset name	Boosting the transition to biorefineries in compliance with sustainability and circularity criteria
Dataset description	The file contains the tables included in the article "Boosting the transition to biorefineries in compliance with sustainability and circularity criteria"
Dataset DOI	10.5281/zenodo.12722647
Dataset version history	1.0
Key contact [Beneficiary]	USC
Dataset file format and size	.xlsx (259 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP3 / Journal Article Publication (KPI Scientific publications)
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Biorefineries; Sustainability; Circularity; Multidisciplinary analysis; Bioplastics
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic Sector
Key data sources	

4

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS_Environmental and techno-economic assessment for valorization of vine-side streams_v1.0_dataset
Dataset name	Environmental and techno-economic assessment on the valorization of vine-side streams to produce resveratrol
Dataset description	The file contains the tables included in the article "Environmental and techno-economic assessment on the valorization of vine-side streams to produce resveratrol"
Dataset DOI	10.5281/zenodo.12722368
Dataset version history	1.0
Key contact [Beneficiary]	USC
Dataset file format and size	.xlsx (493 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP3 / Journal Article Publication (KPI Scientific publications)
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Winemaking process residues; Sustainability assessment; Economic analysis; Environmental profile; Antioxidant; Resveratrol
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic Sector / Certification bodies
Key data sources	ILCD, PEF, Green Chemistry, Standards Map, LCA

5

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS_D1.3_Report impact and contribution SCS and Labels_Appendix II_v1_dataset
Dataset name	STAR4BBS D1.3 Report impact and contribution SCS and Labels_Appendix II dataset
Dataset description	This dataset contains the full coding sheet for the systematic mapping that formed STAR4BBS deliverable D1.3 (Appendix II). The systematic mapping exercise reviewed literature on the impact of and contribution to GHG emissions reductions of existing sustainability systems and certification schemes (SCS) and B2B labels used within the bioeconomy. A coding sheet in the context of a systematic map is a structured tool used to extract and record specific data from studies being reviewed, ensuring consistency and accuracy in data collection. It forms the basis of the analysis and is included for transparency.
Dataset DOI	10.5281/zenodo.12773112
Dataset version history	1.0
Key contact [Beneficiary]	ISEAL
Dataset file format and size	.xlsx (3725 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP1 / T1.4
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Systematic mapping; Sustainability certification; bioeconomy
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic Sector
Key data sources	Web of Science, Scopus, and CAB, Evidensia

6

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS D3.2 Report on additional indicators of monitoring system_Appendix 6.2 System Level Matrix dataset
Dataset name	STAR4BBS D3.2 Report on additional indicators of monitoring system_Appendix 6.3 Content Level Matrix dataset
Dataset description	This dataset contains the final set of indicators selected for the system level of the new monitoring system. The data is part of the D3.2 "Report on additional indicators of monitoring system". The indicators are organised by category, principles, criteria, requirements and references.
Dataset DOI	10.5281/zenodo.13837255
Dataset version history	1.0
Key contact [Beneficiary]	USC
Dataset file format and size	.xlsx (23 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP3 / T3.2
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Sustainability indicators; sustainability monitoring; bioeconomy monitoring; bioeconomy
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic Sector / Certification bodies / Policy makers
Key data sources	19 certification schemes, OECD, BS 8001:2017, ISO, European Environmental Agency, UNI/PdR 135:2002, Ellen McArthur Foundation

7

TOPIC	DESCRIPTION
Dataset identifier	STAR4BBS D3.2 Report on additional indicators of monitoring system_Appendix 6.3 Content Level Matrix dataset
Dataset name	STAR4BBS D3.2 Report on additional indicators of monitoring system_Appendix 6.3 Content Level Matrix dataset
Dataset description	This dataset contains the final set of indicators selected for the content level of the new monitoring system. It is part of the D3.2 "Report on additional indicators of monitoring system" of the STAR4BBS Project (Appendix 6.3). The list of indicators are accompanied by guidance notes, the specific sector and value chain to which they apply as well as potential examples of indicators are suggested.
Dataset DOI	10.5281/zenodo.13837382
Dataset version history	1.0
Key contact [Beneficiary]	USC
Dataset file format and size	.xlsx (75 KB)
Associated WPs/Tasks/Deliverables/Milestones Other contributing beneficiaries	WP3 / T3.2
Dataset (to be made) public?	Yes
Repository(-ies)	Zenodo
Keywords	Sustainability indicators; sustainability monitoring; bioeconomy monitoring; bioeconomy
Licence	Creative Commons Attribution 4.0 International
Useful for whom?	Researchers / Academic Sector / Certification bodies / Policy makers
Key data sources	19 certification schemes, OECD, BS 8001:2017, ISO, European Environmental Agency, UNI/PdR 135:2002, Ellen McArthur Foundation

Annex D: STAR4BBS Zenodo's Community contents: Deliverables, Publications, Datasets and PDIs

Deliverables	
Title	**DOI**
D1.2 Report on existing international and EU SCS and B2B labels for feedstock and bio-based materials & products	10.5281/zenodo.13969811
D1.3 Report on impact and contribution of existing SCS and B2B labels	10.5281/zenodo.12749125
D1.4 Report on existing monitoring schemes, with recommendations for new system	10.5281/zenodo.14008195
D2.1 Concept and methodology for collecting volumes of biogenic feedstock	10.5281/zenodo.12771578
D2.2 Report on matching biogenic flows with certification systems	10.5281/zenodo.12771607
D3.2 Report on additional indicators of monitoring system	10.5281/zenodo.12771638
D4.1 Concept of the monitoring system	10.5281/zenodo.16894777
D6.1 Stakeholder map	10.5281/zenodo.12771663
D7.1 Strategy for dissemination, exploitation and communication	10.5281/zenodo.13969782
D7.3 Action Plan for joint activities with other projects funded under the ZEROPOLLUTION-01-07 topic	10.5281/zenodo.12771761
D7.4 Mid-term clustering report for HORIZONCL6-2021-ZEROPOLLUTION-01-07	10.5281/zenodo.12771776
D7.5 First Policy Brief	10.5281/zenodo.12771846
D8.1 Report on project management	10.5281/zenodo.12771869
D8.2 Initial Data Management Plan	10.5281/zenodo.12771884
D8.3 Ethical issues report	10.5281/zenodo.12771902
Publications	
Title	**DOI**
Biorefineries as a driver for sustainability: Key aspects, actual development and future prospects	10.1016/j.jclepro.2023.137925
Review of potential and prospective strategies for the valorization of coffee grounds within the framework of a sustainable and circular bioeconomy	10.1016/j.jclepro.2023.137925

Process modeling, environmental and economic sustainability of the valorization of whey and eucalyptus residues for resveratrol biosynthesis	10.1016/j.wasman.2023.10.030
Environmental and techno-economic assessment on the valorization of vine-side streams to produce resveratrol	10.1016/j.jclepro.2023.139622
Advancing the European energy transition based on environmental, economic and social justice	10.1016/j.spc.2023.10.013
Boosting the transition to biorefineries in compliance with sustainability and circularity criteria	10.1016/j.jece.2024.113361
Monitoring the bioeconomy: Value chains under the framework of life cycle assessment indicators	10.1016/j.clcb.2024.100072
Advancing waste valorization and end-of-life strategies in the bioeconomy through multi-criteria approaches and the safe and sustainable by design framework	10.1016/j.rser.2024.114907
The Impact of Sustainability Certification Schemes and Labels on Greenhouse Gas Emissions: A Systematic Evidence Map	10.3390/su17020792
Key governance and sustainability indicators for certification systems: Bridging certification and policy frameworks in the bioeconomy	10.1016/j.spc.2025.03.017
Datasets of publications	
Title	**DOI**
Value chains under the framework of life cycle assessment indicators	10.5281/zenodo.12731314
Process modeling, environmental and economic sustainability of the valorization of whey and eucalyptus residues for resveratrol biosynthesis	10.5281/zenodo.12732714
Environmental and techno-economic assessment on the valorization of vine-side streams to produce resveratrol	10.5281/zenodo.12722368
Boosting the transition to biorefineries in compliance with sustainability and circularity criteria	10.5281/zenodo.12722647
Key governance and sustainaiblity indicators for certification systems: operational indicators	10.5281/zenodo.16688412

Key governance and sustainability indicators for certification systems: Sustainability and Circularity Indicators	10.5281/zenodo.16687976
Datasets of Deliverables	
D1.2 Report on existing SCS and B2B labels for feedstock and bio-based materials and products_Appendix A	10.5281/zenodo.14034459
D1.4 Report on existing monitoring schemes_Annex A1	10.5281/zenodo.14008253
D1.4 Report on existing monitoring schemes_Annex A2	10.5281/zenodo.14008329
D3.1 Report on sustainability indicators for the monitoring system based on LCA_Appendix C1	10.5281/zenodo.13970556
D3.1 Report on sustainability indicators for the monitoring system based on LCA_Appendix C2	10.5281/zenodo.13981460
D3.1 Report on sustainability indicators for the monitoring system based on Life Cycle Assessment_Appendix C3	10.5281/zenodo.13981489
D3.1 Report on sustainability indicators for the monitoring system based on LCA_Appendix C4	10.5281/zenodo.13981530
D3.2 Report on additional indicators of monitoring system_Appendix 6.2 System Level Matrix dataset	10.5281/zenodo.13837255
D3.2 Report on additional indicators of monitoring system_Appendix 6.3 Content Level Matrix dataset	10.5281/zenodo.13837382

Star4bbs

"Sustainable bio-based systems via effective certification & labelling"

Consortium:

www.star4bbs.eu
info@star4bbs.eu

@STAR4BBS

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