

## D3.2

# Evaluation of existing schemes and labels

WR - WFBR

*April 2025*



## PROJECT INFORMATION

<b>PROGRAMME</b>	Horizon Europe
<b>TOPIC</b>	HORIZON-CL6-2021-ZEROPOLLUTION-01-07
<b>TYPE OF ACTION</b>	HORIZON-CSA
<b>PROJECT NUMBER</b>	101059785
<b>START DAY</b>	1 June 2022
<b>DURATION</b>	36 months

## DOCUMENT INFORMATION

<b>TITLE</b>	Evaluation of existing schemes and labels
<b>WORK PACKAGE</b>	WP3 Monitoring system and testing on schemes and labels
<b>TASK</b>	Task 3.3: Testing the developed monitoring system and indicators on reviewed schemes and labels
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<b>DATE</b>	30 April 2025

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## DOCUMENT HISTORY

Version	Date	Changes	Responsible partner
0.1	07/03/2025	Draft structure of the deliverable	WR - WFBR
0.2	07/04/2025	First draft ready for review	WR - WFBR
0.3	24/04/2025	Reviewer edits and comments	CU, ECOS
0.4	28/04/2025	Final deliverable integrating reviewer comments	WR - WFBR
1.0	30/04/2025	Final check and Submission by the coordinator	WR

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## ABBREVIATIONS

<b>BCI</b>	Better Cotton Initiative
<b>BMT</b>	BIOBASEDCERT Monitoring Tool
<b>CB</b>	Certification Body
<b>CEN</b>	European Committee for Standardization
<b>CSLs</b>	Certification schemes and labels
<b>ESMP</b>	Environmental and social management plan
<b>etc.</b>	Et cetera / and other similar things
<b>EU</b>	European Union
<b>FSC</b>	Forest Stewardship Council
<b>FPIC</b>	Free, prior and informed consent
<b>GHG</b>	Greenhouse Gas
<b>H&amp;S</b>	Health & Safety

<b>ILO</b>	International Labour Organization
<b>ILUC</b>	Indirect Land Use Change
<b>IPM</b>	Integrated Pest Management
<b>ISCC</b>	International Sustainability & Carbon Certification
<b>ISO</b>	International Standardization Organization
<b>JRC</b>	Joint Research Centre
<b>NEN</b>	The Netherlands Standardization Institute
<b>NTA</b>	Netherlands Technical Agreement
<b>P&amp;C</b>	P&C
<b>PEFC</b>	Programme for the Endorsement of Forest Certification
<b>PO</b>	Participating Operator
<b>PPE</b>	Personal protective equipment
<b>PPP</b>	Plant Protection Product
<b>REACH</b>	Registration, evaluation, authorisation and restriction of chemicals
<b>RED</b>	Renewable Energy Directive
<b>RSB</b>	Roundtable on Sustainable Biomaterials
<b>RSPO</b>	Roundtable on Sustainable Palm Oil
<b>SBP</b>	Sustainable Biomass Program
<b>SDGs</b>	Sustainable Development Goals
<b>SVHCs</b>	Substances of very high concern
<b>VOC</b>	Volatile organic compounds
<b>WHO</b>	World Health Organization

## Executive Summary

In this deliverable, results from the testing of the content level of the BIOBASEDCERT Monitoring Tool (BMT) on selected sustainability certification schemes and labels for industrial biobased systems are reported.

Tested sustainability certification schemes and labels (CSLs) are:

- Sustainability certification schemes for biobased products and materials:
  1. ISCC PLUS
  2. RSB Advanced Products
  3. Better Biomass
- Sustainability certification schemes specific for biological feedstocks for industrial biobased systems:
  4. FSC (wood)
  5. SBP (wood)
  6. Bonsucro (sugarcane)
  7. Better Cotton (cotton)
- ISO14020-compliant (Type I) ecolabels:
  8. EU Ecolabel
  9. Nordic Swan Ecolabel

It was intentionally selected to have the testing of the content level BMT on CSLs with a variety of scopes to ensure the applicability of the tool to the different scopes that CSLs could have. The selection of CSLs was done based on the review carried out and reported in D1.2 according to the scope of the project and based on the established contacts the BIOBASEDCERT cluster partners had with certain CSL owners.

Results from the analysis for each of these CSLs were reported, providing information on the sustainability topics where the tested CSLs covered or not the defined BMT requirements. The aim of the BMT is not to make a comparison between the CSLs, but to conduct an individual assessment and identify opportunities for each of the CSL owners to enhance the ambition level of their schemes. Therefore, it was decided not to calculate a single overall score for their performance nor to have a certain rating or ranking system, which is common in other benchmarking tools. It is important to note that the assessments carried out provide a static picture of the performance of CSLs against the content-level BMT requirements at the time of the assessment. It is expected that the standards will be updated periodically in the future. However, it is not foreseen at this point that there will be new assessments conducted to reflect potential standard updates, because these assessments were carried out as part of a EU project that has a limited timeframe.

The selected sustainability CSLs have a wide variety of scopes in terms of applicable feedstocks (e.g., forests, crops) and value chain actors (e.g., biomass producer, industrial processor, final product manufacturer). Accordingly, in the BMT the applicable feedstock and value chain actor for each requirement are specified. It is thus possible to filter the content-level BMT requirements applicable to each of the assessed CSLs. Thereby, CSLs are not assessed against requirements that are out-of-scope or inapplicable. This means that different sets of requirements can be applicable to different schemes based on their scope. Therefore, it would not be fair nor beneficial to directly compare the results.

In general, CSLs demonstrate relatively high coverage of the defined mandatory requirements of the BMT. Basic-level requirements that provide more prescriptive details on sustainability aspects were often less covered. The coverage of these basic-level requirements was observed to vary among the different CSLs, since some intentionally left these aspects to be decided by the organisation themselves and do not prescribe them in their standards. Advanced-level requirements that are aspirational requirements aimed to drive continuous improvement were found to be scarcely covered by the tested CSLs. However,

this was also expected as these are requirements that are considered for integration by the CSLs in the future and not to be met currently. It was decided to provide the results separately for each requirement level (mandatory, basic and advanced). This gives clarity on the performance of the CSL and also prevents a CSL from scoring poorly if, for example, the only requirements not met are advanced (i.e. aspirational) requirements.

Considering ISO14020-compliant ecolabels (Nordic Swan and EU Ecolabel), it should be noted that ecolabels cover a wide spectrum of products and services. It was not feasible to assess all product groups, and accordingly, specific product groups were selected: building and construction materials for the Nordic Swan Ecolabel, and detergents and cleaning products for the EU Ecolabel. The results are specific to the criteria for these product groups. They are not reflective of the overall performance of the ecolabels. Ecolabels only address the environmental (and social) impacts identified as hotspots for the life cycle of the product group under consideration, and where there is a viable potential for change. Therefore, it is possible that a different set of criteria can be applicable for different product groups.

The ecolabel product groups assessed were seen to have quite different coverage compared to sustainability certification schemes. These differences can be explained by the fact that they are focused on the sustainability of the product and not on the sustainability of the resource (biomass) used. They mostly rely on or refer to third-party sustainability certification schemes (such as RSPO, FSC, Bonsucro) to ensure the sustainable sourcing of the biomass. Additionally, social (except for well-being of consumers) and economic aspects were considered out of the scope or not applicable to ecolabels. Within the two dimensions of the BMT covered by ecolabels, Environment and Circularity, they addressed most extensively Climate change, Air quality, and Chemical use management as well as Responsible waste management principles. Opportunities for improvement are seen in terms of incorporation of water consumption and quality monitoring and reporting on GHG emissions.

For sustainability certification schemes, there was a relatively high coverage of the requirements in the social and environmental dimensions. Notably most of the principles in the environmental dimension were often well covered by the schemes, especially the mandatory requirements. In the social dimension, especially labour and human rights were well addressed as well as the mandatory requirements in the Healthy and safe working conditions and Wellbeing of the local community principles. Opportunities for improvement identified were very much scheme-specific, also depending on the scope of that scheme. Some examples for the Environmental dimension concern the inclusion of more explicit requirements on Air quality and Energy use & efficiency. Additionally, to have explicit requirements on the quantification and reporting of GHG emissions. In the social dimension, some of the recommendations for consideration for inclusion in the standards of CSLs include requirements concerning fair contract practice, provision of social security benefits, maternity leave, and medical treatment in emergencies.

The majority of the tested certification schemes were seen to have less focus on the economic and circularity dimensions. The most addressed principles within these dimensions were Responsible waste management and Economic and financial viability, whereas most CSLs had missing requirements concerning the Circular resource use, Circular design & material cycling, and Financial risk management principles. In the circularity dimension, the integration of criteria beyond waste management alone, such as the application of the 9R framework or the cascading use principle for resource use was identified as an opportunity for improvement. For schemes certifying biobased products (ISCC PLUS, RSB Advanced Products and Better Biomass) it is also recommended to expand the scope to include requirements related to design for high-quality recyclability and product-life extension strategies. Finally, when it comes to the economic dimension, the schemes could have more explicit requirements on business plans, fighting against fraudulent, deceptive and dishonest practices, and economic risk management.

# 1. Introduction

This deliverable (D3.2) is an output of Task 3.3 *Testing the developed monitoring system and indicators on reviewed schemes and labels*. The goal of this deliverable was to evaluate a selected set of prominent voluntary sustainability certifications schemes and labels (CSLs) for industrial biobased systems against the requirements of the content level BIOBASEDCERT Monitoring Tool (BMT), with the twofold aim to i) provide feedback for the content level BMT development from testing it on a range of CSLs, and ii) analyse the coverage of the defined (mandatory) requirements of the content level BMT, and accordingly derive recommendations for improvement for the set of CSLs being tested.

For this purpose, an iterative approach to testing was used, whereby two testing phases were conducted, each followed by a revision of the BMT based on the generated feedback. The process is depicted in Figure 1:

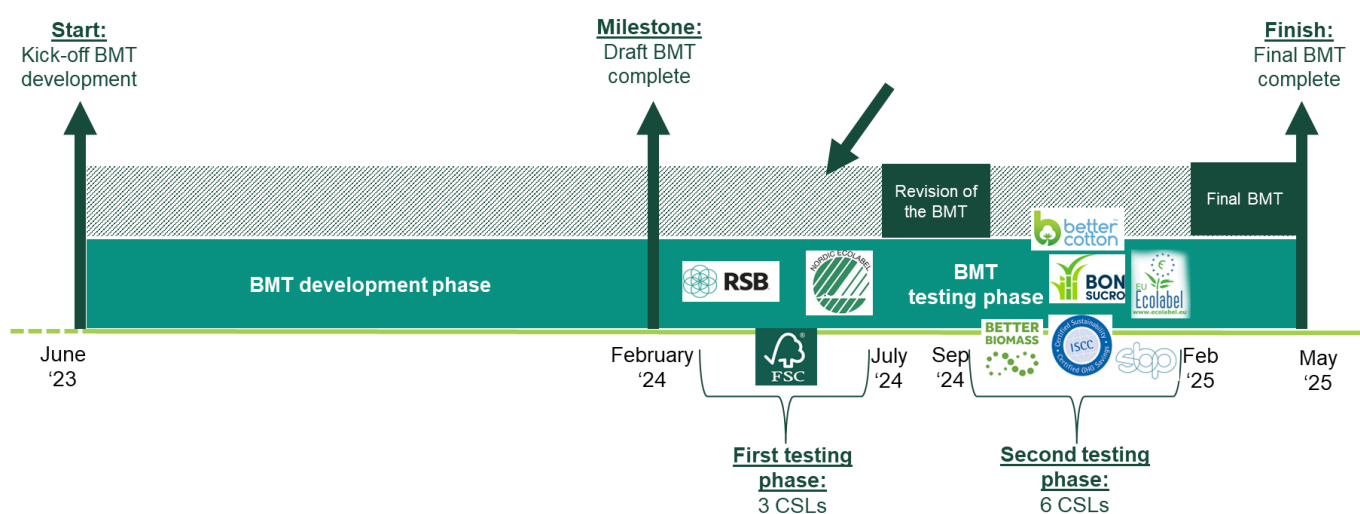


Figure 1. BMT Development and Testing Process

As part of Task 3.2, the draft BMT was developed in November 2023 which was further refined following stakeholder engagement and input through December 2023 to February 2024. This draft BMT was used to develop a testing template for the first testing phase. The first testing phase was successfully carried out for three CSLs (i.e., FSC, RSB and Nordic Swan Ecolabel), in close collaboration with the CSL representatives in the period of February - July 2024. High-level results and key lessons learned, derived from the first testing phase, were presented at the EUBCE side event, on June 26<sup>th</sup> in Marseille, France.

Based on the feedback collected from the first testing phase from the CSLs participating in the first testing phase and project partners conducting the testing, the first revision of the BMT was conducted July – September 2024. This improvement of the BMT is part of Task 3.5, where the draft BMT developed in Task 3.2 is refined based on the feedback received from testing as well as from stakeholder engagements.

Following that, the second testing phase was successfully kicked off in September 2024 with 6 CSLs (i.e., Better Biomass, Better Cotton, Bonsucro, ISCC, SBP and EU Ecolabel) and the improved version of the BMT was used in their testing. This second testing phase was concluded in February 2025 and the feedback generated in this second phase were used again in Task 3.5 for further improvement and finalization of the content level BMT in March 2025.

The testing of all the 9 CSLs were revisited and analysed using the final version of the content level BMT in March-April 2025 for the production of the final testing results presented in this deliverable.

The report is structured as follows:

- Chapter 2 provides brief information on the content level of the BMT and the methodology used in testing it on selected sustainability certification schemes and labels.
- Chapter 3 describes the approach used in carrying out the assessments and reporting on the assessment results including information on the identification of scope, consultations carried out with CSL owners, and different sections included in the template for reporting of the findings.
- Chapter 4 presents the results for each of the 9 tested CSLs following the methodology and template provided in Chapter 3 which provides the scope definition of the CSL followed by analysis of results separately for each dimension: environment, circularity, social and economic.
- Conclusions of the report are given in Chapter 5 where key findings are provided.
- In the Annex the content level BMT requirements are provided, which can be used to get further information on the sustainability criteria codes used when referring to the content level BMT when reporting of the assessment results in Chapter 4.

## 2. Content level of the BMT and methodology used in testing on CSLs

### 2.1 BIOBASEDCERT Monitoring Tool (BMT)

One of the main objectives of this project was to develop a monitoring system and test it to assess the robustness, effectiveness and comprehensiveness of existing voluntary sustainability certification schemes and labels (CSLs) for industrial biobased systems. Instead of a project-specific monitoring system, it was decided to join forces with the sister projects HARMONITOR and STAR4BBS and to develop a joint system called the BIOBASEDCERT Monitoring Tool (BMT). By working together on the BMT, the sister projects were able to streamline stakeholder consultations and avoid duplication of efforts.

The BMT aims to provide the EC with a framework to evaluate the potential of CSLs and accompanying standards to contribute to the objectives and sustainability goals prioritised in relevant EU policies and SDGs. The BMT supports and incentivizes CSL owners to improve their systems by identifying gaps in their content and system characteristics. It is believed that the BMT can facilitate the harmonization of CSLs in terms of shared sustainability and governance criteria.

The BMT is structured into three levels: system, content, and outcome (see Figure 2):

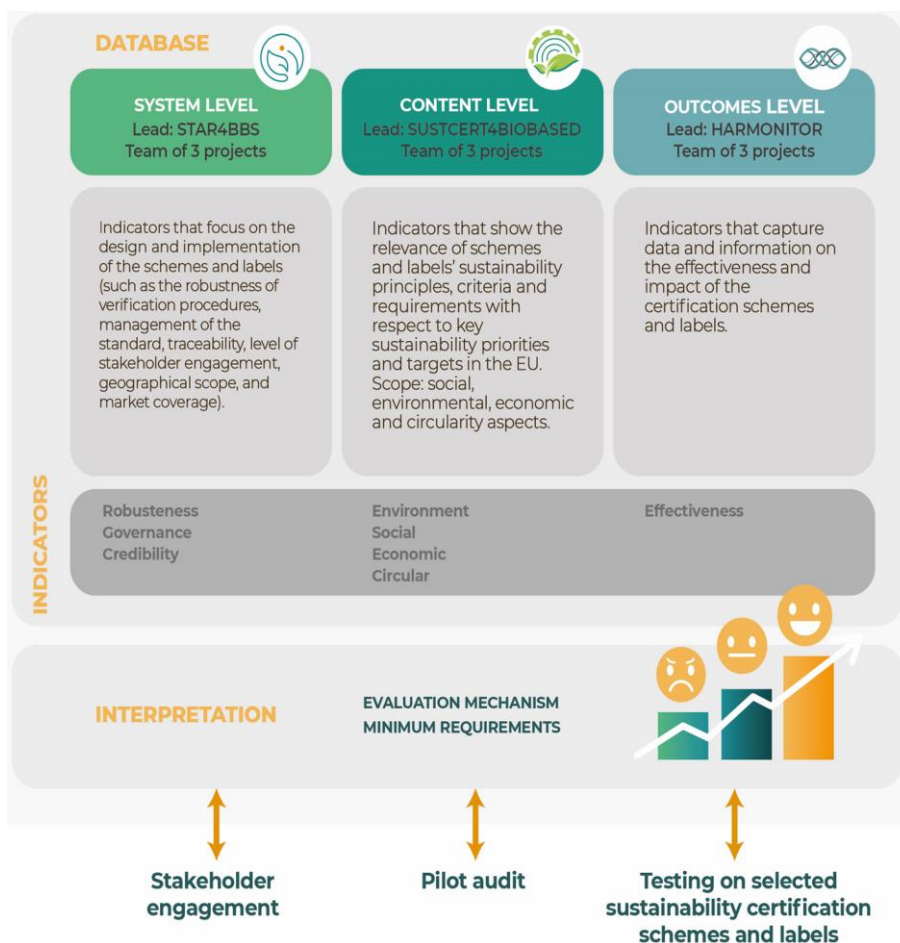


Figure 2 Structure of the BMS

The system level focuses on system characteristics, including governance, traceability, assurance, etc. This level provides an assessment of the robustness of schemes. The content level focuses on the sustainability requirements of the CSLs vis-à-vis specific environmental, social, economic, and circularity priorities and targets required from operators seeking certification. This level provides an assessment of the comprehensiveness of the schemes with respect to key sustainability priorities. The outcome level focuses on evidence of the performance and impact generated by implementing CSLs. This level provides an assessment of the effectiveness of schemes.

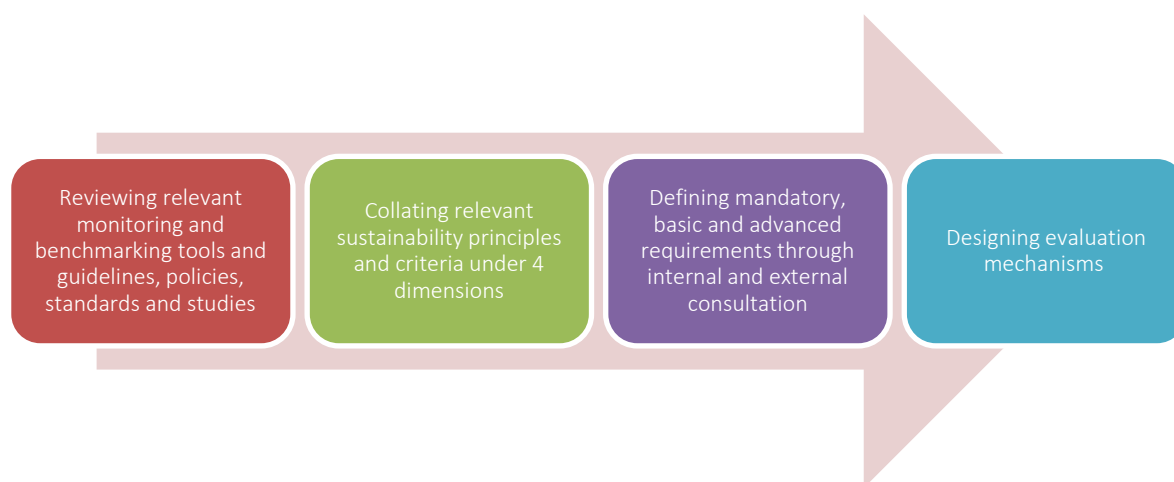
The different levels of the BMT (content, system, and outcome) were developed collaboratively with the sister projects. SUSTCERT4BIOBASED has led the development of the content level but has also been involved in the development of the system and outcome levels.

The BMT development process of the three levels and their contents are described in detail in a separate joint deliverable with the sister projects, which for SUSTCERT4BIOBASED corresponds to D3.3 *Description of the monitoring system*.

## 2.2 Content level of the BMT

This D3.2 deliverable is dedicated to sharing the results from the testing of the content level of the BMT. Therefore, in this section a short overview of the content level development and its principles and criteria is provided. As noted above, the content level of BMT will be described in detail in a separate deliverable D3.3.

The development process is depicted in Figure 3. Firstly, in order to identify the sustainability requirements applicable to biological resources and to biobased materials and products, a thorough review was carried out of relevant legislation, monitoring and benchmarking tools, standards, guidelines and certification schemes and labels. The next steps was the categorization of the identified sustainability principles and criteria in terms of sustainability dimensions. A holistic approach was followed, with equal consideration of all three pillars of sustainability (environment, social and economic). Furthermore, attention was paid to ensure the contribution of biobased products to a circular economy, including aspects such as resource efficiency and recyclability of biobased products. Therefore, principles and criteria were categorized under 4 dimensions: environment, circularity, social and economic.



*Figure 3 Content level BMT development process*

The next step was the definition of the requirements under each sustainability criteria and assigning it a level. Following several rounds of reviews and consultations internally with experts within the cluster, as well as externally with targeted stakeholders through co-creation workshops, bilateral meetings and a

survey, three levels were determined (mandatory, basic and advanced) and each requirement was assigned one of these levels. Finally, an evaluation mechanism was developed to present the assessment results.

### 2.2.1 *Scope definition*

Early on in the development of the content level, it was realized that the schemes have quite a varying scope in terms of the applicability of their requirements to certain types of feedstock and value chain actors. Therefore, it was decided to mark for each sustainability requirement for which feedstock category and value chain actor they it is applicable to.

The defined feedstock categories are crop, forest, agrarian and forestry residues, and waste and residues. There is different categorization of primary residues from agricultural and forestry, because their use has consequences for soil quality. 'Waste and residues' refers to non-primary residues such as secondary residues and wastes arising from industrial processing of biomass, and tertiary residues and waste, which include urban and post-consumer outputs.

The defined value chain actor categories are biomass producer, industrial processor and final product manufacturer. Biomass producers include farmers and plantation or forest managers. Industrial processors process biomass and/or intermediates/semifinished products. Final product manufacturers conduct the final steps of processing to biobased products and/or valorises (processed) biomass for application in finished products.

Additionally, it was seen that some of the sustainability dimensions or principles therein can be outside the scope of the assessed CSLs. This was especially the case for ISO14020-compliant ecolabels which focus on the environmental dimension, and o have some coverage of the circularity dimensions. Therefore, social and economic dimensions were found to be outside the scope (apart from the Wellbeing of consumers principle).

Figure 4 provides a snapshot of the pre-assessment tab of the BMT content level. This pre-assessment, allows for the selection of applicable feedstocks, value chain actors and principles within the scope of the CSL. Accordingly, it is possible to filter the content level BMT requirements applicable to each of the assessed CSLs. Thereby, scoring schemes on topics that are out-of-scope or inapplicable is prevented.

## BioBasedCert Monitoring Tool (BMT)

### Pre-assessment

Name of scheme

Applicable feedstock 1       Applicable feedstock 2       Applicable feedstock 3       Applicable feedstock 4

Applicable value chain actor 1       Applicable value chain actor 2       Applicable value chain actor 3

Applicable principles (Yes/No)

- Environmental management Yes
- Climate change management Yes
- Sustainable Land Use Management Yes
- Protection of Biodiversity Yes
- Chemical Use Management Yes
- Soil management Yes
- Air quality Yes
- Water Quality and Conservation Yes
- Energy Use & Efficiency Yes
- Circular resource use Yes
- Circular design & material cycling Yes
- Responsible waste management Yes
- Labour and human rights Yes
- Healthy and safe working conditions Yes
- Wellbeing of the local community Yes
- Wellbeing of consumers Yes
- Economic and financial viability Yes
- Fair business practice Yes
- Risk management Yes

Figure 4 Screenshot of the pre-assessment tab of content level BMT, which allows for selection of applicable feedstocks, value chain actors and principles within the scope of the CSL

### 2.2.2 Sustainability principles and criteria

In Figure 5, an overview of sustainability principles of content level BMT is provided. The content level is categorized under 4 dimensions: environmental, circularity, social and economic. There is also the high-level requirement on adherence to all applicable regional, national and international laws, regulations and agreements (also referred to as the minimum backstop).

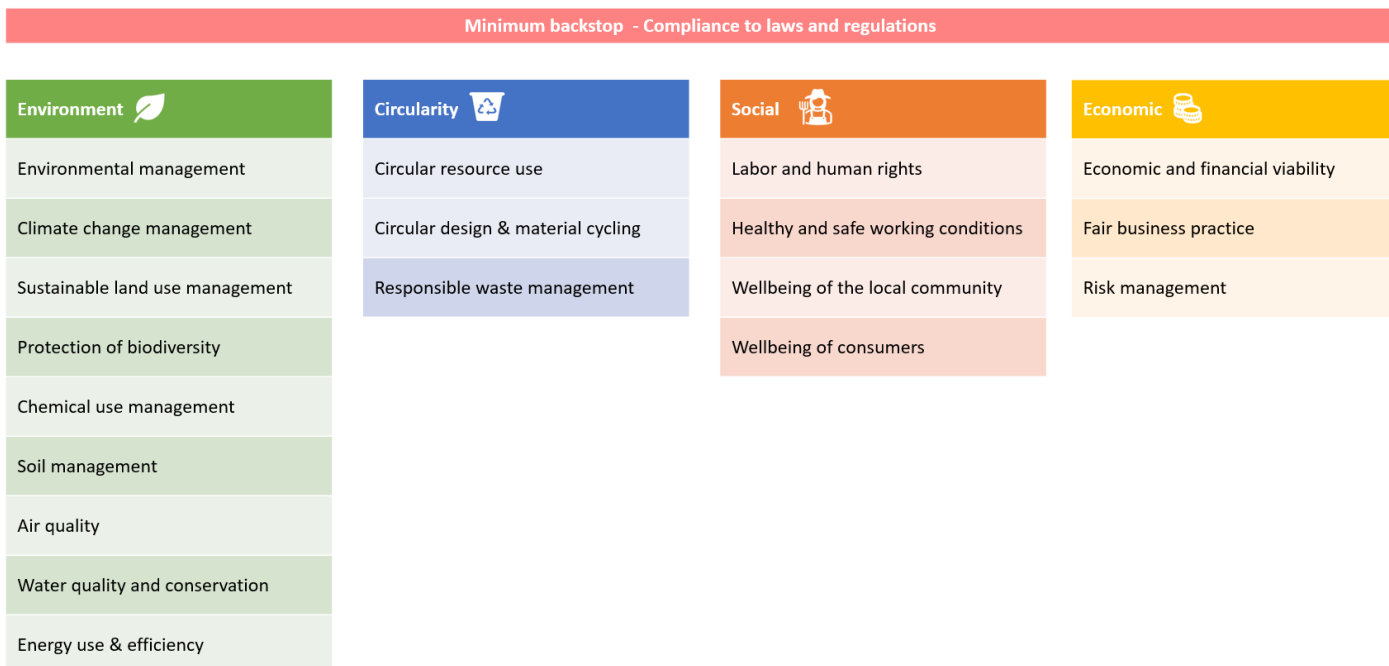


Figure 5 Overview of content level BMT sustainability principles

The sustainability criteria and requirements under each principle are provided in the Annex based on the current version of the content level used in testing of CSLs in March-April 2025 and reporting of the results in this deliverable. Please note that this version can be subject to minor changes and the finalized version will be provided as a result of D3.3 to be submitted at the end of the project in May 2025.

### 2.2.3 Evaluation mechanism

#### Requirement levels:

Three requirement levels were defined: mandatory, basic and advanced. Mandatory requirements are expected to be met currently by schemes. They are linked to legislation, sustainability protocols and conventions. Basic requirements provide more prescriptive details on the sustainability criteria. It was recognized that some schemes choose to provide such more comprehensive requirements in their standards whereas some schemes intentionally do not prescribe this level of detail on their standards and leave these aspects to be decided by the organisations themselves in meeting the defined criteria. Advanced-level requirements are aspirational requirements. These requirements are not expected to be covered by the schemes at the moment, but were defined to drive continuous improvement. Some ambitious schemes may nevertheless already meet some of these requirements. Schemes can use the basic and advanced requirements detailed in the BMT to, for example, build a future improvement roadmap on specific topics and consider them in the update of their standards.

#### Presentation of results:

Different options for presenting the results were discussed throughout the development of the BMT. The aim of this tool is not to compare CSLs but to conduct individual assessment and identify opportunities for improvement for each of them. Therefore, it was decided not to have a single overall score calculation for the CSL performance based on the assessments. Similarly, the decision was also made not to define certain achievement levels (e.g., gold/silver/bronze) or ranking systems (5-point scale or stars).

It was decided to provide results per principle under each dimension. This was considered to provide more transparency in providing feedback and avoid making comparisons in terms of single scores. This would not be useful as schemes have quite varying scopes, meaning the applicable requirements for each would be different.

Moreover, it was decided to provide the results separately for each requirement level (mandatory, basic and advanced). This gives clarity on the performance of the CSL and also prevents a CSL from scoring poorly if, for example, the only requirements not met are advanced (i.e. aspirational) requirements.

Accordingly, the reporting of the results were decided to be presented as tables, showing under each principle and each requirement level as follows: the first number (numerator) represents the number of applicable requirements met, and the second number (denominator) the total number of applicable requirements. For example, in the example in Table 1, a fictitious scheme would have met two out of the three basic requirements that were applicable to it in the Climate change management principle

Table 1. Example results table

Principle	Fraction of applicable requirements covered		
	Mandatory	Basic	Advanced
Environmental Management	1/1	1/2	N/A
Climate change management	1/1	2/3	0/3

## 2.3 Methodology used in testing of the content level BMT

### 2.3.1 Selection of certification schemes and labels for testing

An important preparatory activity in the testing process concerned the selection of CSLs to be tested, and the establishment of contact with scheme owners to ensure commitment and support during the testing phase. The cluster identified 9 CSLs as suitable candidates for testing the BMT, based on a set of criteria. Firstly, regarding the project scope, only existing sustainability certification schemes and ecolabels that can be applicable to either biobased products and materials, or biological feedstock that can be used for these products were considered. Secondly, it was ensured that CSLs with a variety of scopes in terms of applicable feedstocks, product groups/ sectors and value chain actors were selected. In a previous deliverable, D1.2 *Review of sustainability certification schemes and labels for biobased systems*, a review was carried out for this purpose and 11 CSLs were shortlisted as most relevant for industrial biobased systems, also considering coverage of different type of feedstock and sectors and prominence in the market. Eight out of the nine CSLs selected were from this shortlist, with the only addition being SBP which was included based on their ongoing engagement with sister project Harmonitor. Alignment was achieved with the sister projects so that each level of BMT tested these 9 CSLs in parallel. The tested sustainability certification schemes and labels can be categorized under 3 categories:

- Category 1: Sustainability certification schemes for biobased products and materials:
  1. ISCC PLUS
  2. RSB Advanced Products
  3. Better Biomass
- Category 2: Sustainability certification schemes specific for biological feedstocks for industrial biobased systems:
  4. FSC (wood)
  5. SBP (wood)
  6. Bonsucro (sugarcane)
  7. Better Cotton (cotton)
- Category 3: Type 1 Ecolabels:
  8. EU Ecolabel
  9. Nordic Swan Ecolabel

All three categories were included in both testing phases. Table 2 provides an overview of the selected CSLs, involvement in testing phase 1 or 2, and the category.

*Table 2 Joint list of selected CSLs for testing*

Selected CSLs	Involvement in testing phase	Category
RSB	First	Category 1
FSC	First	Category 2
Nordic Swan Ecolabel	First	Category 3
Better Biomass	Second	Category 1
ISCC	Second	Category 1
Better Cotton	Second	Category 2
Bonsucro	Second	Category 2
SBP	Second	Category 2
EU Ecolabel	Second	Category 3

### 2.3.2 Stepwise methodology for testing

As described above, an iterative approach to testing was used, whereby two testing phases were conducted, each followed by revision of the BMT based on the generated feedback. The content-level testing method comprised of five steps in the first testing phase. After the first testing phase, the method was slightly modified with the addition of step 0 (see Figure 6). In this step, the CSL owners were asked to fill in a *pre-assessment questionnaire* (i.e., scope-defining exercise) on the coverage of their CSL, to provide a better understanding of its scope and as such ease the testing process. The outputs from the questionnaire are used to fill the *pre-assessment tab* of the content level BMT (see Figure 4).

First, (step 1) the documents deemed relevant to the assessment of each scheme or label were collected. It was checked with the CSL representative whether this selection of documents was complete and up to date. In the second step (2), an assessment was carried out of the coverage of sustainability requirements of the CSL against the BMT requirements. Next (step 3), the CSL representative was offered the opportunity to provide feedback on the assessment results. Based on this input, the results were revised (step 4). In the last step (5), a final evaluation of the results was performed, resulting in a collation of suggestions on how to improve the BMT and its requirements, as well as an overview of the coverage of the CSLs of the defined requirements.

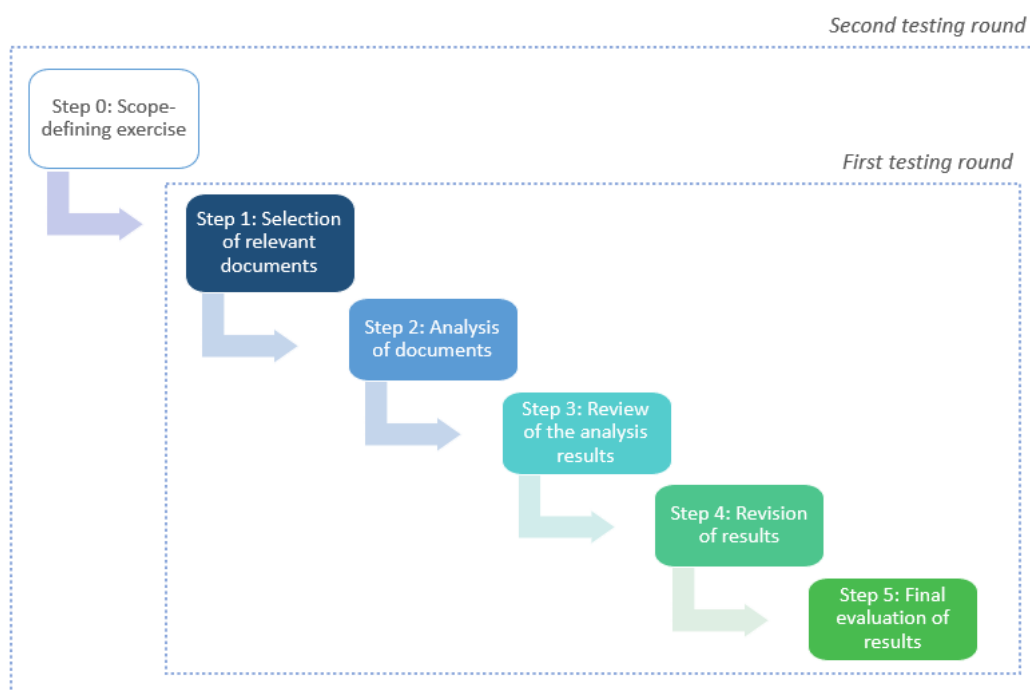


Figure 6. Stepwise method to testing the content level BMT, with the addition of step 0 in the second testing round

The testing of all the 9 CSLs were revisited and analysed using the final version of the content level BMT in March-April 2025 to produce the final testing results presented in this deliverable.

To facilitate the content level testing, an Excel testing template was created. The testing template takes the content level BMT as its basis, extending it with several columns for assessment (see Figure 7 orange headings). These columns allow the assessor to fill the assessment, justify the evaluation and provide a reference. The assessor checks the requirement and selects either "Yes" or "No" from the drop-down menu in this column for each requirement. "Yes" means that the scheme fulfils the requirement, "No" that it does not. If the requirement is fulfilled, the assessor provides justification in the next column referring to the specific text in the scheme standard documents that justifies the response. Under "source reference", the assessor provides references to the specific standard document(s) used in making the assessment and providing the justification.

BioBasedCert Cluster									
BioBasedCert Monitoring Tool (BMT)									
Social									
Principle	Code	Criterion	Requirement	Requirement fulfilled Yes/No	Justification	Requirement level	Applicable feedstock(s)	Applicable value chain phase(s)	Source reference
Labour and human rights	SOC-LR-1	The scheme requires adherence and commitment to the Universal Declaration of Human Rights and the ILO Core Conventions.	i. The operator is committed to and adheres to the Universal Declaration of Human Rights			Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer	
			ii. The operator is committed to and adheres to the ILO Core Conventions.			Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer	

Figure 7. Snapshot of a section of the content level BMT testing template

Additionally, during the first and second testing phase, feedback on the BMT itself was collected in a separate column called “feedback BMT”.

### 2.3.3 Feedback from the testing

The testing phases generated relevant feedback that was used as input for T3.5 *Implementing feedback and optimising the monitoring system and indicators*. The table below (Table 3) highlights some of the findings and the revisions made accordingly to the BMT.

Table 3. Findings from the testing of BMT on CSLs and action taken during subsequent BMT revision

Finding	Action
Due to the number of requirements and the high level of detail, testing is resource-intensive.	Simplification of the criteria and requirements to increase their conciseness and thus the user-friendliness of the tool. Where possible, requirements were merged or grouped.
It is challenging to test CSLs with different scopes with a single tool.	Scope-defining questionnaire was created and was filled by CSL owners before the second testing phase. A follow-up Q&A session was arranged for clarification.
The requirements are often not met if following strictly the exact phrasing of the prescriptive requirements.	Adaptation of requirements and accommodating different ways to meet these if the intent is fulfilled.
Some schemes deliberately do not include detailed prescriptive requirements, but rather provide a generic requirement and leave it to the operator to decide how to meet this requirement. These should not be expected as minimum requirements.	Reformulation of requirement levels in terms of mandatory – basic – advanced which refer to must (i.e., minimum) requirement, more detailed (non-minimum) requirements, and aspirational requirements, respectively.
Inconsistencies between requirements and unclear definitions hinder effective assessment of CSLs.	Harmonisation of similar requirements to improve consistency (e.g., using the same structure for each requirement demanding a management plan) and clarification of definitions.

## 3. Approach used in assessing the selected CSLs and reporting on the results

### 3.1 Approach used in assessment of the CSLs and consultation with the CSL owners

The stepwise testing method described in section 2.3.2 was carried out in different testing 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. In the first two phases, different CSLs were tested in close collaboration with their representatives. The final revision phase involved the revision of the testing for all CSLs based on the final version of the BMT and feedback from the CSL owners. Throughout the process, the BMT was continuously subjected to scrutiny to drive its improvement towards its final version (as part of T3.5). The present section describes the approach used in the assessment of CSLs and specifically the stakeholder engagement in further detail.

Both testing phases commenced with an official online kick-off meeting. During these online sessions, representatives from the CSLs tested in that phase were introduced to the cluster, the BMT and its three levels. Subsequently, the sister projects laid out their expectations regarding collaboration with the CSLs, and the CSL representatives had the chance to ask questions, voice concerns and bring in suggestions.

After the kick-off meetings (which took place in February 2024 and September 2024 for the first and second testing round, respectively), the stepwise testing method (see Figure 6) was carried out for each selected scheme and label. In the meantime, regular contact was maintained with the CSL owners. At the beginning of the testing phase, important contact moments revolved around scope definition and the identification of relevant scheme and label documents for review. For the second testing phase this involved also the filling in of the pre-assessment questionnaire by the CSLs (Step 0). The assessments were done based on the current version of the standards and information provided on the websites of reviewed CSLs (Step 1). After the initial analysis of the documents was carried out (Step 2), preliminary results were shared with each respective CSL representative for their review (Step 3). Subsequently, one-to-one sessions were scheduled to check with CSL owners on some requirements where it was difficult to find evidence in their standards, discuss the initial findings, and respond to questions from CSL owners. Explicit consent was received from all CSLs to share high-level assessment results with the other CSLs in a closing workshop, which took place in May 2024 and January 2025 for the first and second testing round, respectively. During this workshop, the preliminary testing results were presented, and additional feedback was obtained from the CSL owners.

Moreover, in the first closing workshop in May 2024, the process of the first testing phase was evaluated and the format for sharing preliminary findings with a broader audience was discussed and agreed upon. In line with this agreement, the preliminary results were presented in a side event organized by the BIOBASEDCERT cluster at the EUBCE in Marseille on June 26<sup>th</sup>, 2024.

After the second closing workshop, the assessment results from all tested CSLs were revised based on the final version of the BMT and the feedback provided by the involved CSL owners. These draft results were used to fill the reporting template described in section 3.2. All the produced reports were internally reviewed, and crosschecks were carried out for consistency in the information provided at each CSL attachment. Subsequently, the final draft results (both the assessment in Excel and report in Word) were

shared with each respective CSL owner, allowing them the opportunity to provide feedback in early April 2025. The obtained feedback was integrated in the assessment results, resulting in the final version of the assessment results. The updated final assessment result version was shared with each scheme or label owner for a final review and confirmation. Highlights from the final results will be presented at the final event of the BIOBASECERT cluster on 13 May 2025 in Brussels.

### 3.2 Approach used in reporting of the assessment results

The following reporting template was developed to report on the findings from the assessment carried out in the Excel document. The assessment report provides information on the content of the standard with regard to sustainability principles and criteria, identified strengths, weaknesses and opportunities for improvement.

The reporting template is structured into the following sections:

- **General:** Provides information on the scheme’s name, owner, website and label as well as number of active certificates and the scheme’s general goal.
- **Scope:** Provides information on the applicable biomass feedstock, product group and value chains actors as well as the geographical scope of the scheme. .
- **Assessment of BMT content level requirements:** Provides an overview of the assessment results, BMT requirements covered and not covered, and recommended key areas of improvement divided into the following sub-sections:
  - Minimum backstop – provides a check in terms of requirement to adhere to all applicable regional, national and international laws, regulations and agreements
  - Environment
  - Circularity
  - Social
  - Economic
  - Overall result – reports on the key findings and summarizes the opportunities for improvement identified.

The following table (Table 4) provides a description of each item of the reporting template:

*Table 4: Reporting template*

General	
Name of scheme	Name of scheme
Scheme owner	Information on the scheme owner
Website	Website
Label provided	Figure of the label provided
Operational since	Year it came into operation
Number of active certificates	Number of active certificates based on available online information
Standard ownership	Private or public ownership
General objective	General objective of the scheme as defined on its website
Scope	
Biomass feedstock	Applicable biomass feedstock
Applicable feedstock categories in BMT	<input type="checkbox"/> Forest <input type="checkbox"/> Crop <input type="checkbox"/> Agrarian and forestry residues

	<input type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	Explanation for the above selected feedstock categories in BMT in scope
Sector/Product group	Applicable sector/product group
Applicable value chain actor categories in BMT	<input type="checkbox"/> Biomass producer <input type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	Explanation for the above selected value chain actors in BMT in scope
Geographic applicability	Indication of geographical availability (e.g., specific countries, EU or global)
Applicability of sustainability principles in BMT	Environment <input type="checkbox"/> Environmental management <input type="checkbox"/> Climate change management <input type="checkbox"/> Sustainable land use management <input type="checkbox"/> Protection of biodiversity <input type="checkbox"/> Chemical use management <input type="checkbox"/> Soil management <input type="checkbox"/> Air quality <input type="checkbox"/> Water quality and conservation <input type="checkbox"/> Energy use & efficiency Circularity <input type="checkbox"/> Circular resource use <input type="checkbox"/> Circular design & material cycling <input type="checkbox"/> Responsible waste management Social <input type="checkbox"/> Labour and human rights <input type="checkbox"/> Healthy and safe working conditions <input type="checkbox"/> Wellbeing of the local community <input type="checkbox"/> Wellbeing of consumers Economic <input type="checkbox"/> Economic and financial viability <input type="checkbox"/> Fair business practice <input type="checkbox"/> Economic risk management
Justification/comment on the selected sustainability principles	Explanation for the above selected sustainability principles in BMT in scope

**Assessment of BMT content level requirements**

Reference Documents	Information on the document(s) where the sustainability principles are reported.
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**Minimum backstop**

Compliance requirement check	Check on if the scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.
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**Environment**

Results		<i>Fraction of applicable requirements covered</i>		
	<b>Principle</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management			
	Climate change management			
	Sustainable land use management			
	Protection of biodiversity			
	Chemical use management			
	Soil management			
	Air quality			

	Water quality and conservation			
	Energy use & efficiency			
BMT requirements covered	Short overview of Environment principles and requirements well covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
BMT requirements not covered	Short overview of Environment principles and requirements not covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
Recommended key areas for improvement	Based on the identified not covered requirements, derived recommendations for consideration for inclusion in CSL.			
<b>Circularity</b>				
Results		<i>Fraction of applicable requirements covered</i>		
	<b>Principle</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Circular resource use			
	Circular design & material cycling			
	Responsible waste management			
BMT requirements covered	Short overview of Circularity principles and requirements well covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
BMT requirements not covered	Short overview of Circularity principles and requirements not covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
Recommended key areas for improvement	Based on the identified not covered requirements, derived recommendations for consideration for inclusion in CSL.			
<b>Social</b>				
Results		<i>Fraction of applicable requirements covered</i>		
	<b>Principle</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Labour and human rights			
	Healthy and safe working conditions			
	Wellbeing of the local community			
Wellbeing of consumers				
BMT requirements covered	Short overview of Social principles and requirements well covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
BMT requirements not covered	Short overview of Social principles and requirements not covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
Recommended key areas for improvement	Based on the identified not covered requirements, derived recommendations for consideration for inclusion in CSL.			
<b>Economic</b>				
Results		<i>Fraction of applicable requirements covered</i>		
	<b>Principle</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Economic and financial viability			
	Fair business practice			
Economic risk management				
BMT requirements covered	Short overview of Economic principles and requirements well covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
BMT requirements not covered	Short overview of Economic principles and requirements not covered by the scheme, distinguishing between mandatory, basic and advanced requirements of BMT.			
Recommended key areas for improvement	Based on the identified not covered requirements, derived recommendations for consideration for inclusion in CSL.			
<b>Overall result</b>				
Key findings	Summarizes the recommended key areas for improvement identified in the four dimensions of BMT.			

## 4. Results from the assessment of selected CSLs

### 4.1 ISCC PLUS

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official ISCC standards and procedures.*

General	
Name of scheme	ISCC PLUS
Scheme owner	The ISCC Association (ISCC e.V.) is the legally registered body responsible for governing ISCC – the International Sustainability and Carbon Certification System. ISCC is an independent, multi-stakeholder organisation, responsible for the development, surveillance, revision and continuous improvement of the ISCC Certification Systems. ISCC operates different certification systems for different markets, including, but not limited to, ISCC EU, ISCC PLUS, ISCC CORSIA, ISCC CORSIA PLUS, and ISCC Solid Biomass NL.
Website	<a href="https://www.iscc-system.org/">https://www.iscc-system.org/</a>
Label provided	
Operational since	2012
Number of active certificates	5720 ( <a href="https://www.iscc-system.org/certification/certificate-database/valid-certificates/">https://www.iscc-system.org/certification/certificate-database/valid-certificates/</a> , 1 April 2025)
Standard ownership	Private
General objective	ISCC is committed to driving sustainability through transparent, credible, and globally recognized certification systems. Their mission is to empower companies and stakeholders across industries to build sustainable supply chains through trusted and comprehensive certification. ISCC verifies responsible sourcing, traceability, and deforestation-free practices, fostering positive environmental and social impact worldwide.
Scope	
Biomass feedstock	The ISCC PLUS certification system covers as feedstock all biological resources, including agricultural and forestry biomass, biogenic wastes and residues, as well as fossil-based waste and renewable-energy-derived-feedstock.
Applicable feedstock categories in BMT	<input checked="" type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input checked="" type="checkbox"/> Agrarian and forestry residues <input checked="" type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	As indicated above, ISCC PLUS is applicable to a wide variety of biological feedstocks. These include agricultural and forestry biomass (“bio materials” in ISCC’s standards, e.g., both main and intermediate crops), biogenic wastes and residues (“bio-circular materials”, e.g., as used cooking oil, tall oil and agricultural or forestry residues), recycled fossil-based waste (“circular materials”, e.g., mixed plastic waste, waste textile or end-of-life tires) and renewable energy used in conversion reactions to materials (“renewable-energy-derived materials”, e.g., power-to-X, where X can be a variety of end products).
Sector/Product group	ISCC PLUS certification is applicable to the bioeconomy and circular economy for food, feed, chemicals, industrial applications (e.g., plastics or packaging) and energy from renewable sources used outside of the European Union (i.e., markets that are not regulated by the RED III).
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor

	<input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	The ISCC PLUS offers certification for all biomass producers, industrial processors as well as final product manufacturers in biobased value chains. It is however important to note that ISCC EU Principle 1-6 only apply to biomass producers which the circularity, social and economic requirements of BMT belong to. Therefore, it was decided not to select final product manufacturer in BMT to make the specific requirements for them not applicable to ISCC PLUS.
Geographic applicability	Global
Applicability of sustainability principles in BMT	<p>Environment</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Environmental management</li> <li><input checked="" type="checkbox"/> Climate change management</li> <li><input checked="" type="checkbox"/> Sustainable land use management</li> <li><input checked="" type="checkbox"/> Protection of biodiversity</li> <li><input checked="" type="checkbox"/> Chemical use management</li> <li><input checked="" type="checkbox"/> Soil management</li> <li><input checked="" type="checkbox"/> Air quality</li> <li><input checked="" type="checkbox"/> Water quality and conservation</li> <li><input checked="" type="checkbox"/> Energy use &amp; efficiency</li> </ul> <p>Circularity</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Circular resource use</li> <li><input checked="" type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Labour and human rights</li> <li><input checked="" type="checkbox"/> Healthy and safe working conditions</li> <li><input checked="" type="checkbox"/> Wellbeing of the local community</li> <li><input checked="" type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic and financial viability</li> <li><input checked="" type="checkbox"/> Fair business practice</li> <li><input checked="" type="checkbox"/> Economic risk management</li> </ul>
Justification/comment on the selected sustainability principles	<p>The system of ISCC consists of 6 principles:</p> <ul style="list-style-type: none"> <li>• Principle 1: Protection of Land with High Biodiversity Value or High Carbon Stock (applicable to agricultural biomass)</li> <li>• Principle 1: Sustainability Requirements for the Production of Forest Biomass (applicable to forest biomass)</li> <li>• Principle 2: Environmentally Responsible Production to Protect Soil, Water and Air</li> <li>• Principle 3: Safe Working Conditions</li> <li>• Principle 4: Compliance with Human and Labour Rights and Responsible Community Relations</li> <li>• Principle 5: Compliance with Land Rights, Laws and International Treaties</li> <li>• Principle 6: Good Management Practices and Continuous Improvement</li> </ul> <p>Principle 1 and 2 of ISCC are linked the Environmental dimension of the BMT, while Principle 2 includes criteria related to the Circularity dimension. Principle 3, 4 and 5 correspond to the Social dimension, and different topics of the Economic dimension are scattered through Principle 4, 5 and 6.</p>

**Assessment of BMT content level requirements**

Reference Documents	<p>The sustainability requirements for all materials that can be certified under ISCC are described in ISCC EU System Document 202 “Sustainability Requirements” and subdocuments where the respective requirements for different types of raw materials are described in detail:</p> <ul style="list-style-type: none"> <li>• ISCC EU 202-1 – Agricultural Biomass: ISCC Principle 1, V4.1, 1 January, 2024;</li> <li>• ISCC EU 202-2 – Agricultural Biomass: ISCC Principles 2-6, V1.1, 1 December 2022;</li> <li>• ISCC EU 202-3 – Forest Biomass: ISCC Principle 1, V1.0, 19 December 2024;</li> <li>• ISCC EU 202-4 – Forest Biomass: ISCC Principles 2-6, V1.0, 1 March 2023;</li> <li>• ISCC EU 202-5 – Waste and Residues, V4.1, 1 January 2024.</li> </ul> <p>Furthermore, the ISCC PLUS (V3.4.2, 6 March 2024) and ISCC Audit Procedure for Farms and Plantations (V5.4, 1 March 2024) were consulted. In addition, ISCC EU 205 Greenhouse Gas Emissions describes the methodology for GHG emission calculations.</p>
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**Minimum backstop**

Compliance requirement check	The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.
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**Environment**

Results	<b>Fraction of applicable requirements covered</b>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management	1/1	2/2	N/A
	Climate change management	1/1	1/3	0/3
	Sustainable land use management	5/5	6/7	0/4
	Protection of biodiversity	2/2	10/12	1/2
	Chemical use management	5/5	7/8	3/4
	Soil management	4/4	5/5	4/4
	Air quality	1/1	1/1	N/A
	Water quality and conservation	3/3	3/4	1/1
	Energy use & efficiency	N/A	N/A	1/4
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Environmental dimension, ISCC covers all mandatory requirements across all principles, showcasing the scheme’s strength in this domain. This high coverage can, in part, be explained by the impact assessment, management and monitoring system that operators certified by ISCC PLUS are required to implement in order to minimise adverse environmental impacts (e.g., EN-EM-1 i and EN-BD-3). Notably, in the Chemical use management principle, ISCC has strict requirements prohibition of plant protection products (EN-CM-1 i &amp; 2 i-ii) as well as the storage, handling and disposal of substances (EN-CM-3 i).</li> <li>ISCC covers all basic requirements in the Environmental management, Soil management and Air quality principles. In Soil management for example, ISCC requires operators to adopt a range of best practices, e.g., on soil sampling and the improvement of soil water holding capacity (EN-SM-2 iii-iv), considerations for topographic conditions to reduce the risk of soil erosion (EN-SM-3) and appropriate nutrient management (EN-SM-5). For several other principles, such as Sustainable Land Management and Protection of biodiversity, ISCC covers most basic requirements as well.</li> <li>ISCC demonstrates a particularly high coverage in the Soil management and Water quality and conservation principles when it comes to the BMT’s applicable advanced requirements. Also, it was observed that ISCC requires a plan for efficient energy management to support the transition to sustainable energy practices (EN-EE-1 i).</li> </ul>			
BMT requirements not covered	<ul style="list-style-type: none"> <li>No applicable mandatory requirements were found to be absent based on the evaluation of ISCC’s standards.</li> <li>Analysing ISCC’s coverage of basic requirements, several were seen to be missing. For example, in the Climate change management principle, although ISCC does have an elaborate procedure for the calculation and documentation of GHG emissions, it concerns a voluntary add-on. As such, the BMT requirements regarding reporting on GHG emissions of the certified product’s lifecycle (EN-CC-2 i &amp; iii), are not covered. In the Chemical use management principle, it was observed that ISCC does not include requirement for operators to include targets as a part of their integrated pest management plan (EN-CM-1 ii).</li> <li>A number of advanced requirements were found to be not covered, especially in the Climate change management, Sustainable land use management and Energy use &amp; efficiency principles. Regarding Climate change management, there is no explicit requirement to develop a roadmap for reducing GHG emissions (EN-CC-4). In the Energy use &amp; efficiency principle, despite encouraging operators to set targets for the reduced energy consumption and an increased share of renewables, this is not included as a requirement (EN-EE-1 ii-iii &amp; 2).</li> </ul>			
Recommended areas for improvement	<ul style="list-style-type: none"> <li>ISCC is recommended to consider including the BMT’s basic requirements on the reporting of operator’s GHG emissions (EN-CC-2 i &amp; iii) as an integral part of ISCC PLUS (, rather than as a voluntary add-on). Also, the topic of integrated pest management could potentially be further strengthened by adding a requirement on target setting (EM-CM-1 ii), to align with other ISCC PLUS requirements (e.g., on the improvement of soil, water and air) that do include this consideration.</li> <li>As for the advanced requirements, the incorporation of a roadmap requirement for GHG emission reduction (EN-CC-4) is considered a worthwhile consideration that could activate</li> </ul>			

operators certified by ISCC PLUS in the transition towards climate-neutrality. This could be combined with stricter criteria on sustainable energy practices (EN-EE-1 ii-iii & 2).

### Circularity

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Circular resource use	N/A	2/2	N/A
	Circular design & material cycling	1/1	0/1	0/1
	Responsible waste management	1/1	1/2	N/A

BMT requirements covered	<ul style="list-style-type: none"> <li>ISCC PLUS covers the two mandatory requirements of the Circularity dimension. For the Circular design &amp; material cycling principle, the scheme promotes the reuse and recycling of residual flows and residues as extensively as possible (CR-CD-1 i), thereby supporting resource-efficient practices. In the Responsible waste management principle, operators are required to store, transport and dispose of waste as well as used containers in a safe and appropriate manner (CR-WM-1).</li> <li>Regarding basic requirements, ISCC PLUS requires that virgin biomass is harvested at levels that ensure regeneration (CR-CRU-2), and only allows open air burning as a waste management practice in exceptions and under strict conditions (CR-WM-2 ii).</li> </ul>
BMT requirements not covered	<ul style="list-style-type: none"> <li>In terms of basic requirements, ISCC does not include a requirement for operators to take measures to increase material efficiency (CR-CD-2). Also in the Responsible waste management principle, ISCC allows landfilling, while the corresponding BMT requirement requires it to be prohibited and thereby it is not covered (CR-WM-2 i).</li> <li>The advanced Circularity requirement of the BMT regarding use of residual flows and waste for energy generation only in certain circumstances e.g., when the material use is not possible (CR-CD-1 ii), is not covered. ISCC PLUS refers to the Waste Framework Directive, which sets out a general order of priorities for waste management, but no restriction to energy recovery is prescribed.</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>ISCC PLUS is encouraged to consider including a requirement to increase the material efficiency of production processes (CR-CD-2), and to prohibit landfilling as a waste management practice (CR-WM-2 i).</li> <li>The BMT circularity requirements are designed for and apply to, besides biomass producers, also industrial processors and final product manufacturers. Since the ISCC PLUS Principle 2, linked to the topic of circularity, is only applicable to biomass producers, the requirements that are related to the circularity of the product are not covered in ISCC PLUS and were evaluated as outside scope. This for example refers to the basic requirements of increasing circular inflows and the advanced requirements on product design for high quality recyclability (CR-CD-4) and reparability, reusability and product-life extension (CR-CD-3), which is not part of ISCC PLUS. By expanding its scope and including these circularity-related aspects at the level of the industrial processor and final product manufacturer, ISCC could further support the movement of ISCC PLUS-certified operators to a circular bioeconomy.</li> </ul>

### Social

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Labour and human rights	12/13	19/23	6/13
	Healthy and safe working conditions	7/7	16/22	1/7
	Wellbeing of the local community	14/14	5/7	0/1
	Wellbeing of consumers	N/A	N/A	N/A

BMT requirements covered	<ul style="list-style-type: none"> <li>ISCC PLUS demonstrates a particularly broad coverage in terms of the mandatory Social requirements. ISCC requires operators to commit and adhere to the ILO Core Conventions (SOC-LR-1 ii), which trickles down in their evaluation of numerous other criteria. For example, ISCC prohibits child labour (SOC-LR-3 i), forced labour (SOC-LR-4), as well as discrimination of any kind (SOC-LR-10 i). In addition, ISCC requires a dedicated health and safety management plan (SOC-HS-1 i), provision of protective equipment to all workers (SOC-HS-2 i), and decent working hours (SOC-HS-5 i). In the Wellbeing of the local community principle, ISCC emphasises the need for securing and registering land use rights according to legal</li> </ul>
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	<p>requirements (SOC-WLC-1 i-iii) and identification and prioritisation of stakeholders through stakeholder mapping (SOC-WLC-2 i-ii).</p> <ul style="list-style-type: none"> <li>Concerning the basic requirements, a similar pattern is observed as for mandatory requirements: especially the Labour and human rights and Healthy and safe working conditions principles demonstrate high coverage. Examples include the implementation of an effective grievance and resolution mechanism (SOC-LR-7 ii-v), adoption of fair and transparent contract practices (SOC-LR-9 ii-iv), and provision of access to trainings, benefits and opportunities (SOC-LR-10 ii). Also, ISCC includes detailed requirements on emergency response procedures (SOC-HS-3 ii), as well as provision of safe, hygienic accommodation that meets the workers' needs (SOC-HS-6). When it comes to Wellbeing of the local community, operators are required to engage in local development projects, and prioritise local suppliers in their procurement policies (SOC-WLC-6 i-ii).</li> <li>ISCC PLUS covers about half of the advanced Social requirements in Labour and human rights principle. For example, operator's must ensure their workers' access to social security benefits (SOC-LR-15 ii), and operators are only allowed to contract legally authorised and registered employment agencies and labour subcontractors (SOC-LR-16).</li> </ul>
<p>BMT requirements not covered</p>	<ul style="list-style-type: none"> <li>In terms of mandatory requirements, the only found to be missing in ISCC's standards concerns the operators' commitment to the UN Declaration of Human Rights (SOC-LR-1 i).</li> <li>Regarding basic requirements, in the Labour and human rights principle, ISCC does not cover the requirements concerning policy or employee trainings aimed at ensuring the implementation and communication of ILO rights to all workers (SOC-LR-2 ii), and on vocational and/or occupational skills training (SOC-LR-13 i). In terms of Healthy and safe working condition, no requirement is included for reporting cases of ill health (SOC-HS-1 vii), allowing workers to leave situations of imminent danger without being penalised (SOC-HS-2 iii) and overtime work to be voluntary (SOC-HS-5 iv). Moreover, in the Wellbeing of the local community principle, no information could be found on the engagement of operators in legal processes in cases where the validity of land or water use is disputed (SOC-WLC-1 iv).</li> <li>Concerning advanced requirements, some examples of requirements not covered include operators to establish a plan for raising wages to living wage or beyond in the supply chain (SOC-LR-6 v), and a written disciplinary procedure to be available (SOC-LR-8). Also, no requirement exists in the standard on medical examinations for workers exposed to conditions with a heightened health and safety risk (SOC-HS-1 ix). In the Wellbeing of the local community principle, the only advanced requirement, concerning the prioritisation of hiring local candidates (SOC-WLC-6 iii), is not covered.</li> </ul>
<p>Recommended areas key for improvement</p>	<ul style="list-style-type: none"> <li>ISCC PLUS is recommended to examine the gaps identified in the Social dimension, and consider supplementing their readily elaborate Principles 3, 4 and 5 with requirements from the BMT. For example, existing criteria on labour rights could be expanded with requirements on vocational and/or occupational skills trainings (SOC-LR-13 i) and disciplinary procedures (SOC-LR-8). Also, inspiration could be derived from requirements related to health and safety (SOC-HS-1 vii, ix and 2 iii) as well as to support to local communities (SOC-WLC-1 iv &amp; 6 iii).</li> <li>It is important to highlight that the BMT social requirements are designed for and apply to, besides biomass producers, also industrial processors and final product manufacturers. Since the ISCC PLUS Principles 3, 4 and 5 linked to the social dimension are only applicable to biomass producers, it is recommended that ISCC expands their coverage to the other operators to ensure the compliance with labour rights and wellbeing of workers along the whole value chain.</li> </ul>

**Economic**

<p>Results</p>	<table border="1"> <thead> <tr> <th rowspan="2">PRINCIPLE</th> <th colspan="3">Fraction of applicable requirements covered</th> </tr> <tr> <th>Mandatory</th> <th>Basic</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td>Economic and financial viability</td> <td>N/A</td> <td>3/3</td> <td>N/A</td> </tr> <tr> <td>Fair business practice</td> <td>1/2</td> <td>1/4</td> <td>1/1</td> </tr> <tr> <td>Economic risk management</td> <td>N/A</td> <td>1/1</td> <td>2/2</td> </tr> </tbody> </table>	PRINCIPLE	Fraction of applicable requirements covered			Mandatory	Basic	Advanced	Economic and financial viability	N/A	3/3	N/A	Fair business practice	1/2	1/4	1/1	Economic risk management	N/A	1/1	2/2
PRINCIPLE	Fraction of applicable requirements covered																			
	Mandatory	Basic	Advanced																	
Economic and financial viability	N/A	3/3	N/A																	
Fair business practice	1/2	1/4	1/1																	
Economic risk management	N/A	1/1	2/2																	

<p>BMT requirements covered</p>	<ul style="list-style-type: none"> <li>In the Economic dimension, ISCC PLUS covers one out of two mandatory Fair business practice requirements, by requiring a policy/procedure and measures to combat deceptive, fraudulent and dishonest practices (ECO-FBP-1 i). The Economic and financial viability and Risk management principles of the BMT do not contain mandatory requirements.</li> <li>ISCC PLUS covers all basic requirements in the Economic and financial viability and Risk management principles. For example, the scheme requires operators to develop a business plan (ECO-EF-1), maintain business records (ECO-EF-2), as well as systematically identify financial and economic risks (ECO-RM-1).</li> </ul>
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	<ul style="list-style-type: none"> <li>All advanced Economic requirements are also covered. Operators are required to have fair and transparent contracts of business relationships with suppliers and buyers in place (ECO-FBP-3), as well as a minimise their level of vulnerability to risks (ECO-RM-2).</li> </ul>
BMT requirements covered	<ul style="list-style-type: none"> <li>The only mandatory Economic requirement absent in ISCC concerns the systematic identification of fraudulent, deceptive and dishonest practices (ECO-FBP-1 ii).</li> <li>In the same principle, also the basic requirements on record-keeping of any cases of fraudulent, deceptive or dishonest practices are not addressed by ISCC (ECO-FBP-2).</li> </ul>
Recommended areas for improvement	<ul style="list-style-type: none"> <li>ISCC could consider the incorporation of additional requirements to safeguard the fairness of business practices through systematic identification and record-keeping of any fraudulent, deceptive or dishonest practices (ECO-FBP-1 ii &amp; 2).</li> </ul>
<b>Overall result</b>	
Key findings	<p>From the evaluation of ISCC PLUS, the scheme appears to broadly cover requirements across all four dimensions of the BMT. Principles where ISCC demonstrates a remarkably high coverage include Environmental management, Sustainable land use management, Soil Management, Air quality, as well as Labour and human rights and Healthy and safe working conditions. Examples of potential opportunities for improvement within the Environmental dimension were found in the integration of mandatory GHG emission reporting and the advanced GHG emissions reduction roadmap criteria (EN-CC-2 i, iii &amp; 4), and the elaboration of sustainable energy practices (EN-EE-1 ii-iii &amp; 2). In the Social dimension, it is recommended to consider complementing readily existing criteria with requirements on vocational and/or occupational skills trainings (SOC-LR-13), best practices for health and safety on the work floor (e.g., SOC-HS-1 vii, ix &amp; 2 iii) as well as support mechanisms for local and indigenous communities (SOC-WLC-1 iv &amp; 6 iii). In the Circularity dimension, a consideration of increased material efficiency (CR-CD-2) and a prohibition of landfilling (CR-WM-2 i) could further nurture the contribution of ISCC PLUS-certified operators to a circular bioeconomy. Lastly, in the Economic dimension, the introduction of additional requirements to safeguard fairness of business practices through systematic identification and record-keeping (ECO-FBP-1 ii &amp; 2) is suggested. Implementation of these recommended points could render ISCC's positive impact even larger than it is today. Additionally, it is recommended to consider expanding the scope of ISCC Principles 2-6 to also include industrial processors and final product manufacturers, on top of biomass producers.</p>

Date completed: 29 April 2025

Sources:

- ISCC website <https://www.iscc-system.org/> (Last visited: 21 March 2025)
- ISCC System Documents <https://www.iscc-system.org/process/iscc-documents-at-a-glance/iscc-system-documents/> (Last visited: 21 March 2025)
  - ISCC EU 202-1 – Agricultural Biomass: ISCC Principle 1, V4.1, 1 January, 2024;
  - ISCC EU 202-2 – Agricultural Biomass: ISCC Principles 2-6, V1.1, 1 December 2022;
  - ISCC EU 202-3 – Forest Biomass: ISCC Principle 1, V1.0, 19 December 2024;
  - ISCC EU 202-4 – Forest Biomass: ISCC Principles 2-6, V1.0, 1 March 2023;
  - ISCC EU 202-5 – Waste and Residues, V4.1, 1 January 2024;
  - ISCC PLUS V3.4.2, 6 March 2024;
  - ISCC Audit Procedure for Farms and Plantations V5.4, 1 March 2024;
  - ISCC EU 205 Greenhouse Gas Emissions V4.1, 1 January, 2024

## 4.2 RSB Advanced Products

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official RSB standards and procedures.*

General	
Name of scheme	RSB Standard for Advanced Products
Scheme owner	The Roundtable on Sustainable Biomaterials (RSB) is an independent, global, multi-stakeholder organisation. Originally established in 2007 to ensure the sustainability of biofuels, RSB was formally registered in 2013 and its scope expanded to cover biomaterials. The RSB network has members from a variety of organisations, including businesses, NGOs, academia, governments and UN institutes. For fuel producers that seek to get certified, RSB offers RSB Global and RSB EU RED. For biomaterials producers, RSB offers the RSB Standard for Advanced Products. For groups of smallholders, RSB has developed a Smallholder Standard. In addition, companies can voluntarily apply for the RSB's low Indirect Land Use Change (ILUC) Biomass module.
Website	<a href="https://www.rsb.org/">https://www.rsb.org/</a>
Label provided	
Operational since	2013
Number of active certificates	44 ( <a href="https://rsb.org/certification/rsb-certificates/">https://rsb.org/certification/rsb-certificates/</a> , 18 March 2025)
Standard ownership	Private
General objective	Driving the just and sustainable transition to a bio-based and circular economy through certification, sustainability solutions, innovation and partnerships.
Scope	
Biomass feedstock	Any biomass feedstock. Besides biomass feedstock, the scheme also includes as feedstock recycled fossil feedstock and end-of-life products.
Applicable feedstock categories in BMT	<input checked="" type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input checked="" type="checkbox"/> Agrarian and forestry residues <input checked="" type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	RSB's Standard for Advanced Products is applicable to a range of (bio-based) products, which are subdivided into categories. Category Ia includes bio-based products from agricultural, forestry, marine and aquatic feedstocks, and category Ib includes bio-based by-products and residues, as well as bio-based end-of-life products. Therefore, all predefined feedstock categories of the BMT are applicable to this standard.
Sector/Product group	Any industrial application. RSB's Standard for Advanced Products enables the certification of non-energy products like plastics, textiles, pharmaceuticals, packaging, tableware, cosmetics, nutritional supplements, food, feed, pulp, paper and many others. Products certified under this standard are split into three categories: category I: Products that are bio-based and need to have a share of bio-based content not less than 25% present in the product; category II: Products produced with recycled content (non-biogenic end-of-life products or production residues) and category III: Production systems that process bio-based feedstock or non-bio-based end-of-life products or production residues in combination with virgin fossil feedstocks (either bio-based or non-biobased).
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	RSB's standard applies to all so-called Participating Operators (POs) taking part in the RSB certification system. A distinction is made between two types of POs: Biomass Producers (i.e., farmers and plantation or forest managers) and Industrial Operators (i.e., feedstock processors, intermediary producers or biomaterial producers). Altogether, these two types cover the BMT's biomass producer and industrial processor. The final product manufacturer is considered out of scope as RSB's requirements focus primarily on actors upstream in biobased value chains.
Geographic applicability	Global

Applicability of sustainability principles in BMT	<p>Environment</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Environmental management</li> <li><input checked="" type="checkbox"/> Climate change management</li> <li><input checked="" type="checkbox"/> Sustainable land use management</li> <li><input checked="" type="checkbox"/> Protection of biodiversity</li> <li><input checked="" type="checkbox"/> Chemical use management</li> <li><input checked="" type="checkbox"/> Soil management</li> <li><input checked="" type="checkbox"/> Air quality</li> <li><input checked="" type="checkbox"/> Water quality and conservation</li> <li><input checked="" type="checkbox"/> Energy use &amp; efficiency</li> </ul> <p>Circularity</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Circular resource use</li> <li><input checked="" type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Labour and human rights</li> <li><input checked="" type="checkbox"/> Healthy and safe working conditions</li> <li><input checked="" type="checkbox"/> Wellbeing of the local community</li> <li><input checked="" type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic and financial viability</li> <li><input checked="" type="checkbox"/> Fair business practice</li> <li><input checked="" type="checkbox"/> Economic risk management</li> </ul>
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Justification/comment on the selected sustainability principles	<p>RSB’s standard is structured according to 12 principles: 1. Legality; 2. Planning, Monitoring &amp; Improvement; 3. Greenhouse Gas Emissions; 4. Human &amp; Labour Rights; 5. Rural &amp; Social Development; 6. Local Food Security; 7. Conservation; 8. Soil; 9. Water; 10. Air Quality; 11. Management of Inputs &amp; Waste and 12. Land Rights. Many of these principles link directly to the sustainability principles of the BMT, especially those in the Environmental and Social dimension. For several principles, especially in the Circularity and Economic dimension, this link was at first sight less clear. However, after review of the contents of the RSB principles and discussions with RSB representatives, it was decided that all BMT principles apply to RSB’s Standard for Advanced Products. For example, the BMT principles in the Economic dimension can be associated with Principle 1 and 2 of RSB’s standard, and the Circularity dimension with its Principle 7, 10 and 11.</p>
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**Assessment of BMT content level requirements**

Reference Documents	<p>The sustainability requirements for all materials that can be certified under RSB are described in the document RSB Principles &amp; Criteria (RSB-STD-01-001, V4.0, 19 December 2023). For Advanced Products additional specific requirements are provided in the RSB Standard for Advanced Products (RSB-STD-02-001, V2.0, 7 December 2018). Operators using end-of-life products or production residues shall also apply the requirements of the RSB Standard for Advanced Fuels (RSB-STD-01-010, V2.6, 1 December 2023). Additionally, RSB Standard Amendment for Woody Biomass includes requirements that apply to specific types of woody biomass (RSB-SA-01, V1.0, 16 December 2021). For the present analysis, each of these documents were reviewed. Moreover, the RSB system includes a comprehensive set of supporting guidelines and procedures, which were also consulted.</p>
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**Minimum backstop**

Compliance requirement check	The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.
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**Environment**

Results	<table border="1"> <thead> <tr> <th rowspan="2">PRINCIPLE</th> <th colspan="3">Fraction of applicable requirements covered</th> </tr> <tr> <th>Mandatory</th> <th>Basic</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td>Environmental management</td> <td>1/1</td> <td>2/2</td> <td>N/A</td> </tr> <tr> <td>Climate change management</td> <td>1/1</td> <td>3/3</td> <td>0/3</td> </tr> <tr> <td>Sustainable land use management</td> <td>5/5</td> <td>5/7</td> <td>0/4</td> </tr> <tr> <td>Protection of biodiversity</td> <td>2/2</td> <td>10/12</td> <td>1/2</td> </tr> <tr> <td>Chemical use management</td> <td>4/5</td> <td>5/8</td> <td>3/4</td> </tr> <tr> <td>Soil management</td> <td>3/4</td> <td>5/5</td> <td>0/4</td> </tr> </tbody> </table>	PRINCIPLE	Fraction of applicable requirements covered			Mandatory	Basic	Advanced	Environmental management	1/1	2/2	N/A	Climate change management	1/1	3/3	0/3	Sustainable land use management	5/5	5/7	0/4	Protection of biodiversity	2/2	10/12	1/2	Chemical use management	4/5	5/8	3/4	Soil management	3/4	5/5	0/4
PRINCIPLE	Fraction of applicable requirements covered																															
	Mandatory	Basic	Advanced																													
Environmental management	1/1	2/2	N/A																													
Climate change management	1/1	3/3	0/3																													
Sustainable land use management	5/5	5/7	0/4																													
Protection of biodiversity	2/2	10/12	1/2																													
Chemical use management	4/5	5/8	3/4																													
Soil management	3/4	5/5	0/4																													

		Air quality	1/1	0/1	N/A
		Water quality and conservation	3/3	2/4	1/1
		Energy use & efficiency	N/A	N/A	0/4
BMT requirements covered		<ul style="list-style-type: none"> <li>In the Environmental dimension, the RSB Standard for Advanced Products covers nearly all mandatory requirements across principles. In the Environmental management, Climate change management, Sustainable land use management, Protection of biodiversity, Air quality, and Water quality and conservation principles, the standard in particular demonstrates a high coverage.</li> <li>The scheme demonstrates a broad coverage when it comes to basic requirements, especially in the Environmental management, Climate change management and Soil management principles. The scheme includes requirements concerning quantification of GHG emissions (EN-CC-2 ii-iii), and soil quality requirements concerning soil organic matter, soil erosion and nutrient management (EN-SM-2 ii &amp; 3 &amp; 5 i-ii).</li> <li>Concerning advanced requirements, the scheme covers several in the Chemical use management principle e.g., requiring a plan to phase out hazardous substances (EN-CM-5).</li> <li>One of RSB's strengths concerns its conformance with the sustainability requirements set out in the Renewable Energy Directive (RED). Since RSB aligns with the RED, the BMT's corresponding mandatory requirements (i.e., EN-LUM-1, 2, 3 &amp; 4, EN-BD-2, EN-SM-1) are covered.</li> <li>In its certification process, RSB takes a risk-based approach, meaning that Participating Operators (POs) need to identify any risks linked to their operations as they apply for certification. To this end, the RSB Screening Tool is used. This Screening Tool can trigger the need for a more thorough impact assessment across environmental and social topics (e.g., conservation, water, soil, food security). For each identified risk, the PO is required to integrate a section in the overarching Environmental and Social Management Plan (ESMP). The ESMP describes the adverse impacts, corresponding mitigation measures and monitoring for continuous improvement. This risk-based approach is considered a robust, effective way for improving the sustainability performance of operations, and is well-aligned with the BMT, which explains the standards' high coverage of environmental requirements.</li> </ul>			
BMT requirements not covered		<ul style="list-style-type: none"> <li>With regard to mandatory requirements, some were found to be not covered by RSB. For example, RSB does not require record-keeping of the use of fertilisers for operations (EN-CM-2 i). Also, RSB explicitly prohibits the use of substances addressed by the WHO, Rotterdam Convention and Stockholm Convention (EN-CM-4 i) for biomass producers, but not for industrial operators, despite the relevance also for these value chain actors. In the Soil management principle, the only mandatory requirement not covered concerns the use of minimal intervention techniques when building and utilising infrastructure (EN-SM-4 i).</li> <li>As for the basic requirements, several were found to be not covered in the Sustainable land use management, Chemical use management, Air quality, and Water quality and conservation principles. Air quality has only one basic requirement, on the regular monitoring of air quality (EN-AQ-1 ii), which is not included in RSB.</li> <li>It is seen that most of the applicable advanced requirements defined in the BMT are not yet included by RSB, with the exception of some requirements in the Protection of biodiversity, Chemical use management and Water quality and conservation principles. Although the topic of ILUC (EN-LUM-11 &amp; 12) is covered by RSB's low Indirect Land Use Change (ILUC) Biomass module, this module is voluntary and as such not considered as covered in the assessment. Similarly, for Energy use &amp; efficiency (EN-EE-1 &amp; 2), although RSB does encourage the implementation of sustainable energy practices, this is not prescribed as a requirement for POs.</li> </ul>			
Recommended key areas for improvement		<ul style="list-style-type: none"> <li>First of all, it is recommended to consider including the mandatory requirements of the BMT. This could be done by extending, in Chemical use management, the applicability of record keeping to fertilisers (EN-CM-2 i) in addition to plant protection products (PPPs), and by rendering the prohibition of hazardous substances applicable to industrial operators as well (EN-CM-4 i). In addition, the inclusion of a requirement on minimal intervention techniques for soil management (EN-SM-4 i), or integration of this topic in existing RSB criteria, could broaden the coverage of the standard.</li> <li>As for basic requirements, suggestions for the inclusion of requirements were identified across different principles. For example, inclusion of a requirement on monitoring of air quality (EN-AQ-1 ii) could be contemplated to expand the coverage of the Air quality principle.</li> <li>Regarding advanced requirements, for Climate change management, the incorporation of a roadmap requirement for GHG emission reduction (EN-CC-4) could be considered to</li> </ul>			

activate POs in the transition towards climate-neutrality. This could be combined with criteria on sustainable energy practices (EN-EE-1 & 2). Furthermore, it is recommended to appraise the integration of requirements on ILUC (EN-LUM-11 & 12) in the body of RSB's standard to emphasise the importance of this topic, rather than through a separate, voluntary module.

**Circularity**

Results

PRINCIPLE	Fraction of applicable requirements covered		
	Mandatory	Basic	Advanced
Circular resource use	N/A	0/2	N/A
Circular design & material cycling	1/1	0/1	1/1
Responsible waste management	1/1	1/2	N/A

BMT requirements covered

- In the Circularity dimension, RSB's standard covers both mandatory requirements.
- In the Responsible waste management principle, the basic requirement on open-air burning, which is prohibited as a waste management practice (CR-WM-2 ii) is covered. RSB only allows open-air burning under specific conditions (e.g., if workers' health and safety is at stake or when no viable alternative is available).
- In the Circular design & material cycling principle, the advanced requirement is included on the use of residual flows for energy generation only if the material use is not possible (CR-CD-1 ii).

BMT requirements not covered

- From the analysis of the BMT's applicable basic Circularity requirements, it appears that three are currently not covered by RSB's standard. In the Circular resource use principle, RSB was not found to require not harvesting above sustainable yields (CR-CRU-2). Also, although RSB encourages POs to utilise wastes and by-products from the production process preferably for material purposes, no specific requirement is included for prioritization of circularity strategies (e.g., reduce, reuse, recycle) as is promoted by the 9R framework (CR-CRU-1). In the Circular design & material cycling principle, no requirements were identified in RSB's standard that require POs to take measures aimed at increasing material efficiency (CR-CD-2).
- Finally, in the Responsible waste management principle, RSB does not explicitly prohibit landfilling as a waste management method (as required by CR-WM-2 i).

Recommended key areas for improvement

- RSB is recommended to consider which of the BMT requirements identified as not covered could be included to further contribute to the circularity performance of RSB-certified products. The scheme currently mainly focuses on waste management (notably in its Principle 11), which offers potential opportunities for addressing other aspects, such as implementation of the 9R framework or the cascading use principle for resource use (CR-CRU-1), and measures for increased material efficiency (CR-CD-2).

**Social**

Results

PRINCIPLE	Fraction of applicable requirements covered		
	Mandatory	Basic	Advanced
Labour and human rights	12/13	17/23	1/13
Healthy and safe working conditions	6/7	16/22	2/7
Wellbeing of the local community	14/14	6/7	1/1
Wellbeing of consumers	N/A	N/A	N/A

BMT requirements covered

- In the Social dimension, RSB covers the vast majority of mandatory requirements. Similarly as for the Environmental dimension, the risk-based approach taken by RSB – characterised by a robust impact assessment, mitigation and monitoring system – underlies the scheme's strength in the Social domain. Examples of mandatory requirements in the Labour and human rights principle where RSB demonstrates a particularly high coverage include the prohibition of child labour (SOC-LR-3 i) and forced labour (SOC-LR-4), freedom of association and collective bargaining (SOC-LR-5) and the existence of a grievance mechanism (SOC-LR-7 i). In the Healthy and safe working conditions principle, RSB ticks many boxes in the management and documentation of Health and safety risks (SOC-HS-1 i), provision of protective equipment (SOC-HS-2 i), and provision of safe water and adequate sanitation (SOC-HS-4). For the Wellbeing of the local community principle, all

	<p>mandatory requirements are covered, evidencing RSB’s emphasis on the protection of land (use) rights and indigenous people (e.g., SOC-WLC-1 i-iii, 2 i-ii, 3 i-ii, 4 &amp; 5 i, ii &amp; iv).</p> <ul style="list-style-type: none"> <li>As for basic requirements, a similar pattern can be observed as for the mandatory requirements, with an especially broad coverage of the Wellbeing of the local community principle. Regarding this principle, POs have to inform stakeholders on the possibility to file complaints (SOC-WLC-3 iii). Also in the other two applicable principles, over two-thirds of the basic requirements are covered.</li> <li>Finally, several advanced requirements are covered by RSB, including in the Wellbeing of the local community principle, the demanded prioritisation of local candidates in recruitment (SOC-WLC-6 iii).</li> </ul>
BMT requirements not covered	<ul style="list-style-type: none"> <li>In total, two mandatory requirements were found to be not covered in the Social dimension. These are specific requirements asking POs to commit to the Universal Declaration of Human Rights (SOC-LR-1 i), and provide access to medical treatment for injured or ill people (SOC-HS-3 i).</li> <li>As for basic requirements, in the Labour and human rights principle, excluded are e.g., requirements on employee trainings and risk assessment linked to labour rights (SOC-LR-2 ii-iii), fair contract practices (SOC-LR-9 ii-iv) and the provision of social security benefits (SOC-LR-15). In the Healthy and safe working conditions principle, e.g., requirements on working hours and overtime (SOC-HS-5 ii-vi) were seen to be not covered. In the Wellbeing of consumers principle, RSB does not include a requirement on prioritisation of local suppliers (SOC-WLC-6).</li> <li>In terms of advanced requirements, several in the Labour and human rights and Healthy and safe working conditions principles were found to be not covered. By means of illustration, RSB does not require operators to establish a plan for raising wages to living wage or beyond in the direct upstream supply chain (SOC-LR-6 v). Additionally, no requirement was found on access to regular medical examinations for workers exposed to heightened health and safety risks (SOC-HS-1 ix-x).</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>Although RSB’s standard (notably its principles 4, 5 and 11) broadly covers the Social requirements of the BMT, several potential areas of improvement were identified. To begin with, RSB is recommended to consider the inclusion of requirements aimed at ensuring fair contract practices (SOC-LR-9 ii-iv), beyond the provision of a written or oral contract. In addition, the inclusion of a requirement on the provision of social security benefits (e.g., for healthcare, sickness, retirement, invalidity and death, see SOC-LR-15), as well as a requirement on a written disciplinary procedure (SOC-LR-8) could be examined. Furthermore, the scheme could consider incorporating additional health and safety related requirements e.g., on medical treatment of injured or ill persons (SOC-HS-3 i), on medical examination (SOC-HS-1 vii, ix &amp; x), and on working hours (SOC-HS-5 ii-v).</li> </ul>

**Economic**

Results	<table border="1"> <thead> <tr> <th rowspan="2">PRINCIPLE</th> <th colspan="3">Fraction of applicable requirements covered</th> </tr> <tr> <th>Mandatory</th> <th>Basic</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td>Economic and financial viability</td> <td>N/A</td> <td>2/3</td> <td>N/A</td> </tr> <tr> <td>Fair business practice</td> <td>1/2</td> <td>1/4</td> <td>1/1</td> </tr> <tr> <td>Economic risk management</td> <td>N/A</td> <td>0/1</td> <td>0/2</td> </tr> </tbody> </table>	PRINCIPLE	Fraction of applicable requirements covered			Mandatory	Basic	Advanced	Economic and financial viability	N/A	2/3	N/A	Fair business practice	1/2	1/4	1/1	Economic risk management	N/A	0/1	0/2
PRINCIPLE	Fraction of applicable requirements covered																			
	Mandatory	Basic	Advanced																	
Economic and financial viability	N/A	2/3	N/A																	
Fair business practice	1/2	1/4	1/1																	
Economic risk management	N/A	0/1	0/2																	
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Economic dimension, RSB covers one of the two mandatory requirements within the Fair business practice principle, mandating POs to implement and maintain a system to ensure that “all forms of bribery, conflicts of business interest and fraudulent practices” are prohibited, which includes a written policy by the management (ECO-FBP-1 i). The other two principles do not include mandatory requirements.</li> <li>Concerning the basic requirements, RSB covers two thirds of those in the Economic and financial viability principle, as POs are required to maintain business records (ECO-EF-2).</li> <li>The Fair business practice principle includes a single advanced requirement, demanding the PO to have written contracts of business relationships with suppliers and buyers (ECO-FBP-3), which RSB covers.</li> </ul>																			
BMT requirements not covered	<ul style="list-style-type: none"> <li>The only mandatory requirement in the Economic dimension that is not covered by RSB concerns the requirement for systematic identification of potential risks for fraudulent, deceptive and dishonest practices (ECO-FBP-1 ii).</li> <li>As for the basic and advanced requirements, several were found to be not covered across all three principles. In the Economic and financial viability principle, the basic requirement for a business plan (ECO-EF-1) is currently absent. For Fair business practice, basic</li> </ul>																			

	requirements on record-keeping of any cases of fraudulent, deceptive or dishonest practices (ECO-FBP-2) are not included. None of the three Economic risk management requirements are covered by RSB. This concerns the basic requirement demanding the management of financial and economic risks (ECO-RM-1) and the advanced requirement on minimisation of the PO's level of vulnerability (ECO-RM-2).
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>The Economic dimension is not the prime focus of RSB's certification standards. As such, several requirements within this dimension are not captured by the scheme. For instance, it could be considered to include a more explicit business management plan requirement in RSB's Principle 2 on Planning, Monitoring &amp; Improvement, on top of the "economic viability analysis" that is requested at present. But especially in the Fair business practice and Economic risk management principles, a broader coverage of requirements (deriving inspiration from e.g., ECO-FBP-1 ii &amp; 2, ECO-RM-1 &amp; 2), could be contemplated to drive economic sustainability of bio-based operations.</li> </ul>
<b>Overall result</b>	
Key findings	From the analysis of RSB's Standard for Advanced Products, it can be observed that RSB broadly covers requirements across, in particular, the Environmental and Social dimensions. Principles where RSB demonstrates a remarkably broad coverage – supported by RSB's risk-based approach – include Environmental management, Climate change management, Protection of biodiversity and Chemical use management, as well as Labour and human rights and Wellbeing of the local community. Examples of potential opportunities for improvement within the Environmental dimension were found in the implementation of sustainable energy practice requirements (EN-EE-1 & 2), as well requirements on ILUC (EN-LUM-11 & 12), which are currently not mandatory for certification. In the Social dimension, it is recommended to consider addressing fair contract practices (SOC-LR-9 ii-iv). The Circularity and Economic domains are less represented by RSB's standard. Especially for the Circularity dimension, RSB could examine the possibility of integrating criteria beyond waste management alone, such as the application of the 9R framework or the cascading use principle for resource use (CR-CRU-1) and measures for increased material efficiency (CR-CD-2). Finally, in the Economic dimension, inspiration for improvement could be derived from the Fair business practice and Economic risk management principles. Altogether, it is believed that considering these topics could contribute to strengthening RSB's framework in their mission to drive sustainable production of biobased materials.


Date completed: 29 April 2025

Sources:

- RSB website <https://rsb.org/> (Last visited: 31 March 2025)
- RSB standards and procedures <https://rsb.org/rsb-certification-for-products/> (Last visited: 31 March 2025)
  - RSB Screening Tool, RSB-GUI-01-002-02, V2.9, 23 June 2020;
  - RSB Impact Assessment Guidelines, RSB-GUI-01-002-01, V3.0, 1 August 2017;
  - RSB Social Impact Assessment (SIA) Guidelines, RSB-GUI-01-005-01, V3.0;
  - RSB Rural and Social Development Guidelines, RSB-GUI-01-005-02, V3.0;
  - RSB Food Security Guidelines, RSB-GUI-01-006-01, V3.0;
  - RSB Conservation Impact Assessment Guidelines, RSB-GUI-01-007-01, V3.0;
  - RSB Soil Impact Assessment Guidelines, RSB-GUI-01-008-01, V3.0;
  - RSB Water Impact Assessment Guidelines, RSB-GUI-01-009-01, V3.0;
  - RSB Guidelines for Land Rights, RSB-GUI-01-012-01, V3.0;
  - RSB Procedure for Traceability of RSB Certified Material, RSB-PRO-20-001, V3.2, 1 May 2020;
  - RSB Procedure for Risk Management, RSB-PRO-60-001, V3.3, 27 May 2021;
  - RSB Grievance Procedure, RSB-PRO-65-001, V3.2, 30 December 2023;
  - RSB GHG Calculation Methodology, RSB-STD-01-003-01, V2.3, 8 August 2017;
  - RSB Glossary of Terms, RSB-STD-01-002, V1.4, 28 June 2021.

## 4.3 Better Biomass

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official Better Biomass standards and procedures.*

General	
Name of scheme	Better Biomass
Scheme owner	Better Biomass is managed by NEN, the Dutch Standardization Institute. As a member of CEN (the European Committee for Standardization) and ISO (the International Standardization Organization), NEN will ensure that the sustainability criteria and conformity assessment processes are and will remain aligned with the relevant European (EN) and international (ISO) standards. Better Biomass is an international certification system for solid, liquid and gaseous biomass. The Better Biomass certificate is used to demonstrate the sustainability of the biomass used for energy, fuels or bio-based products.
Website	<a href="https://www.betterbiomass.com/">https://www.betterbiomass.com/</a>
Label provided	
Operational since	2011
Number of active certificates	171 ( <a href="https://betterbiomass.nl/en/certificate-holders/">https://betterbiomass.nl/en/certificate-holders/</a> , March 2025)
Standard ownership	Private
General objective	The mission of NEN is to develop and manage standards and certification schemes with high impact and engagement of a broad range of stakeholders. The aim of developing and managing schemes by NEN is to ensure the support for the relevant scheme in the market and to increase the uniformity of the conformity assessment.
Scope	
Biomass feedstock	Any biomass feedstock.
Applicable feedstock categories in BMT	<input type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input checked="" type="checkbox"/> Agrarian and forestry residues <input checked="" type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	Although Better Biomass is designed for all biomass feedstocks, the specific requirements for forest biomass are covered in a separate scheme document. At the time of this assessment, this addendum on forest biomass was under development and not yet publicly available for review. Therefore, upon consultation with the scheme owner, forest biomass was left out of the assessment.
Sector/Product group	Energy, fuels or bio-based products. In the 2015 update of the standards, the scope was extended to include sustainably produced biomass for biobased products.
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	<p>The scope of the reviewed standards applies to the following types of organizations:</p> <ul style="list-style-type: none"> <li>— 'producers': organizations that produce agricultural biomass or collect bio-based residues and waste to be used for energy or in products. Producers fall into four sub-types:             <ol style="list-style-type: none"> <li>1) 'primary producers';</li> <li>2) 'smallholders';</li> <li>3) 'collectors of primary residues and waste';</li> <li>4) 'collectors of non-primary residues and waste';</li> </ol> </li> <li>— 'processors': organizations that process biomass and/or intermediates/semifinished products for further use in the supply chain;</li> <li>— 'traders': organizations that buy and sell (processed) biomass without modifying the materials;</li> <li>— 'end users': organizations that valorise (processed) biomass for application in energy or finished products.</li> </ul> <p>Although Better Biomass includes end-users in their scope and indicates product applications as well, there is no specific consideration for the design, use, and end-of-life aspects of these bio-based products. Since in the BMT, such specific requirements are defined for final product</p>

	manufacturers, it was decided, upon consultation with the scheme owner, to consider this value chain actor as not applicable.
Geographic applicability	Global
Applicability of sustainability principles in BMT	<p>Environment</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Environmental management</li> <li><input checked="" type="checkbox"/> Climate change management</li> <li><input checked="" type="checkbox"/> Sustainable land use management</li> <li><input checked="" type="checkbox"/> Protection of biodiversity</li> <li><input checked="" type="checkbox"/> Chemical use management</li> <li><input checked="" type="checkbox"/> Soil management</li> <li><input checked="" type="checkbox"/> Air quality</li> <li><input checked="" type="checkbox"/> Water quality and conservation</li> <li><input checked="" type="checkbox"/> Energy use &amp; efficiency</li> </ul> <p>Circularity</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Circular resource use</li> <li><input checked="" type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Labour and human rights</li> <li><input checked="" type="checkbox"/> Healthy and safe working conditions</li> <li><input checked="" type="checkbox"/> Wellbeing of the local community</li> <li><input type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic and financial viability</li> <li><input checked="" type="checkbox"/> Fair business practice</li> <li><input checked="" type="checkbox"/> Economic risk management</li> </ul>
Justification/comment on the selected sustainability principles	<p>The sustainability requirements of Better Biomass are provided in NTA 8080-2 and are as follows:</p> <ul style="list-style-type: none"> <li>- 5. Greenhouse gas emissions saving</li> <li>- 6. High carbon stock</li> <li>- 7. Biodiversity</li> <li>- 8. The environment             <ul style="list-style-type: none"> <li>o 8.1 Soil</li> <li>o 8.2 Groundwater and surface water</li> <li>o 8.3 Air</li> <li>o 8.4 Waste</li> </ul> </li> <li>- 9. Competition with food and local applications of agricultural biomass             <ul style="list-style-type: none"> <li>o 9.1 Monitoring local prices</li> <li>o 9.2 Cascading use</li> </ul> </li> <li>- 10. Prosperity</li> <li>- 11. Wellbeing             <ul style="list-style-type: none"> <li>o 11.1 Working environment</li> <li>o 11.2 Local community</li> </ul> </li> </ul> <p>Requirements in sections 5 through 8.3 are linked to the Environmental dimension of the BMT, while requirements in 8.4 and 9.2 are related to the Circularity dimension. Requirements in section 10, 11 and 9.1 correspond to the Social dimension, and the Economic dimension is addressed in 11.1 (regarding fair business practice) as well as information extracted from NTA 8080-1 (i.e., 5.2 documentation management system and 5.5 data and information).</p> <p>NTA 8080-1 provides the applicability of these sustainability requirements to the different types of organizations. Overall, all requirements apply to biomass producers. The social requirements (section 11) and greenhouse gas emission requirements (section 5) are applicable for all value chain actors. Additionally, the cascading use requirement (9.2) is applicable to processors and end-users.</p> <p>The Wellbeing of consumers principle solely contains requirements applicable to final product manufacturers alone. Since this value chain actor is out of scope of the scheme (see justification above), it was decided to consider said principle not applicable to Better Biomass.</p>
<b>Assessment of BMT content level requirements</b>	
Reference Documents	The sustainability requirements for all materials that can be certified under Better Biomass are described in the NTA 8080-1:2024, Sustainability framework for biomass – Part 1: Terminology, overview and general requirements, NTA 8080-2:2024, Sustainability framework for biomass –

Part 2: Sustainability requirements, NTA 8080-3:2024, Sustainability framework for biomass – Part 3: Requirements for greenhouse gas calculations, and NCS 8080-1:2024, Better Biomass – Part 1: Conformity assessment requirements related to sustainability framework for biomass.

**Minimum backstop**

Compliance requirement check The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.

**Environment**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Environmental management	1/1	2/2	N/A
	Climate change management	0/1	3/3	0/3
	Sustainable land use management	2/2	0/2	0/3
	Protection of biodiversity	2/2	8/12	0/2
	Chemical use management	1/5	0/8	0/4
	Soil management	4/4	3/5	0/4
	Air quality	1/1	0/1	N/A
	Water quality and conservation	3/3	2/4	0/1
	Energy use & efficiency	N/A	N/A	0/4

BMT requirements covered

- In the Environmental dimension, Better Biomass covers all mandatory requirements across the vast majority of principles, specifically the Environmental management, Sustainable land use management, Protection of biodiversity, Soil management, Air quality and Water quality and conservation principles. Given its adherence to the RED II, the related mandatory sustainable land use management and biodiversity requirements (i.e., EN-LUM-1 & 2, EN-BD-2, EN-SM-1) are met. Additionally, Better Biomass requires certified operators to take measures aimed at protecting soil, air and water quality, as well as ensuring efficient water consumption (e.g., EN-SM-2 i & ii, EN-AQ-1 i and EN-WQ-2 & 3 i).
- Better Biomass covers the basic requirements concerning an environmental management plan (EN-EM-1 ii-iii) and quantification of GHG emissions (EN-CC-2). For the Protection of biodiversity and Soil management principles, Better Biomass covers most basic requirements as well. The scheme fulfils requirements concerning e.g., the minimization of habitat fragmentation and management of invasive species (EN-BD-6 & 7 i-iv) and accounting for topographical risks and soil organic matter analysis (EN-SM-2 i-iii & 3).

BMT requirements not covered

- With regard to mandatory requirements, gaps are seen in two principles. In the Climate change management principle, Better Biomass does not prescribe an explicit requirement for the adoption of activities that reduce GHG emissions (EN-CC-1). In the Chemical use management principle, Better Biomass does not require an integrated pest management plan (EN-CM-1 i), record-keeping of the use of chemicals for operations (EN-CM-2 i-ii) and safe handling and disposal of substances (EN-CM-3 i).
- Analysing Better Biomass' coverage of basic requirements, gaps are observed especially in the Sustainable land use management principle regarding the use of regenerative/agro-ecological practices (EN-LUM-7), and in the Air quality principle on the regular monitoring of air quality (EN-AQ-1 ii). The basic requirements in the Chemical use management principle linked to the above mentioned mandatory requirements are also missing (concerning EN-CM-1 ii-iii, 2 iii-iv & 3 ii). Additionally, within the Water Quality and Conservation principle, Better Biomass does not prohibit the discharge of untreated sewage, sludge and slurry of human origin (EN-WQ-3 ii-iii) and does not require organizations to evidence water consumption by water monitoring records (EN-WQ-4 ii-iii).
- The scheme is found to currently not cover any of the advanced requirements defined in the BMT. This concerns, for example, requirements on Energy use & efficiency (EN-EE-1 & 2), on developing a roadmap for the reduction of GHG emissions (EN-CC-4) and on a plan to phase out hazardous substances (EN-CM-5).

Recommended key areas for improvement

- Better Biomass is recommended to examine the gaps identified in the Environmental dimension. First of all, it is suggested to consider including all the mandatory requirements of the BMT. Special attention could be paid to the Chemical use management principle, by including requirements concerning an integrated pest management plan (EN-CM-1 i), record-

keeping of the use of chemicals for operations (EN-CM-2 i-ii) and safe handling and disposal of substances based on the manufacturer’s safety instructions (EN-CM-3 i).

- Additionally, there is room for improvement in terms of basic requirements within different principles. The inclusion of, for example, requirements concerning the regular monitoring of water consumption (EN-WQ-4 ii-iii) and air quality (EN-AQ-1 ii) could contribute to a stronger coverage of the Water quality and conservation and Air quality principles respectively.
- Regarding advanced requirements, for Climate change management, the incorporation of a roadmap requirement for GHG emission reduction (EN-CC-4) is considered highly beneficial to activate organizations in the transition towards climate-neutrality. This could be combined with criteria on sustainable energy practices, such as the development of an energy management plan that addresses both energy use reduction and increasing the share of renewables of the operations (EN-EE-1 & 2). Furthermore, Better Biomass previously included requirements on ILUC (related to EN-LUM-11 & 12) which were only required for organizations that market their biomass as 'ILUC low risk'. These were removed in the 2024 version of the standard and to improve the comprehensiveness of the scheme, it is recommended to reintroduce them.

**Circularity**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Circular resource use	N/A	1/2	N/A
	Circular design & material cycling	1/1	1/1	0/1
	Responsible waste management	1/1	1/2	N/A

BMT requirements covered

- Better Biomass meets the two mandatory requirements of the Circularity dimension. For the Circular design & material cycling principle, the scheme promotes the reuse and recycling of residual flows and residues as extensively as possible (CR-CD-1 i), thereby supporting the unfolding of more resource-efficient practices. In the Responsible waste management principle, operators are required to store, transport and dispose of waste as well as used containers in a safe and appropriate manner (CR-WM-1).
- Regarding the BMT’s basic requirements, Better Biomass requires measures to increase the operation’s material efficiency (CR-CD-2) and only allows open air burning as a waste management practice in exceptions and under strict conditions (CR-WM-2 ii). Additionally, Better Biomass has an explicit requirement concerning the cascading use of biomass (CR-CRU-1).

BMT requirements not covered

- In terms of basic requirements, two gaps were identified. First, Better Biomass does not require that virgin biomass is harvested at levels that ensure regeneration (CR-CRU-2). Second, a requirement prohibiting landfilling as a waste management practice is absent (CR-WM-2 i).
- The only advanced Circularity requirement of the BMT that is applicable to Better Biomass, regarding the use of residual flows and waste for energy generation only in certain circumstances (CR-CD-1 ii), is not explicitly covered.

Recommended key areas for improvement

- Better Biomass is encouraged to consider the inclusion of the identified gaps as described above to enhance the circularity performance of Better Biomass certified products.
- Additionally, the circularity requirements of the BMT are designed for and apply to, besides biomass producers, industrial processors and final product manufacturers as well. Therefore, specific consideration is given to the design, use and end-of-life aspects of biobased products. Currently, these aspects are not addressed in the Better Biomass standards and were evaluated as outside scope. Yet, by expanding the scope of Better Biomass to include such considerations, the impact of certified operators in the movement to a circular bioeconomy could be enhanced. Concretely, this could be done by, for example, including the basic requirements on the development of a plan to increase circular inflows in the operations (CR-CRU-3) and the advanced requirements on product design for high-quality recyclability (CR-CD-4) as well as reparability, reusability and product-life extension (CR-CD-3).

**Social**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Labour and human rights	12/13	9/23	1/13

		Healthy and safe working conditions	2/7	7/22	0/7
		Wellbeing of the local community	11/14	3/7	1/1
		Wellbeing of consumers	N/A	N/A	N/A
BMT requirements covered		<ul style="list-style-type: none"> <li>In the Social dimension, Better Biomass meets the majority of mandatory requirements for the Labour and human rights and Wellbeing of the local community principles. Examples of mandatory requirements where Better Biomass demonstrates a particularly high coverage in the Labour and human rights principle include the prohibition of child labour (SOC-LR-3 i), freedom of association and collective bargaining (SOC-LR-5), fair remuneration of workers (SOC-LR-6 i) and fair contact practices (SOC-LR-9 i). In the Wellbeing of the local community principle, Better Biomass ticks many boxes regarding the protection of (traditional) land (use) rights (SOC-WLC-1 i-iii), stakeholder mapping and engagement (SOC-WLC-2 i-ii &amp; 3 i-ii).</li> <li>Better Biomass fulfils several of the basic requirements related to the mandatory Labour and human rights requirements listed above, as well as the requirement concerning vocational and/or occupational skills training (SOC-LR-13 i). In the Wellbeing of the local community principle, Better Biomass performs well in the criteria to support the operation's local development (SOC-WLC-6 i-ii). Regarding the Healthy and safe working conditions principle, Better Biomass includes requirements on, for example, the provision of a health and safety (H&amp;S) training (SOC-HS-1 vi), and ensuring the safe usage of machines by employees (SOC-HS-2 iv)</li> <li>Furthermore, the single advanced requirement in the Wellbeing of the local community principle, demanding prioritisation of local candidates in recruitment (SOC-WLC-6 iii), is covered. Finally, Better Biomass requires operators to implement disciplinary practices (SOC-LR-8 i).</li> </ul>			
BMT requirements not covered		<ul style="list-style-type: none"> <li>With regard to mandatory requirements, gaps are particularly seen in the Healthy and safe working conditions principle. These concern requirements regarding a written H&amp;S management plan (SOC-HS-1 i), providing medical treatment to injured or ill persons (SOC-HS-3 i) and ensuring workers have access to safe water and adequate sanitation facilities (SOC-HS-4). In the Labour and human rights principle, only one mandatory requirement was found missing, which considers workers that have taken maternity leave can return to their job on the same terms and conditions (SOC-LR-14 ii). In the Wellbeing of the local community principle, the mandatory requirements not covered are where potential direct effects on local food security (SOC-WLC-4 ii) and local water security (SOC-WLC-5 ii) resulting from the operator's operations have been identified, requiring free, prior and informed consent (FPIC) to be sought from local stakeholders.</li> <li>Analysing Better Biomass' coverage of basic requirements, gaps are seen across the three principles. For the Labour and human rights principle, excluded are e.g., requirements on employee trainings and risk assessment linked to labour rights (SOC-LR-2 ii &amp; iii) and provision of information on health topics and services of the operator (SOC-LR-15 i). In the Healthy and safe working conditions principle, gaps were identified in terms of requirements related to e.g., first aid and emergency responses (SOC-HS-3 ii-v) and (if offered to workers) accommodation that is safe, clean, and satisfies their basic needs (SOC-HS-6). In the Wellbeing of local community principle Better Biomass does not include a requirement on, for example, stakeholders to be informed about the possibility to file complaints (SOC-WLC-3 iii).</li> <li>The coverage of most advanced requirements were found to be currently largely absent in the first two principles. For instance, Better Biomass does not include a requirement on measures to limit the reduction of workers' pay and/or benefits (SOC-LR-6 iv), nor on medical examinations for workers exposed to conditions with a heightened H&amp;S risk (SOC-HS-1 ix-x).</li> </ul>			
Recommended key areas for improvement		<ul style="list-style-type: none"> <li>In terms of mandatory requirements, Better Biomass is recommended to expand on its requirements, especially linked to the Healthy and safe working conditions principle. Inspiration could be derived from requirements in the BMT related to H&amp;S (SOC-HS-1, 3 &amp; 4), which are not covered in the Better Biomass standards. Besides that, it is suggested to consider including requirements to ensure fair treatment of women returning after maternity leave (SOC-LR-14 ii), as well as to safeguard FPIC from local stakeholders in the case of direct local food and water security effect by the operations (SOC-WLC-4 ii &amp; 5 ii).</li> <li>In order to further strengthen its performance, Better Biomass is suggested to consider including requirements from the Labour and human rights principle on e.g., employees training and risk assessment (SOC-LR-2 ii &amp; iii) and information provision on health topics and services by the operator (SOC-LR-15 i). Moreover, integration of above mentioned requirements from the Healthy and safe working conditions principle could reinforce the scheme's impact.</li> <li>Finally, Better Biomass has one general requirement (11.1.1) covering all relevant labour and human rights followed by specific requirements prescribing additional criteria on some of these labour right topics. It will be beneficial to consider having explicit requirements for each of</li> </ul>			

them with clear messages i.e., “child labour is prohibited”, “forced or compulsory labour is prohibited”.

**Economic**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Economic and financial viability	N/A	2/3	N/A
	Fair business practice	2/2	4/4	0/1
	Economic risk management	N/A	0/1	0/2

**BMT requirements covered**

- In the Economic dimension, Better Biomass meets both of the mandatory requirements within the Fair business practice principle. The scheme requires organizations to take measures to effectively fight corruption through the identification of potential risks for fraudulent, deceptive and dishonest practices, and by establishing policies/procedures to combat these (ECO-FBP-1 i-ii). The other two principles do not include mandatory requirements.
- Better Biomass covers all basic requirements in the Fair business practice principle. Furthermore, two thirds of the basic requirements in the Economic and financial viability principle are covered e.g., on the maintenance of business records (ECO-EF-2).

**BMT requirements not covered**

- As for the basic requirements, several gaps are found. In the Economic and financial viability principle, the basic requirement for a business plan (ECO-EF-1) is currently missing. In the Risk management principle, Better Biomass does not require the management of financial and economic risks (ECO-RM-1).
- None of the advanced Economic requirements are met by Better Biomass. The Fair business practice principle includes a single advanced requirement, demanding the organization to have written contracts of business relationships with suppliers and buyers (ECO-FBP-3), which Better Biomass does not cover. Finally, within the Economic risk management principle, the minimisation of the organization’s level of vulnerability (ECO-RM-2) is not required by the scheme.

**Recommended key areas for improvement**

- Better Biomass could benefit from an explicit business plan requirement (ECO-EF-1). Also it is recommended to add a specific consideration for economic risk management (deriving inspiration from ECO-RM-1 & 2).

**Overall result**

**Key findings**

From the evaluation of Better Biomass, the scheme appears to broadly cover requirements across all four dimensions of the BMT. Principles where Better Biomass performs well include Environmental management, Sustainable land use management, Protection of biodiversity, Soil management, Air quality and Water quality and conservation under Environment, Circular design & material cycling under Circularity, Labour and human rights and Wellbeing of the local community under Social and Fair business practice under Economic. Opportunities for improvement within the Environmental dimension were found especially in the Chemical use management principle with the inclusion of requirements on e.g., the development of an integrated pest management plan and record-keeping on the use of chemicals (EN-CM-1, 2 & 3). Also the reintroduction of low ILUC risk requirements (related to EN-LUM-11 & 12) could be considered. In the Circularity dimension, Better Biomass could benefit from including a criterion on the prohibition of landfilling (CR-WM-2 i). Additionally, it is recommended to expand the scope of Better Biomass to include requirements related to design for high quality recyclability and product-life extension strategies (CR-CD-2 & 3) of bio-based products. In the Social dimension, it is recommended to address missing considerations in the Healthy and safe working conditions principle requirements (under e.g., SOC-HS-1, 3 and 4). Lastly, in the Economic dimension, the introduction of specific requirements regarding the Economic risk management principle is suggested. It is believed that considering these points will further strengthen Better Biomass and drive sustainable production of its certified biobased materials.

Date completed: 31/03/2025

Sources:




- Better Biomass website <https://betterbiomass.nl/> (Last visited: 31/03/2025)
- Better Biomass certification documents <https://betterbiomass.nl/en/certification-documents/current-certification-documents/> (Last visited: 31/03/2025). Note: at the time of this assessment 2015 versions were publicly available on this website. The most recent 2024 versions were used in the assessment which were received directly from the scheme owner:

### D3.2 Evaluation of existing schemes and labels, 30/04/2025

- NTA 8080-1:2024, Sustainability framework for biomass — Part 1: Terminology, overview and general requirements
- NTA 8080-2:2024, Sustainability framework for biomass — Part 2: Sustainability requirements
- NTA 8080-3:2024, Sustainability framework for biomass — Part 3: Requirements for greenhouse gas calculations
- NCS 8080-1:2024, Better Biomass — Part 1: Conformity assessment requirements related to sustainability framework for biomass

## 4.4 FSC

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official FSC standards and procedures.*

General	
Name of scheme	Forest Stewardship Council (FSC)
Scheme owner	The Forest Stewardship Council® (FSC) is an independent, not-for-profit, non-governmental organization established to support the environmentally appropriate, socially beneficial, and economically viable management of the world's forests.
Website	<a href="https://fsc.org/en">https://fsc.org/en</a>
Label provided	<p>FSC has three labels: 1. FSC 100 %, 2. FSC Recycled, and 3. FSC Mix. All 3 FSC labels support responsible forestry. In FSC 100% all materials used come from responsibly managed, FSC-certified forests. Products with the FSC 100% label contribute most directly to FSC's mission. In the FSC Recycled certification label, the product is made from 100% recycled materials e.g., by using FSC recycled wood or FSC recycled paper. Using recycled material reduces the pressure to harvest more trees. In the FSC Mix label, the product is made with a mixture of materials from FSC-certified forests, recycled materials, and/or FSC-controlled wood. FSC controlled wood is material that does not come from FSC-certified forests, however its use does contribute to mitigating the risk of using wood products from undesirable sources in FSC-labelled products.</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div>
Operational since	FSC was established in 1993
Number of active certificates	FSC has 1,601 active Forest Management certificates, and 65,372 associated Chain of Custody certificates (on April 29)
Standard ownership	Private
General objective	FSC's mission is the promotion of environmentally appropriate, socially beneficial, and economically viable management of the world's forests.
Scope	
Biomass feedstock	FSC 100% and FSC Mix covers only wood as feedstock, FSC recycled covers reclaimed wood and paper as feedstock.
Applicable feedstock categories in BMT	<input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crop <input type="checkbox"/> Agrarian and forestry residues <input type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	For the present study, the FSC 100% from well-managed forests standard was assessed. This standard is only applicable to forest biomass.
Sector/Product group	The FSC certification system covers forestry and wood-based manufactured products that are made from wood and non-timber forest products.
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	Forest managers can get certified against the FSC National Stewardship Standard. Industrial processors and manufacturers that use forest-based materials can obtain a certificate from the FSC Chain of Custody standard. The FSC National Stewardship Standards are based on the FSC Principles and Criteria, which define the criteria for environmentally appropriate, socially beneficial, and economically viable forest management. Therefore, the applicable value chain actor within the BMT is the Biomass producer. It must be noted that the FSC Chain of Custody standard also incorporates a section with core labour rights requirements that is applicable to downstream processors and product manufacturers. However, given the limited scope of the sustainability requirements for these actors in this standard, it was decided to focus this assessment only on Biomass producers.

Geographic applicability	Global
Applicability of sustainability principles in BMT	<p>Environment</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Environmental management</li> <li><input checked="" type="checkbox"/> Climate change management</li> <li><input checked="" type="checkbox"/> Sustainable land use management</li> <li><input checked="" type="checkbox"/> Protection of biodiversity</li> <li><input checked="" type="checkbox"/> Chemical use management</li> <li><input checked="" type="checkbox"/> Soil management</li> <li><input checked="" type="checkbox"/> Air quality</li> <li><input checked="" type="checkbox"/> Water quality and conservation</li> <li><input checked="" type="checkbox"/> Energy use &amp; efficiency</li> </ul> <p>Circularity</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Circular resource use</li> <li><input checked="" type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Labour and human rights</li> <li><input checked="" type="checkbox"/> Healthy and safe working conditions</li> <li><input checked="" type="checkbox"/> Wellbeing of the local community</li> <li><input checked="" type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic and financial viability</li> <li><input checked="" type="checkbox"/> Fair business practice</li> <li><input checked="" type="checkbox"/> Economic risk management</li> </ul>

Justification/comment on the selected sustainability principles	<p>FSC's framework consists of 10 principles:</p> <ul style="list-style-type: none"> <li>• Principle 1: Compliance with Laws</li> <li>• Principle 2: Workers Rights and Employment Conditions</li> <li>• Principle 3: Indigenous Peoples' Rights</li> <li>• Principle 4: Community Relations</li> <li>• Principle 5: Benefits from the Forest</li> <li>• Principle 6: Environmental Values and Impacts</li> <li>• Principle 7: Management Planning</li> <li>• Principle 8: Monitoring and Assessment</li> <li>• Principle 9: High Conservation Values</li> <li>• Principle 10: Implementation of Management Activities</li> </ul> <p>Principles 6, 7, 9 and 10 are mainly linked to the BMT's Environmental dimension. The Social dimension is primarily represented by Principles 2, 3 and 4. Sections of principle 1, 7 and 8 are related to the Economic dimension. Although no specific principle for Circularity exists yet in the standards, it was decided, in consultation with the scheme owner, to consider this dimension in scope of the assessment. It must be highlighted that several BMT requirements in the environmental dimension (notably in the Soil management, Air quality and Water quality and conservation principles) are more relevant for schemes with an agricultural focus than forestry-related schemes such as FSC, even though these are considered within scope of the assessment.</p>
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**Assessment of BMT content level requirements**

Reference Documents	Standard FSC-STD-01-001 'FSC Principles and Criteria for Forest Stewardship' describes the ten FSC Principles and their associated Criteria. The FSC requirements are described in various documents which can be found in the Document Centre on the FSC website. The standards are divided in four categories: Forest Management, Controlled Wood for Forest Management, Chain of Custody, and Project Certification. The complete list of documents consulted for the purpose of the present study can be found at the bottom of this assessment report.
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**Minimum backstop**

Compliance requirement check	The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.
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**Environment**

Results	<i>Fraction of applicable requirements covered</i>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management	1/1	2/2	N/A

		Climate change management	1/1	0/3	0/3
		Sustainable land use management	2/2	7/7	0/3
		Protection of biodiversity	1/1	11/12	1/2
		Chemical use management	5/5	7/8	0/4
		Soil management	1/1	0/1	1/3
		Air quality	0/1	0/1	N/A
		Water quality and conservation	2/3	3/4	1/1
		Energy use & efficiency	N/A	N/A	0/4
BMT requirements covered		<ul style="list-style-type: none"> <li>In the Environmental dimension, FSC covers all applicable mandatory requirements in the Environmental management, Climate change management, Sustainable land use management, Protection of biodiversity, Chemical use management, and Soil management principles. For example, FSC requires operators to develop a management plan that contains measures for relevant environmental topics (EN-EM-1 i). In addition, operators must keep detailed records of plant protection products (PPPs) and fertilisers (EN-CM-2 i), and are only allowed to use those PPPs that are permitted in the production country (EN-CM-2 ii). For the Water quality and conservation principle, two thirds of the applicable mandatory requirements is covered.</li> <li>In terms of basic requirements, FSC demonstrates a particularly broad coverage in a range of principles, including Environmental management, Sustainable land use management, Protection of biodiversity, Chemical use management. By means of illustration, FSC requires operators to implement appropriate regenerative/agro-ecological practices with the goal of preserving and promoting biodiversity (EN-LUM-7), and accordingly ensure that the level of harvesting remains at or below the level of the permanent natural replenishment rate (EN-LUM-8). Also, basic requirements corresponding to the mandatory ones in the Chemical use management principle (e.g., EN-CM-1 ii, EN-CM-2 iii-iv, EN-CM-3 ii) are covered.</li> <li>FSC includes one out of two of the applicable advanced requirements in the Protection of biodiversity principle. Importantly, operators are demanded to adopt measures for enhancing local wild genetic diversity (EN-BD-9).</li> </ul>			
BMT requirements not covered		<ul style="list-style-type: none"> <li>Regarding applicable mandatory requirements, several were found to be not covered in the Climate change management, Air quality, and Water quality and conservation principles. No requirement was found on the implementation of measures to limit the emission of harmful substances to the air (EN-AQ-1 i). When it comes to Water quality and conservation, no requirement was found on ensuring that water consumption and withdrawals do not exceed the natural replenishment rate (EN-WQ-1).</li> <li>In the same principles as above, several basic requirements were also found to be not covered. For instance, FSC does not require operators to report on the certified product's lifecycle GHG emissions (EN-CC-2). Additionally, no specific requirements on the measurement and analysis of air quality found (EN-AQ-1 ii).</li> <li>Analysing the advanced requirements of the BMT, the majority of these is currently not included in the FSC standards. For example, no evidence could be found that operators must set up a plan to phase out hazardous substances (EN-CM-5). Also, regarding the Energy use &amp; efficiency principle, no requirement exists for a written energy management plan to be in place that involves energy use reduction targets and increasing the share of renewable energy of the operations (EN-EE-1).</li> </ul>			
Recommended areas for improvement	key for	<ul style="list-style-type: none"> <li>FSC is recommended to examine the requirements identified as not covered in the Environmental dimension. First of all, the scheme is suggested to consider including the mandatory requirements of the BMT, related to the Air quality (EN-AQ-1 i) and Water quality and conservation (EN-WQ-1) principles as described above.</li> <li>Besides that, FSC is recommended to consider including the basic requirements identified as missing across the same three principles as mentioned above, such as on the reporting on the certified product's lifecycle GHG emissions (EN-CC-2) and measurement and analysis of air quality (EN-AQ-1 ii).</li> <li>Finally, the scheme is encouraged to derive inspiration from the advanced requirements found to be not covered. In particular, the Energy use &amp; efficiency principle could be addressed by including a requirement on a plan to reduce energy use, while increasing the share of renewables (EN-EE-1).</li> </ul>			

Circularity					
Results	<b>PRINCIPLE</b>	<b>Fraction of applicable requirements covered</b>			
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>	
		Circular resource use	N/A	1/1	N/A
		Circular design & material cycling	0/1	0/1	0/1
		Responsible waste management	1/1	0/2	N/A
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Circularity dimension, most of the requirements in the Circular resource use and Circular design &amp; material cycling principle of the BMT are out of scope of FSC, due to the scheme's focus on forest management practices rather than wood-based products and e.g., end-of-life aspects linked thereto.</li> <li>In terms of mandatory requirements, FSC demands operators to store, transport and dispose of waste and used containers safely and appropriately (CR-WM-1).</li> <li>In terms of basic requirements, FSC mandates operators to only harvest virgin biomass at levels that ensure regeneration (CR-CRU-2).</li> </ul>				
BMT requirements not covered	<ul style="list-style-type: none"> <li>Regarding mandatory requirements, FSC does not have an explicit requirement to reuse or recycle of residual flows (CR-CD-1 i).</li> <li>Within the Responsible waste management principle, no explicit requirements exist in FSC that prohibits landfilling and open-air burning as waste management practices (CR-WM-2). Also, a requirement on resource/material efficiency is not covered (CR-CD-2).</li> </ul>				
Recommended areas for improvement	<ul style="list-style-type: none"> <li>To begin with, FSC is recommended to consider incorporating the BMT's mandatory requirement on reusing or recycling residual flows (CR-CD-1 i) and basic requirement on material efficiency (CR-CD-2)</li> <li>In addition, to increase the label's coverage in the area of Responsible waste management, FSC is suggested to consider introducing basic requirements on the prohibition of landfilling and open-air burning as waste management practices (CR-WM-2).</li> </ul>				
Social					
Results	<b>PRINCIPLE</b>	<b>Fraction of applicable requirements covered</b>			
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>	
		Labour and human rights	11/13	12/23	3/13
		Healthy and safe working conditions	7/7	20/22	5/7
		Wellbeing of the local community	10/10	6/7	1/1
Wellbeing of consumers	N/A	N/A	N/A		
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Social dimension, FSC demonstrates a broad coverage of especially the Healthy and safe working conditions and Wellbeing of the local community principles. In the former, a written health and safety (H&amp;S) management plan is required (SOC-HS-1 i), as well as personal protective equipment (PPE) for all workers (SOC-HS-2 i). Regarding the latter, the scheme mandates a substantiated legal and legitimate right to use the land and water (SOC-WLC-1). Also, operators must engage with communities within or near the premises that are likely to be affected by operations (SOC-WLC-3 i-ii). As for Labour and human rights, FSC prohibits child labour (SOC-LR-3 i), forced and compulsory labour (SOC-LR-4), and requires the rights of all workers to freedom of association and collective bargaining to be respected, free from interference (SOC-LR-5).</li> <li>Analysing the basic requirements, the Healthy and safe working conditions principle stands out in terms of coverage. FSC ticks many boxes when it comes to the management and documentation of H&amp;S risks (SOC-HS-1 ii-vii), effective first aid and emergency responses (SOC-HS-3 ii-v) and safe, clean accommodation that meets the workers' needs (SOC-HS-6). As for the Wellbeing of the local community principle, many requirements are covered as well, as FSC demands operators to engage in projects to support the development of local community (SOC-WLC-6), and demands that stakeholders are informed about the possibility to file complaints (SOC-WLC-3 iii).</li> <li>A relatively high coverage of advanced requirements is seen in the Healthy and safe working conditions principle. FSC, for example, requires operators to ensure safe transport home after work for employees (SOC-HS-5 vii). Moreover, within the Labour and human rights principle, FSC does not allow unlawful or unjustified deductions and wage reductions without due process (SOC-LR-6 iv).</li> </ul>				

BMT requirements not covered	<ul style="list-style-type: none"> <li>Two mandatory requirements were found to be not covered in the Labour and human rights principle. FSC, for example, does not explicitly require the provision of contracts to all workers (SOC-LR-9 i). Also, the standard does not include a requirement ensuring that workers that have taken maternity leave can return to their job after leave on the same terms and conditions (SOC-LR-14 ii).</li> <li>Considering the BMT's basic requirements, several were found absent in the Labour and human rights principle particularly. For example, FSC does not require operators to regularly carry out risk assessments in relation to labour rights (SOC-LR-2 iii-v).</li> <li>Finally, with regard to advanced requirements in the Labour and human rights principle. explicit requirements on for example, establishing a plan for raising wages to living wage or beyond from members of the direct upstream supply chain (SOC-LR-6 v), or setting objective for female representation in management and skilled positions (SOC-LR-11 iii) were not found.</li> </ul>
Recommended areas key for improvement	<ul style="list-style-type: none"> <li>FSC is recommended to consider incorporating the two mandatory requirements identified as not covered in the Labour and human rights principle concerning contracts and returning to work after maternity leave (i.e., SOC-LR-9 i, SOC-LR-14 ii).</li> <li>Furthermore, FSC could broaden its coverage of social aspects by considering the inclusion of basic requirements on risk assessment on labour rights (SOC-LR-2 iii-v), as well as advanced requirements on the raising of wages in the direct upstream supply chain (SOC-LR-6 v), and on setting an objective for female representation in management (SOC-LR-11 iii).</li> </ul>

**Economic**

Results	<b>PRINCIPLE</b>			
		<b><i>Fraction of applicable requirements covered</i></b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Economic and financial viability	N/A	1/3	N/A
	Fair business practice	1/2	0/4	0/1
Economic risk management	N/A	1/1	0/2	

BMT requirements covered	<ul style="list-style-type: none"> <li>In the Economic dimension, FSC covers the mandatory requirement on the establishment of policies/ procedures with measures to combat fraudulent, deceptive and dishonest practices (ECO-FBP-1 i).</li> </ul>
BMT requirements not covered	<ul style="list-style-type: none"> <li>In terms of mandatory requirements, FSC does not cover the requirement for operators to systematically identify risks for fraudulent, deceptive and dishonest practices (ECO-FBP-1 ii), which is part of the Fair business practice principle.</li> <li>As for basic requirements, for example, FSC does not include an explicit requirement on the maintenance of business records (ECO-EF-2), nor on record-keeping of cases of fraudulent, deceptive or dishonest practices (ECO-FBP-2).</li> </ul>
Recommended areas key for improvement	<ul style="list-style-type: none"> <li>First of all, FSC is recommended to consider incorporating a requirement on the systematic identification of fraudulent, deceptive and dishonest practices (ECO-FBP-1 ii).</li> <li>Additionally, FSC could derive inspiration from the requirements on record-keeping in terms of both finances (ECO-EF-2) and cases of fraudulent, deceptive or dishonest practices (ECO-FBP-2).</li> </ul>

**Overall result**

Key findings	<p>From the analysis of the FSC 100% from well-managed forests standard, it can be observed that the scheme broadly covers requirements across, in particular, the Environmental and Social dimensions. Principles where FSC demonstrates a remarkably broad coverage include Environmental Management, Sustainable land use management, Protection of Biodiversity, Chemical use management, as well as Healthy and safe working conditions and Wellbeing of the Local Community. Examples of potential opportunities for improvement within the Environmental dimension were found in including a requirement for reporting on GHG emissions (EN-CC-2). This could be combined with requirements on sustainable energy practices (EN-EE-1 &amp; 2). In the Social dimension, it is recommended to address the topic of fair contract practices (SOC-LR-9), and risk assessment on labour rights (SOC-LR-2 iii-v). Furthermore, regarding the Circularity dimension FSC is recommended to consider including explicit requirements to prohibit the use of landfills or open-air burning as waste management practices (CR-WM-2). In addition, the integration of requirements beyond waste management, such as on the reuse or recycling of residual flows (CR-CD-1 i) and material efficiency (CR-CD-2) is encouraged. Finally, in the Economic dimension, inspiration for improvement could be derived from the Economic and financial viability, Fair business practice and Economic risk management requirements on maintaining business records and keeping records of any cases of fraudulent, deceptive or dishonest practices (e.g., ECO-EF-2 and ECO-FBP-2).</p>
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### D3.2 Evaluation of existing schemes and labels, 30/04/2025

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	Altogether, it is believed that addressing these elements could contribute to further strengthening FSC's framework in their objective to drive sustainable production of forest-derived biomass.
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Date completed: 29 April 2025

#### Sources:

- FSC website <https://fsc.org/en> (Last visited: 4 April 2025)
- FSC library of tools and documents <https://connect.fsc.org/document-centre> (Last visited: 4 April 2025)
- ILO code of practice: Safety and health in forestry work [https://www.ilo.org/sites/default/files/2025-03/2025%20Code%20of%20practice%20forestry%20-%20EN\\_1.pdf](https://www.ilo.org/sites/default/files/2025-03/2025%20Code%20of%20practice%20forestry%20-%20EN_1.pdf) (Last visited: 4 April 2025)
  - FSC® Principles and Criteria for Forest Stewardship, FSC-STD-01-001, 1 July 2023, V5-3
  - International Generic Indicators, FSC-STD-60-004, 1 July 2023, V2-1
  - FSC Pesticides Policy, FSC-POL-30-001, 1 August 2019, V3-0
  - FSC core labour requirements: Guidance for organizations and certification bodies, V1-0

## 4.5 SBP

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official SBP standards and procedures.*

General	
Name of scheme	Sustainable Biomass Program (SBP)
Scheme owner	SBP is a not-for-profit organization, fully funded by its certificate holders, who take an interest in the use of woody biomass for large-scale energy production. Currently, the governance structure consists of four main entities: the Board, a Technical Committee, a Standards Committee, and the SBP Secretariat. The Board is the key governing body and responsible for overseeing the delivery of SBP's objective, and receives advice on important topics from the Standards Committee and the Technical Committee. The day-to-day running of SBP is handled by the Secretariat. Each of these entities comprise of different stakeholders, including biomass producers, end-users, experts, and civil society, to ensure representation of different perspectives in the development of the certification scheme.
Website	<a href="https://sbp-cert.org/">https://sbp-cert.org/</a>
Label provided	
Operational since	2013 (originally established as Sustainable Biomass Partnership. This name was changed to Sustainable Biomass Program in 2016)
Number of active certificates	346 (April 2025; <a href="https://sbp-cert.org/certifications/certificate-holders/">https://sbp-cert.org/certifications/certificate-holders/</a> )
Standard ownership	Private
General objective	Through certification with SBP, organizations can provide assurance that biomass is sourced both legally and sustainably, allowing companies in the bioeconomy sector to demonstrate compliance with, at minimum, regulatory requirements.
Scope	
Biomass feedstock	Woody biomass
Applicable feedstock categories in BMT	<input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crop <input checked="" type="checkbox"/> Agrarian and forestry residues <input type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	SBP's certification scheme is designed for different types of woody biomass, including: lignocellulosic material derived from forest and non-forest land, processing residues from forest and agriculture related industries (outside forest and agricultural land), and woody agricultural residues from agricultural land. Non-woody agricultural residues from agricultural land are excluded.
Sector/Product group	SBP-certified pellets and wood chips are typically used for energy generation purposes, i.e., heat and electricity production. SBP also applies to the certification of biochar, biocarbon, and other processed wood-based products, used for energy or by other industries. Bioliquids, biofuels, biogas, or fuels originating from non-biological or recycled carbon sources are outside of the scope of SBP's scheme.
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	SBP distinguishes between three types of organizations that can get certified: i.e., Biomass Producers (e.g., pellet manufacturers and chip producers), Traders, and End-Users (e.g., Power Generators). However, since the certification scheme is first and foremost applied to energy-products, rather than non-energy bio-based products, it was decided, upon consultation with the scheme owner, to not consider the Final product manufacturer an applicable value chain actor.
Geographic applicability	Global

<p>Applicability of sustainability principles in BMT</p>	<p>Environment</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Environmental management</li> <li><input checked="" type="checkbox"/> Climate change management</li> <li><input checked="" type="checkbox"/> Sustainable land use management</li> <li><input checked="" type="checkbox"/> Protection of biodiversity</li> <li><input checked="" type="checkbox"/> Chemical use management</li> <li><input checked="" type="checkbox"/> Soil management</li> <li><input checked="" type="checkbox"/> Air quality</li> <li><input checked="" type="checkbox"/> Water quality and conservation</li> <li><input checked="" type="checkbox"/> Energy use &amp; efficiency</li> </ul> <p>Circularity</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Circular resource use</li> <li><input type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Labour and human rights</li> <li><input checked="" type="checkbox"/> Healthy and safe working conditions</li> <li><input checked="" type="checkbox"/> Wellbeing of the local community</li> <li><input checked="" type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Economic and financial viability</li> <li><input checked="" type="checkbox"/> Fair business practice</li> <li><input type="checkbox"/> Economic risk management</li> </ul>
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<p>Justification/comment on the selected sustainability principles</p>	<p>SBP’s certification scheme sustainability standard 1 contains four principles:</p> <ul style="list-style-type: none"> <li>- Principle 1 – Feedstock is legally sourced</li> <li>- Principle 2 – Feedstock sourcing does not harm the environment</li> <li>- Principle 3 – Feedstock is only sourced from Supply Bases where the forest carbon stock is stable or increasing long term</li> <li>- Principle 4 – Feedstock sourcing benefits people and communities</li> </ul> <p>As can be seen from the above principles, SBP focuses primarily on compliance of woody biomass, and products derived thereof, with environmental and social (legal) requirements. As such, all principles of the Environmental and Social dimension of the BMT are considered in its scope. Despite that SBP-certified feedstocks and products could contribute to a more circular bioeconomy (e.g., through certification of forestry residues and responsible waste management practices, as covered by SBP’s Principle 2), it is not considered the purpose of the scheme to demonstrate the circularity performance of organizations. Also, other than corruption-related aspects, the scheme intentionally does not focus on assuring the economic performance of organizations. Hence, it was decided, upon consultation with the scheme owner, to consider the Circular resource use, Circular design &amp; material cycling, Economic and financial viability and Economic risk management principles out of the scheme’s scope.</p>
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**Assessment of BMT content level requirements**

<p>Reference Documents</p>	<p>The scheme consists of six standards, against which organizations are assessed, and which came into effect in August 2023. These include SBP Standard 1: Feedstock Compliance, SBP Standard 2: Feedstock Verification, SBP Standard 4: Chain of Custody, SBP Standard 5: Collection and Communication of Data, SBP Standard 6: Energy and Carbon Balance Calculation. Each of these standards is accompanied by guidance and instruction documents, which inform operators and auditors on evaluating compliance. For the full list of consulted documents and version numbers, refer to the sources at the bottom of this evaluation.</p>
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**Minimum backstop**

<p>Compliance requirement check</p>	<p>The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.</p>
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**Environment**

<p>Results</p>	<b><i>Fraction of applicable requirements covered</i></b>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management	1/1	2/2	N/A
	Climate change management	1/1	3/3	0/3
	Sustainable land use management	3/3	7/7	1/4

	<table border="1"> <tr> <td>Protection of biodiversity</td> <td>1/1</td> <td>6/12</td> <td>1/2</td> </tr> <tr> <td>Chemical use management</td> <td>4/5</td> <td>5/8</td> <td>1/4</td> </tr> <tr> <td>Soil management</td> <td>2/2</td> <td>1/1</td> <td>1/3</td> </tr> <tr> <td>Air quality</td> <td>1/1</td> <td>1/1</td> <td>N/A</td> </tr> <tr> <td>Water quality and conservation</td> <td>3/3</td> <td>2/4</td> <td>1/1</td> </tr> <tr> <td>Energy use &amp; efficiency</td> <td>N/A</td> <td>N/A</td> <td>0/4</td> </tr> </table>	Protection of biodiversity	1/1	6/12	1/2	Chemical use management	4/5	5/8	1/4	Soil management	2/2	1/1	1/3	Air quality	1/1	1/1	N/A	Water quality and conservation	3/3	2/4	1/1	Energy use & efficiency	N/A	N/A	0/4
Protection of biodiversity	1/1	6/12	1/2																						
Chemical use management	4/5	5/8	1/4																						
Soil management	2/2	1/1	1/3																						
Air quality	1/1	1/1	N/A																						
Water quality and conservation	3/3	2/4	1/1																						
Energy use & efficiency	N/A	N/A	0/4																						
<p>BMT requirements covered</p>	<ul style="list-style-type: none"> <li>In the Environmental dimension, SBP shows a particularly high coverage by addressing all applicable mandatory requirements with the exception of one in the Chemical use management principle. Examples of mandatory requirements covered by SBP include the adoption of GHG emission reduction activities (EN-CC-1), and the mandate to only use plant protection products (PPPs) that are officially registered and permitted in the production country for the respective crop (EN-CM-2 ii). Given its adherence to the RED III, the related mandatory sustainable land use and soil management requirements (i.e., EN-LUM-3 &amp; 4, EN-SM-1) are covered as well.</li> <li>Additionally, SBP covers all basic requirements across the Environmental management, Climate change management, Sustainable land use management, Soil management and Air quality principles. For example, by virtue of their risk-based approach, SBP requires the development of a robust environmental management plan through the inclusion of targets for topics relevant to the organization’s operations (EN-EM-1 ii), and regular progress monitoring and updating of the plan (EN-EM-1 iii). With regard to the Soil management principle, SBP demands organizations to take measures and apply cultivation techniques aimed at reducing topographic risks such as soil erosion (EN-SM-3). Also, SBP includes explicit requirements to ensure maintenance and strengthening of forest regeneration over the long term (EN-LUM-8), and linked to this, organizations must implement agro-ecological/regenerative practices to preserve and promote biodiversity (EN-LUM-7).</li> <li>Analysing the BMT’s advanced requirements, SBP is seen to cover several e.g., the single advanced requirement in the Water quality and conservation principle, which concerns the evidencing of water quality by water monitoring records (EN-WQ-4 i).</li> </ul>																								
<p>BMT requirements not covered</p>	<ul style="list-style-type: none"> <li>As indicated above, one applicable mandatory requirement could not be found in SBP’s standards. This concerns the requirement on record-keeping of the application of PPPs and fertilisers (EN-CM-2 i) in the Chemical use management principle.</li> <li>In terms of basic requirements, gaps were found for several BMT principles, notably with regards to Protection of biodiversity and Chemical use management. When it comes to the former, SBP does not prohibit burning as a method of land preparation and post-harvest disposal of residues (EN-BD-4), nor does it require maintenance and restoration of field margins, boundaries and watercourses (EN-BD-5). Also, organizations are not explicitly obliged to carefully manage the introduction, cultivation and use of invasive species in the case of introduction (EN-BD-7 ii-v). In terms of the latter principle, the scheme does not require regular maintenance of chemical application equipment (EN-CM-2 iv).</li> <li>Although SBP defines requirements for reporting and meeting GHG saving targets, which can indirectly be met through energy-related measures, the scheme does not prescribe the development, implementation and monitoring of an energy management plan, involving energy use reduction and increasing the share of renewable energy (EN-EE-1), nor does it set targets for the use of renewable energy (EN-EE-2) beyond those mandated by the RED. Also, the scheme currently does not address the topic of ILUC (EN-LUM-11 &amp; 12).</li> </ul>																								
<p>Recommended key areas for improvement</p>	<ul style="list-style-type: none"> <li>SBP is encouraged to consider the relevance of adding the following requirements in the Environmental dimension. First of all, the scheme is suggested to consider including, from the Chemical use management principle, the requirement concerning record-keeping of the use of chemicals for operations (EN-CM-2 i).</li> <li>In terms of basic requirements, SBP is encouraged to derive inspiration from the BMT’s requirements, specifically the requirement on the prohibition of burning as a land-clearing method (EN-BD-4), the careful management of invasive species (EN-BD-7 ii-v) and the regular maintenance of chemical application management (EN-CM-2 iv).</li> <li>Regarding advanced requirements, SBP could consider explicitly addressing the topics of sustainable energy practice (EN-EE-1 &amp; 2) and ILUC (EN-LUM-11 &amp; 12) in its standards.</li> </ul>																								

Circularity				
Results	<b>PRINCIPLE</b>	<b>Fraction of applicable requirements covered</b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Circular resource use	N/A	1/1	N/A
	Circular design & material cycling	N/A	N/A	N/A
	Responsible waste management	0/1	0/2	N/A
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Circularity dimension, most of the requirements, with the exception of those in the Responsible waste management principle and one basic requirement in the Circular resource use principle (CR-CRU-2), are out of scope of SBP.</li> <li>SBP was found to require the harvesting of virgin biomass at levels that ensure regeneration (CR-CRU-2).</li> </ul>			
BMT requirements not covered	<p>The Responsible waste management principle includes three requirements, of which one mandatory and two basic. Although SBP requires appropriate disposal of waste, its appropriate transportation and disposal are not necessarily demanded (CR-WM-1). Besides that, SBP does not prohibit landfilling and open-air burning as waste management practices (CR-WM-2).</p>			
Recommended key areas for improvement	<p>SBP is recommended to consider including more comprehensive requirements on Responsible waste management deriving inspiration from BMT's requirements (CR-WM-1 &amp; 2), as outlined above.</p>			
Social				
Results	<b>PRINCIPLE</b>	<b>Fraction of applicable requirements covered</b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Labour and human rights	9/13	17/23	8/13
	Healthy and safe working conditions	7/7	14/22	1/7
	Wellbeing of the local community	10/10	6/7	0/1
Wellbeing of consumers	N/A	N/A	N/A	
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Social dimension, SBP shows particularly high coverage of mandatory requirements within the Wellbeing of the local community and Healthy and safe working conditions principles. For example, in terms of the former, SBP ticks many boxes regarding stakeholder mapping and engagement (SOC-WLC-2 i-ii &amp; 3 i-ii), as well as the identification of potential impacts on water resources in the local community (SOC-WLC-5 i-ii &amp; iv). Furthermore, in the Labour and human rights principle, over half of the mandatory requirements are covered. These include for instance the prohibition of child labour (SOC-LR-3 i), prohibition of forced or compulsory labour (SOC-LR-4), assurance of workers' freedom of association and collective bargaining (SOC-LR-5) and the remuneration of work of equal value with equal pay (SOC-LR-10 i).</li> <li>Turning to the basic requirements, SBP covers multiple across all applicable principles. With respect to Labour and human rights, SBP requires that all workers have equal access to trainings, benefits and opportunities (SOC-LR-10 ii), and explicitly demands the provision of vocational and/or occupational skills training to employees (SOC-LR-13 i). Note that SBP mandates subsidiaries and subcontractors of the certified organization to uphold the same labour rights as the organization itself (SOC-LR-17 i), which reinforces the scheme's impact. Linked to the Healthy and safe working conditions principle, the scheme considers effective first aid and emergency responses on the work floor (SOC-HS-3 ii &amp; v).</li> <li>SBP covers several advanced requirements from the Labour and human rights principle, e.g., on the insurance of workers' benefits (SOC-LR-15 ii) and on the legal authorisation of all contract employment agencies and labour contractions used by the operator (SOC-LR-16).</li> </ul>			
BMT requirements not covered	<ul style="list-style-type: none"> <li>In the Labour and human rights principle, four mandatory requirements are not seen to be covered by SBP: explicit requirements on adherence to the Universal Declaration of Human Rights (SOC-LR-1 i), provision of written or oral contracts (SOC-LR-9 i), right to paid maternity leave (SOC-LR-14 i) and ensuring returning to the job on the same terms and conditions after maternity leave (SOC-LR-14 ii).</li> <li>In terms of basic requirements, some were not found to be covered across all three principles. These include, for example, in the Labour and human rights principle, requirements on the promotion of recruitment operations to encourage women's presence across operations (SOC-LR-11 ii), and in the Healthy and safe working conditions principle, a requirement on the safe usage and storage of machinery and other equipment (e.g., SOC-HS-2 iv-v).</li> </ul>			

	<ul style="list-style-type: none"> <li>The majority of the advanced requirements in the Healthy and safe working conditions and Wellbeing of the local community principles are currently not seen to be covered by SBP. Examples are requirements that specifically address the availability of a disciplinary procedure (SOC-LR-8), compensation of training time as work time (SOC-LR-13 ii) and prioritisation of hiring local candidates (SOC-WLC-6 iii).</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>SBP is recommended to examine the identified requirements in BMT not covered in the Social dimension, focussing on the mandatory ones (i.e., SOC-LR-9 i, SOC-LR-14). Incorporating these requirements in the standard could contribute to broader coverage of labour and human rights aspects by SBP.</li> <li>Furthermore, SBP is encouraged to consider including a requirement on recruitment operations encouraging women’s presence across operations (SOC-LR-11 ii), as well as consider the relevance of adding Healthy and safe working conditions related requirements that were so far not explicitly addressed (e.g., SOC-HS-2 iv-v) to enhance the scheme’s completeness.</li> <li>Finally, SBP could derive inspiration from the not covered advanced requirements identified in all three applicable principles to showcase commitment to continuous improvement in social aspects.</li> </ul>

**Economic**

Results	<b>PRINCIPLE</b>			<b><i>Fraction of applicable requirements covered</i></b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>		
	Economic and financial viability	N/A	N/A	N/A		
	Fair business practice	2/2	1/4	0/1		
	Economic risk management	N/A	N/A	N/A		

BMT requirements covered	In terms of Fair business practice, which is the only Economic principle in scope of SBP, the scheme covers both mandatory requirements. These concern the establishment of policies/ procedures with measures to combat fraudulent, deceptive and dishonest practices (ECO-FBP-1 i) and the systematic identification of risks related to such practices (ECO-FBP-1 ii). Within the same criterion, SBP requires staff training on fair business practices, including record-keeping of these trainings (ECO-FBP-1 iii).
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BMT requirements not covered	Continuing on the analysis of the Fair business practice principle, the basic requirements on record-keeping of any cases of fraudulent, deceptive or dishonest practices (ECO-FBP-2), as well as the single requirement on business relationships based on written contracts (ECO-FBP-3) are seen to be not covered.
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Recommended key areas for improvement	SBP is encouraged to consider broadening its requirements on effective arrangements against corruption by incorporating above considerations derived from the BMT’s Fair business practice principle.
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**Overall result**

Key findings	From the analysis of SBP, it can be observed that the scheme broadly covers requirements across the Environmental dimension. Principles where SBP performs remarkably well – supported by SBP’s risk-based approach – include Environmental management, Climate change management, Sustainable land use management, Soil management and Air quality. Examples of opportunities for improvement within the Environmental dimension were found in Chemical use management (EN-CM-2 iv & 3 ii) principle. Also, the scheme could be strengthened by addressing the topics of sustainable energy practice (EN-EE-1 & 2) and ILUC (EN-LUM-11 & 12). In the Social dimension, SBP demonstrates a high coverage of the Healthy and safe working conditions and Wellbeing of the local community principles. SBP is encouraged in particular to consider the incorporation of identified missing mandatory requirements from the Labour and human rights principle (i.e., SOC-LR-1, SOC-LR-9 i, SOC-LR-14). Regarding the Circularity and Economic dimensions, most principles are currently out of SBP’s scope. However, in terms of the applicable Responsible waste management principle, SBP is encouraged to include stricter requirements on waste management, transportation and storage practices (deriving inspiration from CR-WM-1 & 2). Finally, in the Economic dimension, SBP readily covers both mandatory requirements for Fair business practice, and could derive inspiration from related basic and advanced requirements (ECO-FBP-2 & 3). Altogether, it is believed that considering these aspects will further strengthen SBP’s standards in their quest to drive sustainable production of woody biomass.
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### D3.2 Evaluation of existing schemes and labels, 30/04/2025

Date completed: 29 April 2025

Sources:

- SBP website <https://sbp-cert.org/> (Last visited: 2 April 2025)
- European Commission website [https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes\\_en#:~:text=Sustainable%20Biomass%20Program%20\(SBP\),agricultural%20residues%20from%20agricultural%20land](https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en#:~:text=Sustainable%20Biomass%20Program%20(SBP),agricultural%20residues%20from%20agricultural%20land) (Last visited: 2 April 2025)
- SBP library <https://sbp-cert.org/documents/normative-documents/> (Last visited: 2 April 2025)

The following standard documents (published on 10 August 2023) were consulted as part of this evaluation:

- SBP library SBP Standard 1: Feedstock Compliance, V2.0
- Guidance for SBP Standard 1: Feedstock Compliance, V1.0
- SBP Standard 2: Feedstock Verification, V2.0
- Guidance for SBP Standard 2: Feedstock Verification, V1.0
- SBP Standard 4: Chain of Custody, V2.0
- Guidance for SBP Standard 4: Chain of Custody, V1.0
- SBP Standard 5: Collection and Communication of Data, V2.0
- SBP Standard 6: Energy and Carbon Balance Calculation, V2.0
- Instruction Document 6D: Methodology for the Calculation and Certification of GHG Emissions Savings for REDII, V1.1
- Glossary of Terms and Definitions, V2.0

## 4.6 Bonsucro

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official Bonsucro standards and procedures.*

General	
Name of scheme	Bonsucro
Scheme owner	Bonsucro is the leading global sustainability platform and standard for sugarcane, one of the world's most important crops. Its purpose is to collectively accelerate the sustainable production and use of sugarcane. Bonsucro convenes over 300 members from more than 50 countries to address critical challenges in the sugarcane sector and drive both performance and impact through its system of sustainability standards. The organisation works across all sugarcane products and derivatives – sugar, ethanol, molasses, and bagasse in traditional and newer market sectors, from sugar and alcohol to biofuels and bioplastics.
Website	<a href="https://bonsucro.com/">https://bonsucro.com/</a>
Label provided	
Operational since	2009
Number of active certificates	277 certified entities (April 2025) Can be consulted at <a href="https://bonsucro.com/certified-members-3/">https://bonsucro.com/certified-members-3/</a>
Standard ownership	Private
General objective	The purpose of Bonsucro is "to collectively accelerate the sustainable production and uses of sugarcane".
Scope	
Biomass feedstock	Specific type of feedstock - Sugarcane
Applicable feedstock categories in BMT	<input type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input checked="" type="checkbox"/> Agrarian and forestry residues <input type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	Bonsucro focuses on sustainable sugarcane production, which falls under the "Crop" category. During processing, residues like bagasse and cane trash are generated which are also utilized, classified as "Agrarian and forestry residues".
Sector/Product group	Bonsucro standard covers all sugarcane products and derivatives – sugar, ethanol, molasses, and bagasse in traditional and newer market sectors, from sugar and alcohol to biofuels and bioplastics.
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	Bonsucro covers "biomass producers" and "industrial processors" because it focuses on sustainable sugarcane cultivation and processing into products like sugar and ethanol. It does not cover "final product manufacturers" since its scope is limited to the earlier stages of production rather than the final transformation into consumer goods.
Geographic applicability	Global
Applicability of sustainability principles in BMT	Environment <input checked="" type="checkbox"/> Environmental management <input checked="" type="checkbox"/> Climate change management <input checked="" type="checkbox"/> Sustainable land use management <input checked="" type="checkbox"/> Protection of biodiversity <input checked="" type="checkbox"/> Chemical use management <input checked="" type="checkbox"/> Soil management <input checked="" type="checkbox"/> Air quality <input checked="" type="checkbox"/> Water quality and conservation <input checked="" type="checkbox"/> Energy use & efficiency

	<p>Circularity</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Circular resource use</li> <li><input checked="" type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Labour and human rights</li> <li><input checked="" type="checkbox"/> Healthy and safe working conditions</li> <li><input checked="" type="checkbox"/> Wellbeing of the local community</li> <li><input type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic and financial viability</li> <li><input checked="" type="checkbox"/> Fair business practice</li> <li><input checked="" type="checkbox"/> Economic risk management</li> </ul>
Justification/comment on the selected sustainability principles	All principles defined in BMT were considered applicable to Bonsucro except the Wellbeing of consumers principle. This principle solely contains requirements applicable to final product manufacturers. Since this value chain actor is out of scope of the scheme (see justification above), it was decided to consider said principle not applicable to Bonsucro.

**Assessment of BMT content level requirements**

Reference Documents	The “Bonsucro Production Standard” v 5.2 defines principles and criteria for certification for achieving sustainable production of sugarcane and all sugarcane derived products in respect of economic, social and environmental dimensions. Bonsucro Production Standard Implementation Guidance provides operators with guidance to implement the Bonsucro Production Standard at the mill and farm level. Additionally, the following documents and tools were reviewed for input in the analysis: The Bonsucro Guidance for operators - Developing a BMP, Bonsucro Guidance for Operators – Supply Base Mapping, Bonsucro Calculator 5.2.3, Carbon Accounting in Sugarcane: Bonsucro Calculator User Guide v1.1, and Bonsucro Mass Balance Chain of Custody Standard v5.1.
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**Minimum backstop**

Compliance requirement check	The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.
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**Environment**

Results	<i>Fraction of applicable requirements covered</i>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management	1/1	2/2	N/A
	Climate change management	1/1	3/3	2/3
	Sustainable land use management	1/2	3/2	0/3
	Protection of biodiversity	2/2	5/12	0/2
	Chemical use management	5/5	6/8	1/4
	Soil management	3/4	4/5	1/4
	Air quality	0/1	0/1	N/A
	Water quality and conservation	2/3	3/4	1/1
	Energy use & efficiency	N/A	N/A	0/4

BMT requirements covered	<ul style="list-style-type: none"> <li>• Bonsucro demonstrates strong performance across key environmental principles, driven by a comprehensive environmental management plan (EN-EM-1) that includes biodiversity, soil, and water regularly updated with progress monitoring. The scheme also features dedicated plans for specific environmental areas, including the Climate Mitigation and Resilience Plan (indicator 3.2.1), Biodiversity Management Plan (indicator 4.1.2), Soil Management Plan (indicator 4.2.2), Water Stewardship Plan (indicator 4.3.2), and Integrated Pest Management (IPM) Plan (indicator 4.4.2).</li> <li>• Bonsucro covers all mandatory requirements in the Environmental management, Climate change management, Protection of biodiversity and Chemical use management. It also has well coverage of the mandatory requirements within Soil management and Water quality and conservation principles. Similarly concerning basic requirements, Bonsucro meets all of them in the Environmental management, and Climate change management, and shows good coverage in Chemical use management, Soil management and Water quality and conservation principles.</li> <li>• In Climate change management, Bonsucro prescribes GHG emissions reduction activities (EN-CC-1) and lifecycle GHG emissions reporting (EN-CC-2), ensuring alignment with existing standards. In Soil management, it requires practices to maintain soil health (EN-SM-2) and address</li> </ul>
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	<p>soil erosion (EN-SM-3), while efficient water use and pollution prevention are emphasized (EN-WQ-2 and EN-WQ-3). In Protection of biodiversity, Bonsucro requires mapping of high biodiversity values near potential/existing operations (EN-BD-1), a baseline biodiversity assessment (EN-BD-3) and measures to minimize habitat fragmentation (EN-BD-6). The scheme also requires an Integrated Pest Management plan (EN-CM-1) and safe chemical use practices (EN-CM-3), including strict guidelines prohibiting hazardous substance (EN-CM-4).</p> <ul style="list-style-type: none"> <li>Bonsucro demonstrates a particularly good performance in the Climate change management and Water quality and conservation principles when it comes to the BMT's advanced requirements. The standard meets advanced requirements in terms of defining targets for GHG reduction (EN-CC-4 ii. and iii.). Bonsucro is also seen to cover the single advanced requirement in the Water quality and conservation principle, which concerns the evidencing of water quality by water monitoring records (EN-WQ-4 i).</li> </ul>
<p>BMT requirements not covered</p>	<ul style="list-style-type: none"> <li>It was seen that the requirements defined in BMT for Air quality and for Energy use &amp; efficiency were not covered by Bonsucro. Regarding air quality, although Bonsucro requires operators to measure and report stationary source emissions (e.g., from boilers), this is related to measurement and not to limiting harmful air emissions (EN-AQ-1). Also, it is prescribed only for boilers and not all sources of air emissions.</li> <li>Gap is seen also in the Sustainable land use management principle. The requirement on prohibiting the degradation and/or drainage of peatlands (EN-LUM-2) is missing. Regarding water quality and conservation, although Bonsucro demonstrates good performance, it could improve by addressing water usage by not exceeding natural replenishment rates (EN-WQ-1). Also in Soil management principle, the mandatory requirement on the use of agrarian and forestry residual products to not have negative impact on the soil nutrient balance, soil organic matter balance or important traditional uses (EN-SM-1) is not covered.</li> <li>Analysing Bonsucro's coverage of basic requirements, gaps are seen in several basic requirements, notably in air quality, protection of biodiversity, chemical use management, soil management, water quality and sustainable land use management. In biodiversity, the scheme does not require that genetically modified species are utilised (EN-BD-8) or careful management of the introduction, cultivation and use of invasive species in case of introduction (EN-BD-7). Regarding biodiversity, Bonsucro also does not prohibit the use of fire as a land-clearing method (EN-BD-4 i). In chemical use management, the scheme does not require the regular maintenance of chemical application equipment (EN-CM-2 iv), and in soil management there is no mention to the requirement for the storage of soil organic matter samples (EN-SM-2 iii). In water quality, the prohibition for the use and discharge of untreated sewage, sludge and slurry of human origin is not required (EN-WQ-3 ii). In Sustainable land use management, lacks requirements for appropriate regenerative practices to preserve biodiversity (EN-LUM-7).</li> <li>With regard to advanced requirements, although Bonsucro demonstrates good performance for setting targets for GHG emissions, it could improve by requiring specific targets for increased energy efficiency and share of renewable energy (EN-EE-1 &amp; 2). In Sustainable land use management, Bonsucro does not address ILUC risk management (EN-LUM-11 &amp; 12).</li> </ul>
<p>Recommended key areas for improvement</p>	<ul style="list-style-type: none"> <li>To strengthen its sustainability efforts, Bonsucro could address Air quality concerning requirement on limiting emissions of harmful substances from all sources and regular monitoring (EN-AQ-1) and include specific requirements addressing Energy efficiency and renewable energy use (EN-EE-1 &amp; 2). Then, it is recommended to consider including all the mandatory requirements of the BMT. This can be done by including for Sustainable land use management, the mandatory requirement on prohibiting degradation of peatlands (EN-LUM-2), on Soil management consideration for soil quality when using agricultural residues (EN-SM-1) and regarding Water use explicit requirement not to exceed natural replenishment rates (EN-WQ-1).</li> <li>As for basic requirements, there is room for improvement across different principles. For example for Sustainable land management consideration for regenerative agricultural practices (EN-LUM-7) and for Protection of biodiversity addressing management of invasive and genetically modified species (EN-BD-7 &amp; 8).</li> <li>To increase the comprehensives of the standard, Bonsucro could also benefit from addressing some of the identified gaps in advanced requirements such as ILUC risk management (EN-LUM-11 &amp; 12).</li> </ul>

**Circularity**

<p>Results</p>	<b><i>Fraction of applicable requirements covered</i></b>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Circular resource use	N/A	0/2	N/A
	Circular design & material cycling	1/1	1/1	0/1
	Responsible waste management	1/1	1/2	N/A

BMT requirements covered	<ul style="list-style-type: none"> <li>Bonsucro performs well in the Circularity dimension, covering the mandatory requirements for both circular design &amp; material cycling and responsible waste management. The scheme ensures proper management of residual biomass after harvesting (CR-CD-1 i).and mandates safe and appropriate waste disposal practices (CR-WM-1), demonstrating its commitment to responsible handling of residues and wastes. Additionally, it prohibits open-air burning as a waste management practice (CR-WM-2 ii), aligning with sustainability standards. Bonsucro also encourages efficient material use, as seen in its focus on maximizing industrial efficiency (CR-CD-2),</li> </ul>
BMT requirements not covered	<ul style="list-style-type: none"> <li>Gaps are observed in terms of basic requirements regarding Circular resource use and Responsible waste management. In terms of Circular resource use, Bonsucro lacks specific references to the 9R framework or cascading use principles in its guidelines (CR-CRU-1). These principles could help guide a more systemic approach to resource use. The standard does also not explicitly address regenerative harvesting or sustainable yield limits for virgin biomass (CR-CRU-2). Bonsucro focuses on yield thresholds based on climatic zones but does not explicitly prohibit overharvesting nor promotes regenerative practices. In the Responsible Waste Management area, Bonsucro does not explicitly prohibit landfilling as a waste management practice (CR-WM-2 i).</li> <li>The advanced Circularity requirement of the BMT regarding use of residual flows and waste for energy generation only in certain circumstances e.g., when the material use is not possible (CR-CD-1 ii) is not covered. While residual flows are reused or recycled, the scheme does not clarify when energy generation from waste is allowed, leaving room for improvement in aligning with the Circularity principle.</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>To improve the performance in terms of circularity requirements, Bonsucro could pay some extra attention to the Circular resource use (CR-CRU-1,2) and Responsible waste management (CR-WM-2 i). Regarding Circular resource use basic requirements which are within scope, Bonsucro could strengthen its approach to circularity by incorporating the 9R framework and cascading use principles, which would guide more sustainable resource flows across the system (CR-CRU-1) and explicitly address sustainable harvesting and regenerative practices for virgin biomass, along with clear yield limits, enhancing the circular resource use criteria (CR-CRU-2).</li> <li>To fully cover the basic requirements, Bonsucro should introduce a prohibition on landfilling (CR-WM-2 i). Additionally, reinforcing the restriction on energy recovery from waste would help align with broader sustainability goals. Bonsucro should clarify the circumstances under which residual flows and waste may be used for energy generation (in alignment with the Circular design &amp; material cycling principle CR-CD-1 ii).</li> </ul>

**Social**

Results	<table border="1"> <thead> <tr> <th data-bbox="392 1240 810 1328" rowspan="2">PRINCIPLE</th> <th colspan="3" data-bbox="815 1240 1481 1279"><i>Fraction of applicable requirements covered</i></th> </tr> <tr> <th data-bbox="815 1285 1027 1328">Mandatory</th> <th data-bbox="1032 1285 1244 1328">Basic</th> <th data-bbox="1249 1285 1473 1328">Advanced</th> </tr> </thead> <tbody> <tr> <td data-bbox="392 1335 810 1377">Labour and human rights</td> <td data-bbox="815 1335 1027 1377">12/13</td> <td data-bbox="1032 1335 1244 1377">22/23</td> <td data-bbox="1249 1335 1473 1377">10/13</td> </tr> <tr> <td data-bbox="392 1384 810 1426">Healthy and safe working conditions</td> <td data-bbox="815 1384 1027 1426">7/7</td> <td data-bbox="1032 1384 1244 1426">18/22</td> <td data-bbox="1249 1384 1473 1426">2/7</td> </tr> <tr> <td data-bbox="392 1433 810 1476">Wellbeing of the local community</td> <td data-bbox="815 1433 1027 1476">11/14</td> <td data-bbox="1032 1433 1244 1476">5/7</td> <td data-bbox="1249 1433 1473 1476">0/1</td> </tr> <tr> <td data-bbox="392 1482 810 1525">Wellbeing of consumers</td> <td data-bbox="815 1482 1027 1525">N/A</td> <td data-bbox="1032 1482 1244 1525">N/A</td> <td data-bbox="1249 1482 1473 1525">N/A</td> </tr> </tbody> </table>			PRINCIPLE	<i>Fraction of applicable requirements covered</i>			Mandatory	Basic	Advanced	Labour and human rights	12/13	22/23	10/13	Healthy and safe working conditions	7/7	18/22	2/7	Wellbeing of the local community	11/14	5/7	0/1	Wellbeing of consumers	N/A	N/A	N/A
PRINCIPLE	<i>Fraction of applicable requirements covered</i>																									
	Mandatory	Basic	Advanced																							
Labour and human rights	12/13	22/23	10/13																							
Healthy and safe working conditions	7/7	18/22	2/7																							
Wellbeing of the local community	11/14	5/7	0/1																							
Wellbeing of consumers	N/A	N/A	N/A																							
BMT requirements covered	<ul style="list-style-type: none"> <li>The Bonsucro standard demonstrates overall a high performance in the Social dimension. With regards to Labour and human rights principles, the scheme explicitly requires operators to commit to and adhere to the Universal Declaration of Human Rights and the ILO Core Conventions (SOC-LR-1). Bonsucro prohibits child labour (SOC-LR-3) and forced labour (SOC-LR-4), while also safeguarding workers' freedom of association and the right to collective bargaining (SOC-LR-5). Furthermore, the standard ensures non-discriminatory practices in remuneration (SOC-LR-10 i), as well as promoting gender equality (SOC-LR-11).</li> <li>This commitment is reinforced through also meeting almost all of the basic requirements, e.g., requirements on effective management practices, including the implementation of policies, regular risk assessments, mitigation measures, and training sessions aimed at ensuring workers' rights (SOC-LR-2). Additionally, protecting workers from abuse, harassment, and violence (SOC-LR-12) and requiring equal access to training and opportunities (SOC-LR-10 ii). Bonsucro also shows high coverage of the advanced requirements defined in BMT for this principle. This concerns for example with provisions for limiting pay reductions, and mechanisms to raise wages above the living wage (SOC-LR-6 iv &amp; v) and promotes women's presence in management and skilled positions (SOC-LR-11 iii).</li> <li>In terms of Healthy and safe working conditions principle, Bonsucro covers all mandatory and majority of basic requirements. It requires comprehensive health and safety (H&amp;S) management, including risk assessments, safety training, and incident documentation (SOC-HS-1). Workers are provided with necessary personal protective equipment (PPE), and their safe usage is enforced</li> </ul>																									

	<p>(SOC-HS-2). Emergency response and first aid procedures are in place, ensuring injured or ill workers receive prompt medical attention (SOC-HS-3). Additionally, the standard mandates the provision of safe drinking water, sanitation facilities, and adequate working hours that do not compromise workers' health (SOC-HS-4, SOC-HS-5).</p> <ul style="list-style-type: none"> <li>Regarding the Wellbeing of the Local Community, the Bonsucro standard requires operators to have secure and registered land tenure rights (SOC-WLC-1), to map stakeholders while developing engagement plans with clear goals (SOC-WLC-2) and requires engagement with them (SOC-WLC-3). Operators are also required to assess the impact of operations on local water security and take appropriate mitigation measures (SOC-WLC-5).</li> </ul>
<p>BMT requirements not covered</p>	<ul style="list-style-type: none"> <li>Despite its strengths, the Bonsucro standard exhibits few gaps. In mandatory requirements this concerns the requirement on the right to return to work on the same terms after maternity leave is not guaranteed (SOC-LR-14 ii.) even though maternity leave rights are generally respected. Additionally, the requirements on identification and management of the impacts of land use changes on local food security (SOC-WLC-4) could be strengthened.</li> <li>Regarding coverage of basic indicators, a few are not covered. In terms of H&amp;S, there is no clear provision for allowing workers to leave situations of imminent danger without penalties (SOC-HS-2 iii). Furthermore, the standard does not mandate the inclusion of firefighting and spill remediation equipment or related training for personnel (SOC-HS-3 vi. &amp; vii.). In addition, in terms of wellbeing of the local community, the scheme does not require support for local development (SOC-WLC-6 i. &amp; ii.). Furthermore, regarding labor rights, while most contract practices are fair, there is no requirement to record changes to employment terms or communicate them to workers (SOC-LR-9 iv).</li> <li>On advanced indicators, there is a lack of requirement on a written disciplinary procedure (SOC-LR-8) and for regular medical examinations for workers exposed to heightened health risks (SOC-HS-1 ix.). Additionally, the scheme does not explicitly require that only legitimate employment agencies and subcontractors are used (SOC-LR-16). The standard also shows limited engagement with local development projects, and it does not include requirements to prioritize hiring local candidates or local suppliers in procurement policies (SOC-WLC-6 iii).</li> </ul>
<p>Recommended key areas for improvement</p>	<ul style="list-style-type: none"> <li>Although Bonsucro's standard broadly covers the social requirements of the BMT, several potential areas of improvement were identified. Notably in the principles related to wellbeing of the local community (SOC-WLC-4), and to a lesser extent the labour and human rights (SOC-LR-14 ii.) and Healthy and safe working conditions (SOC-HS-3 vi. &amp; vii and SOC-HS-2 iii).</li> <li>To begin with, regarding mandatory requirements for wellbeing of the local community, Bonsucro is encouraged to include a requirement on the right for workers that have taken maternity leave to return to their job after leave on the same terms and conditions, and requirements on management of the impacts of land use changes on local food security (SOC-WLC-4).</li> <li>Further, inclusion of some basic requirements are advised such as aiming at supporting local development (SOC-WLC-6 i &amp; ii) which would contribute to more holistic community support when considering wellbeing of local communities. In terms of H&amp;S, e.g., the inclusion of requirements on firefighting and spill remediation equipment or related training for personnel (SOC-HS-3 vi. &amp; vii.). Regarding labor rights, a requirement that can be considered for addition is to ensure the record of changes to employment terms or communication of them to workers (SOC-LR-9 iv).</li> <li>Considering advanced requirements, Bonsucro could further strengthen social measures by addressing gaps related to requirements on disciplinary procedures (SOC-LR-8) and enhancing worker protection by including medical examinations for those in high-risk conditions (SOC-HS-1 ix.). Also, Bonsucro can consider expanding their standard with other advanced social requirements to support local development such as the inclusion of requirement on the prioritization of hiring local candidates and local suppliers in procurement policies (SOC-WLC-6).</li> </ul>

**Economic**

<p>Results</p>	<table border="1"> <thead> <tr> <th rowspan="2">PRINCIPLE</th> <th colspan="3">Fraction of applicable requirements covered</th> </tr> <tr> <th>Mandatory</th> <th>Basic</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td>Economic and financial viability</td> <td>N/A</td> <td>2/3</td> <td>N/A</td> </tr> <tr> <td>Fair business practice</td> <td>2/2</td> <td>0/4</td> <td>1/1</td> </tr> <tr> <td>Economic risk management</td> <td>N/A</td> <td>1/1</td> <td>0/2</td> </tr> </tbody> </table>	PRINCIPLE	Fraction of applicable requirements covered			Mandatory	Basic	Advanced	Economic and financial viability	N/A	2/3	N/A	Fair business practice	2/2	0/4	1/1	Economic risk management	N/A	1/1	0/2
PRINCIPLE	Fraction of applicable requirements covered																			
	Mandatory	Basic	Advanced																	
Economic and financial viability	N/A	2/3	N/A																	
Fair business practice	2/2	0/4	1/1																	
Economic risk management	N/A	1/1	0/2																	
<p>BMT requirements covered</p>	<ul style="list-style-type: none"> <li>Bonsucro covers majority of requirements defined in BMT in the Economic dimension. Regarding the Fair business practices mandatory requirements are covered. Bonsucro explicitly mandates anti-corruption policies and requires measures to prevent corruption, bribery and money laundering (ECO-FBP-1). The scheme also ensures that potential risks related to these practices are systematically identified, which supports ethical business conduct.</li> </ul>																			

	<ul style="list-style-type: none"> <li>In terms of basic principles, Bonsucro requires operators to maintain business records, including production volumes, sales revenues, and profitability (ECO-EF-2). The system is designed to be up-to-date and stores data for a minimum of five years, ensuring transparency and accountability. In terms of Economic risk management, Bonsucro also addresses the requirement to operators to identify and manage financial and economic risks (ECO-RM-1) within their Risk and Impact Assessment.</li> <li>As for advanced requirements, the scheme requires that business relationships are based on written contracts (ECO-FBP-3)</li> </ul>
BMT requirements not covered	<ul style="list-style-type: none"> <li>Gaps are observed in terms of basic requirements regarding economic and financial viability, and fair business practice principles. Considering economic and financial viability, Bonsucro lacks an explicit requirement for operators to maintain a business plan (ECO-EF-1). While the scheme emphasizes maximizing economic sustainability, a formal business plan articulating long-term economic viability is not required. Regarding fair business practices, the scheme also does not explicitly cover the record-keeping of fraudulent, deceptive, or dishonest practices (ECO-FBP-2), and does not require specific staff training related to these practices (ECO-FBP-1-iii).</li> <li>Regarding advanced requirements, although, financial risk assessment is addressed by Bonsucro, explicit requirement to analyse the level of vulnerability to e.g., supply shortages, income generation, financial liquidity (ECO-RM-2) was not found in the standard.</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>Although Bonsucro covers well all the mandatory applicable requirements, several areas could be addressed in terms of basic (fair business practices and economic and financial viability) and advanced requirements (for economic risk management).</li> <li>Regarding basic requirements for economic and financial viability, Bonsucro could enhance its standard by introducing a formal requirement for operators to develop a business plan (ECO-EF-1).</li> <li>To further improve transparency and integrity in business practices, Bonsucro could include a basic fair business practice requirement ensuring maintaining records of any fraudulent, deceptive, or dishonest practices (ECO-FBP-2), including legal cases, disciplinary actions, and contract terminations. Bonsucro could also benefit from explicitly addressing the need for staff training on fair business practices (ECO-FBP-1-iii), along with maintaining records of such training, to ensure that all personnel are aligned with the scheme's ethical standards.</li> <li>Finally, for more advance improvement on the economic dimension Bonsucro could also include a specific consideration in the Risk and Impact Assessment for addressing the financial vulnerability (in accordance with ECO-RM-2).</li> </ul>

### Overall result

Key findings	<p>From the evaluation of Bonsucro, the scheme appears to broadly cover requirements across all four dimensions of the BMT. Principles where Bonsucro performs remarkably well include Environmental management, Climate change management, Protection of biodiversity and Chemical use management under Environment, Circular design &amp; material cycling and Responsible waste management under Circularity, Labour and human rights and Healthy and safe working conditions under Social and Fair business practice under Economic. Some opportunities for improvement were identified for all dimensions. Within the Environmental dimension, It is advised to include specific requirements on Air quality (EN-AQ-1) and Energy efficiency and renewable energy use (EN-EE-1 &amp; 2). Regarding circularity, Bonsucro could benefit from including a criteria on the prohibition of landfilling (CR-WM-2 i) and guidelines for circular resource use (CR-CRU-1). Within the Social dimension, Bonsucro is encouraged to consider the inclusion of requirements for better management of the impacts of land use changes on local food security (SOC-WLC-4) and fostering local development (SOC-WLC-6). Lastly, in the Economic dimension, the introduction of specific requirements regarding the development of a business plan (ECO-EF-1) and maintaining records of any dishonest business practice (ECO-FBP-2) is recommended. It is believed that considering these points will further strengthen Bonsucro and drive sustainable production of its certified sugarcane-based products.</p>
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Date completed: 25 April 2025

Sources:

- Bonsucro website <https://bonsucro.com/> (Last visited: 7 April 2025)
- Bonsucro library of tools and documents <https://bonsucro.com/certification-tools/> (Last visited: 7 April 2025)
  - Bonsucro Production Standard v5.2
  - Implementation Guidance for v5.2
  - Bonsucro Calculator 5.2.3
  - Carbon Accounting in Sugarcane: Bonsucro Calculator User Guide v1.1
  - HCV Guidance – Bonsucro guidance for operators – Supply base mapping V2
  - HCV Guidance – Bonsucro guidance for operators – Developing a biodiversity management plan V2
  - Bonsucro Mass Balance Chain of Custody Standard (including Guidance) v5.1

## 4.7 Better Cotton

*Disclaimer: The information contained in this assessment presents the status of the scheme in April 2025. It is for informational purpose only and cannot be used in replacement of the official Better Cotton standards and procedures.*

General	
Name of scheme	Better Cotton
Scheme owner	The Better Cotton Initiative (BCI) is a non-profit, multistakeholder governance group that promotes better standards in cotton farming and practices across 21 countries.
Website	<a href="https://bettercotton.org/">https://bettercotton.org/</a>
Label provided	
Operational since	2010 (founded in 2005)
Number of active certificates	767 ( <a href="https://bettercotton.org/wp-content/uploads/2025/02/Better-Cotton-Active-License-Holders-2024-25.pdf">https://bettercotton.org/wp-content/uploads/2025/02/Better-Cotton-Active-License-Holders-2024-25.pdf</a> , April 2025)
Standard ownership	Private
General objective	The purpose of BCI is to make global cotton production better for the people who produce it, better for the environment it grows in and better for the sector's future. BCI connects people and organisations from across the cotton sector, from field to store, to promote measurable and continuing improvements for the environment, farming communities and the economies of cotton producing areas.
Scope	
Biomass feedstock	Specific type of feedstock – Cotton
Applicable feedstock categories in BMT	<input type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input type="checkbox"/> Agrarian and forestry residues <input type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	Only the feedstock category of Crop in BMT applies to Better Cotton.
Sector/Product group	BCI is a multistakeholder platform that covers the full cotton supply chain from farmers to Retailers and Brands. However, the BCI farm-level standard covers and certifies only Producers who produce the seed cotton at farm-level.
Applicable value chain actor categories in BMT	<input checked="" type="checkbox"/> Biomass producer <input type="checkbox"/> Industrial processor <input type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	The sustainability requirements of Better Cotton only applies to farm level, therefore only Biomass producer is applicable value chain actor for selection in BMT. Better Cotton works with a wide range of farming contexts, from smallholders to large farms, across diverse geographies. Accordingly, three farm categories are distinguished in their standards namely smallholders, medium farms and large farms. Many of the producers face complex socio-economic and environmental conditions, where access to infrastructure, formal systems, and support services can be limited which can place a substantial burden on farmers. Better Cotton realizes the challenges associated with implementing sustainability requirements in agricultural contexts, particularly at the field level.
Geographic applicability	Global
Applicability of sustainability principles in BMT	Environment <input checked="" type="checkbox"/> Environmental management <input checked="" type="checkbox"/> Climate change management <input checked="" type="checkbox"/> Sustainable land use management <input checked="" type="checkbox"/> Protection of biodiversity <input checked="" type="checkbox"/> Chemical use management <input checked="" type="checkbox"/> Soil management <input checked="" type="checkbox"/> Air quality

	<input checked="" type="checkbox"/> Water quality and conservation <input checked="" type="checkbox"/> Energy use & efficiency Circularity <input checked="" type="checkbox"/> Circular resource use <input checked="" type="checkbox"/> Circular design & material cycling <input checked="" type="checkbox"/> Responsible waste management Social <input checked="" type="checkbox"/> Labour and human rights <input checked="" type="checkbox"/> Healthy and safe working conditions <input checked="" type="checkbox"/> Wellbeing of the local community <input type="checkbox"/> Wellbeing of consumers Economic <input checked="" type="checkbox"/> Economic and financial viability <input checked="" type="checkbox"/> Fair business practice <input checked="" type="checkbox"/> Economic risk management
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Justification/comment on the selected sustainability principles	<p>Better Cotton includes the following 6 principles:</p> <ul style="list-style-type: none"> <li>• Principle 1: Management</li> <li>• Principle 2: Natural Resources</li> <li>• Principle 3: Crop Protection</li> <li>• Principle 4: Fibre Quality</li> <li>• Principle 5: Decent Work</li> <li>• Principle 6: Sustainable Livelihoods</li> </ul> <p>Principles 2, 3 and part of 1 are to the Environmental dimension of the BMT, while Principles 5, 6 and part of 1 correspond to the Social dimension, and the Economic dimension is indirectly addressed by Principle 4.</p> <p>Better Cotton provides the applicability of these sustainability requirements to three farm categories of smallholders, medium farms and large farms. For this assessment, all the requirements defined are considered without differentiation of the applicability to different farm categories.</p> <p>All principles defined in BMT were considered applicable to Better Cotton except the Wellbeing of consumers. The Wellbeing of consumers principle solely contains requirements applicable to final product manufacturers alone. Since this value chain actor is out of scope of the scheme (see justification above), it was decided to consider said principle not applicable to Better Cotton.</p>
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**Assessment of BMT content level requirements**

Reference Documents	The global sustainability requirements that all Producers must meet to be licensed to sell Better Cotton are described in the Better Cotton Principles and Criteria (P&C) v.3.0.
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**Minimum backstop**

Compliance requirement check	The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.
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**Environment**

Results	<b>PRINCIPLE</b>	<b><i>Fraction of applicable requirements covered</i></b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management	1/1	2/2	N/A
	Climate change management	1/1	0/3	0/3
	Sustainable land use management	1/2	1/2	0/3
	Protection of biodiversity	2/2	1/12	0/2
	Chemical use management	4/5	5/8	1/4
	Soil management	3/3	3/5	2/4
	Air quality	0/1	0/1	N/A
	Water quality and conservation	2/3	1/4	0/1
	Energy use & efficiency	N/A	N/A	0/4

BMT requirements covered	<ul style="list-style-type: none"> <li>• In the Environmental dimension, Better Cotton covers all mandatory requirements in the Environmental Management, Climate Change Management, Protection of Biodiversity, and Soil Management principles. Also, in Chemical Use Management and Water Quality and</li> </ul>
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	<p>Conservation principles, the standard performs well. The scheme requires identification and conservation of high conservation values (EN-BD-1 &amp; 2), implementation of an Integrated Pest Management strategy (EN-CM-1) as well as requirements on conserving soil quality (EN-CM-2), and water efficiency and quality (EN-WQ-2 &amp; 3).</p> <ul style="list-style-type: none"> <li>The scheme demonstrates a broad coverage when it comes to basic requirements. Especially in the Environmental Management, Chemical Use Management and Soil Management principles, the requirements are well covered. Besides prohibiting pesticides under 1a and 1b of the WHO classification, Rotterdam Convention, and the Stockholm Convention which are referenced by almost all schemes, Better Cotton also has consideration of the Montreal Protocol and Globally Harmonized System of Classification and Labelling of Chemicals (GHS) (EN-CM-4 ii &amp; iii). Although it should be noted that Better Cotton limits its focus to pesticides, and it is recommended to expand this requirement to all chemicals used in operations. In Soil management for example, Better Cotton requires operators to adopt a range of best practices, e.g., the improvement of soil water holding capacity (EN-SM-2 iv), considerations for topographic conditions to reduce the risk of soil erosion (EN-SM-3). Also, notable in Sustainable land use management principle, Better Cotton requires regenerative agricultural practices to promote biodiversity (EN-LUM-7).</li> <li>The scheme also shows coverage of several advanced requirements. Better Cotton requires a plan for phase out of hazardous pesticides, which again is advised to extend to all chemicals (EN-CM-5). Also, in soil quality nutrient management Better Cotton requires to follow the 4R approach (EN-SM-5 iii).</li> </ul>
<p>BMT requirements not covered</p>	<ul style="list-style-type: none"> <li>On a principle level, it was observed that some principles were not specifically addressed. Air quality is not considered as a risk by Better Cotton and therefore no explicit requirements were included for this principle. Also Energy efficiency and use of renewable energy sources are considered only as options within climate change mitigation measures, and no explicit requirements for them are prescribed.</li> <li>Regarding mandatory requirements, the requirement on agricultural biomass shall not be obtained from land that was peatland (EN-LUM-2) is not covered. Better Cotton does not require record-keeping of the use of fertilisers for operations (EN-CM-2 ii), only for pesticides. On water use there is no requirement on the consumption of water without exceeding natural replenishment rates (EN-WQ-1).</li> <li>As for the basic requirements, in Climate change management principle, regarding quantification of GHG emissions, this is only recommended and not required in Better Cotton (EN-CC-2). For Protection of biodiversity, no requirement exist on baseline assessment (EN-BD-3). In Better Cotton preventing the spread of invasive species is offered as one of the practices that could be done to conserve biodiversity, but the management of invasive species (EN-BD-7) and genetically modified species (EN-BD-8) are not included as requirements. For Water Quality and Conservation, Better Cotton does not require producers to evidence water consumption by water monitoring records, nor is regular water quality testing prescribed (EN-WQ-4).</li> <li>It is seen that most of the advanced requirements defined in the BMT are not yet included in Better Cotton, with the exception of some requirements in the Chemical Use Management and Soil management principles.</li> </ul>
<p>Recommended key areas for improvement</p>	<ul style="list-style-type: none"> <li>First of all, it is recommended to include specific consideration for Air quality (EN-AQ-1) and Energy use &amp; efficiency (EN-EE-1 &amp; 2) in the standard. Another important point is to extend in Chemical Use Management, the applicability of management practices to all chemicals, and not only limit them to pesticides e.g., record keeping (EN-CM-2 i), prohibition and phase out of hazardous substances (EN-CM-4 &amp; 5), and safe handling and disposal (EN-CM-3).</li> <li>Moreover, it is advised to consider including all the mandatory requirements of the BMT which were identified as gaps above. As for basic requirements, there is room for improvement across different principles. For example inclusion of explicit requirements on quantification of GHG emissions (EN-CC-2) and management of invasive species (EN-BD-7) and genetically modified species (EN-BD-8)</li> </ul>

**Circularity**

Results

PRINCIPLE	<i>Fraction of applicable requirements covered</i>		
	Mandatory	Basic	Advanced
Circular resource use	N/A	0/1	N/A
Circular design & material cycling	0/1	0/1	0/1
Responsible waste management	1/1	0/2	N/A

BMT requirements covered	<ul style="list-style-type: none"> <li>Better Cotton meets the mandatory requirement in the Responsible waste management principle, operators are required to store, transport and dispose of waste as well as used containers in a safe and appropriate manner (CR-WM-1). Although the standard does not include the term waste, there is explicit requirement for the disposal of agrochemical containers, also consideration of recycling or return to supplier if possible.</li> </ul>
BMT requirements not covered	<ul style="list-style-type: none"> <li>By filtering out requirements applicable to biomass producers in the Circularity dimension, only few remained to be applicable for Better Cotton in the Circular resource use and Circular design &amp; material cycling principles. The only applicable requirement in circular resource use concerns requirement on not harvesting above sustainable yields (CR-CRU-2), which is not covered in Better Cotton standard.</li> <li>In the Circular Design &amp; Material Cycling principle, the mandatory criteria is requiring reusing and recycling of residual flows (CR-CD-1). The Better Cotton standard refers to crop residue management such as residue integration or composting as one option for practices to minimise soil disturbance, but do not explicitly include it as a requirement. Additionally, no requirements were identified in Better Cotton's standard that require the producers to take measures aimed at increasing material efficiency (CR-CD-2). Although there is a mention of productivity and yield in the standard, there is no explicit requirement on measures to increase them.</li> <li>Finally, in the Responsible Waste Management principle, Better Cotton does not cover the basic requirement on prohibiting landfilling as waste management methods (as required by CR-WM-2 i). Also, preventing of open air burning of residues or slash is offered as one of the climate mitigation measures in Better Cotton but not explicitly prohibited (CR-WM-2 ii).</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>Better is encouraged to consider including an explicit requirement on re-using or recycling of residual flows in a sustainable manner (CR-CD-1). Additionally, Better Cotton could benefit from requirements to increase material efficiency of production processes (CR-CD-2), and to prohibit landfilling and open-air burning as waste management practices (CR-WM-2), to promote resource efficiency and responsible waste management of the producers.</li> </ul>

**Social**

Results	<i><b>Fraction of applicable requirements covered</b></i>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Labour and human rights	9/13	17/23	7/13
	Healthy and safe working conditions	6/7	7/22	1/7
	Wellbeing of the local community	12/14	3/7	0/1
	Wellbeing of consumers	N/A	N/A	N/A
BMT requirements covered	<ul style="list-style-type: none"> <li>Better Cotton demonstrates a good coverage in terms of the mandatory Social requirements. More specifically in the Labour and human rights principle, Better Cotton prohibits child labour (SOC-LR-3), forced labour (SOC-LR-4), as well as discrimination of any kind (SOC-LR-10). In addition, in Healthy and safe working conditions principle Better Cotton requires a dedicated health and safety management plan (SOC-HS-1), provision of protective equipment to all workers (SOC-HS-2) and requires that all workers have access to safe water and adequate sanitation facilities (SOC-HS-4). In the Wellbeing of the local community principle, Better Cotton requires that prior to any activity that may affect the surrounding local communities in terms of their rights, lands, resources, territories, livelihoods or food security, Producers should inform and consult with concerned and affected stakeholders to obtain free, prior and informed consent (which addresses several SOC-WLC mandatory requirements).</li> <li>Concerning the basic requirements, similarly good coverage is seen in the Labour and human rights principle. Some notable examples are that Better Cotton requires a system to be in place to regularly monitor risks and incidents of labour rights violations (SOC-LR-2) and support the capacity building of workers (SOC-LR-13).</li> <li>Better Cotton meets about half of the advanced Social requirements in Labour and human rights principle. For example, Better Cotton ensures that victims of labour violations are able to access support, protection and remedy (SOC-LR-2). Additionally, Better Cotton is one of the very few CSLs that specifically address subcontractors' protection of labour rights (SOC-LR-17).</li> </ul>			
BMT requirements not covered	<ul style="list-style-type: none"> <li>In the introduction section of the standard reference is given to alignment with the United Nations Guiding Principles on Human Rights. However, there is no explicit requirement for producers to adhere to that (which is the mandatory SOC-LR-1 i requirement). Considering mandatory requirements, other gaps observed are related to maternity leave (SOC-LR-14) and decent working hours (SOC-HS-5).</li> </ul>			

	<ul style="list-style-type: none"> <li>Several gaps were identified in relation to the basic requirements. Some examples of requirements not covered for the Labour and Human Rights principle e.g. provision of social security benefits (SOC-LR-15), in the Healthy and Safe Working Conditions principle, e.g., requirements related to restrictions on hours of work for individuals working in challenging conditions (SOC-HS-5 iii), and in the Wellbeing of the local community principle, e.g., requirement on prioritization of local suppliers (SOC-WLC-6). Moreover, in the Wellbeing of the local community no information could be found on the engagement of operators in legal processes if the validity of land or water use is disputed (SOC-WLC-1 iv).</li> <li>Regarding advanced requirement, for instance, there is no requirement on medical examinations for workers exposed to conditions with a heightened health and safety risk (SOC-HS-1 ix). In the Wellbeing of the local community principle, the only advanced requirement, on the prioritisation of hiring local candidates (SOC-WLC-6), is not covered.</li> </ul>
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Recommended key areas for improvement	<ul style="list-style-type: none"> <li>Although Better Cotton’s P&amp;C broadly covers the social requirements of the BMT, several areas of improvement were identified. Better Cotton is recommended to consider inclusion of requirements aimed at provision of social security benefits (e.g., for healthcare, sickness, retirement, invalidity and death, see SOC-LR-15) and right to maternity leave (SOC-LR-14). Furthermore, the scheme’s completeness could benefit from incorporating additional health and safety related requirements e.g., on medical examination (SOC-HS-1 vii, ix &amp; x), first aid and emergency responses (SOC-HS-3) and on working hours and overtime (SOC-HS-5). Regarding Wellbeing of the community it is advised to explicitly address the management of dispute related to land use rights (SOC-WLC-1 iv).</li> </ul>
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**Economic**

Results	<b>Fraction of applicable requirements covered</b>			
	<b>PRINCIPLE</b>	<b>Mandatory</b>	<b>Basic</b>	
	<b>Advanced</b>			
	Economic and financial viability	N/A	0/3	N/A
	Fair business practice	0/2	0/4	0/1
Economic risk management	N/A	0/1	0/2	

BMT requirements covered	<ul style="list-style-type: none"> <li>Better Cotton is not seen to explicitly cover the prescribed Economic requirements of BMT. However, the standard does in fact have consideration of the economic dimension especially with Principle 4 on Fibre quality. The value of cotton lint relates to both the quality of yarn that can be produced from it as well as the efficiency with which the yarn can be produced – which are both heavily influenced by fibre quality. The requirement on protecting and enhancing fibre quality therefore ensures economic sustainability linked to the first economic principle of BMT – Economic and financial viability.</li> </ul>
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BMT requirements not covered	<ul style="list-style-type: none"> <li>Regarding Fair business practice principle, Better Cotton is not seen to prescribe requirement to producers to fight against fraudulent, deceptive and dishonest practices. Although, it should be noted that this is addressed through the CoC Standard Monitoring and Assessment Process. Under the section on Suspension and consequences, it is indicated that Better Cotton retains the right to suspend use of the BCP at any time if Better Cotton or a designated third-party assessor has detected any kind of unethical conduct which may include bribery or fraud.</li> <li>None of the requirements linked to Economic risk Management are met by Better Cotton. So far the standard has consideration for identifying and mitigating any social and/or environmental risks that the farm operation poses. The Economic risk management of the BMT however concerns the basic requirement demanding the management of financial and economic risks (ECO-RM-1) and advanced requirement on minimisation of the organization’s level of vulnerability (ECO-RM-2), which are not covered by Better Cotton.</li> </ul>
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Recommended key areas for improvement	<ul style="list-style-type: none"> <li>It would be recommended to include the considerations that are so far indirectly addressed by Better Cotton with explicit requirements to producers in the Better Cotton Principles &amp; Criteria. This concerns i.e., requirements on maintaining of business records and having a business plan (ECO-EF-1 &amp; 2). Additionally, to include specific requirements for producers to safeguard fairness of business practices through systematic identification and record-keeping of any fraudulent, deceptive or dishonest practices (ECO-FBP-1 &amp; 2). Also to consider adding a specific consideration for financial risk management (deriving inspiration from ECO-RM-1 &amp; 2).</li> </ul>
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**Overall result**

Key findings	From the evaluation of Better Cotton, the scheme appears to broadly cover requirements in the Environmental and Social dimensions. However, more explicit consideration is required in the
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Circularity and Economic dimensions with most of the BMT requirements currently not seen to be addressed. Principles where Better Cotton performs well include Environmental Management, Climate Change Management, Protection of Biodiversity, and Soil Management principles under Environment and Labour and human rights under the Social dimension. Opportunities for improvement within the Environmental dimension were found especially in including more specific consideration for Air quality and Energy use & efficiency principles. Also in the Chemical Use Management principle, it is recommended to extend the applicability of management practices to all chemicals instead of only on pesticides. In the Circularity dimension, Better Cotton would benefit from including explicit requirements on efficient use of residues, increasing material efficiency and prohibition of landfilling and open-air burning as waste management practices. In the Social dimension, it is especially recommended to address missing considerations in the Healthy and safe working conditions principle (under e.g., SOC-HS-1, 3 and 5) and regarding Wellbeing of the community it is advised to explicitly address the management of dispute in relation to land use rights.(SOC-WLC-1 iv). Lastly, in the Economic dimension, the introduction of specific requirements concerning all the principles (financial viability, fair business practice, financial risk management) would provide Better Cotton a better position ensuring coverage of all sustainability dimensions. It is believed that considering these aspects will further strengthen Better Cotton in their quest to drive sustainable production of cotton.

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Date completed: 29 April 2025

Sources:

- Better Cotton website: <https://bettercotton.org/> (Last visited: 4 April 2025)
- Better Cotton resource library: <https://bettercotton.org/document-library/> (Last visited: 4 April 2025)
- Better Cotton Principles and Criteria (P&C) v3.0 <https://bettercotton.org/what-we-do/defining-better-our-standard/> (Last visited: 4 April 2025)

## 4.8 EU Ecolabel (Detergents and cleaning products)

*Disclaimer: The information contained in this assessment presents the status of the ecolabel in April 2025. It is for informational purpose only and cannot be used in replacement of the official EU Ecolabel standards and procedures.*

General	
Name of scheme	EU Ecolabel (Product group: Detergents and cleaning products)
Scheme owner	The functioning of the EU Ecolabel is set out in the official Regulation of the European Parliament and of the Council (No 66/2010). The EU Ecolabel is managed by the European Commission (EC) and the Member States according to the priorities established in a Strategic Working Plan. National Competent Bodies designated by states of the European Economic Area are responsible for implementing the EU Ecolabel at the national level. The European Commission manages the EU Ecolabel at the EU level to ensure that the EU Ecolabel Regulation is implemented correctly. Two main expert groups are established for the management, implementation and growth of the EU Ecolabel: the EU Ecolabelling Board (composed of representatives of the Competent Bodies and representatives of relevant stakeholders) which contributes to the development and revision of EU Ecolabel criteria and the Competent Body Forum which ensures consistency in the implementation of the scheme in the different countries.
Website	<a href="https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home_en">https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home_en</a>
Label provided	
Operational since	1992
Number of active certificates	As of March 2025, 3 248 licences have been awarded for 102 373 products (comprising goods and services) on the EU market. ( <a href="https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/businesses/ecolabel-facts-and-figures_en">https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/businesses/ecolabel-facts-and-figures_en</a> )
Standard ownership	Public
General objective	The EU Ecolabel aims to promote products (i.e., goods and services) with a reduced environmental impact during their entire life cycle and to provide consumers with accurate, non-deceptive, science-based information on the environmental impact of these. It is awarded to sustainably designed products that contribute to the EU goal of climate neutrality by 2050 and to the circular economy.
Scope	
Biomass feedstock	The EU Ecolabel covers a wide range of product groups. Which biomass feedstocks are relevant depends on the specific product group, and can include biomass from forestry, agriculture, as well as residual streams from production and manufacturing processes, such as straw from cereal production, bagasse from sugar cane production, and recycled material like fibres. EU Ecolabel has separate standards for different product groups, featuring the feedstocks relevant to the products covered. For this analysis, it was decided to only focus on the <b>detergents and cleaning products</b> group. For this product group, both forest biomass and crops was found relevant. The label is awarded to the final product, 'Detergents' and not at the level of the raw materials (such as oil palm tree for the specific case of 'Detergents') used in the product. Raw materials for these product group must fulfil the requirements of depending on the type of biomass for example RSPO (palm), FSC and PEFC (wood) certification.
Applicable feedstock categories in BMT	<input checked="" type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input type="checkbox"/> Agrarian and forestry residues <input type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	For the present analysis, it was decided to focus on the product group of <b>detergents and cleaning products (excluding packaging)</b> . Considering which are the most relevant ingredients, in terms of function and/or amount used, and how are these produced, then the feedstocks most relevant to this product group are obtained from the oil palm tree, cultivated on palm oil plantations. As such, both forest and crop are selected as relevant feedstock categories in the BMT.

Sector/Product group	The EU Ecolabel covers a wide range of products that we use in our day-to-day home and work life. The product categories currently covered by the EU Ecolabel are: Cleaning, Clothing and textiles, Coverings, Do it yourself (paints and varnishes), Electronic equipment, Furniture and mattresses, Gardening, Holiday accommodation, Lubricants, Paper, and Personal and animal care products. As indicated above, the present analysis solely focuses on the product group of detergents and cleaning products (excluding packaging).
Applicable value chain actor categories in BMT	<input type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor <input checked="" type="checkbox"/> Final product manufacturer
Justification/comment on the selected value chain actor categories	The EU Ecolabel promotes sustainable sourcing of biological raw materials to protect biodiversity and other environmental aspects (such as sustainable land use management and water quality and conservation). To do this, EU Ecolabel makes use of other certification schemes for some requirements concerning raw materials sourcing and traceability (e.g., RSPO, FSC, and PEFC). As such, EU Ecolabel itself does not directly prescribe such sustainability requirements for biomass producers but indirectly, since it refers to third-party certification schemes aligned with such sustainability principles. Therefore, for the evaluation of EU Ecolabel, the biomass producer category was selected not to be applicable.
Geographic applicability	The EU Ecolabel is applied in all EU member states, as well as in Norway, Liechtenstein and Iceland. EU Ecolabel is recognised worldwide.
Applicability of sustainability principles in BMT	Environment <input type="checkbox"/> Environmental management <input checked="" type="checkbox"/> Climate change management <input type="checkbox"/> Sustainable land use management <input type="checkbox"/> Protection of biodiversity <input checked="" type="checkbox"/> Chemical use management <input type="checkbox"/> Soil management <input checked="" type="checkbox"/> Air quality <input checked="" type="checkbox"/> Water quality and conservation <input checked="" type="checkbox"/> Energy use & efficiency Circularity <input type="checkbox"/> Circular resource use <input checked="" type="checkbox"/> Circular design & material cycling <input checked="" type="checkbox"/> Responsible waste management Social <input type="checkbox"/> Labour and human rights <input type="checkbox"/> Healthy and safe working conditions <input type="checkbox"/> Wellbeing of the local community <input checked="" type="checkbox"/> Wellbeing of consumers Economic <input type="checkbox"/> Economic and financial viability <input type="checkbox"/> Fair business practice <input type="checkbox"/> Economic risk management
Justification/comment on the selected sustainability principles	<p>The EU Ecolabel is, in accordance with the ISO 14024, a Type 1 Ecolabel. This means the ecolabel covers the whole life cycle and all relevant environmental aspects of the certified products and set requirements where environmental hotspots are identified. There must be a potential in the market to reduce the problem and the EU Ecolabel must be able to verify a positive environmental change.</p> <p>In the Environmental dimension, Environmental management principle, as well as several individual management plan related requirements (i.e., EN-CC-4, EN-CM-5, EN-EE-1) are excluded from the assessment, since Type I Ecolabels intentionally do not focus on requiring policies and management plans aimed at improvement over time, but rather set absolute product requirements that operators have to meet. Additionally, Sustainable land use management, Protection of biodiversity, and Soil management principles were considered out of scope. EU Ecolabel does not include requirements on these in its own standard, but rather addresses them through third-party certification (in the case of detergents, through e.g., RSPO).</p> <p>For the present assessment, social (except for Wellbeing of consumers) and economic aspects are considered out of the scope or not applicable. For some specific product groups like textiles, social criteria are included because these are identified as a hotspot for this category group. However, this is not the case for the category groups on detergent and cleaning products analysed in this study.</p> <p>In addition, the Circular resource use principle and several other circularity requirements were out of scope as these are not applicable to detergents which are consumables.</p>

**Assessment of BMT content level requirements**

**Reference Documents**  
 The EU Ecolabel is a component of the EC’s Sustainable Consumption, Production and Industry Action Plan. In terms of sustainability principles, the EU Ecolabel addresses these by aligning with relevant EU legislation/strategies and by setting provisions on aspects identified as having an environmental improvement potential. Consequently, the full picture in terms of sustainability principles is not set solely at EU Ecolabel level and for a thorough understanding, the legal criteria of each specific product group should be consulted alongside the technical reports supporting/explaining the rationale behind them. The background information, on environmental, quality, and chain of custody criteria for the **product group of detergents and cleaning products** specifically can be found in the following documents: EU Ecolabel for detergents and cleaning products V1.4 (2022), JRC Report Revision of six EU Ecolabel - Criteria for detergents and cleaning products (2016).

**Minimum backstop**

**Compliance requirement check**  
 The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.

**Environment**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Environmental Management	N/A	N/A	N/A
	Climate change management	1/1	0/3	N/A
	Sustainable Land Use Management	N/A	N/A	N/A
	Protection of Biodiversity	N/A	N/A	N/A
	Chemical Use Management	2/2	4/4	1/1
	Soil management	N/A	N/A	N/A
	Air quality	1/1	0/1	N/A
	Water Quality and Conservation	1/3	1/4	0/1
	Energy Use & Efficiency	N/A	N/A	0/1

**BMT requirements covered**

- In the Environmental dimension, EU Ecolabel for the specific case of detergents covers both of the mandatory requirements in the Climate change management and Air quality principles. With regard to the former principle, EU Ecolabel requires operators to perform activities that contribute to the reduction of GHG emissions (EN-CC-1), while regarding the latter, measures must be taken to limit the emission of VOC compounds from the product into the air (EN-AQ-1 i). In addition, the label covers the applicable mandatory requirements in the Chemical use management principle, by requiring operators to have a procedure in place for the storage, handling and disposal of substances based on the manufacturer’s safety instructions (EN-CM-3 i) and by regulating the use of hazardous substances according to international guidelines and principles (EN-CM-4 i). EU Ecolabel also limits the use of phosphorus compounds in laundry detergents to reduce their contribution to eutrophication and the cost of their removal during wastewater treatment, as such preventing or minimising (non-)point source pollution (EN-WQ-3 i).
- As for basic requirements, EU Ecolabel covers all in the Chemical use management principle. The label, for instance, prohibits and/or limits the use of substances hazardous to the ozone layer (EN-CM-4 ii), as well as aligns with European legislation concerning the prohibition of hazardous substances (EN-CM-4 iii-iv). Furthermore, in the Water quality and conservation principle, the EU Ecolabel follows the mandatory EU legislation, including the Water Framework Directive and the Waste Framework Directive, which forbid the discharge of untreated sewage, sludge and slurry of human origin (EN-WQ-3 ii).

**BMT requirements not covered**

- Regarding applicable mandatory requirements, two were found to be not directly covered by the EU Ecolabel in the Water quality and conservation principle. These include a requirement on the consumption and withdrawal of water by the operator not exceeding the natural replenishment rate (EN-WQ-1), and the implementation of measures to use water efficiently (EN-WQ-2).
- In terms of basic requirements, EU Ecolabel does not consider the monitoring of water consumption at processing and product manufacturing (EN-WQ-4 i). Also, within the Climate change management principle, the label does not require operators to report on the certified product’s lifecycle GHG emissions (EN-CC-2).

	<ul style="list-style-type: none"> <li>In terms of advanced requirements, EU Ecolabel only does not address the topic of evidencing water quality through monitoring records (EN-WQ-4 iii). In addition, there is no requirement included for a certain percentage of the operator's total direct energy to be based on renewable energy sources (EN-EE-2) in the Energy use &amp; efficiency principle</li> </ul>
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>For mandatory requirements, for the specific case of detergents, the label is encouraged to consider including BMT's considerations on water use efficiency under Water quality and conservation principle (EN-WQ-1 &amp; 2).</li> <li>In terms of basic requirements, the EU Ecolabel could consider including requirements demanding the monitoring of water consumption at processing and product manufacturing (EN-WQ-4 i) and reporting on the product's lifecycle GHG emissions (EN-CC-2).</li> <li>For advanced criteria, the label is suggested to consider addressing the topic of water quality monitoring (EN-WQ-4 iii). Furthermore, it is recommended to consider incorporating a requirement on a certain percentage of the operator's total energy use to be obtained from renewable sources (EN-CC-2)</li> </ul>

**Circularity**

Results	<table border="1"> <thead> <tr> <th rowspan="2">PRINCIPLE</th> <th colspan="3">Fraction of applicable requirements covered</th> </tr> <tr> <th>Mandatory</th> <th>Basic</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td>Circular resource use</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Circular design &amp; material cycling</td> <td>0/1</td> <td>0/1</td> <td>0/1</td> </tr> <tr> <td>Responsible waste management</td> <td>1/1</td> <td>0/2</td> <td>N/A</td> </tr> </tbody> </table>	PRINCIPLE	Fraction of applicable requirements covered			Mandatory	Basic	Advanced	Circular resource use	N/A	N/A	N/A	Circular design & material cycling	0/1	0/1	0/1	Responsible waste management	1/1	0/2	N/A
PRINCIPLE	Fraction of applicable requirements covered																			
	Mandatory	Basic	Advanced																	
Circular resource use	N/A	N/A	N/A																	
Circular design & material cycling	0/1	0/1	0/1																	
Responsible waste management	1/1	0/2	N/A																	
BMT requirements covered	<ul style="list-style-type: none"> <li>In the Circularity dimension, EU Ecolabel covers the single mandatory requirement in the Responsible waste management principle, demanding for the safe and appropriate storage, transport and disposal of waste (CR-WM-1).</li> </ul>																			
BMT requirements not covered	<ul style="list-style-type: none"> <li>It is important to highlight that, given that detergents – the product group focused on in the present assessment – are consumables, all BMT requirements of the Circular resource use principle (CR-CRU-1 up to 4) and majority of the requirements of the Circular design &amp; material cycling principle (CR-CD-3 &amp; 4) are not applicable, also because packaging and biomass procurement was not considered in scope of the assessment.</li> <li>The only mandatory requirement of the Circular design &amp; material cycling principle, demanding operators to reuse and recycle residual flows and waste as extensively as possible (CR-CD-1 i), and corresponding advanced requirement, only allowing the use of these flows and wastes for energy generation in certain circumstances (CR-CD-1 ii) are not covered by EU Ecolabel.</li> <li>With regard to the basic requirements, a requirement on increasing material efficiency (CR-CD-2) while producing the detergents/ cleaning products was not found. Also, in the Responsible waste management principle, no explicit requirement was found on the prohibition of landfilling and open-air burning practices of waste and residues generated during the production of detergents (CR-WM-2). It should however be noted that, EU Ecolabel follows the European Waste Framework which is mandatory for products in the European market. In this sense, the EU Ecolabel does not set requirements that are redundant with mandatory legislation (any enforcement with regards to landfilling need to come from the framework).</li> </ul>																			
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>EU Ecolabel is recommended to consider incorporating the BMT's mandatory requirement on the reuse and recycling of residual flows and waste (CR-CD-1 i).</li> <li>Furthermore, EU Ecolabel is encouraged to consider including a requirement on increasing material efficiency (CR-CD-2).</li> </ul>																			

**Social**

Results	<table border="1"> <thead> <tr> <th rowspan="2">PRINCIPLE</th> <th colspan="3">Fraction of applicable requirements covered</th> </tr> <tr> <th>Mandatory</th> <th>Basic</th> <th>Advanced</th> </tr> </thead> <tbody> <tr> <td>Labour and human rights</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Healthy and safe working conditions</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Wellbeing of the local community</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>Wellbeing of consumers</td> <td>N/A</td> <td>1/1</td> <td>1/1</td> </tr> </tbody> </table>	PRINCIPLE	Fraction of applicable requirements covered			Mandatory	Basic	Advanced	Labour and human rights	N/A	N/A	N/A	Healthy and safe working conditions	N/A	N/A	N/A	Wellbeing of the local community	N/A	N/A	N/A	Wellbeing of consumers	N/A	1/1	1/1
PRINCIPLE	Fraction of applicable requirements covered																							
	Mandatory	Basic	Advanced																					
Labour and human rights	N/A	N/A	N/A																					
Healthy and safe working conditions	N/A	N/A	N/A																					
Wellbeing of the local community	N/A	N/A	N/A																					
Wellbeing of consumers	N/A	1/1	1/1																					

BMT requirements covered	Even though the Social dimension is largely out of scope of Type 1 Ecolabels, EU Ecolabel includes initiatives that promote the wellbeing of consumers and as such meets the requirement prescribing the operator to ensure users can provide feedback about the operations (SOC-WCO-1) and that the chemicals used in the product ensure consumer safety (SOC-WCO-2).
BMT requirements not covered	No gaps were identified.
Recommended key areas for improvement	No recommendations for improvement were identified.

**Economic**

Results	<b>PRINCIPLE</b>	<b>Fraction of applicable requirements covered</b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Economic and financial viability	N/A	N/A	N/A
	Fair business practice	N/A	N/A	N/A
	Economic risk management	N/A	N/A	N/A

BMT requirements covered	The Economic dimension is out of the scope of Type 1 Ecolabels.
BMT requirements not covered	Not applicable.
Recommended key areas for improvement	Not applicable.

**Overall result**

Key findings	<p>It is important to highlight that this assessment was done considering only the product group <b>‘detergents and cleaning products’</b> and <b>excluding the packaging of the product</b>. Therefore, the results could be different if the assessment were to be carried out for other EU Ecolabel product groups. EU Ecolabel determines the criteria of the different product groups based on a hotspot analysis and focuses only on the areas where a high impact could be achieved. This is a very different approach as compared to the BMT, which includes a comprehensive set of parameters clustered around different areas (Environment, Circularity, Social, Economic).</p> <p>The EU Ecolabel standard on detergents and cleaning products covers requirements mainly in two dimensions of the BMT; the Environment and the Circularity dimension. For Chemical use management, EU Ecolabel covers all mandatory, basic and advanced requirements. All of the mandatory requirements included in the Climate change management, Air quality principles under Environmental and in the Responsible waste management principle under Circularity dimension are also covered. In the Social dimension, EU Ecolabel also includes all of the requirements within the Wellbeing of consumers principle.</p> <p>Potential opportunities for improvement were identified in the Environmental dimension, particularly in terms of Climate change management and Water quality and conservation principles. EU Ecolabel is encouraged to consider adding requirements on water use efficiency (EN-WQ-1,2) and monitoring water quality (EN-WQ-4 iii), and reporting on life GHG emissions (EN-CC-2), drawing inspiration from BMT requirements.</p> <p>For the Circularity dimension, EU Ecolabel is recommended to consider the incorporation of a requirement on the reuse and recycling of residual flows (CR-CD-1 i-ii) from the production process of detergents. These changes could support in enhancing the Ecolabel’s impact in the transition to more sustainable bio-based detergents and cleaning products.</p> <p>It must be noted that two criteria of the Circular design &amp; material cycling principle (CR-CD-3 &amp; 4) were considered out of scope, as these do not pertain to consumable products such as detergents, and because packaging is excluded from this assessment. The latter is relevant since packaging is part of the EU Ecolabel criteria for detergents, which contains relevant circularity provisions (i.e., design for recycling). Additionally, the Circular resource use requirement (CR-CRU-2) is considered out of scope because the requirement is linked to biomass production and procurement. The criteria considered out of the scope do not adversely affect the results.</p>
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Date completed: 30 April 2025

Sources:

- EU Ecolabel facts and figures [https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/businesses/ecolabel-facts-and-figures\\_en#:~:text=As%20of%20September%202024%2C%20services\)%20on%20the%20EU%20market.](https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/businesses/ecolabel-facts-and-figures_en#:~:text=As%20of%20September%202024%2C%20services)%20on%20the%20EU%20market.) (Last visited: April 2025)

### D3.2 Evaluation of existing schemes and labels, 30/04/2025

- EU Ecolabel criteria for detergents and cleaning products -User Manual Version 1.5.  
[https://environment.ec.europa.eu/document/download/1c7502bd-d75e-46b0-a117aeebf094d347\\_en?filename=DETERGENTS\\_User\\_Manual\\_V1.4\\_October\\_%202022\\_4.pdf](https://environment.ec.europa.eu/document/download/1c7502bd-d75e-46b0-a117aeebf094d347_en?filename=DETERGENTS_User_Manual_V1.4_October_%202022_4.pdf) (Last visited: April 2025)
- EU Ecolabel decisions establishing the criteria: [https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/product-groups-and-criteria/cleaning\\_en](https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel/product-groups-and-criteria/cleaning_en)
- JRC Technical Report Revision of six EU Ecolabel Criteria for detergents and cleaning products (2016)  
[https://ec.europa.eu/environment/ecolabel/documents/JRC104463\\_detergents\\_without%20watermark.pdf](https://ec.europa.eu/environment/ecolabel/documents/JRC104463_detergents_without%20watermark.pdf) (Last visited: April 2025)
- RSPO Principles and Criteria For the Production of Sustainable Palm Oil 2018 [rspo-principles-criteria-for-production-of-sustainable-palm-oil-2018-revised-01-february-2020-with-updated-supply-chain-requirements-for-mills.pdf](https://ec.europa.eu/environment/ecolabel/documents/rspo-principles-criteria-for-production-of-sustainable-palm-oil-2018-revised-01-february-2020-with-updated-supply-chain-requirements-for-mills.pdf) (Last visited: April 2025)
- General Information EU Ecolabel [https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home\\_en](https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel-home_en) (Last visited: April 2025)
- Carbon footprinting and the European Ecolabel [https://ec.europa.eu/environment/archives/ecolabel/carbon\\_en.htm](https://ec.europa.eu/environment/archives/ecolabel/carbon_en.htm) (Last visited: April 2025)

## 4.9 Nordic Swan Ecolabel (Building and construction materials)

*Disclaimer: The information contained in this assessment presents the status of the ecolabel in April 2025. It is for informational purpose only and cannot be used in replacement of the official Nordic Swan Ecolabel standards and procedures.*

General	
Name of scheme	Nordic Swan Ecolabel (Product groups regarding building and construction materials)
Scheme owner	The Nordic Ecolabelling board is the owner of the Nordic Swan Ecolabel scheme. It is the overall decision-making body on all areas concerning criteria and environmental position for the Nordic Swan Ecolabel. The Nordic Swan Ecolabel was established by the Nordic Council of Ministers, which is the official body for inter-governmental cooperation in the Nordic Region involving the governments of Denmark, Finland, Iceland, Norway, and Sweden. The Nordic Ecolabelling Board consists of five national local organisations appointed by the respective governments.
Website	<a href="https://www.nordic-swan-ecolabel.org/">https://www.nordic-swan-ecolabel.org/</a>
Label provided	
Operational since	1989
Number of active certificates	The Nordic Swan Ecolabel has 56 different product groups and more than 200 different product types. Around 25,000 different products are sold with the Nordic Swan Ecolabel.
Standard ownership	Public
General objective	Nordic Ecolabelling works to reduce the environmental impact from production and consumption of goods and services. The Nordic Swan Ecolabel is an effective tool to help companies that want to go ahead with sustainable solutions – and thereby enable consumers and professional buyers to choose the environmentally best goods and services.
Scope	
Biomass feedstock	The Nordic Swan Ecolabel covers a wide range of product groups. For this analysis, the product groups related to <b>building and construction materials</b> of Nordic Swan Ecolabel were considered i.e., Panels and mouldings for interior use (010), Exterior panels (114), Floor coverings (029), New Buildings (089) and Durable/resistant wood for outdoor use (086). In these product groups, for the biobased building and construction materials a range of biomass feedstocks is covered by the Nordic Swan Ecolabel, such as wood or other lignocellulose-based materials. The label is provided on the products (biobased construction products), not on the raw materials. Woody raw materials for these product categories must fulfil the requirements of FSC or PEFC certification and chain of custody schemes. Nordic Swan Ecolabel also prohibits the use of tree species under the Convention on International Trade in Endangered Species of wild fauna and flora (CITES) and restricts the use of endangered tree species, or key tree species from Intact Forest Landscape (IFL) areas.
Applicable feedstock categories in BMT	<input checked="" type="checkbox"/> Forest <input checked="" type="checkbox"/> Crop <input checked="" type="checkbox"/> Agrarian and forestry residues <input checked="" type="checkbox"/> Wastes and residues
Justification/comment on the selected feedstock categories	Nordic Swan Ecolabel is applicable to a range of (bio-based) products, which are subdivided into group categories. Group categories related to bio-based construction products include feedstock from forestry, crop feedstocks, agrarian and forestry residues, and waste (i.e., post-consumer recycled raw material). Therefore, all feedstock categories of the BMT are applicable to this standard.
Sector/Product group	The ecolabel covers a wide spectrum of products and services. 56 different product areas are covered, including: textiles, personal care products (cosmetics, sanitary products etc.), construction/building materials (panels, flooring, wood for outdoor use), chemicals (cleaning products, chemical building products, paint and varnishes), wood products, paper, plastic products etc. For this assessment, the following product groups related to building and construction materials of Nordic Swan were considered: Panels and mouldings for interior use (010), Exterior panels (114), Floor coverings (029), New Buildings (089), and Durable/resistant wood for outdoor use (086).
Applicable value chain actor categories in BMT	<input type="checkbox"/> Biomass producer <input checked="" type="checkbox"/> Industrial processor <input checked="" type="checkbox"/> Final product manufacturer

<p>Justification/comment on the selected value chain actor categories</p>	<p>The Nordic Swan Ecolabel promotes the sustainable sourcing of biological raw materials to protect biodiversity and other environmental aspects (such as sustainable land use management, soil and water quality). To do this, Nordic Swan Ecolabel make use of other certification schemes for some requirements concerning raw materials sourcing and traceability (e.g., RSPO, FSC, PEFC, Bonsucro). As such, Nordic Swan Ecolabel itself does not directly prescribe such sustainability requirements for biomass producers but indirectly, since it refers to third-party certification schemes aligned with such sustainability principles. Therefore, for the evaluation of Nordic Swan Ecolabel, the biomass producer category was selected not to be applicable.</p>
<p>Geographic applicability</p>	<p>The Nordic Swan Ecolabel was set up as an official label for the countries in the Region (Norway, Sweden, Denmark, Finland, and Iceland). However, this ecolabel has an international recognition and preference and when a product is licensed, the ecolabel's validity is not subject to geographical limitations, and production site audits are performed worldwide.</p>
<p>Applicability of sustainability principles in BMT</p>	<p>Environment</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Environmental management</li> <li><input checked="" type="checkbox"/> Climate change management</li> <li><input type="checkbox"/> Sustainable land use management</li> <li><input type="checkbox"/> Protection of biodiversity</li> <li><input checked="" type="checkbox"/> Chemical use management</li> <li><input type="checkbox"/> Soil management</li> <li><input checked="" type="checkbox"/> Air quality</li> <li><input checked="" type="checkbox"/> Water quality and conservation</li> <li><input checked="" type="checkbox"/> Energy use &amp; efficiency</li> </ul> <p>Circularity</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Circular resource use</li> <li><input checked="" type="checkbox"/> Circular design &amp; material cycling</li> <li><input checked="" type="checkbox"/> Responsible waste management</li> </ul> <p>Social</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Labour and human rights</li> <li><input type="checkbox"/> Healthy and safe working conditions</li> <li><input type="checkbox"/> Wellbeing of the local community</li> <li><input checked="" type="checkbox"/> Wellbeing of consumers</li> </ul> <p>Economic</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Economic and financial viability</li> <li><input type="checkbox"/> Fair business practice</li> <li><input type="checkbox"/> Economic risk management</li> </ul>
<p>Justification/comment on the selected sustainability principles</p>	<p>The Nordic Swan Ecolabel is in accordance with the ISO 14024 a Type 1 Ecolabel. This means the ecolabel covers the whole life cycle and all relevant environmental aspects of the certified products and set requirements where environmental hotspots are identified. There must be a potential in the market to reduce the problem and the Nordic Swan Ecolabel must be able to verify a positive environmental change.</p> <p>In the Environmental dimension, Environmental management principle, as well as several individual management plan related requirements (i.e., EN-CC-4, EN-CM-5, EN-EE-1) are excluded from the assessment, since Type I Ecolabels intentionally do not focus on requiring policies and management plans aimed at improvement over time, but rather set absolute requirements that operators have to meet. Additionally, Sustainable land use management, Protection of biodiversity, and Soil management principles, were considered out of scope. Nordic Swan Ecolabel does not include requirements on these in its own standard, but rather addresses them through third-party certification (in the case of building and construction materials, through e.g., FSC).</p> <p>For the present assessment, social (except for Wellbeing of consumers) and economic aspects are considered out of the scope or not applicable. For some specific product groups like textiles, social criteria are included because these are identified as a hotspot for this category group. However, this is not the case for the category groups on building materials analysed in this study.</p> <p>In addition, the majority of the requirements in Circular resource use principle were considered out of scope as these concern development and implementation of plans.</p>
<p><b>Assessment of BMT content level requirements</b></p>	
<p>Reference Documents</p>	<p>There is not a single document summarizing and describing the sustainability principles, criteria and requirements for all products or product categories of Nordic Swan Ecolabel. The background information, environmental and quality criteria, chain of custody and references of each of the 56 different product groups can be found in individual documents per product area.</p> <p>For this analysis, the following documents of product groups linked to <b>building and construction materials</b> documents were reviewed: Panels and mouldings for interior use (010) v7.2, Exterior panels (114) v2.0, Floor coverings (029) v7.1, New Buildings (089) v4.5, and Durable/resistant wood for outdoor use (086) v3.0.</p>

Minimum backstop				
Compliance requirement check	The scheme requires adherence to all applicable regional, national and international laws, regulations and agreements.			
Environment				
Results	<b>PRINCIPLE</b>	<b>Fraction of applicable requirements covered</b>		
		<b>Mandatory</b>	<b>Basic</b>	<b>Advanced</b>
	Environmental management	N/A	N/A	N/A
	Climate change management	1/1	1/3	N/A
	Sustainable land use management	N/A	N/A	N/A
	Protection of biodiversity	N/A	N/A	N/A
	Chemical use management	2/2	4/4	1/1
	Soil management	N/A	N/A	N/A
	Air quality	1/1	1/1	N/A
	Water quality and conservation	1/3	2/4	1/1
	Energy use & efficiency	N/A	N/A	0/1
	BMT requirements covered	<ul style="list-style-type: none"> <li>In the Environmental dimension, Nordic Swan Ecolabel covers all applicable mandatory requirements in the Climate change management, Chemical use management and Air quality principles. For example, the label requires operators to demonstrate the adoption of GHG emission reduction activities (EN-CC-1) as well as implement measures to limit the emission of harmful substances into the air (EN-AQ-1 i). In addition, Nordic Swan Ecolabel requires the safe handling and disposal of substances (EN-CM-3 i).</li> <li>Regarding basic requirements, Nordic Swan Ecolabel covers all in the Chemical use management and Air quality principles. For example, the label requires operators to have a procedure in place on handling cases of hazardous substances spills (EN-CM-3 i), as well as prohibits the use of hazardous substances addressed by international conventions and regulations (EN-CM-4 ii-iv). In terms of Water quality and conservation, Nordic Swan Ecolabel shows a high coverage of the criteria related to water pollution and emissions to water (EN-WQ-3 ii &amp; 4 ii).</li> <li>In terms of advanced requirements, Nordic Swan Ecolabel again covers all the Chemical use management and Water quality and conservation principles. In the former principle, the label requires the prohibition of substances meeting the criteria laid down in Article 57 of the EU REACH regulation (EN-CM-4 v). In the latter principle, the label requires operators to evidence water quality by means of monitoring records (EN-WQ-4 iii).</li> </ul>		
BMT requirements not covered	<ul style="list-style-type: none"> <li>Analysing the mandatory requirements, two were found to be not covered in the Water quality and conservation principle. These include a requirement on the consumption and withdrawal of water by the operator not exceeding the natural replenishment rate (EN-WQ-1), and the implementation of measures to use water efficiently (EN-WQ-2).</li> <li>In terms of basic requirements, within the Climate change management principle the label does not require operators to report on the certified product's lifecycle GHG emissions (EN-CC-2 i &amp; iii) due to significant uncertainties linked to data quality and boundary definitions. Instead, environmental and climate hotspots are identified in the product's lifecycle to set requirements and to reduce impact in those areas.</li> <li>Considering the advanced requirements, there is no requirement included for certain percentage of the operator's total direct energy to be based on renewable energy sources (EN-EE-2) in the Energy use &amp; efficiency principle, although the label sets limits for energy consumptions per kg of panels for biobased and non-biobased materials and has initiatives signaling that the increase of renewable energy may become mandatory in the next revision of the criteria.</li> </ul>			
Recommended key areas for improvement	<ul style="list-style-type: none"> <li>For mandatory requirements, for the specific case of building and construction materials, the label is encouraged to consider including BMT's considerations on water use efficiency under Water quality and conservation principle (EN-WQ-1 &amp; 2).</li> <li>In terms of basic requirements, Nordic Swan Ecolabel could promote calculations of lifecycle GHG emissions of products (EN-CC-2). Currently, this calculation is already required in some specific cases (e.g., panels and moulding for interior use for cement products, and for New Buildings larger than 5000 m<sup>2</sup> a calculation in agreement with the requirements in the EU taxonomy), but it is not a common practice for all construction products, especially for biobased products.</li> </ul>			

- Looking at the advanced criteria, the incorporation of a requirement on the share of renewable energy sources (EN-EE-2) could contribute to showing the label's commitment to promoting sustainable production.

**Circularity**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Circular resource use	N/A	1/1	N/A
	Circular design & material cycling	1/1	1/1	6/6
	Responsible waste management	1/1	0/2	N/A

**BMT requirements covered**

- In the Circularity dimension, Nordic Swan Ecolabel covers all the mandatory criteria within the Circular design & materials recycling and Responsible waste management principles. For example, the label requires the reuse or recycling of residual flows as extensively as possible (CR-CD-1). Besides that, the label requires operators to develop a waste management plan to ensure safe and proper storage, transportation and disposal of waste (CR-WM-1).
- When it comes to basic requirements, all applicable requirements in the Circular design & material cycling and Circular resource use principles are covered. By means of illustration, Nordic Swan Ecolabel requires measures to be taken to increase the material efficiency of production (CR-CD-2).

**BMT requirements not covered**

- Regarding basic requirements, within the Responsible waste management principle, no explicit requirement was found on the prohibition of landfilling and open-air burning of waste and residues generated during the production of building and construction products (CR-WM-2). It should however be noted that, these aspects are indirectly addressed by Nordic Swan Ecolabel with the prohibition of open-air burning being a legal requirement, and landfilling is prevented by not allowing the use of materials that have the waste class "landfill" in any Nordic country.

**Recommended key areas for improvement**

- No recommendation for improvement were identified considering the waste management practices being indirectly addressed by existing legal requirements and consideration on not using materials that can be sent to landfill. Nordic Swan Ecolabel can however include explicit consideration prohibiting landfilling of the residues and wastes arising from the processes in production.

**Social**

Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Labour and human rights	N/A	N/A	N/A
	Healthy and safe working conditions	N/A	N/A	N/A
	Wellbeing of the local community	N/A	N/A	N/A
	Wellbeing of consumers	N/A	1/1	1/1

**BMT requirements covered**

Even though the social dimension is out of scope of Type 1 Ecolabels, it is seen that Nordic Swan Ecolabel includes initiatives that promote the wellbeing of consumers and as such meets the requirement prescribing the operator to ensure users can provide feedback about the operations (SOC-WCO-1) and that the chemicals used in the product ensure consumer safety (SOC-WCO-2).

**BMT requirements not covered**

No gaps were identified.

**Recommended key areas for improvement**

No recommendations for improvement were identified.

Economic				
Results	PRINCIPLE	Fraction of applicable requirements covered		
		Mandatory	Basic	Advanced
	Economic and financial viability	N/A	N/A	N/A
	Fair business practice	N/A	N/A	N/A
Economic risk management	N/A	N/A	N/A	
BMT requirements covered	The Economic dimension is out of scope of Type 1 Ecolabels.			
BMT requirements not covered	Not Applicable.			
Recommended key areas for improvement	Not Applicable.			
Overall result				
Key findings	<p>It is important to highlight that this assessment was done considering only the product groups related to <b>building and construction materials</b> of Nordic Swan Ecolabel. Therefore, the results could be different if the assessment were to be carried out for other Nordic Swan Ecolabel product groups. Nordic Swan Ecolabel determines the criteria of the different product groups based on a hotspot analysis and focuses only on the areas where a high impact could be achieved. This is a very different approach as compared to the BMT, which includes a comprehensive set of parameters clustered around different areas (Environment, Circularity, Social, Economic).</p> <p>The Nordic Swan Ecolabel standards on building and construction materials covers requirements mainly in two dimensions of the BMT; the Environment and the Circularity dimension. For Chemical use management and Air quality principles under Environment and Circular design &amp; material cycling principle under Circularity dimension, Nordic Swan covers all applicable requirements. Additionally, all of the mandatory requirements included in the Climate change management under Environment and in the Responsible waste management principle under Circularity dimension are also covered. In the Social dimension, Nordic Swan Ecolabel also includes all of the requirements within the Wellbeing of consumers principle.</p> <p>Potential opportunities for improvement within the Environmental dimension were found in the Water quality and conservation principle. Nordic Swan Ecolabel is encouraged to derive inspiration from especially the mandatory BMT requirements on water use efficiency (EN-WQ-1 and 2). It must be noted that Nordic Swan Ecolabel did not identify Water quality and conservation as an environmental hotspot for the construction materials product group. Water-related requirements in the standards for 089 New buildings target water consumption during the use phase of the building rather than the processing and production of materials.</p>			

Date completed: 30 April 2025

Sources:

- General Information of the Nordic Swan Ecolabel <https://www.nordic-swan-ecolabel.org/official-nordic-ecolabel/> (Last visited: March 2025)
- Sustainable sourcing of biological raw materials <https://www.nordic-swan-ecolabel.org/nordic-ecolabelling/environmental-aspects/sustainable-raw-materials-biodiversity/sustainable-sourcing-of-biological-raw-materials/> (Last visited: March 2025)
- Group 114 version 2.0 Exterior panels and cladding [https://www.nordic-swan-ecolabel.org/4adab6/contentassets/432a01492e0d4656894881210ba27abb/criteria-document-for-product-group-114\\_114\\_exterior-panels-and-cladding-114\\_english.pdf](https://www.nordic-swan-ecolabel.org/4adab6/contentassets/432a01492e0d4656894881210ba27abb/criteria-document-for-product-group-114_114_exterior-panels-and-cladding-114_english.pdf) (Last visited: March 2025)
- Group 029 version 7.1 Floor covering and flooring underlays [https://www.nordic-swan-ecolabel.org/49163b/contentassets/d4b7cd06007e4c70a4baa13abf209923/criteria-document\\_029\\_floor-coverings-029\\_english.pdf](https://www.nordic-swan-ecolabel.org/49163b/contentassets/d4b7cd06007e4c70a4baa13abf209923/criteria-document_029_floor-coverings-029_english.pdf) (Last visited: March 2025)
- Group 010 version 7.2 Panels and mouldings for interior use [https://www.nordic-swan-ecolabel.org/492081/contentassets/64b1fc9d12164e48aa2bf1a62322d07d/criteria-document\\_010\\_panels-and-mouldings-for-interior-use-010\\_english2.pdf](https://www.nordic-swan-ecolabel.org/492081/contentassets/64b1fc9d12164e48aa2bf1a62322d07d/criteria-document_010_panels-and-mouldings-for-interior-use-010_english2.pdf) (Last visited: March 2025)
- Group 086 version 3.0 Biological durable wood for outdoor use [https://www.nordic-swan-ecolabel.org/495c85/contentassets/b3417d4b788f40a9af76ed622549e9a3/criteria-document\\_086\\_durableresistant-wood-for-outdoor-use-086\\_english2.pdf](https://www.nordic-swan-ecolabel.org/495c85/contentassets/b3417d4b788f40a9af76ed622549e9a3/criteria-document_086_durableresistant-wood-for-outdoor-use-086_english2.pdf) (Last visited: March 2025)
- Group 089 version 4.5 New Buildings [https://www.nordic-swan-ecolabel.org/492ae8/contentassets/b9969713cbc445949d910bce4d4f3c1c/criteria-document\\_089\\_new-buildings-089\\_english.pdf](https://www.nordic-swan-ecolabel.org/492ae8/contentassets/b9969713cbc445949d910bce4d4f3c1c/criteria-document_089_new-buildings-089_english.pdf) (Last visited: March 2025)

### D3.2 Evaluation of existing schemes and labels, 30/04/2025

- Environmental Aspects <https://www.nordic-swan-ecolabel.org/nordic-ecolabelling/environmental-aspects/> (Last visited: March 2025)
- Product groups <https://www.nordic-ecolabel.org/product-groups/> (Last visited: March 2025)
- Nordic ecolabel Forestry requirements [https://www.nordic-swan-ecolabel.org/pulp-paper-declaration-portal/what-can-be-declared/forestry-requirements/forestry\\_requirements\\_2020/#:~:text=A%20minimum%20of%2070%25%20by,or%20originate%20from%20recycled%20material](https://www.nordic-swan-ecolabel.org/pulp-paper-declaration-portal/what-can-be-declared/forestry-requirements/forestry_requirements_2020/#:~:text=A%20minimum%20of%2070%25%20by,or%20originate%20from%20recycled%20material) (Last visited: March 2025)

## 5. Key Findings and Conclusions

The sustainability CSLs have proven to be major tools for global production and trade to become more sustainable, and for the private sector to demonstrate sustainability. The premise is that sustainability standards that are credible and effective can bring about positive social, environmental and economic impacts. This is only possible if ambitious requirements are established in all areas of sustainability. This is sought after by the content level of the BMT. The content level BMT was intentionally designed to have a comprehensive coverage of all relevant sustainability aspects with equal consideration for the three pillars of sustainability: environment, social and economic. Additionally, in order to ensure the contribution of biobased products to a circular economy, circularity was included as a fourth dimension with its own principles and criteria.

The comprehensive list of requirements was categorized into three levels: mandatory, basic and advanced. Mandatory requirements are those requirements expected to be covered currently by existing schemes. They are linked to legislation, sustainability protocols and conventions in place. Basic requirements provide more prescriptive details on the sustainability criteria. Advanced level requirements are aspirational requirements. For all the content level BMT requirements, the applicable feedstock(s) and value chains actor(s) were defined. This enables assessments that avoid addressing topics that are out of scope or not applicable to the assessed CSL.

In this deliverable, the results from the assessment of the content level BMT on selected CSLs are presented. Individual recommendations are devised for each CSL based on BMT requirements identified as not being covered. The aim is to encourage CSL owners to improve the coverage and ambition level of their systems to stay competitive by comprehensively addressing key sustainability criteria and requirements. This can drive a voluntary process of improvement and can, if organised through a central organ, lead to harmonization of standards of existing schemes. Regulatory support and recognition of the BMT by the EC would be instrumental for achieving this harmonization.

It was decided not to calculate a single overall score for the coverage of sustainability topics of a CSL, but instead provide results per principle, distinguishing also in terms of requirement level: mandatory, basic and advanced. This was considered to provide more transparency in providing feedback and avoid making comparisons which would not be fair, nor beneficial, since the schemes were seen to have quite varying scopes with different set of requirements being applicable.

The pre-assessment step (scope defining exercise) carried out proved useful in determining the scope of the assessed CSLs. The variety of scopes of the tested CSLs was useful for providing feedback to the BMT, in order to ensure the applicability of the tool to the different scopes that CSLs could have.

It is important to note that the assessments carried out in this deliverable provide a static picture of the coverage of each CSL against the content level BMT requirements at the time of the assessment, and no further assessments are foreseen to reflect on potential updates of the standards.

Although initially perceived as a barrier by some CSLs, the deliberate choice of using a binary system for the assessment (with Yes/No as response options and no "Partially met" option) was seen to provide consistency/objectivity to the evaluations and to contribute to consistent results to be achieved if the testing is done by different testers. However, when applying the BMT to different CSLs with multiple testers, it is recommended to conduct a cross-check to facilitate further alignment as was done in this study.

A major challenge faced was to design and assess with a single tool both sustainability certification schemes and ecolabels which have significant differences in terms of the scope as well as the definition and phrasing of the requirements in their standards. Additionally, it should be noted that ecolabels cover

a wide spectrum of products and services. In this assessment a selection was made for each assessed ecolabel and the results are specific to these product groups selected. Moreover, it was found that ecolabels are focused on the sustainability of the final product and mostly rely on or refer to third-party sustainability certification schemes (such as RSPO, FSC, Bonsucro) to ensure the sustainable sourcing of the biomass. Additionally, social (except for the Wellbeing of consumers principle) and economic aspects were considered out of the scope to ecolabels, at least for the product groups assessed. In the approach adopted by the ecolabels, requirements are defined not to be comprehensive in coverage but to address the environmental (and social) impacts identified as hotspots for the life cycle of the product group under consideration, and where there is a viable potential for change by operators. Additionally, several individual management plan related requirements are excluded from the assessment, since Type I Ecolabels intentionally do not focus on requiring policies and management plans aimed at improvement over time, but rather set absolute product requirements that operators have to meet. This has therefore led to a picture for the assessment of ecolabels with the content level BMT where many requirements were either not covered or were not applicable. Ecolabels were seen to address more specifically the Climate change management, Air quality and Chemical use management principles under Environment dimension and the Responsible waste management principle under Circularity dimension. Opportunities for improvement are seen in terms of incorporation of water consumption and quality monitoring and reporting on GHG emissions.

Looking at the sustainability certification schemes, in general, there was a relatively high coverage of the requirements in the social and environmental dimensions, and less of a focus on the economic and circularity dimensions. Opportunities for improvement identified were seen to be very much scheme-specific, also depending on the scope of that scheme. Some examples include, for the Environmental dimension, the inclusion of more explicit requirements on Air quality, Energy use & efficiency, and Climate change management. A striking observation is that the criteria on ILUC and GHG emission reporting are typically not covered by schemes, or these are covered as voluntary add-ons offered by schemes, rather than being integrated as specific requirements in the core standard documents. Regarding the Social dimension, the CSLs were suggested to consider including explicit requirements on fair contract practices, the provision of social security benefits, maternity leave and medical treatment in emergencies. Concerning the Circularity dimension, it is recommended to consider integrating requirements beyond waste management, such as on the reuse or recycling of residual flows and resource efficiency. Furthermore, for biobased product CSLs (ISCC PLUS, RSB Advanced Products and Better Biomass), it is encouraged to also consider including requirements related to the design for high quality recyclability and product-life extension strategies. Finally, related to the Economic dimension, the schemes could potentially benefit from including more specific requirements on business plans, fighting against fraudulent, deceptive and dishonest practices and economic risk management.

In conclusion, the analysis showed that each CSL has potential room for improvement on varying degrees. It must be highlighted that many CSLs are developed as a result of extensive multi-stakeholder interactive processes, representing the interests and perspectives of e.g., the industry, academia and non-governmental organizations. Through these processes, consensus is sought on the inclusion and modification of requirements such that the CSL finds broad support in the market. While scheme owners are recommended to consider addressing the points identified and reported under opportunities for improvement, upholding a balanced multi-stakeholder engagement system is acknowledged as instrumental, in order to safeguard sustainability and their position as a comprehensive and widely recognized scheme in the market.

## Annex: List of BMT Content Level Requirements

### Environmental dimension of the BMT

Principle	Criterion code	Criterion	Requirements	Requirement level	Applicable feedstock(s)	Applicable value chain actor(s)
Environmental management	EN-EM-1	The scheme requires an environmental management plan for relevant environmental topics.	i. A written environmental management plan is in place that contains measures for biodiversity, soil, water, and air pollution and/or other relevant environmental topics.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The environmental management plan contains targets for biodiversity, soil, water, and air pollution improvements and/or for other relevant environmental topics.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The environmental management plan is updated and progress is monitored regularly.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
Climate change management	EN-CC-1	The scheme requires activities that reduce GHG emissions.	i. Adoption of GHG emissions reduction activities is demonstrated.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
Climate change management	EN-CC-2	The scheme requires quantification and disclosure of the certified product's lifecycle greenhouse gas emissions (GHG).	i. The certified product's lifecycle GHG emissions are reported.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The methodology(ies) required by the scheme aligns with existing standards and/or legislation.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The methodologies and emission factors used to calculate GHG emissions are disclosed.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
Climate change management	EN-CC-3	The scheme requires quantification and disclosure of the	i. Scope 1, 2 and 3 GHG emissions are reported.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer

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		operator's total GHG emissions.	ii. The methodology(ies) required by the scheme aligns with existing standards and/or legislation.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			iii. The methodologies and emission factors used to calculate GHG emissions are disclosed.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
Climate change management	EN-CC-4	The scheme requires a roadmap for reduction of the certified products' lifecycle GHG emissions.	i. A roadmap for lifecycle GHG emission reductions for a product is created with the end goal of achieving carbon neutrality by 2050 the latest.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Interim targets for at least every 10 years are set.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The interim targets are updated at least every 5 years.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
Climate change management	EN-CC-5	The scheme requires a roadmap for reduction of the total GHG emissions of the operator.	i. A roadmap for total GHG emission reduction is set with the end goal of achieving carbon neutrality at latest by 2050.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			ii. Targets are set separately for scopes 1, 2 and 3.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			iii. Interim targets for at least every 10 years are set.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			iv. The interim targets are updated at least every 5 years.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
Sustainable Land Use Management	EN-LUM-1	The scheme requires that no raw material is obtained from high-carbon stock areas.	i. Biobased products produced from agricultural biomass shall not be made from raw material obtained from land with high-carbon stock, namely land that had one of the following statuses in January 2008 and no longer has that status: (a) wetlands; (b) continuously forested areas; (c) land spanning more than one hectare with trees higher than five metres and a canopy cover of between 10 % and 30 %	Mandatory	Crop	Biomass producer;Industrial processor;Final product manufacturer

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Sustainable Land Use Management	EN-LUM-2	The scheme prohibits the degradation and/or drainage of peatlands and cultivation expansion into them.	i. Raw material (here: agricultural biomass) shall not be obtained from land that was peatland in January 2008, unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.	Mandatory	Crop	Biomass producer;Industrial processor;Final product manufacturer
Sustainable Land Use Management	EN-LUM-3	The scheme requires a monitoring and enforcement system to ensure the sustainability of harvesting operations.	i. The monitoring and enforcement system ensures: (1) the legality of harvesting operations; (2) forest regeneration of harvested areas; (3) that areas designated by international or national law or by the relevant competent authority for nature protection purposes are protected; (4) that harvesting is carried out considering maintenance of soil quality and biodiversity with the aim of minimising negative impacts; and (5) that harvesting maintains or improves the long-term production capacity of the forest	Mandatory	Forest	Biomass producer
Sustainable Land Use Management	EN-LUM-4	The scheme requires that procured forest biomass originates from an area with climate plans guided by international agreements.	i. The biobased materials are produced from forest biomass originating in a country or regional economic integration organisation that (a) is a Party to the Paris Agreement; (b) has submitted a nationally determined contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), covering emissions and removals from agriculture, forestry and land use which ensures that changes in carbon stock associated with biomass harvest are accounted towards the country's commitment to reduce or limit greenhouse gas emissions as specified in the NDC; OR (c) has national or sub-national laws in place, in accordance with Article 5 of the Paris Agreement, applicable in the area of harvest, to conserve and enhance carbon stocks and sinks, and providing evidence that reported LULUCF-sector emissions do not exceed removals.	Mandatory	Forest	Industrial processor;Final product manufacturer

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<b>Sustainable Land Use Management</b>	EN-LUM-5	The scheme requires the development, implementation and monitoring of a forest management plan.	i. A written forest management plan, which includes a forest resource assessment, is developed.	Mandatory	Forest	Biomass producer
			ii. The plan must contain targets for sustainable forest management and a strategy to maintain and improve forest health.	Basic	Forest	Biomass producer
			ii. The plan is updated and progress is monitored regularly	Basic	Forest	Biomass producer
<b>Sustainable Land Use Management</b>	EN-LUM-6	The scheme requires that land use management is conducted using a relevant and credible methodology in forested areas.	i. Land use management is conducted using a relevant and credible methodology in forested areas.	Basic	Forest	Biomass producer
<b>Sustainable Land Use Management</b>	EN-LUM-7	The scheme requires agro-ecological/regenerative practices to preserve and promote biodiversity.	i. Appropriate regenerative/agro-ecological practices are in place with the goal of preserving and promoting biodiversity.	Basic	Crop;Forest	Biomass producer
<b>Sustainable Land Use Management</b>	EN-LUM-8	The scheme requires that forest regeneration is maintained or strengthened over the long term.	i. Regeneration methods are used to regenerate vegetation cover to pre-harvesting or more natural conditions.	Basic	Forest	Biomass producer
			ii. The level of harvesting is sustained at the level or below the permanent natural replenishing rate of the forest	Basic	Forest	Biomass producer
<b>Sustainable Land Use Management</b>	EN-LUM-9	The scheme requires that raw material is not obtained or procured from deforested areas.	i. Raw material is obtained or procured from land that has not been subject to deforestation, and the wood has been harvested from the forest without inducing forest degradation.	Basic	Forest;Crop	Biomass producer;Industrial processor;Final product manufacturer
<b>Sustainable Land Use Management</b>	EN-LUM-10	The scheme requires that forest biomass produced with regenerative forest practices is prioritised in procurement processes and policies.	i. Forest biomass produced through regenerative forestry practices is prioritised in procurement processes and practices over biomass produced through non-regenerative practices.	Advanced	Forest	Industrial processor;Final product manufacturer

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<b>Sustainable Land Use Management</b>	EN-LUM-11	The scheme requires a management plan and strategies to reach low ILUC risk level.	i. An ILUC risk assessment is conducted and documented.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. A strategy to reach a low ILUC risk level is established.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Sustainable Land Use Management</b>	EN-LUM-12	The scheme requires that there is low indirect land use change (ILUC) risk.	i. Low ILUC risk is demonstrated by meeting <u>at least one</u> of the following: a) Additional biomass is produced through an increase in yield without additional land conversion and any yield increase techniques applied do not create negative environmental trade-offs concerning for example soil quality or protection of biodiversity. b) The biomass used for biobased products production is a waste or a residue with low ILUC risk level. c) The biomass used for biobased product production is derived from unused, abandoned or severely degraded land.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Protection of Biodiversity</b>	EN-BD-1	The scheme requires identification and documentation of the high biodiversity value(s) in or near potential or existing operations.	i. The high biodiversity value(s) in or near potential or existing operations are identified and documented.	Mandatory	Agrarian and forestry residues;Crop;Forest	Biomass producer;Industrial processor;Final product manufacturer
<b>Protection of Biodiversity</b>	EN-BD-2	The scheme prohibits cultivation of land with high biodiversity value.	i. Biobased products produced from agricultural biomass shall not be made from raw material obtained from land with a high biodiversity value, in or after January 2008	Mandatory	Crop	Biomass producer;Industrial processor;Final product manufacturer
<b>Protection of Biodiversity</b>	EN-BD-3	The scheme requires a baseline assessment of biodiversity.	i. A baseline biodiversity assessment is conducted at site level.	Basic	Crop;Forest	Biomass producer
			ii. The baseline biodiversity assessment is reconducted regularly to monitor progress.	Basic	Crop;Forest	Biomass producer
<b>Protection of Biodiversity</b>	EN-BD-4	The scheme prohibits the use of fire as a land-clearing method	i. Burning is prohibited as a method of land preparation and post-harvest disposal of residues, except in exceptional cases.	Basic	Agrarian and forestry residues;Crop;Forest	Biomass producer

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<b>Protection of Biodiversity</b>	EN-BD-5	The scheme requires that field margins, buffer zones, boundaries and waterways are maintained and restored.	i. Field margins, boundaries and watercourses are maintained and restored to support the conservation of native birds and animals in a way that takes into consideration local conditions.	Basic	Agrarian and forestry residues;Crop;Forest	Biomass producer
<b>Protection of Biodiversity</b>	EN-BD-6	The scheme requires measures to minimise habitat fragmentation.	i. Measures to minimise habitat fragmentation are taken.	Basic	Crop;Forest	Biomass producer
<b>Protection of Biodiversity</b>	EN-BD-7	The scheme requires careful management of the introduction, cultivation and use of invasive species in case of introduction	i. Practices are put in place to avoid invasive genetic variations (contaminants) in biomass planting material.	Basic	Crop;Forest	Biomass producer
			ii. An invasive species management plan is established.	Basic	Crop;Forest	Biomass producer
			iii. If using invasive species, due diligence research is to be conducted about the invasiveness of the species.	Basic	Crop;Forest	Biomass producer
			iv. If a species is considered as highly invasive, the species shall not be used.	Basic	Crop;Forest	Biomass producer
			v. In cases where invasive species are used, the traceability and proper labeling of these varieties must be ensured.	Basic	Crop;Forest	Biomass producer
<b>Protection of Biodiversity</b>	EN-BD-8	The scheme requires that genetically modified species are utilised with care and consideration.	i. If using genetically modified species, due diligence research is to be conducted about the invasiveness of the species.	Basic	Crop;Forest	Biomass producer
			ii. In cases where genetically modified varieties are used, the traceability and proper labeling of these varieties must be ensured.	Basic	Crop;Forest	Biomass producer
<b>Protection of Biodiversity</b>	EN-BD-9	The scheme requires measures for enhancing local wild genetic diversity.	i Measures are taken for the enhancement of local wild genetic diversity.	Advanced	Crop;Forest	Biomass producer
<b>Protection of Biodiversity</b>	EN-BD-10	The scheme requires maintenance and/or rehabilitation of pollinator habitats	i. Measures are taken to maintain and/or rehabilitate pollinator habitats on the premises.	Advanced	Crop;Forest	Biomass producer
<b>Chemical Use Management</b>	EN-CM-1	The scheme requires the development,	i. A written Integrated Pest Management Plan (IPM) is in place	Mandatory	Crop;Forest	Biomass producer

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		implementation and monitoring of an Integrated Pest Management plan	ii. The plan must contain targets for reducing the use of plant protection products.	Basic	Crop;Forest	Biomass producer
			iii. The plan is updated and progress is monitored regularly	Basic	Crop;Forest	Biomass producer
<b>Chemical Use Management</b>	EN-CM-2	The scheme requires proper application of plant protection products and fertiliser as well as appropriate equipment maintenance.	i. Records are kept of the application of plant protection products and fertilisers, showing type of chemical, application time, and amount.	Mandatory	Crop;Forest	Biomass producer
			ii. Only plant protection products that are officially registered and permitted in the production country for the respective crops are used.	Mandatory	Crop;Forest	Biomass producer
			iii. Best practices are respected considering, for example, (a) the timing and concentration of application; (b) maximum authorised rates of application; (c) restricted entry intervals; and (d) pre-harvest intervals.	Basic	Crop;Forest	Biomass producer
			iv. Maintenance of chemical application equipment is conducted regularly.	Basic	Crop;Forest	Biomass producer
<b>Chemical Use Management</b>	EN-CM-3	The scheme requires safe handling and disposal of substances.	i. Storage, handling, use and disposal of substances is conducted based on the manufacturer's safety instructions.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Procedures are in place on how to handle cases of hazardous substance spills.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Chemical Use Management</b>	EN-CM-4	The scheme prohibits and/or regulates the use of hazardous substances.	i. The use of substances addressed by WHO, Rotterdam Convention, or the Stockholm Convention are prohibited.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The use of substances addressed by the Montreal Protocol is prohibited.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The use of substances classified as carcinogenic (category 1a or 1b), mutagenic (category 1a or 1b) or reprotoxic (category 1a or 1b) by the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) is prohibited.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			iv. The use of substances meeting the criteria laid down in Article 57 of the EU REACH regulation, notably substances meeting the criteria for classification as carcinogenic, mutagenic or toxic for reproduction, is prohibited for some or all applications.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. The use of substances identified as "substances of very high concern" under the EU REACH regulation is prohibited.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Chemical Use Management</b>	EN-CM-5	The scheme requires a plan to phase out hazardous substances.	i. A plan to phase out hazardous substances as comprehensively as possible is set out.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Industrial processor;Final product manufacturer
			ii. The plan must contain targets to reduce the use of hazardous substances.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Industrial processor;Final product manufacturer
			iii. The plan is updated and progress is monitored regularly.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Industrial processor;Final product manufacturer
<b>Soil management</b>	EN-SM-1	The scheme requires that the use of agrarian and forestry residues for biobased products shall not be at the expense of soil quality and soil carbon.	i. The use of agrarian and forestry residual products does not occur at the expense of the soil nutrient balance, soil organic matter balance or important traditional uses.	Mandatory	Agrarian and forestry residues	Biomass producer
<b>Soil management</b>	EN-SM-2	The scheme requires implementation of practices to maintain or enhance soil quality	i. The health and/or quality of soil organic matter is maintained or enhanced through rehabilitation measures.	Mandatory	Crop	Biomass producer
			ii. Soil structure is maintained or enhanced including the prevention and mitigation of compaction and degradation.	Mandatory	Crop	Biomass producer
			iii. Samples of soil organic matter are taken and stored on-site in appropriate conditions (e.g. method, temperature, duration).	Basic	Crop	Biomass producer
			iv. Actions are taken to improve soil water holding capacity with the aim of preventing water loss through runoff or evaporation.	Basic	Crop	Biomass producer
			v. Measures are taken to maintain and/or improve soil biodiversity.	Advanced	Crop;Forest	Biomass producer

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<b>Soil management</b>	EN-SM-3	The scheme requires that measures are taken and cultivation techniques are used to reduce the risk of soil erosion.	i. Topographic risks are accounted for in soil management and activities are avoided in and around areas where these risks have been identified.	Basic	Crop;Forest	Biomass producer
<b>Soil management</b>	EN-SM-4	The scheme requires the use of minimal intervention techniques to minimise damages to soil.	i. Minimal intervention techniques are used when building and utilising infrastructure.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer
			ii. Soil scarification is only used in exceptional cases if required to achieve sufficient regeneration.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer
			iii. The lightest appropriate soil scarification method is used to minimise impacts on soil and lichen.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer
<b>Soil management</b>	EN-SM-5	The scheme requires the development, implementation and monitoring of a nutrient management plan.	i. A written nutrient management plan is established.	Basic	Crop	Biomass producer
			ii. The plan is updated and progress is monitored regularly	Basic	Crop	Biomass producer
			iii. The nutrient management plan is based on the 4Rs principle.	Advanced	Crop	Biomass producer
<b>Air quality</b>	EN-AQ-1	The scheme requires measures to limit the emission of harmful substances into the air.	i. Measures are taken to limit the emission of harmful substances into the air.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Air quality is measured regularly in the area of operation and analysed.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Water Quality and Conservation</b>	EN-WQ-1	The scheme requires that water use does not exceed the natural replenishment rate.	i. The water consumption and withdrawals of the operator do not exceed the natural replenishment rate.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Water Quality and Conservation</b>	EN-WQ-2	The scheme requires measures for optimising water use efficiency.	i. Water is used efficiently and good water management measures are implemented.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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<b>Water Quality and Conservation</b>	EN-WQ-3	The scheme requires measures for water pollution prevention or minimisation.	i. Measures are in place to prevent or minimise point and nonpoint source pollution.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The use and discharge of untreated sewage, sludge and slurry of human origin is prohibited.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Buffer zones are installed along natural watercourses	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Water Quality and Conservation</b>	EN-WQ-4	The scheme requires records of water use and quality.	i. Water consumption is evidenced by water monitoring records.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The quality of water is tested regularly.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Water quality is evidenced by water quality monitoring records.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Energy Use &amp; Efficiency</b>	EN-EE-1	The scheme requires the development, implementation and monitoring of an energy management plan, including energy use reduction and increasing the share of renewable energy.	i. A written energy management plan is in place that considers energy use reduction and increasing the share of renewable energy.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The energy management plan contains targets for energy use reduction and for increasing the share of renewable energy.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The energy management plan is updated and progress is monitored regularly.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Energy Use &amp; Efficiency</b>	EN-EE-2	The scheme requires that a certain percentage of the	i. A certain percentage of the operator's total direct energy derives from renewable energy sources.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial

		operator's total direct energy use derives from renewable energy sources.				processor;Final product manufacturer
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## Circularity dimension of the BMT

Principle	Criterion code	Criterion	Requirements	Requirement level	Applicable feedstock(s)	Applicable value chain actor(s)
<b>Circular resource use</b>	CR-CRU-1	The scheme requires the 9R framework and/or the cascading use principle to be the main guiding principle of resource use.	i. Measures are taken to apply the 9R framework and/or the cascading use principle.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Industrial processor;Final product manufacturer
<b>Circular resource use</b>	CR-CRU-2	The scheme requires that virgin biomass is harvested at levels that ensure regeneration.	i. Virgin biomass is not harvested at levels above sustainable yields (biomass producer) nor is virgin biomass harvested at levels above sustainable yields procured (industrial processor, final product manufacturer).	Basic	Crop;Forest	Biomass producer;Industrial processor;Final product manufacturer
<b>Circular resource use</b>	CR-CRU-3	The scheme requires a plan for the improvement of the share of circular inflows in production	i. A written plan for the increase of circular inflows is in place.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			ii. The plan contains targets for increasing the circular inflows.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			iii. The plan is updated and progress monitored regularly.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
<b>Circular resource use</b>	CR-CRU-4	The scheme requires the development and implementation of a circular procurement plan	i. A procurement plan is in place with goals and targets to increase the procurement of circular material inflows.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
<b>Circular design &amp; material cycling</b>	CR-CD-1	The scheme requires re-using or recycling of residual flows in a sustainable manner.	i. Residual flows and waste are reused or recycled as extensively as possible.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final

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						product manufacturer
			ii. Residual flows and waste are used for energy generation only in certain circumstances.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Circular design &amp; material cycling</b>	CR-CD-2	The scheme requires measures to increase material efficiency in production processes	i. Measures are taken to reduce the material intensity of production per unit.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Circular design &amp; material cycling</b>	CR-CD-3	The scheme requires products to be designed for repairability and reusability, when possible.	i. Product is designed for repairability and reusability.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			ii. Repairability and reusability practices are applied.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			iii. Product-life extension is facilitated via concrete initiatives.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
<b>Circular design &amp; material cycling</b>	CR-CD-4	The scheme requires products to be designed for high-quality recyclability	i. Best practices and guidelines on design for high-quality recycling are established and followed.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
			ii. The most desirable next use of the used product is indicated (following the 9R framework).	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
<b>Responsible waste management</b>	CR-WM-1	The scheme requires safe and proper storage, transportation and disposal of waste.	i. Waste and used containers are stored, transported, and disposed of safely and appropriately.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Responsible waste management</b>	CR-WM-2	The scheme does not allow the use of landfills or open-air burning for waste disposal or for	i. Landfilling as a waste management practice is prohibited.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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		burning residues and by-products.	ii. Open-air burning as a waste management practice is prohibited.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
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## Social dimension of the BMT

Principle	Criterion code	Criterion	Requirements	Requirement level	Applicable feedstock(s)	Applicable value chain actor(s)
Labour and human rights	SOC-LR-1	The scheme requires adherence and commitment to the Universal Declaration of Human Rights and the ILO Core Conventions.	i. The operator is committed to and adheres to the Universal Declaration of Human Rights	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The operator is committed to and adheres to the ILO Core Conventions.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
Labour and human rights	SOC-LR-2	The scheme requires effective management of ILO Core Conventions in its own operations	i. A policy ensuring ILO labour rights is publicly available, implemented and communicated to all workers.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Employee trainings regarding ILO labour rights are organised.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Risk assessment on ILO labour rights in own operations are conducted regularly	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. Mitigation measures based on risk assessment for ILO labour rights are identified for own operations	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. The progress and effectiveness of the mitigation measures for own operations are monitored at a regular interval.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			vi. Confirmed cases of ILO labour rights violations in the operator's own operations are remediated, protecting the anonymity of the victims and ensuring documentation of processes.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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<b>Labour and human rights</b>	SOC-LR-3	The scheme requires the operator to ensure that there is no child labour in its own operations. (C138, C182)	i. Child labour is prohibited.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The applicable minimum age thresholds of employees according ILO C138 are not violated.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. There are restrictions on the hours of work for workers below 18 years.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. Work does not negatively impact the schooling of workers under the legal school-leaving age. (C182)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-4	The scheme requires the operator to ensure that there is no forced labour in its own operations (C105, C029)	i. Forced or compulsory labor is prohibited.(C105, C029)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-5	The scheme requires that the rights of all workers to freedom of association and collective bargaining are respected, free from interference. (C087, C098)	i. All workers have the right to form, join or not join a labour union without fear of reprisal, intimidation or harassment. (C087)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. All workers have the right to perform collective bargaining. (C098)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-6	The scheme requires fair remuneration of workers.	i. The worker is paid at least a living wage or the wage negotiated through a collective bargaining agreement (whichever is higher).	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Work is compensated based on an objective appraisal of performance (C100)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Workers are provided with proof of payment for each paycheck.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. Measures are taken to limit the reduction of workers' pay and/or benefits.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. A plan is established for raising wages to living wage or beyond from members of the direct upstream supply chain	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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<b>Labour and human rights</b>	SOC-LR-7	The scheme requires an effective grievance mechanism to be in place that enables stakeholders to raise concerns related to the operator's activities.	i. A grievance mechanism is in place that is easily accessible to all parties who may be adversely impacted by the operations.(R130)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. All workers are aware of the rules and practices governing the grievance mechanism.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Grievances are solved in an effective, timely and appropriate manner, ensuring anonymity and confidentiality of complainants when requested, without risk of reprisal or intimidation.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. A conflict resolution mechanism is in place that includes the option of access to independent legal and technical advice, the ability for complainants to choose individuals or groups to support them or act as observers, or the option of a third-party mediator. (R130)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. The worker who submitted a grievance is kept informed of the steps being taken under the procedure and the action taken on their grievance. (R130)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-8	The scheme requires a written disciplinary procedure.	i. A written disciplinary procedure is available.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Records are kept of disciplinary procedures taken.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-9	The scheme requires fair contract practices.	i. All employees have a written or oral contract.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			i. The operator keeps records of the contracts.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. All workers understand the content of their employment contracts prior to the start of employment and have ongoing access to their contract.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			iv. Changes to the contract/employment terms document are recorded, communicated and accepted by the worker.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-10	The scheme requires the operator to ensure there is no discrimination of any kind, whether in employment or opportunity (C111, C100)	i. Work of equal value is remunerated with equal pay without discrimination. (C111, C100)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Workers have equal access to trainings, benefits and opportunities	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-11	The scheme requires the promotion of gender equality.	i. There are practices in place to ensure the safety of female workers as well as equality with male workers.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Recruitment operations to encourage women's presence across the operations are promoted.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. An objective is set for female representation in management and skilled positions.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-12	The scheme requires that workers do not suffer from abuse, harassment, or violence. (C190)	i. Practices are in place to prevent all forms of abuse, harassment and violence. (C190)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-13	The scheme requires that employees are provided with opportunities to increase their skills and knowledge.	i. Vocational and/or occupational skills training is provided.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Training time is treated as work time and compensated accordingly.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-14	The scheme requires that permanent workers are entitled to paid maternity leave, rights and benefits. (C183)	i. Right to maternity leave is ensured as defined by ILO C183.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Workers that have taken maternity leave can return to their job after leave on the same terms and conditions. (C183)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-15	The scheme requires provision of social security benefits.	i. Workers are provided with information on health topics, medical leave policies, and the availability of primary/maternal/reproductive health services of the operator.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			ii. Workers' access to social security benefits such as healthcare, sickness benefits, retirement benefits, invalidity and death benefits is ensured.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-16	The scheme requires that only legitimate employment agencies and subcontractors are used.	i. All contracted employment agencies and labour subcontractors used by the operator are legally authorised to operate and registered with labour authorities.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Labour and human rights</b>	SOC-LR-17	The scheme requires effective management of labour rights for subcontractors and subsidiaries as defined by the Universal Declaration of Human Rights and the ILO Core Conventions.	i. The scheme requires that subsidiaries and subcontractors are contractually required to uphold labor rights.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The subsidiary/subcontractors have a policy on labour rights	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Risk assessment on labour rights in supply chain is conducted regularly	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. Mitigation measures based on risk assessment for labour rights are identified for supply chain	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. The progress and effectiveness of the mitigation measures for the supply chain are monitored at a regular interval.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Healthy and safe working conditions</b>	SOC-HS-1	The scheme requires effective management and documentation of H&S hazards and risks	i. A written H&S management plan is required.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii: The plan contains targets for improving the H&S of employees.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The plan is updated and progress is monitored regularly.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. H&S assessments are carried out regularly for all types of work on the premises.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. The results of the H&S assessment are communicated to employees in an accessible manner.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			vi. Employees are provided with the sufficient training and information to perform their job in a healthy and safe manner.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			vii. Cases of ill health that employees have developed due to their work tasks are recorded.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			viii. All incidents, non-fatal injuries and occupational fatalities are recorded.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ix. Workers who are exposed to conditions with a heightened H&S risk receive a medical examination at regular intervals.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			x. Workers have access to the results of their medical examination.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			xi. The number of lost-time accidents is lower than the sector average or a similar appropriate benchmark.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			xii. An occupational H&S committee or individual, elected by the workforce, participates in or carries out regular occupational H&S reviews, and its findings and decisions are considered in the updating and implementation of the H&S risk assessment.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Healthy and safe working conditions</b>	SOC-HS-2	The scheme requires that health and safety are ensured on the work premises	i. All workers are provided with required personal protective equipment (PPE) in good condition. (C155)	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. A system is implemented to enforce the effective use of PPE.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Workers may leave situations of imminent danger without being penalized. (C184;C155)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. Machines have clear instructions on safe usage that can be understood by the workers, and dangerous parts are guarded or encased. (C184)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			v. Machinery and other equipment are stored safely when not in use. (C184)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Healthy and safe working conditions</b>	SOC- HS-3	The scheme requires that effective first aid and emergency responses are ensured on the work floor. (C155)	i. Injured or ill persons receive medical treatment.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. A written emergency response procedure is established and communicated to workers in an accessible manner.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. The accident and emergency procedure includes information on marked fire exits, evacuation maps, and emergency drills.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. First aid supplies are available in central locations and checked for quality.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. Dedicated personnel are trained to use these first aid supplies, and are present during working hours.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			vi. There is firefighting equipment and equipment to remediate spillage of materials.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			vii. Dedicated personnel are trained to use the firefighting and spillage equipment, and are present during working hours.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Healthy and safe working conditions</b>	SOC- HS-4	The scheme requires that all workers have access to safe water and adequate sanitation facilities	i. Free and safe drinking water is provided to all workers.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Access is provided to free and safe water for e.g., hand washing, and skin cooling.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Access is provided to sufficient, clean and functioning toilet facilities.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Healthy and safe working conditions</b>	SOC- HS-5	The scheme requires that working hours allow the workers to safely and healthily carry out their work.	i. Working hours allow the workers to safely carry out their work.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Adequate rest periods are provided (notwithstanding occasional exceptional circumstances)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			iii. The scheme requires restrictions on hours of work for individuals working in challenging conditions.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iv. Overtime is only permitted if it is voluntary and requested in a timely manner	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			v. Overwork is only permitted if the nature of the work and the workload allow work to be carried out without increased risk to safety and health.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			vi. A record of the number of regular hours and overtime hours of each worker is kept. (R116)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			vii. Workers have safe transport home after work.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Healthy and safe working conditions</b>	SOC-HS-6	The scheme requires that if accommodation is provided to workers, it is safe, clean, and satisfies their basic needs	i. If accommodation is provided, it meets local sanitary and regulatory standards.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. If accommodation is provided, it satisfies basic needs (e.g. shelter, access to drinking water, provision of sanitary, laundry and cooking facilities, possibility for children to attend schools)	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Wellbeing of the local community</b>	SOC-WLC-1	The scheme requires a substantiated legal and legitimate right to use the land and water.	i. Land tenure rights are secure and registered according to legal requirements	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Where traditional land and water use rights are applicable, there is documented evidence of a FPIC consultation process.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Where traditional land and water use rights are applicable, there is documented evidence of a positive FPIC (i.e approval) from local stakeholders.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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			iv. If the validity of the operator's use of the land and water is disputed, the operator (a) demonstrates its legitimate right to use the land and water; (b) conducts and ensures acceptance of a conflict resolution and remediation process; (c) engages in good faith in applicable legal processes; AND (d) if the dispute involves indigenous peoples and local communities, follows a Free, prior, and informed consent (FPIC) process aligned with the UN Declaration on the Rights of Indigenous People (UNDRIP) or a more ambitious process.	Basic	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
<b>Wellbeing of the local community</b>	SOC-WLC-2	The scheme requires stakeholder mapping and establishing a stakeholder engagement plan.	i. A stakeholder mapping is conducted, including the identification and prioritisation of stakeholders.	Mandatory	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
			ii. A written stakeholder engagement plan is established and implemented.	Mandatory	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
			iii. The stakeholder engagement plan contains targets and goals.	Basic	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
			iv. The stakeholder engagement plan is updated and progress is monitored regularly.	Basic	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
<b>Wellbeing of the local community</b>	SOC-WLC-3	The scheme requires engagement with nearby communities that are likely to be affected by operations.	i. The operator engages with communities within or near the premises that are likely to be affected by operations.	Mandatory	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
			ii. Stakeholders' concerns and interests related to operations are identified.	Mandatory	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
			iii. Stakeholders are informed about the possibility to file complaints.	Basic	Agrarian and forestry residues; Crop; Forest; Waste and residues	Biomass producer; Industrial processor; Final product manufacturer
<b>Wellbeing of the local community</b>	SOC-WLC-4	The scheme requires that impacts on local food	i. Procedures are in place to identify risks of the direct effects of land use change on local food security.	Mandatory	Crop	Biomass producer; Industrial processor; Final product manufacturer

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		security are pre-emptively identified and managed.	ii. Where potential direct effects on local food security from land use change resulting from the operator's operations has been identified, free, prior and informed consent (FPIC) has been sought from local stakeholders.	Mandatory	Crop	Biomass producer;Industrial processor;Final product manufacturer
			iii. Measures are taken to minimise impact on local food security.	Mandatory	Crop	Biomass producer;Industrial processor;Final product manufacturer
			iv. Any direct land use change effects and their impact on local food security are documented.	Mandatory	Crop	Biomass producer;Industrial processor;Final product manufacturer
<b>Wellbeing of the local community</b>	SOC-WLC-5	The scheme requires identification of potential impacts on water resources in the local community.	i. Procedures are in place to identify risks of the direct effects of operations on water availability, quantity, and quality in the local community.	Mandatory	Crop;Forest	Biomass producer;Industrial processor;Final product manufacturer
			ii. Where potential direct effects on local water security resulting from the operator's operations has been identified, free, prior and informed consent (FPIC) has been sought from local stakeholders.	Mandatory	Crop;Forest	Biomass producer;Industrial processor;Final product manufacturer
			iii. Any direct effects on local water security are documented.	Basic	Crop;Forest	Biomass producer;Industrial processor;Final product manufacturer
			iv. Measures are taken to minimise impact on local water security.	Mandatory	Crop;Forest	Biomass producer;Industrial processor;Final product manufacturer
<b>Wellbeing of the local community</b>	SOC-WLC-6	The scheme requires supporting local development.	i. The operator engages in projects to support the local development of the communities it operates in.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Local suppliers are prioritised in the procurement policy when considering other suppliers with similar or equal characteristics.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Hiring local candidates is prioritised when considering other candidates with similar skills, profile, and conditions.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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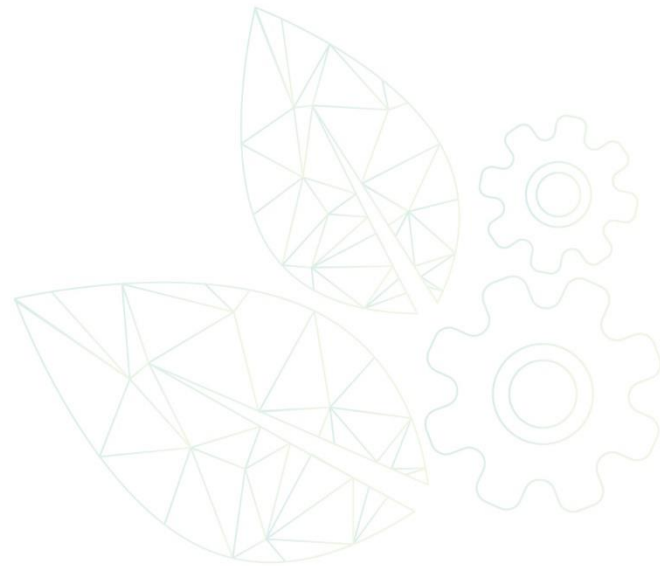
<b>Wellbeing of consumers</b>	SOC-WCO-1	The scheme requires the operator to ensure that end users can provide feedback about its operations.	i. The operator ensures that users can provide feedback about its operations.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer
<b>Wellbeing of consumers</b>	SOC-WCO-2	The scheme requires risk assessment calculations of chemicals used in the product to ensure consumer safety.	i. Risk assessment calculations are performed for dermal, oral, and inhalative exposure routes.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Final product manufacturer

## Economic dimension of the BMT

Principle	Criterion code	Criterion	Requirements	Requirement level	Applicable feedstock(s)	Applicable value chain actor(s)
<b>Economic and financial viability</b>	ECO-EF-1	The scheme requires a business plan to ensure economic viability.	i. A business plan or another document exists articulating the long-term economic viability is established.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Economic and financial viability</b>	ECO-EF-2	The scheme requires maintaining business records.	i. A documentation system exists with information on, for example, production volumes, sales revenues, expenses and profitability.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. The documentation system is kept up to date and the data is stored for at least five years.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Fair business practice</b>	ECO-FBP-1	The scheme requires fighting against fraudulent, deceptive and dishonest practices within the organization.	i. Policies/procedures are established prohibiting and measures are taken to combat fraudulent, deceptive and dishonest practices.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Potential risks for fraudulent, deceptive and dishonest practices are systematically identified.	Mandatory	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Staff training on fair business practices relevant to their work is provided and a record is kept of the trainings.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer

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<b>Fair business practice</b>	ECO-FBP-2	The scheme requires keeping records of any cases of fraudulent, deceptive or dishonest practices.	i. Record is kept of any lawsuits and results thereof related to fraudulent, deceptive or dishonest practices that have been brought against the organization or employees of the organization.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Record is kept of incidents where employees have been subject to disciplinary measures due to fraudulent, deceptive or dishonest behaviour.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			iii. Record is kept of incidents where contracts with business contracts were not renewed due to fair business practice breaches.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Fair business practice</b>	ECO-FBP-3	The scheme requires that business relationships are based on written contracts.	i. Written contracts or agreements exist of the business relationships with suppliers and buyers.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Risk management</b>	ECO-RM-1	The scheme requires management of financial and economic risks.	i. Potential financial risks along with measures to address them are systematically identified.	Basic	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
<b>Risk management</b>	ECO-RM-2	The scheme requires minimising the operator's level of vulnerability.	i. Procedures are in place to analyse the level of vulnerability of the operator e.g., to supply shortages, income generation, financial liquidity.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer
			ii. Measures are taken to minimize the risks described.	Advanced	Agrarian and forestry residues;Crop;Forest;Waste and residues	Biomass producer;Industrial processor;Final product manufacturer



## About SUSTCERT4BIOBASED

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

### PARTNERS



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Control Union Certifications Germany GmbH (CU)  
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