STAR ProBio

Sustainability Transition Assessment and Research of Bio-based Products

Sustainability Certification Tools

Smart tools for bio-based products certification and for the design of new certification schemes

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1. Introduction

A significant number of well-developed and relevant sustainability assessment and certification schemes exists within the different sectors of the bioeconomy. However, there is a number of potential gaps regarding sustainability principles, criteria and indicators within these schemes. The STAR-ProBio project has conducted a thorough analysis of the existing certification and standardisation landscape. The project has developed the **SAT-ProBio framework** aiming at assisting stakeholders of the bioeconomy in sustainability assessment and certification of bio-based products.

The SAT-ProBio framework demonstrates the applicability of STAR-ProBio results to the existing landscape of bio-based product certification schemes and sustainability assessments. SAT-ProBio is composed of the two self-contained smart tools (the Integrated Assessment Tool and the Sustainability Certification Tools) to be used as an integrated framework or separately, in application to a specific area of sustainability *(Figure 1)*. These tools can be used either in a combined manner for the sustainability assessment of bio-based products or as stand-alone applications. The Integrated Assessment Tool was developed as an internal assessment tool for companies to understand the hotspots for sustainability risks of a given bio-based product. The Sustainability Certification Tools were developed for facilitating the continuous improvement of existing product certification schemes and for guiding the design of new certification schemes. If the use of both tools will reveal a mismatch, i.e. that the identified hotspots from the IAT assessment are not appropriately covered in sustainability certification schemes, then it will be an indication for a gap.

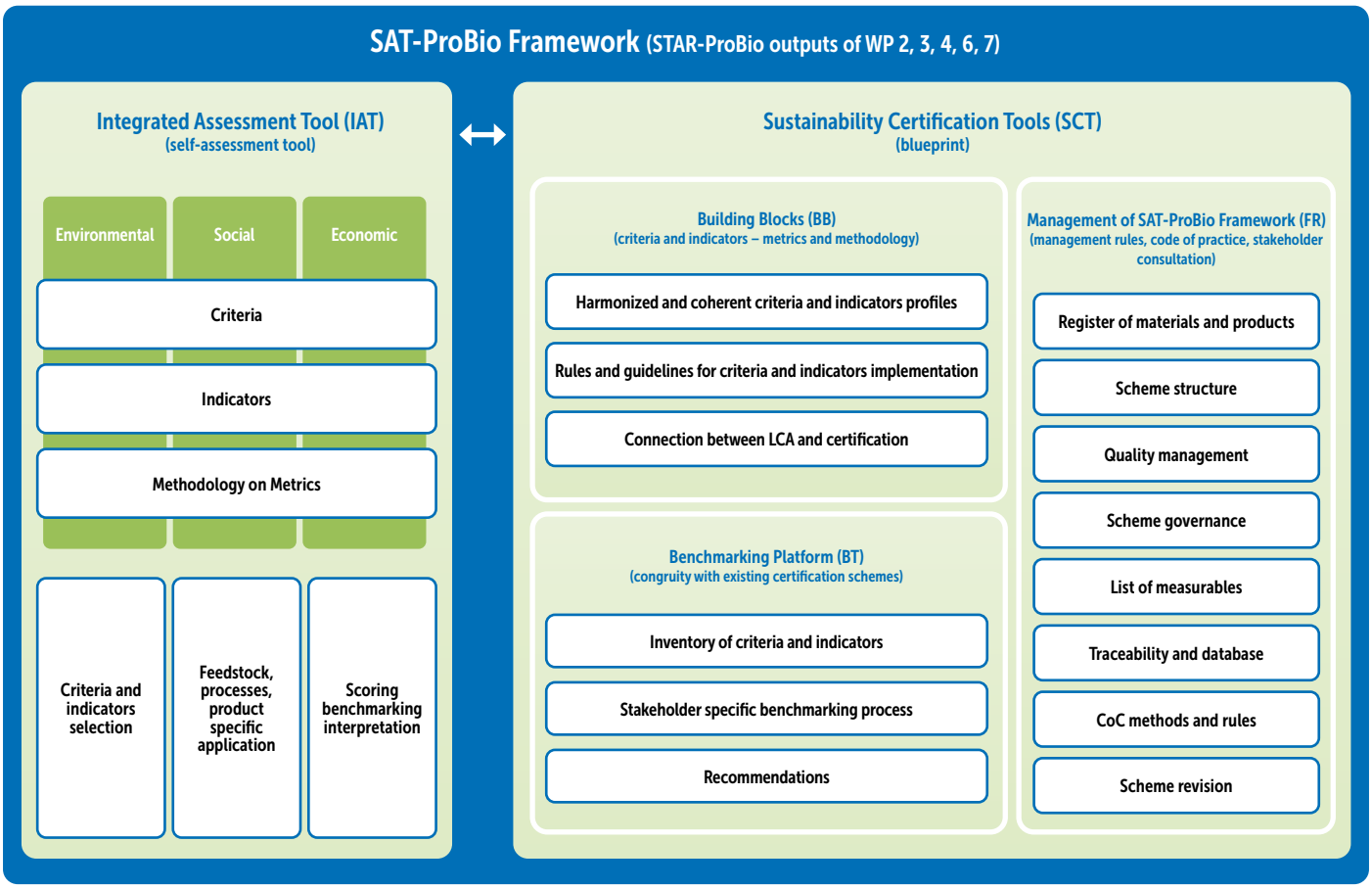


Figure 1: The smart tools of SAT-ProBio framework

The Sustainability Certification Tools (SCT) integrate three smart tools:

A **Benchmarking Platform (BP)** to benchmark participating certification schemes, identify their common denominator and to propose a mechanism for self-improvement, including recommendations to improve their **Framework Management Rules (FR)**. The Benchmarking Platform proposes to label participating certification schemes with a certain performance level: Basic, Advanced or Excellent. The Benchmarking Platform would also aim to compare the criteria and indicators of participating schemes against those criteria and indicators identified and developed by STAR-ProBio as relevant for the sustainability of bio-based products. To do this, findings of STAR-ProBio Working Packages have been translated into a set of criteria and indicators named **Building Blocks (BB)**. Building Blocks are represented in factsheets designed to facilitate the transfer of STAR-ProBio results for its use by certification schemes.

2. Benchmarking Platform

2.1. Structure

The governance of the Benchmarking Platform should be based on three bodies: An Operative Body, an Experts Committee and a Stakeholders Board. These three bodies together represent the **Benchmarking Platform Forum**.

The Operative Body is the entity that manages the Benchmarking Platform. It should be in charge of inviting certification schemes to participate of the Platform, check if candidate schemes meet the criteria for acceptance, manage the Benchmarking and scoring exercise and disseminate the results and recommendations of the benchmarking.

The Experts Committee is formed by a group of multidisciplinary experts appointed by the Operative Body to develop the benchmarking methodology and apply it to participating certification schemes. The Experts Committee should also be in charge of scoring participating schemes and recommending their approval by the Operative Body when they meet the established minimum level of requirements for such approval. They should also participate in discussions for recommendations to improve the quality of participating schemes.

The Stakeholders Board is the mechanism chosen to involve relevant stakeholders from a broad scope of activities and interests to elaborate recommendations addressed to participating schemes for the continuous improvement. The Stakeholders Board is appointed by the Operative Body and should include members representing feedstock producers (for example farmers and the agricultural community), food processing industries, bio-based industries, businesses, such as product distributors and companies involved in waste management, the scientific community, policy makers, standardisation bodies, auditors/verifiers and their accreditation bodies, environmental NGOs and civil society organisations engaged in analysing and advocating for a bio-economy, consumers associations, public procurers and end-users.

The benchmarking exercise shall make reference to a set of materials and products to which also the participating schemes relate to. The **Registry of certifiable materials and products** is a comprehensive list of materials and products that are potentially subject to

certification by participating schemes. This list is determined by the scope of the participating schemes. Additional materials and products are possible when new scheme participants are considered in the benchmarking process.

Besides the registry of materials and products, a separate and permanently maintained **Registry of Measurables** is implemented within the Benchmarking Platform. The Registry of Measurables contains the requirements (criteria and indicators) that should be assessed and benchmarked by the Benchmarking Platform. It is established, and permanently maintained and updated by the Experts Board. Already existing approaches and examples may be found in the RED I and RED II with an agreed GHG Calculation Methodology, Standard- and Default Values, tools such as Biograce, Clarifications on ILUC, etc.

The process carried out by the Benchmarking Platform, as well as its structure are illustrated in *Figure 2*.

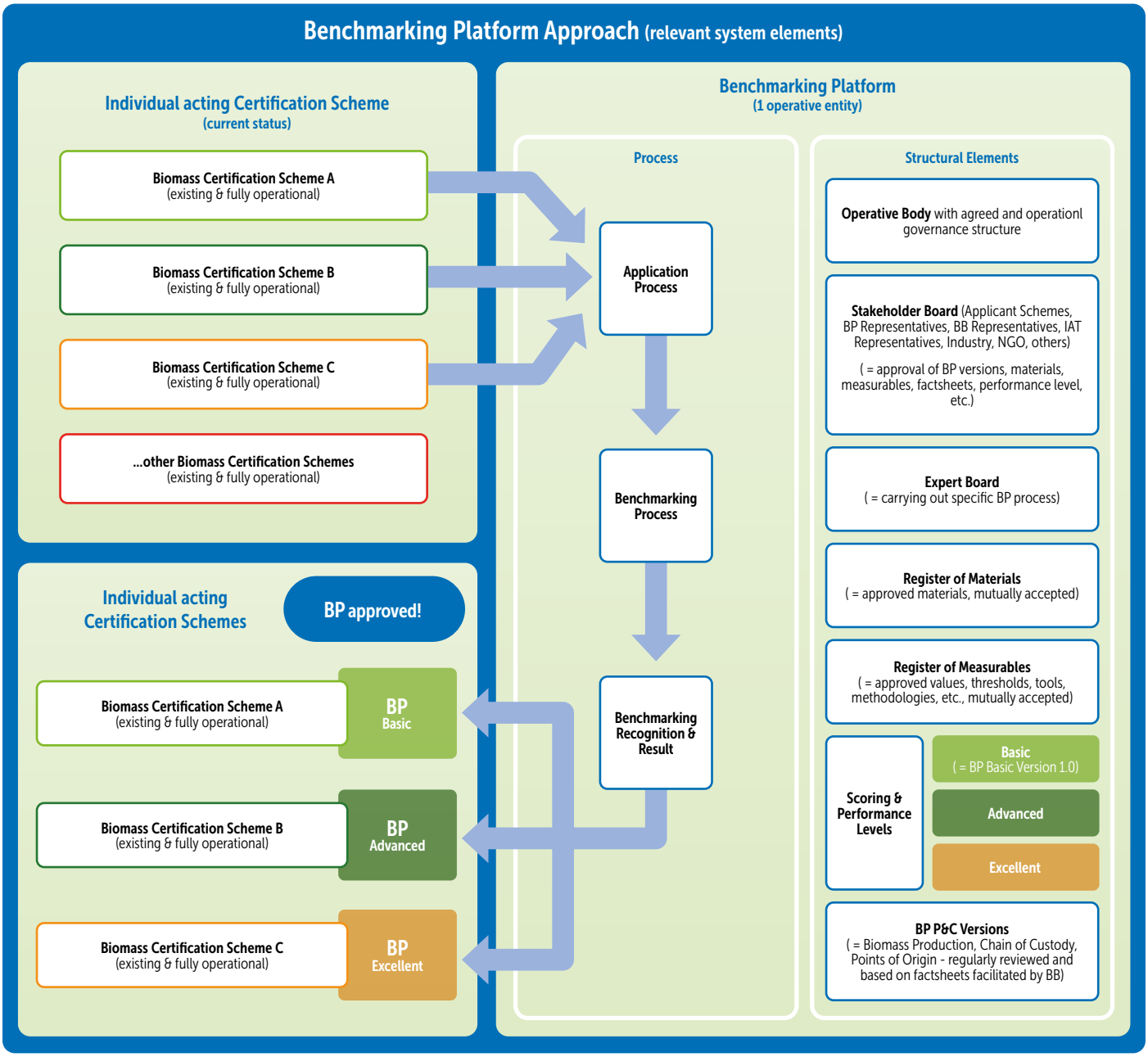


Figure 2: Structure of the Benchmarking Platform

2.2. Benchmarking methodology

The Benchmarking Platform (BP) follows the general principles established by *ISEAL Alliance in its ISEAL Alliance Sustainability Benchmarking Good Practice Guide*[1], and it is designed to compare participating certification schemes according to:

- The "nature" of the criteria, indicators or more generally, control points included in the schemes (Biomass Production and Supply Chain Level).
- The operation and governance or scheme management approach (System Level).

The Benchmarking Platform should aim at accepting Chain of Custody (CoC) certification methods that allow to some extent the traceability of materials and intermediate products needed for the production of bio-based products. From higher to lower rigorousness of traceability, three different Change of Custody methods are accepted: identity preserved, physical segregation and mass balance.The mass balance method in certification schemes is already operating in the market thanks to the Renewable Energy Directive, and it is well defined and implemented.

The criteria used for the selection of participating certification schemes in the Benchmarking Platform are:

- Applicability to biomass and Chain of Custody levels.
- Use of the RED GHG Methodology.
- Criteria in certification schemes compliant with ISO 13065.
- Stakeholder involvement is practiced.
- System documents are publicly available.
- Have developed additional sustainability standards (e.g. Biomaterial, Food, Feed, Chemical Industry, Pharmaceuticals etc.).
- Perspectives towards biomaterial sector (inclusive circular economy, bio-economy, etc.).
- Dynamic standard development.
- Different levels of market penetration.

2.2.1. Benchmarking based on control points

The core element of each Certification Scheme is the set of the commonly described "Principles & Criteria" (P&C). These P&C define the relevant requirements of a specific Certification Scheme. Since each Certification Scheme does have an individual systematic approach and understanding how to organize these P&C, different Certification Schemes do very often have a different structure of those P&C, although the contents might be almost similar.

Besides the core set of P&C, supplementary System Documents in all Certification Schemes are needed to allow the respective Certification Scheme to become fully operational. One of these documents is the auditor checklist. The auditor-checklist is the invaluable tool auditors have for comparing companies practices and processes to the requirements set out by the certification scheme. The auditor checklist contains everything needed to complete an audit accurately and efficiently. It summarises the respective requirements of the P&C for each supply chain element and guides the auditor at the external onsite audit through the entire auditprocess. Hence that audit checklist may be also understood as a "translated version" of the original P&C, and it is often chronologically assembled by using so called "control points". Control points

1 Available at https://www.isealalliance.org/benchmarking

in the auditor checklist do not only highlight the P&C content, but also contains the rules to determine the compliance status of an operation.

Control points in the audit checklists are as important as the Standard documents themselves because of the following reasons:

- The auditor checklist with all control points is visible for both parties at the day of the audit (Auditor and Auditee).
- The definition of control points influences the audit-methodology and give an impression about the intensity of the audit.
- A number of control points are used to score the individual compliance level and give System Conformity.
- System Conformity is verified by complying with a minimum number of control points.
- Non-Compliance is mainly specifically allocated to certain control points.
- The audit checklist with control points is "the" binding conformity status protocol – agreed and signed at each audit by Auditor and Auditee.
- The number of control points indirectly give an impression about importance of System-contents.
- Principles, criteria and indicators are differently denoted in each certification scheme; however, the control points define the contents which are directly addressed and examined at each economical operator using the certification scheme.

Control Points can be allocated to several chapters. *Table 1* includes a first set of control points for the benchmarking at Biomass Production & Supply Chain Level. The proposed methodology compares participating certification schemes by the control points within each of these chapters. This simple approach helps us to gain additional information about the strengths and weaknesses of each examined certification scheme.

2.2.2. Scoring for scheme approval and communication

The proposed scoring system intends to be a measure indicating how a certification scheme performs against the rest of benchmarked schemes. Scores are meant to become drivers for permanent improvement of the certification schemes participating in the benchmark. The proposed scoring system for the Benchmarking Platform establishes three levels of performance: Basic, Advanced and Excellent.

The specific requirements for the proposed scoring system and its three levels of performance should be defined by the Benchmarking Platform in consultation with the Stakeholder Board. This scoring system shall be based on non-selective criteria/indicators and control points. This shall help to clearly define the contents of the respective Basic Performance, the contents for Advanced Performance and also the same for Excellent Performance. Since some of the participating certification schemes may make use of selective control-points (such as those labelled as "minor must", recommendations, etc.), a transparent and plausible benchmark would not be possible by applying a less rigid methodology. Permanent revision of the methodologies used by the SAT-ProBio Benchmark Platform shall ensure to dynamically develop the Scoring System and its interpretation according to stakeholders' input and the final recognition by Convenors. These benchmark versions of the better performing levels are also regularly reviewed and revised as best practice evolves, and generally require a higher degree of engagement with the Certification Schemes being benchmarked.

The final goal of the scoring system and its performance level is to persuade the participating certification schemes to display the performance level on each issued certificate, which again would allow the specific

Criteria	Sub-criteria	Example	APPLICABILITY		
			Depends on Supply Chain elements	Location of scheme user	
				EU	Non-EU
Legal compliance	National compliance	Set of national legislation	No	✓	✓
	EU compliance	e.g. Cross Compliance, Reach, etc.		✓	?
	Compensating criteria - Non-EU	Corresponding EU legislation		✓	?
Good practices	GAP, GMP, etc.	Multiple	No	✓	✓
Management system and record keeping	Multiple	Multiple		✓	✓
Internal assessment	Multiple	Multiple		✓	✓
Risk assessment	Multiple	Multiple		✓	✓
Sustainability	Social	Multiple		✓	✓
	Environmental	Multiple		✓	✓
	Economic	Multiple		✓	✓
Traceability & Chain of Custody	Multiple	Multiple		✓	✓
Declarations & claims	Multiple	Multiple		✓	✓
Alignment with international norms & guidance	Multiple	Multiple		✓	✓
Add-on elements	Supply Chain element	GHG, smallholder, recyclability, EoL, etc.	Yes	✓	✓

Table 1: Control points benchmarked at Biomass Production & Supply Chain Level

scheme user to make a claim on its product.

One potential option for the communication of results is to display the achieved performance level on the schemes' respective System Users Certificate. Hence it clearly indicates that certified products by participating schemes may be mutually recognised. For example, bio-based products put in the market could claim that they are certified by with a Benchmarking Platform certification scheme ranked as "Basic", "Advanced" or "Excellent".

3. Framework Management Rules

A crucial issue in the management rules set by certification schemes is up to what extent and how exactly criteria and indicators shall be inspected, and what kind of evidence are mandatory.

Supply chains for bio-based materials and bio-based products usually have multiple regions of origin. Different regions have different levels of vulnerability to sustainability issues. A pre-condition for the participation in the Benchmarking Platform is that certification schemes guarantee a well implemented risk assessment process for all vulnerable regions where they aim to operate.

Participating schemes of the Benchmarking Platform should organise their governance and management rules in accordance to the elements defined in the GSSI Benchmark Framework[2], with the addition of mass balance as Chain-of-Custody option (see *Table 2*).

For achieving an optimal performance level, management rules must sufficiently ensure adherence to sustainability principles, criteria and indicators, and how effectively criteria and indicators are assessed and measured in practice.

The Benchmarking Platform should require that participating schemes focus on the following management rules:

- The rules on the audit system, including among others: audit procedures, sampling requirements, verification procedures, quality requirement for auditors, and sanctions for non-compliance.
- The management system, including the level of transparency and accessibility of information, the level of stakeholder engagement, and the availability of a complaint system.
- Accreditation, membership or recognition by official organizations or government bodies.
- The rules for the affiliation and rules for cross-acceptance of certificates from other certification schemes.

3.1. Rules on the audit system

Audit rules refer to aspects such as type of audits, frequency of auditing, validity period of certificates, audit procedures, quality requirements for auditors, and sanctions for non-compliance. Participating Schemes should ensure that their rules on the audit system are aligned with the provisions given by ISO 19011:2018(en) Guidelines for auditing management systems. These rules shall ensure truthfulness of the sustainability information recorded during certification audits.

2 Version 1.0, October 2015 (GSSI – Global Sustainable Seafood Initiative)

Scheme governance	Governance	• Legal status • Impartiality • Operating procedures • Transparency of governance • Governance complaints • Governance participation
	Scope and objectives	• Scheme scope • Scheme objectives
	Non-discrimination	• Openness • Market access
	Standard setting body	• Internal review
Scheme management	Standard setting body	• Claims policy • Relevant claims • Claims-making requirements • Logo management • Certificate content management • Minimum verified/measurable percentage-based claims
Standard setting & maintenance	Standard setting body	• Standard setting body • Central focal point
	Standard setting procedures	• Standards development and maintenance procedure • Work program • Terms of reference • Decision making process • Complaints Standards review and revision • Proposals for revisions • Record keeping
	Participation and consultation	• Public summary • Balanced participation • Public consultation • Public announcement • Stakeholder consultation • Transparency comments received • Comment management
	Standards content	• Standards content • Relevance of standards content • Local applicability
	Standards accessibility	• Standards availability
	Transition period	• Informing enterprises of transition • Transition period for compliance
Certification	Certification process	• ISO-17065 compliance • Fee structure •Certification cycle • Surveillance Assessment methodology •Termination, suspension, withdrawal • Multi-site certification • Audit reports • Stakeholder input • Non-compliances • Site audit • Transparency on certified entities •Transparency on audit reports • Notification of changes • Timeline for corrective action
	Auditor competence	• Auditor competence • Requirements for technical knowledge • Technical knowledge • General auditing skills • Scheme specific knowledge assessment • Scheme specific knowledge maintenance • Knowledge maintenance
Accreditation	Accreditation	• ISO-17011 compliance • Non-discrimination • Specified requirements • Transition period accreditation body – competencies • External review • Organizational transparency • Office audit • Field audit
Chain of Custody	CoC options & requirements	• Segregation • Mass balance • Enterprises to be audited • Records for traceability •Sub-contractors • Auditing methods and frequency • Non-conformity/corrective actions • Audit report • Record keeping • Multi-site Chain of Custody audit • Multi-site Chain of Custody • internal verification

Table 2: Governance and management rules organisation for participating schemes

3.1.1. Types of audit

Generally any kind of audit or assessment (internal or external) may be carried out in different ways. They may be:

- Desktop audits where information and diverse data are submitted to the verifier.
- Remote audits where the verifier has technical instruments to conduct an audit or parts of it via e.g. remote sensing tools or other accessible electronically and approved tools.
- Onsite audits at the certifiable operation, the original and most reliable way to conduct assessments.

Depending on the certification schemes requirement it is laid down in the respective system requirements when to conduct and onsite audit obligatory (internal and external), and under what specific conditions it is accepted to make use of alternative solutions. Remote desk audits should in principle be a supporting practice or complementary to on-site audits.

Certification schemes differentiate internal and external assessments in this way:

a) Internal Assessments

An internal assessment procedure is an essential element in each quality assurance system and shall be conducted regularly, at least once a year. This shall be applicable to individual operations as well as for adhered subcontractors, so that every supply chain actor is reasonably aware of the respective system requirements.

Group certifications require well implemented internal assessments. The option of group certification was caused by the fact, that especially small scale producers, smallholders and members of larger production cooperatives would not be able to undergo an individual, external certification process since. This is due to a financial aspect on one hand side and the resource aspect (training, implementation, technical knowledge, etc.) on the other hand side. By applying group certification mechanism it becomes acceptable that only a certain random sample of all group members will be externally audited and certified each year. This also means that the majority of these group members are not externally certified. To compensate this dilemma, an obligatory internal assessment of each group member is a requirement for each producer in the group. Currently, existing biomass certification schemes keep this aspect in mind, however with differing intensity.

Random sampling is very often based on specific key such as e.g. the square root of all group members. In different schemes it is also widely required to refer this key to a risk level (respectively risk factor) which has to be determined before the audit is taking place.

As an example, for the ISCC certification scheme, the square root of all suppliers needs to be audited in each group of up to 100 members; if the risk level is medium (risk factor 1,5) the respective random sample size would be 15 farms in the same group.

Another additional approach is applied by GLOBAL G.A.P., in which the operating group, as one entity, has to educate and approve internal assessors who conduct the internal assessments of 100% of their suppliers. Only if all 100% of these suppliers are audited positively, the external auditor may then choose the respective random sample such as the square root for external assessment.

The rules of different approaches for group certification definitely influence the credibility of a certification scheme, nevertheless it is the final decision of the related stakeholders to find the right balance in respect to feasibility and credibility.

Clarification has to be given to the fact that sometimes Self-Declaration by supplying producers are meant to replace an internal assessment. It needs to be differentiated between above mentioned internal assessment and the Self-Declaration. The Self-Declaration itself especially in the RED approved certification schemes is a fundamental contractual element which covers many issues around specific product specifications as well as legal responsibility and liability in the relation between buyer and seller.

b) External Assessments

Any supply chain operator who is applying for certification and who was successfully undergoing the entire certification process will receive a certificate.

To allow any kind of groups and cooperatives to undergo an economic feasible certification process, the group certification option is an appropriate method to include also smaller sized producers. Again, the requirements and for this external audit- and certification process is very much linked up to a well implemented self-assessment system. Examples are already explained above. It has to be taken into consideration that only the certified group is eligible to receive the certificate and subsequently to sell sustainable material. The individual producer in a group is not entitled to do so since not separately certified.

External assessments again may be differentiated in (mainly) annual and announced certification audits and intermediate Surveillance Audits. Surveillance Audits are very often conducted if the risk analyses does indicate relevant risk or the certification scheme requires in a certain time period. These Surveillance Audits may be either conducted as an announced or as an unannounced audit.

3.1.2. Audit frequency

The frequency of audits is usually determined according to the risk level, size and volume of operations. The higher the frequency, the more control over deviations from sustainable practices.

Participating certification schemes have to apply a well acceptable and balanced audit frequency structure in order to satisfy all stakeholders interests as good as possible. They shall ensure their management rules determine audit frequency using a clear risk-based approach procedure. This risk-based procedure should be specific to the sustainability risks associated to each bio-based material and bio-based product listed in the Registry of certifiable materials and products.

3.1.3. Validity period of certificates

These are determined by each certification scheme and it is usually 1 year. Diverging approaches among certification schemes need to clearly indicate how they will guarantee to keep their assurance level upright over a longer time period.

Nevertheless it has to be considered, that most of certification schemes with a longer certification period also need an annual audit. If for example a certificate validity is five years, so the first audit carried out is a Certification Audit. The following four subsequent annual audits are meant to be Surveillance Audits (with the same content) which need to be carried out at least once a year. The fifth audit then again is a Certification Audit.

Basically the validity of a certificate does not directly influence the credibility of a certification scheme, main differences are due to administrative issues with some more organizational flexibility.

3.1.4. Sanctions for non-compliance

Failure of a company to meet certification requirements leads to non-conformities, and non-conformities should be sanctioned. Sanctions for non-compliance shall be clearly defined by Participating Schemes. Defining a sanctions structure is not complicated; the largest difficulty in applying sanctions is to establish from which level of non-compliance these specific sanctions should be imposed.

The Benchmarking Platform, advised by its Stakeholders Board, should establish more specific guidelines to this respect. Participating Schemes shall ensure that their individual management rules establishes a defined time period for the correction of major non-conformities; otherwise, certificates shall be suspended and ultimately withdrawn. These provisions should be in line with guidelines established by the Benchmarking Platform (e.g. time frames for corrective actions, warnings, additional surveillance audits, suspensions, temporary suspensions, withdrawals, etc.).

3.2. Management system

The management system of a certification scheme gives a clear indication of the scheme's commitment to listen society's concerns for improvement. Participating Schemes should ensure that their management systems are aligned with the provisions given by ISO/IEC 17065:2012(en) Conformity assessment – Requirements for bodies certifying products, processes and services, and by ISO 17067:2013 Conformity Assessment – Fundamentals of product certification and guidelines for product certification schemes. Management systems for participating schemes should include aspects such as:

Transparency and accessibility to information: Information made accessible by Participating Schemes should minimally include: Rights and duties of certified companies, certification documentation, list of certified companies, summary reports of company assessments and list of non-compliant companies.

Traceability of information: Participating Schemes shall have established a well-functioning mechanism for tracing back sustainability information. To sustain this, Participating Schemes will keep all sustainability information kept for five years or longer.

Stakeholder engagement: Participating schemes shall implement a mechanism to consult relevant stakeholders. Invited stakeholders shall always be informed about the points where they may comment or participate on. In particular during scheme review processes.

Complaint system: Participating schemes shall have an easily accessible and responsive complaint system and shall ensure that certification bodies also have a complaint system in place. Participating schemes shall aim at high quality of control and facilitate complaints from any person or organization.

3.3. Accreditation and recognition

Participating Schemes should aim at accreditation by recognised entities. Accredited certification schemes are usually closely monitored by accreditation bodies. Membership to specialized institutions also gives a good indication about the quality of the System requirements of Participating Schemes. Membership of the ISEAL Alliance for example illustrates an explicit commitment to the ISEAL Codes of Good Practice, which provides good practices for quality of control.

3.4. Mutual recognition of certificates

Mutual recognition of certificates facilitates the certification of products in long, complex international supply chains. However, mutual recognition of certificates also brings the risk of artificially raising the level of sustainability performance of a certified bio-based product. Mutual recognition of certificates between Participating and non-participating Schemes should not be allowed. And mutual recognition between Participating Schemes should only be allowed when both Participating Schemes have achieved the same level of performance within the Benchmarking Platform.

4. Building Blocks: Operationalisation of STAR-ProBio criteria and indicators

The Building Blocks (BB) module of the SCT aims at organising STAR-ProBio criteria and indicators according the general logic of a product certification approach and to prepare their coherent and uniform presentation. Consequently, the Building Blocks module can help to address gaps which have been identified by the Benchmarking Platform as result of the comparison of existing schemes with the STAR-ProBio principles, criteria and indicators.

The STAR-ProBio criteria and indicators have been sourced from different methodological approaches and perspectives (e.g. LCA and non LCA based such as iLUC, social aspects and circularity) and are organised around these principles:

Environmental

- Minimize global warming potential.
- Minimize the indirect impacts on natural lands OR pressure on agricultural land.
- Promote the positive and reduce the negative impacts on ecosystems and biodiversity.
- Protect soil quality and productivity.
- Conserve and protect water resources.
- Promote good air quality.
- Minimize the emission of chemicals.
- Promote the prevention of non-renewable energy resource depletion.

Circularity

- Limit the use of high concern materials.
- Promote efficient use of material resources and the prevention of resource depletion.
- Promote the renewability fraction of products.
- Promote the efficient use of energy.
- Promote the efficient use of water.
- Promote Circularity and End of Life options.

Social and techno-economic

- Respect Labour Rights.
- Respect health and safety of end users.
- Promote consumer satisfaction.
- Promote transparency.
- Missing in the original matrix.

- Respect of health and safety of local communities.
- Promote local development.
- Respect land use rights.
- Respect Food Security.
- Promote fair competition in the market.
- Sustainable Manufacturing – Techno-economically sound manufacturing.
- Sustainable Alternative End-of-Life Routes – Techno-economically sound EoL options

Thus, the integration of STAR-ProBio criteria and indicators into a common structure for their use by certification schemes requires additional steps, especially for the presentation of these results in a coherent structural approach. This is done in two steps (see *Figure 3*);

i) The development of an inventory that collects the results of STAR-ProBio Work Packages 2, 3, 4, 6 and 7 and organises them according to their relevance in the chain of custody as well as their sustainability dimension. This is a necessary intermediate step between the outcome of Work Packages and the proposed Building Blocks that can be used by product certification schemes.

i) The development of factsheets, which present the STAR-ProBio criteria and indicators in a uniform structure aiming to facilitate their general understanding and implementation.

A series of compact factsheets have been produced for a number of STAR-ProBio criteria. These factsheets will present the STAR-ProBio results in a uniform approach with further information which should support the potential transfer of these results, such as the necessary pre-conditions for their implementation in product certification schemes or general limitations of the criteria and indicators as well as their respective methodologies.

5. Recommendations for next steps

5.1. Regarding the formation of a Benchmarking Platform

The Benchmarking Platform is a stakeholder driven instrument, and as such it first needs to become operational as prior step to set, after a consultative and consensus driven process, definite provisions for:

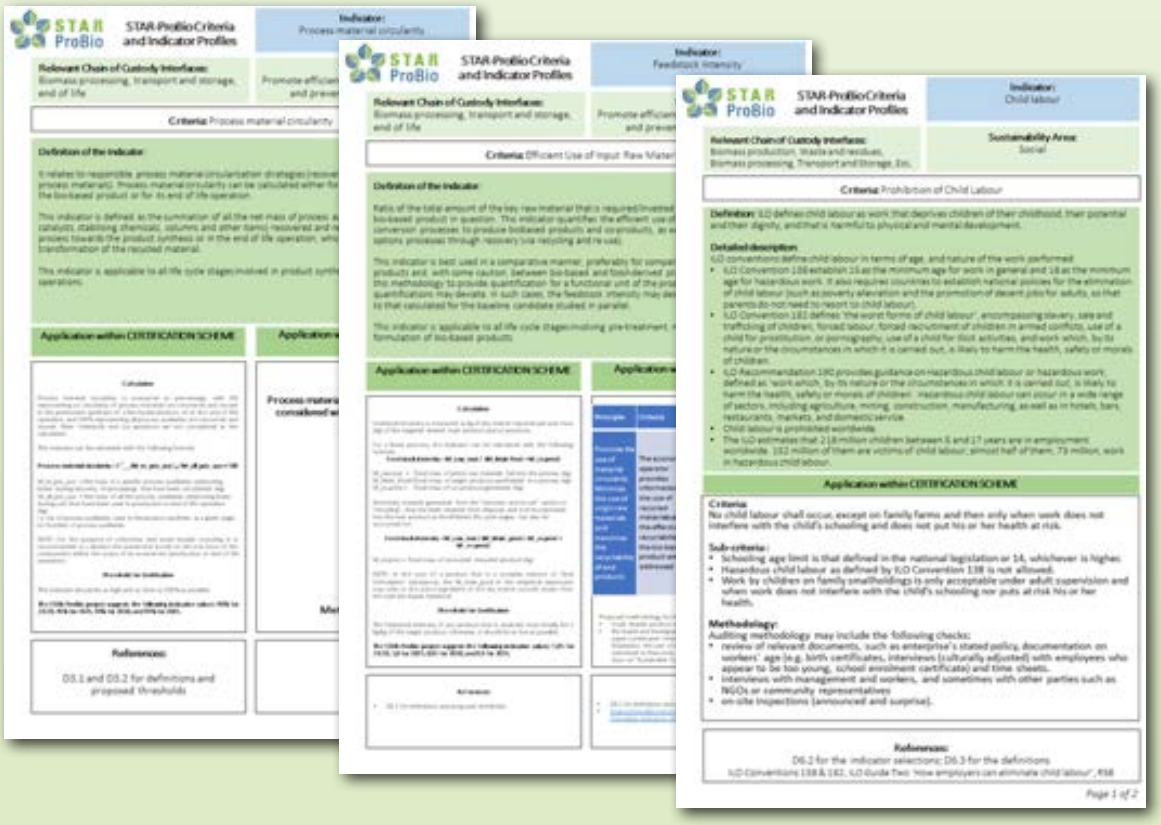
- Criteria for the selection of Participating Schemes.
- Benchmarking methodology.
- Final set of the Control Points chapters to be identified.
- Scoring rules and guidelines.
- Structure and rules for establishing the Registry of certifiable materials and products.
- Structure and rules for establishing the Registry of measurables.
- Final set of requirements at system level.
- Communication and transparency of results.

The illustrative application of the benchmarking methodology has followed best practice guidelines established by initiatives such as ISEAL Alliance and GSSI. However, this illustrative application been carried out within the limitations of the STAR-ProBio project. Definite provisions for the required methodologies,

SAT-ProBio Building Blocks Module

Organisation of STAR-ProBio results according to certification CoC

Development of coherent and uniform factsheets



Building Blocks to **support the implementation** of STAR-ProBio results

Figure 3: SAT-ProBio Building Blocks Module

set of rules and guidelines must be done with a larger stakeholder group mirroring all relevant parties in the sustainable bio-economy landscape. Therefore, it is recommended that existing certification schemes and the European Commission promote the formation of the proposed Benchmarking Platform.

The results of the illustrative application of the benchmarking methodology shall be seen as a guiding information for the design of the processes within the proposed Benchmarking Platform and Building Blocks Factsheets proposed in chapter 3. The subsequent stakeholder dialogue within the Benchmarking Platform shall lead to agreement on mentioned processes. In summary, those processes shall most likely:

- Be promoted by a separate entity supported and if possible, receive some level of recognition by European bodies.
- Be the consequence of an active participation of existing certification schemes.
- Initiate a comprehensive dialogue between affected stakeholders.
- Trigger a dynamic Standard Development process.
- Patronize participating certification schemes.
- Widely avoid a race to the bottom by participating certification schemes.
- Help to guide consumers by avoiding multi-labelling programs.

5.2. Regarding the use of results of the Benchmarking Platform by other existing or new certification schemes

Non-participating certification schemes and developers of new certification schemes can use the results of the benchmark exercise performed by the Benchmarking Platform to check if their schemes meet the requirements for a Basic Performance Level. In case they do not meet the minimum requirements for a Basic Performance Level, they can plan for using results to fill-in the gaps and improve the criteria, indicators and system requirements (governance and management rules) of their schemes.

Moreover, non-participating and new certification schemes can engage in a continuous improvement path by planning the implementation of recommendations issued by the Benchmarking Platform Stakeholders Board for achieving the Advance or Excellent Performance Level. This will entail:

- Develop principles, criteria and indicators (Control Points) as advised by a Stakeholders Board to achieve the Advanced or Excellent Performance Level. Criteria and indicators defined by the Building Blocks Factsheets should be considered for the additional set.
- Implement recommendations regarding scheme governance and management rules as established by the Framework Management Rules set by the Benchmarking Platform.
- Factsheets for new criteria and principles developed by the Benchmarking Platform can be used to this effect.
- Pay attention to continuously evolving EU legislative framework as identified by the Benchmarking Platform for scheme permanent adaptation.
- Updating the certification scheme with compensatory framework for certification activities outside the EU.
- Additional criteria and indicators should be developed as Factsheets following the templates used for the Building Blocks (Annex C1 in D8.2). These Factsheets shall clearly define minimum set of Control Points and System Requirements.

5.3. Regarding the regulatory support to the Benchmarking Platform

A pre-condition for effective sustainability certification of bio-based products is that certification is applied to all steps in the supply chain. This is a challenge for the design of certification scheme since supply chains for bio-based products are complex and fully international, with many of their materials (bio-based or not) being commodities.

The role and importance of certification schemes in the bioeconomy sector in Europe the past decades have kept growing. Organic and national certification programs came under a common EU wide regulation for organic certification in 1993 (EC Regulation 2092/1993). Other certification schemes operating in different sectors have gained relevance since then. The Forest Stewardship Council (FSC) certification scheme came into the market in 1994 for certifying forestry management and wood producing systems. The Programme for the Endorsement of Forest Certification (PEFC) started operating in 1999. GLOBALGAP, another sustainability related certification scheme for agricultural production and food safety became operational in 1997. And many other certification schemes related to vegetable oils (such as RSPO) and later related to bioliquids and biofuels mushroomed in the past 10 years. Although stakeholder driven, all of these certification schemes do have different approaches in regards to the system operating requirements.

The experience gained by the use of sustainability certification schemes for compliance with the European Renewable Energy Directive (RED) and EU Timber Regulation has shown that it is important a certain level of homogenised approach among certification schemes. This homogenised approach is more evident when in practice the certification schemes already operating in the market have different approaches related to the scope of sustainability criteria and indicators they cover, their rules on the audit system, including among others: audit procedures, sampling requirements, group auditing, verification procedures, quality requirement for auditors, sanctions for non-compliance, management systems, accreditation requirements, etc.

The Renewable Energy Directive gave a mandate to the European Commission (EC) to recognise certification schemes for their use to show compliance of different bioenergy products with sustainability requirements that it established. Certification Schemes aiming at being recognised by the European Commission must have their system requirements assessed by a specific EC approved Assessment Protocol. This has been the first experience for homogenising system requirements with the help of EU regulation. However, it has become clear that 10 years of sustainability certification for some bioenergy products has not led to a more effective harmonisation of system requirements.

Some level of regulatory support and recognition to the formation of the proposed Benchmarking Platform could help this objective. so that above mentioned differences may be harmonized as good as possible. An official recognition of the Benchmarking Platform for the approval of certification schemes aiming at certifying bio-based materials and bio-based products could help certification schemes reach higher performance levels while keeping a level playing field among them.

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