



**SLOVENSKI STANDARD**  
**kSIST-TP FprCEN/TR 17341:2018**  
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**Bioizdelki - Primeri poročanja o merilih trajnostnosti**

Bio-based products - Examples of reporting on sustainability criteria

Biobasierte Produkte - Beispiele für die Berichterstattung zu Nachhaltigkeitskriterien

Produits biosourcés - Exemples de rapports relatifs aux critères de durabilité

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**ICS:**

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ICS

English Version

**Bio-based products - Examples of reporting on  
sustainability criteria**

Produits biosourcés - Exemples de rapports relatifs aux  
critères de durabilité

Biobasierte Produkte - Beispiele für die  
Berichterstattung zu Nachhaltigkeitskriterien

This draft Technical Report is submitted to CEN members for Vote. It has been drawn up by the Technical Committee CEN/TC 411.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (FprCEN/TR 17341:2018) has been prepared by Technical Committee CEN/TC 411 “Bio-based products”, the secretariat of which is held by NEN.

This document is currently submitted to the Vote on TR.

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## Introduction

Bio-based products from forestry and agriculture have a long history of application, such as paper, board and various chemicals and materials. The last decades have seen the emergence of new bio-based products in the market. Some of the reasons for the increased interest lie in the bio-based products' benefits in relation to the depletion of fossil resources and climate change. Bio-based products may also provide additional product functionalities. This has triggered a wave of innovation with the development of knowledge and technologies allowing new transformation processes and product development.

Acknowledging the need for common standards for bio-based products, the European Commission issued mandate M/4921, resulting in a series of standards developed by CEN/TC 411, with a focus on bio-based products other than food, feed and biomass for energy applications.

The standards of CEN/TC 411 "Bio-based products" provide a common basis on the following aspects:

- Common terminology;
- Bio-based content determination;
- Life Cycle Assessment (LCA);
- Sustainability aspects;
- Declaration tools.

It is important to understand what the term bio-based product covers and how it is being used. The term 'biobased' means 'derived from biomass'. Bio-based products (bottles, insulation materials, wood and wood products, paper, solvents, chemical intermediates, composite materials, et cetera) are products which are wholly or partly derived from biomass. It is essential to characterize the amount of biomass contained in the product by for instance its bio-based content or bio-based carbon content.

The bio-based content of a product does not provide information on its environmental impact or sustainability, which may be assessed through LCA and sustainability criteria. In addition, transparent and unambiguous communication within bio-based value chains is facilitated by a harmonized framework for certification and declaration.

The aim of this Technical Report is to give some examples on how to apply EN 16751 *Bio-based products – Sustainability criteria*. These examples give guidance and ideas on how to respond to the indicators in that European Standard.

## 1 Scope

This document provides examples of business to business (B2B) reporting in accordance with EN 16751 Bio-based products – Sustainability criteria. This Technical Report also offers some additional guidance to the user of EN 16751.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 16751, *Bio-based products – Sustainability criteria*

EN 16575, *Bio-based products – Vocabulary*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16575 and EN 16751 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

## 4 General guidance

The examples in Clause 5 give additional information and guidance to the economic operator and other users of EN 16751 to better understand and respond to the indicators in that standard. According to EN 16751, it is required to report on the sustainability of the biomass production, and it is encouraged to apply the standard to the entire supply chain (including the biomass production).

In this TR, one of the examples is only regarding the biomass production while two are for the entire supply chain until leaving the mill/factory of the economic operator applying the standard. The examples provided in this Technical Report are not a comprehensive list.

These examples are informative and intended as help for an economic operator applying EN 16751. In practice, it is the business-to-business and/or the business-to-consumer relationship that determines the level of ambition, which can thus be both higher and lower than in these examples.

The level of detail in the responses in these examples differ. Since usually economic and administrative burdens are connected with acquiring the necessary information, in practice, the level of risk for significant negative sustainability impacts should be a guiding principle. In case the level of risk is deemed low or very low, the justification should be transparently documented.

Some indicators in EN 16751 may be wholly or partly covered by relevant legal requirements, national regulations or recognized best practice. One example is proven implementation of sustainable agricultural cultivation/good farming practice, including crop rotation on all agriculturally used areas according to Council Regulation (EC) No 73/2009 Cross Compliance, or according to national legislation. If the organization is certified under a voluntary certification system that covers one or more indicators required by EN 16751, this may be referenced in the response(s). If the organization is applying a management system such as EN ISO 14001, EMAS or EN ISO 50001, this may also be referenced in the responses.

As stated in 4.1 of EN 16751, in some cases the response to an indicator may be “not relevant” or “not applicable” together with a justification.

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In some cases, this is obvious and the justification can be just a couple of explanatory sentences.

**EXAMPLE**

Examples of such situations:

- A farmer has no employees. Therefore, the indicators regarding labour rights, working conditions and living conditions are not relevant/applicable.
- A forest owner does not use any irrigation (only water is precipitation). Therefore, the indicators regarding water quantity are not relevant/applicable.
- A processing plant is operating in an area where there are sufficient water resources available, both intra-annually (i.e. considering different seasons within a year) and inter-annually (i.e. considering several years). Therefore, the indicators regarding areas with water scarcity (aiming to secure water availability for human consumption and food production) are not relevant/applicable.

See also the following examples for more details on water availability in more complex cases, such as areas where the water availability varies over the year.

- In aquaculture (especially in sea water) impact on soil can be diminutive/not existent. Therefore, the indicators regarding soil are not relevant/applicable.

In other cases, however, “not relevant” or “not applicable” can only be the conclusion of a detailed procedure.

**EXAMPLE**

Examples of such situations:

- The statement if an economic operator acts in an area with water scarcity or water-rich area follows from the execution of the suitable “water criteria” or “water indicators” of EN 16751, respectively. These are 3.34 water availability, 3.35 water scarcity, 5.3. Water and 6.3. Water Use Rights. In doing so it needs to be emphasized that also seasonal fluctuations and/or deferrals in the water supply due to climate change, that are already discernible, have to be sufficiently taken into account. Moreover it needs to be explained how the distinction of an area with water scarcity or water-rich area was carried out. For the scope it should, where applicable, be taken into account if the admixture of irrigation water and/or production water can cause problems in the regions of origin of that water. The issue of conflicts between upstream and downstream riparians alongside irrigation channels should be addressed where necessary. If feasible, key figures for the efficiency of the water usage and for the access to water should be specified. For example:
  - Cubic meter of irrigation water per kilogram of biomass (dry matter)
  - Liter of drinking water per inhabitant and day

Key figures allow comparison of efficiency of productions in the same region.

**5 Examples of reporting****5.1 General**

The following three examples are detailed below:

- Bio-based supply chain – agricultural-based supply chain in Europe (5.2);
- Biomass production – sawn timber from Swedish forests (5.3); and



- Bio-based supply chain – cellulose pulp produced in Sweden (5.4).

## 5.2 Agricultural-based supply chain in Europe

This example covers an entire agricultural-based supply chain in Europe. It includes sustainability aspects from the agriculture (biomass production) and the following stages up to the final production of a bio-based product.

Verification:

- The compliance with this standard has been verified by: [NAME]
- First/ Second/ Third Party verification (choose option) according to ISO/EN xxx.

**Table 1 — Agricultural-based supply chain in Europe**

SUSTAINABILITY PRINCIPLES and CRITERIA	CORRESPONDING INDICATORS	RESPONSE	JUSTIFICATION/ LIST OF AVAILABLE DOCUMENTS	REMARKS / GUIDANCE / CLARIFICATION
<b>ENVIRONMENTAL CRITERIA</b>				
<b>Climate protection and air quality</b>				
<b>Principle: Promote good air quality and reduce GHG emissions.</b>				
Criterion: The economic operator provides information on how greenhouse gas (GHG) emissions and removals related to their operations are managed.	Indicator: Describe procedures taken to identify GHG emissions and removals related to their operations. List the identified emission sources and removals and quantify them if possible.	1) Life Cycle Assessment (LCA) is used for identifying and quantifying the main sources of GHG emissions.	1) LCA study on GHG accounting, report, calculations tools etc.	1) GHG accounting and management can be executed with tools free of charge like: <a href="http://www.biograce.net/">http://www.biograce.net/</a> or by external consultants, or by internal functions of the company.
	Indicator: Describe the measures taken to reduce GHG emissions listed under 5.2.2.2.1.	1) Changes in agricultural practices have been introduced. In particular, the company has introduced the Soil Organic Matter (SOM) management which means that SOM is not depleted in the medium/long run. This has direct	1) and 2) Internal documents, evidences about the implementation of the action described in the response column. 3) Certification that attests that the overall electricity consumption of the company	1) and 2) Measures to reduce GHG emissions can be identified after a GHG accounting execution through LCA or other guidelines (e.g. Greenhouse Gas Reporting Program). The economic operator decides the best compromise among GHG reduction and economic costs of the action. Regarding point 3) see, for example, the

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SUSTAINABILITY PRINCIPLES and CRITERIA	CORRESPONDING INDICATORS	RESPONSE	JUSTIFICATION/ LIST OF AVAILABLE DOCUMENTS	REMARKS / GUIDANCE / CLARIFICATION
		<p>consequences on GHG emissions management as well.</p> <p>2) A green procurement has been introduced with the aim to buy only the raw materials characterized by a low carbon footprint</p> <p>3) Increase up to 100 % of the company demand of renewable electricity</p>	comes from renewable sources.	following initiative: <a href="http://there100.org/re100">http://there100.org/re100</a>
Criterion: The economic operator provides information on how emissions to air are managed with the objective to promote good air quality.	Indicator: Describe the procedures taken to identify air pollutant sources and emissions. List the relevant air pollutant sources and emissions identified.	1) According to the national law any point of emission is subject to a periodic (generally annual) verification by an external laboratory or by the national organism. Each industry sector is subjected to a specific list of pollutants that must be verified.	1) Documents and report analysis regarding the pollutants that are periodically verified and their management (e.g. environmental management systems like ISO 14001 or EMAS).	1) In addition to the analysis requested by the law the economic operator may perform additional analysis and/or to develop a series of internal indicators to measure the efficiency of the process (e.g. kg NO <sub>x</sub> /kg of product). Based on this indicator it is possible to monitor the efficiency of the process and to plan possible interventions.
	Indicator: Describe the measures taken to reduce the air pollutant emissions listed under 5.2.2.3.1.	1) The economic operator has decided to introduce a further exhaust emission treatment for particulate matter since it is the most relevant pollutant	1) Documents and evidence of the action	

SUSTAINABILITY PRINCIPLES and CRITERIA	CORRESPONDING INDICATORS	RESPONSE	JUSTIFICATION/ LIST OF AVAILABLE DOCUMENTS	REMARKS / GUIDANCE / CLARIFICATION
<b>Water</b>				
<b>Principle: Conserve and protect water resources</b>				
Criterion: The economic operator provides information on how quality and quantity of water withdrawn and released are addressed.	Indicator: Describe procedures taken to identify potential impacts on water quality and quantity. Impacts to water quantity and quality should consider impacts to water sources and receiving bodies.	1) A scientific study along with University "X", has been undertaken so as to better identify the impacts of the economic operator on water bodies	1) Documents and evidence of the action	
	Indicator: Describe measures taken to address the impacts on water quality and quantity identified under 5.3.2.2.1.	1) The number of recycling cycles has been increased so as to reduce water withdrawals 2) Research activities are being carried out so as to utilize specific crops able to grow with reduced or zero irrigation water 3) A specific project for monitoring water withdrawals and quality of effluents has been implemented. The outcomes will be used for improving the wastewater treatment thus the quality of the effluent	1), 2) and 3) Documents and evidence of the action	1), 2) and 3) The evidence related to this point may be derived from other management system applied by the company (e.g. environmental management systems). Therefore, the reporting can be generated also by other systems.
<b>Soil</b>				

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SUSTAINABILITY PRINCIPLES and CRITERIA	CORRESPONDING INDICATORS	RESPONSE	JUSTIFICATION/ LIST OF AVAILABLE DOCUMENTS	REMARKS / GUIDANCE / CLARIFICATION
<b>Principle: Protect soil quality and productivity</b>				
Criterion: The economic operator provides information on how soil quality (e.g. organic matter and nutrients content in soil), productivity and erosion are addressed.	Indicator: Describe procedures taken to identify potential impacts on soil quality, productivity and soil erosion forces. List the relevant identified soil impacts.	1) Soil organic matter (SOM) is one of the most important indicators of soil quality. The economic operator has decided to maintain the level of SOM constant in the long run thanks to specific rotations and compost applications	1) Documents and evidence of the undertaken action (e.g. used model and documents that attest the application of compost)	1) SOM management can be handled based on simple models that can be derived from literature (e.g. Henin Depuis model). Based on the outcomes of the model the economic operator can set the appropriate SOM management
	Indicator: Describe measures taken to address those impacts on soil quality, productivity and soil erosion forces.	1) Changes in agricultural practices have been introduced like soil protection from erosion. This has been achieved through planting vegetation in winter.	1) Documents and evidences that attest the implemented changes in agricultural cultivation	1) Planting vegetation is the simplest and natural way to prevent soil erosion and it can be applied without any interference with the industrial crop
<b>Biodiversity</b>				
<b>Principle: Promote the positive and reduce the negative impacts on biodiversity</b>				
Criterion: The economic operator provides information on how biodiversity values are addressed within the area of operation and the environment directly influenced by the economic operator.	Indicator: Describe procedures to identify potential impacts on biodiversity. List the identified impacts on biodiversity.	1) This criterion is not relevant since the economic operator is already operating in a very anthropized area. 2) The economic operator has supported a research activity related to the study of lichen diffusion to be	2) Evidence, documents etc. attesting the research project, timing and outcomes	

SUSTAINABILITY PRINCIPLES and CRITERIA	CORRESPONDING INDICATORS	RESPONSE	JUSTIFICATION/ LIST OF AVAILABLE DOCUMENTS	REMARKS / GUIDANCE / CLARIFICATION
		used as bio-indicators.		
	Indicator: Describe measures taken to promote positive and reduce negative impact on the biodiversity.	1) The economic operator has decided to adhere to the principles of “green chemistry” by replacing organic solvent with water for the extraction of the biomass.	1) Evidence, documents etc. attesting the research project, timing and outcomes	
Criterion: The economic operator provides information on biomass removal from those areas designated as biodiversity protected areas under applicable national laws and regulations.	Indicator: List and document necessary permits obtained from the management authorities for operations in the protected areas, including a map showing: a) the location of the designated biodiversity-protected area where biomass removal is allowed; and b) the area where the economic operator removes biomass.	1) Not relevant.	1) No biomass from protected areas has been used.	1) This criterion is relevant only for those specific cases where biomass has to be removed from protected areas e.g. in order to maintain biodiversity
	Indicator: Describe measures taken to respect the biodiversity goals of the protected area, as described by	1) Not relevant.	1) No biomass from protected areas has been used.	1) This criterion is relevant only for those specific cases where biomass has to be removed from protected areas e.g. in order to maintain biodiversity