SLOVENSKI STANDARD
oSIST prEN 16214-3:2022

01-julij-2022

Merila za trajnostnost in zmanjševanje emisij toplogrednih plinov za biomaso za energijsko uporabo - Načela, merila, kazalniki in preskuševalniki - 3. del: Merila trajnostnosti, povezana z okoljskimi vidiki

Sustainability and greenhouse gas emission saving criteria for biomass for energy applications - Principles, criteria, indicators and verifiers - Part 3: Sustainability criteria related to environmental aspects

Nachhaltigkeitskriterien für die Herstellung von Biokraftstoffen und flüssigen Biobrennstoffen für Energieanwendungen - Grundsätze, Kriterien, Indikatoren und Prüfer - Teil 3: Biodiversität und Umweltaspekte im Zusammenhang mit Naturschutzzwecken

Critères de durabilité pour la production de biocarburants et de bioliquides pour des applications énergétiques - Principes, critères, indicateurs et vérificateurs - Partie 3: Biodiversité et aspects environnementaux liés aux objectifs de protection de la

Ta slovenski standard je istoveten z: **prEN 16214-3**

ICS:

13.020.99	Drugi standardi v zvezi z varstvom okolja	Other standards related to environmental protection
27.190	Biološki viri in drugi alternativni viri energije	Biological sources and alternative sources of energy

oSIST prEN 16214-3:2022 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Will supersede EN 16214-3:2012+A1:2017

English Version

Sustainability and greenhouse gas emission saving criteria for biomass for energy applications - Principles, criteria, indicators and verifiers - Part 3: Sustainability criteria related to environmental aspects

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 383.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 16214-3:2022) has been prepared by Technical Committee CEN/TC 383 “Sustainably produced biomass for energy applications”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16214-3:2012+A1:2017.

In comparison with the previous edition, the following technical modifications have been made:

In order to adapt the current edition to the sustainability criteria of European Commission Directive 2018/EU/2001, the recast of the Renewable Energy Directive (RED II), some sustainability criteria have been introduced and some reformulated. In particular, the RED II introduces sustainability for forest biomass and the directive has also been extended to include solid biomass.

This European standard comprises the following parts:

— prEN 16214-1, Sustainability and greenhouse gas emission saving criteria for biomass for energy applications — Principles, criteria, indicators and verifiers — Part 1: Terminology;

— CEN/TS 16214-2, Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers — Part 2: Conformity assessment including chain of custody and mass balance;

— prEN 16214-3, Sustainability and greenhouse gas emission saving criteria for biomass for energy applications — Principles, criteria, indicators and verifiers — Part 3: Sustainability criteria related to environmental aspects;

— EN 16214-4, Sustainability criteria for the production of biofuels and bioliquids for energy applications — Principles, criteria, indicators and verifiers — Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle analysis approach.

Introduction

In December 2018, the recast Renewable Energy Directive 2018/2001/EU (RED II) entered into force, as part of the Clean energy for all Europeans package, helping the EU to meet its emissions reduction commitments under the Paris Agreement. In RED II, the overall EU target for Renewable Energy Sources consumption by 2030 has been raised to 32 %.

The RED II defines a series of sustainability and greenhouse gas savings criteria that biomass for energy applications must comply with to be eligible for financial support by public authorities. Some of these criteria are the same as in the original RED, while others are new or reformulated. In particular, the RED II introduces sustainability criteria for forestry feedstocks as well as greenhouse gas savings criteria for solid and gaseous biomass fuels.

It is widely accepted that sustainability at large encompasses environmental, social and economic aspects. However, this standard series only cover a selection of environmental aspects since the standard series has been developed with the aim to assist EU Member States and economic operators with the implementation of RED II. This standard series is therefore limited to certain aspects relevant for a sustainability assessment of biomass produced for energy applications. This means that compliance with this standard series (or parts thereof) alone does not substantiate claims of the biomass being produced sustainably.

There is a limited set of environmental aspects for biomass produced from agriculture and from forestry, which are covered by criteria in RED II, i.e. in article 29. There are, of course, many more sustainability issues that can be relevant to assess for general biomass production, including in agriculture and forestry. In cases where further advice is desired, ISO 13065 *Sustainability criteria for bioenergy,* may be a relevant standard to consult as it provides a framework for considering environmental, social, and economic aspects that can be used to facilitate the evaluation and comparability of bioenergy production and products, supply chains and applications.

Biomass can originate from various sources, as seen in Figure 1. This document covers agricultural biomass and forest biomass, as these sources have sustainability criteria requirements laid down in RED II. The sustainability criteria of RED II are connected to agricultural and forest land.

Biomass from aquaculture and fisheries or from other land types such as gardens, parks, industrial or infrastructural land as well as the biodegradable fraction of waste, e.g. from forest industry, municipal waste, are outside the scope of this document.

However, most of the biomass types are covered by greenhouse gas savings requirements in RED II. These requirements are dealt with in Part 4 of this standard series. Traceability is dealt with in Part 2.

The sustainability and greenhouse gas emission savings criteria must be met in order for the biomass to be counted towards the overall target for renewable energy and to be eligible for financial support by public authorities.

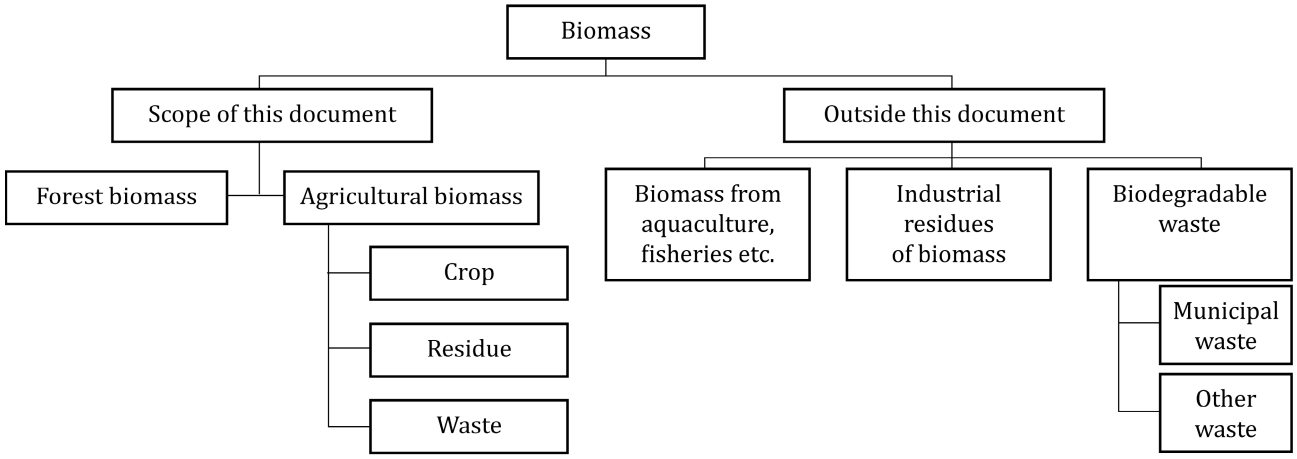

Figure 1 — An illustrative flowchart for different types of biomass

1 Scope

This document defines procedures, criteria and indicators meeting the sustainability criteria of European Commission Directive 2018/EU/2001 (RED II), the recast of the Renewable Energy Directive, for agricultural biomass and forest biomass for energy applications, i.e. biofuels, bioliquids and biomass fuels. This document is applicable to production, cultivation and harvesting of biomass from agricultural land and forest land for biofuels, bioliquids and biomass fuel production.

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.

prEN 16214-1:2022, *Sustainability and greenhouse gas emission saving criteria for biomass for energy applications — Principles, criteria, indicators and verifiers — Part 1: Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 16214-1:2022 apply.

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

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

4 Principle

This document contains procedures with underlying questionnaires and indicative data forms to provide the required evidence for the production, cultivation and harvesting of biomass for energy applications in order to comply with the sustainability criteria of RED II.

Biomass from agricultural and forest land need to fulfil the sustainability criteria as presented in this document irrespective of their geographical origin. Information on geographic origin and feedstock type shall be documented. A verification shall be done, ensuring that the biomass is not intentionally modified at the expense of the main product or discarded so that the material becomes a residue or waste.

NOTE Figure 2 shows an illustrative flowchart for the biomass types covered by this document. The numbers refer to the sustainability requirements in RED II.

To show compliance with the sustainability criteria, as a first step, a distinction between agricultural biomass and forest biomass shall be made. Agricultural biomass is produced within agriculture and can be crops, residues from agricultural land or wastes from agricultural land. Forest biomass is all biomass produced within forestry, including residues from forestry.

For agricultural biomass (Clause 5) a distinction between crop, residue and waste shall be made. Agricultural waste and agricultural residues shall originate from land under a soil monitoring plan or a soil management plan (5.2). For agricultural crops and agricultural residues, a location check shall be carried out (5.3). In case this is positive the respective procedures as laid down in 5.4 shall be followed. These procedures include functional checks and impact checks (see 5.5-5.7).

For forest biomass (Clause 6) the economic operator needs to distinguish if there is national legislation covering the requirements or if the requirements can be met at forest sourcing level for sustainable harvesting (6.2) and for carbon stock maintenance (6.3), respectively.

To show compliance with the sustainability criteria, the economic operator shall take the appropriate steps in order to minimize the risk of using unsustainable agricultural biomass or forest biomass for the production of bioenergy. To that end, the economic operator shall put in place a risk-based approach.

These checks are based on criteria, indicators, and verifiers. All criteria of the relevant clause shall be met. If a criterion is not applicable/necessary, justification/evidence shall be provided.

The listed indicators should be used, where possible.

If an indicator cannot be used, evidence/justification shall be provided. Which indicators and verifiers are used shall be chosen and justified depending on the respective location. If an additional indicator is used, this shall be justified in the context of the RED II.

Each respective procedure is illustrated by a flowchart. The flowcharts present the steps to be taken to provide evidence that the raw material is taken from a source in compliance with the requirements of the RED II.

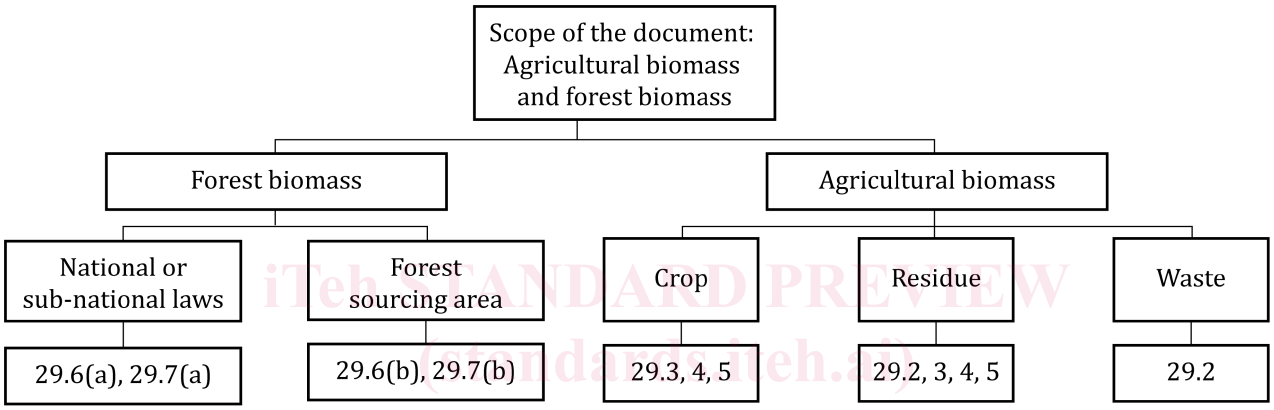

Figure 2 — An illustrative flowchart for the biomass types covered by this document. The numbers refer to the sustainability requirements in RED II

5 Agricultural biomass

5.1 Check the type of the agricultural biomass

It shall be identified whether the raw material originating from agricultural land is crops, residues, or waste.

Agricultural biomass shall be identified as crop if the material originates from agricultural land and it is not identified as residue or waste.

The material shall be identified as agricultural residue if the material originates from agricultural land and is not the end product or products that a production process directly seeks to produce. The economic operator shall show that production of the agricultural residue is not a primary aim of the production process and the process has not been deliberately modified to produce it. It can be straw and other natural non-hazardous agricultural material which do not harm the environment or endanger human health.

The material shall be identified as agricultural waste if the material originates from agricultural land and the holder discards, or intends to discard, or is required to discard it.

A verification shall be done, ensuring that materials are not intentionally modified at the expense of the main product or discarded so that the material becomes a residue or waste.

Evidence shall be provided in reliable documentation (e.g. product name, on-site consultation, third party issued certificate, authority declaration, self-declaration) that the agricultural biomass meets the criteria of crop, residue or waste respectively.

For agricultural biomass identified as waste and/or residues it is required that the economic operators or national authorities have soil monitoring plans or soil management plans covering the area in question (5.2). For agricultural biomass identified as residue and/or crop additional location check is needed (5.3).

5.2 Agricultural waste and agricultural residues

A check shall be done whether the economic operators or national authorities have soil monitoring plans or soil management plans in place covering the area of origin to address the impacts on soil quality and soil carbon.

NOTE 1 Further guidance is available in ISO 13065:2015, Annex C.

If the functional check is positive, the economic operator shall provide evidence such as which soil monitoring or soil management plan that is in place covering the specific area (agricultural land) where the waste or residue originates from.

NOTE 2 The specific area can be a country if the monitoring is made on a national level, covering all agricultural land (i.e. arable land, area of pasture, and meadows) in the country.

If the functional check is negative, this agricultural waste or residue is not in compliance with RED II and shall therefore not be considered sustainable.

5.3 Agricultural residues and agricultural crop

For agricultural biomass identified as crop and/or residue, it shall be distinguished if it originates from any of the specific land types described in RED II.

Check whether the area in question falls under one or more of the following land types (spanning more than one hectare) in or after January 2008:

a) primary forest; follow the procedures laid down in 5.4.1.3;

b) highly biodiverse forest and other wooded land; follow the procedures laid down in 5.4.1.4;

c) areas for nature protection purposes; follow the procedures laid down in 5.4.2;

d) highly biodiverse grasslands; follow the procedures laid down in 5.4.3;

e) land with high carbon stock (wetlands, continuously forested area, sparsely forested area); follow the procedures laid down in 5.4.4.4, 5.4.4.2, and 5.4.4.3 (respectively); and

f) peatlands; follow the procedures laid down in 5.4.4.5.

An example of the whole check is visualized in Figure 3.

Differences and overlaps between different types of land depending on canopy cover (as described in RED II), are illustrated in Figure 4.

If the area in question does not belong to any of the six types of areas mentioned above the agricultural biomass is in compliance with the land related sustainability criteria in RED II.

The output of the location check is evidence shown in reliable documentation (e.g. maps, Geographic Information Systems GIS data, landscape assessment, on-site consultation, third party issued certificate, authority declaration, self-declaration) that the area is inside or outside of the areas as defined above.

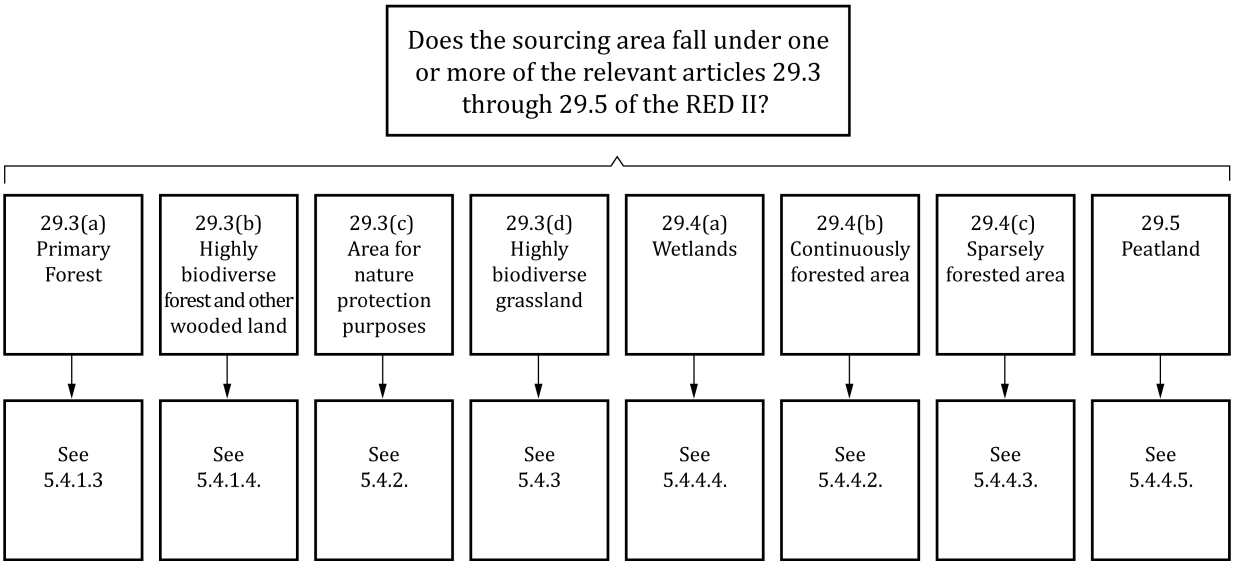

Figure 3 — Location check to be done for crop and/or residues of agricultural biomass

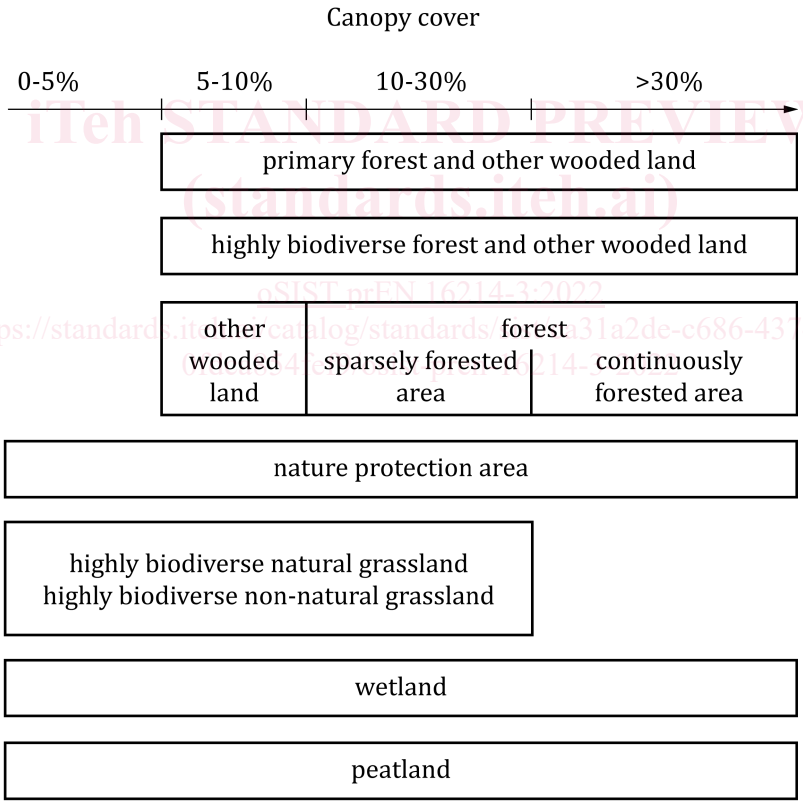

Figure 4 — Differences and overlaps for land types depending on canopy cover as described in RED II

Each of the land types in Figure 3 shall be checked. Some proofs are less elaborate than others.