

Scheme principles for sustainable biomass production in the food industry

Version: RC² 4.1

© REDcert GmbH 2024

This document is publicly accessible at www.redcert.org.

Our documents are protected by copyright and may not be modified. Nor may our documents or parts thereof be reproduced or copied without our consent.

Document title: "Scheme principles for sustainable biomass production in the food industry"

Version: RC² 4.1

Valid from: 1st of January 2025

The document is a read-only version and is intended solely as a working aid to better understand the scheme requirements of the REDcert² scheme. The translated documents cannot be used as a basis for any legal claims. The legally binding basis for certification under the REDcert² scheme is exclusively the current versions of the English-language documents published on the REDcert website at www.redcert.org.

Table of contents

1	Introduction	6
2	Definition of terms.....	7
2.1	Voluntary module Responsible Farming.....	7
3	Requirements for sustainable biomass production	8
3.1	Land with high biodiversity value	8
3.1.1	Primary forests and other wooded land	9
3.1.2	Highly biodiverse forests and other wooded areas	9
3.1.3	Areas designated by law or by the relevant competent authority for nature conservation purposes	12
3.1.4	Areas designated for the protection of rare, threatened or endangered ecosystems or species	12
3.1.5	Highly biodiverse grassland	13
3.1.6	Land with high above-ground or underground carbon stock.....	18
3.1.7	Wetlands.....	18
3.1.8	Forested areas.....	19
3.1.9	Land that was peatland in January 2008	21
4	Operations management	22
4.1	Environmentally responsible biomass production.....	24
4.2	Groundwater protection	26
4.3	Water protection and management	27
4.4	Irrigation management.....	27
4.5	Fertiliser use	29
4.6	Use of sludge	30
4.7	Handling and use of plant protection products	30
4.8	Integrated pest management	33
4.9	Use of seeds and planting stock.....	33

4.10 Soil management.....34

4.11 Prevention of soil erosion35

4.12 Preservation of organic matter and soil structure37

4.13 Soil quality and carbon protection41

4.14 Social responsibility.....43

4.15 GHG-oriented resource and energy use (energy efficiency)48

4.16 Waste management49

5 First gathering points 50

5.1 General requirements.....50

5.2 Documentation requirements51

5.2.1 Incoming sustainable biomass51

5.2.2 Internal documentation.....53

5.2.3 Outgoing sustainable biomass.....53

6 Suppliers 54

6.1 General requirements.....55

6.2 Documentation requirements55

6.2.1 Incoming sustainable biomass55

6.2.2 Outgoing sustainable biomass.....56

7 Interfaces/last interface 56

7.1 Documentation requirements56

7.1.1 Self-monitoring of agricultural businesses57

7.1.2 Incoming sustainable biomass57

7.1.3 Internal company information.....58

7.1.4 Outgoing sustainable biomass.....58

8 Scheme principles for the mass balance 59

9 Scheme principles for the GHG calculation 60

10 Scheme principles for neutral inspections 60

10.1 Evaluation of the audit results	61
10.1.1 REDcert ² core requirements	62
10.1.2 Determining the SAI compliance level	64
10.1.3 Responsible Farming	65
11 Relevant documents	66
12 Revision Information for Version 4.1	67

1 Introduction

In order to make a significant contribution to conserving resources and implementing social aspects along the entire supply chain, the food and animal feed industry is increasingly focussing on the use of sustainably produced and certified biomass.

REDcert² certification enables companies to transparently demonstrate that they are making an important contribution to conserving resources and reducing greenhouse gases. REDcert² certification is based on the principles of the REDcert-EU system for biofuels (which in turn based on the European Renewable Energy Directive) and the criteria of the Sustainable Agriculture Initiative (SAI). In addition, a module was developed together with QS Quality scheme for food to ensure the compatibility of the standards.

Responsible Farming

Requirements of the optional extension module **Responsible Farming** are highlighted in this document. Compliance with these requirements is only mandatory for participants in the extension module. Participation can be used, for example, to demonstrate the assumption of further responsibility or to strive for conformity with other certification schemes.

The requirements criteria outlined in the present document apply to the entire production chain.

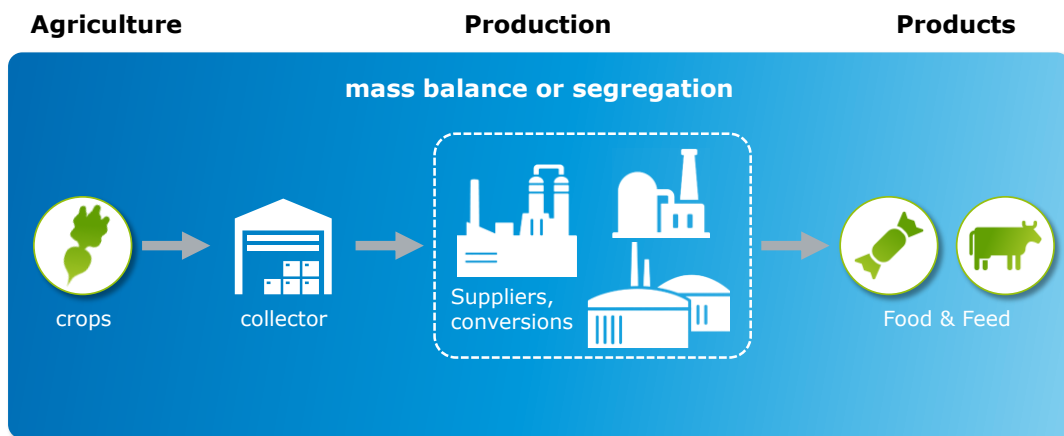


Figure 1. Chain of Custody under REDcert²

In contrast to the REDcert-EU system, the REDcert² system does not require the disclosure of GHG emissions or the fulfilment of prescribed requirements for the GHG reduction potential of certain substances. However, GHG emissions can optionally be reported under that scheme.

2 Definition of terms

In order to establish a common understanding of the terms and definitions used in these scheme principles, please refer to the REDcert-EU document "Definitions in the REDcert-EU scheme".

The diagram below provides an overview of the structure and function of the REDcert² scheme principles:

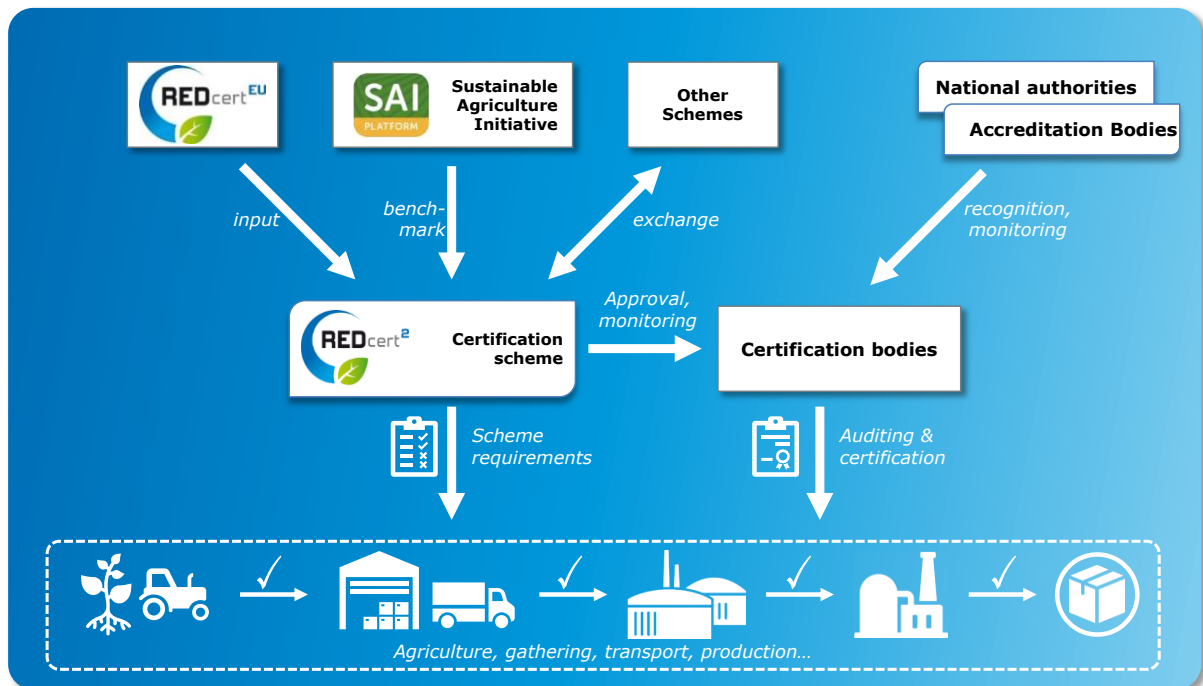


Figure 1. Functionality of the system.

2.1 Voluntary module Responsible Farming

The voluntary "Responsible Farming" module sets additional requirements for the sustainable production of agricultural products and the social responsibility of the companies concerned, thereby expanding the scope of the scheme to include the FEFAC criteria.¹ As part of the REDcert² scheme, the focus is also placed on ecologically and socially responsible farming: Arable farming according to the basic requirements for farm management, crop protection according to the points of integrated crop protection, optimisation of social

¹ <https://fefac.eu/resources/professional-guidelines/>

conditions for employees, legal land use and compliance with environmentally friendly measures are further sub-aspects.

The “*Responsible Farming*” extension module is aimed at agricultural producers and is generally suitable for all crops worldwide. Downstream companies that pass on certified goods in their value chain must label them in such a way that they cannot be confused with other flows of goods. The value chain models *Identity Preservation*, *Segregation* or *Mass Balance* according to ISO 22095:2020² must be applied and documented.

A company seeking certification in accordance with the “*Responsible Farming*” criteria has the opportunity to demonstrate environmentally and socially responsible production to the recipients of the goods, as described above. The module helps companies to improve their processes, reduce their environmental impact and improve social conditions for their employees at the same time.

There are no disadvantages if a voluntary criterion is not met. This means that an unfulfilled voluntary target in the REDcert² assessment logic does not represent a critical violation of the scheme principles and does not initiate an action plan. Instead, companies are offered the opportunity to proactively provide evidence of additional services rendered.

3 Requirements for sustainable biomass production

The land-related requirements criteria set forth in revised Directive (EU) 2018/2001 (Article 29 of revised Directive (EU) 2018/2001) are designed to ensure that no new land designated for the protection of natural habitats or containing significant carbon stocks is converted for cultivating biomass for energy use.

3.1 Land with high biodiversity value

Sustainable biomass cannot be made from raw materials obtained from land with high biodiversity value, namely land that had one of the following statuses on or after 01 January 2008, whether or not the land continues to have that status.

² ISO 22095:2020-10 (Chain of custody - General terminology and models)

3.1.1 Primary forests and other wooded land

Primary forests and other wooded land are forests where native tree species grow and there is no clearly visible indication of human activity and ecological processes are not significantly disturbed.

Native tree species are tree species growing within their natural growing range in places and under climate conditions to which they are adapted through their natural evolution without human intervention.

Native tree species do not include:

- tree species introduced into areas by humans where they never would have grown without human intervention or
- tree species and/or cultivated varieties that would not have grown in these places or under these climate conditions without human intervention even if these places and/or climate conditions are still within the wider geographic growing range

Clearly visible indications of human activity are

- economic use (e.g. wood harvest, forest clearance, land-use change)
- severe fragmentation by infrastructure e.g. roads, power lines and
- disruptions to the natural biodiversity (e.g. significant presence of non-native plants and animal species)

Activities performed by indigenous populations and other traditional sections of the population whose livelihoods depend on the use of forest products who have a minor impact on the wooded land (e.g. collection of wood and non-wood products, use of a small number of trees and small-scale clearance as part of traditional systems of use) are not considered clearly visible indications of human activity as long as the impact on the forest is minor.

3.1.2 Highly biodiverse forests and other wooded areas

Highly biodiverse forests and other wooded areas are non-degraded, species-rich forest or wooded land or areas designated by the competent authorities as highly biodiverse forest or wooded land.

Biological diversity is defined by the Convention on Biological Diversity as

“variability among living organisms from all sources, [...]; this includes diversity within species, between species and of ecosystems.”

Biodiversity thus does not just refer to species of flora and fauna (animals, higher plants, mosses, lichens, fungi and microorganisms) per se. Many species are also further distinguished by sub-species and regional varieties and are divided into genetically different populations. Biodiversity therefore includes intra-species genetic diversity as well as the habitats of organisms and ecosystems. In simplified terms, biodiversity thus describes the levels diversity of habitats, diversity of species and genetic diversity within species.

Not degraded means areas not characterised by long-term loss of biodiversity due to, for instance, overuse, mechanical damage to the vegetation, soil erosion or loss of soil quality.

Species-rich areas are any of the following:

- a habitat of significant importance to critically endangered, endangered or vulnerable species as classified by the International Union for the Conservation of Nature Red List of Threatened Species or other lists with a similar purpose for species or habitats laid down in national legislation or recognised by a competent national authority in the country of origin of the raw material
- a habitat of significant importance to endemic or restricted-range species
- a habitat of significant importance to intra-species genetic diversity
- a habitat of significant importance to globally significant concentrations of migratory species or congregatory species within the meaning of Commission Regulation (EU) 1307/2014
- a regionally or nationally significant or highly threatened or unique ecosystem

Forests or wooded areas in the following regions of the European Union must, without exception, be considered highly biodiverse forests or wooded areas:

- habitats listed in Annex I to Directive 92/43/EEC
- habitats with great significance for animal and plant species of Community (EU) interest (Annexes II and IV of Directive 92/43/EEC)
- habitats of importance for wild birds listed in Annex I to Directive 2009/147/EC of the European Parliament and of the Council

Land that is considered highly biodiverse may be used for the production of raw materials whenever economic operators can provide evidence:

- that the harvesting of the raw material is necessary to preserve the highly biodiverse status or
- that management practices do not present a risk of causing biodiversity decline of the land.

This can be done through:

- check of compliance with the requirements for protected areas by a certification body
- provision of an official document from the authority responsible for the protected area
- similar confirmation by the competent authority as part of an inspection whereby the agricultural biomass producers have to be able to provide the authority with the contact people responsible and their telephone numbers
- Extract from designation of a protected area

A precautionary approach must always be taken when determining the potential biodiversity of forests and other wooded land. The auditor must assess whether the evaluation of biodiversity is necessary. If the auditor determines that an assessment of the status of forests and other wooded land is necessary, it must be performed by an external and independent expert without any conflicts of interest with the activity being audited, who may be a member of the auditing team. The evaluation and the result must then be checked as part of the audit.

The requirements that apply to the REDcert auditors and experts are described in detail in the REDcert-EU document "Scheme principles for neutral inspections". The verification requirements for assessing the status of the land are described in detail in the REDcert-EU document "production of biomass, biofuels, bioliquids and biomass fuels" in the section "Verification of the status of land".

The use of biomass from forests or from wooded areas with high biological diversity rich in trees is only permitted if it can be demonstrated that the sourcing of this raw material does not have adversely affect biological diversity.

Information about the biodiversity status can still be obtained from the land-use codes specified in the farm's application for the direct support scheme, special area-related support measures, agricultural and environmental measures, participation in contractual nature conservation management or nature conservation programmes, etc. as well as in other applications submitted to or assessments from government agencies, e.g. the federal or regional nature conservation authority.

3.1.3 Areas designated by law or by the relevant competent authority for nature conservation purposes

Areas serving purposes of nature conservation have been designated, by law or by the competent authority, for the purposes of nature protection, and land that has been recognised by the Commission of the European Communities for the protection of rare, threatened or endangered ecosystems in accordance with the second subparagraph of Article 29 (4) of revised Directive (EU) 2018/2001. In many countries, areas used for nature conservation purposes are differentiated by size, conservation function and conservation objectives.

The verification requirements for assessing the status of the land are described in detail in the REDcert-EU document "production of biomass, biofuels, bioliquids and biomass fuels" in the section "Verification of the status of land".

Biomass may be produced on land that serves nature conservation purposes as long as evidence is provided that the production of that raw material did not interfere with the stated nature conservation purposes.

3.1.4 Areas designated for the protection of rare, threatened or endangered ecosystems or species

These are areas designated for the protection of rare, threatened or endangered ecosystems or species recognised by international agreements or included in lists drawn up by intergovernmental organisations or the International Union for the Conservation of Nature, subject to their recognition in accordance with the second subparagraph of Article 30(4) of revised Directive (EU) 2018/2001.

Exceptions are possible if evidence is provided that the production of that raw material did not interfere with the stated nature conservation purposes.

3.1.5 Highly biodiverse grassland

Sustainable biomass cannot be produced from raw material obtained from land that is larger than one hectare and that was protected as highly biodiverse grassland on or after 01 January 2008, whether or not the land still has that status. Areas smaller than one hectare are exempt from this prohibition on use.

Responsible Farming

In keeping with the requirements of the above-mentioned QS system and its add-on module *Soy^{plus}* (benchmarking), the exception for areas smaller than one hectare no longer applies. If areas smaller than one hectare have been subject to a land-use change and are nonetheless of a nature to fulfil the requirements of the QS module *Soy^{plus}*, they must be documented.

Article 1(1) of Commission Regulation (EU) No 1307/2014 defines **grassland** as terrestrial ecosystems dominated by herbaceous or shrub vegetation for at least five years continuously. It includes meadows or pasture that is cropped for hay but excludes land cultivated for other crop production and cropland lying temporarily fallow. "Human intervention" means managed grazing, mowing, cutting, harvesting or burning. The term "grassland" also excludes continuously forested areas as defined in Article 29(4)(b) of revised Directive (EU) 2018/2001, except in the case of agroforestry systems which include land-use systems where trees are managed in agricultural structures together with crop or livestock production systems. The dominance of herbaceous or shrub vegetation means that their combined ground cover is greater than the canopy cover of trees.

In this context **natural highly biodiverse grassland** means grassland that:

- would remain grassland in the absence of human intervention
- maintains the natural species composition and ecological characteristics and processes

Furthermore, **non-natural highly biodiverse grassland** means grassland that:

- would cease to be grassland in the absence of human intervention

- is not degraded, that is to say it is not characterised by long-term loss of biodiversity due to for instance overgrazing, mechanical damage to the vegetation, soil erosion or loss of soil quality
- is species-rich, that is to say:
 - a) a habitat of significant importance to critically endangered, endangered or vulnerable species as classified by the International Union for the Conservation of Nature Red List of Threatened Species or other lists with a similar purpose for species or habitats laid down in national legislation or recognised by a competent national authority in the country of origin of the raw material
 - b) a habitat of significant importance to endemic or restricted-range species
 - c) a habitat of significant importance to intra-species genetic diversity
 - d) a habitat of significant importance to globally significant concentrations of migratory species or congregatory species
 - e) a regionally or nationally significant or highly threatened or unique ecosystem

As an exception to the rule, harvest in non-natural species rich grassland is permitted if convincing evidence is provided that the harvesting of the raw material is necessary to preserve its status as highly biodiverse grassland. Economic operators must prove that harvesting of the raw material is necessary to preserve its grassland status and that current management practices do not present a risk of causing biodiversity decline of the grassland. Where economic operators are unable to provide the evidence, they shall provide evidence that they have been granted permission by the relevant competent authority, or designated agency, to harvest the raw material in order to preserve the highly biodiverse grassland status.

Alternatively, a permit from the competent authority to harvest the raw material may be submitted to maintain the status of high biodiversity grassland. Auditors verify whether land is high biodiversity grassland within the meaning of Article 29(3)(d) of revised Directive (EU) 2018/2001 and whether the land is or has been highly biodiverse grassland at any moment since 01 January 2008.

Grassland in the following geographical ranges of the European Union must always be considered highly diverse grassland:

- habitats listed in Annex IV to Directive 92/43/EEC

- habitats with great significance for animal and plant species of Community (EU) interest (Annexes II and IV of Directive 92/43/EEC)
- habitats of importance for wild birds listed in Annex I to Directive 2009/147/EC of the European Parliament and of the Council

For all land which was grassland according to the above definition on 01 January 2008 or has become grassland in the meantime, it needs to be established whether the grassland would remain or cease to be grassland in the absence of human intervention in the case of “natural highly biodiverse grassland” and “non-natural highly biodiverse grassland” respectively.

Where land would remain or (if it has been converted) would have remained grassland in the absence of human intervention and is located in any of the geographic ranges listed in Article 2 of Commission Regulation (EU) No 1307/2014, it must be considered to be or to have been natural, highly biodiverse grassland. For land that is located outside these areas, it must be determined whether the grassland, in the absence of human intervention, would maintain or would have maintained the natural species composition and ecological characteristics and processes. Where that is the case, the land must be considered to be, or to have been, natural, highly biodiverse grassland. **Biomass from land that was highly biodiverse grassland on or after 01 January 2008 cannot be used for the production of sustainable biomass.**

In the event that the grassland would not remain grassland in the absence of human intervention and the harvesting of the raw material is necessary to preserve its grassland status, no further evidence is necessary to show compliance with Article 29(3)(d) of revised Directive (EU) 2018/2001 even if the grassland is located in the ranges specified in Article 2 of Commission Regulation (EU) No 1307/2014. Artificially created grassland with high biodiversity value must be identified as such by the competent authority.

If the harvesting of raw material is not necessary to preserve the grassland status or the grassland has been converted, e.g. into cropland used for the production of raw materials, it has to be determined whether the grassland is or has been highly biodiverse:

- If the land is located in the ranges specified in Article 2 of Commission Regulation (EU) No. 1307/2014, the grassland must be considered non-natural highly biodiverse grassland.

- If the land is located outside these areas, it needs to be determined whether, according to the criteria laid down in Article 1(3) and (4) of Commission Regulation (EU) No 1307/2014, the land is or has been degraded and/or species-rich. If the land is, or was before its conversion, species-rich and not degraded, it has to be considered non-natural highly biodiverse grassland. If the grassland is or has been non-natural highly biodiverse grassland, raw materials from this area cannot be regarded as compliant with the sustainability criteria.

If grassland has already been converted to cropland, it is not possible to assess the characteristics of the land itself. Verifying compliance with the criteria for highly biodiverse grassland requires some technical knowledge that goes beyond the expertise that can be expected of the auditors verifying the accuracy of the claims made by the economic operators.³ This proof can be furnished in the form of approvals or certificates from state authorities relating to changes in grassland status which were issued with due consideration to the aspect of biodiversity. This means a precautionary approach must be taken when assessing whether or not the grassland was highly biodiverse: the auditor “must judge whether an assessment of highly biodiverse grassland is necessary”. And if an assessment is necessary, it must be conducted by a qualified independent expert consulted in addition to the auditor.

Where grassland has already been converted to cropland and it is not possible to assess the characteristics of the land itself through information available from the national competent authorities or satellite imagery, the auditor must consider such land as not having been highly biodiverse grassland at the moment of conversion.

The assessment and the result must then be checked as part of the audit. The requirements that apply to the REDcert auditors and the experts are described in detail in the REDcert-EU document “Scheme principles for neutral inspections”.

Information about an area’s grassland status can still be obtained from the land-use codes specified in the farm’s application for the direct support scheme, special area-related support measures, agricultural and environmental measures, participation in nature conservation agreements or programmes, etc. as well as in other applications submitted

³ European Commission, Directorate-General for Energy: Letter to the voluntary certification schemes with guidance on how to demonstrate proof of the protection of high biodiversity grassland (29 January 2015) at <https://ec.europa.eu/energy/sites/ener/files/documents/PAM%20to%20vs%20on%20HBG.pdf> (accessed on 30 August 2022)

to or assessments issued by government agencies, e.g. the regional or local nature conservation authority.

However, the legally enshrined bans on ploughing and conversion (e.g. regulations governing the preservation of permanent grassland relevant to conditionality (formerly cross compliance); grassland habitat types in special areas of conservation which have special protection under nature conservation laws; preservation of permanent grassland/greening; areas protected by nature conservation laws delineated in protected area ordinances, etc.) always have to be taken into account.

3.1.6 Land with high above-ground or underground carbon stock

Sustainable biomass must not be made from raw materials obtained from land with high carbon stock, namely land that had one of the following statuses on or after 01 January 2008, whether or not the land continues to have that status.

3.1.7 Wetlands

Wetlands are land that is covered with or saturated by water permanently or for a significant part of the year. These provisions do not apply if, at the time the raw material was obtained, the land had the same status as it had on 01 January 2008.

Wetlands include, in particular, swamps, marshes or bogs, as well as other bodies of water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

- “Covered with water” means that water is visible on the surface as surface water.
- The soil is “saturated by water” if it is completely inundated with water and, as a result, moisture is present at the surface but no shallow pools form.
- This state is evident throughout the entire year for areas that are permanently covered with or saturated by water.
- This state is not evident throughout the entire year for areas that are covered with or saturated by water for a significant part of the year. “A significant part of the year” means that the covering or saturation with water lasts for such a considerable portion of the year that the dominant organisms are adapted to moisture or reduced conditions. This applies, in particular, to shallow water areas, coastal areas, swamps, bogs, fens and moors.

3.1.8 Forested areas

- a) Continuously forested areas, i.e. land spanning more than one hectare with trees higher than five metres and a canopy cover of more than 30%, or trees able to reach those thresholds in situ (Article 29 (4) (b) of revised Directive (EU) 2018/2001). They do not include land that is predominantly under agricultural or urban land use (Communication from the European Commission 2010/C 160/02).⁴ "Land under agricultural use" in this context refers to tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations and agroforestry systems when crops are grown under tree cover.
- b) Land spanning more than one hectare with trees higher than five metres and a canopy cover of between 10% and 30% (known as "sparsely forested areas"), or trees able to reach those thresholds in situ, unless evidence is provided that the carbon stock of the area before and after conversion is such that, when the methodology laid down in part C of Annex V to revised Directive (EU) 2018/2001 is applied, the conditions laid down in Article 29(10) of that directive would be fulfilled (Article 29(4)(c) of revised Directive (EU) 2018/2001).

Canopy cover is the degree to which an area is covered by the layer of branches and foliage at the top of a forest's trees. A tree's cover corresponds to the extent its crown. The extent of a crown can be estimated or measured. When determining the percentage of canopy cover within a forest, the vertical projection of all crowns is used.

The status of forested areas includes all development stages and ages. It is possible for the canopy cover to fall below 10% or 30% temporarily in the course of forestry use or as a result of a natural disaster (e.g. storm damage). This does not, however, change the land's status as a forested area as long as reforestation or natural rejuvenation is assured within a reasonable amount of time.

⁴ "Land under agricultural use" in this context refers to tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations and agroforestry systems when crops are grown under tree cover (Communication from the European Commission 2010/C 160/02).

The canopy cover expressed as a percentage denotes the average canopy cover of a forest area; it corresponds to an area with a homogeneous canopy cover. If an area has measurably different canopy covers, it must be broken down into sub-areas each with homogenous canopy covers to determine the average canopy cover. The average canopy cover is then derived from the canopy covers of the sub-areas.

The total size of the forested area has to be considered regardless of how much of the forested area lies within the farmed areas or cropland. Accordingly, the total size applies as a standard for the thresholds listed here for 10% cover (subparagraph (b) – sparsely forested) or 30% cover (subparagraph (a) – continuously forested). If the total size of the forested area is larger than one hectare and if the entire area has trees higher than five metres, the area, and every part situated within a framed area or cropland, is classified as forested area. Even if only 0.5 ha of the forested area lies within the farmed area, those 0.5 ha have to be classified as forested area as does the entire area.

Continuously forested areas must not be converted, even if national regulations allow this.

Short-rotation plantations are not subject to the regulation set forth in Article 29(4)(b) and (c) of revised Directive (EU) 2018/2001, because they are classified as permanent crops and thus part of the agricultural land, unless they are defined differently by law in the country of origin.

The provisions set forth in that paragraph of revised Directive (EU) 2018/2001 (Article 29(4)(a) to (c)) do not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008.

3.1.9 Land that was peatland in January 2008

Sustainable biomass must not be made from raw material obtained from land that was peatland on 01 January 2008 or has been since.

An exception is possible if evidence is provided that:

- the land had been completely drained on 01 January 2008 or
- the land has not been drained since 01 January 2008.

This means that, for peatland that was partially drained on 01 January 2008, subsequent deeper drainage, affecting soil that was not already fully drained, would constitute a breach of the criterion.⁵

Peat itself is not considered biomass.

Peatland soil is soil that, when analysed up to a depth of 60 cm, exhibits organic material (peat substrate) in horizontal layers with a total thickness of at least 30 cm. The mass of the organic material is at least 20% organic carbon in the fine soil.

Drainage is defined as a reduction of the average annual water level due to increased water loss or a reduced water supply resulting from human activities or installations both inside and outside an area.

Peatland that was already used as cropland before the cut-off date may be used for biomass cultivation as long as evidence is provided that the cultivation and harvest of that raw material did not require land to be drained that was previously not drained.

⁵ Communication from the European Commission 2010/C 160/02

4 Operations management

The support guidelines of the Common Agricultural Policy (CAP) of the European Community were passed for market-related expenses and direct support as well as the development of rural areas. The objectives of the CAP are both economic and social in nature. Because those contractually established objectives cannot be fulfilled to the same extent at the same time, legislators have considerable discretionary power to implement current policy priorities. Agenda 2000 and greening, for example, have reinforced other issues such as policy for rural areas, promotion of environmental measures and food security, conditionality and modulation for bonus payments, mandatory crop diversification, preservation of permanent grassland and land use to benefit the environment.

The central support instrument in the implementation of the shared EU priorities for the development of rural areas is the European Agricultural Fund for Rural Development (EAFRD).

Agricultural producers who are subject to the conditionality requirements (formerly cross-compliance requirements) and apply for funding (direct payments) must comply with provisions on protecting the environment, animal welfare, food and animal feed safety, soil protection, water law and "minimum activity on agricultural land". In all EU member states, the conditionality regime (formerly the cross-compliance regime) includes:

- statutory management requirements, taken from 13 legal acts (directives and regulations) of relevance to agricultural producers in the areas of environmental protection, food and animal feed safety, tagging and registration of animals, animal disease control, the use of PPPs and animal welfare
- standards for maintaining agricultural land in good agricultural and environmental condition (GAEC), which include nine standards that aim to, among other things, reduce soil erosion, prevent the removal of landscape elements, replant land taken out of production and protect bodies of water
- conditionality/greening regulations to preserve permanent grassland

Compliance with these requirements is monitored by the relevant authorities (e.g. veterinarian agencies, nature conservation authorities) or payment offices on site by conducting random checks on payment recipients.

A producer has to take many influencing factors into account to be able to manage operations over the long run. Such factors may include changes in policy, regulations and the demands of the market as well as in the cost-effectiveness of the business (capital, buildings, technologies, land, animals). A management plan should at least cover finances, investments, marketing, crop rotation (use of fertilisers, PPPs, machinery, etc.), risk assessment (natural events, price fluctuations, changes in regulations, etc.) and volume of work (accounting, applications, further training, consulting, inspections, special activities, etc.).

The records that need to be kept for taxation purposes result in an organised agricultural system in which each incoming or outgoing item of farm funds or farm equipment is documented. This can be regarded as an inventory.

Responsible Farming	Producers and their employees are aware of the health and safety aspects of their farms. Relevant health and safety risks are identified in the course of internal monitoring and procedures are undertaken to address those risks.
----------------------------	---

Within the framework of the applicable legal provisions, training for all the farm’s workers is offered on a regular basis.

Non-conditionality farms (formerly non-cross-compliance) must independently provide proof of compliance with the above conditionality requirements independently as part of the REDcert² certification process.

Responsible Farming	All machinery and agricultural equipment used on the farm are regularly inspected and maintained.
	Emergency contact details are available on the farm and made easily accessible within an emergency plan. First aid kits are in place at all permanent sites and in the vicinity of the fields. Medical care is provided without delay.

Producers have appropriate contracts for the purchase of their products, covering specifications, price, quantities and payment conditions. The contractual agreements should be mutually beneficial and formulated on the basis of realistic prognoses regarding the growing period in question. Alternatively, they can prove membership of a cooperative society or similar organisation.

**Responsible
Farming**

Producers ensure that the workplace is always safe and free from health risks. This means at least providing access to drinking water, sanitation facilities and, where necessary, suitable protective equipment.

4.1 Environmentally responsible biomass production

Producers must keep their land in good agricultural and environmental condition and ensure that there is no significant decrease in or reallocation of permanent grassland. This includes preventing deterioration of habitats e.g. by constructing buildings or other facilities with excessive land use change and preventing the encroachment of unwanted vegetation on agricultural land. The REDcert² -scheme must therefore ensure that biomass – including the provision of harvest residues and other agricultural residues – is produced in an environmentally responsible manner.

Environmentally responsible biomass production means:

- management according to the requirements of the GAP guidelines (good agricultural practice)
- maintaining the soil in a “good agricultural and environmental condition”

With the requirements of the GAP guidelines, REDcert draws on Regulation (EU) No. 2021/2116 (former 1307/2013), which regulates direct payments to farmers under the common agricultural policy (also known as “CAP-Conditionality” former “cross-compliance criteria”). Specifications for environmentally responsible biomass production can be found in Regulation (EU) No. 2021/2115 Annex III (former Regulation (EU) No. 1306/2013 Annex II).

In addition, the REDcert² -scheme must respect the principles of good agricultural practice and standards for maintaining land in good agricultural and environmental condition. The principles of good agricultural practice must ensure the sustainable fertility and performance of soil as a natural resource.

The requirements of the REDcert² -scheme for environmentally responsible biomass production also explicitly apply to harvest residues and other agricultural residues. If agricultural waste or residues are harvested, the biomass producer must ensure that there is no associated negative impact on soil quality and soil carbon stock.

The principles of good agricultural practice include in particular:

- the soil structure is preserved or improved
- soil compaction is prevented to the extent possible, particularly taking into account soil type, soil moisture and soil pressure caused by the equipment used for farming
- soil erosion is prevented to the extent possible through site-adapted use, in particular by taking into account slope, water and wind conditions and soil cover
- natural structural elements of fields, especially hedges, trees growing in the middle of fields, field margins and field terraces, which are necessary to protect the soil, are maintained
- the biological activity of the soil is maintained or promoted by appropriate crop rotation, and
- the humus content of the soil typical of the site is preserved, in particular by a sufficient supply of organic matter or by reducing the intensity of tillage, and
- soil tillage must always be adapted to the site, taking into account the weather conditions.

4.2 Groundwater protection

Producers must not release harmful substances into groundwater within the meaning of Annex I to Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration and Annex II Part B to Commission Directive 2014/80/EU of 20 June 2014 amending Annex II to Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration. In agricultural production, this mainly involves substances such as petroleum-based products and pesticides that explicitly contain toxic organic-chemical substances and substances with the potential to pose a biological hazard. The requirements include those set out in section 5.6.

Responsible Farming

Where fuel-storage facilities are present or other hazardous substances are stored, the design of the facilities or method of storage must be such as to ensure adequate safety and protection and to avert the risk of soil and groundwater contamination in accordance with the applicable laws and directives.

Producers must also prevent indirect discharge into the groundwater of those hazardous substances within the meaning of Annex I to Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration and Annex II Part B to Commission Directive 2014/80/EU of 20 June 2014 amending Annex II to Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration. They therefore have to provide adequate facilities for the storage and handling of slurry or other type of livestock manure and silage with no risk of leakage or drip loss. If national provisions apply (e.g. stipulating that these facilities have to be approved by the competent authority), they must be fulfilled.

The disposal, use and storage of these types of substances must comply with the applicable legislation.

4.3 Water protection and management

In addition to the requirements set out in section 4.2, water resources must be properly protected and managed. In general, water must be protected against all forms of pollution and natural supplies of it safeguarded to ensure that enough water is available to meet the needs of humans, livestock and crops (in this particular order).

Responsible Farming	Along natural watercourses, erosion control strips must be installed in which production is less intensive in terms of soil tillage and the use of fertilisers and pesticides. Any indication that groundwater or surface water has been contaminated must be reported to the local authorities and monitored in collaboration with them.
----------------------------	---

4.4 Irrigation management

Responsible Farming	The legal expectations governing biomass producers' irrigation management are part of the conditionality requirements that producers have to meet. The legal framework in Germany, for example, is formed by the Federal Water Act (Wasserhaushaltsgesetz) and, at European level, by Directive 2000/60/EC to create a legal framework for EU measures in the area of water policy (Water Framework Directive).
----------------------------	---

Optimised irrigation determines the frequency and duration of irrigation and ensures that the right amount of water is applied at the right time.

Producers have to adhere to a water use plan that is updated at least once a year and documented in writing and which aims, among other things:

- to optimise water availability (by making drainage unnecessary, engaging in user collaboration, diversifying water resources) and water consumption
- to prevent water pollution and the occurrence of waste water
- to maintain records to prove that the farm is optimising its water use.
- to maintain records to prove that water availability in the surrounding area is not being adversely affected
- to maintain records to prove that no water is being removed from the ecosystem which is needed for it to function healthily
- to maintain records to prove that the irrigation method used is best suited to the crop in question
- to maintain records to prove that the irrigation system is being kept in working order
- where rainwater is used, to ensure measures are taken to optimise its use as part of the irrigation management system

This may be achieved, for example, by means of agricultural practices that improve the water retention capacity of the soil and minimise rainwater runoff. Producers undertake measures to collect excess rainwater, if local climate conditions permit, e.g. by means of rainwater-collection systems on the roofs of agricultural buildings.

For greywater occurring in the context of agricultural activities, possible reuse should be considered in the interests of optimised water use within the framework of the applicable legal provisions and guidelines. Recycled greywater can be used, for example, to irrigate crops, as drinking water for livestock, to wash vehicles, machinery and equipment, to flush toilets or to wet pavements.

4.5 Fertiliser use

“Good agricultural practice” includes rules for handling and applying all kind of fertilisers responsibly. Special attention must be paid to fertilisers with high nitrogen content because of their negative impact on groundwater and surface water quality (nitrates and ammonium) as well as on GHG emissions (NH_4 and NO_2).

Arable farms therefore need to implement practices that reduce the risk of nitrate leaching, taking into consideration the specific farming conditions in the region and the type of crop. These include:

- respecting periods when it is prohibited to apply fertiliser
- not applying fertiliser to ground with a steep gradient
- not applying fertiliser to water-saturated, frozen or snow-covered ground
- creating a crop nutrient balance taking into account nutrient inputs in relation to crop offtake (input = every kind of fertiliser; crop offtake = everything that is harvested including straw and co-products) or documenting the fertiliser or nutrient quantities actually applied
- using care when applying fertiliser in the catchment area of watercourses (e.g. reducing the amount or doing without entirely)
- calculating and providing the necessary storage capacity and setting up slurry storage facilities
- storing mineral fertilisers in appropriate storage facilities (covered, dry and clean)
- undertaking measures to prevent water contamination caused by leakage and seepage of liquids that contain slurry or slurry effluent from stored plant material (e.g. silage) into the groundwater or surface water
- using suitable procedures for applying chemical and organic fertilisers that keep any leaching of nitrates into the groundwater at an acceptable level in relation to the quantity and quality of fertiliser used
- storing organic and mineral fertilisers in suitable areas or storage facilities (generally covered, dry and clean)
- On land bordering on protected areas, measures are undertaken to protect natural habitats. This may mean establishing buffer zones or less intensive farming in the immediately adjacent areas.

It must also be ensured that all workers involved in applying fertilisers have the necessary expertise. The producer documents what fertiliser has been applied and when. Fertilisers are preferably kept and stored in their original packaging and must be appropriately labelled. An inventory is kept recording the fertilisers purchased and applied.

4.6 Use of sludge

The use of “sludge” as defined in Article 2(a) of Council Directive 86/278/EEC as a fertiliser on agricultural land is prohibited unless country-specific laws and regulations explicitly allow and regulate the use of sludge in a manner consistent with that directive.

If sludge is allowed to be applied as fertiliser, the documentation and verification requirements are the same as for other fertilisers. Proof must also be kept available that official authorisation to apply sludge has been granted.

4.7 Handling and use of plant protection products

Responsible Farming	Producers are not allowed to handle or apply plant protection products (PPP) that are not officially approved and registered for a specific target crop. This explicitly includes local or temporary restrictions on application, e.g. in protected areas or in places where “incidents” have already occurred. Producers ensure that PPPs are applied within the framework of the applicable legal provisions.
	Producers must not use chemicals listed in the Stockholm Convention on Persistent Organic Pollutants. The use of chemicals in PPPs which are included in the lists of WHO classes Ia and Ib is not permitted. Chemicals listed in Annex III to the Rotterdam Convention (UNEP Prior Informed Consent (PEP) programme list) must be avoided and alternatives considered if any are available on the market.

There must be a scenario in place to phase out the use of chemicals to be avoided in order to ensure that none of these substances are still in use by January 2023. In cases where there are no alternatives to one of these chemical substances, an external assessor must be consulted to carry out an evaluation. The assessment must be performed by an independent expert with sufficient expertise. Some of the chemicals in WHO classes 1a and 1b are not covered by the scope of current EU legislation. These requirements also apply to producers who are subject to cross-compliance. Any use of PPPs must respect the specific manufacturers’ guidelines.

Responsible Farming

Moreover, records must be kept as to the PPP used, the amount applied and the date of application, including the results of monitoring for a particular plant disease and how often it occurs.

The origin of the PPPs must be documented to ensure traceability (e.g. bills or delivery slips). Producers must ensure that all workers involved in applying PPPs have the necessary expertise for the activity in question. Furthermore, every individual who handles PPPs must have appropriate personal safety equipment, provided by their employer. The equipment used to apply the PPPs must be appropriate in terms of accurate dosage and even distribution, and it must ensure safe working conditions. There must be a process in place for regularly inspecting and calibrating that equipment.

Leftover approved PPPs or substances that are still in the possession of the farm after the approval has expired must not be disposed of by means of applying them to plants. Just like PPP packaging, they must instead be brought to appropriate and approved disposal facilities or returned to the manufacturer, who is generally required to take them back, for disposal.

Responsible Farming

PPP's must be used in accordance with good agricultural practice. In addition, the measures put in place by the competent authorities must be taken into account when applying PPPs. Violating those measures can entail punishment in the form of a fine. The requirement to use good professional practice in relation to pesticides generally apply to all types of operation (e.g. conventional, integrated or organic farming).

Good agricultural practice in relation to pesticides is viewed as a set of requirements governing the activities of those undertaking plant protection measures.

The demands of society and consumer protection are considered, as are scientific findings in such areas as hygiene, the application of PPPs and the protection of certain adjacent areas of land. Special priority must also be given to documenting the use of PPPs. These requirements supplement the existing legal provisions, such as those relating to pesticide approval, the inspection of pesticide equipment and proof of expertise. Adequate facilities must be provided for people who handle pesticides, fertilisers or hazardous substances to wash themselves in the event of contact. These include, for example, access to water and soap, changing facilities, emergency showers and eye washing stations.

Directive 2009/128/EC (Pesticides Framework Directive) creates the framework for the sustainable use of pesticides. Annex III of that directive:

- - lists measures to prevent the spread of harmful organisms and to help determine when and whether plant protection measures should be applied and
- - stipulates, among other things, that the PPPs applied should be as specific as possible in terms of target species, with the lowest possible risk of side effects, and kept to the necessary minimum (use of resistance-prevention strategies)

According to the Plant Protection Act (*Pflanzenschutzgesetz*), plant protection may only be carried out in accordance with good professional practice. This includes integrated plant protection, which is defined as a combination of processes which keeps the application of chemical PPPs to the necessary minimum and prioritises biological, biotechnical and breeding-, cultivation- and cropping-related measures. In particular, danger to humans, animals, plant biodiversity and water and air quality must be kept to a minimum.

Responsible Farming	<p>It must also be noted that PPPs must not be applied within 30 metres (or less, if national legislation so provides) of inhabited areas or bodies of water. Additional precautionary measures must be put in place to prevent people entering recently treated areas. The application of pesticides from the air must be undertaken in such a way that it does not affect inhabited areas or bodies of water. Before any airborne application, residents living within 500 metres (or less, if national legislation so provides) of the planned application. The application of pesticides in WHO classes 1a, 1b and 2 is not permitted within 500 metres (or less, if national legislation so provides) of inhabited areas or bodies of water.</p>
---------------------	---

Orientation as to the European context and applicable European law can be found in Articles 12 and 9 of Directive 2009/128/EC.

4.8 Integrated pest management

Responsible Farming	<p>Another important aspect of good agricultural practice is integrated pest management (IPM). The goal is to ensure that products are safe and of high quality while keeping the use of plant protection products to the unavoidable minimum. This goal is achieved through various preventative measures. It requires continuous monitoring and analysis of all conditions that affect plant growth. Arable farms must keep proof of their IPM activities and be able to assess their specific production processes in relation to them.</p>
----------------------------	--

4.9 Use of seeds and planting stock

In addition to Regulation (EC) No 178/2002, other directives and regulations require that traceability be guaranteed for all biomass produced and processed across all the phases of production and delivery of food and animal feed.

Biomass producers must therefore keep records of the seeds and/or planting stock they use, including the name of the variety, the supplier, the production area, the sowing or planting date and the quantity of seeds or planting stock applied per area. They should ensure that the seeds or planting stock can be traced back to the location of its propagation. This requirement is satisfied, for example, in the case of certified seeds and planting stock.

Responsible Farming	<p>The selection of the seeds or planting stock should be preceded by obtaining information, e.g. on variety resistance/tolerance in respect of common or economically significant pests and diseases, soil and crop-rotation requirements, fertiliser and water requirements, expected yield, the impacts on adjacent arable land, etc.</p>
----------------------------	--

If genetically modified organisms (GMO) are used on their farms, producers take steps to prevent cross-contamination between GMO and conventional material. They must do so in compliance with the relevant legislation and seed company instructions. Producers can prove that appropriate buffer zones are maintained between conventional and GMO crops. Seeds, harvests and propagating material are stored separately in accordance with the relevant legislation and guidelines.

Where planting stock is grown, the farmer must designate special areas to protect it during hardening off. Planting stock is susceptible to weather-induced stresses as well as pests and diseases and should therefore be grown segregated from other crops in order to avoid possible cross-contamination.

Producers take into account the optimum sowing quantities and the optimum distance between plants depending on local conditions and the crop in question. They have strategies to determine the optimum quantity of seeds or plants. Such a strategy may be based, for example, on the producer's own experience.

4.10 Soil management

Responsible Farming	<p>According to Regulation (EU) No 2021/2115, the member states have to ensure that all agricultural land is maintained in good agricultural and environmental condition (GAEC). For example, as broad requirements, it lists suitable measures and appropriate machinery that can be used to maintain the soil structure. These requirements can be satisfied, for example, by:</p> <ul style="list-style-type: none"> ➤ preventing intensive land use (livestock) and fields being traversed by vehicle when weather conditions are damp or wet ➤ minimising intensive land use (livestock) and the traversing of fields by vehicle ➤ using low-pressure tyres ➤ preventing the excessive use of driving corridors
----------------------------	--

On the basis of that directive, the member states must define corresponding minimum requirements at national and regional level. For example, in Germany, the Federal Soil Protection Act (*Bundes-Bodenschutzgesetz*) outlines principles relating to soil management in section 17 on good professional practice in agriculture. The principles of maintaining agricultural land in good agricultural and environmental condition are set out in the Agricultural Payments Obligations Ordinance (*Agrarzahlungen-Verpflichtungenverordnung*) in line with the conditionality provisions in Article 93 of Regulation (EU) No 2021/2115 on the financing, management and oversight of the common agricultural policy.

4.11 Prevention of soil erosion

Soil erosion is defined as soil loss that is influenced to a greater or lesser extent by erosive precipitation or wind and land use by humans. It leads to the detachment, transport and accumulation of soil particles and associated nutrients and pollutants. In addition to the negative effects of soil displacement with respect to soil functions and soil fertility on the affected area, substance discharges and inputs can have consequences for neighbouring and distant water bodies and biotopes.

Producers have to protect the soil from erosion by means of appropriate measures. Good agricultural practice includes various measures to prevent erosion. This requires:

- a basic evaluation of the farmland with regard to its potential risk of erosion, which can be derived from the length and gradient of slopes, type of soil, soil cover (tillage method, crop rotation) and, in particular, from empirical values (although the potential soil erosion to be determined, e.g. by means of a soil erosion equation, must not be equated with actual soil erosion), and
- precautionary measures derived from that evaluation, based on the assessment of the potential risk

The challenge is to maintain the natural soil structure while lowering the risk of erosion caused by wind and water by minimising the amount of time that the soil is (by necessity) uncovered. Areas at higher risk of erosion should be identified and subject to special monitoring. Special attention should also be paid to very sandy soils and land on slopes.

Minimum requirements to reduce the risk of erosion are therefore defined, depending on the degree of water or wind erosion risk on agricultural land. As guidance for risk assessments and the minimum requirements derived from them, the REDcert-EU scheme refers to the recommendations regarding good agricultural and environmental condition and the provisions of conditionality (formerly cross-compliance) to limit soil erosion during tillage (GAEC 5).

They stipulate as follows:

- Cropland assigned to the water erosion category $CC_{\text{Water}1}$ and not included in a special erosion control measure must not be ploughed from 1 December to the end of 15 February. Ploughing after the previous crop has been harvested is permitted only if sowing occurs before 1 December. Where cultivation occurs perpendicular to the slope, these two restrictions on ploughing do not apply.

- If cropland is assigned to the water erosion category $CC_{\text{Water}2}$ and is not included in a special erosion control measure, it must not be ploughed between 1 December and 15 February. Ploughing between 16 February and the end of 30 November is allowed only if sowing occurs immediately afterwards. The latest date for sowing is 30 November. Ploughing is prohibited before sowing row crops with row spacing of 45 centimetres or more.
- If cropland is assigned to the wind erosion category CC_{Wind} and is not included in a special erosion control measure, it may only be ploughed if sown before 1 March. Deviating from this rule, ploughing is permitted from 1 March onwards, except in the case of row crops with row spacing of 45 centimetres or more, if sowing takes place immediately afterwards. The ban on ploughing for row crops does not apply where, before 1 December, green strips at least 2.5 metres wide and at a maximum distance of 100 metres are sown perpendicular to the direction of the prevailing wind or, in the case of crops grown in embankments, where the embankments are positioned perpendicular to the direction of the prevailing wind or seedlings are planted immediately after ploughing.

Basic measures to prevent soil erosion might be, for example:

- Erosion-reducing soil tillage and cultivation methods such as conservation tillage with mulch sowing for the purpose of large-scale erosion control – throughout the crop rotation cycle if possible, but at least in individual areas particularly affected by erosion (maize, sugar beets); mulch sowing, if possible without seedbed preparation, in the interests of leaving a soil-protecting mulch layer and maintaining stable soil aggregates; etc.
- Measures to prevent erosion in arable farming, such as minimising periods without soil cover, including crop rotation, catch crops, undersowing and straw mulch; tilling the soil perpendicular to the slope; avoiding tracks running downhill; avoiding or eliminating infiltration-inhibiting soil compaction; establishing and preserving stable soil aggregates that reduce silting by promoting biological activity and by liming or similar measures; etc.
- Erosion-reducing design of crops and fields, such as subdividing the field with erosion control strips (e.g. trees, field margins) and paths with ditches; laying windbreaks perpendicular to the gradient or prevailing wind direction; laying parallel strips perpendicular to the gradient and prevailing wind direction with a change of crop types; sowing grass strips to slow down runoff, etc.

4.12 Preservation of organic matter and soil structure

Humus (also called soil organic matter, or C_{org}) is a prerequisite for soil formation and soil fertility and represents one of the largest carbon pools. It influences almost all physical, chemical and biological soil properties as well as the C and N cycles. It is therefore a decisive environmental factor and requires special attention. This raises the question of the optimum humus content. Humus and the nutrients it contains must be seen as an inseparable unit, as they influence each other.

In contrast to the mineral plant nutrients in the soil, there are no international reference values for optimum or desirable humus content of soils. Soil organic matter (SOM) consists of a decomposable (active) fraction and a largely inert (stable) fraction. Only the decomposable part (“nutrient humus”) is dependent on soil management and can be

influenced accordingly. On the other hand, the inert fraction (“permanent humus”), which accounts for up to two thirds of the total quantity, is largely protected from decomposition depending on the soil type.

The total humus content alone therefore says very little about the supply of decomposable SOM. Thus, for example, arable sandy soil with 1% organically bound carbon is already very rich in humus; a loamy soil with 1.5% C_{org} , on the other hand, may already be completely depleted of decomposable organic matter.

In the REDcert² scheme, therefore, soil organic matter levels must be maintained – or, in the event that the soil has been drained of nutrients, restored – by means of suitable field tillage practices adapted to local conditions. This means that balanced humus levels must be sought for farmland, and positive humus levels in cases of undersupply. In the REDcert² scheme, this requirement explicitly applies not only to the cultivation of the main crop on the farmland, but also to the use of harvest residues or other residues from agricultural land.

If organic fertiliser is used to improve the soil organic matter, the nutrient requirements of the soil must be taken into account as a matter of course. The generally lower tillage intensity of conservation cultivation methods can effectively contribute to maintaining and increasing SOM, with all the positive consequences of this for the soil structure and properties.

The supply of the soil with organic matter can be assessed with the help of a suitable “humus balance method”, as no reliable reference values for the optimum humus content of soils are available yet.

The requirements for the maintenance of organic matter are considered to be met if there is sufficient crop diversification at farm level. Accordingly, the REDcert² scheme sets minimum requirements for the number and permitted percentages of individual agricultural crops on the total arable land of a farm. Crop diversification generally only refers to the arable land of a farm. Permanent crops and permanent grassland, on the other hand, are not included in the agricultural crops to be taken into account in the context of crop diversification.

The burning of stubble fields is prohibited in the REDcert2 scheme in accordance with good agricultural and environmental condition as it pertains to the maintenance of soil organic matter. It can be approved if this is necessary for plant protection as defined in the Plant Protection Act and if harmful effects on the natural balance can be ruled out.

Producers ensure that high-quality soil substrate from primarily sustainable sources are used to maintain and improve soil structure. High-quality soil substrate must be free of potential hazardous substances and pathogens and possess favourable characteristics in relation to good water retention capacity, nutrient content and high organic matter content.

The following minimum requirements apply in the REDcert² scheme for verifying the preservation of soil organic matter through crop diversification:

- Farms with up to 30 hectares of arable land must grow at least 2 different crops, with the main crop accounting for a maximum of 75 percent of the farmed area.
- Farms with more than 30 hectares of arable land must grow at least 3 different crops, with the main crop accounting for a maximum of 75 percent and the two crops with the largest area together for a maximum of 95 percent. If these farms meet the requirement 'at least three different crops' but do not meet all or part of the remaining requirements, the requirements are nevertheless met in the following two cases:
 - a) The first exception involves farms with more than 75% grass or other green fodder crops as the main crop. In this case, the area of the other main crop of the remaining arable land must be less than 75 %, unless this is fallow land.
 - b) The second exception involves farms with more than 75% fallow land as their main crop. Then the area of the other main crop of the remaining arable land must be below 75 %, unless this is grass or other green fodder crops.

If this is not the case, the preservation of soil organic matter in the REDcert² scheme can be verified (not conclusively), for example by the following methods:

- every year, a humus balance is calculated at farm level by 31 March of the following year. If the humus balance is not below -75 kg humus-C per ha, the condition is met. The results of the humus balance must be kept for 5 years, or
- a soil humus survey is carried out, the results of which must not be older than 7 years in the calendar year in which the farm is inspected. Humus analyses are required for each field plot of 1 ha or more. For soil testing, humus content of more than 1% for soils with a clay content of up to 13% and a humus content of 1.5% for soils with a clay content of more than 13% is the limit value to meet the requirement. The results of the humus balance must be kept for a minimum of 8 years.

If, however, only crops with neutral or positive effects on the soil humus content ("humus multipliers") are grown on a farm, the farmer is exempted from the requirement to create a humus balance or soil humus analysis and the requirement to maintain organic matter is also deemed to be fulfilled.

Crops with positive or neutral changes in the humus content are considered to be (according to Art. 3 (1) (6) in connection with Annex IV of the Direct Payments Obligations Ordinance):

- Protein crops (in particular field beans, peas, lupins) exclusively for the production of grain
- oilseeds (in particular rapeseed, sunflower) exclusively for the production of grain
- maize for the exclusive use of cobs or grains
- perennial arable fodder (in particular clover, clover grass, lucerne, arable grass and mixtures thereof), also for seed multiplication
- green fallow, cropland set-aside

Other examples of measures to maintain or build up soil organic matter are:

- reduced or no tillage
- rewetting
- use of cover crops
- addition of organic amendments, e.g. biochar, compost, manure, crop residues

4.13 Soil quality and carbon protection

If crop residues are harvested for use as biomass the producer of the agricultural residues must implement measures that are suitable for maintaining soil quality and soil carbon content, while at least the requirements on the preservation of the soil structure, the protection of soils against erosion and preservation of the soil organic matter content (soil carbon) typical for the site have to be met according to Implementing Regulation (EU) 2022/996 Annex VI.

It should be verified that harvesting agricultural waste and residues does not have a negative impact on soil quality and soil carbon content. The purpose of this verification is to ensure that appropriate soil management or monitoring practices are applied on the land to promote soil carbon sequestration and soil quality on national level or on economic operator's level.

At the national level, the approach can be based on plans and activities which are required under national law. Proof that the plans developed or activities carried out to verify the requirements for maintaining soil quality and carbon protection are already subject to national legislation and corresponding monitoring systems must be provided by the economic operator as part of the audit.

If compliance with the criteria on soil quality and carbon protection cannot be demonstrated on national level, the economic operator has to implement a management plan with measures which have an equivalent effect.

These measures can include (exemplary and not exhaustively):

- At least a 3-crop rotation, including legumes or green manure in the cropping system, in order to promote soil fertility, soil carbon, soil biodiversity, pathogene control and limit soil erosion
- Sowing of cover/catch/intermediary crops using a locally appropriate species mixture with at least one legume
- Prevent soil compaction by avoiding tillage operation on wet soils and, thus, soil erosion
- No burning of arable stubble (except for plant health reason)
- Liming of acidic soils to improve soil structure, soil biodiversity and soil carbon
- Addition of organic amendments, e.g. biochar, compost, manure and crop residues
- Agroforestry

The efficacy of the measures taken to protect soil quality and soil carbon must be verified and documented by a 'management plan', which is usually implemented as a field management documentation, where all activities related with the production of crops are documented. This management plan verifies and documents the application of the measures taken to protect soil quality and soil carbon.

Monitoring activities including appropriate instruments (exemplary, not cumulative), such as

- Risk assessment (identifying areas at high risk of soil degradation helps to prevent these risks and focus on the areas with the greatest impact),
- Analysis of soil organic matter,
- Analysis of soil organic carbon content,
- Soil erosion risk assessment,
- Nutrient input management plans,
- Regular pH analyses of the soil

The information to be used for this monitoring activities can be sourced either from individual economic operators and/or from a higher level including reliable scientific publications and national/regional authorities.

REDcert can provide an overview about member states and third countries where the scheme is applied how the national legislation regulates the application of essential soil management practices to address the potential impact of harvesting such residues on soil quality and soil carbon together with mechanisms to monitor and enforce the implementation of those practices.

If such an overview of the type of national implementation is not available for a country, it is up to the certification body to verify the existence and efficacy of the management plan during an audit, provided they have the technical capacity to perform this role. However, REDcert must have overall oversight of national level certification as part of REDcert's internal monitoring process.

Where a group auditing approach is applied, it is the responsibility of the collection point/first gathering point to ensure that all farms supplying agricultural wastes and residues meet the specified requirement. Relevant information on how compliance is met (at national level or at level of the economic operator) is to be provided to the first gathering point/collection point via the self-declaration.

4.14 Social responsibility

Sustainable production of biomass also requires that economic operators acknowledge and uphold their social responsibility. Awareness of their responsibilities under the applicable laws, and compliance with the applicable laws, is considered fundamental.

All countries from which biomass is sourced must adopt and meet at least the minimum requirements laid down and ratified by the International Labour Organisation (ILO) in respect of such matters.

The following conventions must be followed in connection with the production of sustainable biomass:

ILO Criteria	Convention
29	Forced Labour (1930)
87	Freedom of Association and protection of the Right to Organise (1948)
98	Right to Organise and Collective Bargaining (1949)
100	Equal remuneration (1951)
105	Abolition of Forced Labour (1957)
111	Discrimination (Employment and Occupation) (1958)
138	Minimum Age (1973)
155	Occupational Safety and Health (1981)
182	Worst Form of Child Labour (1999)

ILO-criteria	Convention
1	Hours of Work (Industry)
14	Weekly Rest (Industry)
25	Sickness insurance (Agriculture)
77	Medical Examination of Young Persons (Industry)
102	Social Security (Minimum Standards)
110	Plantations
130	Medical Care and Sickness Benefits
132	Holidays with Pay
135	Workers' Representatives
154	Collective Bargaining
161	Occupational Health Services
170	Chemicals
174	Prevention of Major Industrial Accidents
183	Maternity Protection

You can find a list of the countries that have ratified the ILO conventions at

<https://www.ilo.org/dyn/normlex/en/f?p=1000:12000>

Producers are moreover active and involved members of their local or village communities and contribute to their development. This can occur in a variety of ways, e.g. through:

- participation in the local council through political involvement and/or church activities
- cultural and/or nature conservation activities
- membership of the local fire brigade or civil protection organisations, etc.
- membership of and active involvement in sports clubs, rifle associations, etc.
- etc.

If required, producers must take the measures necessary to prevent illegal hunting, fishing and extraction of flora and fauna on the farm in accordance with the applicable laws and customary rights.

Producers must take measures to ensure that weekly working hours are monitored and that they remain within the bounds of legislation and administrative regulations, collective bargaining agreements and/or employer-employee agreements. Overtime is voluntary and remunerated in accordance with employment contracts or collective bargaining agreements. Moreover, average working hours over a seven-day period must not exceed 48 hours including overtime. Overtime of more than 12 hours a week is not permitted unless worked within extraordinary and limited timeframes during which, for economic or time-related reasons, no alternative is possible.

Producers ensure that wages and social security benefits for permanent, temporary and seasonal staff are regularly paid and in line with statutory and sector-specific minimum requirements.

When deductions are made from wages, it is ensured that these are legally permitted, clearly recorded and communicated to the employee, and never made for disciplinary reasons.

Responsible Farming	<p>Every business has a complaints system that enables all interested parties to file complaints. Producers respond to complaints from public authorities within an appropriate timeframe. Complaints can reach the business via various channels (e.g. e-mail, telephone, post, website). The complaints system guarantees a suitable investigation of the complaints filed. If a complaint is confirmed, measures are taken to bring about a swift solution.</p>
----------------------------	--

It is ensured that employees who are injured or ill engage in no activities that jeopardise their own or another employee’s health and safety. In the event of an employee suffering long-term illness, their return to work follows a regulated procedure that guarantees employee safety.

It is moreover ensured that all employees who may be vulnerable or whose immune systems may be compromised do not come into contact with PPPs or any hazardous substances. Employees must not be subjected to physical punishment, physical or mental oppression, verbal or physical abuse, sexual harassment or any kind of intimidation. No employee is obliged to surrender their identification documents unless required by law.

If employees are provided with accommodation on the farm, it must be clean and safe and provide access to suitable cooking and sanitation facilities.

Permanent, temporary and seasonal staff are paid a living wage that corresponds to the national minimum wage or the appropriate industry standard, whichever is higher.

All employees receive compensation in accordance with the applicable legal provisions in the event of accidents or illnesses arising from their professional activities. Where no public health insurance cover is in place, all employees receive advice and support in respect of the possibility of acquiring health insurance.

Responsible Farming	<p>Producers are in a position to submit certification of their land use rights. Alternatively, they can submit official confirmation from the local authority testifying that they are legally entitled to manage the land. If the land in question was bought, the purchase needs to have been conducted in compliance with the law and it must be possible to prove that existing property and land rights were respected. Where land ownership or land use rights are unclear, no land management is undertaken until all matters of ownership have been cleared up.</p>
----------------------------	--

4.15 GHG-oriented resource and energy use (energy efficiency)

According to revised Directive (EU) 2018/2001 (Renewable Energy Directive), controlling energy consumption in Europe and increasing the use of energy from renewable energy sources are, along with energy savings and improved energy efficiency, key elements in the bundle of measures needed to reduce greenhouse gas emissions and comply with the Paris Climate Change Agreement and other community and international obligations to lower greenhouse gas emissions. These factors also play a key role in strengthening, for example, opportunities for regional development, primarily in rural and remote areas. The chief objective of the European Community is the binding EU target to reduce emission by at least 40% compared to 1990 levels by 2030. It is the responsibility of the member states to considerably improve energy efficiency in all areas.

Responsible Farming	Producers planning conversion work should consider integrating renewable energy sources into their businesses wherever available and affordable. It is possible, for example, to use solar panels or wind turbines, green electricity, wood fuel sourced from sustainably managed forests or crop residue and wood from pruned organic matter.
Responsible Farming	Producers compile quantified overviews of their energy sources and energy needs. They have energy management systems in place, including assessment of fundamental energy needs.

The proportion of electricity from renewable sources within the electricity sector in the relevant bidding zone should be taken into consideration.

Regulation (EU) No 2021/2115 contains the general conditions for promotion of rural development by the European Community, which is financed by the European Agricultural Fund for Rural Development (EAFRD).

Responsible Farming	The climate action should involve both limiting agriculture and forestry emissions arising from core activities, animal husbandry and the use of fertilisers and preserving carbon sinks and enhancing carbon sequestration in the context of land use, land use change and the forestry sector.
----------------------------	--

The goals of rural development, which contribute to the Europe 2020 strategy, are being pursued in the following areas:

- improving water management, including the handling of fertilisers and pest-control products
- preventing soil erosion and improving soil management
- increasing efficiency of energy use in agriculture
- reducing greenhouse gas and ammonia emissions stemming from agriculture
- promoting carbon sinks and sequestration in agriculture and forestry

The EAFRD funding is carried out on the basis of the rural development programmes, which are designed in Germany, for example, as region-specific programmes for each German federal state.

If required, producers put measures in place to prevent and mitigate the air pollution caused in accordance with the applicable legislation and guidelines. To that end, the activities which present the greatest risk to the environment and/or to human health are identified and, where necessary, prevention and/or mitigation measures implemented.

4.16 Waste management

One of the central pieces of legislation in the area of waste management is Directive 2008/98/EC (Waste Framework Directive). It defines key waste-related terms and establishes, among other things, the following waste hierarchy: (a) prevention, (b) preparation for reuse, (c) recycling, (d) other recovery such as energy recovery, (e) disposal. In Germany, for example, the Circular Economy Act (*Kreislaufwirtschaftsgesetz*) supplements the requirements set forth in Directive 2008/98/EC into German national law and regulations, e.g. the Ordinance on the European Waste Catalogue (*Abfallverzeichnis-Verordnung*) and the Biowaste Ordinance on the reuse of biowaste on soil used for agriculture, forestry or gardening (*Bioabfallverordnung*). Under Article 22 of Directive 2008/98/EC, biodegradable waste is to be collected separately and reused sensibly.

This waste gives rise to compost and fermentation residues that are suitable for agricultural use. Most agricultural residues, however, are not considered biodegradable waste that needs to be collected separately, because it is not disposed of as waste. These kinds of residues are used, e.g. in accordance with agricultural soil use under section 17 on good professional practice in agriculture in the Federal Soil Protection Act (*Bundes-Bodenschutzgesetz*), to improve the soil structure, to maintain and encourage the biological activity of the soil and/or to maintain the humus content of the soil typical for the location. Depending on the type of land management (intensive/conventional or extensive/green/organic/alternative), including the associated form of tillage (conventional/turned or not ploughed/not turned/conservation), the result is a certain level of circularity is achieved within the business (prevention – reuse – sale).

Responsible
Farming

Producers maintain waste-management plans to minimise the quantity of waste and create reuse and recycling systems. These waste-management plans can be described orally.

5 First gathering points

5.1 General requirements

First gathering points have to document that they have pledged to satisfy the requirements of the REDcert² scheme in the handling (e.g. storage, preparation, mixing) of biomass under its scope.

Verification can be provided in the form of, for example, the certificate (valid for 12 months) or the scheme contract with REDcert.

First gathering points also have to ensure that all of the businesses directly or indirectly involved in the production or supply of biomass which are not interfaces themselves have at least pledged to meet the requirements of the REDcert² certification scheme for the production of biomass and have actually met those requirements.

Verification can be provided to the first gathering point in the form of the self-declarations filled out and signed by the farmers.

5.2 Documentation requirements

The traceability of the biomass is ensured by a mass balance system. To that end, records must be kept during every phase of production and supply. The system must be applied in such a way that the quantity of sustainably produced biomass can be identified for every phase. Records must ensure that there is always a transparent link between the biomass and the documentation.

The REDcert² scheme requires all economic operators to have a document management system that can be checked as part of an inspection. Proper documentation is mandatory for compliance with the legal provisions for sustainable biomass.

All of the documents in the document management system must be kept for at least 5 years regardless of any other legal requirements relating to retention periods.

5.2.1 Incoming sustainable biomass

The first gathering point has to document the following:

- the names and number of all farms – **a list is kept that is provided to the competent certification body for arranging spot checks**
- that the farms have satisfied the requirements set forth in Article 29 of revised Directive (EU) 2018/2001 for every consignment of sustainable raw material supplied (verified by the annual submission of a self-declaration by the farm)
- whether the farm is subject to audits in accordance with Regulation (EU) 2021/2115 **(conditionality)**
- the location of the biomass cultivation area as a polygon in geographic coordinates with a resolution of 20 metres for each individual point (this is not necessary if producers confirm in the self-declaration that they keep the relevant verification on the premises)
- the country of origin of the feedstocks
- delivery documents for every quantity of sustainable biomass **(e.g. delivery slip or weight certificate)**
- the clear and unmistakable labelling of every consignment of biomass (e.g. with a unique identification number)

- if not listed in the delivery documents, the following for every quantity of compliant biomass
- the type of sustainable biomass
- the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
- the date the sustainable biomass was received
- the quantity of sustainable biomass (in tonnes)
- GHG emissions in grams of carbon dioxide equivalent per kilogram of dry matter of sustainable biomass for each specific element (if appropriate) as an absolute value or
- an indication of (disaggregated) default values, e.g. "(disaggregated) default value applied" or similar or
- NUTS2 values in grams of carbon dioxide equivalent per kilogram of dry matter of sustainable biomass
- (The information in the self-declaration determines whether it is necessary to calculate the GHG emissions specifically or whether default values or NUTS2 values can be used.)
- the country where the biomass was produced
- purchasing contracts between the farm and the first gathering point or other documents, similar to purchasing contracts, which represent the industry standard
- contracts with third parties entrusted with handling the sustainable biomass (e.g. subcontractors, brokers, storage facility operators)
- the name of the person who verified the accuracy of the data forwarded and documented by the upstream business or operating site upon receipt of the sustainable biomass
- the name of the person who accepted the quantity of sustainable biomass

5.2.2 Internal documentation

The first gathering point must also collect the following data on internal processes and archive it in the document management system:

- the quantity of sustainable biomass that went into the process
- the clear and unmistakable labelling of every consignment of biomass (e.g. with a unique identification number)
- the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
- the country of origin of the feedstocks
- the type of internal process (e.g. mixture and preparation)
- conversion rates
- mass balance as stipulated in the directive
- the name of the person who verified the accuracy of the internal process and the recorded and documented mass balance attributes

5.2.3 Outgoing sustainable biomass

Under revised Directive (EU) 2018/2001, first gathering points are required when supplying sustainable biomass to provide the data necessary for the documentation in the downstream business or in the operating site of the downstream interface and to notify the REDcert certification scheme and the contracted certification body without delay of any inconsistencies in the documentation.

The first gathering point must pass on the following data to the next interface when sustainably produced biomass is sold:

- delivery documents for every quantity of outgoing sustainably produced biomass
- the clear and unmistakable labelling of every consignment of biomass (e.g. with a unique identification number)
- the certificate number and name of the certification scheme (in this case, REDcert)
- the country of origin of the feedstocks
- the type of outgoing sustainable biomass

- the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
- the date the sustainable biomass left the premises
- the quantity of sustainable biomass (in tonnes)

The following records must be available:

- the name and address of the buyer for every quantity of sustainably produced biomass
- purchasing contract between first gathering point and downstream interface, business or operating site
- contracts with third parties entrusted with handling the sustainable biomass
- mass balance including batching for every new batch resulting from the internal process

6 Suppliers

The present document describes the requirements criteria as well as the documentation and verification for all suppliers who participate in the REDcert² scheme.

A distinction is made in the scheme between suppliers upstream of the last interface and suppliers downstream of the last interface.

Suppliers upstream of the last interface are economic operators that supply biomass to the next recipient between the first gathering point and the last interface.

Suppliers downstream of the last interface are the economic operators that supply the liquid biomass or fuel to the next recipient between production by the last interface and the plant operator or those required to provide proof that they satisfy the requirements.

6.1 General requirements

The REDcert² scheme requires all economic operators to have a document management system that can be checked as part of an inspection.

In the biomass sector, suppliers downstream of the last interface have to document that they have pledged to comply with the requirements of the REDcert² scheme. Verification may be in the form of, for example, the inspection certificate or the scheme contract with REDcert.

6.2 Documentation requirements

Suppliers who participate in the REDcert² scheme must have a document management system which can be checked as part of an inspection, so that they can provide the data required for every consignment of sustainable biomass to the downstream businesses. All of the documents in the document management system must be kept for at least 5 years regardless of any other legal requirements relating to retention periods.

When providing sensitive company data, proof must be provided that this data is handled confidentially by all businesses along the supply chain.

6.2.1 Incoming sustainable biomass

Suppliers must document the following information upon receipt of biomass:

- the name and address of the seller (upstream interface, business or operating site) for every quantity of sustainably produced biomass
- the clear and unmistakable labelling of every consignment of biomass (e.g. with a unique identification number)
- the country of origin of the feedstocks
- the type of sustainable biomass
- the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
- the date the sustainable biomass was received
- the quantity of sustainable biomass (in tonnes)
- the certificate number and name of the certification scheme

6.2.2 Outgoing sustainable biomass

Suppliers both upstream and downstream of the last interface must keep the following records upon any sale of sustainably produced biomass:

- the name and address of the buyer (downstream interface, business or operating site) for every quantity of sustainably produced biomass
- the clear and unmistakable labelling of every consignment of biomass (e.g. with a unique identification number)
- the country of origin of the feedstocks
- the type of outgoing sustainable biomass
- the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
- the date the sustainable biomass left the premises
- the quantity of sustainable biomass (in tonnes)

Suppliers in the REDcert² scheme also have to notify the REDcert certification scheme and the contracted certification body without delay of any inconsistencies in the documentation of the upstream businesses or operating sites. There is also a general obligation to provide data to REDcert upon request (e.g. if this is necessary to ensure continuous traceability of the sustainable biomass).

7 Interfaces/last interface

7.1 Documentation requirements

The REDcert² scheme requires all economic operators to have a document management system that can be checked as part of an inspection. Proper documentation is mandatory for compliance with the legal provisions for sustainable biomass. All of the documents in the document management system must be kept for at least 5 years regardless of any other legal requirements relating to retention periods.

7.1.1 Self-monitoring of agricultural businesses

Farms that want to supply sustainable goods to the REDcert² scheme must either be inspected as part of a group or certified individually. To fulfil this central role, farmers must demonstrate that they have intensively studied the scheme requirements and comply with them at all times.

Responsible Farming	In the case of individually certified farmers, an annual, documented self-assessment is necessary in addition to the system audits. In the case of group certifications, it is the responsibility of the group manager to ensure that all members of the group fulfil the requirements in accordance with the currently valid scheme principles for neutral inspection, section "Requirements of group management".
----------------------------	---

7.1.2 Incoming sustainable biomass

The interfaces have to document and keep the following information after receipt of sustainable biomass:

- delivery documents for every quantity of sustainable biomass (e.g. delivery slip) and, if not listed in the delivery documents, the following for every quantity of biomass compliant with revised Directive (EU) 2018/2001
- the name and address of the supplier or upstream business
- a copy of the certificate of the upstream interface that was valid at the time the production, processing or other step for the biomass in question was carried out in the interface
- the purchasing contract for sustainable biomass between the business or the operating site and the upstream business or operating site
- contracts with third parties (e.g. with external service providers or in the case of a subcontracting agreement, etc.) commissioned to handle the sustainable biomass
- for each quantity of sustainable biomass, which must be clearly and unmistakably labelled (e.g. with a unique identification number):
 1. the type of incoming sustainable biomass

2. the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
3. the country of origin of the feedstocks
4. the date the sustainable biomass was received
5. the quantity of sustainable biomass (in tonnes)
6. confirmation statement of the employee responsible for the incoming goods

7.1.3 Internal company information

The following data on internal processes also need to be recorded:

- the quantity of sustainable biomass input into the process, which must be clearly and unmistakably labelled (e.g. with a unique identification number):
- the designation and, if applicable, code (for waste and residues) and, if relevant, the category for animal fats, etc.
- the country of origin of the feedstocks
- the date the plant started operations
- the type of internal process (e.g. pressing, refining, mixing of the sustainable biomass in tank storage, reallocation of quantities to another operating site, issuance of proof of sustainability or partial proof of sustainability, etc.)
- in the case of raw material or intermediate products, the feedstock factor (kg/kg) for the dry matter content
- for raw material or intermediate products, the allocation factor for the intermediate product
- mass balance including the quantity of biomass resulting from the internal process
- the confirmation statement of the employee responsible verifying the accuracy of the internal process and the recorded and documented mass balance attributes

7.1.4 Outgoing sustainable biomass

The last interface is required to document the following upon sale of sustainable biomass:

- the name and address of the buyer for every quantity of sustainably produced biomass
- the clear and unmistakable labelling of every consignment of biomass (e.g. with a unique identification number)
- the country of origin of the feedstocks
- the type of sustainable biomass
- the date the sustainable biomass left the premises
- the quantity of sustainable biomass (in tonnes)
- the date the plant started operations
- the type, name and, if applicable, code (for waste and residues) of the biomass and, when relevant, the category for animal fats, etc.
- In the specific case of the last interface, the following must also be documented:
 - the issuance of proof of sustainability (see related section)

The REDcert certification scheme is to be notified immediately of any discrepancies in the documentation of the upstream businesses and operating sites. There is also a general obligation to provide data to REDcert upon request (e.g. if this is necessary to ensure continuous traceability of the sustainable biomass).

When providing sensitive company data, proof must be provided that this data is handled confidentially.

8 Scheme principles for the mass balance

Whenever the document "System principles for mass balancing" refers to "bioliquids/biofuels", this also implies the term "sustainable biomass in food production".

Contrary to the requirements under the REDcert-EU scheme, economic operators are free to define a balance period after which the balance is positive (less outgoing than incoming biomass) as long as that period is not longer than 12 months.

The operational mass balance always has to show and provide proof of the property "REDcert²-certified biomass".

Alongside certified products, downstream companies can use certified sustainable biomass with certificates from REDcert² or from another scheme that has a positive assessment from the Sustainable Agriculture Initiative (SAI).

Responsible
Farming

Downstream companies that pass on certified goods in their value chain must label them in such a way that they cannot be confused with other good flows. The value chain models *Identity Preservation*, *Segregation* or *Mass Balance* according to ISO 22095:2020⁶ must be applied and documented.

9 Scheme principles for the GHG calculation

In contrast to the REDcert-EU system, the REDcert² system does not require the disclosure of GHG emissions or the fulfilment of prescribed requirements for the GHG reduction potential of certain substances. However, GHG emissions can optionally be reported under that scheme.

The underlying calculation methodology must follow the principles described in the REDcert-EU system documents "Scope and basic requirements of the system" and "System principles for GHG calculation".

10 Scheme principles for neutral inspections

In principle, when the document "Scheme principles for neutral inspections" refers to "bioliquids/biofuels", this always implies the use of sustainable biomass in the area of food and feed production in the context of this document as well.

The documented stipulations for neutral inspections relate both to the implementation of the requirements of revised Directive (EU) 2018/2001 for "bioliquids/biofuels" and, where applicable, to the supplementary criteria of the REDcert² scheme.

Economic operators along the entire production chain wishing to be certified in line with the REDcert² scheme requirements must register online on the REDcert website. The company to be certified must thoroughly familiarise itself with the REDcert² scheme requirements prior to the inspection.

⁶ ISO 22095:2020 (Chain of custody - General terminology and models)

The templates and forms provided by REDcert must be used to issue certificates by the certification bodies acknowledged by REDcert. The format and/or language of them may be changed, but not the content. REDcert must be informed if the templates or forms are changed. The translated version of a certificate must indicate that it is a translation which is not legally valid.

Auditors who conduct the inspections in accordance with the REDcert² requirements must have the necessary expertise. In all EU member states, the conditionality regime includes the statutory management requirements (SMR), the standards for maintaining arable land in good agricultural and environmental condition (GAEC) and the regulations for maintaining permanent grassland.⁷ REDcert² inspectors must above all provide evidence of well-founded knowledge of environmental protection, food and animal feed safety and the use of plant protection products, primarily in relation to water, soil, biodiversity and landscape.⁸ The basis of that knowledge can be, for example, agricultural/agrarian training or activities focused on plant production.

In contrast to cash-based accounting where operating income and expenses are allocated by cash flow, in agricultural accounting, they are recognised in the period of the financial year that they belong to. The accounting obligation for farms depends on the revenue threshold. To be able to assess a company's or farm's financial statements (annual accounts), an inspector needs verifiable general understanding of business or special knowledge about agricultural management.

10.1 Evaluation of the audit results

During the audit, compliance with all REDcert² scheme requirements is verified using a checklist. The audit result is evaluated in several parts and, in addition to the core elements of REDcert² certification, also optionally includes determining the degree of compliance with the SAI requirements at the producer level as well as the optional *Responsible Farming* extension module.

⁷ <https://www.bmel.de/EN/topics/farming/eu-agricultural-policy-and-support/direct-payments.html>

⁸ Regulation (EU) No 2021/2115, Annex III

10.1.1 REDcert² core requirements

The assessment corresponds to the procedure in the REDcert-EU certification scheme (see “scheme principles for neutral inspection”, chapter 3.5) and is carried out using the questions specified in the checklists according to the following assessment scheme:

The respective country-specific benchmark results of the SAI platform, which are current and published in their form, generally apply to the REDcert² performance level according to SAI.⁹ The evaluation of the REDcert² scheme requirements in the checklists and the corresponding number of points are shown in the table below.

⁹ <https://saipatform.org/resource-centre/fsa/>

Table 1: Evaluation options in the REDcert² scheme

Evaluation	Explanation	Number of points
Compliant	Complete compliance	20 points
Minor	Minor non-conformity	15 points
Major	Scheme requirements are not fulfilled (critical)	5 points
Critical (KO)	Scheme requirements are not fulfilled (critical)	0 points
N/A	Scheme requirements are not applicable (requirements evaluated as N/A must be explained in the audit report; not all criteria can be evaluated as "N/A")	0 points

Depending on the number of points achieved or whether a criterion is evaluated as KO, the inspections are categorised in the following groups:

Compliant (100%)

No problems were found; the REDcert requirements are fully satisfied. The total number of possible points is achieved and the certificate can be issued.

Partially compliant (75–99%)

The REDcert- scheme requirements are not fully satisfied but the non-conformities found do not put the scheme integrity at risk. A minimum of 75% of the total number of possible points is achieved. The corrective measures agreed with the certification body and/or auditor must be implemented by the dates specified.

The certificate/inspection certificate can only be issued once the auditor responsible has accepted the corrective measures proposed by the operation and the time periods for their implementation.

Non-compliant (<75% and/or KO evaluation(s))

Significant problems were found in the fulfilment of the REDcert² scheme requirements or the respective SAI fulfilment level were identified. Scheme integrity is not assured.

➤ No certificate/ Inspection certificate

The non-conformities found are tracked and sanctions introduced (not in the case of initial

certifications) in accordance with the REDcert **sanction management system** (see REDcert scheme principles for integrity management).

If the audit result is "non-compliant" (< 75% and/or KO evaluation), the neutral **certification body** is required:

- **to inform REDcert within 24 hours** (i.e. send the inspection report to REDcert in electronic form)
- to agree to **corrective measures** with the scheme participant and
- to **define an appropriate timeframe or a deadline** by which the operation has to verify implementation of the corrective measures – usually through another on-site inspection. The **follow-up audit** must have been conducted no later than three months after the previous audit. If after three months no follow-up audit has been carried out, a **full scheme audit** is required to obtain a new REDcert confirmation of conformity.

Prior to re-certification, the certification body must inform REDcert if an economic operator that was previously found to be in non-conformity (major non-conformity) of the requirement in the following areas:

- to indicate the names of all schemes they participate in and
- to make all relevant information, including the mass balance data and the auditing reports, available to the auditor, or

to disclose whether they were found to be non-compliant with any other aspect of the mandatory sustainability criteria.

10.1.2 Determining the SAI compliance level

The level of SAI compliance can also be determined during a REDcert² audit of an agricultural production operation. Requirements are divided into the categories "essential", "intermediate" and "advanced" and compliance with each is assessed. This classification is indicated in the checklist for agricultural businesses. There must be no serious or critical non-conformity for a positive decision in a certain criterium.

Level	Requirements
Bronze	Compliance to 100% 'Essential' questions and a minimum of 50% 'Intermediate' questions.
Silver	Compliance to 100% 'Essential' questions, 75% 'Intermediate' questions and more than 50% 'Advanced' questions.
Gold	Compliance to 100% 'Essential' questions, 100% 'Intermediate' questions and a minimum of 75% 'Advanced' questions.

10.1.3 Responsible Farming

Responsible Farming	<p>The additional <i>Responsible Farming</i> module offers companies the opportunity to demonstrate that efforts have been made to operate sustainably over and above the basic system requirements. For successful certification, participants must fulfil at least 75% of the relevant criteria (chapter 6 within the checklist).</p> <p>There are no disadvantages if an additional criterion is not met. This means that a voluntary target that is not met does not represent a critical violation of the system principles in the REDcert² assessment logic and does not initiate an action plan. Instead, companies should be given the opportunity to proactively provide evidence of additional services rendered.</p>
----------------------------	--

11 Relevant documents

The documentation structure of the REDcert² scheme principle includes the following:

No	Document	Published/revised
1	REDcert-EU scope and basic scheme requirements	The current versions of the REDcert-EU scheme principles and the supplementary REDcert ² principles are published on the www.redcert.org website.
2	REDcert ² scheme principles for biomass production for the food industry	
3	REDcert-EU – Scheme principles for mass balancing	
4	REDcert-EU – Scheme principles for integrity management	
5	REDcert-EU – Scheme principles for GHG calculation	
6	REDcert-EU – Scheme principles for neutral inspections	
7	REDcert-EU – Sanction system	
8	Definitions in the REDcert-EU scheme	
9	Checklist for inspecting producers	
10	Checklist for inspecting interfaces, warehouses and suppliers	

12 Revision Information for Version 4.1

Section	Change
General	Directive (EU) 2018/2001 has been changed to Revised Directive (EU) 2018/2001
7.1.1	New section added

Publication information

REDcert GmbH

Schwertberger Straße 16

53177 Bonn

Germany

+49 (0) 228 3506 200

www.redcert.org