KZR INiG System/11

Forest biomass

by The Oil and Gas Institute - National Research Institute

The KZR INiG System/11

List of contents

1. Introduction 4
1.1.1. Compliance with the harvesting criteria at national or sub-national level 4
1.1.2. Compliance with the harvesting criteria at the forest sourcing area level 6
1.2.1. Compliance with the LULUCF criteria at national level 8
1.2.2. Compliance with the LULUCF criteria at the forest sourcing area level 9
2. Normative references 11
3. Definitions 12
4. Forest sourcing area 12
5. Harvesting criteria 14
5.1. Demonstrating compliance with harvesting criteria at level A 15
5.1.1. The legality of harvesting operations 16
5.1.2. Forest regeneration of harvested areas 16
5.1.3. Areas designated by international or national law for nature protection purposes ...16
5.1.4. Soil quality management and maintenance of forest biodiversity 17
5.1.5. Maintenance of long-term production capacity of forests 18
5.1.6. 'No-go' areas 18
5.2. Demonstrating compliance with harvesting criteria at level B 20
5.2.1. The legality of harvesting operations 22
5.2.2. Regeneration criteria 23
5.2.3. Protected area 25
5.2.4. Maintenance of soil quality and biodiversity 27
5.2.5. Long-term production capacity 30
5.2.6. 'No-go' areas 31
6. Criteria for Land-use, Land-use change and Forestry 32
6.1. Paris Agreement 32
6.2. NDC 33
6.3. Carbon stock 34
6.4. Demonstrating compliance with LULUCF criteria (level A) 34
6.5. Demonstrating compliance with LULUCF criteria (level B) 37
7. Risk analysis 46
7.1. Methodology 47
7.1.1. Legality of wood harvesting 51
7.1.2. Forest regeneration 51
7.1.3. Preservation of biological diversity 52
7.1.4. Preservation of soil quality 53
7.1.5. Regulations for protected areas 53
7.1.6. Maintenance of the long-term production capacity of the forest 53
7.1.7. Guarantee of carbon sequestration parity 54
7.1.8. Enforcement and monitoring 54
7.1.9. 'No-go' areas 55
7.2. Performance of risk analysis – Level A 55
7.3. Performance of risk analysis – Level B 58
8. Annexes 60
9. Changes compared to the previous edition 60

1. Introduction

The document describes the KZR INiG System's requirements related to forest biomass. Biomass from woody industry is excluded from criteria defined in this document. These requirements provide guidelines on the sustainable way to produce, process, transport and use biofuel, biomass fuels and bioliquids raw materials and feedstocks.

In order to ensure a high level of credibility and consistent risk-based approach across the scheme, the assessment of determining compliance with the harvesting criteria [and LULUCF criteria] at national/sub-national level should follow a set process and apply standard templates.

In accordance with the KZR INIG System, biofuels, biomass fuels and bioliquids shall fulfil requirements stated in Directive RED III, article 29 point 6, 7.

All of these requirements included in this document apply to forest biomass and shall be met by forest biomass collection point participating in the KZR INiG System.

Article 29.6 of the RED III specifies that biofuels, bioliquids and biomass fuels produced from forest biomass taken into account for national renewable energy targets shall meet described below criteria to minimise the risk of using forest biomass derived from unsustainable production.

Article 29.7 of the RED III specifies that biofuels, bioliquids and biomass fuels produced from forest biomass taken into account for national renewable energy targets shall meet described below land-use, land-use change and forestry (LULUCF) criteria.

1.1.1. Compliance with the harvesting criteria at national or sub-national level

(1) The economic operators shall provide audited information establishing compliance with the harvesting criteria at national or sub-national level. To that end, economic operators shall carry out a risk-based assessment which provides accurate, up-to-date, and verifiable evidence of all the following elements:

(a) the country of harvest, and, where applicable, the sub-national region where the forest biomass was harvested; and

(b) that the national or sub-national law applicable to the area of harvest ensures:

(i) The legality of harvesting operations, which shall be proven by providing evidence compliance of harvesting with the applicable legislation in the country of harvest, as set out in point (h) of Article 2 of Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market;

(ii) Forest regeneration of harvested areas, which may be proven by providing evidence that the applicable laws require natural or artificial regeneration, or a

combination of both, aiming at the establishment of a new forest in the same area and within an appropriate period according to the relevant national legislation;

(iii) that areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands, grassland, heathland and peatlands, are protected with the aim of preserving biodiversity and preventing habitat destruction;

(iv) that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats.

(v) That harvesting maintains or improves the long-term production capacity of the forest, which may be proven by providing evidence that the applicable law at national or sub-national level ensures that the average annual fellings do not exceed average net annual increment over an appropriate period according to the relevant national legislation, except in cases where it is temporarily justified due to documented forest pests, storms, or other natural disturbances. That may be proven by using:

(1) national forest inventory reports, providing the evidence referred to in point 1.2.1.a.ii or
(2) similar inventory reports at sub-national level

(vi) that forests in which the forest biomass is harvested do not stem from the lands that have the statuses referred to in Article 29(3) points (a), (b), (d) and (e); Article 29(4), point (a), and Article 29(5) of the RED III, respectively under the same conditions of determination of the status of land specified in those paragraphs; and

(vii) that installations producing biofuels, bioliquids and biomass fuels from forest biomass, issue a statement of assurance, underpinned by company-level internal processes, for the purpose of the audits conducted pursuant to Article 30(3) of the RED III, that the forest biomass is not sourced from the lands referred to in point (vi) of this subparagraph. Economic operators include in the contracts statement of

assurance that forest biomass used for energy production is not sourced from the areas listed in Article 29(6)(a)(vi) of the RED III.

(c) the existence of systems for ensuring monitoring of implementation and enforcement of the national and sub-national laws referred to in paragraph (b), including information on the following elements: the authorities competent for carrying out monitoring, implementation and enforcement, sanctions for non-compliance, systems for appealing against decisions, and public access to information;

(d) that there is no significant lack of enforcement of the national and/or sub-national laws and regulations referred to in point (b).

(e) In order to minimize the administrative burden for economic operators, KZR INiG allows to use established by Member States public databases. with up-to-date information on the elements referred to in Level A requirements (art 29(6)), including public spatial data and public inventories, to operators.

NOTE:
Primary forests and old growth forests are defined by Article 29(3)(a) as 'no-go' areas, which should be interpreted as an absolute prohibition to harvest in these areas. The references in Article 29(6)(a)(iv) and Article 29(6)(b)(iv) to those areas should be read in conjunction with Article 29(3)(a). The references in Article 29(6)(a)(iv) and Article 29(6)(b)(iv) should be considered as a description of sustainable harvesting practices. They should not be interpreted as an exception to the specific – and absolute – rule that forest (and agricultural) biomass should not be sourced from these areas.

1.1.2. Compliance with the harvesting criteria at the forest sourcing area level

Where evidence of compliance with one or several harvesting criteria at national or sub-national level is not available, economic operators shall provide audited information that those criteria have been complied with through management systems that are in place and implemented at the level of the sourcing area. To that end, economic operators shall provide accurate, up-to-date, and verifiable evidence of the following elements:

(a) The spatial boundaries of the sourcing area for which compliance needs to be demonstrated, and on which management systems referred to in point (b) apply, including by means of geographical coordinates or parcels.

(b) Management systems applicable to the sourcing area ensuring:

(i) The legality of harvesting operations, which shall be proven by providing evidence of the compliance of harvesting with the due diligence system defined in article 6 of Regulation (EU) No 995/2010 of the European Parliament and of the Council;

(ii) That forest regeneration is carried out in a manner that at least maintains the quality and quantity of the harvested forest areas, which may be proven by providing evidence of the establishment of a new forest is in the same area within a maximum of ten years after the harvesting. That may be proven by using forest management plans, operational protocols, environmental impact assessments, and results of relevant compliance audits and inspections;

(iii) That forest biomass does not originate from areas designated by international or national law or by relevant competent authority for nature protection, including in wetlands, grasslands, heathlands and peatlands, are protected with the aim of preserving biodiversity and preventing habitat destruction, unless evidence is provided that the harvesting of that raw material does not interfere with those nature protection purposes. That may be proven by using, international and national databases, official maps, forest management plans, operational protocols, harvesting protocols, satellite imaging, environmental impact assessments, and official logging permits including conditions or restrictions ensuring that there is no conflict with the relevant nature protection objectives, and the results of relevant compliance audits and inspections;

(iv) that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats This may be proven by providing evidence that, the relevant risks associated with the harvesting of forest biomass for energy production have been identified in advance, appropriate mitigation actions have been implemented, such as the following:

(1) primary forests and areas protected under 1 (b) (iii) are not degraded to or replaced by plantation forests or other wooded land;

(2) harvesting of stumps and roots is minimised;

(3) no harvesting is carried out on vulnerable soils;

(4) harvesting is carried out through logging systems that minimise impacts on soil quality, including soil compaction;

(5) harvesting is carried out in a way that minimises impacts on biodiversity features and habitats, including plants and animals protected under international or national legislation;

(6) a locally-appropriate quantity and assortments of deadwood is left in the forest; and

(7) large clear-cuts are minimised except in cases where it is temporarily justified due to documented forest pests, storms, or other natural disturbances.

Those mitigation actions may be proven by using, international and national databases, official maps and satellite imaging, forest management plans, operational protocols, and harvesting protocols, results of relevant compliance audits and inspections; and

(v) That harvesting maintains or improves the long-term production capacity of the forest. This may be proven by providing evidence that the annual feedings do not exceed the net annual increment in the relevant sourcing area on average within the ten-year period prior to the harvesting intervention, unless different amounts are duly justified in order to enhance the future production capacity of the forest; or because of documented forest pests, storms or other natural disturbance. That may be proven by using, public or private forest inventory data.

(vi) that forests in which the forest biomass is harvested do not stem from the lands that have the statuses referred to in Article 29(3) points (a), (b), (d) and (e); Article 29(4), point (a), and Article 29(5) of the RED III, respectively under the same conditions of determination of the status of land specified in those paragraphs.

NOTE:

Primary forests and old growth forests are defined by Article 29(3)(a) as ‘no-go’ areas, which should be interpreted as an absolute prohibition to harvest in these areas. The references in Article 29(6)(a)(iv) and Article 29(6)(b)(iv) to those areas should be read in conjunction with Article 29(3)(a). The references in Article 29(6)(a)(iv) and Article 29(6)(b)(iv) should be considered as a description of sustainable harvesting practices. They should not be interpreted as an exception to the specific – and absolute – rule that forest (and agricultural) biomass should not be sourced from these areas.

1.2.1. Compliance with the LULUCF criteria at national level

The economic operators shall provide audited information that confirms compliance with the criteria on land use, land use change and forestry (LULUCF) at national level. To that end, economic operators shall provide accurate, up-to-date, and verifiable evidence that the

country or regional economic integration organisation from which the forest biomass originates, is Party to the Paris Agreement and fulfils either of the following two sets of conditions:

(a) the country or regional economic integration organization of origin of the forest biomass is a Party to the Paris Agreement and:

(i) it has submitted a nationally determined contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), covering emissions and removals from agriculture, forestry and land use which ensures that changes in carbon stock associated with biomass harvest are accounted towards the country's commitment to reduce or limit greenhouse gas emissions as specified in the NDC, that meets the following requirements:

a) the NDC integrates the agriculture, forestry and land use sectors, either combined as one agriculture, forestry and other land use (AFOLU) sector, or as agriculture and LULUCF sectors separately;

b) the NDC explains how the agriculture, forestry and land use sectors have been considered in the NDC;

c) the NDC counts the emissions and removals from the agriculture, forestry and land use sectors against the country's overall emission reduction target, including emissions associated with harvesting of forest biomass; or

(ii) it has national or sub-national laws in place, in accordance with Article 5 of the Paris Agreement, applicable in the area of harvest, to conserve and enhance carbon stocks and sinks, and provides evidence that reported LULUCF-sector emissions do not exceed removals. In addition, evidence shall be provided that the reported LULUCF sector emissions do not exceed removals on average over the ten years preceding the harvesting of the forest biomass and that carbon stocks and sinks are conserved or enhanced between the last two successive ten-year periods preceding the harvesting of forest biomass.

1.2.2. Compliance with the LULUCF criteria at the forest sourcing area level

(b) where evidence referred to in point (a) of section 1.2.1 above is not available, the biofuels, bioliquids and biomass fuels produced from forest biomass shall be taken into account for national renewable energy targets if management systems are in place at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained or strengthened over the long term. To that end, economic operators shall provide accurate, up-to-date, and verifiable evidence in accordance with the following requirements:

a) identify the spatial boundaries of the sourcing area for which compliance needs to be demonstrated, for instance by means of geographical coordinates, plots or parcels, including stands and tracts of land; and identify the relevant forest carbon pools, including aboveground biomass, belowground biomass, litter, deadwood and soil organic carbon.

b) calculate the average forest carbon stocks and sinks over a historical reference period with the purpose of establishing a benchmark for the comparison of maintenance or strengthening of forest carbon stocks and sinks of a sourcing area. Economic operators shall use the reference period of 2000-2009, or another period of similar length and as close as possible to 2000-2009 to facilitate the use of forest inventory data or to mitigate the impacts of natural disturbances or other extreme events. The economic operators shall duly justify the choice of their reference period. The economic operator shall estimate reference values for all relevant carbon pools individually identified pursuant to point (a);

c) describe the scenario of the expected forest management practices in a sourcing area for a projected long-term period, covering at least 30 years after the harvesting event from which biomass is sourced. That scenario shall be constructed on the basis of the forest management practices in a sourcing area documented for the historical reference period, or on existing forest management plans or other verifiable evidence;

d) estimate the average carbon stocks and sinks of the sourcing area over the projected long-term period, covering at least 30 years, or more years depending on the forest growth rate, after the harvesting of the forest biomass. In order to ensure comparability with the historical reference period, those estimates shall use the same carbon pools, data and methods referred to in points (a) and (b). Where economic operators are not able to quantify one or more of the pools identified pursuant to point (a), they shall provide due justification;

e) compare the average carbon stock and sinks in the relevant forest sourcing area of the projected long-term period with the forest carbon stocks and sinks of the historical reference period. If the average forest carbon stocks and sinks of the projected long-term period are equal to or higher than the average forest carbon stocks and sinks of the historical reference period, the forest biomass is in compliance with the LULUCF criteria at the forest sourcing area level. Economic operators shall put in place adequate monitoring and verification systems of the actual development of carbon stock and sinks in demonstrated compliance with the requirements set out in this article.

According to the KZR INiG system, Level A it is the national level, while Level B it is the forest sourcing area. The forest biomass criteria are fulfilled at national or sub-national level

("level A") when legislation defined in Article 29(6a) and 29(7a) are in place. However, for any of these criteria at level A for which compliance cannot be demonstrated at national or sub-national level, economic operators will need to demonstrate compliance at the forest sourcing area level ("level B").

According to KZR INiG proofs of conformity with above mentioned criteria shall be provided using a risk-based approach (a risk assessment) that assesses the risk of using non-sustainable forest biomass. The risk assessment must demonstrate that laws at national or sub-national level apply to the sourcing area of forest biomass. If the result confirms meeting of criteria on A level, forest biomass can be harvested as sustainable. No further actions are needed in this context. Otherwise, the economic operator is obliged to proof on the level B that sourcing area meets these criteria which are not met on the level A. Further guidelines concerning risk analysis are described in point 7 of this document. If there is no Level A risk assessment or the Level A risk assessment results indicate high risk level (in 1 or more of the criteria), FGP is obliged to define sourcing area and prepare the risk assessment for that sourcing area (Level B assessment).

In case of Level B risk assessment, the assessment is performed on the basis on guidelines defined in section 5.2 for the harvesting criteria and section 6.5 for the LULUCF criteria of the document no 11. In case of Level A risk assessment, the assessment is performed on the basis on guidelines defined in point 7 of the document no 11.

Risk assessments are in the form as provided in the Annex 11.1 or Annex 11.2. Place of origin sigs the self-declaration as provided in the Annex 11.4.

2. Normative references

The normative references, covering all aspects of the KZR INiG System, are the following linked documents, which should be read in conjunction.

KZR INiG System /1/ Description of the KZR INiG System – general rules

KZR INiG System /2/ Definitions

KZR INiG System /3/ Reference with national legislation

KZR INiG System /4/ Land use for raw materials production – lands with high carbon stock

KZR INiG System /5/ Land use for raw materials production – biodiversity

KZR INiG System /6/ Land use for raw materials production – agricultural and environmental requirements and standards

KZR INiG System /7/ Guidance for proper functioning of mass balance system

KZR INiG System /8/ Guidelines for the determination of the life cycle per unit values of GHG emissions for biofuels, biomass fuels and bioliquids

KZR INiG System /9/ Requirements for certification bodies

KZR INiG System /10/ Guidelines for auditor and conduct of audit

KZR INiG System /11/ Forest biomass

KZR INiG System/12/ Renewable Fuels of non-biological origin and recycled carbon fuels

3. Definitions

System KZR INiG /2/ Definitions

KZR INiG accepts the definition of "old growth forest" defined by national legislation in the country of origin of biomass. If such definition does not exist, the definition defined in the document System KZR INiG/2 shall be applied.

4. Forest sourcing area

According to Article 2(30) of RED III, the term 'Sourcing area' is defined as "the geographically defined area from which the forest biomass feedstock is sourced, from which reliable and independent information is available and where conditions are sufficiently homogeneous to evaluate the risk of the sustainability and legality characteristics of the forest biomass ".

This definition implies:

• A "geographically defined area": The area of origin, from which the forest biomass feedstock is sourced, is known, and can be shown on a map, typically on the basis of administrative boundaries.

• "From which reliable and independent information is available": information required to assess compliance with the RED III criteria is available from reputed organizations, public or private, which have the competence to produce reliable information.

• "Where conditions are sufficiently homogenous to evaluate the risk of the sustainability and legality characteristics of the forest biomass": this means in the first place that within the area, the legislation covering the issues in the sustainability criteria, shall be the same. If an economic operator's supply base spreads over two countries or regions where the issues addressed in RED III are governed through different sets of legislation, then that results in two separate sourcing areas for which the risk-based approach would have to be implemented separately.

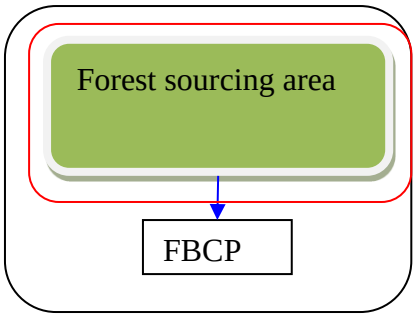
This definition does not refer to the size of the area, but rather to a sufficient level of information for the respective area that is required.

First gathering point of forest biomass is obliged to define in its internal procedure:

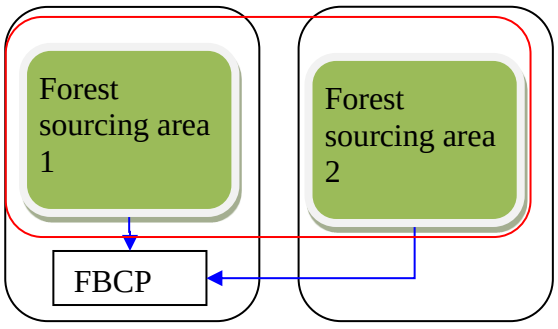
- sourcing area (clear and verifiable information to identify the area and location, for example geographical coordinates, verification of the area via field blocks or politically defined regions such as county, state or national borders);
- a clear reference to the relevant risk assessment, including authors, title, source, issue date and validity period and a link to the website where the assessment is published or a copy of the document;
- evidences that biomass is harvested from specified sourcing area (e.g. purchase documents, agreements, others).

The Union sustainability and greenhouse gas emissions saving criteria, according to the RED III recital (104), apply only to electricity and heating from biomass fuels produced in installations with a total rated thermal input equal to or exceeding 20 MW in the case of solid biomass fuels. Such facilities, when using solid biomass fuels, can have a sourcing radius of about 70 km or even larger.

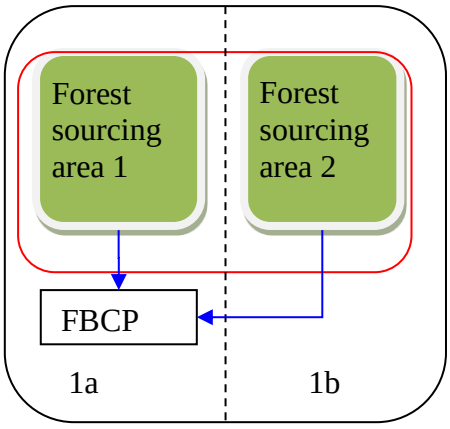
The following Figure 1 shows different scenarios for the division of an operator's supply base into forest sourcing areas.



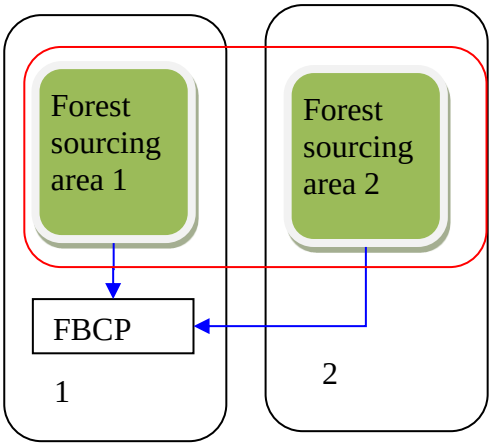
Scenario1



Scenario2



Scenario3



Scenario4

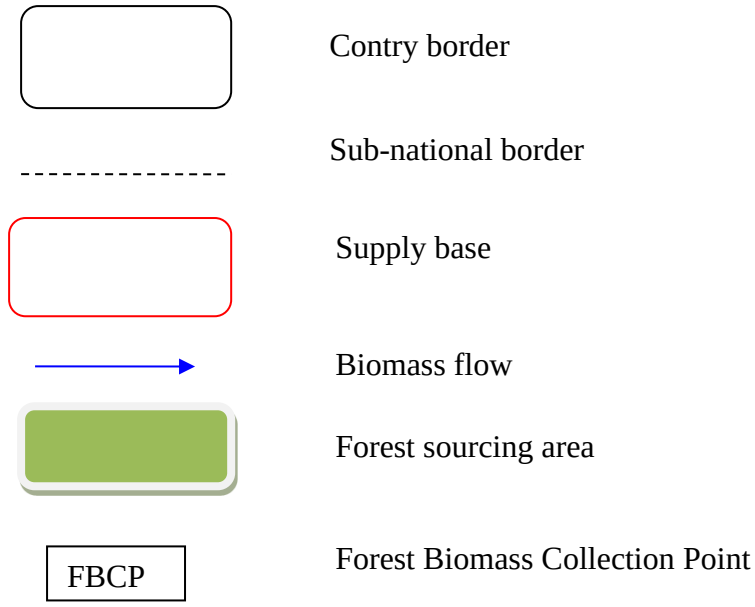


Figure 1. Scenarios of risk-based assessment for different level forest sourcing area

Scenario 1

Country 1 does not comply at level A for one or more criteria. One risk-based assessment is needed to determine compliance with those criteria for the entire supply base.

Scenario 2

Neither country 1 nor country 2 comply at level A for one or more criteria. Two separate risk-based assessment are needed to demonstrate compliance for the entire supply base.

Scenario 3

The country has sub-national legislation in the area of harvest. Region 1a complies for level A and region 1b is non-compliant. Therefore, the country does not comply at level A and two risk-based assessment are needed to demonstrate compliance for the entire supply base.

Scenario 4

Country 1 does not comply at level A, while country 2 does comply at level A. A risk-based assessment is needed to demonstrate compliance for forest sourcing area 1.

5. Harvesting criteria

This point refers to Article 29(6). The RED III requires that biofuels, bioliquids and biomass fuels would be produced only from forest biomass that fulfils the criteria mentioned in introduction part of this document. The criteria are fulfilled at national or sub-national level

("level A") when legislation in the area of harvest, as well as monitoring and enforcement systems are in place (Article 29(6a)). However, for any of these criteria at level A for which compliance cannot be demonstrated at national or sub-national level, economic operators will need to demonstrate compliance at the forest sourcing area level ("level B").

The criteria (i), (ii), (iv) and (v) on level B are the same as on level A – thus with the difference that the economic operator is responsible for ensuring compliance with the harvesting criteria in the sourcing area(s). When criteria (iii) need to be met at forest sourcing area level, if raw material would be harvested from designated areas, then evidence needs to be provided that the harvesting of the material does not interfere with the nature protection purposes.

5.1. Demonstrating compliance with harvesting criteria at level A

If criteria on level A are not met, forest biomass collection point should follow requirement stated in this document to prove meeting of sustainability criteria.

For "level A" compliance the harvesting criteria need to be fulfilled at national level for the country from which the biomass was harvested from a forest area. Laws, enforcement, and monitoring systems can be a national or sub-national or regional competence. In the latter case, all regions need to comply with a criterion so that a country can be considered to pass it at "level A". The regional level can be referred to differently depending on the country. In federal countries, like Austria (10 Länder), Belgium (2 regions), Canada (10 provinces), Germany (16 Bundesländer) and the United States of America (US, 50 states), or in decentralized countries like Spain (17 provinces) and Italy (20 regions), important parts of the legislative power can be transferred from the country level to the sub-national level. In the mentioned countries this also applies in the area of forestry.

When compliance cannot be guaranteed in all constituent regions of a country, then compliance will need to be checked at the forest sourcing area level.

Note that in some countries it may be the case that for some criteria the legislative power is at the country level, whereas for other criteria this would be at sub-national level, and in some cases, it can be a mix, for example when different laws apply for different types of forest ownership.

Example 1. A country regulates all laws applicable in the area of harvest at national level. Compliance with the RED III criteria needs to be checked only at national level. For criteria that are non-compliant at national level, the compliance would need to be checked at forest sourcing area level.

Example 2. To pass a criterion at "level A" when any legislation in the area of harvest is not a power of the US federal level but of the state level, that criterion would need be complied with in all of its 50 states (with the exception of e.g. forests that are owned and regulated by the US federal level). In Canada this would need to be checked for each of its 10 provinces; in Germany for each of its 16 Bundesländer and so forth.

Additional guidance on assessing these criteria is provided in the annex 11.2 of this document.

5.1.1. The legality of harvesting operations

In line with the Regulation (EU) no 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market – in short EU Timber Regulation or EUTR – legality of harvesting operations shall be ensured by compliance with legislation in force in the country of harvest.

5.1.2. Forest regeneration of harvested areas

The Directive defines the term 'forest regeneration' as the 'Re-establishment of a forest stand by natural or artificial means following the removal of the previous stand by felling or as a result of natural causes, e.g. fire or storm' (Article 2.31).

Example 1: A final cut was applied to a forest and the biomass was removed. On the site already existing seedlings and seeding from seed trees that were left from the previous forest already will form the basis for the new forest.

Example 2: A forest was removed. On the site no seedlings exist. The forest is re-established through planting of seedlings from a nursery.

5.1.3. Areas designated by international or national law for nature protection purposes

Biomass fuels produced from forestry biomass shall not be made from raw materials obtained from land that was a protected area. Proving that this criterion is met is always required, even if the Level A assessment is available.

The list of protected areas includes:

- national parks,
- nature reserves,
- landscape parks, as well as protected landscape areas,
- Natura 2000 areas,
- natural monuments,
- documentation sites,
- ecological grounds,
- nature-landscape complexes for protection of plant, animal and fungi species
- wetlands,
- peatlands,
- grasslands,

– heathlands.

For more information see documents System KZR INiG/4, System KZR INiG/5.

5.1.4. Soil quality management and maintenance of forest biodiversity

The term ’maintenance of soil quality’ means keeping the physical, chemical, biological and ecological state of the soil after an intervention at comparable level as before the harvesting intervention.

It shall be ensured that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats.

In context of soil quality, the term ‘minimising negative impacts’ does in practice mean keeping soil disturbance due to harvesting to a minimum by applying a site-suitable harvesting system and preventing soil erosion, while allowing established sustainable forestry practice. Special care is to be given especially in areas prone to erosion such as steep slopes, in the vicinity of waterways and soils prone to compaction, particularly wet soils.

Example 1: Forests on wet soils that are easily compacted by heavy machinery could be harvested in winter when the ground is frozen.

Example 2: To prevent erosion on steep slopes, low-impact harvesting can be implemented by extracting the biomass via purpose-specific cableways.

The term ‘maintenance of forest biodiversity’ means that genetic and diversity of animal and plant species is unharmed during an intervention or can establish again after an intervention. This would include measures directly targeted at the conservation of species or indirectly by ensuring species can re-establish. This leads to consider e.g. genetic diversity and species richness that relate to the dominant plant and animal species that characterize a given forest ecosystem, while also vegetation structure (height, density, complexity) and age of the trees play an important role. Protecting and restoring biodiversity serves to maintain resilience in forests, in time and space.

At forest management unit level, maintenance of biodiversity according to the harvesting criteria laid down in Article 29.6 requires that, upon biomass harvesting, the forest will re-

establish with comparable or more biodiversity-favourable characteristics and sustainable forest management practice.

Example 1: Regulation can require to leave a certain number of mature trees standing on the logging site, not only to secure natural regeneration but also as old trees are important for biodiversity.

Example 2: Regulation can require to leave a certain minimum amount of standing and laying dead treetrunks as deadwood fulfils an important ecological function.

5.1.5. Maintenance of long-term production capacity of forests

This term refers to the management of forests to sustainably deliver products and services over a long period of time bridging several successive forestry rotations. Actions which ensure long-term production capacity should be implemented in sourcing area. It may be such actions as:

- branches are extracted while the nutrient-rich foliage is left on site;
- after burning, ashes are returned to the forest;
- the harvested biomass does not exceed the net annual increment;
- residue harvest is not conducted on poor or vulnerable soils;
- harvest of foliage is omitted.

In case if the forest in a certain area has suffered storm damage, which resulted in a windthrown tree volume equivalent to several times the net annual increment, this does not result to non-compliance with the productivity criterion, however on the extraction sites measures would need to be in place to prevent high nutrient losses.

5.1.6. ‘No-go’ areas

Areas with high biodiversity (art. 29(3))

Biofuels, bioliquids and biomass fuels cannot be obtained from raw materials originating from areas with high biodiversity:

- primary forest and other wooded land of native species;
- old growth forest;
- highly biodiverse forest and other wooded land which is species-rich and not degraded;
- highly biodiverse grassland;
- heathland.

This means that all activities related to their production cannot lead to the degradation of natural ecosystems, including deforestation, destruction of permanent grasslands, heathlands,

drainage of wetlands or other interference that could negatively affect biodiversity and the functioning of ecosystems.

The areas prohibited for raw material sourcing for biofuel production include primary forests that have not been subject to human intervention, as well as old-growth forests, which serve as valuable habitats with unique species composition. Protection also extends to forests and other areas of high biodiversity, characterized by species richness and low levels of degradation, as well as areas that have been officially recognized as having significant environmental value. The restriction also applies to grasslands and high-biodiversity grassy areas, both those of natural origin, which retain their original characteristics in the absence of human intervention, and those that require appropriate management to maintain their high ecological value.

This criterion is binding irrespective of whether the land continues to have this status in or after January 2008.

Land with high-carbon stock (art 29(4))

The restriction covers:

- wetlands, namely land that is covered with or saturated by water permanently or for a significant part of the year;
- continuously forested areas, namely 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;
- land spanning more than one hectare with trees higher than five metres and a canopy cover of between 10 % and 30 %, 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 of RED III is applied, the conditions laid down in paragraph 10 of Article 29 of RED III would be fulfilled.

This provision shall not apply if, at the time the raw material was obtained, the land had the same status as it had in January 2008.

Peatland (art. 29(5))

Peatlands play a crucial role in maintaining biodiversity and storing carbon dioxide. Thus, biofuels, bioliquids and biomass fuels cannot be produced from land that had this status in January 2008, unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.

All activities related to raw material sourcing from these areas must comply with the principles of sustainability as outlined in the System KZR INiG/5 document, and any intervention requires proof that it does not compromise the ecological functions of the given area.

Statement of assurance

Installations producing biofuels, bioliquids and biomass fuels from forest biomass, issue a statement of assurance, underpinned by company-level internal processes, that the forest biomass is not sourced from the lands referred to in point 5.1.5. Countries must have such legislation in place, obliging the companies to issue the statements of assurance, and energy companies will have to comply with it in their contracts and actually issue the statements of assurance.

5.2. Demonstrating compliance with harvesting criteria at level B

Assessment of the legality of harvesting forest biomass is necessary to define an appropriate legal framework in the area where the biomass is produced. If a risk assessment shows that A level is not met or the risk assessment is not available, FGP is obliged to prove that defined by FGP sourcing area meets sustainable criteria according to Article 29(6-7). Particular attention should be paid to regulating property rights and land use. It is also important that the lack of formal legal regulations in the area of biomass production or use does not constitute a breach of sustainability, as the legality assessment presupposes the existence of an appropriate legal basis. Therefore, all operations related to the harvesting of biomass can only be considered illegal if they violate the law.

Harvesting of forest biomass from areas which have status defined in Article 29 (6)(a)(vi) is forbidden. The FGP is obliged to confirm that forest biomass does not origin from no-go areas. Documenting and verification of these criteria is performed according to the same rules as for agricultural biomass.

Demonstrating compliance with harvesting criteria at level B should performed criterion by criterion as it is shown in the Figures 2- 7.

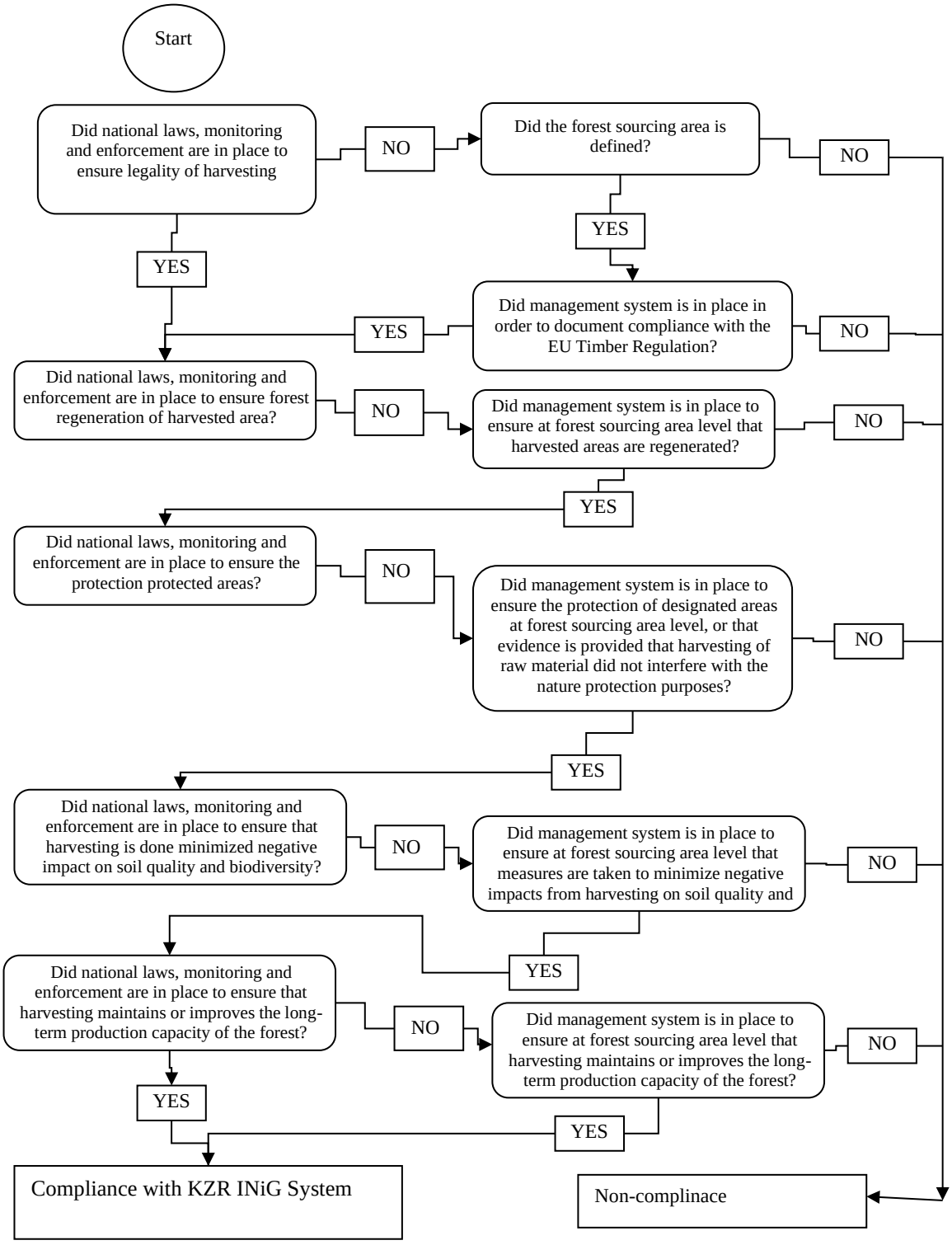


Figure 2. Procedure for verifying of compliance with the harvesting criteria

5.2.1. The legality of harvesting operations

In order to assess the forest biomass trade as compliant with the law, producers of forest biomass need to ensure the compliance of harvesting with the due diligence system defined in article 6 of Regulation (EU) No 995/2010 of the European Parliament and of the Council. The procedure is shown in Figure 3.

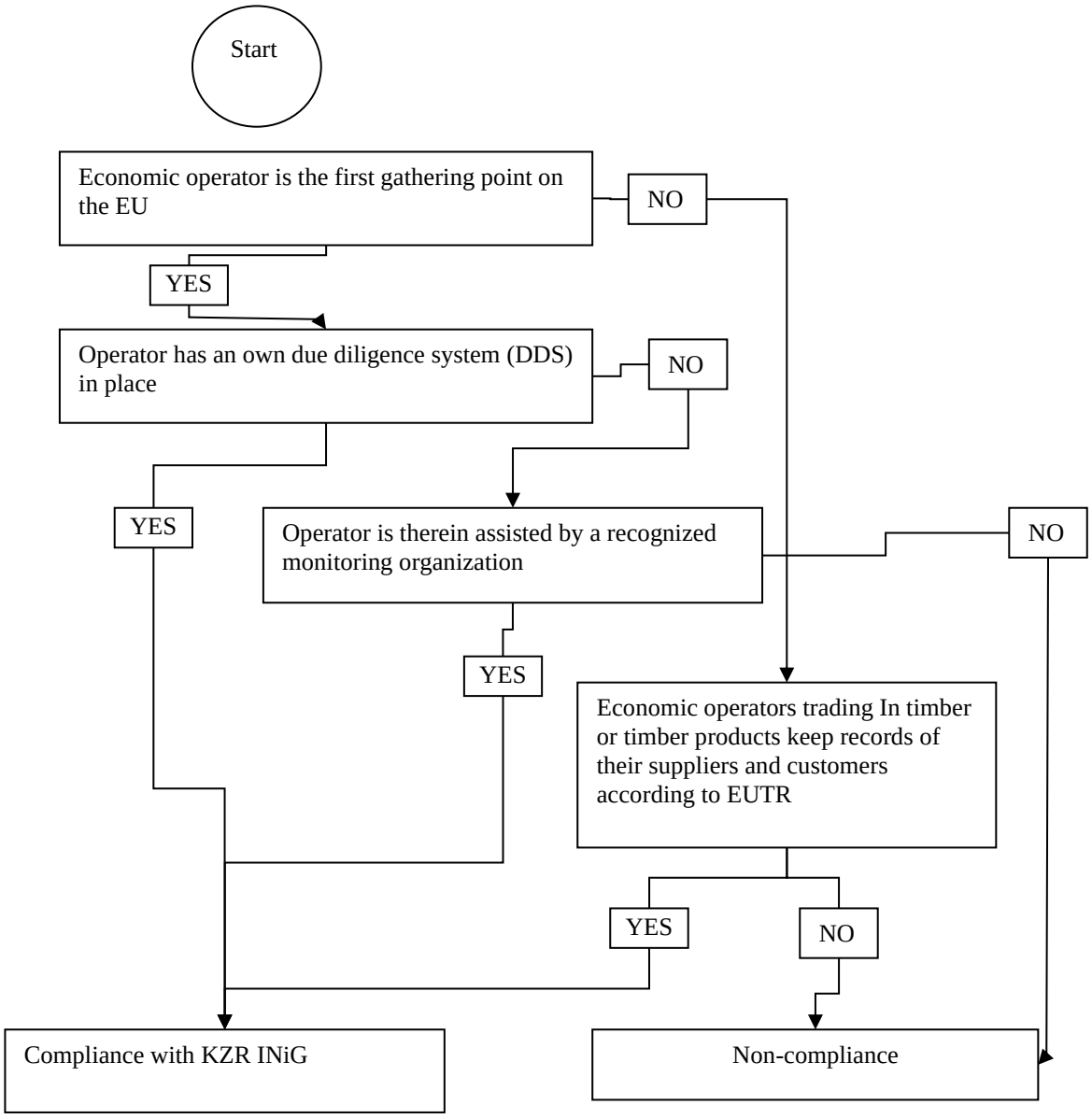


Figure 3. Procedure for verifying of compliance with the legality criterion

Own Due Diligence System is described as follows:

- Information – Businesses must gather information from their supply chain on their products. This must include product description (wood species, country of harvest, volume), details of the suppliers and other compliance documents.
- Risk Assessment – Analysis and evaluation of the information gathered against relevant criteria including: assurance of compliance with legislation, prevalence of illegal harvesting of the tree species and practices in the country of harvest and accounting for the complexity of the supply chain.
- Risk Mitigation – If there is evidence of non-negligible risk then businesses must undertake actions to mitigate the identified risks to a negligible level.

Further info on DDS requirements: Commission Implementing Regulation (EU) No 607/2012 of 6 July 2012 on the detailed rules concerning the due diligence system and the frequency and nature of the checks on monitoring organisations as provided for in Regulation (EU) No 995/2010 of the European Parliament and of the Council laying down the obligations of operators who place timber and timber products on the market. OJ L 177, 7.7.2012, p. 16–18

Due Diligence System (DDS) via recognized monitoring organization is described by Commission Delegated Regulation (EU) No 363/2012 of 23 February 2012 on the procedural rules for the recognition and withdrawal of recognition of monitoring organisations as provided for in Regulation (EU) No 995/2010 of the European Parliament and of the Council laying down the obligations of operators who place timber and timber products on the market. OJ L 115, 27.4.2012, p. 12–16

Records shall be kept by trader for the last five years.

5.2.2. Regeneration criteria

Figure 4 shows the stepwise approach for demonstrating compliance with the regeneration criterion.

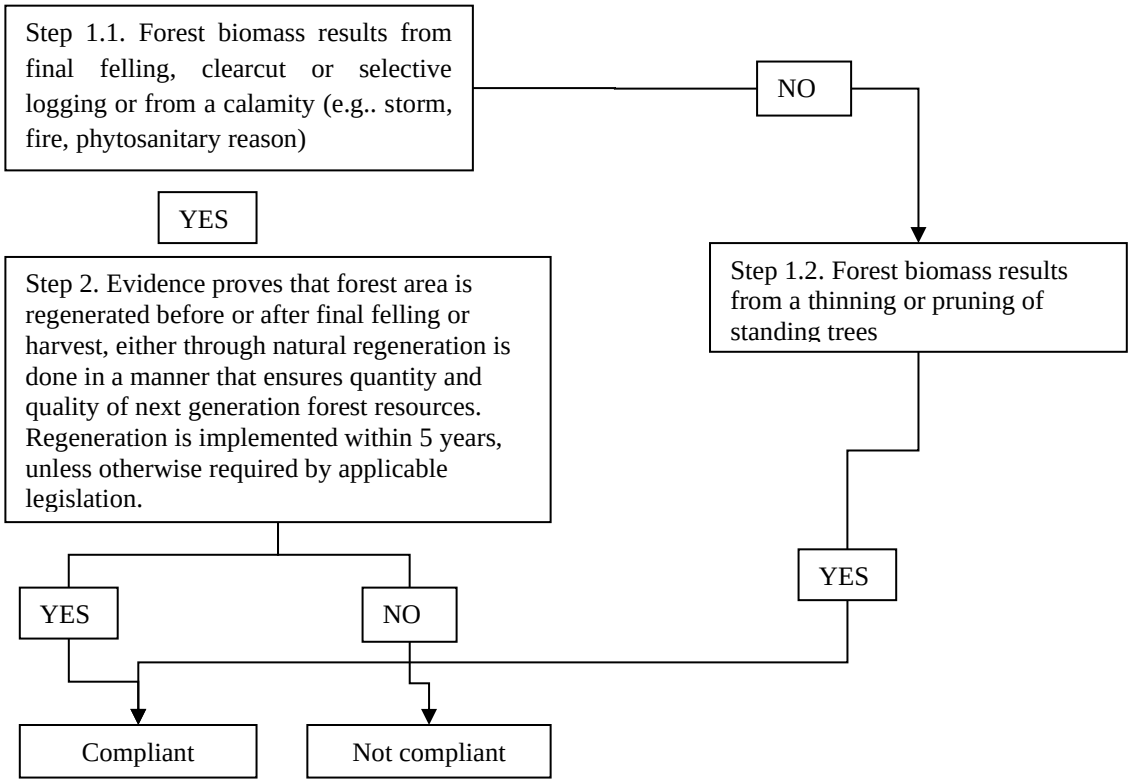


Figure 4. Steps to confirm compliance with the regeneration criteria

Key steps include:

Step 1.1: The economic operator shall identify whether the forest biomass results from final felling, clearcutting, or selective logging, or from a calamity (such as storm, fire, or for phyto-sanitary reasons to prevent the spread of biotic pests and diseases). In this case, regeneration is required.

Step 1.2: When biomass results from thinning or from the pruning of trees, then regeneration would not be an issue and the biomass would be considered automatically compliant with the criterion. Thinning means a reduction of the number of stems to give more space for the crowns of the main trees of interest to develop to maturity. This is undertaken while maintaining a maximum possible tree cover, not leading to forest degradation and instead ensuring quantity and quality of next generation forest resources.

The information to assess these first steps should be specified in forest management plans/operational reports/harvest protocols by specifying the type of forest operation from which forest biomass stems from (e.g. final felling, thinning, salvage cuttings). The information must be specified for each stand individually. The relevant information could be obtained e.g. from the forest owner directly, or from a competent authority that compiles such information from forests within the sourcing area.

Step 2: If regeneration is required, the operator shall provide evidence to make sure that regeneration will be carried out in an appropriate manner. This means that it is implemented

either through natural regeneration, planting and seeding, or coppice regrowth. Also, evidence is required that forest regeneration is done in a manner that ensures quantity and quality of next generation forest resources. This also means that forest composed of site-natural species shall not be replaced with non-site natural plantations (e.g. site-natural forests will not be replaced by agriculturally managed monocultural plantations). Regeneration should be implemented at least within five years upon timber harvesting, unless otherwise required by the applicable legislation. This to have a limited time period without forest cover, ensuring the maintenance of forest productivity as well as the carbon sink.

This information required in this step should be available from forest management plans. These shall include a regeneration goal regarding species composition and establishment period, as well as identified measures to prevent abiotic and biotic hazards. The information must be specified for any stand individually. The information could be obtained e.g. from the forest owner directly, or from a competent authority that compiles such information from forests within the sourcing area.

5.2.3. Protected area

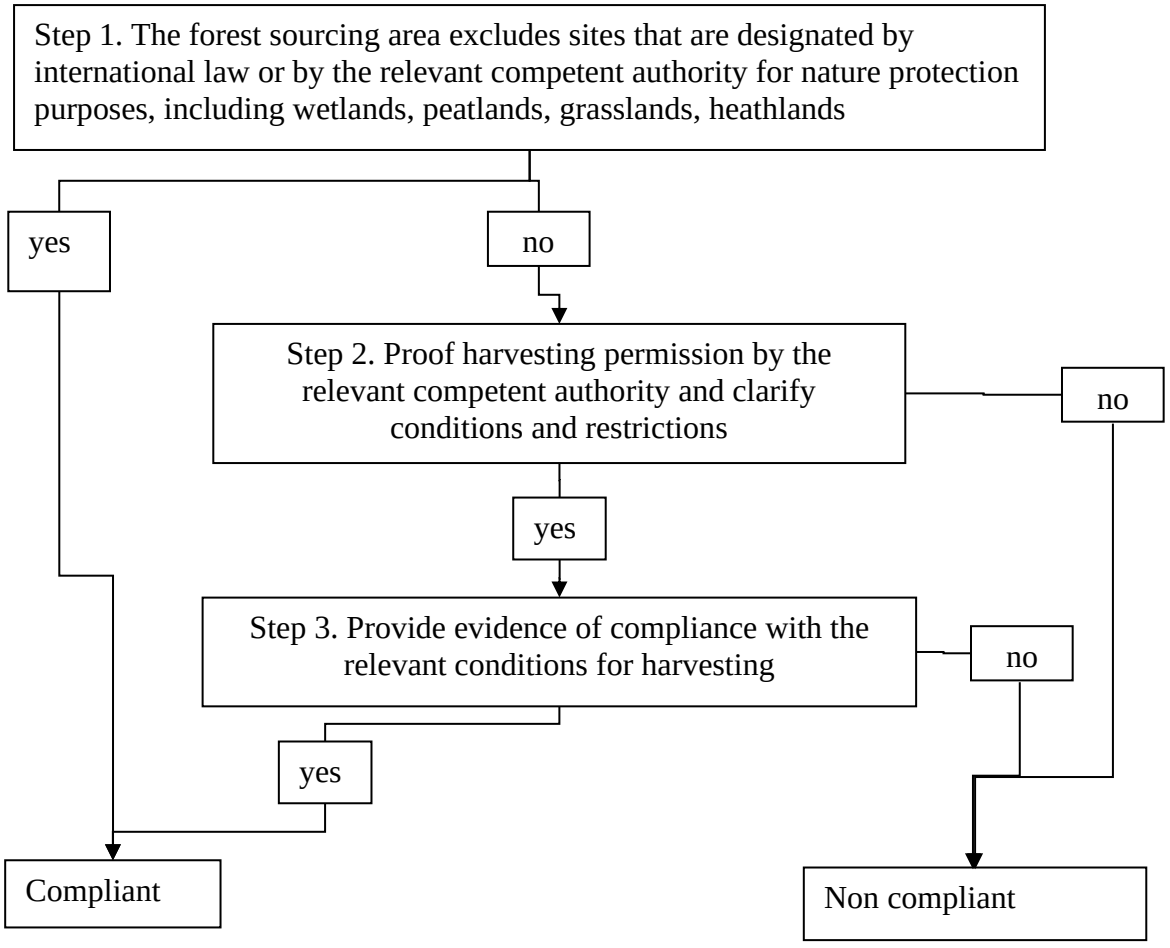


Figure 5. Steps to confirm compliance with the protected area criteria

Figure 5 shows the stepwise approach for demonstrating compliance with the criterion on protected areas. Key steps include:

Step 1: Ensure whether areas designated for nature protection, including wetlands and peatlands, are excluded from the forest sourcing area. If no biomass is sourced from such areas, then the criterion on protected areas is de facto complied with. If the sourcing area does however include such areas, then it needs to be ensured that the interventions were permitted and that all conditions and restrictions are followed, as laid out in the following steps.

The information required in Step 1 can be queried e.g. from the IUCN maintains the World Database on Protected Areas (WDPA). This most comprehensive global database on protected areas contains information on location and boundaries of protected areas, legal status, and other indicators. Other international networks of designated areas include e.g. the UNESCO Biosphere Reserves, which promotes solutions reconciling the conservation of biodiversity with its sustainable use. There are currently 701 biosphere reserves in 124 countries, including 21 transboundary sites, that belong to the World Network of Biosphere Reserves.

Step 2: Provide evidence that an official permission for biomass harvesting was granted by the relevant competent authority and clarify the conditions and restrictions that apply to the harvesting from such areas, the species, amounts and locations where these can be logged from. Restrictions could include specification of certain time periods within which the harvesting should or should not be implemented, equipment specifications, protective measures to be implemented with methods for felling and timber extractions, etc.

This information must be provided upon every consignment originating partly or fully from nature protection areas. Otherwise, proof of compliance with relevant legislation is provided through operational reports/harvest protocols describing amounts and harvesting systems in the respective type of nature protection area.

Step 3: Provide evidence of compliance with the relevant conditions and restrictions for harvesting, by means of operational reports that describe measures undertaken in the respective areas, in order to ensure compliance with the condition statements of the relevant competent authority.

Such reports are either implemented by a second or third party and endorsed by the competent authority, or the reports are implemented via field-inspections with an agent of the relevant competent authority. The information must be provided upon every consignment originating partly or fully from nature protection areas. When all three steps are backed-up with credible evidence, then the biomass is considered compliant with this criterion.

5.2.4. Maintenance of soil quality and biodiversity

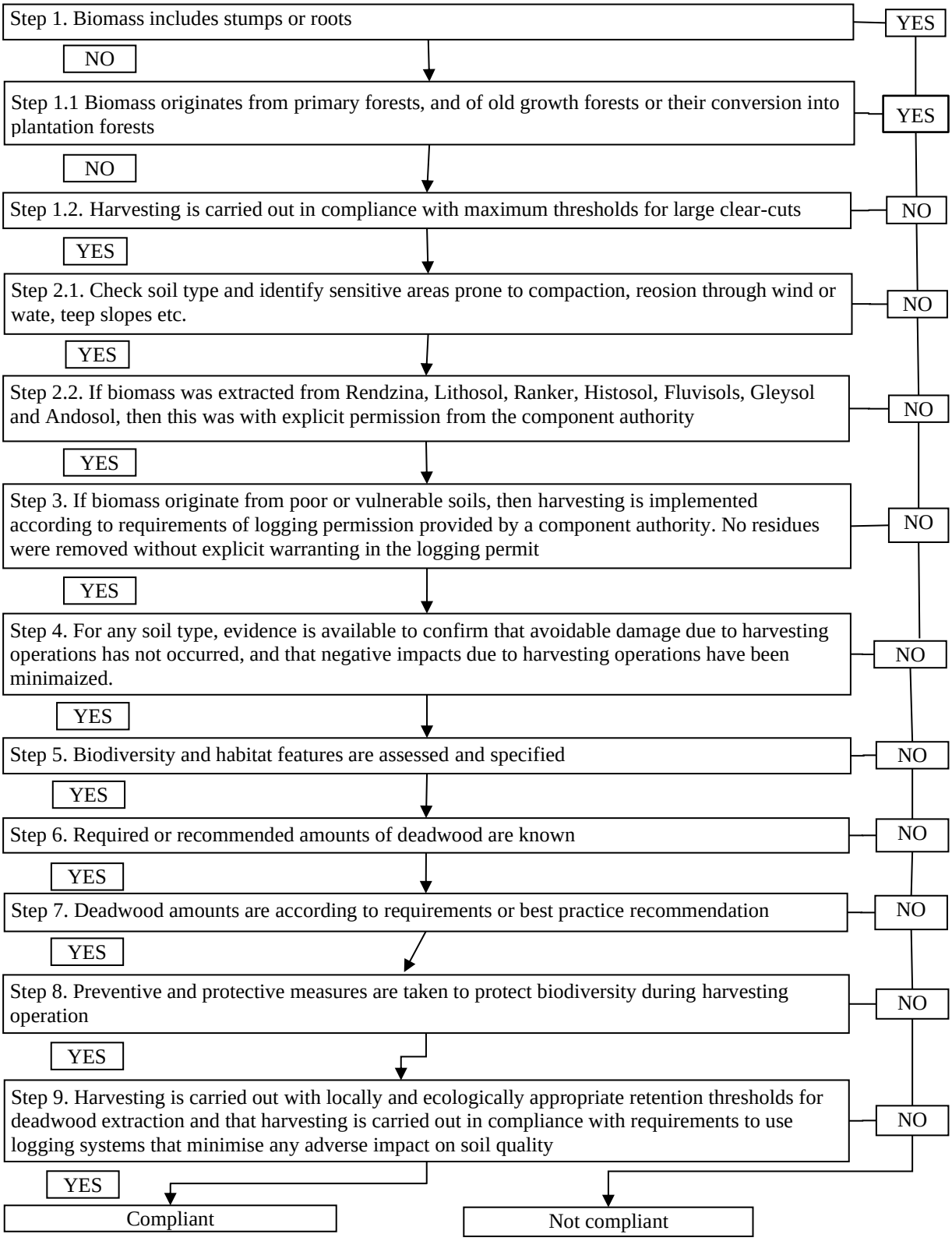


Figure 6 Steps to confirm compliance with the maintenance of soil quality and biodiversity criteria

Figure 6 shows the stepwise approach for demonstrating compliance with the soil and biodiversity criterion. Steps 1 to 4 concern the part of the criterion that requires minimizing harvesting impacts on soil quality, while step 5 to 8 relate to impacts on biodiversity:

Step 1: Removal of stumps and roots can detrimentally affect soil structure, soil proneness to water and wind erosion, reduce soil fertility and reduce soil carbon. Therefore, in order to protect any soil type, ensure that stumps and roots are excluded from the biomass harvested. Harvesting is carried out considering maintenance of soil quality in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests. Harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located.

Step 2.1: Identify sensitive areas in the forest sourcing area (prone to compaction, erosion through wind or water, steep slopes etc.). This can be done e.g. on the basis of soil maps, soil sensitivity maps by the operator or supplier or through the provision of detailed field inventory data. Areas must first be identified before forest biomass can be acquired. If no detailed field inventory data for the forest sourcing area is available. The operator has to interpret (digital) available soil maps or on-site analysis with own or third-party expertise with regard to sensitivity including soil type, slope, and soil quality.

Step 2.2: As a general guideline, no biomass extraction is allowed from soil types Rendzina, Lithosol, Ranker, Histosols, Fluvisols, Gleysols and Andosols, unless with explicit permission from the competent authority.

Step 3: When the sourcing area does comprise poor or vulnerable soils, then evidence needs to be provided that logging on such areas is implemented with the correct logging permit and according to specifications mentioned in the permit. Residues cannot be removed unless explicitly permitted in documentation provided by the competent authority.

Otherwise, confirmation of compliance with local guidelines or best practice guidelines regarding vulnerable soils through operational reports/harvest protocols is provided (e.g. justification of chosen harvesting system in respect of soil type and slope). If such guidelines do not exist, the operator may require suppliers and forest owners to adopt specific Best Management Practices for certain tasks. These should be specified in supply contracts, or the suppliers and forest owners include a report from qualified experts regarding soil vulnerability and possible harvesting systems endorsed with a statement that harvesting practices were implemented according to required standards. Officially approved forest management plans specify measures to be taken and operational reports confirm implementation of required protocols.

Step 4: Requires for any soil type that measures are planned and implemented to minimize impact on soils (e.g. by means of low or reduced impact logging (RIL), soil protecting harvesting system, low tire pressure, residue topping on logging trails, logging and removal

when soil is frozen or under protective snow cover, optimized trail location without redundant driving, permanent logging trails, power shift clutch, skid chains, traction-assisting-winch, exclusion of logging within a certain distance from water bodies, exclusion of logging of forests smaller than a certain size, etc.). In order to minimize impacts of forest management, appropriate assessment of impacts and planning to minimize impacts is necessary. The measures have to be in accordance with the level of vulnerabilities of respective soil types.

At sourcing area level, maintenance of biodiversity according to the harvesting criteria laid down in Article 29.6 requires that, after biomass harvesting, the forest will be re-established with comparable or more biodiversity-favourable characteristics.

Step 5: Assess biodiversity and habitat features so they can be appropriately addressed during planning and implementation of harvesting operations (e.g. habitat features for rare and endangered species, features and prevalent species with a high biodiversity value, including estimated or measured amounts of standing and laying deadwood per hectare, veteran trees, occurrence of rare tree species etc.).

Step 6: Ensure that deadwood is recognized as an important indicator and substrate for many plant and animal species. Recommended or required levels for standing and laying deadwood, including of mature dimensions, need to be left in the forest. The amounts shall either depend on official regulations or on scientifically based recommendations.

Step 7: Verify if during the harvesting operations, the level of deadwood was kept at least at the recommended level, or if the present amounts of deadwood are lower than the recommended level, then biomass sourcing should incur measures to allow deadwood amounts and dimensions to increase.

Step 8: Verify if preventive and protective measures were taken to protect biodiversity and habitat features, as identified in Step 5, during harvesting operations.

Step 9. Verify if harvesting is carried out with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats.

Example: A pre-harvesting inventory or forest management plan (or equivalent) of a logging site which registered the occurrence of endangered tree species. The harvesting plan should then document the practical steps taken during the harvesting intervention to retain the endangered trees in a viable micro habitat. A second example is that standing and laying large dead tree trunks fulfil important ecological functions as substrate e.g. for rare fungi and saproxylic beetles. Harvesting is therefore implemented according to plans that specify minimum amounts of these dead tree trunks to be left in the forest, which is confirmed afterwards as part of a post-harvest inspection.

Protecting biodiversity also means that site-natural forests should not be replaced by agriculturally managed monocultural plantations. This issue is more related to the forest regeneration criterion and referred to that section of this document.

5.2.5. Long-term production capacity

The proposed approach is to retrospectively consider average sustainable harvesting levels in the sourcing area over the five-year period preceding harvesting. When observed in isolation from the requirements to fulfil the first four RED III sustainable harvesting criteria, this approach could be seen as oversimplifying the issue of long-term productivity. However, as all sustainable harvesting criteria need to be fulfilled at all times, the combined requirements are reinforcing one another.

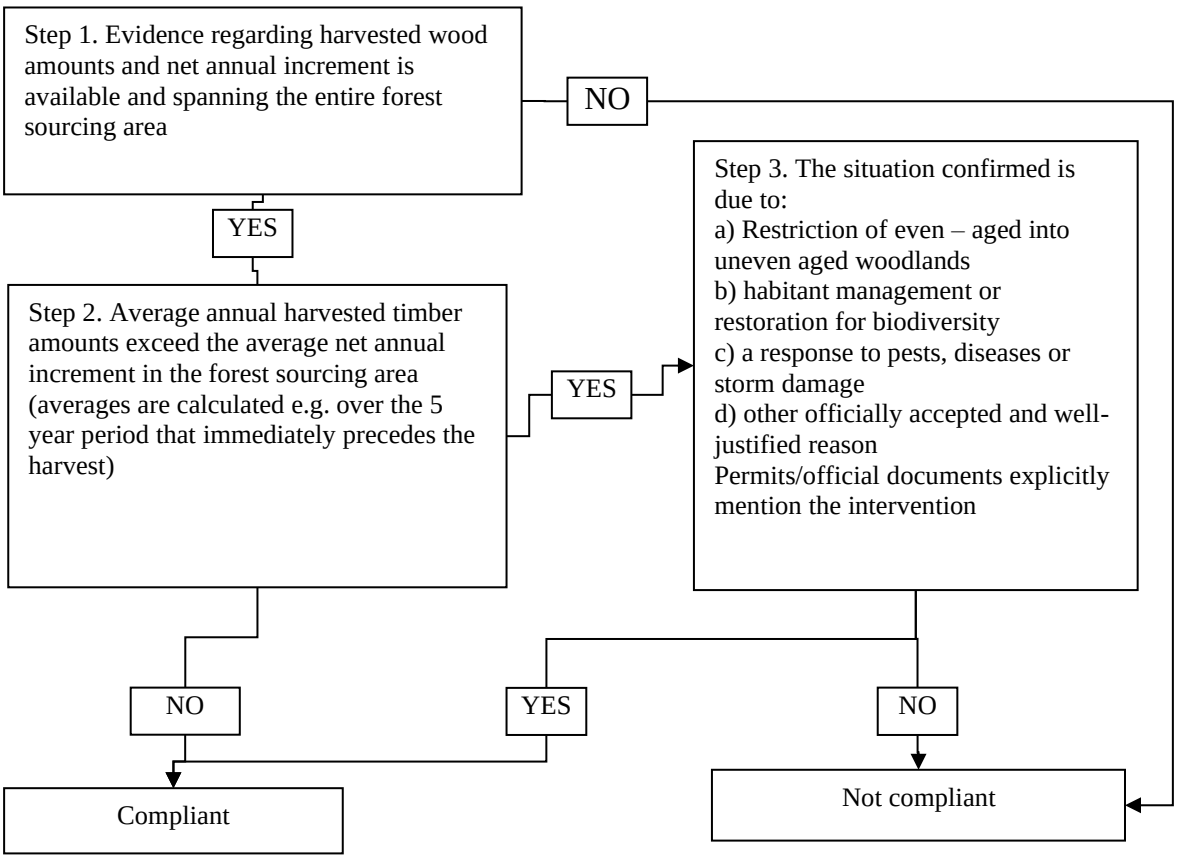


Figure 7. Steps to confirm compliance with the long-term production capacity criteria

Figure 7 shows the stepwise approach that economic operators should follow to demonstrate compliance with the criterion on long-term production capacity at the forest sourcing area level (level B), following a retrospective approach.

Step 1: Requires that data for 'annually logged wood amounts' and for 'net annual increment' are available for the forest sourcing area in its entirety. Inventory and growth data must cover the entire forest sourcing area and should be based on regional markers, such as growth/drain, harvest level, mortality, and age class distribution, relative to forest types. This requires that a relevant competent party conducts forest inventories periodically, based on in-situ measurements and/or state of the art remote sensing. Detailed harvesting reports need to be compiled periodically for the forest management unit or geographical unit that is as close as possible to the forest sourcing area.

When national or regional forest inventory data are used, it is important to consider data only for forest available for wood supply. Harvested wood amounts from any illegal logging in the forest sourcing area, also needs to be accounted for. The forest inventory information should be considered for an area that is congruent as much as possible with the forest sourcing area.

Step 2: The average annual felled timber amounts is compared to the average net annual increment (e.g. an average measured over a 5-year period preceding the harvesting intervention). When the amount of felled timber does not exceed the net annual increment, current wood extraction is assumed not to impede the long-term production capacity.

Step 3: Evidence and well-argued reasons need to be presented to exceptionally justify if logged amounts would exceed net annual increment. Examples of such justifying reasons include e.g. restructuring of for example exotic intensively managed monocultural single-species even-aged forests into site-natural multi-species uneven-aged woodlands, habitat management or restoration of biodiversity, or that increased extraction took place to counter the effect of biotic or abiotic forest disturbances.

Recommended evidences and tools to confirm of meeting harvesting criteria

- https://ec.europa.eu/environment/forests/pdf/list_competent_authorities_eutr.pdf
- www.unep-wcmc.org/featured-projects/eu-timber-regulations-and-flegt
- http://www.fao.org/faolex
- https://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-14
- http://www.protectedplanet.net.

5.2.6. 'No-go' areas

In order to confirm compliance with land status requirements, it is necessary to verify the sourcing area in its detailed aspects:

- primary forest and other wooded land of native species;

- old growth forest;
- highly biodiverse forest and other wooded land which is species-rich and not degraded;
- highly biodiverse grassland;
- heathland;
- land with high-carbon stock: wetlands , continuously forested area and land spanning more than one hectare with trees higher than five meters and a canopy cover of between 10 % and 30 %, or trees able to reach those thresholds in situ, where degradation could lead to the loss of habitats for valuable species;
- peatland.

Rules for verifications are analogous as it is described for farmers in System KZR INiG/5 point 6.1, 6.2 and 6.4 respectively.

Proofs of compliance with land-related criteria are demonstrated in many different ways, including aerial photographs, satellite images, maps, land register entries/database, site surveys, or other reliable documents. The evidence can be 'positive' or 'negative'. Geospatial and/or non-geospatial data may not always be sufficient to allow a firm conclusion on the status of the land for the RED III. In those cases, on-site assessments (interviews with local experts or communities) could provide the necessary additional information.

Auditors verify compliance with this criterion during an audit.

6. Criteria for Land-use, Land-use change and Forestry

This point refers to Article 29(7). Article 29.7 of the RED III calls economic operators to ensure that biofuels, bioliquids and biomass fuels produced from forest biomass meet a number of land-use, land-use change and forestry (LULUCF) criteria. Please see introduction part.

Additional guidance on assessing these criteria is provided in the annex 11.2 of this document.

6.1. Paris Agreement

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.[1] It is assumed that as a result of provisions of the agreement global warming will be limited to well below 2, preferably to 1,5 degrees Celsius, compared to pre-industrial levels. Implementation of the Paris Agreement requires economic and social transformation, based on the best available science. The Paris Agreement, adopted through Decision 1/CP.21[2] Some of the key aspects of the Agreement are:

[1] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
[2] https://cop23.unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf

- Long-term temperature goal (Art. 2),
- Global peaking and 'climate neutrality' (Art. 4),
- Mitigation (Art. 4),
- Sinks and reservoirs (Art.5),
- Voluntary cooperation/Market- and non-market-based approaches (Art. 6),
- Adaptation (Art. 7),
- Loss and damage (Art. 8),
- Finance, technology, and capacity-building support (Art. 9, 10 and 11),
- Climate change education, training, public awareness, public participation and public access to information (Art 12),
- Transparency (Art. 13), implementation and compliance (Art. 15),
- Global Stocktake (Art. 14).

The Paris Agreement works on a 5 - year cycle of increasingly ambitious climate action carried out by countries. By 2020, countries submit their plans for climate action known as nationally determined contributions (NDCs).

6.2. NDC

NDCs are submitted every five years to the UNFCCC secretariat (2020, 2025, 2030 etc.) NDC synthesis report is published https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs/ndc-synthesis-report#eq-1. The latest submissions of the report are listed https://www4.unfccc.int/sites/ndcstaging/Pages/LatestSubmissions.aspx. The NDC document shall contain references to the area of harvest, to conserve and enhance carbon stocks and sinks, and providing evidence that reported LULUCF - sector emissions do not exceed removals.

Emissions

Anthropogenic (i.e. originating from human activity) emissions of greenhouse gases into the atmosphere by sources.

Removals

Anthropogenic (i.e. originating from human activity) removals of greenhouse gases from the atmosphere by sinks.

Agriculture, Forestry and Other Land Use

This refers to the Land Use, Land-Use Change and Forestry (LULUCF) and Agriculture emission sectors. These are two greenhouse gas inventory sectors defined by the Intergovernmental Panel on Climate Change (IPCC) and are also known as Agriculture, Forestry and Other Land Use (AFOLU).

One of the criteria, which, when fulfilled, can in part assure national-level compliance with the requirements of RED III Article 29.7(a), stipulates that national or sub-national laws need to be in place, in accordance with Article 5 of the Paris Agreement, applicable in the area of harvest, to conserve and enhance carbon stocks and sinks, and evidence is provided that reported LULUCF-sector emissions do not exceed removals. This implies that comprehensive national or sub-national monitoring frameworks need to be in place to report on carbon emissions and removals by the LULUCF sector. This could be checked for example from a country's annual greenhouse gas inventory report submitted to the UNFCCC. Greenhouse gas inventory data can be checked e.g. from https://di.unfccc.int/detailed_data_by_party.

6.3. Carbon stock

If a country did not submit the NDC document FGP shall provide proofs that management system is in place at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained or strengthened over the long term. It is recommended to choose a reference period of about ten years. Please note that the data on carbon stocks for the reference period must always be representative.

Carbon stock is the mass of carbon stored in a carbon pool. Examples of relevant carbon pools are forest biomass (above- and belowground), deadwood, litter and soil organic carbon.

Carbon sink is any process, activity or mechanism that removes a greenhouse gas, an aerosol, or a precursor to a greenhouse gas from the atmosphere. Carbon sinks are reservoirs that take-in and store more carbon than they release. Examples of carbon sinks are forests and oceans. Once the carbon is stored, it becomes part of a carbon stock (see carbon stock definition).

6.4. Demonstrating compliance with LULUCF criteria (level A)

Figure 8 depicts a stepwise approach for economic operators for demonstrating compliance with the LULUCF criteria of RED III Article 29.7. It is important to note that when compliance cannot be demonstrated at national or subnational level (referred to as "level A"), evidence will need to be sought at forest sourcing area level (referred to as "level B").

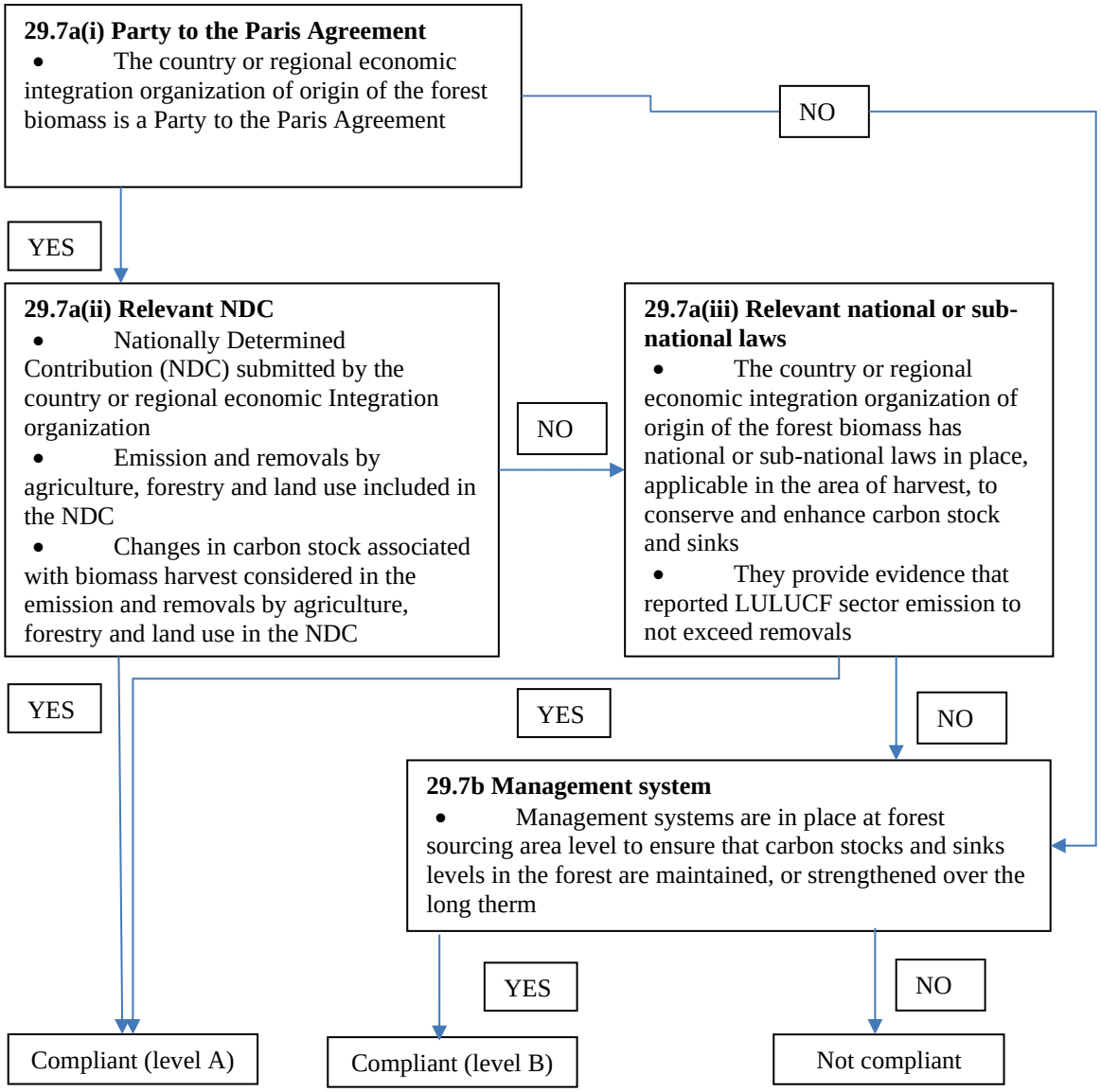


Figure 8. Stepwise approach to demonstrate compliance with the LULUCF criteria

To demonstrate compliance with the LULUCF criteria at national level, the economic operators shall demonstrate that the forest biomass is sourced only from countries or regional economic integration organisations that are party of the Paris Agreement and:

– Should have submitted its NDC that covers emissions and removals from agriculture, forestry and land use, ensuring that that changes in carbon stock associated with biomass harvest are accounted towards a country's commitment to reduce or limit greenhouse gas emissions;

or:

– Has laws in place to conserve and enhance carbon stocks and sinks applicable in the area of harvest and that evidence is provided that LULUCF sector emissions do not exceed removals.

In the following, a three-step approach to estimate compliance with the LULUCF sub-criterion at a national level (level A) is described.

Step A.1: Determine if a country or a regional economic integration organisation is a party to the Paris Agreement
As a first step, it is necessary to check whether the country or regional economic integration organisation is listed as a Party to the Paris Agreement. This could be verified from the United Nations list of parties to the Paris Agreement. If this condition is not met, demonstrating compliance at national level (level A) is not possible and an economic operator should proceed with demonstrating compliance at forest sourcing area level (level B).

Step A.2: Determine if a country or a regional economic integration organisation has submitted a Nationally Determined Contribution (NDC).
In the second step, it is necessary to determine whether the country or regional economic integration organisation from which forest biomass is originating has submitted a Nationally Determined Contribution and whether it has integrated the agriculture, forestry and land use sectors into its NDC (either combined as one AFOLU sector, or as Agriculture and LUCUCF sectors separately). Please note that countries and regional economic integration organisations are requested to submit the next round of NDCs (new or updated NDCs) by 2020 and every five years thereafter (i.e. by 2020, 2025, 2030), regardless of their respective implementation time frames. Some countries have already submitted new NDCs and more countries will submit them towards the end of 2020.

As NDCs are nationally determined and there are no mandatory accounting methods for LULUCF in the Paris Agreement, but only provisions aimed at ensuring transparency of the method used. Hence, countries will have different approaches to setting national targets in their NDCs and apply different methods to account AFOLU emissions and removals towards their climate targets. Similarly, also the approaches addressing the AFOLU sector in the NDCs may differ; countries might exclude the AFOLU sector from their NDC at all, they might include the AFOLU sector within the overall target for emission reductions, or they might have a separate target for the AFOLU sector (or even separately for agriculture and the LULUCF sectors).

The mere existence of a submitted NDC mentioning the AFOLU sector (or the agriculture and the LULUCF sectors) is not enough for demonstrating compliance with the criteria of Art. 29.7. Instead, the NDC should:

- Explain how the AFOLU sector (or separately for agriculture and the LULUCF sectors) has been considered in the NDC; and
- Count the emissions and removals from the AFOLU sector against the country's overall emission reduction target; and

– Consider carbon stock changes associated with harvesting forest biomass in the total emissions of the AFOLU sector.

In case that all three requirements are met, biomass from any forestry operator in the country/region complies with the LULUCF requirements of RED III. In case the requirements are not met, an economic operator could proceed with the next (third) step.

Step A.3: Determine if national or sub-national laws that aim to conserve and enhance carbon stocks and sinks in forests are in place.
For the third step, it is necessary to check whether national or sub-national laws are in place that aim to conserve and enhance carbon stocks and sinks in forests. For example, such laws could be (sub-) national laws implementing the LULUCF Regulation, or other climate change or protection-related laws in case they require that forest carbon stocks and sinks are maintained or enhanced. The presence of a law that merely requires that forest area should be maintained is not sufficient as it does not guarantee that the carbon stocks and sinks are maintained or enhanced. The presence of such laws must be accompanied with evidence that reported LULUCF sector emissions do not exceed removals. Such information can be obtained from National Greenhouse Gas Inventory Reports submitted to UNFCCC. It is recommended to consider emissions and removals data from a period of the last 10 years but can be shorter or longer to mitigate the impact of annual disturbance or any eventual stochastic events on the levels of carbon emissions and removals.
Compliance is demonstrated when the sum of reported LULUCF sector emissions (reported as positive values) and removals (reported as negative values) is zero or negative. If this condition is not met, demonstrating compliance at national level (level A) is not possible and an economic operator should proceed with demonstrating compliance at forest sourcing area level (level B).

6.5. Demonstrating compliance with LULUCF criteria (level B)

If compliance cannot be demonstrated at regional level or national level (‘Level A’), then evidence needs to be provided at the level of the forest sourcing area (Level B). Based on the criterion specified in Article 29.7(b) of the RED III, an economic operator needs to demonstrate that management systems are in place to ensure that carbon stocks and sinks levels in the forest are maintained or strengthened, both over the long term. It is required that such systems include planning and periodic monitoring.

An economic operator can provide evidence of compliance with the LULUCF criterion at the level of a sourcing area, by adapting existing methodologies to assess carbon stocks and sinks in forests.

Methodologies to assess carbon stocks and sinks in forests already exist and could be adapted by an economic operator to provide evidence of compliance with the LULUCF criterion at the level of a sourcing area. Such methodologies are used for national level reporting and

assessments to UNFCCC under the LULUCF Regulation and by voluntary carbon standards for certifying carbon emissions reductions through AFOLU activities at landscape or stand level. These methodologies serve as a useful starting point for developing approaches to demonstrate compliance with the LULUCF sub-criterion, but they need to be adapted as they have not been designed for demonstrating compliance with RED III.

Building on existing methodologies, the following section describes a stepwise approach, including eight steps (see Figure 9), to demonstrate compliance with the LULUCF criterion on the level of a forest sourcing area (level B). The approach builds on existing methods for which tools and data can be used that are freely available from public sources. However, it is considered that familiarity with calculations on forest carbon stocks and sinks is needed to be able to provide evidence for compliance. Furthermore, the approach described below requires an economic operator to ensure that a forest management is implemented in the forest sourcing area that will result in equal or higher carbon stocks in the long-term period.

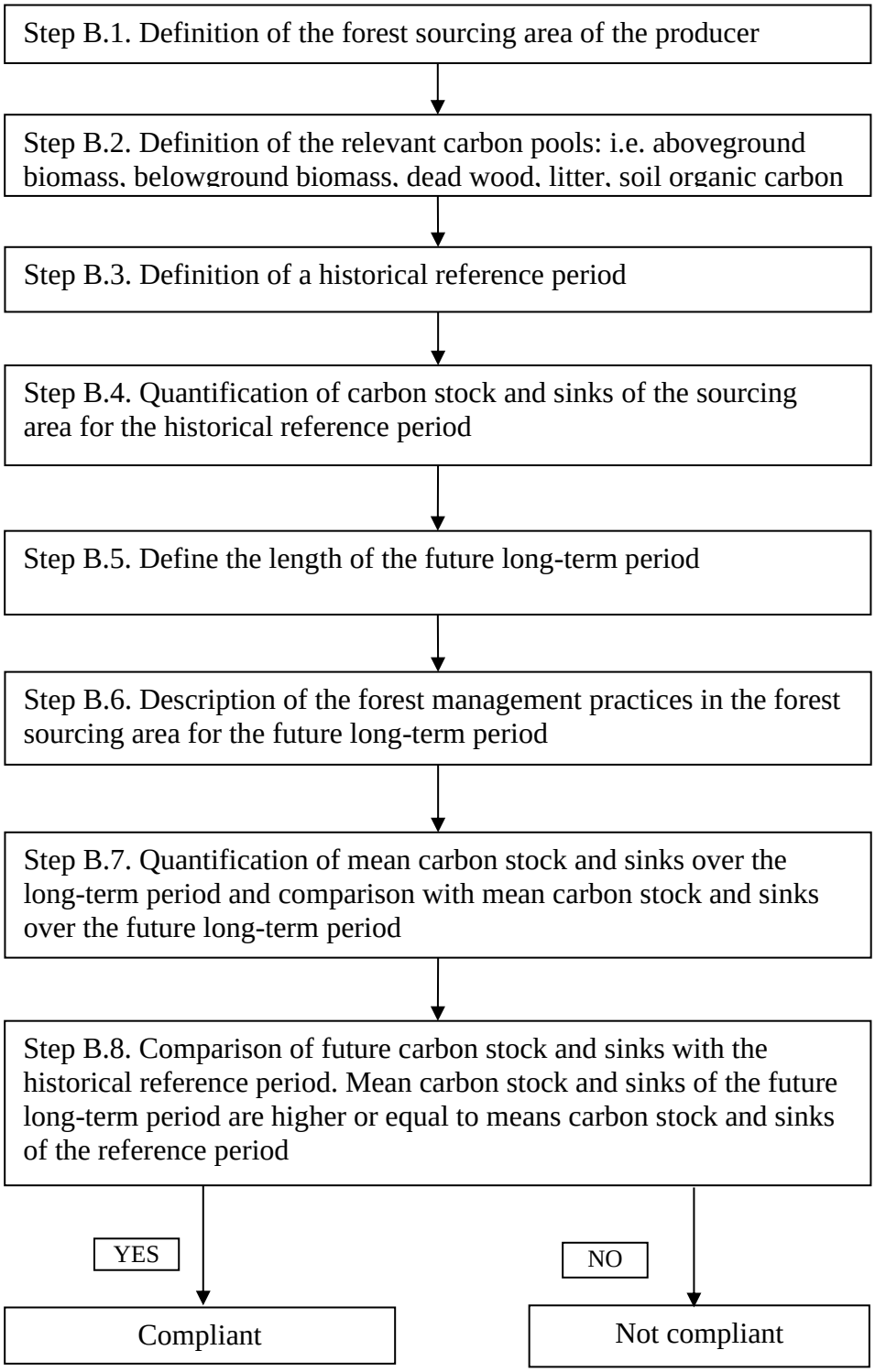


Figure 9. Steps to demonstrate LULUCF criteria compliance at forest sourcing area level (Article 29.7(b))

Step B.1: Define the spatial boundaries of the compliance check

The sourcing area of an economic operator comprises the area for which compliance needs to be demonstrated. To satisfy the requirements as set out in RED III Article 2.30, it is recommended that the compliance check is conducted for a geographically explicit area belonging to a single country or a region, depending on which level forest legislation is regulated. Furthermore, it is recommended to conduct the compliance check for a geographically explicit area having common forest management practices that ensure implementation of sustainable yield management in the sourcing area during the assessment period (please see step B.6 for a definition of the temporal boundaries). Please note that spatial boundaries are not necessarily relating to a continuous, unfragmented patch of land, but may comprise several mutually unconnected areas.

Step B.2: Define relevant carbon pools

RED III requires maintaining or increasing of carbon stocks and sink levels at the sourcing area level, without specifying which carbon pools to consider. Carbon stocks and sinks in forests include multiple pools. It is good practice to consider all the carbon pools in forests, as specified by UNFCCC which include:

1. Aboveground biomass;

2. Belowground biomass;

3. Litter;

4. Dead wood;

5. Soil (mineral and organic soils).

These pools also encompass the carbon pools considered relevant by the LULUCF Regulation except the Harvested Wood Products pool. The Harvested Wood Products pool can be excluded because it is not a forest carbon pool.

Step B.3: Determine a historical reference period

RED III does not specify a historical year or period that can serve as a reference to compare the future development of carbon stocks and sinks in the sourcing area. It is recommended that an economic operator uses the average carbon stocks and sinks over a reference period that will serve as a benchmark against which maintenance or strengthening of carbon stocks and sinks of a sourcing area will be compared.

It is recommended that a fixed period in time is used to avoid the effects of biomass harvest progressively lowering carbon stocks and sinks. In line with the reference period used in the

LULUCF Regulation, it is proposed to focus on the period 2000-2009, but it can be shorter or longer to facilitate the use of forest inventory data or to mitigate the impact of annual disturbance or any eventual stochastic events on the levels of carbon stocks and sinks in the sourcing area. In any case, the selected reference period should reflect representative carbon stocks and sinks in the supply area (i.e. is consistent with any broader historical data used as evidence). The economic operators are encouraged to provide argumentation for the definition of their reference period. An economic operator should avoid using short periods (or a single year) as reference period in which significant natural disturbance took place as they may strongly disrupt forest carbon stocks and especially sinks.

Step B.4: Quantify carbon stocks and sinks of the sourcing area for the historical reference period

The requirement "to maintain or strengthen" carbon stocks and sinks (RED III, 29.7(b)) requires the existence of a historical reference value that can be used to estimate if a specific carbon stock and sink value has been maintained or increased. Hence, data need to be collected to estimate mean values for carbon sinks and stocks of the sourcing area during a reference period as reference values for a compliance check.

Data on carbon stocks and sinks in the sourcing area may be obtained from (repeated) forest inventories or forest management plans, provided they are transparent, accurate and reliable. If there are no existing data on carbon stocks and sinks in the sourcing area, an economic operator can estimate mean carbon stocks and sinks of the sourcing area for the historical reference period, for example by applying forest carbon calculators or models (see Table 1). Data (tree species, growing stock, age-structure, increment rate, see Table 2) to be used in these tools can be obtained from historical forest management plans or inventories conducted in the sourcing area, but additional data (e.g. basic wood density, carbon content, factors to estimate whole-tree biomass) may be needed to provide necessary information on all of the relevant carbon pools (see step B.2). It is recommended that an economic operator provides or estimates reference values for all the relevant carbon pools individually. When estimating historical carbon stocks and sinks, it is recommended to further stratify the sourcing area in homogenous units. Stratification is not an explicit requirement by RED III but is suggested to improve accuracy of the estimates. When stratifying the sourcing area, an economic operator can consider some of the following factors:

• Administrative/legal conditions:

  o Administrative region where sourcing level is located (e.g. region, province, municipality);

  o Ownership type (e.g., private, public);

• Biophysical conditions:

o Topography;

o Site conditions (e.g. forest site index);

• Forest characteristics:

o Tree species composition;

o Forest management regime.

In case an economic operator is not able to quantify one of the above-mentioned pools (e.g. litter or soil carbon, see step B.2), it is recommended that a justification is provided why a pool cannot be quantified (e.g. absence of data on the litter or soil carbon pools) and why omitting the pool does not affect compliance with the requirement to maintain or strengthen carbon stocks in the long term.

Step B.5: Define the length of the future long-term period

RED III requires that the levels of carbon stocks and sinks of a sourcing area are maintained or strengthened, both over the long term. However, the Directive does not specify the period of time that needs to be considered. It is recommended to conduct a compliance check for a period of at least 30 years. Please note that the assessment period is not static and always forward looking. Accordingly, it is recommended that the assessment period covers at least 30 years after a harvesting event from which biomass is sourced.

Step B.6: Describe forest management practices in a sourcing area for the future long-term

Period To prove that carbon stocks and sinks of a sourcing area are strengthened or maintained over a long term period (recommended 30 years, see step B.5), an economic operator should describe forest management practices that are reasonably expected to be practiced in the long term. Information on future forest management may be derived from existing forest management plans or other verifiable evidence. The future forest management practices must at minimum comply with legal requirements that are valid in a sourcing area. When describing the future forest management practices in the sourcing area, the following factors could be considered that may affect the development and calculation of forest carbon balances and sinks in subsequent steps:

• Annual harvest level;

• Tree species composition;

• Forest reproductive material used (provenance);

• Thinning intensity and frequency;

• Cutting regime (e.g. even-aged clearcutting, shelterwood, group or tree selection, coppice);

• Other management decisions (e.g. fertilization, drainage, herbicide, and pesticide application,

etc.);

• Average minimum and maximum rotation length.

Potential data sources for these factors are listed in Table 2.

Step B.7: Quantify mean carbon stocks and sinks over the future long-term period

To assess how carbon stocks and sinks will develop over the long term, it is recommended that economic operators develop a projection of the development of carbon stocks and sinks in the forest sourcing area, based on forest growth and planned management practices. Assumptions on the effects of future impact of policies and markets should be avoided as much as possible. Economic operators can apply forest carbon calculators and models (for an overview of potential tools, see Table 1) as a basis for these calculations. Such tools will require information on future forest management practices (see Step B.6), forest structure (e.g., tree species, growing stock, age structure) and growth (increment), as well as additional data (e.g. basic wood density, carbon content, factors to estimate whole-tree biomass) (for an overview of potential data sources, see Table 2). In line with the recommendations provided in step B.4, it is recommended to stratify the sourcing area in homogenous units to improve accuracy of the estimates.

To ensure comparability of the estimates, it is recommended that the same carbon pools (see step B.2), data and methods are employed as for estimating carbon stocks and sinks in the reference period. The future and historically oriented estimates should be methodologically and quantitatively comparable. In a case when an economic operator is not able to quantify any of the abovementioned pools (e.g. litter or soil carbon, see step B.2), it is recommended that a justification is provided why a pool cannot be quantified (e.g. absence of data on the litter or soil carbon pools). Also, it is recommended to consider relevant secondary data and information to explain how forest biomass removals are expected to affect these carbon pools in the long term at the forest sourcing area.

Finally, it is recommended to document the temporal development of all carbon pools to facilitate the comparison with results obtained from monitoring, as a basis for the verification of compliance under RED III Article 30.

Step B.8: Compare future carbon stocks and sinks with the historical reference period

The compliance with the LULUCF criterion may be proven by comparing both the mean carbon sinks and stocks for the long-term period (step B.7) with the carbon stocks and sinks of the reference period (step B.4). If mean carbon stocks and sinks of a long-term period are higher or equal to mean carbon stocks and sinks of a reference period, an economic operator

is compliant with the LULUCF criteria. Several issues must be noted regarding the above described stepwise approach for demonstrating compliance at the sourcing area level. These relate inter alia to the need for monitoring of the actual development of forest carbon stocks and sinks to support the verification of compliance with the sustainability and greenhouse gas emissions saving criteria, under RED III Article 30.

Potential tools that could be used for assessments to demonstrate that carbon stocks and sinks levels in the forest are maintained or strengthened are shown in table 1.

Table 1. Potential tools that could be used for assessments to demonstrate that carbon stocks and sinks levels in the forest are maintained, or strengthened

Name of tool	Brief description	URL
CO2FIX	Stand level simulation model, which quantifies the C stocks and fluxes in the aboveground biomass, belowground forest biomass, soil organic matter and the wood products chain.	http://dataservices.efi.int/casfor/models.htm
CBM-CFS3	Stand- and landscape-level modelling framework that simulates the dynamics of all forest carbon stocks required under the Kyoto Protocol (aboveground biomass, belowground biomass, litter, dead wood and soil organic carbon).	https://www.nrcan.gc.ca/climate-change/impacts-adaptations/climate-change-impacts-forests/carbon-accounting/carbon-budget-model/13107
YASSO soil carbon model	Dynamic model of the cycling of organic carbon in soil. Yasso calculates the amount of soil organic carbon, changes in the amount of soil organic carbon and heterotrophic soil respiration	https://en.ilmatieteenlaitos.fi/yasso
CASMOFOR	Tool to assess the amount of carbon sequestered in a forest system (aboveground biomass, belowground biomass, litter, dead wood and soil organic carbon)	http://www.scientia.hu/casmofor/index.php

FORMIND	Individual tree-based vegetation model that simulates the growth of forests on the hectare scale. It allows to explore forest dynamics and forest structure.	http://formind.org/model/

Table 2. Potential data sources to demonstrate LULUCF criteria compliance at forest sourcing area level

Variable affecting carbon stock and sinks in forests	Potential source of information
Tree species composition	Forest inventories Forest management plan
Age structure	Forest inventories Forest management plan
Forest reproductive material used (provenance)	Forest management plan
Growth rate of the selected tree species and forest reproductive material used	Forest inventories National or regional yield tables Producer of seedlings or seeds used for regeneration
Basic wood density	IPCC 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol
Carbon content	IPCC 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol
Whole-tree biomass in relation growing stock volume	IPCC 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol National GHG inventory report to UNFCCC FAO method collection, see http://www.fao.org/3/w4095e/w4095e06.htm . Scientific literature
Thinning intensity and frequency	Forest management plan Forest management recommendations applicable to the forest sourcing level

Rotation length	Forest management plan Forest management recommendations Empirical historic data for the sourcing area on rotation cycles applied
Cutting regime	Forest management plan Forest management recommendations
Other management decisions	Forest management plan Forest management recommendations

7. Risk analysis

The Risk analysis can be performed for country, region or defined sourcing area. According to the KZR INiG the risk analysis shall be carried out according to the following guidance.

The risk-based approach for forest biomass under the KZR INiG System assesses whether the required sustainability criteria are already sufficiently implemented by state or sub-state legislation in the area of biomass harvesting, and whether they are effectively verified and, if necessary, sanctioned. If the assessment leads to the conclusion that the sustainability criteria are already reflected in the relevant forest management legislation and that the rules are rigorously enforced and monitored, the risk of biomass uptake from unsustainable forests is considered low.

The assessment shall be undertaken by in country expert organisations (e.g. competent ministries, qualified national-level organisations or associations, independent national bodies specifically set up to undertake the risk assessment etc) and not by the individual economic operators. Using standard templates provided by KZR INiG in the annex no 1 of this document is mandatory.

The process of approving of the risk assessment is performed according to the following steps:

1. The KZR INiG System sets up the technical Committee (the Committee composes of KZR INiG staff and external experts) to ensure it has been undertaken according to the specified process, is completed and of required quality.
2. The draft of the risk assessment report is checked in the context of formal and substantive aspects by the Committee. If the correction is needed the appropriate update of the draft is performed by the authors.
3. Then public consultations are carried out: The draft is published on the KZR website for 21 days and information about it is disseminated through the newsletter. Everyone

is allowed to send comments on the draft of the report. All feedback provided needs to be documented, and incorporated into the risk assessment where justified.

4. Finally, the KZR INiG System can recognise the report. The report is available on the KZR website.

The KZR INiG System recognises assessments accepted by other voluntary schemes. KZR INiG works collaboratively in developing risk assessments to be applied across the market.

Risk assessments is valid for up to 5 years but must be updated if the evidence basis changes, including in exchange with other voluntary schemes to ensure a consistent approach.

The aim of the risk-based approach under the KZR INiG System is to obtain forest biomass from source areas where the principles of sustainable forest management are upheld in compliance with the requirements of the criteria set out in RED III in Article 29 (6) and (7) and with the requirements of the scheme KZR INiG. Under the KZR INiG system, forest biomass means biomass for which it is certain that:

- forest biomass has been legally obtained, processed, and placed on the market / distributed in accordance with national legislation and international conventions,
- areas designated by international or state legislation or by the competent authority as nature conservation areas, including wetlands and peatlands, are protected, with the aim of preserving biodiversity and preventing habitat destruction,
- during harvesting, care is taken to preserve soil quality and biodiversity to minimize damage, prevent any adverse impact,
- the forest in harvesting areas is continuously regenerated,
- the long-term production capacity of the forest is maintained or improved,
- the land status of the area was confirmed on January 1, 2008,
- guarantee of carbon sequestration parity in the sourcing area of the forest biomass, (the country or regional economic integration organization of origin of the forest biomass meet LULUCF criteria).

7.1. Methodology

Risk analysis is carried out on the basis of indicators that assess the fulfilment of each criterion separately and is carried out to assess whether the country (area) complies with the legislation to confirm compliance with point 29 (6-7) at level A/B and whether it is effective.

Please note that for each criterion an assessment of the enforcement and monitoring needs to be made.

The risk analysis should be performed on the basis of point 7, using annexes 11.1 and 11.2. For each criterion, the risk is separately defined at score 1 or 0. If 1 is awarded for all criteria,

it is considered that the area for which the assessment is conducted meets the KZR INiG requirements. In this case the risk of using non-sustainable biomass is low.

In case of Level A assessment if 0 is awarded to any of them, then the area is considered to be Level B. In this case the risk of using non-sustainable is high. Thus, the FGP is required to prove that all the criteria for the defined area of harvest that have been identified as 0 meet the requirements as specified in the KZR INiG System documents.

In order to perform the risk analysis, it is recommended to use external sources listed in the table 3. The list is not exhaustive.

Table 3. The list of sources to be used for the risk assessment

Source	Link	Comments
World Bank: Global world management indicators	http://info.worldbank.org/governance/wgi/	This source helps to assess application of the law. The World Bank is like a cooperative, made up of 189 member countries. These member countries, or shareholders, are represented by a Board of Governors, who are the ultimate policymakers at the World Bank.
FAO: Global Forest Resource Assessment (FRA)	https://www.fao.org/forest-resources-assessment/past-assessments/fra-2015/en/	FAO has been monitoring the world's forest resources through periodic assessments conducted in cooperation with its member countries. The information provided by the Global Forest Resources Assessment (FRA) presents a comprehensive view of the world's forests and the ways in which the resource is changing
Forest Europe: Country Reports on SFM indicators	https://foresteurope.org/	FOREST EUROPE (also Ministerial Conference on the Protection of Forests in Europe) is a Pan-European voluntary high-level forest policy process.
ITTO International Tropical Timber Organization	https://www.itto.int/sustainable_forest_management/criteria_indicators/	ITTO pioneered the development of criteria and indicators (C&I) for the sustainable management of natural tropical forests
UNECE: Report - Forests in the ECE region: Trends and Challenges in Achieving the Global Objectives on Forest Management	https://unece.org/DAM/timber/fra/UNFF_2015_Forests_in_the_ECE_Region/forests-in-the-ece-region1.pdf	On the website of the United Nations Economic Commission for Europe (UNECE), you can find the Forests in the ECE Region: Trends and Challenges in Achieving the Global Objectives on Forests report, which may be the source of the data.

Source	Link	Comments
Montréal Process: Country reports	https://montreal-process.org/	The Montréal Process Working Group was formed in 1994 as a bold, intergovernmental response to the pressing need for sustainable forest management. Reports under the Montreal Process include "Criteria and Indicators for Sustainable Forest Management" for twelve Member States
Chatham House: Illegal Logging Portal	https://forestgovernance.chathamhouse.org/	Chatham House is monitoring forest governance and legality in 19 countries to assess the effectiveness of government and private sector efforts to tackle illegal logging and trade. Information on illegal logging in various countries is provided by the Chatham House website. The portal publishes reports on illegal logging and trade.
UN: United Nations Treaty Series	https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement	Confirmation of 29(7) Article. The status of ratification of the Paris Agreement can be seen on the Paris Agreement website.
UNFCCC: NDC Registry	https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx	Confirmation of 29(7) Article. The website of the NDC Registry of the United Nations Framework Convention on Climate Change (UNFCCC) publishes a list of the countries that have submitted an NDC and which version has been submitted.

Additional guidance on assessing forest biomass criteria is provided in the annex 11.3 of this document.

7.1.1. Legality of wood harvesting

Legality of wood harvesting is crucial from sustainable biomass production point of view. Thus, the risk assessment shall contain the assessment of legality of harvesting Timber harvesting is not legal if the harvesting, trade / distribution, or transportation of timber is in violation of state laws and agreements, lower than state or international. As this criterion is connected with the law application, the law enforcement, government structure should be evaluated. Factors assessing this criterion should take into account rule of law and corruption control.

In order to assess this criterion, the Global Governance Indicators, individual surveys to identify illegal activities related to sourcing, trade / distribution and transportation of timber in a region should be conducted and, where appropriate, reported. Internet surveys, interviews with the local population in the source area or the opinions of environmental associations (non-exhaustive) may be used for this purpose.

If there is no evidence of illegal activity, the criterion can be assessed as effectively implemented. Score 1 is awarded.
If the benchmark values are negative or there are illegal activities, the effectiveness of the legal framework is week, the criterion is not met, score 0 is awarded. FGP is obliged to prove compliance at Level B (see point 5.6).

For the description of the enforcement and monitoring of the legislative system in terms of risk assessment, information such as bodies or departments competent to carry out monitoring, implementation and law enforcement, sanctions for non-compliance, decision appeal system should be provided.

7.1.2. Forest regeneration

The RED III defines the term ‘forest regeneration’ as the ‘re-establishment of a forest stands by natural or artificial means following the removal of the previous stand by felling or as a result of natural causes, including fire or storm’. This can be done artificially by planting and sowing, or naturally by natural rejuvenation. It is important to assess whether sourcing area is supervised in this context. Appropriate factors for forest regeneration can be taken from the results of national forest inventories or from the results of the latest FAO Global Forest Resource Assessment (FRA). If the forest area decreases, the decrease should be explained and described by reliable and verifiable information about the reasons and appropriate action to prevent a negative phenomenon should be undertaken. The causes are analysed by the KZR INIG System as part of the recognition of the risk assessment. Decreasing of the forest area should be assessed at sourcing area level – national level. Cutting for investments are

excluded from this assessment.

If the formation of the forest is proven by indicators or by sufficient causes, the criterion can be assessed as successfully implemented. Score 1 is awarded. However, if the decline in forest area cannot be adequately explained, the effectiveness of the legal framework is considered unsubstantiated. In this case, score zero is awarded and the FGP must provide detailed evidence of forest regeneration in the sourcing area. In the course of the audit of the first collection point, the auditors randomly check the implementation of forest regeneration measures in the source area of forest biomass producers.

7.1.3. Preservation of biological diversity

Biodiversity is one of the biggest treasures of nature, thus bioenergy production shall be performed in such way to not harm environment. Evaluating forest biodiversity and its development is a complex matter and requires a high degree of technical proficiency. In the KZR INIG approach to risk assessment of the preventing of biodiversity is thus assessed on the basis of the following factors such as dead wood, variety of tree and plants species, variety of animal species, landscape diversity, age and structure of trees. The list is not exhaustive, other factors can be included into the assessment.

It shall be ensured that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats.

It is recommended to use external source to assess this criterion e.g. the UNECE report Forests in the ECE region: Trends and Challenges in Achieving Global Forest Stewardship Goals. The reports present indicator values for dead wood and forest naturalness levels. State reports on SFM indicators published by Forest Europe contain indicator values for dead wood, forest naturalness levels and percentage of protected forest areas. The FAO Global Forest Resource Assessment contains data on dead wood.

If the biodiversity criterion in the sourcing area is sufficiently documented, gathered proofs indicate that biodiversity is maintained the criterion can be assessed as met, score 1 is awarded. Otherwise, the criterion is not met. In this case score zero is awarded and FGP is obliged to present proofs that sourcing area meets this criterion at level B.

7.1.4. Preservation of soil quality

Soil quality maintenance is assessed based on analysis, soil condition maps, statistics data, peer review publications, others. Analysis may contain soil condition surveys and are performed on the basis of factors such as soil carbon content, nutrient availability, pH value, soil physical parameters.

If the results of the assessment show that conservation of soil quality is maintained score 1 is awarded. Otherwise, zero is awarded, the criterion is not met ant level A. In this case, the FGP must provide detailed evidence of measures to maintain soil quality in the sourcing area.

7.1.5. Regulations for protected areas

Protected areas are locations which receive protection because of their recognized natural, ecological, or cultural values. The establishment and maintenance of protected areas plays a central role in achieving nature conservation objectives. There are several kinds of protected areas, which vary by level of protection depending on the enabling laws of each country or the regulations of the international organizations involved. Thus, the assessment shall contain verification if protected areas has been designated. Special care should be taken if there are officially approved guidelines, ordinances, regulations, etc., that govern the usage of forest biomass.

If the results of the assessment show that areas are protected effectively, score 1 is awarded. Otherwise, zero is awarded, the criterion is not met ant level A. In this case, the FGP must provide detailed evidence that this criterion is not violated. Especially the FGP shall prove that on his own sourcing area they are not protected areas or forest biomass disposal does not interfere with protection purposes.

7.1.6. Maintenance of the long-term production capacity of the forest

Having in mind that the purpose of the sustainability is to preserve nature for next generations, the long-term productive capacity of the forest is crucial for achieving this goal. A typical indicator for maintenance of the long-term production capacity, at country level or at forest sourcing area level, is that the harvested biomass should not exceed the net annual increment. An estimate of the net annual increment (NAI) of the forest - i.e. the net amount of stem wood that grows over a year’s time - determines the maximum volume of wood that timber companies can harvest without endangering future possible harvesting levels. A maximum annual allowable cut (AAC) can be country-specific or applicable to smaller areas. This AAC is a very basic guidance to help maintain the long-term production capacity of the forest in a

country. Estimates of NAI and AAC can be derived from national forest inventory data or yield tables for example, or they can be prescribed by a local forest management authority.

If the results of the assessment show that the long-term production capacity is maintained, score 1 is awarded. Otherwise, zero is awarded, the criterion is not met ant level A. In this case, the FGP must provide detailed evidence that this criterion is not violated.

7.1.7. Guarantee of carbon sequestration parity

To demonstrate compliance with the LULUCF criteria at national level, it must be shown that the country or regional economic integration organisation of origin of the forest biomass is a party of the Paris Agreement and:

• Should have submitted its NDC that covers emissions and removals from agriculture, forestry, and land use

or:

• Has laws in place to conserve and enhance carbon stocks and sinks applicable in the area of harvest and that evidence is provided that LULUCF sector emissions do not exceed removals.

A three-step approach to estimate compliance with the LULUCF sub-criterion at a national level (Level A):

Step 1: Determine if a country or a regional economic integration organisation is a party to the Paris Agreement.

Step 2: Determine if a country or a regional economic integration organisation has submitted a Nationally Determined Contribution (NDC).

Step 3: Determine if national or sub-national laws that aim to conserve and enhance carbon stocks and sinks in forests are in place.

If the results of the assessment show that the country meets LULUCF criterion, score 1 is awarded. Otherwise, zero is awarded, the criterion is not met ant level A. In this case, the FGP must provide detailed evidence that this criterion is not violated.

7.1.8. Enforcement and monitoring

Each criterion is assessed in the context of enforcement and monitoring. Performing of the assessment of enforcement and monitoring is needed to ensure that there is no significant lack of enforcement of the national and/or sub-national laws and regulations. The analysis shall take into account the following information:

- Competent authorities or departments for carrying out monitoring, implementation and law enforcement,
- Sanctions for non-compliance,

- Systems for appealing against decisions, and
- Public access to information.

Legal assessments and reports prepared by national or international governmental organisations, detailing the level of enforcement of the national or sub-national laws can provide evidence of fulfilment this requirement.

If in the context of the criterion being assessed no significant lack of enforcement of the national and/or sub-national laws and regulations can be determined, the sustainability criterion is deemed to be fulfilled. If in the context of the criterion being assessed no law has been identified, or that an enforcement and monitoring system cannot be documented, the sustainability criterion is deemed to be unfulfilled.

7.1.9. 'No-go' areas

Harvesting of forest biomass from areas which have status defined in Article 29 (6)(a)(vi) is forbidden.

Statement of assurance
Countries must have legislation obliging the companies to issue the statements of assurance, underpinned by company-level internal processes, for the purpose of the audits conducted pursuant to Article 30(3) of RED III, that the forest biomass is not sourced from the 'no-go' areas. If such legislation is in place then score 1 is awarded. Otherwise, zero is awarded, the criterion is not met ant level A.

7.2. Performance of risk analysis – Level A

In order to carry out the risk analysis, complete the table in accordance with Annex 11.1 and assign the score successively for each criterion. Authors of the assessment may use additional guidance listed in the Annex 11.3. Using REDIIBIO report is recommended as a useful reference sources.

If all categories are assessed as low (score "one" is awarded), then the risk analysis result for a given area is low and it is considered that the sourcing area will meet the requirements at level A. Sustainable Forest biomass can be harvested from this sourcing area as long as the assessment is valid.

Otherwise FGP is obliged to prove meeting of forest biomass criteria at level B.

The risk assessment shall contain at least:

1. Authors' profile

A prerequisite to ensure reliability of the assessment is that the analysis is carried out by relevant experts. Thus, the author(s) of the risk assessment must have expert knowledge of the forestry conditions in the region. In this section of the assessment the author(s) must present a scientific profile. The information must include information about the author's work experience, training/education, and other relevant qualifications to demonstrate the author's ability to properly performed the risk assessment.

2. Scope of the assessment and summary (national/subnational level)

This section should contain essential information about the analysis including in particular:

- Identification of the region for which the analysis was performed,
- Date of validity of the risk assessment,
- Applied methodology,
- Results of the assessments.

Defining the sourcing area is relevant for the Level A assessment, particularly if the Level A assessment is at a sub-national level.

3. Date of the risk assessment

This section shall contain the following dates:

- Date of preparation of the draft,

- Public consultation period,

- Date of final approval,

- Date of validity.

4. Description of a sourcing area

The sourcing area must be drawn in geographic coordinates. However, if the analysis is performed for a country or a region for which boundaries are administratively defined, determination of coordinates is not mandatory. If the geographic coordinates of individual points are not available in tabular form, they can be determined using tools such as Google Earth. The map should also be included. This section should also include information about size of the area, topography, short climate description (tropical, temperate etc.) and other essential information.

5. Forestry industry description

This section should contain the description of the structure of forestry (e.g. percentage of deciduous forests, coniferous forests, mixed forests) and the wood industry relevant to scope of the risk assessment. This description bases on a statistical data for the area of assessment and should provide an overall view of the regional characteristics and the importance of the forestry and wood industry.

In order to characterize forestry following information should be considered:

- Total forest area;
- Structure of forestry (e.g. percentage of deciduous forests, coniferous forests, mixed forests);
- Protected areas, including national park, nature reserve. This section should indicate areas from which wood disposal is totally banned and also CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) tree species;
- Forest rejuvenation, gross annual increase.

In order to characterize wood industry following information should be considered:

- Structure of the sawmill industry
- Structure of the wood products industry
- Structure of the pulp and paper industry
- Structure of sales in the wood industry (internal market, export etc.)
- Structure of biomass use for energy purposes

All data must be clearly and verifiable supported by source and date.

6. Evaluation of the level of risk for each criterion

Evaluation shall include associated evidence - such as relevant legislation/laws (fully referenced), enforcement and monitoring (and sanction mechanism).

This section is divided into 9 subsections:

- The legality of harvesting operations;
- Forest regeneration of harvested areas;
- Biodiversity;
- Soil quality management;
- Areas designated by international or national law for nature protection purposes;
- Maintenance of long-term production capacity of forests;
- Guarantee of carbon sequestration parity;
- 'No-go' areas;
- Summary.

In case of each criterion following aspects are assessed:

- Legislation relating to the criterion. Description of specific legal acts and regulation in the area of the criterion.
- National authorities executing the law. The name of the authority(ies) shall be listed, scope of tasks and responsibilities. Each information shall be supplemented with appropriate legal references.
- Enforcement and monitoring. National authorities entitled to supervising of the application of the law and penalties, sanctions applied in case of breaking the law. Statistic data if available.

Each subsection shall include findings clearly indicating whether a given criterion is met.

7. Public consultation

This section contains the course of public consultation, information on any stakeholder feedback and findings.

8. Results

This section includes risk compliance score per criterion and overall score (e.g. “low risk” or specified risk”). Results shall explicitly indicate if Level A is met,

7.3. Performance of risk analysis – Level B

FGP is responsible for preparing the risk analysis. In order to carry out the risk analysis, complete the table in accordance with Annex 11.2 and assign the score successively for each criterion. Authors of the assessment may use additional guidance listed in the Annex 11.3. Using REDIIBIO report is recommended as a useful reference sources.

If each criterion is met (score “one” is awarded), then the risk analysis result for a given area is low and it is considered that the sourcing area will meet the KZR INiG requirements at level B. Sustainable Forest biomass can be harvested from this sourcing area as long as the assessment is valid.

The risk assessment shall contain at least:

1. Authors' profile

This section contains information about the authors and their roles in the risk assessment.

The information must include information about the author's work experience, training / education, and other relevant qualifications to demonstrate the author's ability to properly performed the risk assessment.

2. Scope of the assessment and summary

This section should contain essential information about the analysis including in particular:

- Identification of the region for which the analysis was performed,
- Date of validity of the risk assessment,
- Applied methodology,
- Results of the assessments.

3. Date of the risk assessment

This section shall contain the following dates:

- Date of issuing of the document,

- Date of validity.

4. Identification of the sourcing area

The sourcing area must be drawn in geographic coordinates. If the geographic coordinates of individual points are not available in tabular form, they can be determined using tools such as Google Earth. The map should also be included. This section should also include information about size of the area, topography, short climate description (tropical, temperate etc.) and other essential information.

5. Forest characteristic in the sourcing area

This section should contain the description of the structure of forestry (e.g. percentage of deciduous forests, coniferous forests, mixed forests) and the wood industry relevant to scope of the risk assessment. This description bases on a statistical data for the area of assessment and should provide an overall view of the regional characteristics and the importance of the forestry.

In order to characterize forestry following information should be considered:

- Total forest area;
- Structure of forestry (e.g. percentage of deciduous forests, coniferous forests, mixed forests);
- Protected areas, including national park, nature reserve. This section should indicate areas from which wood disposal is totally banned and also CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) tree species;

– Forest rejuvenation, gross annual increase.

All data must be clearly and verifiable supported by source and date.

6. Evaluation of the level of risk for each criterion

Evaluation shall include associated evidence - such as relevant legislation/laws (fully referenced), enforcement and monitoring (and sanction mechanism).

Each criterion shall be assessed separately. Discussion of evidence/findings shall be performed criterion by criterion. Summary is presented in the table provided by the template.

7. Results

This section includes risk compliance score per criterion and overall score (e.g. "low risk" or specified risk"). Results shall explicitly indicate if Level B is met.

8. Annexes

Annex 11.1. Risk assessment – Level A
Annex 11.2. Risk assessment – Level B
Annex 11.3. Additional guidance on assessing forest biomass criteria.
Annex 11.4. Declaration on forest biomass.

9. Changes compared to the previous edition

Date	Section	Previous requirement	Current requirement
05.05.2025	Whole document	RED II	RED III
05.05.2025	Whole document	Directive 2018/2001	Directive 2018/2001 as amended by Directive 2023/2413
05.05.2025	1.	-	Added: Article 29.7 of the RED III specifies that biofuels, bioliquids and biomass fuels produced from forest biomass taken into account for national renewable energy targets shall meet described below land-use, land-use change and forestry (LULUCF) criteria.
05.05.2025	1.1.1.	(iii) Those areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected; (iv) That forest harvesting is carried out in a way that minimises negative impacts on soil quality and biodiversity, which may be proven by providing evidence that the applicable law, or relevant forest management rules: (1) requires that primary forests and areas protected under 1 (b) (iii) are not degraded to or replaced by plantation forests or other wooded land, which may include, but should not be limited to, safeguarding that the regenerated forest area provides for a locally	(iii) that areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands, grassland, heathland and peatlands, are protected with the aim of preserving biodiversity and preventing habitat destruction; (iv) that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into

		appropriate and adequate amount of plants and tree species; (2) provides for the protection of soils and of species and habitats including those protected by international or national law. To facilitate the work of economic operators, Member States shall endeavour to provide data on site-specific environmental features; and (3) minimises, where appropriate, the removal of stumps, roots and deadwood	plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats.
05.05.2025	1.1.1.	(v) That harvesting […]: (1) national forest inventory reports, (2) providing the evidence referred to in point 1.2.1.a.ii or (3) similar inventory reports at sub-national level	Changing the structure of the document: (v) That harvesting […]: (1) national forest inventory reports, providing the evidence referred to in point 1.2.1.a.ii or (2) similar inventory reports at sub-national level
05.05.2025	1.1.1.	-	Added: (vi) that forests in which […]; and (vii) that installations […].
05.05.2025	1.1.1.	-	Added: NOTE: Primary forests and old growth forests […].
05.05.2025	1.1.2.	(b) Management systems applicable to the sourcing area ensuring: (i) The legality […] (iii) That forest biomass does not originate from areas designated by international or national law or by relevant competent authority for nature protection, including in wetlands and peatlands, unless there is evidence that the harvesting of the raw material activities does not interfere with the protection objectives of the designated areas. That may be proven […] (iv) That forest harvesting is carried out in a way that aims at least at preventing negative impacts on soil quality and biodiversity. This may be proven by providing evidence that, the relevant risks associated with the harvesting of forest biomass for energy production have been identified in advance, appropriate mitigation actions have been implemented, such as the following:	(b) Management systems applicable to the sourcing area ensuring: (i) The legality […] (iii) That forest biomass does not originate from areas designated by international or national law or by relevant competent authority for nature protection, including in wetlands, grasslands, heathlands and peatlands, are protected with the aim of preserving biodiversity and preventing habitat destruction, unless evidence is provided that the harvesting of that raw material does not interfere with those nature protection purposes. That may be proven […] (iv) that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats This may be proven by providing evidence that, the relevant risks associated with the harvesting of forest biomass for energy production have been identified in advance, appropriate mitigation actions have been implemented, such as the following:[…] (vi) that forests in which the forest biomass is harvested do not stem from the lands that have the statuses referred to in Article 29(3) points (a), (b), (d) and (e); Article 29(4), point (a), and Article 29(5) of the RED III, respectively under the same conditions of determination of the status of land specified in those paragraphs; and NOTE: Primary forests and old growth […].
05.05.2025	1.2.2.	(b) where evidence referred to in point (a) of the paragraph above […]	(b) where evidence referred to in point (a) of section 1.2.1 above […]
05.05.2025	2.	-	Added:

			KZR INiG System/12/Renewable Fuels of non-biological origin and recycled carbon fuels
05.05.2025	3.	-	Added: KZR INiG accepts the definition of "old growth forest" defined by national legislation in the country of origin of biomass. If such definition does not exist, the definition defined in the document System KZR INiG/2 shall be applied.
05.05.2025	5.1.	5. Harvesting criteria This point refers to Article 29(6). […]. If criteria on level A […].	5. Harvesting criteria This point refers to Article 29(6). […] 5.1. Demonstrating compliance with harvesting criteria at level A If criteria on level A […].
05.05.2025	5.1.1.	5.1. The legality of harvesting operations	5.1.1. The legality of harvesting operations
05.05.2025	5.1.2.	5.2. Forest regeneration of harvested areas	5.1.2. Forest regeneration of harvested areas
05.05.2025	5.1.3.	5.3. Areas designated by international or national law for nature protection purposes Biomass fuels produced […]. The list of protected areas includes: - national parks, - nature reserves, - landscape parks, as well as protected landscape areas, - Natura 2000 areas, - natural monuments, - documentation sites, - ecological grounds, - nature-landscape complexes for protection of plant, animal and fungi species. For more information see documents System KZR INiG/4, System KZR INiG/5.	5.1.3. Areas designated by international or national law for nature protection purposes Biomass fuels produced […]. The list of protected areas includes: - national parks, - nature reserves, - landscape parks, as well as protected landscape areas, - Natura 2000 areas, - natural monuments, - documentation sites, - ecological grounds, - nature-landscape complexes for protection of plant, animal and fungi species - wetlands, - peatlands, - grasslands, - heathlands. For more information see documents System KZR INiG/4, System KZR INiG/5.
05.05.2025	5.1.4.	5.4. Soil quality management and maintenance of forest biodiversity The term […] intervention. In context of soil quality, […].	5.1.4. Soil quality management and maintenance of forest biodiversity The term […] intervention. It shall be ensured that harvesting is carried out considering maintenance of soil quality and biodiversity in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests, and harvesting on vulnerable soils, that harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located and with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats. In context of soil quality […].
05.05.2025	5.1.6.	-	Added: 5.1.6. 'No-go' areas […]
05.05.2025	5.2.	5.6. Demonstrating compliance with harvesting criteria at level B Assessment of […] Demonstrating compliance with harvesting criteria at level B should performed criterion by criterion as it is shown in the Figures 2- 7.	5.2. Demonstrating compliance with harvesting criteria at level B Assessment of […] Harvesting of forest biomass from areas which have status defined in Article 29 (6)(a)(vi) is forbidden. The FGP is obliged to confirm that forest biomass does not origin from no-go areas. Documenting and verification of these criteria is

			performed according to the same rules as for agricultural biomass. Demonstrating compliance with harvesting criteria at level B should performed criterion by criterion as it is shown in the Figures 2- 7.
05.05.2025	5.2.1.	The legality of harvesting operations	5.2.1. The legality of harvesting operations
05.05.2025	5.2.2.	Regeneration criteria	5.2.2. Regeneration criteria
05.05.2025	5.2.3.	Protected area	5.2.3. Protected area
05.05.2025	5.2.4.	Maintenance of soil quality and biodiversity	5.2.4. Maintenance of soil quality and biodiversity
05.05.2025	5.2.4.	Step 1: Removal of stumps and roots can detrimentally affect soil structure, soil proneness to water and wind erosion, reduce soil fertility and reduce soil carbon. Therefore, in order to protect any soil type, ensure that stumps and roots are excluded from the biomass harvested.	Step 1: Removal of stumps and roots can detrimentally affect soil structure, soil proneness to water and wind erosion, reduce soil fertility and reduce soil carbon. Therefore, in order to protect any soil type, ensure that stumps and roots are excluded from the biomass harvested. Harvesting is carried out considering maintenance of soil quality in accordance with sustainable forest management principles, with the aim of preventing any adverse impact, in a way that avoids harvesting of stumps and roots, degradation of primary forests, and of old growth forests as defined in the country where the forest is located, or their conversion into plantation forests. Harvesting is carried out in compliance with maximum thresholds for large clear-cuts as defined in the country where the forest is located.
05.05.2025	5.2.4.	-	Added: Step 9. Verify if harvesting is carried out with locally and ecologically appropriate retention thresholds for deadwood extraction and that harvesting is carried out in compliance with requirements to use logging systems that minimise any adverse impact on soil quality, including soil compaction, and on biodiversity features and habitats.
05.05.2025	5.2.5.	Long-term production capacity	5.2.5. Long-term production capacity
05.05.2025	5.2.6.	-	Added: 5.2.6. 'No-go' areas […]
05.05.2025	7.	• forest biomass […], • areas designated by international or state legislation or by the competent authority as nature conservation areas, including wetlands and peatlands, are protected, • during harvesting, care is taken to preserve soil quality and biodiversity to minimize damage, • the forest in harvesting areas is continuously regenerated, • the long-term production capacity of the forest is preserved, • guarantee […].	• forest biomass […], • areas designated by international or state legislation or by the competent authority as nature conservation areas, including wetlands and peatlands, are protected, with the aim of preserving biodiversity and preventing habitat destruction, • during harvesting, care is taken to preserve soil quality and biodiversity to minimize damage, prevent any adverse impact, • the forest in harvesting areas is continuously regenerated, • the long-term production capacity of the forest is maintained or improved, • the land status of the area was confirmed on January 1, 2008 • guarantee […].
05.05.2025	7.1.3.	-	Added: It shall be ensured that harvesting […] soil compaction, and on biodiversity features and habitats;
05.05.2025	7.1.9.	-	Added: 7.1.9. 'No-go' areas […]
05.05.2025	7.2.	This section is divided into 8 subsections: - The legality of harvesting operations; - Forest regeneration of harvested areas; - Biodiversity; - Soil quality management; - Areas designated by international or national law for nature protection purposes;	This section is divided into 9 subsections: - The legality of harvesting operations; - Forest regeneration of harvested areas; - Biodiversity; - Soil quality management; - Areas designated by international or national law for nature protection purposes;

		- Maintenance of long-term production capacity of forests; - Guarantee of carbon sequestration parity; - Summary.	- Maintenance of long-term production capacity of forests; - Guarantee of carbon sequestration parity; - 'No-go' areas; - Summary.