

System Certyfikacji



KZR INiG

System KZR INiG/4



**Certification system of sustainable
biofuels and bioliquids production**

Issue: 2nd

Date:

**Land use for raw materials production –
lands with high carbon stock**

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by The Oil and Gas Institute – National Research Institute

The KZR INiG System/4

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1. Introduction

The document describes the KZR INiG System's requirements related to land with high carbon stock. These requirements provide guidelines on sustainable ways to produce, process, transport and use biofuel and bioliquids raw materials and feedstocks.

KZR INiG System regulations prohibit the use of raw materials obtained from categories of land listed below, unless the status of these lands has not changed in comparison with their status in January 2008:

1. Lands with high carbon stock:
 - a) wetlands,
 - b) continuously forested areas,
 - c) weakly forested areas

In the case of peatland, an exception is possible. Additional requirements are discussed later in this document.

If the land falls into to one of the three categories listed above, all of the criteria discussed below apply.

All of the requirements included in this document apply to agricultural producers participating in the KZR INiG System. Agricultural producers that receive direct payments pursuant to Regulation (EC) no. 73/2009 are obliged to meet Cross-Compliance requirements and therefore they must fulfill agricultural and environmental requirements and standards such as soil and water protection, Habitat and Birds Directives, good agricultural practice and management, etc. (for more information see System KZR INiG/6/ *Land for raw materials production – agricultural and environmental requirements and standards*). Whether or not farmers are covered by the direct support scheme, they are obliged to comply with sustainability criteria related to high carbon stock lands. Farmers within the EU who supply raw material for biofuels/ bioliquids production not covered by the EU control system or beyond the EU must meet all KZR INiG System requirements.

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 INiG System of Sustainability Criteria – general rules

KZR INiG System /2/ Definitions

KZR INiG System /3/ Reference with national legislation

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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 /10/ Guidelines to auditors and conduct of audits

The scope of the aforementioned KZR INiG System documents is based on the following articles:

EN 16214-3 Sustainably produced biomass for energy applications – Principles, criteria, indicators and verifiers for biofuels and bioliquids – Part 3: Biodiversity and environmental aspects.

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

3. Definitions

KZR INiG System/2/ Definitions

4. Description and requirements

4.1 Wetlands

Biofuels and bioliquids shall not be made from raw materials obtained from land with high carbon stock, namely land that had wetland status in January 2008 and no longer has that status. Wetland is land covered by or saturated with water permanently or for a significant part of the year.

Designation of wetlands requires definition of the geographical boundaries of areas so designated. Wetlands boundaries are often not defined precisely; they are movable and can change depending on climate and current precipitation conditions. This influences the precision of the land status classification. For instance, due to seasonal changes of wetland boundaries the requirements for assessments conducted on-site must be higher than for assessment of other types of agricultural land. This applies to all wetlands, not only those included in the Convention on Wetlands of International Importance.

In such cases it may be necessary to integrate data other than geospatial data with on-site assessment results.

System participants, especially agricultural producers, first gathering points and brokers (middlemen), are obliged to, among other things:

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- prove that the land on which the raw material was cultivated and harvested did not have wetland status in January 2008 or, if it have such status in January 2008, during the harvest of the raw material, the land status did not change;
- define the status, boundaries and characteristics of wetlands defined as such in January 2008, and indicate the boundaries of nearby raw materials production, existing or planned.

4.2 Continuously forested areas and weakly forested areas

Biofuels and bioliquids shall not be made from raw material obtained from land with high carbon stock, i.e. land that had one of the following statuses in January 2008 and no longer has that status:

- continuously forested areas, i.e. land spanning more than one hectare with trees higher than five metres and a canopy cover of more than 30 %, or trees able to reach those thresholds *in situ*
- 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 A is applied, the greenhouse gas (GHG) threshold would still be fulfilled
- forest according to respective national legal definition.

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

Continuously forested areas do not include land that is predominantly under agricultural or urban land use, because land under agricultural use in this context refers to trees standing in agricultural production systems, such as fruit tree plantations, oil palm plantations and agroforestry systems (crops are grown under tree cover).

Therefore, raw materials for biofuel or bioliquid production may be harvested from continuously forested areas and weakly forested areas on condition that before and after January 2008, the area had preserved its status of continuously or weakly forested area. For weakly forested areas, it is necessary to ensure fulfillment of the requirements on GHG emissions, in accordance with the rules of System KZR INiG/8/ *Guidelines for determination of life cycle per unit values of GHG emissions for biofuels and bioliquids*. If in January 2008 this terrain would have been characterized by the same status after raw material harvest, the raw materials obtained from the land fulfill the sustainability criteria. This also applies to continuously forested areas, as well as wetlands. **From other naturally forested areas the harvesting of raw materials is prohibited.**

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Continuously forested areas and weakly forested areas are characterized by the following definitions:

a) continuously forested areas

area: > 1 ha
height: > 5 m
canopy cover : > 30 %

b) weakly forested areas

area: > 1 ha
height: > 5 m
canopy cover: 10-30 %

System participants, especially agricultural producers, first gathering points and brokers (middlemen), may comply with this criterion by:

- proving that the raw materials are obtained from areas which did not have the status of continuously forested land in or after January 2008 (e.g. the areas are agricultural lands);
- in the case of raw materials obtained from weakly forested areas, **providing evidence** of GHG emissions, including any changes since January 2008 in the carbon stock of the area concerned.

Additionally, the influence of land use on carbon stock level should be taken into account.

4.3 Peatlands

The KZR INiG System prohibits, for biofuels or bioliquids production, the use of raw materials obtained from land that was peatlands in January 2008, unless:

- the soil was completely drained in January 2008, or
- there has been no draining of the soil since January 2008.

Thus for peatland that was partially drained in January 2008, a subsequent deeper drainage affecting soil that was not already fully drained would constitute a breach of the criterion^{iv}.

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4.4 Land use change

The term "land use changes" refers to changes among the six land categories recognised by the IPCC^{viii} (forest land, grassland, cropland, wetlands, settlements and other land) plus a seventh category of perennial crops, i.e. multi-annual crops whose stems are not usually harvested annually, such as short-rotation coppice and oil palm. This means, for example, that a change from grassland to cropland is a land-use change, while a change from one crop (such as maize) to another (such as rapeseed) is not.

In order to determine the carbon stock (CS) per unit of surface area with ascribed values of CS_R and CS_A, the following rules should be followed^{ix}:

- the entire area for which the land carbon stocks are calculated shall have similar:
 - biophysical conditions in terms of climate and soil types;
 - management history in terms of tillage;
 - history of change in carbon stock level in the soil.
- The following is considered a carbon stock at actual land use, CS_A:
 - in the case of a decrease in carbon stock – *the estimated equilibrium carbon stock that the land will reach in its new use*;
 - in the case of carbon stock accumulation – *the estimated carbon stock after 20 years or when the crop reaches maturity, whichever is the earlier*.

5. Calculations

Not applicable

6. Conformity check

The KZR INiG System prohibits, for production of biofuels or bioliquids, obtaining raw materials from:

- a) wetlands,
- b) continuously forested areas
- c) weakly forested areas,
- d) peatlands [art. 17(5)],

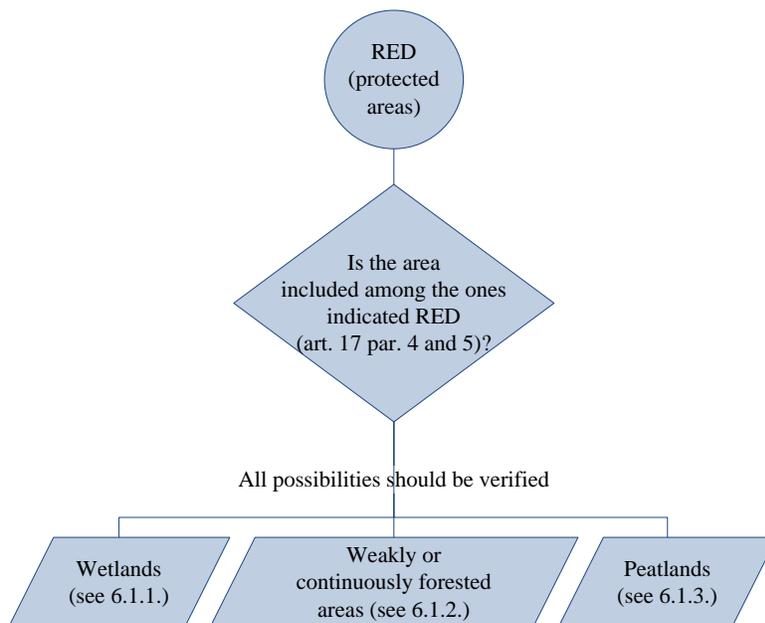
- as long as the status of lands a-c has not changed from its status in January 2008. In the case of peatland (li. d), an exception is possible according to section 6.1.3.

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NOTE

Proofs of compliance with land-related criteria are demonstrable in many different forms, including aerial photographs, satellite images, maps, land register entries/database, site surveys, and 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. In those cases, on-site assessments (interviews with local experts or communities) could provide the necessary additional information. Additional guidelines concerning verification of land status are given in the KZR System/9 document.

Figure 1 – Example of the procedure for checking the requirements of art. 17 (4-5) of Directive 2009/28/EC

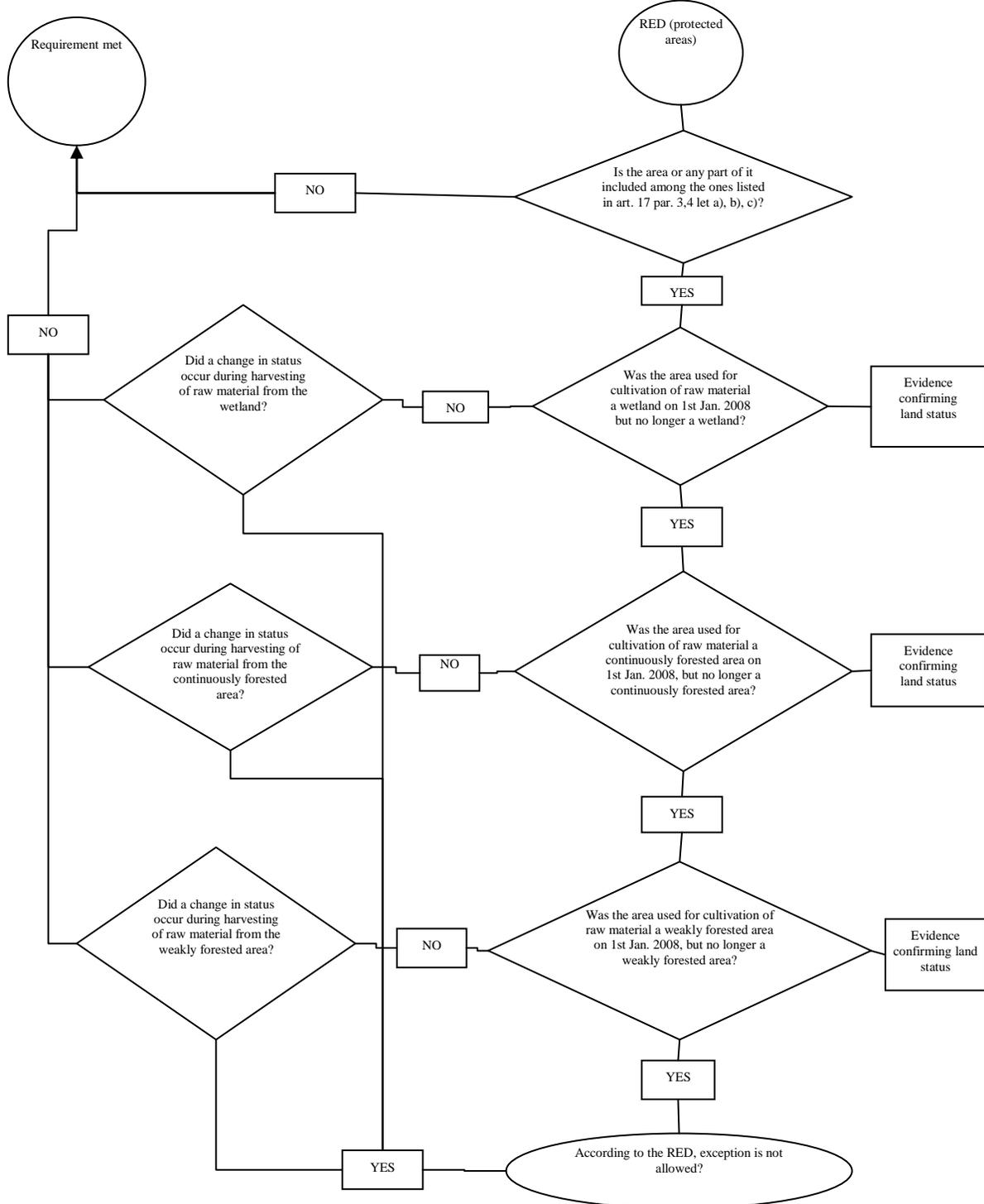


6.1 Criteria

Figure 2 shows the evaluation path for lands with high carbon stock, as defined by art. 17 (4 a, b, and c).



Figure 2 – Evaluation path for lands with high carbon stock



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6.1.1 Wetlands

Scenario 1 – the farm/plantation was established after January 2008;

In this case, the participant must credibly prove that in January 2008 the land did not have wetland status, or it had wetland status on that date but production of the raw material on the land cannot result in a change of its status.

Scenario 2 – the farm was established before January 2008;

In this case, the participant must credibly prove that in January 2008 the land did not have wetland status, or it had wetland status on that date but production of the raw material on the land cannot result in a change of its status.

Scenario 3 – establishing a new farm/plantation;

In this case, the participant may choose to obtain information about the land where the farm/plantation is to be established, in order to check whether the land has wetland status at present, and/or had it in January 2008.

To demonstrate compliance with this criterion, the agricultural producer may provide:

- a) satellite images, aerial photograph, maps or land-use plans. These means of verification may be considered as reliable sources on condition that they unequivocally show that the land was not a wetland area or indicating lack of existence of water reservoirs in comparison to January 2008 and after that date; **or**
- b) reports, lists of water and swamp areas with a description of, for example, land topography, **or**
- c) an excerpt and map extract from the water register. Based on this register, it may be checked whether or not defined wetland areas (e.g. intermediate peatland such as quagmire) occur in the given region in comparison to January 2008. Proof should be provided in the form of a document (a printout is acceptable) with an attached map, satellite image or map extract from the land register (containing information about land use), **or**
- d) other as defined in the KZR INiG/9.

Figure 2 shows the evaluation path for lands with high carbon stock, according to art (17 4 a, b, and c).

6.1.2 Continuously or weakly forested areas

Claims that the land is not a continuously forested area (canopy cover exceeds 30 %) or a weakly forested area (canopy cover 10-30 %) are subject to evaluation of defined thresholds of canopy cover and the possibility of reaching those thresholds *in situ*. During the evaluation, changes in land use in comparison to January 2008 are taken into account.

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To demonstrate compliance, the agricultural producer should provide:

- a) satellite images, aerial photographs, a map extract from the land register (containing information about land use) with borders marked, or other geospatial data. These means of verification may be considered reliable sources on condition that they unequivocally prove that the land was not a continuously forested area or a weakly forested area in comparison to January 2008 or after that date, **or**
- b) other as defined in the KZR INiG/9.

6.1.3 Peatlands

The KZR INiG System prohibits the use of raw materials obtained from land that was peatland in January 2008. For biofuels and bioliquids produced from raw materials grown on land that was peatland in January 2008, an exception is possible if evidence is provided that the soil was completely drained before January 2008 or there has been no draining of the soil since January 2008. This means that for peatland that was partially drained before January 2008, a subsequent more profound drainage, affecting soil that was not already fully drained, would constitute a breach of the criterion.

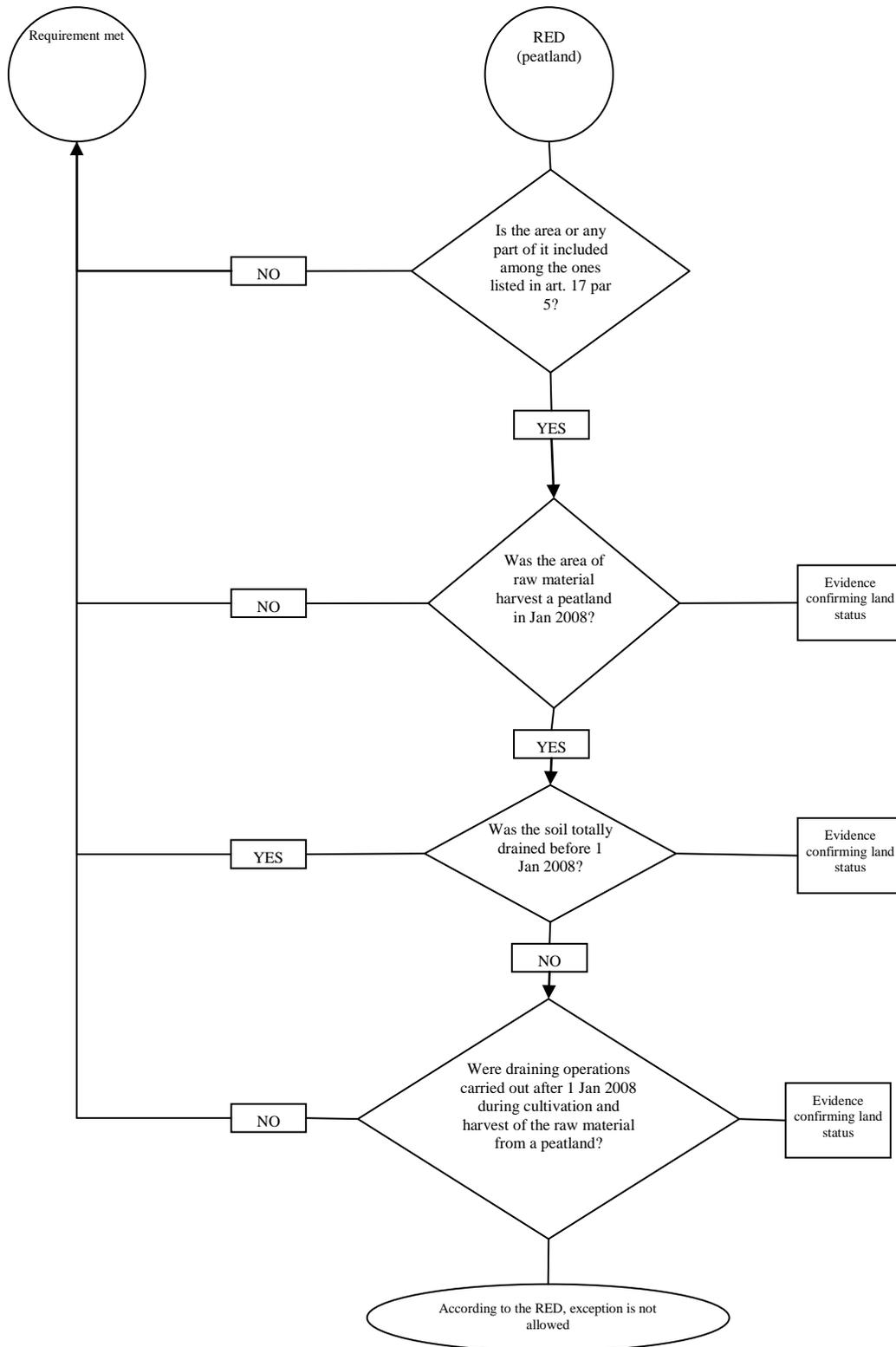
To demonstrate compliance, the agricultural producer may provide:

- a) satellite images, aerial photographs, a map with borders marked, or an excerpt and map extract from the register. These means of verification may be considered as reliable sources on condition that they unequivocally prove whether or not the land had peatland status in January 2008, **or**
- b) a document (e.g. drainage plans) indicating that after January 2008 the cultivation and harvesting of the raw material has not involved drainage of previously undrained soil, **or**
- c) other as defined in the KZR INiG/9.

Figure 3 shows the path for evaluating conformity with these requirements.



Figure 3 – Evaluation check path for peatlands



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7. Checklist

KZR INiG System/ 10/ Guidelines for auditors and conduct of audits

8. References

- ⁱ EN 16214-3 *Sustainably produced biomass for energy applications – Principles, criteria, indicators and verifies for biofuels and bioliquids – Part 3: Biodiversity and environmental aspects.*
- ⁱⁱ Convention on Wetlands of International Importance especially as waterfowl habitat (J. of Laws 1978 No. 7 item 24).
- ⁱⁱⁱ Part C of Attachment V to Directive 2009/28/WE.
- ^{iv} Communication from the Commission on the practical implementation of the EU biofuels and bioliquids sustainability scheme and on counting rules for biofuels (2010/C 160/02).
- ^v Acts on shaping the agricultural structure of 11.04.2003 (J. of Laws 2003 No. 64 item 592 as amended).
- ^{vi} Act on protection of agricultural and forest lands of 03.02.1995 (J. of Laws 1995 No. 16 item 78 as amended)
- ^{vii} Acts of 25.07.2001 on national register of farms and farm animals, and on changes in some acts (J. of Laws z 2001 r. No. 125 item 1363)
- ^{viii} Handbook on GHG inventory in land use change and forestry sector, Consultative Group Of Experts On National Communications From Parties Not Included In Annex and To The Convention, published by UNFCC.
- ^{ix} Commission Decision of 10 June 2010 on guidelines for the calculation of land carbon stocks for the purpose of Annex V to Directive 2009/28/EC (2010/335/EU).
- ^x PrEN 16214-4 *Sustainably produced biomass for energy applications – Principles, criteria, indicators and verifiers for biofuels and bioliquids – Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle analysis.*
- ^{xi} Council Regulation (EC) No 73/2009 of 19 January 2009 establishing common rules for direct support schemes for farmers under the common agricultural policy and establishing certain support schemes for farmers, amending Regulations (EC) No 1290/2005, (EC) No 247/2006, (EC) No 378/2007 and repealing Regulation (EC) No 1782/2003 (J. of Laws L 30 z 31.01.2009, s. 16–99).
- ^{xii} Council Regulation (EC) No 73/2009 of 19 January 2009 establishing common rules for direct support schemes for farmers under the common agricultural policy and establishing certain support schemes for farmers, amending Regulations (EC) No 1290/2005, (EC) No 247/2006, (EC) No 378/2007 and repealing Regulation (EC) No 1782/2003 (J. of Laws L 30 z 31.01.2009, s. 16–99).
- ^{xiii} *Cross-compliance rule – Minimum standards, Scope A and Scope B valid from 2011, information folder of Agencja Restrukturyzacji i Rozwoju Wsi*, November 2010.
- ^{xiv} Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market (J. of Laws WE L 230, z 19.8.1991 r.).
- ^{xv} *Cross-compliance rule – Minimum standards, Scope A and Scope B valid from 2011, information folder of Agencja Restrukturyzacji i Rozwoju Wsi*, November 2010.