



EFNCP response to TREN (European Commission)

Draft Consultation paper definition highly biodiverse grasslands under Renewable Energy Directive 2009/28/EC

Introduction

EFNCP welcomes the principle encapsulated in the Renewable Energy Directive (RED) and the TREN consultation process.

Our aim is to help make RED workable for government authorities, farmers and other land-based businesses, at the same time as effectively reducing the risk to highly biodiverse grasslands of incentives to produce biofuels/bio liquids.

EFNCP's main focus in this response is on implementation within the EU. In practical and policy terms there are important differences in the way RED can be applied to biofuel production within the EU, compared with outside the EU territory. For example, data bases are different, as are the existing policy instruments relating to grassland protection.

Within the EU, it is essential to achieve a more joined-up approach to RED in relation to other EU policy instruments that are concerned directly with the protection of grasslands for their environmental value, especially:

- The EIA Directive
- CAP cross-compliance (protection of permanent pasture)
- High Nature Value (HNV) farmland maintenance under EAFRD, plus the related CMEF indicators on HNV farmland.

There is a confusing mix of concepts and definitions currently existing within these EU policies, including "highly biodiverse grassland" and "species rich" grassland (RED), "semi-natural or uncultivated land" (EIA Directive), "High Nature Value farmland" (CMEF indicators) and "permanent pasture" (cross-compliance). There are great overlaps between these concepts on the ground (for the land manager) and also in policy design and delivery. The current situation, in which related concepts and definitions are layered upon each other in EU policy with no

apparent co-ordination, leads to considerable confusion for practitioners. We feel this lack of integration continues to be apparent in the Consultation document.

The need for 'efficiency' and 'cost-effectiveness' of any solution to RED implementation should be seen in this context. The benefits of a coherent and consistent approach will result not only in simplicity of implementation by Government but make a real contribution to both reducing and clarifying the administrative burden for the farmer in accordance with Community policy. We believe that this would be a major step forward in the implementation of the Gothenburg principles while recognizing the needs of businesses.

It is in particular essential for the Commission services to address the development and integration of data systems, working towards a common data system for farmland of biodiversity value, integrated with European instruments such as LPIS (Land Parcel Identification System) and CORINE Land Cover.

Data systems are the main focus of our response to the Consultation paper, as we believe they are key to finding an effective solution. It is important to distinguish between what is possible with existing data systems as they are currently constructed; and what is potentially possible if data systems are adapted and developed. As a point of principle, within the EU and globally, the aim should be to develop data systems that respond to current and future policy priorities, and not be anchored to existing systems if these are found to be inadequate.

Overall, EFNCP urges the Commission to take an integrated and long-term approach to data systems for implementing RED in combination with other related policies. The data issues are not going to go away and must be tackled sooner or later. It is important to develop systems and mechanisms that are efficient and effective in steering biofuels away from land that is highly biodiverse, and these same mechanisms and systems should serve to protect the same land from agricultural intensification and misuse (EIA Directive and cross-compliance) and abandonment (HNV farmland maintenance). On-site assessment will be necessary in some situations but it is not realistic to follow this approach in all cases.

In the EU currently there is a range of data systems, data categories and concepts related to grasslands that are not co-ordinated or integrated. The relevant data systems are:

- Land-cover data based on satellite images (CORINE land cover)
- Agricultural land-use data (LPIS map data, IACS and FSS data)
- Biodiversity data (inventories of semi-natural, natural grasslands and other habitats; inventories of species).

In principle it should be perfectly possible to develop and integrate these data systems, and to adapt them in such a way as to permit an effective identification of the grassland types that should be protected under RED, EIA Directive and CAP cross-compliance and that also should be monitored under the CMEF HNV farmland indicator.

At present this integration does not happen at EU level nor in most Member States. Also, EU data systems such as CORINE, LPIS and FSS are constructed in such a way that the categories are not well-suited at present to identifying the grassland types most likely to be highly biodiverse.

The development of habitat and species inventories is highly variable across the EU Member States and there is no pan-European inventory of highly biodiverse grasslands.

However, this does not mean that it cannot be done. Examples exist of data systems that are better suited to the needs of RED implementation and of the other policies referred to above. For example, the UK Land Cover 2007 distinguishes improved grassland from non-improved grassland, which is highly relevant, as explained below. Several EU countries have well-developed inventories of semi-natural grasslands. In Bulgaria and Slovakia data on the location of semi-natural grasslands have been incorporated into LPIS. Although teething problems are reported, the approach is commendable and offers potentially efficient solutions for the range of policy objectives concerning grassland conservation referred to above. In fact without developing LPIS in the way begun by these Member States, we believe it is impossible to achieve an effective implementation of these EU policies.

The EU initiative INSPIRE (Infrastructure for Spatial Information in the European Community) provides a potential framework for addressing these issues at the EU level.

Consultation questions

1) Do you have comments on the suggested operational definition of the two categories of grassland?

Recital 69 of RED explains the basis for establishing a system for preventing the destruction of highly biodiverse grasslands. Key wording for consideration of definitions is highlighted below:

“The increasing worldwide demand for biofuels and bioliquids, and the incentives for their use provided for in this Directive, should not have the effect of encouraging the destruction of biodiverse lands. Those finite resources, recognised in various international instruments to be of value to all mankind, should be preserved....

...Having regard, furthermore, to **the highly biodiverse nature of certain grasslands, both temperate and tropical, including highly biodiverse savannahs, steppes, scrublands and prairies, biofuels made from raw materials originating in such lands should not qualify for the incentives provided for by this Directive.** The Commission should establish appropriate criteria and geographical ranges to define such highly biodiverse grasslands in accordance with the best available scientific evidence and relevant international standards.”

The Directive does not provide an overarching definition of “grassland”. However, it does refer in Recital 69 to a range of grassland types (*highly biodiverse savannahs, steppes, scrublands and prairies*). These include explicitly some types that often have a high proportion of woody plants, particularly scrublands, and in some cases a dispersed tree cover, as in the case of savannahs. Such communities are indeed often highly biodiverse, and their protection against destruction is as important as purely herbaceous grasslands.

The Consultation Paper proposes an overarching definition of grasslands which includes the words “with few woody plants”. This definition conflicts with the range of grassland types set out in Recital 69 of the Directive. A different overarching definition is needed, which covers

the full range of highly biodiverse grassland types, including types with a large proportion of scrub and shrubs, and in some cases a dispersed tree cover that may reach up to 50% (e.g. in Spanish dehesas and Portuguese montados).

Bearing in mind that Article 17.4(b) of RED defines forested areas as having more than 30% tree cover, we propose the following overarching definition of grasslands:

“a terrestrial ecosystem dominated by herbaceous and/or scrub vegetation and with a tree canopy cover of no more than 30%”

This definition provides an overarching definition that captures all types of highly biodiverse grasslands.

The definitions proposed in the Consultation paper for natural and non-natural grasslands are different from those in the RED. A key difference is the inclusion of the phrase **“maintained for at least 5 years”** in the definition of non-natural grassland. In other words, this new definition would exclude Temporary Grasslands (as defined by EUROSTAT and FAO) from the definition of non-natural grasslands for the purposes of RED. As explained below, we believe this is a sensible cut-off point. However, rather than including this in the definition of non-natural grasslands (making the definition not strictly correct) we suggest that the concept of Temporary Grasslands is introduced under the approach to identifying “no go” and “go” areas for biofuels. Temporary Grasslands would be assumed to be not “highly biodiverse” except where an area has been identified as of biodiversity value under a national or international designation, such as Ramsar sites.

We do not have other specific comments on the new definitions proposed by the Consultation paper.

In the RED definition of highly biodiverse non-natural grasslands (Article 17.3 (c) (ii), the phrase **“and not degraded”** needs to be explained. The word “degraded” should be understood as referring to the biodiversity value of the grassland. It should NOT be understood in the sense of “degraded lands” as defined in the Annex V (C) 9. This definition considers degraded lands to include land with “significantly low organic matter content and has been severely eroded”. Such conditions occur in the case of certain types of highly biodiverse grasslands, for example over large areas of the Mediterranean region. The fact that soils are degraded does not mean that the biodiversity value of the grassland in question is necessarily low. In the context of climate change, the carbon sequestration capacities of these areas require restoration; conversion to use for cropping is rarely appropriate.

We are concerned that the Consultation paper limits itself to two categories of grassland (natural and non-natural) and does not give consideration to the concept of **semi-natural grasslands**. These are non-natural grasslands that have not been improved for forage production through activities such as fertilisation and reseeded, and thus mimic natural grasslands. There is a wealth of literature and research into semi-natural grasslands in Europe and these communities are a priority for many nature conservation bodies, and well represented in the EU Habitats Directive. The identification of highly biodiverse non-natural grasslands is related closely to the concept of semi-natural grassland. Furthermore, in the EU context there are important interplays between the RED and the EIA Directive, which requires

assessment of projects affecting “semi-natural” and uncultivated land. New policies such as RED should use established and recognised concepts as far as possible.

2) Do you agree that it is not possible to define highly biodiverse grasslands in a way that would permit their identification through remote sensing data/satellite photographs?

Data sources based on satellite information (e.g. land cover data sets) generally do not use categories such as “highly biodiverse” and “not highly biodiverse”. However, it may be possible to devise a system for distinguishing grassland types that are *likely* to be highly biodiverse from grassland types that are not, without recourse to on-site assessment. In other words, a first level of separation that would allow a green light for biofuels production on certain grassland types which, because of their basic characteristics, are very unlikely to be highly biodiverse. And conversely, a presumption against biofuel cropping on grassland of types that have a significant probability of being highly biodiverse (i.e. types that are potentially highly biodiverse).

Grasslands under more intensive management (temporary and annual grassland) can be assumed never to be highly biodiverse, although in certain circumstances they may be important as feeding areas for particular wildlife species, especially birds.

In terms of FAO grassland categories, this means that the grasslands least likely to be highly biodiverse are annually sown grasslands and Temporary Meadows and Pastures (defined as reseeded within five years). We propose that these grasslands would be assumed to be not “highly biodiverse” except where an area has been identified as of biodiversity value under a national or international designation, such as Ramsar sites.

The grasslands that ARE likely to include highly biodiverse types are those defined by FAO and EUROSTAT as **Permanent meadows and pastures**. The FAO definition for Permanent meadows and pastures is “**land used permanently (five years or more) to grow herbaceous forage crops, either cultivated or growing wild (wild prairie or grazing land)**”. As pointed out under question 2 above, for the purpose of RED and other policies concerned with biodiversity on grasslands, these should not be limited to “herbaceous” types only.

Permanent meadows & pastures are divided by FAO into Cultivated and Naturally grown. The former are “managed and cultivated” (although not resown more frequently than every five years), in other words they have undergone some agricultural improvement. The Naturally grown type are defined as “land not being controlled under permanent meadows and pastures, such as wild prairie or grazing land”. This “Naturally grown” category is the most likely to harbour high biodiversity, because the grassland is not only permanent, but has not been agriculturally improved.

The issue which we face is first whether such categories can be taken as a proxy for separating potentially ‘highly-biodiverse’ grasslands from the rest; and second, whether these categories can in practice be identified reliably on the basis of remote sensing.

Our proposal is that permanent grassland not subjected to agricultural improvement (“non-improved grassland”) can be taken as likely to be highly biodiverse; whereas permanent grassland subjected to agricultural improvement can be taken as unlikely to be highly

biodiverse, alongside temporary grassland. The reasoning is explained below. The UK system of Biodiversity Action Plan (BAP) habitat categories also follows this premise.

Biodiversity in grasslands occurs both above the ground and within the soil, with the vast majority of species being found in the latter. These invertebrates, fungi, bacteria and so on provide the landscape with its robustness and capacity to stand up to environmental challenges, not least climate change. It is important therefore that both the above and below ground diversity are given their due importance and that large or conspicuous species are not given too much weight.

The least biodiverse grasslands are those which have been managed 'intensively' over many years, especially those which have received herbicides and inorganic fertilizers. Many of these intensively used grasslands may have originated as sown grasslands, but now fall into the 'permanent grassland' category through being over 5 years old. The literature suggests that as well as being species poor in the sward, they have an impoverished soil biota.

Long-established grasslands which have not received herbicides or large quantities of fertilizer (and especially of inorganic fertilizer) are likely to be highly-biodiverse. The difficulty arises because some of these grasslands have been grazed at high stocking densities and are therefore rather poor in higher plant species, being dominated by a few vigorous grasses and grazing-resistant herbs (often considered 'weeds'). However, it has been shown that in the Atlantic biogeographical zone at least, such grasslands can still be highly-biodiverse as regards the largest species groups – invertebrates and other soil biota. These grasslands are in fact strongholds for some species groups, such as grassland fungi.

Climatic factors mean that circumstances in which permanent (or near-permanent) grasslands are the agronomically-rational *intensive* land use are limited. In the continental, Boreal or Mediterranean zones, intensively managed land usually falls within an arable rotation. Permanent grasslands tend not to be ploughable and to be more extensively managed. Only in the Alpine and Atlantic zones are there large areas of intensively managed permanent grasslands. It is to these areas that we must turn to examine whether these grasslands can be separated by their biodiversity level.

Is it then possible to distinguish older, less intensively managed permanent grasslands from more intensive swards that are not likely to be highly biodiverse? The assumption made in the Consultation paper and in some of the responses we have seen is that it is not. We question this, and feel that this conclusion may be based on consideration of *higher plant* biodiversity only – a very small part of the overall biodiversity of the grassland ecosystem.

The UK can be used to illustrate what should or should not be possible. The UK Land Cover 2007 data base distinguishes improved grassland from non-improved grassland on the basis of satellite imagery. It is reasonable to assume that such divisions between categories of land as are used are ones that are workable in practice. Interestingly, the 'non-improved' land class includes not only *floristically*-diverse swards but also the long-established grasslands which retain a highly biodiverse soil biota. This suggests that the difficulties of separating out highly-biodiverse grasslands may be more apparent than real.

The UK is only one Member State and wider conclusions should be drawn with caution. Nevertheless we suggest that since the UK is very representative of the extreme variations within the Atlantic zone and that the Atlantic zone is likely to be the one which would raise doubts about the efficacy of remote sensing for the identification of highly-biodiverse grasslands, for the reasons outlined, the basic assumption of the consultation – that this cannot be done – is poorly founded and may well be erroneous. We suggest that the Commission liaises directly with the Centre for Ecology and Hydrology in the UK to get expert technical advice on this issue.

The equivalent data base at the European level is CORINE. At present the land cover classes (CLC) used in CORINE are not suitable for distinguishing non-improved grasslands from improved grasslands. The “Pastures” class (2.3.1) includes temporary grasslands and more productive types of permanent grassland in one category. However, the “Natural grassland” class (3.2.1) probably is non-improved in the majority of cases¹. Potentially, the CORINE classes could be redefined to make the separation between improved and non-improved grasslands.

Similar issues occur with agricultural land-use data in the EU, such as the Farm Structures Survey (FSS). Permanent Grassland under FSS is broken down into two sub-types, defined as:

- “Permanent Pasture and Meadows - On good or medium quality soils. These areas can normally be used for intensive grazing.
- Rough Grazings - Low yielding permanent grassland, usually on low quality soil, for example on hilly land and at high altitudes, usually unimproved by fertiliser, cultivation, reseeded or drainage. These areas can normally be used only for extensive grazing and are not normally mown, or are mown in an extensive manner; they cannot support a large density of animals” (Handbook on implementing the FSS and SAPM definitions, Eurostat, September 2008).”

The Permanent Pasture and Meadows sub-type will include intensively-farmed silage fields, and permanent pastures that may be reseeded every five years and/or heavily fertilised. However, highly-biodiverse traditional semi-natural hay meadows can also be expected to fall within this category. The current FSS categories do not allow for a distinction between improved and unimproved grassland, but this could be changed to make the data more relevant to current policy requirements.

At the global level, the GLC2000 project uses the FAO Land Cover Classification System (LCCS). This is a hierarchical classification, which allowed each regional partner to describe the landcover classes at the thematic detail best suited to the landcover in their region of expertise, whilst following a standardised classification approach. The LCCS allowed the regionally defined legends to be translated into more generalised global landcover classes for the GLC2000 global product.

The relevant land cover class in GLC2000 is “Natural and Semi-Natural Primarily Terrestrial Vegetation”, which includes:

¹ Some of the assumptions in CORINE are questionable, for example distance from settlements is applied as one criterion for distinguishing so-called ‘Natural grassland’ from ‘Pastures’.

- Herbaceous Sparse Vegetation / Sparse Shrubs
- Herbaceous Closed to Open Vegetation

Overall, there are complex questions to be resolved which can be broken down into the following issues:

- How are categories defined in data systems? For example, the UK Land Cover divides permanent grassland into “improved” and “non-improved” types. The categories in CORINE and FSS are less useful, but this does not mean necessarily that they could not be adjusted to new policy objectives such as those covered by RED. The GLC2000 categories appear to be suitable, but would need to be investigated much more closely.
- In cases where the categories are suitable, what is the accuracy of methods for distinguishing these categories using satellite imagery (for the UK case this should be checked with CEH)?
- What are the criteria used for interpreting the raw data and converting them into a land cover map, and are these sufficiently robust?

The table in Annex 1 illustrates where “potentially highly biodiverse” grassland sits within current grassland definitions and data systems in the EU.

3) Are you aware of, or would you suggest, possible ways of identifying (ranges) of highly biodiverse grasslands, other than through on-site assessments?

We believe that administrative efficiency and common sense dictates that the aim of any procedure should be to eliminate ‘simple’ sites from consideration at as early a stage as possible, whether they be clearly appropriate for conversion (“go areas”) or clearly inappropriate (“no go”). On-site procedures should concentrate on those sites where there is uncertainty. Any doubt should be in favour of non-conversion of grassland, not least since highly-biodiverse grasslands are themselves not only part of the mechanism for ameliorating climate change through carbon sequestration, but also of the ecological ‘infrastructure’ which makes landscapes robust for biodiversity conservation in the face of climate change.

We suggest therefore that the Commission follows the rationale of the UK Land Cover Survey (and UK Biodiversity Action Plan) and assumes a strong correlation between ‘improved/non-improved’ and ‘non-highly-biodiverse/highly-biodiverse’. An appeal mechanism for on-site assessment should be put in place with criteria which clearly address grassland biodiversity in its totality – above ground and in the soil.

In addition, the Commission should promote the development of semi-natural (or “highly biodiverse”) grassland inventories across the EU, following models already existing in a number of Member States.

We believe that both the relevant land cover data and data from semi-natural grassland inventories should be incorporated into LPIS to create a highly efficient and effective system for implementing the provisions of RED and of the other EU policies referred to above. This would be of great benefit to effective policy implementation and to farmers and other land managers. See 6 below.

4) Which approach of the three possible approaches 1, 2 and 3 do you prefer? Please motivate your response and the implications in terms of economic burden, and efficiency.

Approaches 1 and 2 would provide very unsatisfactory protection for highly biodiverse grasslands in the non-natural category. Certainly within Europe and probably in other regions of the world, there is no reason to consider these grasslands of less value than natural grasslands. In the EU, a large proportion of semi-natural grasslands are not within existing protected areas.

Some form of on-site assessment is needed in situations that cannot be clearly identified using existing data bases as either “no go” or “go”. See our responses to 3, 5 and 6.

5) Do you have comments on the suggested criteria for assessment of highly biodiverse grassland, including:

- **Quantifiable indicators for the suggested operationalising approach, their reliability, precision and feasibility;**
- **The existence and status of possible suitable lists of species;**
- **The range of areas that would be currently covered by such lists?**

While in principle measuring ‘biodiversity’ clearly involves measuring both the number and variety of organisms, this information is not available for most species groups in the detail and reliability necessary for this kind of assessment. Going down the “counting species” route will lead to administrative complexity, a false sense of precision and a failure to protect less well-known species groups.

Fortunately, there is another approach. Species live together in habitats, which, while not simple to identify, are still much easier to distinguish. We suggest that the premise of the consultation be re-examined and that the remote sensing possibilities are explored more thoroughly, including the options for adapting and developing existing systems such as CORINE and GLC2000, and for the development of semi-natural grassland inventories and their incorporation into LPIS.

6) Is there be a better suited alternative approach or can one be developed? Please bear in mind the end result has to be able to distinguish "go" and "no-go" on legally sound and objective bases.

This Directive will have to be implemented on the ground through the monitoring and enforcement of hard-pressed administrators and understood and complied with by SMEs (mostly farmers) for whom the administrative burden is getting every more onerous and complex. It is very important that the implementation of this Directive is as ‘joined-up’ as possible with other Community rules and instruments, to ensure efficiency and ease of administration, better compliance and to maximise the chance of actually achieving the policy goals set.

Farmers and administrators have, as has been pointed out, to deal with a number of similar (but possibly different) policies. The agricultural intensification or conversion of semi-natural and uncultivated land is controlled by the EIA Directive. The conversion of permanent pasture is

controlled, at least at the level of the administration, through cross-compliance in the CAP. On a more positive note, funding is to be targeted for maintaining and enhancing 'High Nature Value' farmland – farmland defined in the Commission guidance as having a high proportion of 'semi-natural' habitats.

We believe strongly that this muddle serves no-one well. Not the farmer certainly – he is just confused, leading to inadvertent breaches and distracting him from his work with a mountain of paperwork. Not the administrator, who is often as confused as the farmer and has yet another round of inspections to add to his load. However the most important things to suffer are the policy goals themselves, whether it is promoting farming systems important for biodiversity, protecting our ability to respond to climate change or safeguarding our vitally-important soils.

It is clear to us that there are overlaps here. Biodiverse grasslands are HNV grasslands and are semi-natural grasslands. Grasslands on peat and humic soils are also permanent grasslands protected by cross-compliance. And so on. It is essential that Commission services – TREN, Agri, Env – collaborate with Member States to rationalise this confusion and present farmers and administrators on the ground with one set of requirements, backed up by one indicative data system which is easily understood by farmers.

Such a data system does not have to be invented from scratch – its basic form exists already in the Land Parcel Identification System (LPIS) mandatory for every Member State in support of the CAP Integrated Administration and Control System. Until the recent reform of the CAP, this database contained a huge level of detail about land use – some relevant and some not, but the point is that farmers and administrators are familiar with it and that it covers almost all agricultural land (the gaps could be easily filled).

Some Member States have reduced the level of detail and the amount of information gathered annually from farmers in IACS. However this 'simplification' did not lead to a lessening of the burden for farmers – they were still subject to all the rules about semi-natural land or permanent pasture. LPIS should be used as a system for helping farmers and administrators to apply these rules.

We therefore encourage TREN to engage with Agri and Env with a view to making LPIS maps a real tool for farmers and administrators, and a practical aid to implementing the range of EU policies concerned with conserving grasslands. It should provide a reference as to which fields are a) non-biodiverse improved permanent pasture and b) semi-natural, highly-biodiverse vegetation. In this way cross-compliance is satisfied (applying to a + b), RED and EIA are satisfied (applying to b) and HNV farmland monitoring is aided (b again).

This is a real opportunity for integrated outcomes, raising hopes that the RED will not be another Directive more respected in the breach than the observance.

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4th February 2010

Annex 1 : Illustration of where “potentially highly biodiverse” grassland sits within current grassland definitions and data systems in the EU

Scrubby and/or wooded pasture of native species, grazed and/or browsed.	Permanent grassland that has not been reseeded or fertilised i.e. unimproved.	Traditional hay meadows, not reseeded. May receive low levels of manure.	Permanent grassland that may be reseeded after 5 years and/or fertilised i.e. improved.	Multi-annual sown forage – temporary grass, lucerne – reseeded after < 5 years.	Annual sown forage – grass leys, forage maize, other forage crops.
<0.1 LU/ha -----approx 1LU/ha----->5 LU/ha					
Potentially highly biodiverse grasslands					
Inclusion of scrubby or wooded pasture depends on national interpretation.	Rough grazing – FSS – Pasture and meadow				
	Permanent Pasture (CAP definition R796/2004)				
	LPIS – all parcels eligible for CAP payments are recorded, and those not eligible (e.g. forest) – national categories vary. IACS data - all parcels recorded for which payment claimed or/and which justify forage area for livestock– national categories vary.				
←3.2.2, 3.2.3, 3.2.4 Moors, Scrub... 3.2.1 Natural grassland – CORINE CLC – 2.3.1 Pastures					