

BIKE is a Horizon 2020 project whose objective is to support uptake of the low ILUC-risk concept for biofuel feedstocks. This series of Briefing Notes seeks to explore issues in the EU policy sphere which may impact low ILUC-risk value chains, and identify opportunities for fostering an enabling policy environment.

Legal definitions in the low ILUC-risk policy framework



Castor bean grown in experimental field trials (Greece).

The concept of low ILUC-risk biofuels originated in EU energy policy, as a way to identify biofuel feedstocks whose production avoids driving agricultural expansion and the concomitant greenhouse emissions from land use change. It made its policy debut in 2015ⁱ, and was thereafter refined in the recast Renewable Energy Directive (RED II)ⁱⁱ and associated regulations from the European Commissionⁱⁱⁱ.

These legal texts provide a system of interlocking definitions which collectively determine what can be counted as a low ILUC-risk biofuel feedstock under the RED II, and how to demonstrate compliance with the set criteria. This Briefing Note covers the principal definitions in force today, discusses some subtleties arising from them, and suggests some simple amendments that could increase the impact of the low ILUC-risk concept.

Low ILUC-risk definition

Low ILUC-risk crops are, according to the most general definition, crops grown in a way that avoids displacement of other land uses^v. They must go beyond the crop outputs that would have been produced if no low ILUC-risk project was implemented, meaning that the feedstock is grown purely to meet demand from the biofuels market. In the language of the RED II, feedstock from a given farm may be certified as low ILUC-risk if it is “additional feedstock obtained through additionality measures^v”. In some cases, this means a whole extra crop; in others, an increase in productivity for an existing crop.

In the RED II, the main role given to low ILUC-risk certification is as a basis to exempt batches of fuel from the limitations placed on food and feed crops designated as high ILUC-risk. This emphasis on food and feed crops is reflected in the regulatory definitions. For example, low ILUC-risk biofuels are defined as:

“fuels, the feedstock of which was produced within schemes which avoid displacement effects of food and feed-crop based biofuels, bioliquids and biomass fuels through improved agricultural practices”;

and an ‘additionality measure’ is defined as:

“any improvement of agricultural practices leading, in a sustainable manner, to an increase in yields of food and feed crops on land that is already used for the cultivation of food and feed crops; and any action that enables the cultivation of food and feed crops on unused land, including abandoned land”.

The focus on food and feed crops in the definitions is also consistent with the fact that RED II only provides non-zero estimates of ILUC emissions for food and feed crops – in Annex VIII, it is stated that the ILUC emissions for all feedstocks other than starch, sugar, and oil crops are considered to be zero.

Because the definitions for low ILUC-risk feedstock are framed for food and feed crops specifically, other crops are effectively excluded from the RED II rules for certification. Given that non-food crops can be excellent options for low ILUC-risk projects, this definitional detail may limit the practical applicability of low ILUC-risk certification in ways that were not intended by the European institutions.

One non-food crop category that is currently excluded from low ILUC-risk certification under the RED II rules is ligno-cellulosic crops. It would be entirely possible to apply the certification methodology to ligno-cellulosic cropping projects, and in fact ligno-cellulosic crops may be very suitable for the reclamation of unused land, especially where it has become degraded or is otherwise unproductive for food and feed crops. While the RED II allocates an estimated ILUC value of zero to such crops, and modelling of perennial energy crops with GLOBIOM returned a negative ILUC factor, some other studies have suggested that ILUC emissions for crops such as switchgrass could be substantial, and many potential cellulosic crops have never been assessed for land use impact.^{vi} Low ILUC-risk certification on energy crops could therefore be an attractive way for fuel producers to demonstrate that their fuels have been produced sustainably through processes securing improved yields or reclaiming unused land with these crops.

A second issue arising from these definitions is a contradiction in the status of intermediate crops. Intermediate crops, such as cereals or oilseeds grown as catch or cover crops, are explicitly excluded from the definition of food and feed crops, on the proviso that their production does not “trigger additional demand for land”. Not triggering additional demand for land is the central characteristic of a low ILUC-risk production system, and thus there is a potential ‘catch-22’ for low ILUC-risk projects based on adding intermediate crops to an existing system – if the crops are successfully produced without demand for more land, then they do

not count as food or feed crops and thus fall outside the regulatory scope of low ILUC-risk certification, whereas if they are produced in a way that causes an increase in land demand they would fail low ILUC-risk certification.

From the point of view of encouraging the most sustainable use of bioenergy feedstocks and avoiding indirect land use change, there is no obvious downside to extending the regulatory definition of low ILUC-risk so that all crops can be assessed on their merits. Within the current logic of the RED II these potentially sustainable options are, by definition, excluded from certification precisely because they are already assumed likely to be low ILUC. Extending certification rules would give value chain actors the option to back this assumption up by offering defined and audited evidence of low land use impact. This change could easily be implemented in the RED II and associated regulations simply by changing the phrase ‘food and feed crops’ to ‘crops’ in the definitional sections relating to low ILUC-risk and additionality.

Land definitions

One of the pathways to low ILUC-risk certification is crop production “on unused land, including on abandoned land”. Unused land is land which has had no significant cultivation or grazing on it for five consecutive years, while abandoned land is a sub-category of unused land which formerly produced food and feed crops, but ceased for biophysical or socioeconomic reasons^{vii}. When a low ILUC-risk project is implemented on unused land, all of the produced feedstock can be certified.

Special status is granted under the RED II to two sub-categories of unused land, viz. ‘abandoned’ and ‘severely degraded’ land. Projects on abandoned or severely degraded land are automatically treated as



Sunn hemp and industrial hemp (in background) grown in rotation with cereals (Greece).

additional, i.e. they are not required to present further evidence that “they become financially attractive or face no barrier preventing their implementation only because [they can be counted under the RED]”. This derogation is justified by reference to the “significant potential for productivity improvements and the barriers faced to finance the necessary investments” for these cases^{viii}.

The RED II aims to support “restoration of land that has been severely degraded and therefore cannot otherwise be used for agricultural purposes”^{ix}, and a GHG emission reduction bonus is offered to feedstock produced on severely degraded land that “was not in use for agriculture or any other activity in January 2008”. The regulatory texts could be amended to make it clearer that in the context of low ILUC-risk, severely degraded land should be treated as a subset of unused land (i.e., that one could not simply reclassify existing production on land meeting the definition of severe degradation as additional production). This is implicit in the Delegated Regulation, which refers to additionality measures that “allow for cultivation of food and feed crops on ... severely degraded land” (if a productive system is already in place, then there is no need for an additionality measure to allow production), but it is not directly stated. This would be a simple clarifying amendment.

A second definitional issue is again connected to the link drawn between low ILUC-risk certification and food and feed crops. Food and feed crops are defined by reference to ‘agricultural land’, though the term is not formally defined. This raises the question of whether degraded or unused land could be considered non-agricultural. If land with low productivity is considered non-agricultural, then cereals or oilseeds produced on such land by a low ILUC-risk project would not fall under the definition of food and feed crops, and would not be eligible for low ILUC-risk certification under the terms of the RED. If instead all land on which an agricultural crop is produced can be treated as agricultural land, even when it is of poor quality, then the reference to agricultural land in the definition of food and feed crops is redundant. This ambiguity could be readily clarified by either allowing low ILUC-risk certification for all crops, as suggested above, or by deleting the words “on agricultural land” from the definition of food and feed crops.

Discussion

The low ILUC-risk concept has potential to add value beyond its present role. In energy policy, it can guarantee an extra layer of sustainability certification, building confidence that displacement effects and indirect emissions from feedstock use have been minimised. Beyond energy, there are opportunities to intersect with and support sustainable agricultural production and rural development. These points are elaborated in “BIKE Briefing Note #1: Policy to support low ILUC-risk agriculture”.

But the current definitions cast low ILUC-risk as a subset of food and feed crops, which restricts which types of feedstocks can qualify. Policy makers are invited to provide the required flexibility by removing the words ‘food and feed’ from the low ILUC-risk definitions. This would allow certification of any feedstock that adheres to the core principles of additionality, without prejudice to other designations (such as being a food and feed crop, or an ‘Annex IX’ feedstock).

This universalisation of the low ILUC-risk principles would allow it to become a broadly applicable 'gold standard' of feedstock sustainability. This in turn would build economic operators' confidence in making investments into low ILUC-risk value chains.

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- I. In the "ILUC Directive", Directive (EU) 2015/1513.
 - II. Directive (EU) 2018/2001.
 - III. Commission Delegated Regulation (EU) 2019/807 (hereafter 'Delegated Regulation') and Commission Implementing Regulation (EU) 2022/996 (hereafter 'Implementing Regulation'). Note that these later texts are assumed to supersede REDII wherever there is a clash in terminology (e.g. in the definition of low ILUC-risk).
 - IV. REDII, Article 2, Paragraph 37.
 - V. Delegated Regulation, Article 4, Part 1(b).
 - VI. See for example the ICCT report, "A comparison of induced land-use change emissions estimates from energy crops" (2021), https://theicct.org/wp-content/uploads/2021/06/ILUC-energy-crops_ICCT-White-Paper_06022018_vF1.pdf.
 - VII. Defined in detail by the Implementing Regulation, Article 26, Points 1-3.
 - VIII. Delegated Regulation, Recital 15.
 - IX. RED II, Recital 121.



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