

*BIKE is a Horizon 2020 project whose objective is to support uptake of the low ILUC-risk concept for bio-fuel 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.*

## Additionality measures for low ILUC-risk projects



Brassica cultivation

The low ILUC-risk concept seeks to promote the production of biofuel feedstocks in a way that does not interfere with existing food and feed markets. In technical language, feedstock production must be 'additional' to be certified as low ILUC-risk, and must result from implementation of a farm-level 'additionality measure', meaning<sup>i</sup>:

*"the improvement of agricultural practices leading, in a sustainable manner, to an increase in yields on land that is already used for the cultivation of crops; and any action that enables cultivation on unused land, including abandoned land, for the production of biofuels"*

In this Briefing Note, we focus on interventions which are intended to increase crop yields on existing agricultural lands above 'business-as-usual' performance. We discuss what kinds of additionality measure are already recognised in the legislation, and offer some recommendations for expanding the list in line with principles of sustainable agriculture.

## Additionality measures

A list of eligible additionality measures for yield increase is provided in a Commission Implementing Regulation<sup>ii</sup>. This list identifies four categories of additionality measures: mechanisation; multi-cropping; management; and replanting (for perennial crops). These have a proven track record of improving on-farm productivity, and can be applied by an economic operator with the proviso that they do not compromise long-term sustainability.

Crucially, application of any additionality measure must “go beyond common agricultural practice”. Fulfilment of this condition is assessed via the Delegated Regulation’s ‘additionality test’, which is intended to identify which measures would be part of a farm’s business-as-usual operations, and which are genuinely new improvements aimed at supplying extra biofuel feedstock without impacting existing production.

## Adding to the list

The list of additionality measures provided by the Implementing Regulation is explicitly ‘non-exhaustive’. This means that, while it provides a guide to the kinds of projects which may qualify for low ILUC-risk certification, there are others which could be considered suitable candidates. Adding additional categories of additionality measure to the list would give a broader range of operators looking to produce feedstock for the biofuel value chain confidence that their measures could be eligible in principle; it could also lower barriers to farmers wishing to change land management and cropping practices in response to climate change.

These additions are suggested on the basis that the production of cellulosic crops and intermediate crops for biofuel may be covered by low ILUC-risk principles, as is demonstrated by the BIKE case studies. Currently, the language of the RED restricts low ILUC-risk certification to ‘food and feed’ crops; this issue is discussed in more detail in BIKE Briefing Note #2<sup>iii</sup>.

## Recommendations

The table below replicates the non-exhaustive list of the Implementing Regulation, with recommended additions and clarifications in bold italics.

Category	Additionality Measure	Example
<b>Mechanisation</b>	Machinery	Adoption of machinery that reduces / complements existing workforce input to boost output or reduce losses. This could include sowing, precision farming, harvesting machinery or machinery to reduce postharvest losses.



Category	Additionality Measure	Example
Multi-cropping <sup>iv</sup>	Sequential cropping	Introduction of second crop on same land in the same year.
	<i>Agroforestry</i>	<i>Introduction of productive woody plants onto arable lands.</i>
	<i>Intercropping</i>	<i>Introduction of a crop grown amidst the main crop or in-between its planting rows, intended to be harvested or to be supportive to the harvest of the main crop.</i>
Management	Soil management <sup>v</sup>	Mulching instead of ploughing; low tillage; <i>ridges; biochar application; crop residue integration.</i>
	Fertilisation	Optimisation of fertilisation regime, use of precision agriculture.
	Crop protection	Changes in weed, pest and disease control, <i>consistent with the principles of integrated pest management laid out in Directive (EU) 2009/128.</i>
	Pollination	Improved pollination practices.
	<i>Landscape elements</i>	<i>Contour ploughing on steep slopes, terraces, buffer strips<sup>vi</sup>, field margins.</i>
	<i>Genotype selection and improvement<sup>vii</sup></i>	<i>Appropriate crop genotype selection and improvement.</i>
	<i>Irrigation<sup>viii</sup></i>	<i>Vegetated waterways and drainage, precision irrigation, rainwater harvesting with low-cost practices.</i>
	Other	Leaves room for innovation, combinations of measures and unforeseen developments.
Replanting (for perennial crops) <sup>ix</sup>	Choice of crop varieties	Higher yield <i>or short-rotation</i> variety, better adaptation to eco-physiological or climatic conditions.

These proposed new measures are in line with existing EU agricultural sustainability guidelines – for instance, the CAP's Good Agricultural and Environmental Condition (GAECs) practices. It is worth emphasising that an economic operator seeking low ILUC-risk certification would be assessed on a farm-specific and regionally contextualised basis. For operators outside the EU, it may be especially appropriate to consider yield improvement measures recognised by international agricultural standards beyond EU policy and beyond what is contained in the table.

For now, the Commission is invited to consider adopting the proposals in the table above as a form of extra guidance to stakeholders that leaves intact the sustainability safeguards established by existing legislation.

- I. Commission Delegated Regulation (EU) 2019/807 (henceforth 'Delegated Regulation'). Quotes in this Note may be edited for readability (e.g. dropping ellipses).
- II. Commission Implementing Regulation (EU) 2022/996 (henceforth 'Implementing Regulation'), Annex VIII.
- III. BIKE Briefing Note #2, "Legal definitions in the low ILUC-risk policy framework", 2022; accessible from [www.bike-biofuels.eu/briefing-notes/](http://www.bike-biofuels.eu/briefing-notes/).
- IV. Panoutsou et al., 2022, 'Opportunities for Low Indirect Land Use Biomass for Biofuels in Europe', <https://doi.org/10.3390/app12094623>.
- V. Mosier et al., 2021, 'Restoring Soil Fertility on Degraded Lands to Meet Food, Fuel, and Climate Security Needs via Perennialization', <https://doi.org/10.3389/fsufs.2021.706142>.
- VI. Christen & Dalgaard, 2011, 'Buffers for biomass production in temperate European agriculture: A review and synthesis on function, ecosystem services and implementation', [www.fs.usda.gov/nac/assets/documents/morepublications/BuffersBiomassProduction2012.pdf](http://www.fs.usda.gov/nac/assets/documents/morepublications/BuffersBiomassProduction2012.pdf).
- VII. Pancaldi & Trindade, 2020, 'Marginal Lands to Grow Novel Bio-Based Crops: A Plant Breeding Perspective', <https://doi.org/10.3389/fpls.2020.00227>.
- VIII. Nikolaou et al., 2020, 'Implementing Sustainable Irrigation in Water-Scarce Regions under the Impact of Climate Change', <https://www.mdpi.com/2073-4395/10/8/1120>.
- IX. Blanco-Canqui, 2016, 'Growing Dedicated Energy Crops on Marginal Lands and Ecosystem Services', <https://doi.org/10.2136/sssaj2016.03.0080>.



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