

Low ILUC-risk pilots Webinar

May 7, 2024

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By the European Commission

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Q&A

By the project team and DG ENER

The aim of this webinar is to share the key results of the Low ILUC-risk pilot project and to reflect on the role of low ILUC certified biomass in the current policy landscape

Introduction to today's presenters



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European Commission DG ENER



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01

Welcome

By European Commission

Legal framework: REDII & ILUC Delegated Regulation

- The **Delegated Regulation (EU) 2019/807** of March 2019 defines high ILUC-risk feedstocks and low ILUC-risk biofuels
- The **REDII (EU) 2018/2001** explains the concepts of high ILUC-risk feedstock and **low ILUC-risk certification**
- **Implementing Regulation 2022/996 Annex VIII** sets out more detailed guidelines for low ILUC certification

Fuels produced from feedstocks considered high ILUC-risk are capped at the 2019 consumption level and will be phased out by 2030, unless they can be certified as low ILUC-risk

High ILUC-risk feedstocks are determined by a formula combining crop expansion values with productivity factors and energy yield – currently only palm oil is classed as high ILUC-risk feedstock

Low ILUC-risk fuels are those that can demonstrate:

- Produced from '**Additional feedstock**' (e.g. through yield increase or unused/abandoned/severely degraded land)
- Meets one of the following '**Additionality**' tests:
 - Financial attractiveness or non-financial barrier analysis
 - Production on abandoned or severely degraded land
 - Applied by smallholders < 2 ha

Added value of project deliverables and next steps

- Currently, 4 voluntary schemes already recognised for Low ILUC certification: **Better Biomass, Bonsucro, ISCC, RSB**
- Any other voluntary schemes who are interested to extend their scope to cover Low ILUC should contact the EC
- REDII Annex IX updated list is finalised. It includes **intermediate crops** and **severely degraded land**, but with some additional criteria compared to Low ILUC

Next steps for EC:

- ❑ Review of Delegated Regulation 2019/807, High ILUC feedstocks: REDII modified the empowerment on the review
- ❑ Completion / update Implementing Regulation 2022/996 on sustainability certification, amongst others covering:
 - Existing articles on Low ILUC-risk certification and Annex VIII
 - Extra guidance to define different cases of certification of intermediate crops and feedstocks under REDII Annex IX and Low ILUC-risk certification of High-ILUC feedstocks
 - More elaborated definition of degraded land to support certification
- ❑ Methodologies of recognised voluntary schemes will need to be updated to take account of any new legal basis

The deliverables from this project will feed into these updates!

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02

Project introduction

Project introduction

Supporting the EC (DG ENER) to develop and test certification guidance for Low ILUC-risk biofuels, as defined in Delegated Regulation 2019/807 and Implementing Regulation 2022/996

10 pilots across two phases (2020 – 2023)

Crops

Palm, soy, Brassica
carinata, camelina, arable
crops for biogas

Countries

Global – 7 countries across
SE Asia, Latin America and
Europe

ILUC
Solutions

Yield increase of main crops,
sequential cropping, new cultivation on
abandoned or severely degraded land



Project outcomes and deliverables

1 Phase 1 outcomes are published

- Five phase 1 pilot reports and key findings
- Stakeholder webinar with 200+ global attendees
- Draft Low ILUC-risk Certification Guidance for public consultation

2 Phase 2 outcomes out now!


- Five phase 2 pilot reports and final report
- Stakeholder webinar and Q&A for voluntary schemes
- Final Low ILUC-risk Certification Guidance for adoption by voluntary schemes

3 Next steps for Low ILUC

- Recommendations to the EC for review of Delegated Regulation 2019/807 & update to Implementing Regulation 2022/996
- EC recognised voluntary schemes can start to certify Low ILUC

Low ILUC-risk certification guidance is published

Certification Guidance ("Handbook")

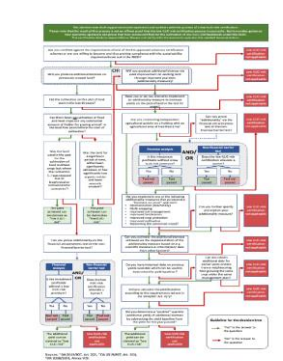


Support for the implementation of the provisions on
ILUC set out in the Renewable Energy Directive

ENER/C2/2018-462 – Lot 2


Prepared for DG ENER – European Commission

– Guidance Handbook for



Delivered by ISCC System GmbH (subcon
B.V.) as part of Task 2.2 – Application of the
and more specifically Task 2.2.2: Create

Management Plan template

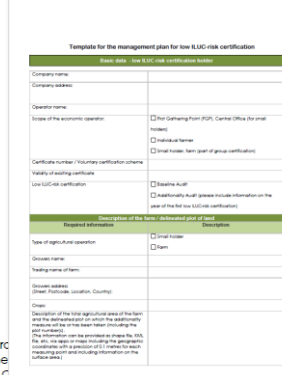


Support for the implementation of the provisions on ILUC set out in the
Renewable Energy Directive

ENER/C2/2018-462 – Lot 2


Prepared for DG ENER – European Commission

– Final template for the management plan for low ILUC-risk certification V0.6 –



Delivered by ISCC System GmbH (subcon
B.V.) as part of Task 2.2 – Application of the
bioliquids and more specifically Task 2.2.2: C

Audit Checklist

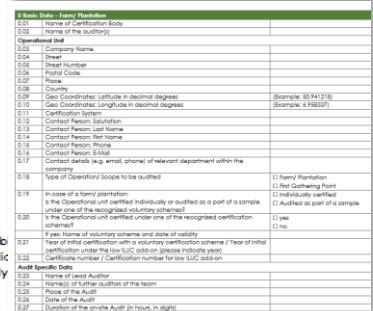


Support for the implementation of the provisions on ILUC set out in the
Renewable Energy Directive

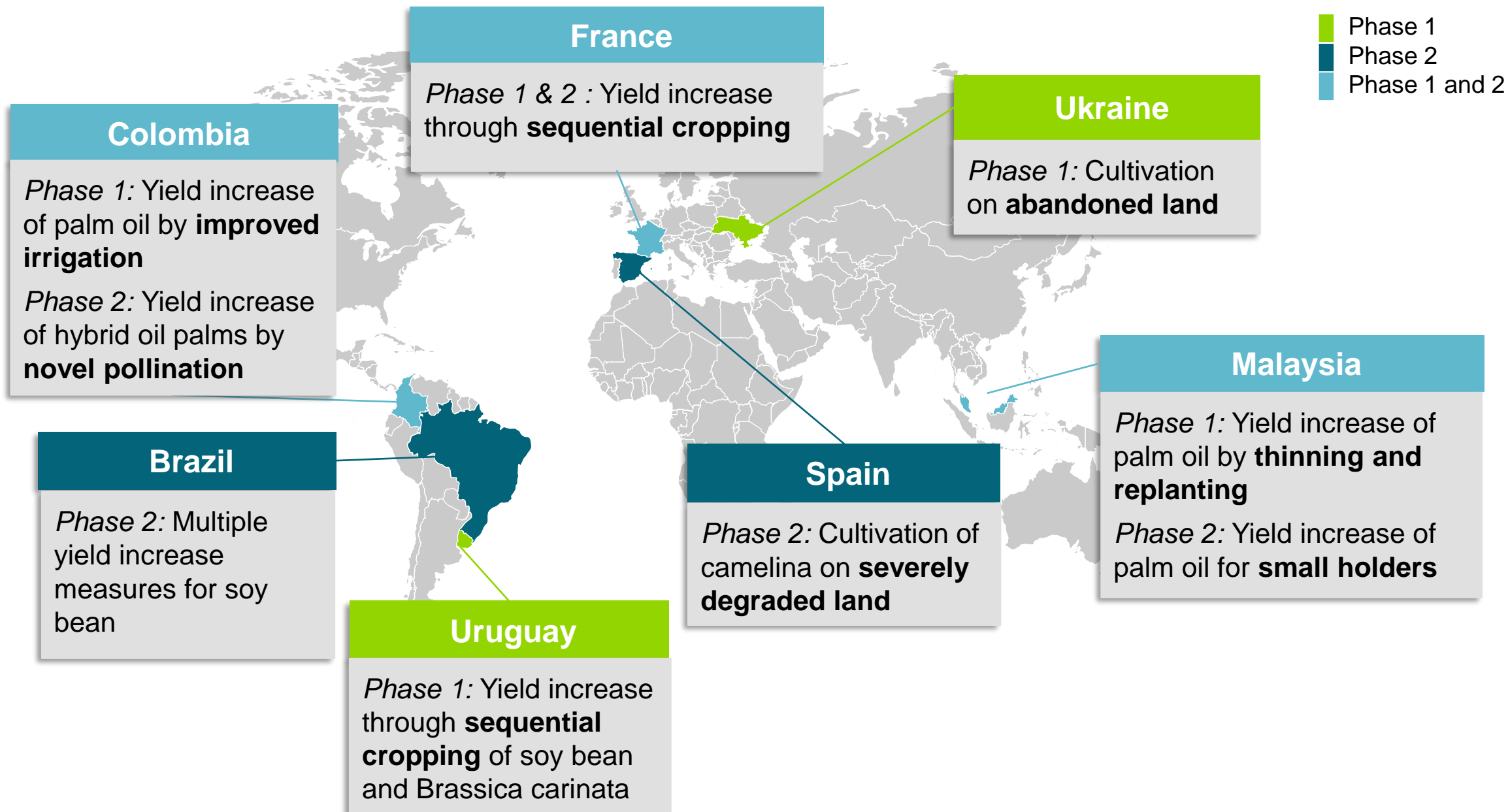
ENER/C2/2018-462 – Lot 2

Prepared for DG ENER – European Commission

– Final Audit Checklist for low ILUC-risk Certification V0.92 –



Delivered by ISCC System GmbH
B.V.) as part of Task 2.2 – Applic
bioliquids and more specifically



Colombia pilot: Palm yield increase via novel pollination



Example of African Palm field affected by bud rot and lethal wilt



Application of NAA in flowering palm bunch



New conditioner unit installed to process kernel-less fruit bunches

Malaysia pilot: Focus on palm small holders



Picture of the audit team during small holder sample audit



Small farm participating in the fertiliser credit scheme



Small farm who participates in the bio farm program

France pilot: Yield increase through sequential cropping



Anaerobic digestion plant and solar panels
at Site 1



Growing a mixture of sunflower and
sorghum as sequential crops

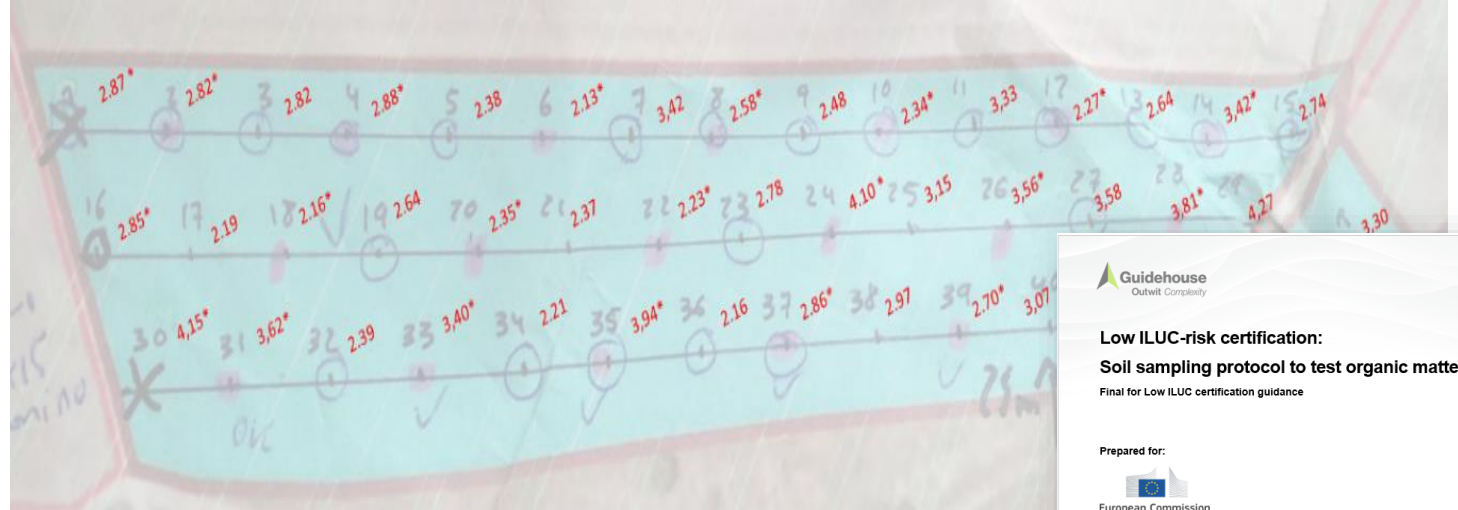


Anaerobic digestion plant with biomethane
upgrading and injection equipment at Site 2

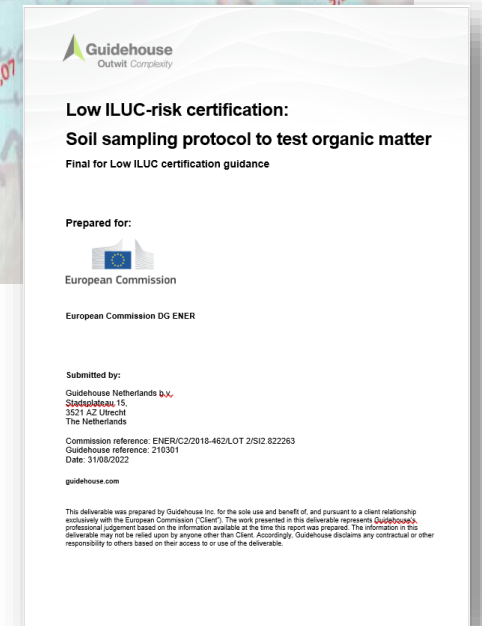
Spain pilot: Camelina on degraded land



Pilot site with an exposed rock, low topsoil (15-20 cm) with small stones mixed into the topsoil



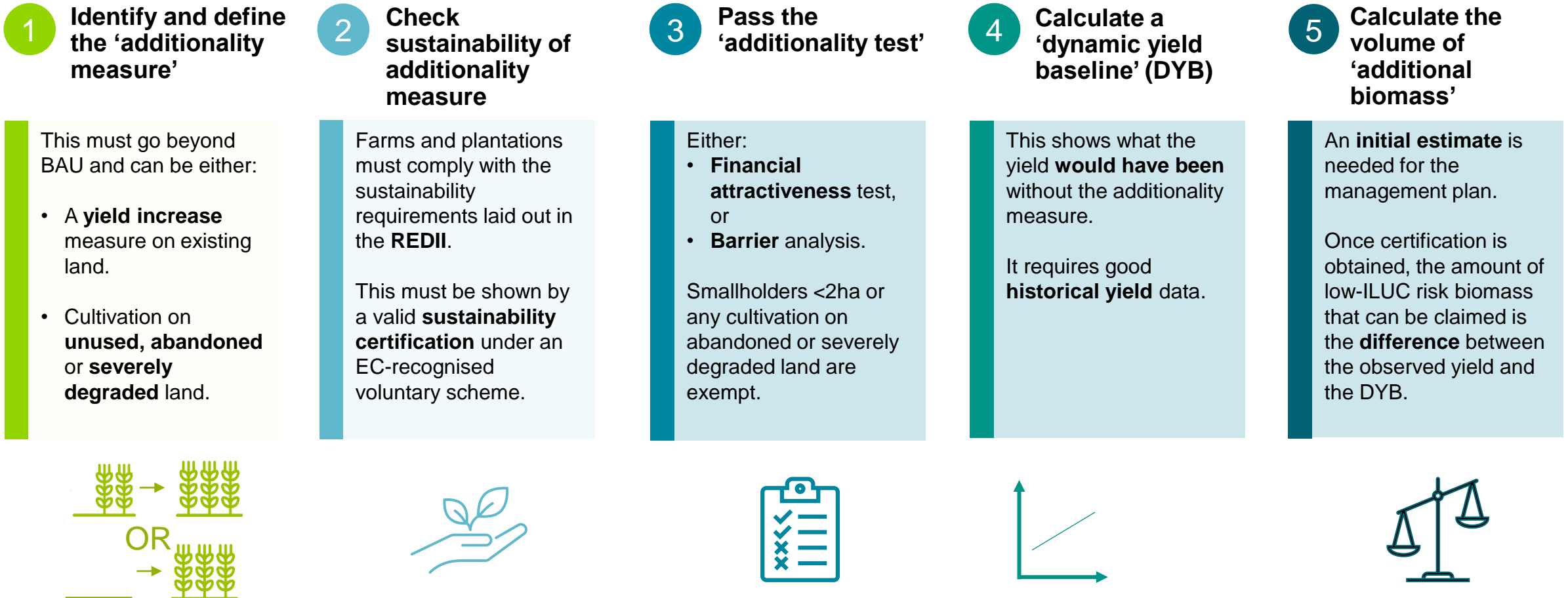
Soil sampling grid of the pilot plot (above) and the soil sampling protocol developed for the purpose of this pilot (right)





03 Overview low ILUC- risk certification steps

Economic operators must complete five steps to obtain low ILUC-risk certification

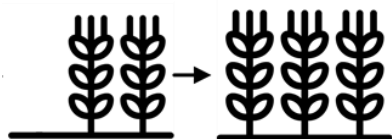


Step 1: Identify the additionality measure

The additionality measure must be clearly described

Low ILUC-risk biofuels

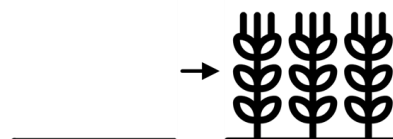
Yield Increase



- Existing crop systems
- Production of additional crop yields above a dynamic yield baseline

OR

Unused, Abandoned or Severely Degraded Land



- New crop system
- Production on unused, abandoned or severely degraded land

The economic operator must provide the following information:

- 1** Qualitative description of the situation **before** the additionality measure was implemented.
- 2** Qualitative description of the additionality measure, the **timeline** over which it is applied and whether it will be **combined** with other additionality measures.
- 3** An explanation of the expected future yield growth.

Step 2: Check sustainability of additionality measure

The additionality measure should lead to an increase in yields in a sustainable manner

Farms and plantations looking to obtain low ILUC-risk certification must comply with the sustainability requirements laid out in Article 29 of Directive (EU) 2018/2001.

This will be proven by demonstration of a **valid sustainability certification** under a voluntary scheme.

The whole farm or plantation must comply with sustainability requirements for:

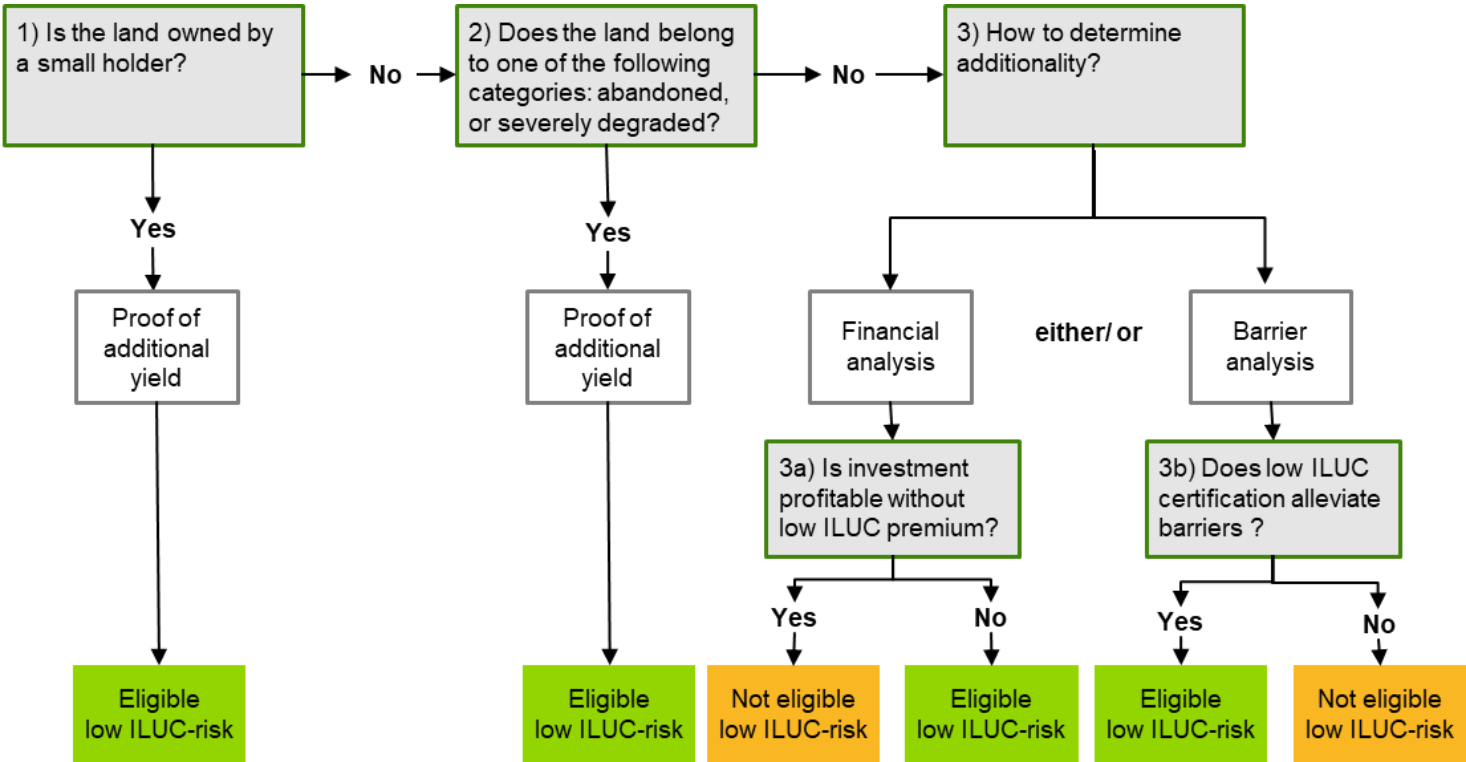
- Land with **high biodiversity** value
- Land with **high carbon stock** and **peatland**
- **Soil quality** and soil organic carbon
- Greenhouse gas **emissions savings** for biofuels, bioliquids and biomaterials

All emissions must be documented and passed on to the recipient of the low ILUC-risk material.

The additionality measure must not compromise the **future growing potential** of the land and must not have a negative impact on the **soil quality** and **carbon stock** of the land.

Step 3: Pass the ‘additionality test’

There are two ways to demonstrate additionality depending on the scenario



Economic operators can use either of two additionality tests:

1. Financial attractiveness test

This should show that the investment required for the additionality measure becomes financially attractive **only if** the resulting additional yield is certified as low ILUC-risk.

Only the costs and revenues **directly related** to the additionality measure should be included. To pass this test, **the NPV should be negative!**

2. Barrier analysis

This should show how non-financial project barriers could be overcome **only if** low ILUC-risk certification is obtained.

The economic operator must provide **verifiable evidence** of this (e.g. supply contracts, legal documents, bank statements), in addition to showing that the additionality measure is made possible by an **EU value signal**.

Note that small holders whose farm is smaller than 2 hectares, and cultivation on abandoned or severely degraded land, are exempt from the additionality test.

EXAMPLE BARRIERS

No access to finance

Legal restrictions

No access to input(s)

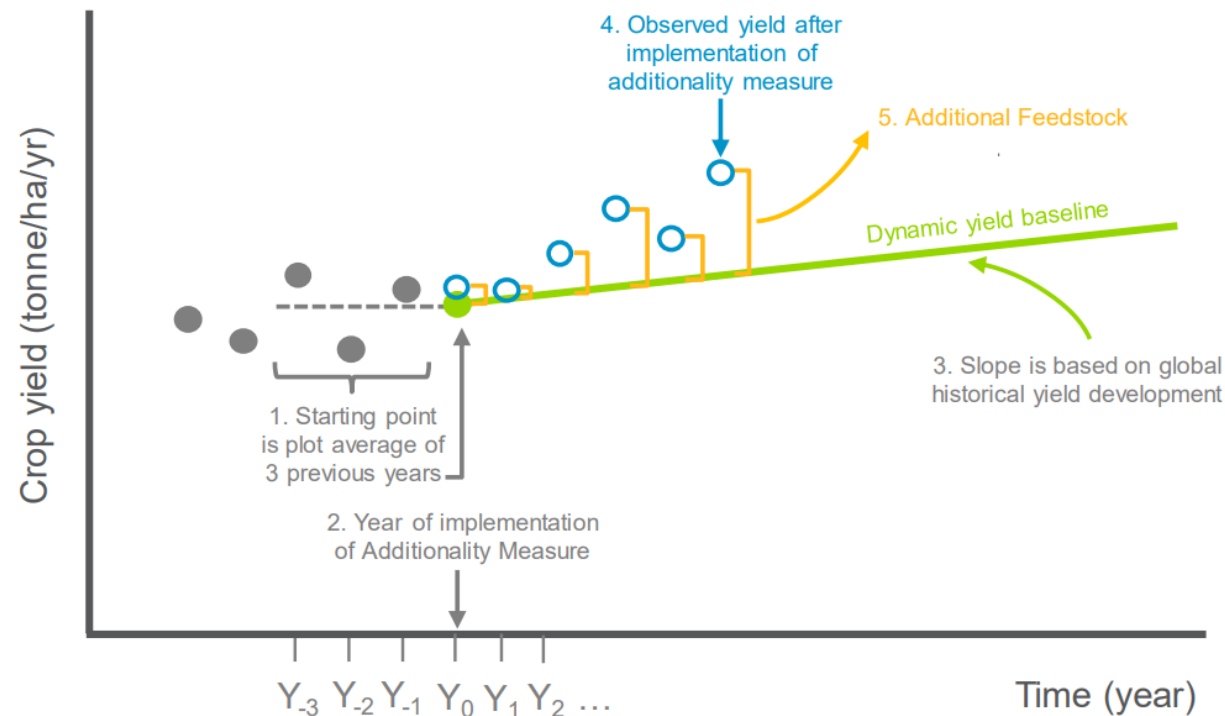
Access to knowledge

No access to labour

First-of-a-kind measure

Step 4: Calculate the 'dynamic yield baseline'

The basic methodology is straightforward, but a slightly different approach is taken for palm and sequential crops

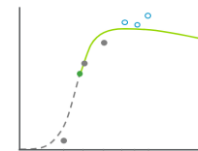


The DYB (**green line**) is made up of two elements:

1. **A starting point (green dot)** – average historical yield of the target crop in the 3 most recent years (**grey dots**).
2. **A slope** – given in Table 4 of the Certification Guidance Handbook.

The starting point is based on historic yield data from the economic operator, or on best available data on crop yield for the respective plot(s) / region if the former is not available.

The slope is derived from the last 20 years of global crop data from FAOSTAT World+ yield data.



For **oil palm**, crop yield follows a curve over their lifetime, requiring a slightly different approach.



For **sequential crops**, crop-specific baselines may be needed.

Step 4: Demonstrate land status

Severely degraded land

Severely salinated, or significantly low organic matter (SOM) and severely eroded

- Salinisation threshold: >4.0 dS/m
- SOM threshold: $<3.4\%$ SOM
- Erosion threshold: >1.5 t/ha/y soil loss
- Zero baseline for land that has not been under cultivation for >3 years
- Land with previous yield needs to set a baseline

Abandoned land

Agricultural land that was abandoned due to biophysical or socio-economic constraints for at least 5 years

- Documents on historic land use, remote sensing data, etc. can be used to prove historic and actual land status
- The certification is valid for 10 years after the production of energy crops

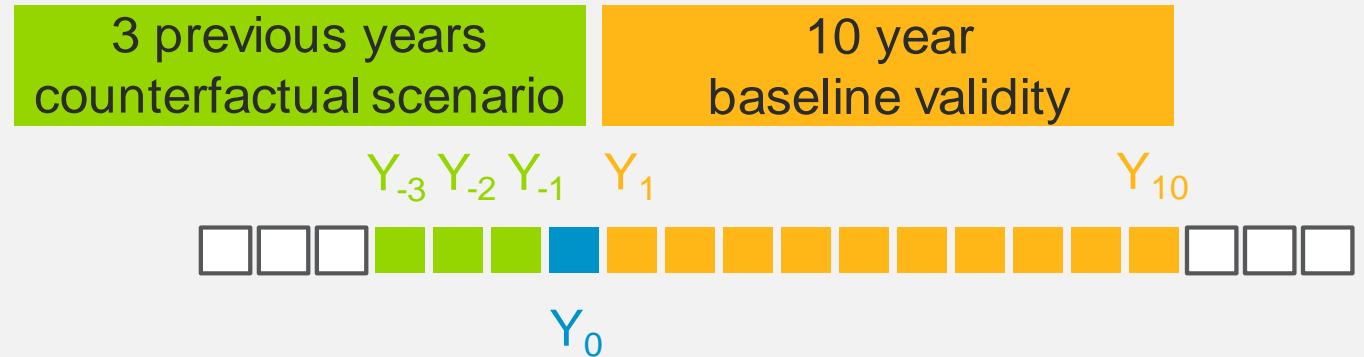
Other unused land

For a consecutive period of at least 5 years prior to certification was not used for food or feed crops, energy crops or fodder

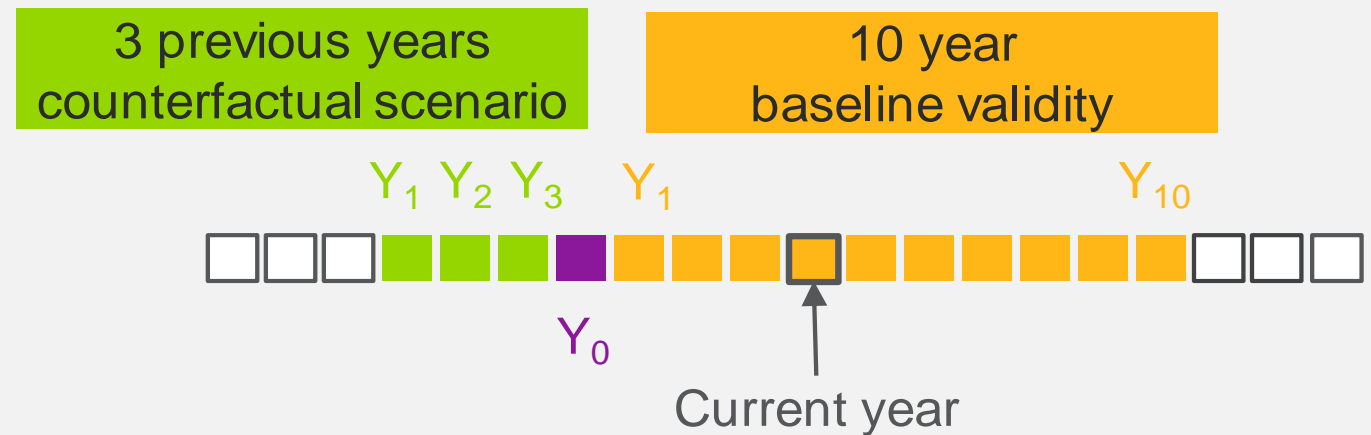
- Unlike severely degraded and abandoned land, unused land must pass the financial attractiveness and/or barrier analysis
- Historic land use documents and remote sensing may be used to prove the land status
- The certification is valid for 10 years after the production of energy crops

“Baseline validity” of 10 years

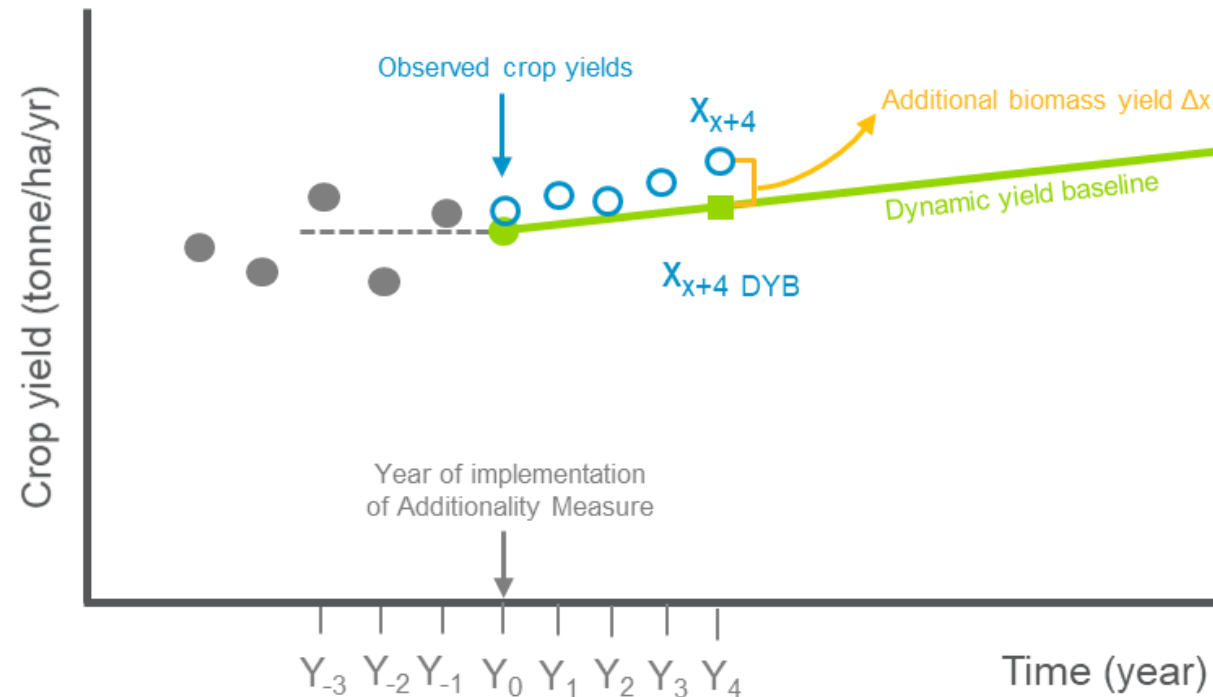
Additionality measure
taken in the present day



Additionality measure
taken in the past



Step 5: Calculate the volume of 'additional biomass'



Estimate additional biomass yield

- Estimate of additional biomass required for the NPV calculation
- The amount of low ILUC-risk biomass claimed is the actual difference between the observed yield and the dynamic yield baseline
- Using the following formula:

$$\Delta x = (x_{x+4} - x_{x+4 \text{ DYB}}) \times A \text{ (in tonne/yr)}$$

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04

Low ILUC in practice

The current Low ILUC policy is aimed at high ILUC-risk feedstocks



Proving additionality

Needs a strong market signal. If costs cannot reasonably be estimated, a more nuanced approach should be considered, especially for smaller farms, to use the barrier analysis.



Additionality measures

Certification of additionality measures taken in the past or with small impact on yield difficult to certify, because hard to prove additionality and risk that volume of low ILUC biomass will be low.



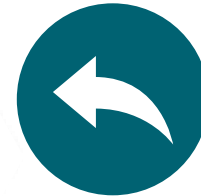
Smaller farms

Tend to have lower yields and therefore well positioned for low ILUC-risk certification if they can close the yield gap. But certification is harder to access and this methodology requires robust, well documented yield data.



Strong value signal needed from EU market

Value signal could develop in the form of a low ILUC premium, access to market or positive branding. Strong value pull from the EU biofuel market would make the financial attractiveness test a more feasible option.



Innovative and new additionality measures

Measures planned for the future, especially innovative additionality measures which have the potential to create relatively high volumes of low ILUC certified biomass most likely to be successful.



Work with existing group certification

Building on existing group certification approaches to help smaller farms access certification and centralise knowledge transfer, data collection and calculations necessary to access Low ILUC certification

There are opportunities to use the developed materials outside the context of high ILUC-risk feedstocks

New Annex IX feedstocks

Intermediate crops

The low ILUC-risk methodology to calculate additional biomass from sequential cropping could be used to demonstrate that intermediate crops do “not trigger demand for additional land”, as is required by both the food and feed cap exemption and the proposed Annex IX definition.

Definitions Annex IX Part A(t) (or Part B(f) if not used in aviation)

Intermediate crops, such as catch crops and cover crops that are grown in areas where due to a short vegetation period the production of food and feed crops is limited to one harvest and provided their use does not trigger demand for additional land, and provided the soil organic matter content is maintained, where used for the production of biofuel for the aviation sector;

Severely degraded land

Clear and consistent definitions for severely degraded land should be set across all the potential policy applications in the REDII – low ILUC-risk certification, the GHG bonus for cultivation on severely degraded land and inclusion in Annex IX.

Definitions Annex IX Part A(u) (or Part B(e) if not used in aviation)

Crops grown on severely degraded land, except food and feed crops, where used for the production of biofuel for the aviation sector;

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Break – 5 minutes



05 Results

Low ILUC-risk certification is highly dependent on yield data and high standard of auditing



For parties throughout the supply chain, **low ILUC material cannot be physically distinguished from non-low ILUC material.**



The pilot projects revealed **high natural variation in yields at the individual farm level**, caused by external factors. This will lead to **variation in the volume of low ILUC-risk biomass that can be claimed** each year.



Audit implementation

- 1 Yield data reported is accurate and can be linked back to the farm or plantation being certified.
- 2 Outliers are discarded from the baseline calculation.
- 3 To remain low ILUC-risk certified, auditors need to check that additionality measures have been taken as described.
- 4 Careful auditing of mass balance systems through the supply chain to ensure robust low ILUC claims.

High quality yield data needed to set accurate dynamic yield baseline



The most common error calculating the dynamic yield baseline in the pilots occurred while implementing the global trendline or “slope” element. In the baseline audit, auditors need to ensure all steps in the Certification Handbook have been correctly followed.

Allow operators the option to determine the baseline and additional biomass on the basis of raw material harvested (e.g. FFB) or the usable intermediate product (e.g. CPO). The calculation methodology needs to be applied consistently over time.

For intermediate crops, observed yield is difficult as the primary indicator used to assess whether or not the intermediate crops do “not trigger demand for additional land”. Yield data can vary due to crop rotation pattern changes and natural yield variations. Additional indicators, such as a consistent growing season for the main crop (sowing and harvesting dates) should be allowed as an indicator.

Not all pilots had sufficient yield data to set an accurate yield baseline. Some pilots collected yield data on farm level but applied additionality measures only on sub-plots. In the Malaysia pilot, some farmers recorded a yield of zero in certain years, because there was no proper documentation of yield collection. However, to set a baseline multi-year yield data on a plot-level is needed and including zero yield would skew the yield baseline.

For a credible additionality test a high level of transparency is needed in the starting phase



Additionality test

Ensuring a **high level of transparency** on how the additionality test is applied and audited will be crucial to the credibility of the low ILUC-risk mechanism.

Robust **evidence** and a link to the **EU biofuels market** is needed. High level of **transparency** required, especially in early years, to ensure robust application of the additionality test.



Financial attractiveness test

A **strong market signal** will need to **develop** for low ILUC-risk certified biomass before any significant number of projects will be able to identify additionality using the financial attractiveness test.

Ensuring **the value signal reaches the feedstock producer**, who is required to pass the additionality test.



Barrier test

The pilot projects found that **the barrier analysis is inherently subjective** and can be difficult to objectively prove. In practice, farmers make decisions by taking into consideration a range of drivers.

A more nuanced approach should be allowed, especially for smaller farmers, so that the barrier test can be used **unless costs can reasonably be estimated**.

More elaborated definition of severely degraded land to support certification

Severely degraded land thresholds

The feedback received (the stakeholder consultation & Spanish pilot) is that **the degradation thresholds proposed in the first draft certification guidance were too strict** and that it is **unlikely to be possible to cultivate crops** on lands that would meet those thresholds. This would likely result in:

1. **little to no low ILUC-risk feedstock** possible from severely degraded lands;
2. **not providing an incentive** for farmers whose land is becoming degraded (but not yet degraded enough to meet the strict thresholds) **to change their current practices and reverse the degradation**.

Proposed thresholds for low ILUC-risk certification for severely degraded land should be set at a **more modest level**, but to counter that the farmer should either be required to prove there is **no existing yield or to set a yield baseline**, based on current yields (the baseline is zero if the farmer can show that there is no yield).

Abandoned land

The availability, reliability and accuracy of data to confirm the land status was good in the Phase 1 pilot.

The main challenge is finding examples where the land has been **abandoned for more than 5 years** (to meet the definition) but biofuels produced from biomass grown on that land can **still meet the REDII GHG saving threshold once direct land use change emissions** are taken into account from the conversion of that land back into agriculture.

Land that has been left abandoned is at risk of re-growth and developing into a grassland. There could also be biodiversity concerns that would prevent land conversion meeting the core REDII sustainability criteria if the land has been abandoned for a long period and has high biodiversity value.

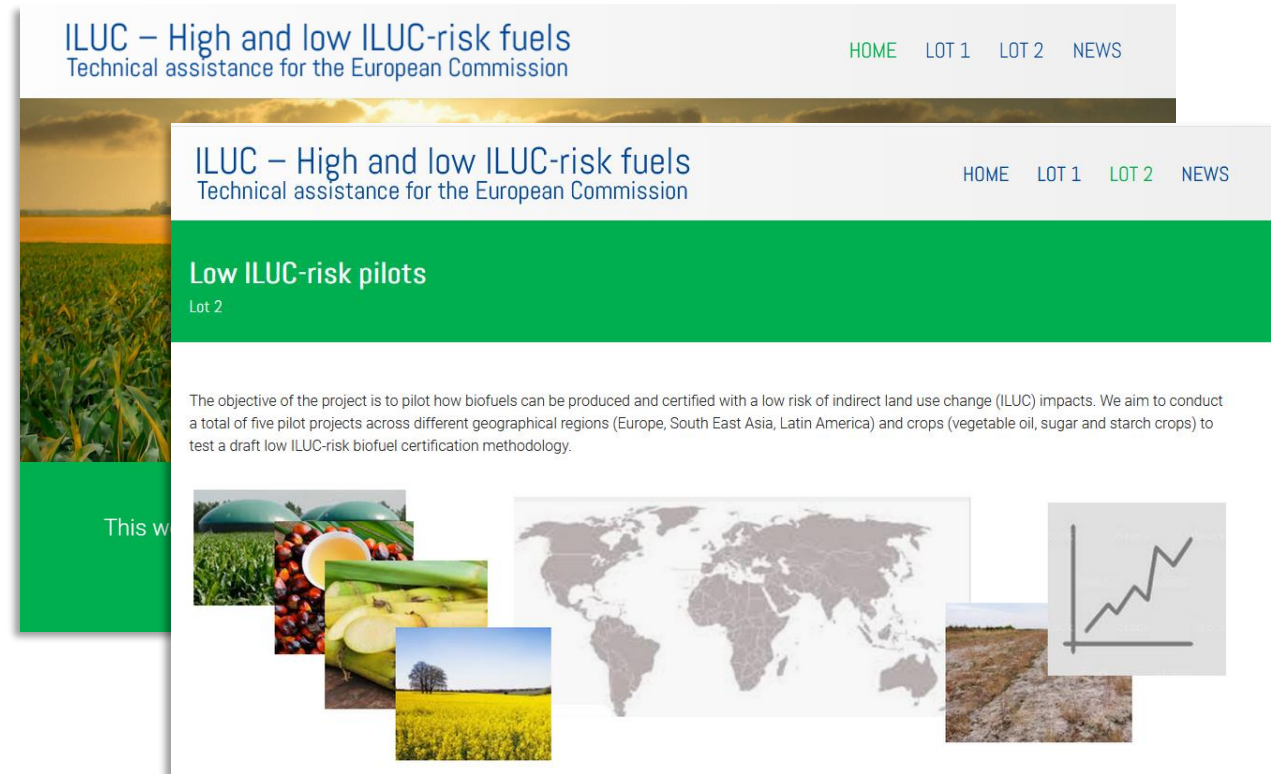
Low ILUC-risk certification guidance published



- Certification guidance and templates are available for EC recognised voluntary schemes that have low ILUC in their scope to use from now
- EC will use project materials to feed into update of Implementing Regulation which covers Low ILUC, and guidance for Annex IX feedstocks
- Voluntary schemes should enable high level of transparency e.g. on **which types of additionality measures, which barriers are identified, validated and the type of evidence** that was provided to help ensure credibility and consistency
- EC should **facilitate group learning via voluntary schemes** to identify areas that need further guidance and help improve the mechanism over time

All results can be found on the project website

- Webinar slides and updated FAQ document will be circulated and published on project website: <https://iluc.guidehouse.com/lot-2>
- The certification guidance, audit checklist and management plan template are published on the website and can be adopted by voluntary schemes that are recognised by the Commission and include Low ILUC in their recognition scope
- A dedicated Q&A session for voluntary schemes will be organised in the coming weeks
- For further questions, please contact: ILUCpilots@guidehouse.com



06 Q&A

ILUCpilots@guidehouse.com

Thank You

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