



Low iLUC Feedstock and ISCC Low iLUC Approach

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Different ways to deal with indirect land use change (iLUC) in the USA and EU

LCFS iLUC values (gCO₂e/MJ)



Corn:	19.8
Sugarcane:	11.8
Corn Stover:	0
Sorghum:	19.4
Soy:	29.1
Canola:	14.5
Corn Oil:	0
UCO, Tallow:	0



iLUC values to be applied

RFS iLUC values (gCO₂e/MJ)



Corn ethanol:	30.3
Switchgrass ethanol:	14.2
Soybean biodiesel:	40.8
Sugarcane ethanol:	3.8



iLUC values to be applied

EU RED II iLUC values (gCO₂e/MJ)



Oil crops:	55
Cereals and other starch-rich oils:	12
Sugars:	13

- No application of values
- High vs low risk iLUC biofuels
- High risk iLUC biofuels must be **phased out until 2030**

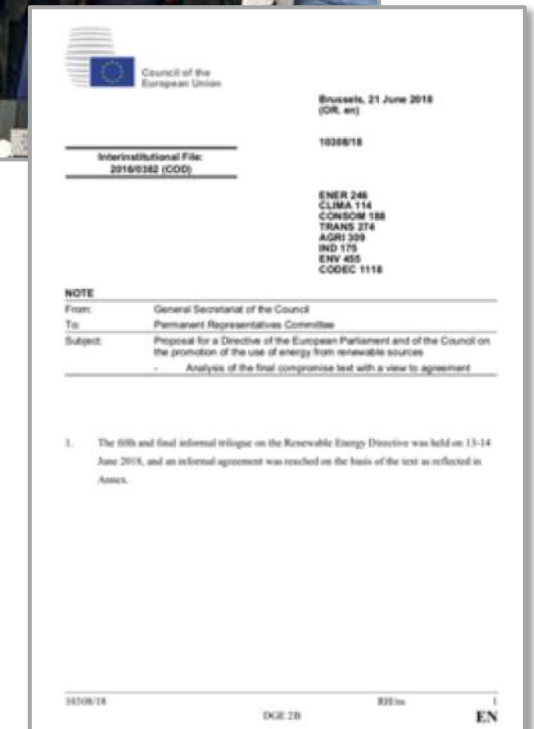


Low risk iLUC biofuels can be further used if certified

Low iLUC risk biofuels are produced from crops being cultivated by avoiding the displacement of biomass for food and feed applications

European Union: RED II

- **Low iLUC risk biofuels:** No displacement of biomass for food, feed and fibre (“**additionality**” required)
 - **Waste, residues and forest biomass not classified as low iLUC risk**
 - Feedstocks must be compliant with all sustainability criteria
- European Commission to provide **guidance** in Feb.
- **ISCC** is developing procedures **to certify low iLUC** biomass and biofuels





“Additionality” can be achieved by cultivating unused land and/or achieving yield increase

Options for determining low iLUC risk biofuels

ISCC certified companies can apply **low iLUC** for

- 1. Unused land:**
expanding cultivation of crops on areas, which were previously not used for agriculture
- 2. Yield increase:**
Increasing yields through improved agricultural practices and investments into better machinery
- 3. Minimizing post-harvest losses:**
Increasing yields via improved management and processing of crops



Option 1: Unused land

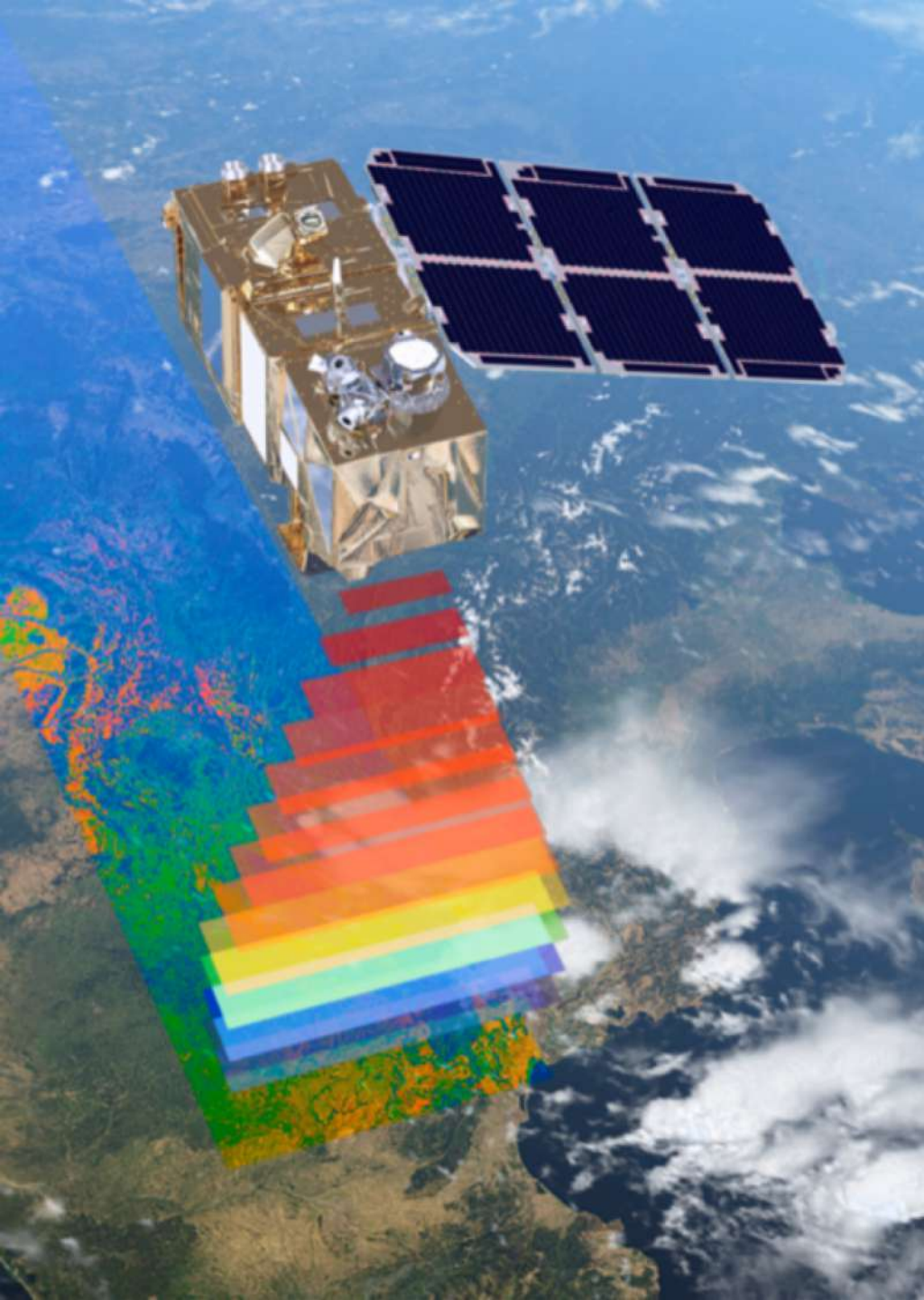
Definition:

Areas which were previously not used for agriculture and have a low carbon stock and biodiversity value

The land must meet requirements:

1. Agricultural production **in compliance with EU sustainability criteria** for biofuels
2. Land can be used for agricultural production in compliance with relevant **legal and regulatory requirements** as well as respecting traditional and/or customary **land use rights**

➤ **Therefore, ISCC certification required**

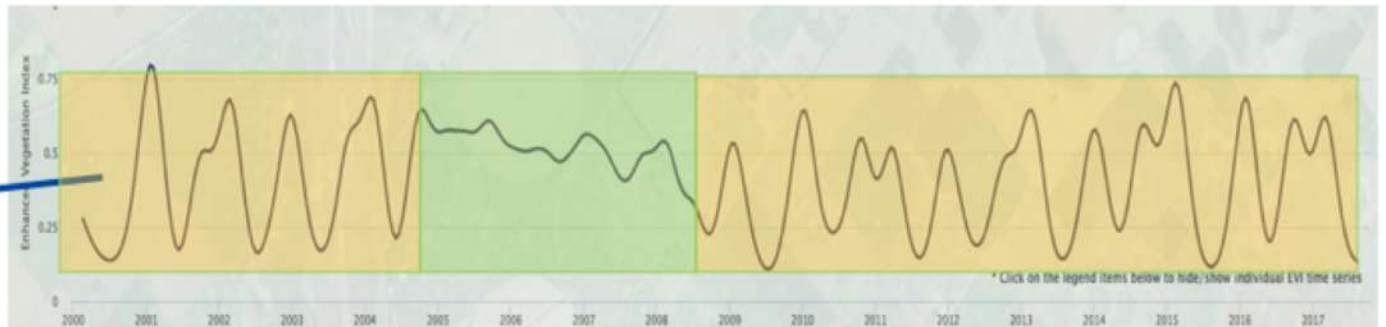
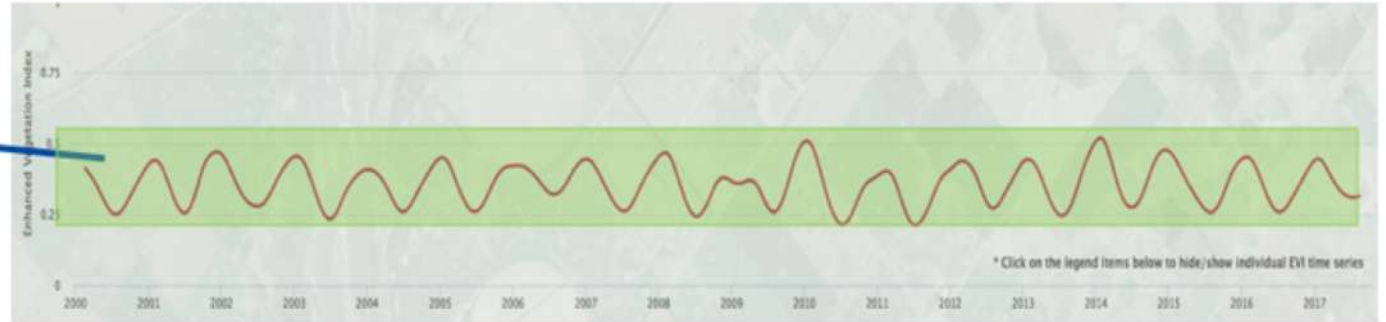
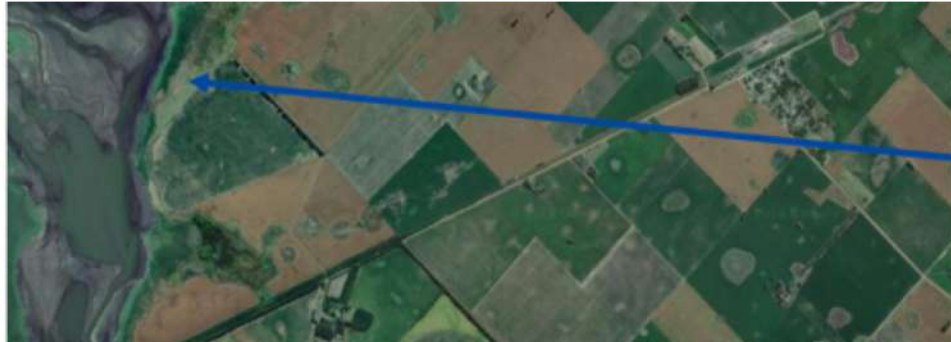


Verification of biomass production on previously unused land

ISCC proposes two steps **approach**:

- 1. Land cover and utilization assessment** with GRAS (Global Risk Assessment Services), a tool analysing remote sensing data
 - a) Vegetation profile – Examination through e.g. EVI
 - b) Image interpretation – Satellite and high-resolution images
 - c) Geo-information – Digital geoportals or cadastre systems
- 2. On-site assessment** including verification of low carbon stock and biodiversity value of the land

Verification of former status as unused land is possible with GRAS



- Use of vegetation profile and image interpretation to detect the actual status of vegetation
- Find out about historical information on land use and LUC
- This is relevant to determine if ISCC compliant unused land was changed to potential low iLUC cropland



Option 2: Yield increase – Proposal ISCC

Requirements for determining yield increase

- Determination of “**additional biomass**” produced by crops on already cultivated land
- Yield increase must be **achieved via improved land management** (e.g. implementation of at least one improved agricultural practice)
- “Additional biomass” is calculated against a reference **baseline**
- If the “Additional biomass” share is in line with the share of biomass exported to the EU under the RED (compared to the worldwide production of this crop) the entire production of respective farms/plantation could be eligible as low iLUC risk feedstocks

The determination of a reference baseline is necessary for calculating “additionality”

- The **historical yields** of the farm or the group of farmers for the respective crop must be used to determine the baseline
- The **average yield** must be calculated and is taken **as a baseline**
- The **baseline** is then **used to assess low iLUC**
- Yield increase that would have prevailed also in the absence of improved agricultural practices should not be considered low iLUC



Next steps

- Further **refinement of approach** and **stakeholder discussions**
- Conducting **pilot projects** to verify the approach
- Discussions with the EU Commission
- Once available, analysis of delegated act from the Commission
- Development of overall **certification framework** for low iLUC risk biofuels



Many thanks for your attention!

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