ISCC Approach to low ILUC risk biofuels

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

RED II - low iLUC risk biofuels

- **Low iLUC risk biofuels**: processed from crops which were cultivated/produced by avoiding the displacement of biomass being used for food, feed and fibre applications (additional biomass production; “additionality”)
  - Waste and residue-based material as well as forest biomass can not be classified as feedstocks for low iLUC risk biofuels production
  - Feedstocks must be compliant with the sustainability criteria listed in Art.26 of the RED II

- **Commission will set up further criteria** for certification of low iLUC risk biofuels via a delegated act by 1 Feb 2019

- Recognized voluntary certification scheme can implement procedures to certify low iLUC risk biofuels. ISCC is developing and implementing such procedures
“Additionality” can be obtained by cultivating unused land and/or by achieving yield increase

Options for determining low iLUC risk biofuels

ISCC certified operators can opt for the low iLUC module/add-on to claim biofuel as low iLUC

1. **Unused land:**
   Expanding agriculture on land, which were previously not used for cultivation of crops

2. **Yield increase from agriculture:**
   Increasing crop yields through improved agricultural practises and investments into better machinery

3. **Yield increase from processing:**
   Increasing oil yields at oil mill
Requirements for land in order to be defined unused land

Option 1: Unused land

Definition of unused land:
Areas which were previously not used for agriculture and have a low carbon stock and biodiversity value

Unused land must meet the following requirements:
1. Agricultural production is 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
Verification of biomass production on previously unused land

Option 1: Unused land

ISCC proposes a three 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. **Regulatory assessment** to determine if land can be legally used for crop production (e.g. land rights)

3. **On-site assessment** including assessment of evidences and soil carbon calculations to verify low carbon stock and biodiversity value of the land
Option 1: Unused land

- The vegetation profile and image interpretation provides information on the actual status of vegetation.
- In addition, the examination can provide information on land use occurred in the past.
- This is relevant to detect if and when in the past LUC has occurred on the land.
Requirements for determining yield increase from agriculture

**Option 2: Yield increase from agriculture**

- “Yield increase from agriculture” is the determination of “additional biomass” being produced by crops on already cultivated land.

- The yield increase must be achieved via improved land management (e.g. implementation of at least one GAP measure).

- “Additional biomass” is calculated against a reference baseline.
“Yield increase from agriculture” can be achieved via implementing GAP measures

Option 2: Yield increase from agriculture

Possible yield increase from agriculture measures within the palm oil sector:

- Choice of palm variety (e.g. higher yielding variety) / re-planting
- Fertilisation (e.g. optimisation of fertilisation, use of better fertiliser)
- Crop protection (e.g. change in pest and disease control)
- Harvest practices
- Weed control
- Soil conservation
- Precision farming
The determination of a reference baseline for palm oil is necessary for calculating “additionality”

Option 2: Yield increase from agriculture

- Palm yields vary over the life cycle. Hence, a reference baseline must be determined taking the natural development of the yield into account.
- Calculation of the baseline using a theoretical curve based on statistical yield developments.
- This curve could be based on the following factors:
  - Quality of plants (and seeds)
  - Management (e.g. smallholders)
  - Climate
  - Soil
Additionality can be defined as the difference between the theoretical yield achieved without GAP and the yield after the application of GAP

Option 2: Yield increase from agriculture

- Following information shall obtained from the palm plantation owner:
  - Age of the plantation
  - Average yearly yield amounts of the last 3 years
- Alignment of the average yield development with the theoretical yield curve and determination of the baseline
- Verification of the GAP measures and determination of the expected yield increase
- Monitoring of the yield increase
Requirements for measuring additional biomass achieved through yield increase from processing

Option 3: Yield increase from processing

- “Yield increase from processing” is the determination of “additional oil yields” being achieved by oil mills

- “Additional oil yield” is calculated against a reference baseline.

- The yield increase must be achieved via improved processing measures. There must be evidences of the implementation of at least one improved processing measure
The approaches should be verified during a pilot project focusing on low iLUC risk palm oil

Challenges and open questions to be determined in a pilot project

- Determination of a reference baseline:
  - Data availability for the creation of a theoretical baseline curve for palm trees (different varieties, soil, weather etc.)
  - Methodology for determining the baseline curve for palm oil mills

- Determination of yield increase:
  - Reliable prediction of yield increase as a function of GAP measures
  - Verification whether the achieved yield increase is in line with the prediction (especially during year 1)
Next steps

- Further refinement of the approach as part of stakeholder discussion
- Discussions with the EU Commission on ISCC methodology for the verification of low iLUC risk feedstocks
- Conducting pilot projects, also taking a jurisdictional approach into account
- Development of overall certification framework and ISCC system documents on the certification of low iLUC risk biofuels (in parallel to pilot projects and discussions with the EU)
Many thanks for your attention!

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