Feedstock Classification, its Implications and Double Counting in EU Member States

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Different types of raw material categories under current RED

- Food/ feed crops
- Co-products
- Agriculture, aquaculture, fisheries and forestry residues
- Processing residues
- Wastes
Classification has implications on EU market access, certification and GHG calculation

<table>
<thead>
<tr>
<th>Food/ feed crops</th>
<th>Co-products</th>
<th>Agriculture, aquac., fisheries, forestry residues</th>
<th>Processing residues</th>
<th>Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cap of 7%</td>
<td>- Certification including cultivation</td>
<td>- Zero GHG emissions for cultivation</td>
<td>- Double counting (depending on EU Member State)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- GHG calculation including cultivation</td>
<td>- Agricultural residues: certification includes cultivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Processing residues: cultivation excluded</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Certification/ GHG starts point of origin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Classification of materials is often difficult and so far depends on Member States – Some examples

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food/ feed crops</strong></td>
<td>- FFBs, soybeans, wheat, etc.</td>
</tr>
<tr>
<td><strong>Co-products</strong></td>
<td>- Soybean meal, DDGS, palm kernels, PFAD?</td>
</tr>
<tr>
<td><strong>Agriculture, aquac., fisheries, forestry residues</strong></td>
<td>- Straw, husks, nut shells, bagasse</td>
</tr>
<tr>
<td><strong>Processing residues</strong></td>
<td>- crude glycerine, crude tall oil, PFAD?</td>
</tr>
<tr>
<td><strong>Wastes</strong></td>
<td>- UCO, MSW</td>
</tr>
</tbody>
</table>
Some definitions

Waste:

• Any substance or object which the holder discards or intends or is required to discard

• Raw materials or substances that have been intentionally produced, modified or contaminated to count as waste under this definition do not qualify as waste

• EU Waste Framework Directive applies

Agriculture residue:

• Directly deriving from or generated by agriculture, aquaculture, fisheries, forestry

• Do not include residues from related industries or processing

Processing residue:

• Production of the substance is not the primary aim of the production process and the process has not been deliberately modified to produce it
Reduced complexity for the certification and GHG calculation of biofuels produced from waste and residues

**Simplified supply chain of traditional biofuels**
- Sample audits
- Farm/Plantation → FGP
- Certification
- FGP → Oil Mill/Refinery
- Certification
- Oil Mill/Refinery → Biodiesel
- Certification

**GHG emissions for entire supply chain**

**Simplified supply chain of waste/residues biofuels**
- Sample audits (if applicable)
- No upstream certification
- No upstream GHG emissions
- No upstream traceability
- Oil Mill/Refinery → Biodiesel
- Certification

**GHG emissions (zero at the PoO)**
Double counting: Fragmented situation in the EU

Absolute share of the total renewable energy

Additional categories will be introduced by RED II

- Advanced biofuels
- High iLUC risk biofuels
- Low iLUC risk biofuels
- Renewable fuels of non-biological origin
- Recycled carbon fuels
New categories will require sustainability certification – ISCC is prepared to cover these new categories as well

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced biofuels</td>
<td>- Annex IX of RED II</td>
</tr>
</tbody>
</table>
| High iLUC risk biofuels                     | - Both not defined yet. Criteria from EC in 02/2019  
- Low iLUC certification required, e.g. by ISCC  
- Examples low iLUC: double cropping, use of degraded land, yield increase, waste/residues, etc. |
| Low iLUC risk biofuels                      |                                                                                                                                                                                                              |
| Renewable fuels of non-biological origin    | - E.g. hydrogen                                                                                                                                                                                            |
| Recycled carbon fuels                       | - Fuels produced from e.g. plastics, waste processing gases, exhaust gases                                                                                                                                  |
Also under **RED II**, classification will have implications with respect to EU market access, certification and GHG calculation

- **Advanced biofuels**
  - Sub-quota of 3.5% (Part A)
  - 1.7% (Part B) but exemptions possible

- **High iLUC risk biofuels**
  - 0% by 2030!

- **Low iLUC risk biofuels**
  - Food/feed crops can continue to be used if categorized and certified as low iLUC

- **Renewable fuels of non-biological origin**
  - Directly 70% GHG savings required

- **Recycled carbon fuels**
  - Counted only for 14% transport target, not for overall renewable energy target
Some more definitions

• Definition “Renewable Fuels of Non-Biological Origin”:
  • Liquid or gaseous fuels other than biofuels whose energy content comes from renewable energy sources other than biomass

• Definition “Recycled Carbon Fuels”:
  • Fuels that are produced from liquid or solid waste streams of non-renewable origin … and waste processing gases and exhaust gases of non-renewable origin which are produced as an unavoidable and not intentional consequence of the production process in industrial installations
Watch the ISCC list of materials: It contains information on the classification of materials in the different EU Member States

ISCC takes into account:
- National positive lists
- Biofuel laws and regulations
- Information from national authorities
- If a material is officially classified as a waste/residue, the ISCC waste/residue process can be applied
- Specific Member State requirements must always be complied with

### Table 1: Raw material

<table>
<thead>
<tr>
<th>Material</th>
<th>Additional Information</th>
<th>Classified as waste/residue material in the following EU Member States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal fat / tallow (category 2) *</td>
<td>There is no applicable GHG default value for cat. 2 materials. Therefore, GHG emissions for processing must generally be calculated.</td>
<td></td>
</tr>
<tr>
<td>Animal fat / tallow (category 3) *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal fat / tallow (uncategorized) *</td>
<td>Applicable if no official categorization exists. EU Regulation 1999/2003 and Commission Regulation 142/2011 by a competent authority is available. Regarding GHG emissions, uncategorized tallow will be treated the same way as category 3 material.</td>
<td></td>
</tr>
<tr>
<td>Beans / peas</td>
<td>Agricultural residue acc. to RED</td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown grease / grease trap fat *</td>
<td>Glaze that is removed from wastewater sent down a sink chain (grease trap). Material removed from sewers known as “FOG”. Oils and Grease skimmed from the material going into sewage treatment plants should also be reported under this name.</td>
<td>NL, NL, SE</td>
</tr>
<tr>
<td>Camelina</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cashew Nut Shell Liquid (CNSM) *</td>
<td>A processing residue that is squeezed from the shells of cashew nuts after the edible portion has been removed.</td>
<td>NL, NL</td>
</tr>
<tr>
<td>Corn / Maize</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: ISCC website (client login required)
Many thanks for your attention!

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