Food, feed, fibres, fuels

Enough **biomass** for a sustainable bioeconomy?

Biomass estimates shown in this presentation are the results of JRC calculations from different statistical sources.
40 mt
NET EXPORT
used
1.2 billion tonnes

67 mt
NET IMPORT
sourced
1 billion tonnes

AGRICULTURAL CROPS
52 %

COLLECTED CROP RESIDUES
10 %

GRAZED BIOMASS
12 %

FORESTRY
27 %

2015 data dry matter

PLANT-BASED FOOD
43 %

SEAFOOD
9 %

SECONDARY SOURCES
<1 %

EUROPEAN COMMISSION
How much biomass is supplied in the EU and where is it sourced from?

1 billion tonnes

AGRICULTURAL CROPS 52%  
COLLECTED CROP RESIDUES 10%  
GRAZED BIOMASS 12%  
FORESTRY 27%

FISHERIES AND AQUACULTURE <1%  

2015 data dry matter
How much **biomass** is **supplied** in the **EU** and where is it sourced from?

- **0.2 billion tonnes** supplied by **SECONDARY SOURCES**
  - **CASCADING USE OF WOOD**: 73 million tonnes
  - **PAPER AND BOARD BIOWASTE**: 52 million tonnes
  - **OTHER BIOWASTE**: 85 million tonnes

2015 data dry matter

*European Commission*
Adding value to bio-waste

2010

185 million tonnes
117 million tonnes RECOVERED
68 million tonnes NOT RECOVERED

2015

175 million tonnes
138 million tonnes RECOVERED
38 million tonnes dry matter

+15%
-45%
How much **biomass** is **being used** in the **EU** and in which sectors?

<table>
<thead>
<tr>
<th>Material Uses</th>
<th>Bioenergy</th>
<th>Animal Feed and Bedding</th>
<th>Plant-Based Food</th>
<th>Seafood</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>23%</td>
<td>43%</td>
<td>9%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

1.2 billion tonnes used

2015 data dry matter
How has the *use of biomass evolved* in the EU over the last years?

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bioenergy</strong></td>
<td>+67 mt</td>
<td>+32%</td>
</tr>
<tr>
<td><strong>Material Uses</strong></td>
<td>+15 mt</td>
<td>+5.6%</td>
</tr>
<tr>
<td><strong>Animal Feed and Bedding</strong></td>
<td>+10 mt</td>
<td>+1.9%</td>
</tr>
<tr>
<td><strong>Plant-based and Seafood</strong></td>
<td>+1 mt</td>
<td>+1%</td>
</tr>
</tbody>
</table>

**Increase:**
- +93 mt (+8.5%)

**Bio-based Chemicals:** +48.4%

0.1% of all used biomass

*Dry matter*
**Data sources and methods**

**EUROSTAT**
- environmental accounts
- agriculture, forestry and fisheries statistics
- energy statistics
- COMEXT
- PRODCOM

**FAOSTAT**
- Joint Forest Sector Questionnaire (Eurostat, UNECE, FAO, ITTO)
- Joint Wood Energy Enquiry (UNECE/FAO)
- NREAP (National Renewable Energy Action Plans) Progress Reports
- Forest Europe
- National Forest Inventories (NFI)
- State of World Fisheries and Aquaculture 2016 (FAO)
- FAO Global Capture Production database (FAO)
- International Council for the Exploration of the Sea (ICES)
- Scientific, Technical and Economic Committee for Fisheries (STECF)
- International Commission for the Conservation of Atlantic Tuna (ICCAT)


JRC Biomass Study Pursuant to the Mandate on the provision of data and analysis on a long-term basis on biomass supply and demand by the JRC

**The European Commission’s Knowledge Centre for Bioeconomy**
Any questions?
You can find us at EC-Bioeconomy-KC@ec.europa.eu