

Joint Research Centre

the European Commission's in-house science service

*Serving society
Stimulating innovation
Supporting legislation*

Biomass flows in the European Union

The Sankey biomass diagram

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Centre of the European Commission
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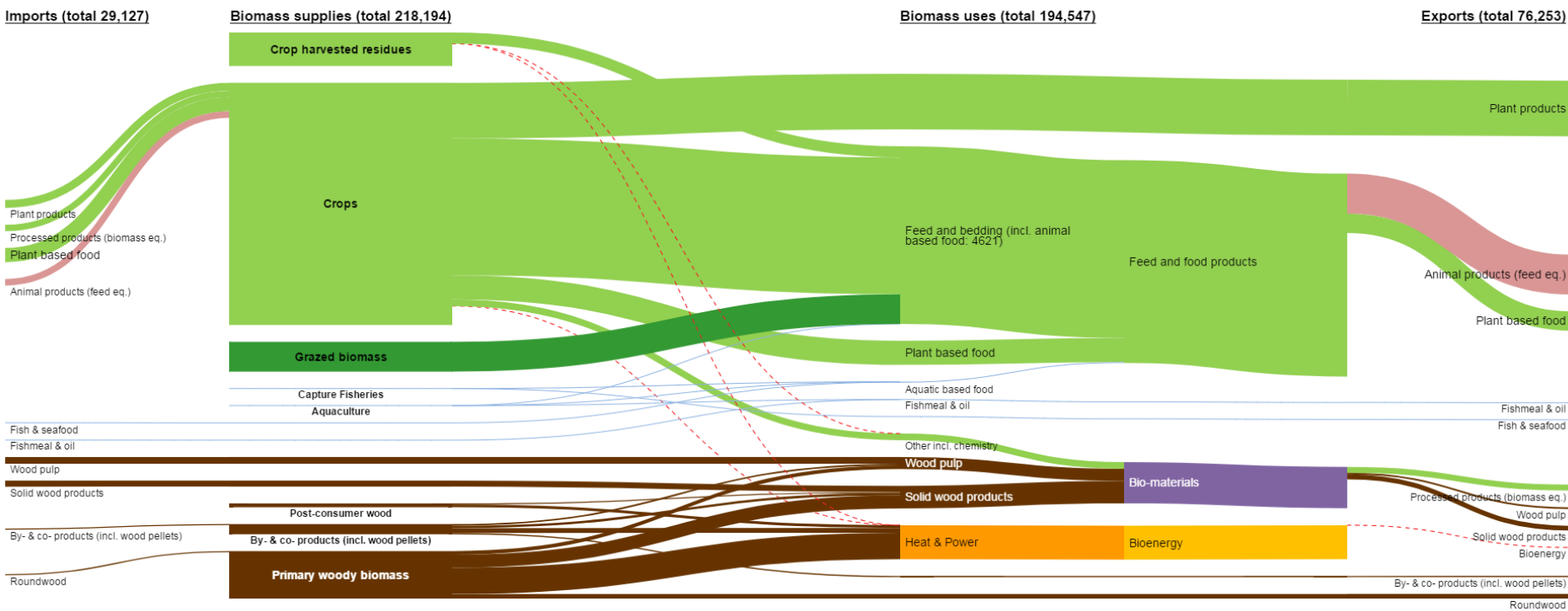


Outline

- **Approach**
- **Preliminary results**
- **Data challenges**

Biomass flows diagram

Biomass balances in France, Last data available
1000 T of dry matter

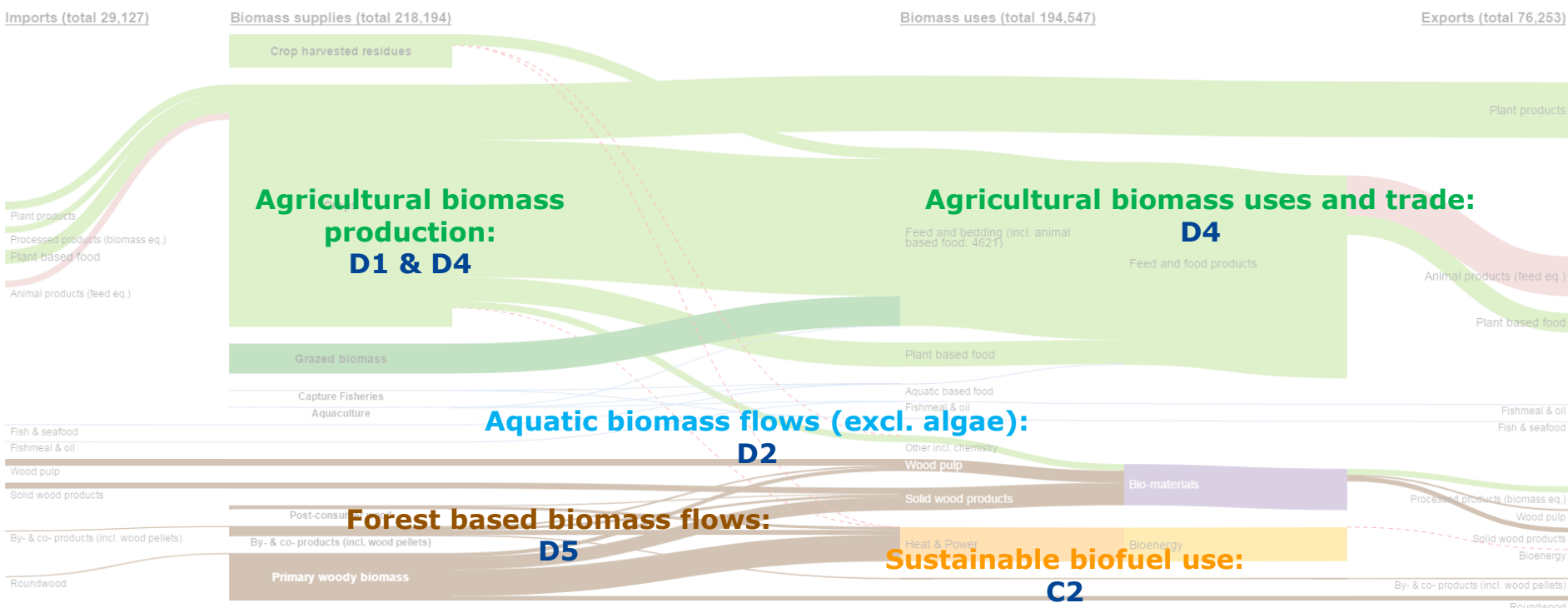


Source: data from the BIOMASS project, European Commission – Joint Research Center
Please note: Supply and use figures might not match due to estimation errors, stock changes, waste and/or loss of biomass or differences in the data sources used.
Known data gaps are shown as dotted red lines. Gaps derive from missing or incorrectly reported data, data not assigned to a specific category or data that cannot be estimated.

<http://datam.jrc.ec.europa.eu>

A JRC collaborative work

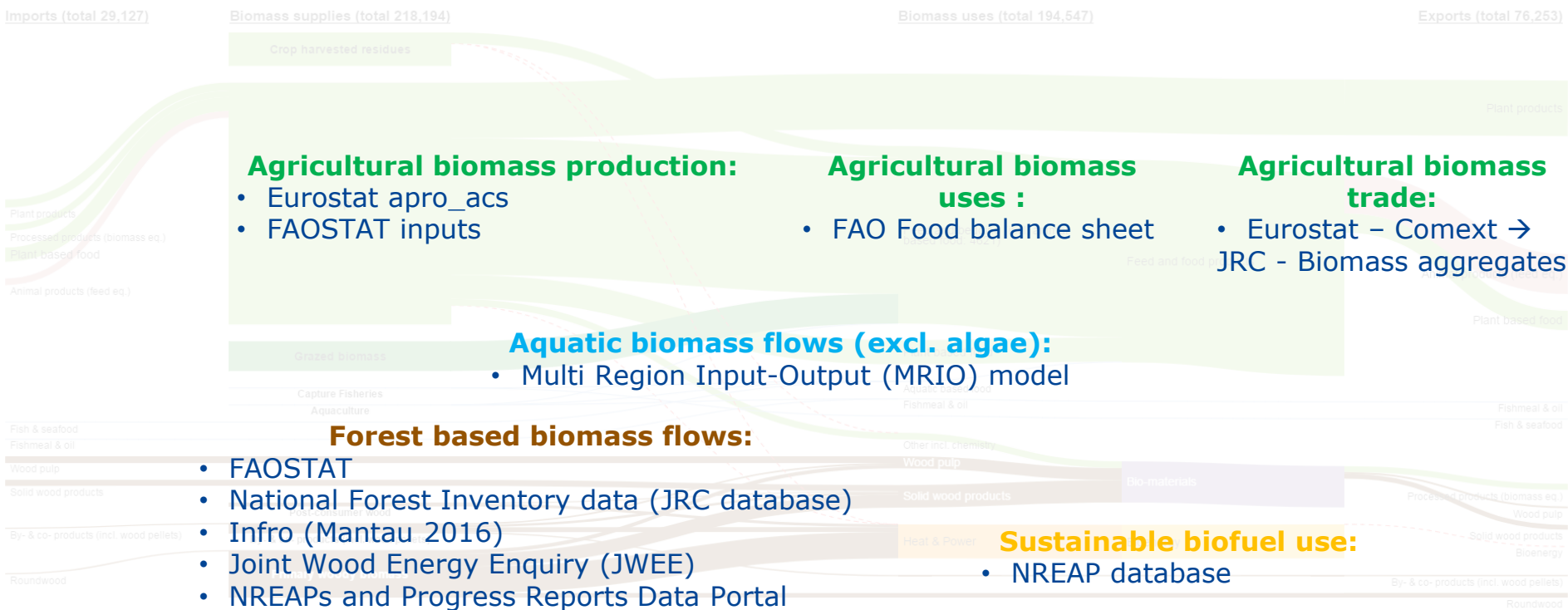
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From a diversity of data sources

Biomass balances in France, Last data available
1000 T of dry matter

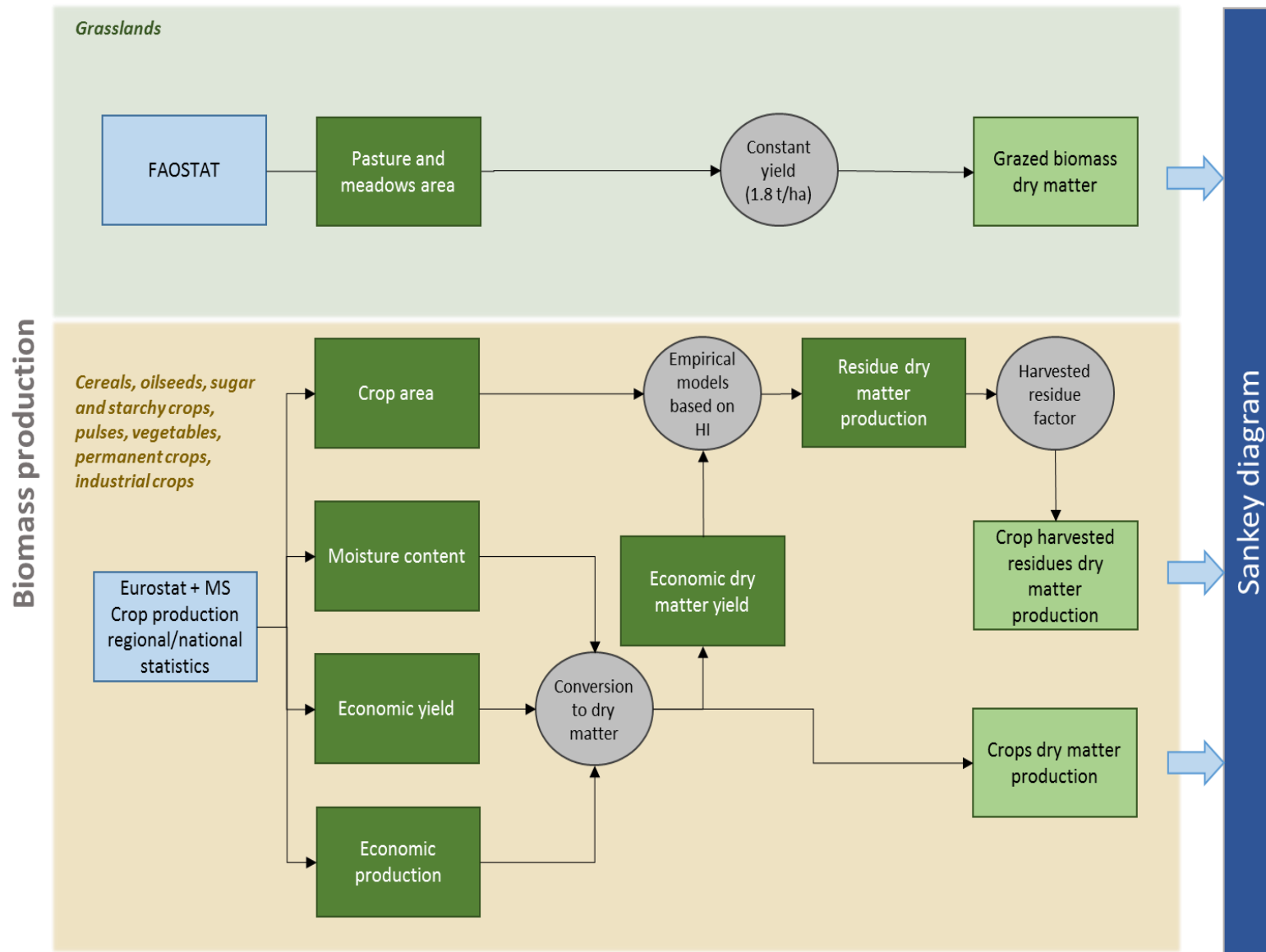


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E.g. Transformations (in grey) for the quantification of crop residues



Data harmonisation...

❑ Agriculture: vegetal biomass eq.

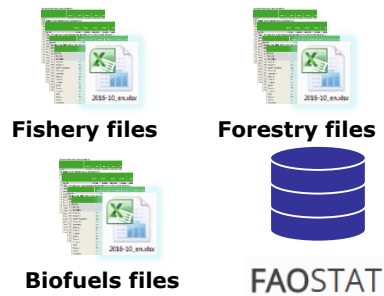
❑ Fisheries: live weight eq.

❑ Forestry: m³ roundwood
under bark eq.

**Tonnes dry matter
of biomass equivalent**

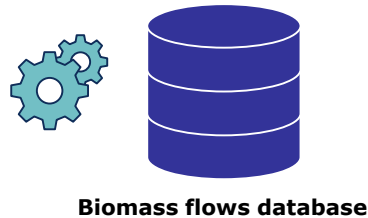
... and data integration

Data sourcing



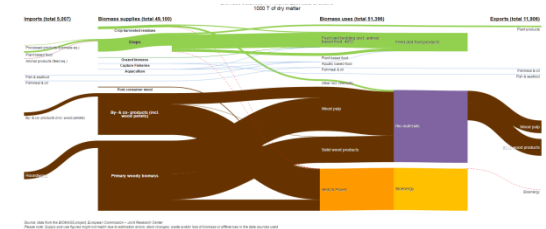
DataM – Supply and potentials

Transformation & Integration

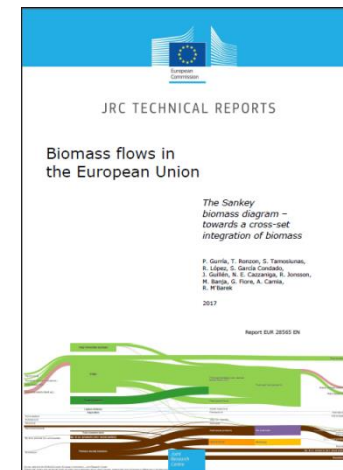


DataM Visualizations – Biomass flows

Visualization & Analysis



Sankey Diagram



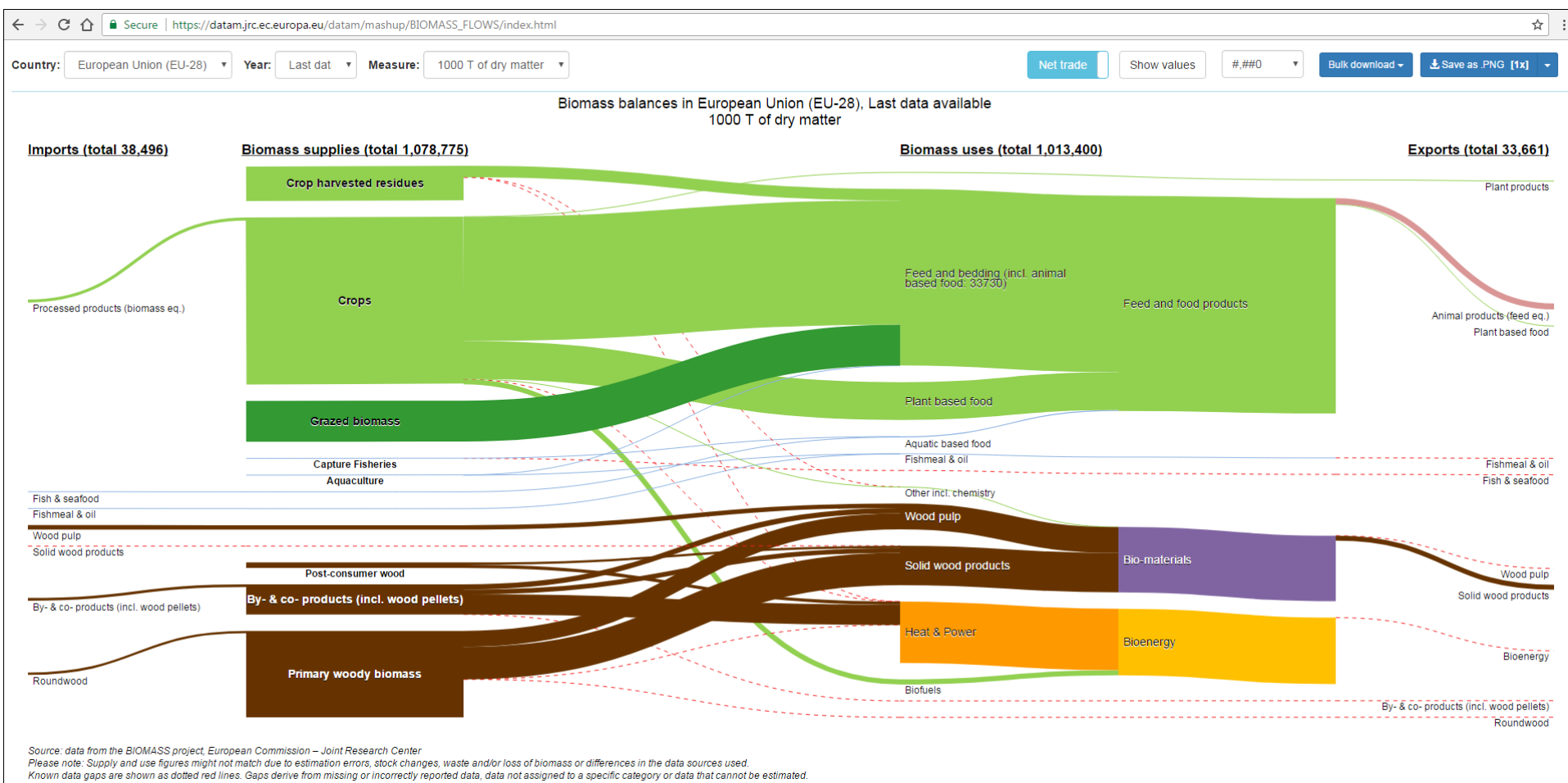
JRC Technical report

Diagrams: <http://datam.jrc.ec.europa.eu>
JRC Report: <http://dx.doi.org/10.2760/352412>

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Biomass flows in the EU (net trade)

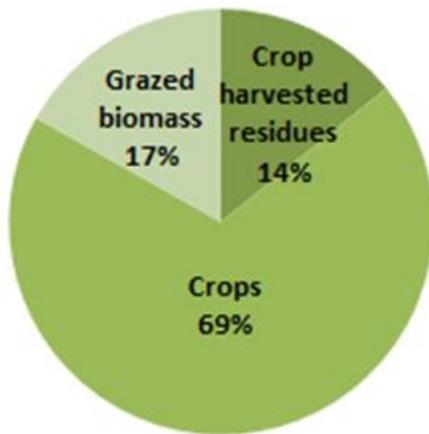


<http://datam.jrc.ec.europa.eu>

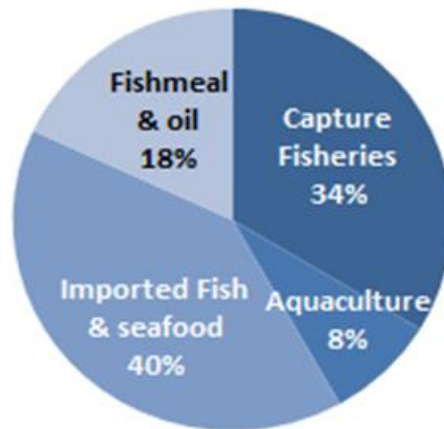
EU biomass composition

Biomass supplies...

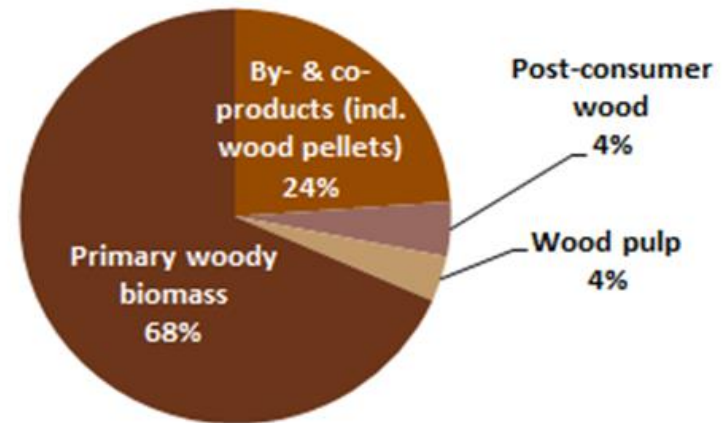
Agriculture (net trade)



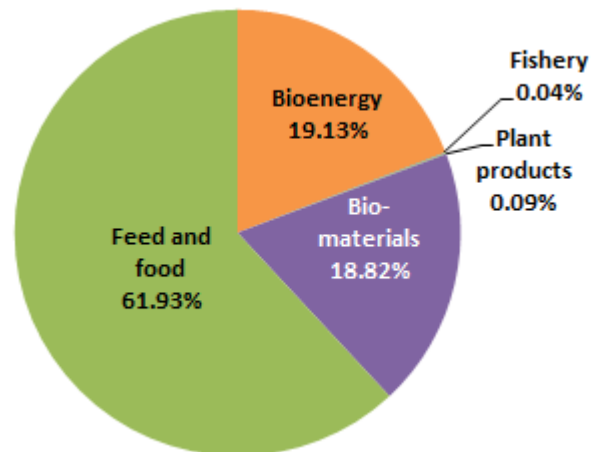
Fishery (net trade)



Forestry (net trade)

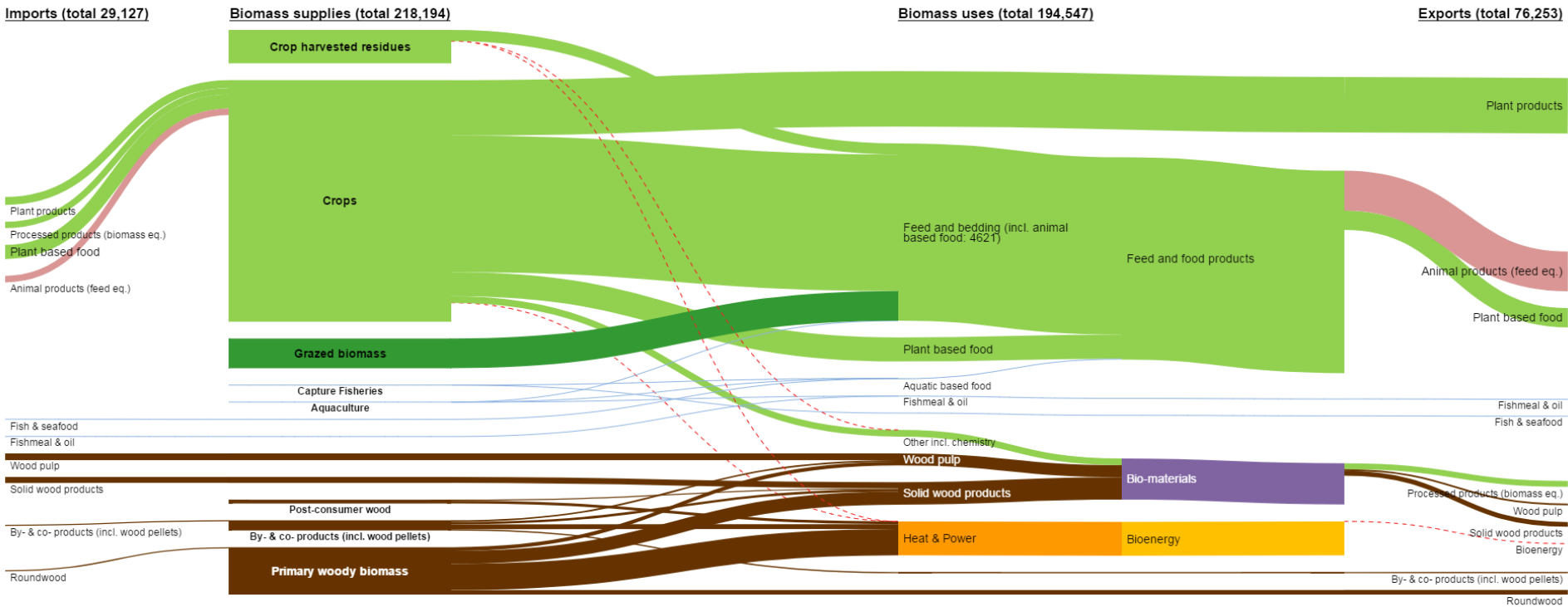


... and biomass uses:



The French case

Biomass balances in France, Last data available
1000 T of dry matter

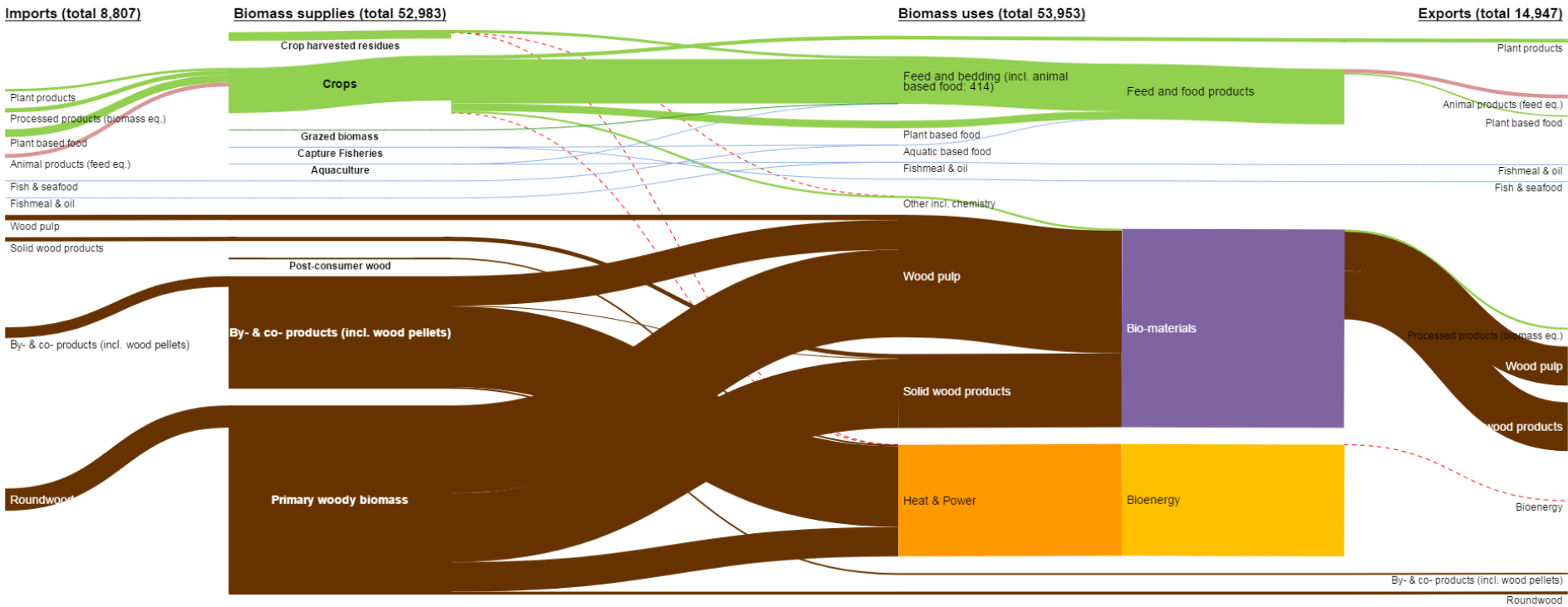


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The Finnish case

Biomass balances in Finland, Last data available
1000 T of dry matter

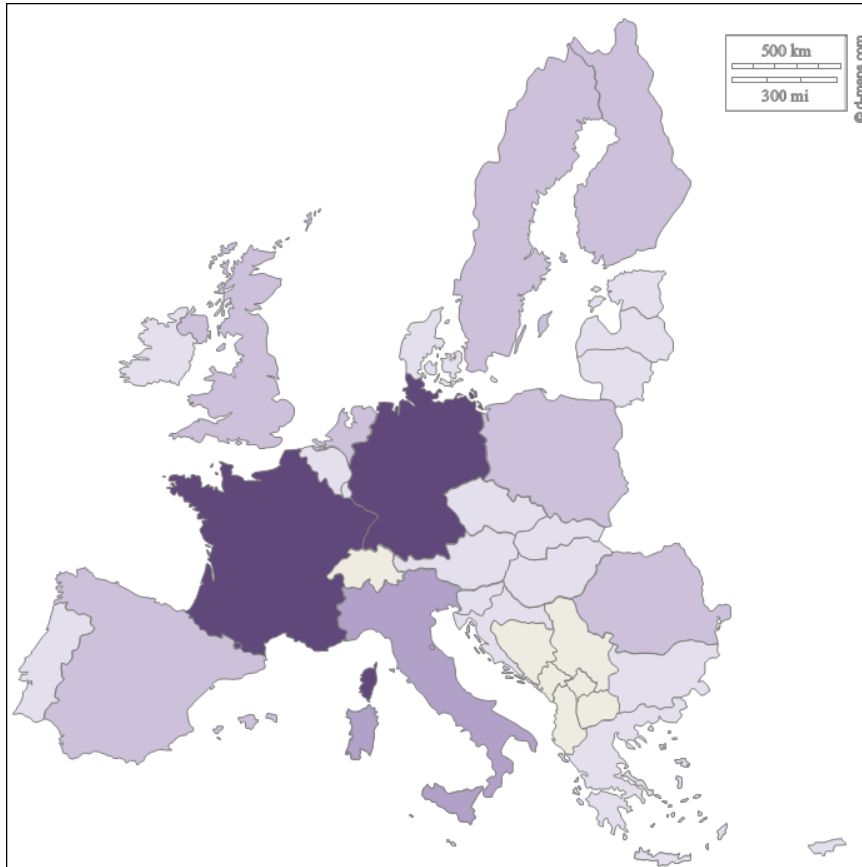


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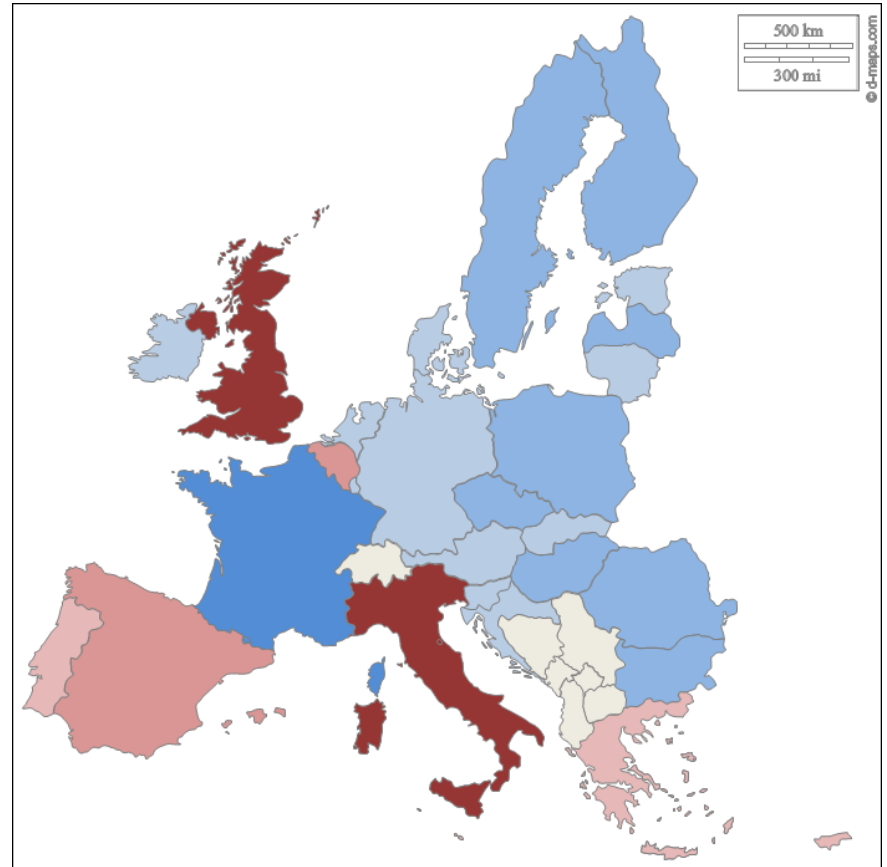
<http://datam.jrc.ec.europa.eu>

Geographical analyses possible

Total biomass supply (Mt dm)



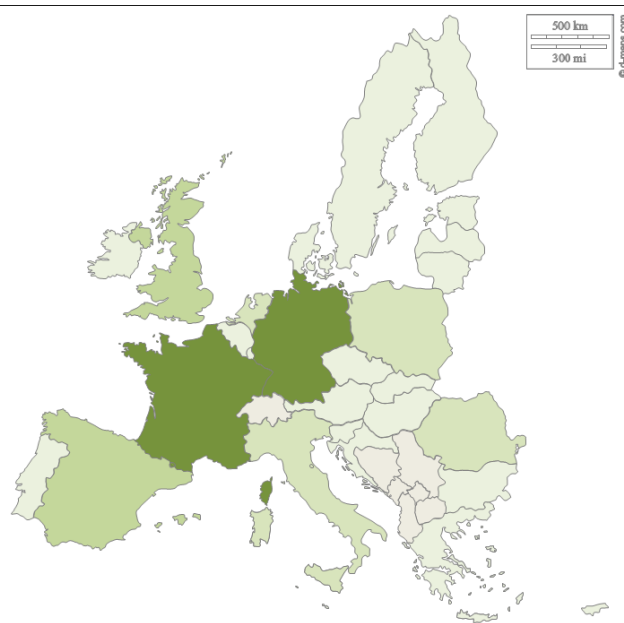
Net trade of biomass (Mt dm)



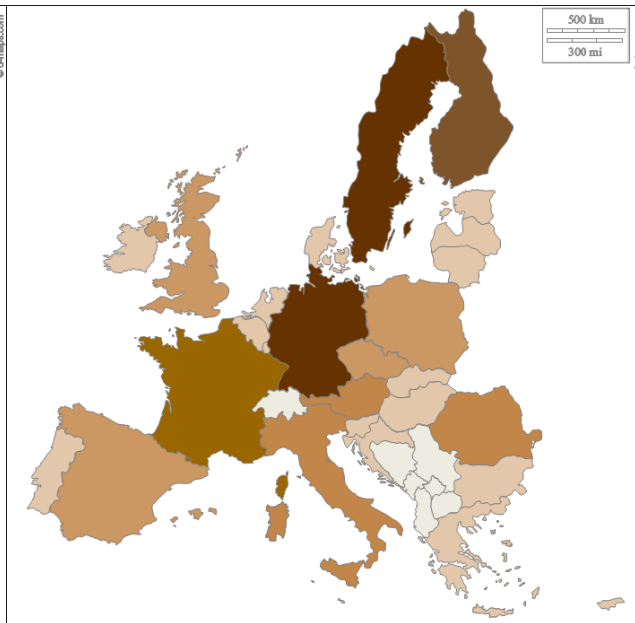
Cross-country comparisons possible

Domestic supply of:

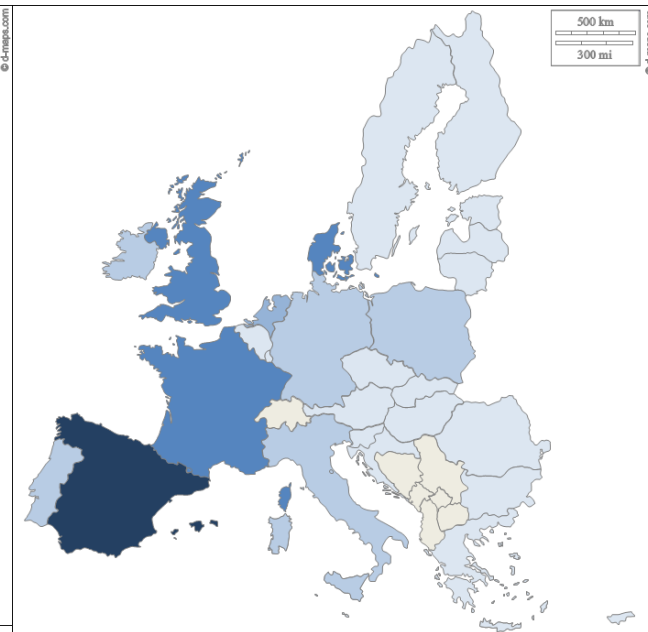
Agriculture biomass (Mt dm)



Forest-based biomass (Mt dm)



Aquatic biomass (Mt dm)

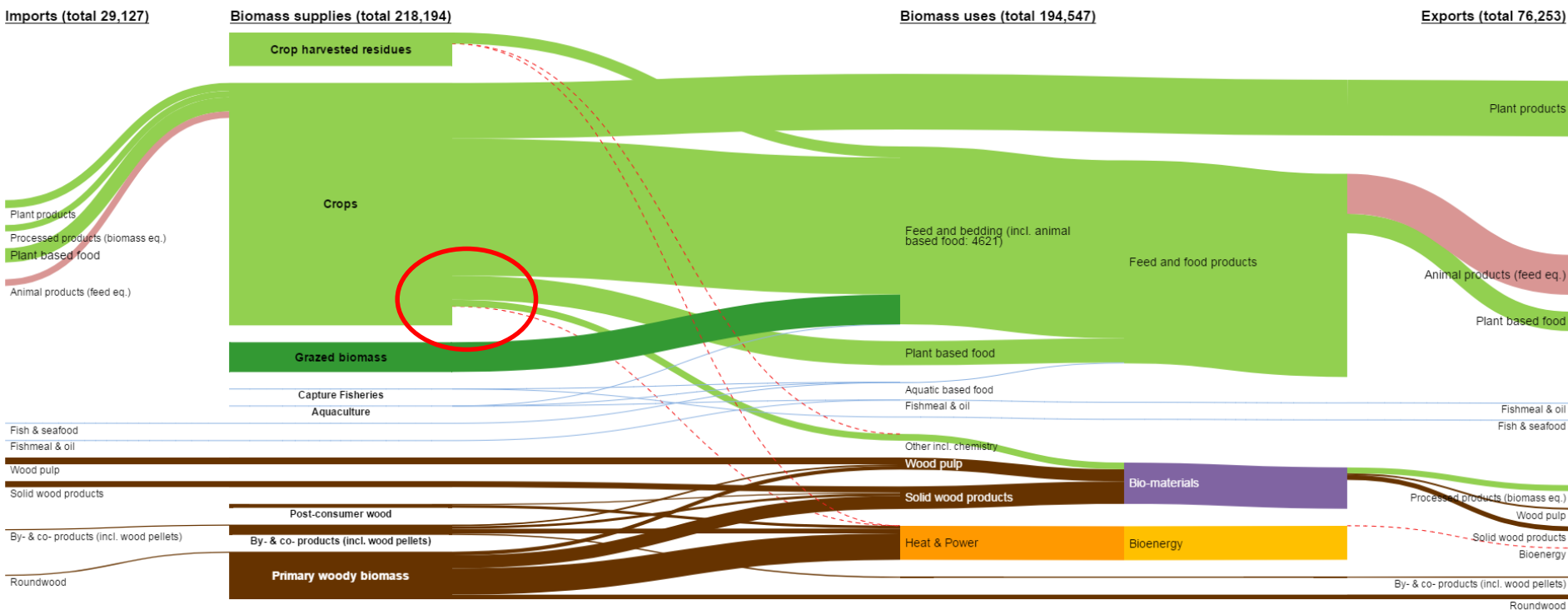


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Data Challenges: Supply > Use, the French case

Biomass balances in France, Last data available
1000 T of dry matter

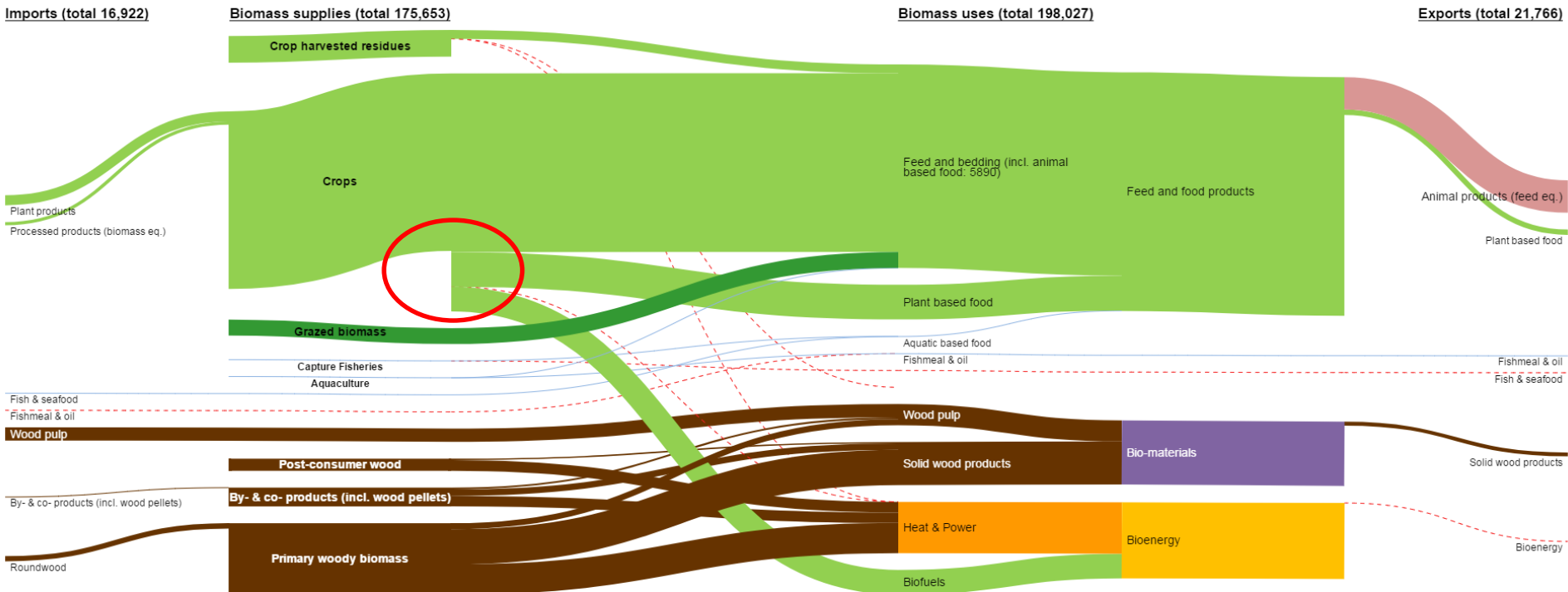


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Data Challenges: Supply < Use, the German case

Biomass balances in Germany, Last data available
1000 T of dry matter



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Data Challenges

- **Data gaps** = under-estimation of biomass flows
 - **Quality checks**
 - **Data disaggregation**
 - **New units of measures**
 - **Additional representations**
- ➔ **Potential for improvement as data become available**

JRC TECHNICAL REPORTS

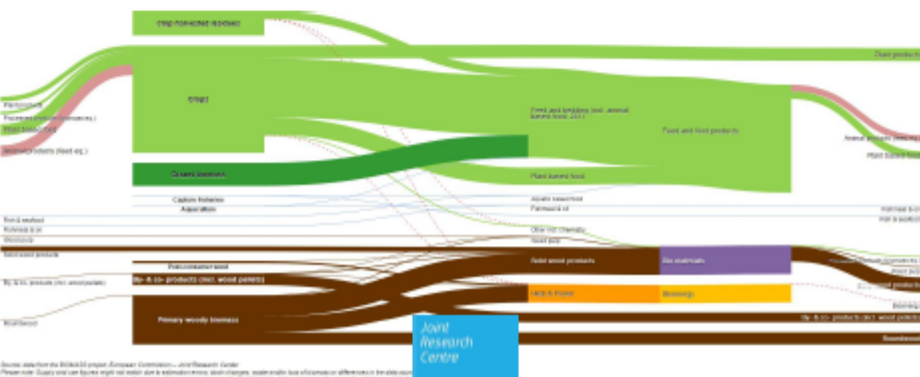
Biomass flows in the European Union

*The Sankey
biomass diagram –
towards a cross-set
integration of biomass*

P. Gurría, T. Ronzon, S. Tamosiunas,
R. López, S. García Condado,
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2017

Report EUR 28565 EN



<http://dx.doi.org/10.2760/352412>

Thank you
for your attention

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