

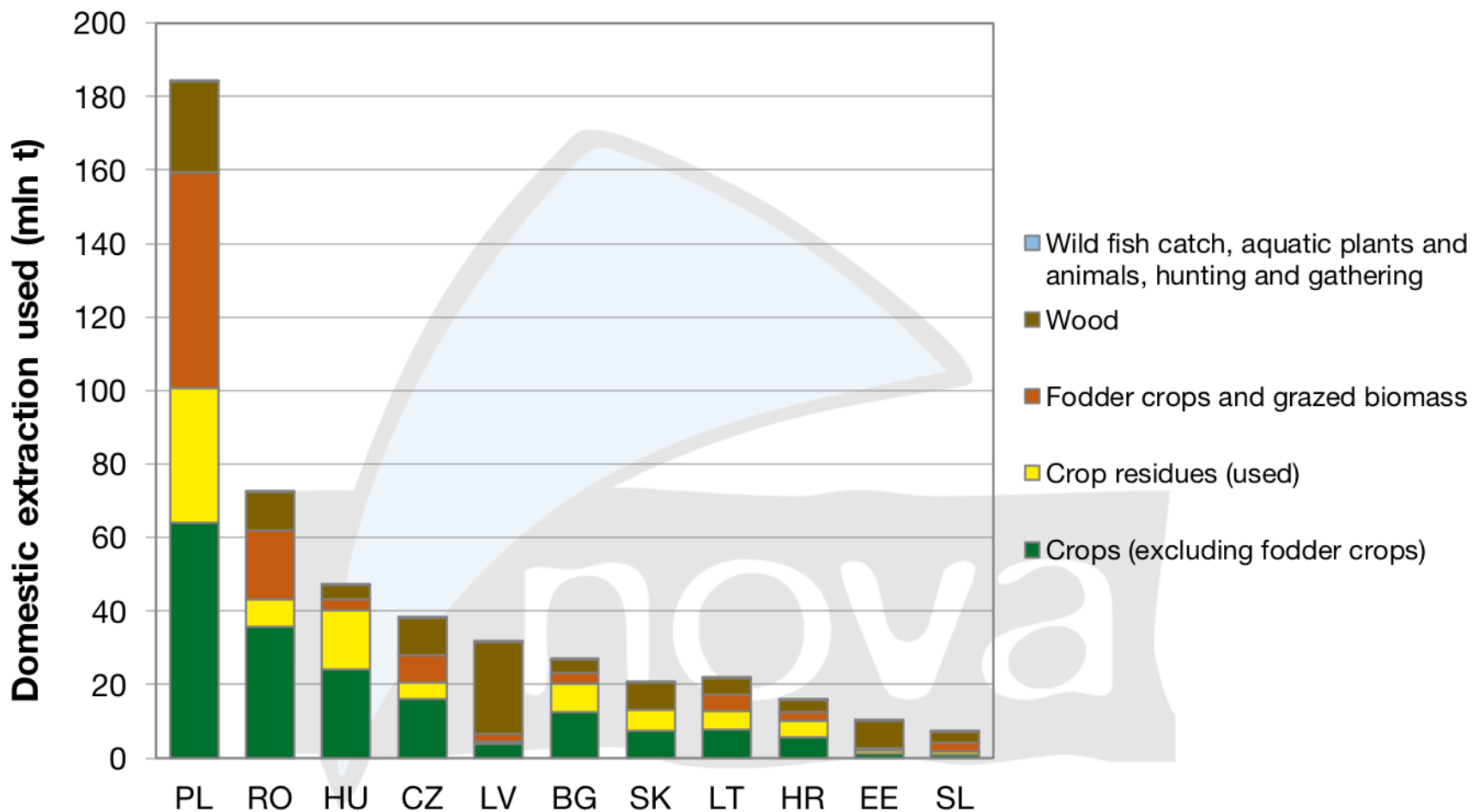


State of play of Central and Eastern Europe's bioeconomies

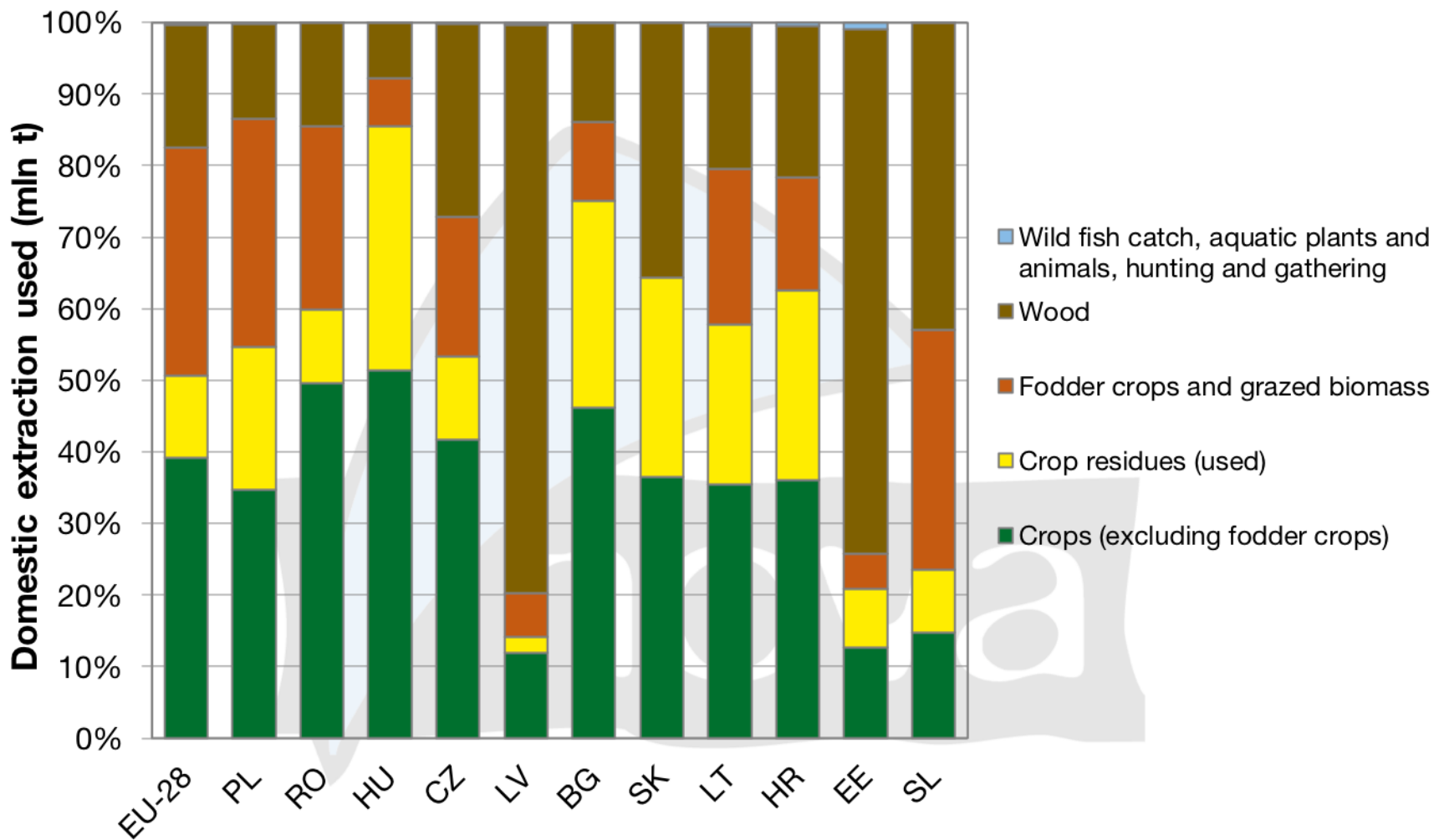
BIOEAST Conference, Budapest,
November 8, 2018

Dr. Stephan Piotrowski
nova-Institut GmbH, Hürth (Cologne), Germany

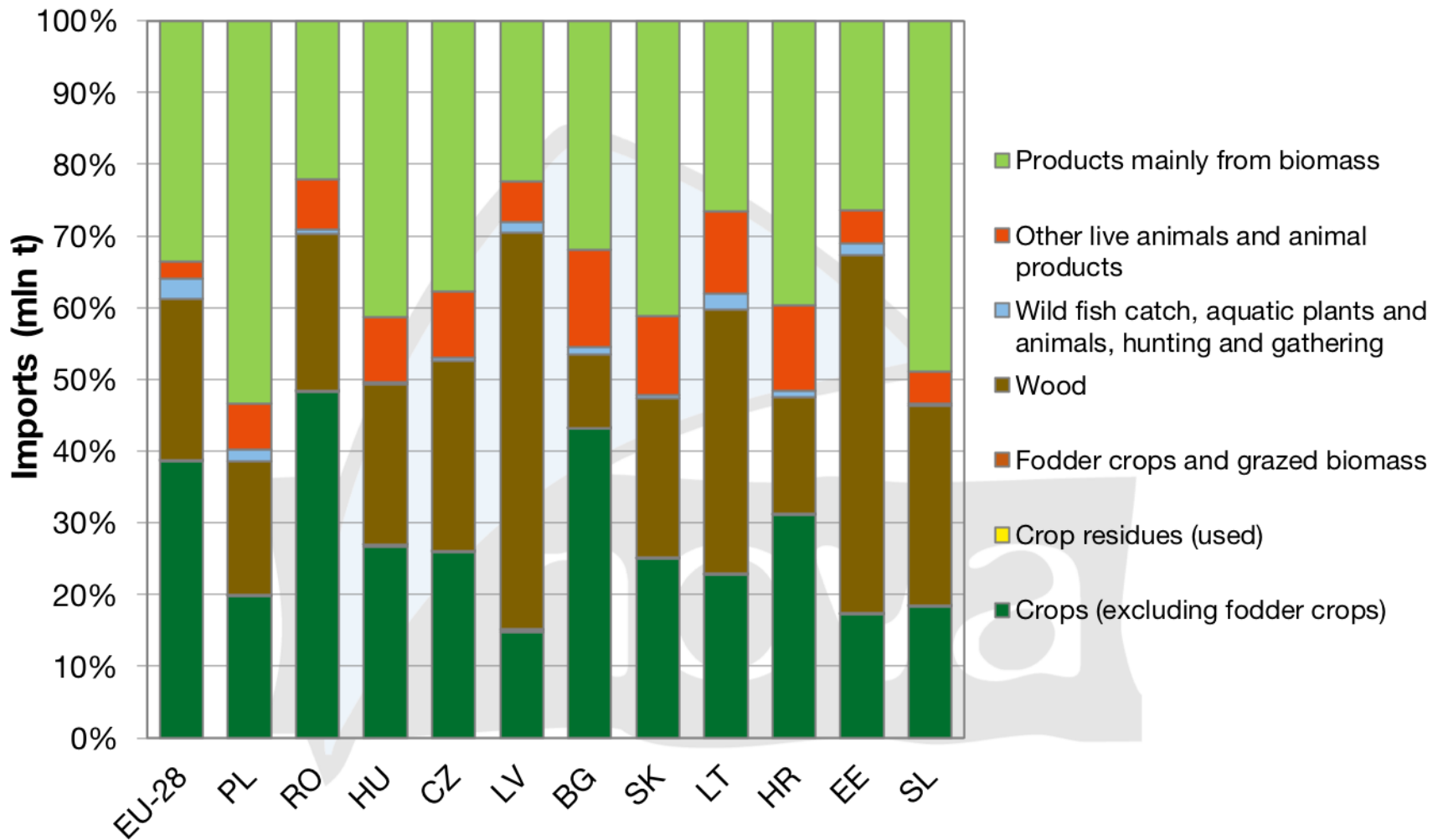
Domestic extraction of biomass in the BIOEAST Member States (2016)



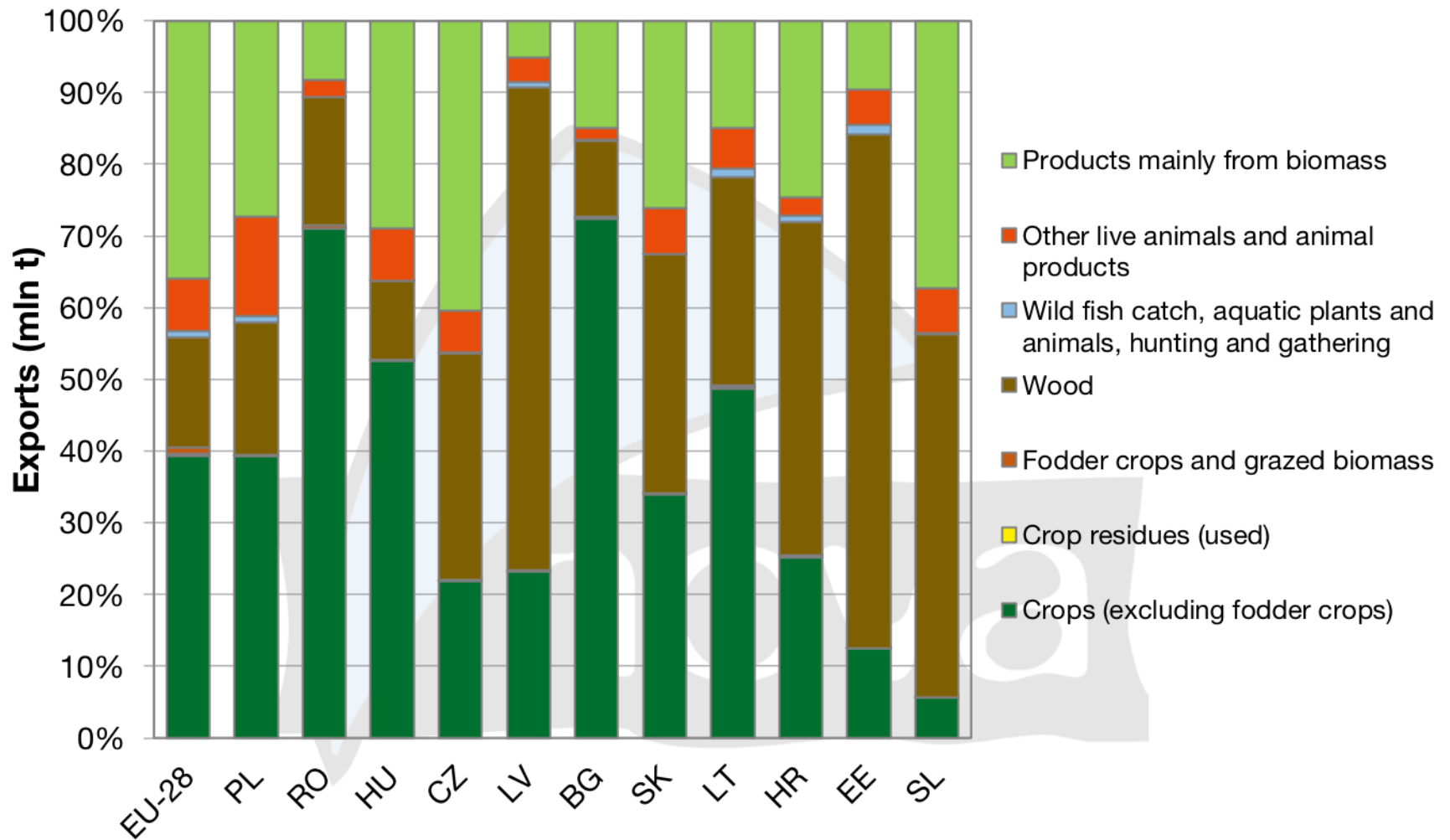
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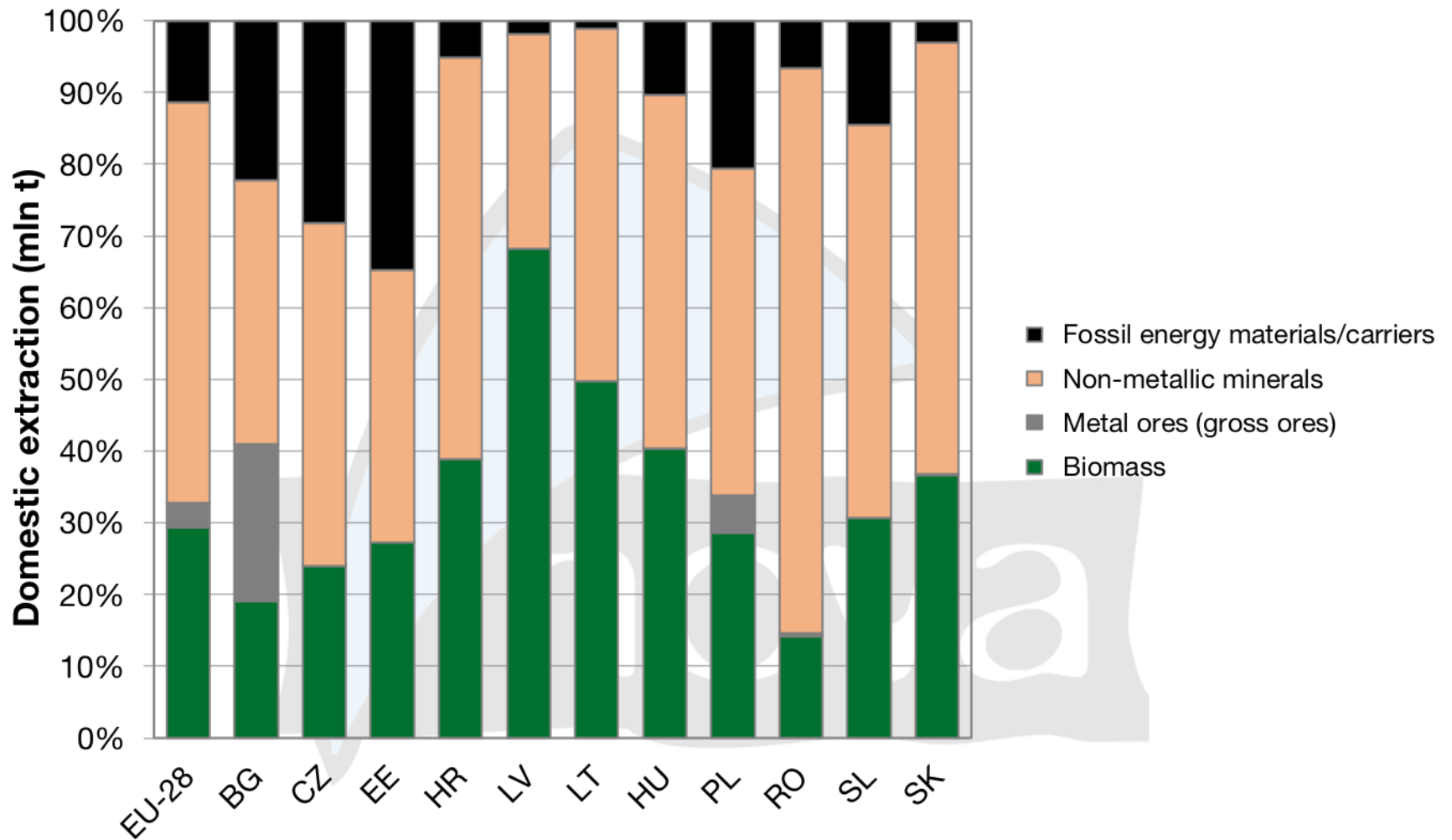
Imports of biomass in the BIOEAST Member States (2016)



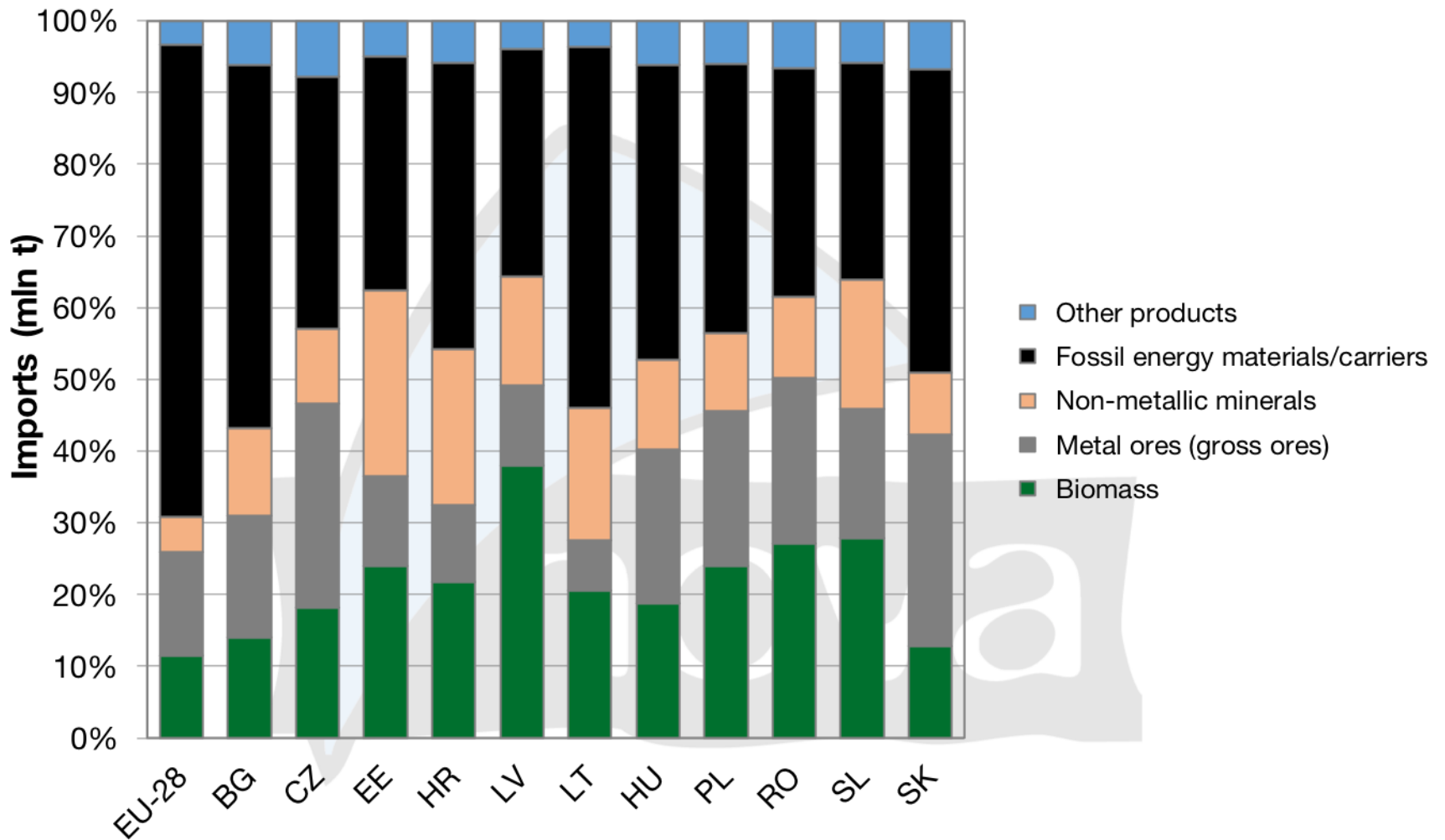
Exports of biomass in the BIOEAST Member States (2016)



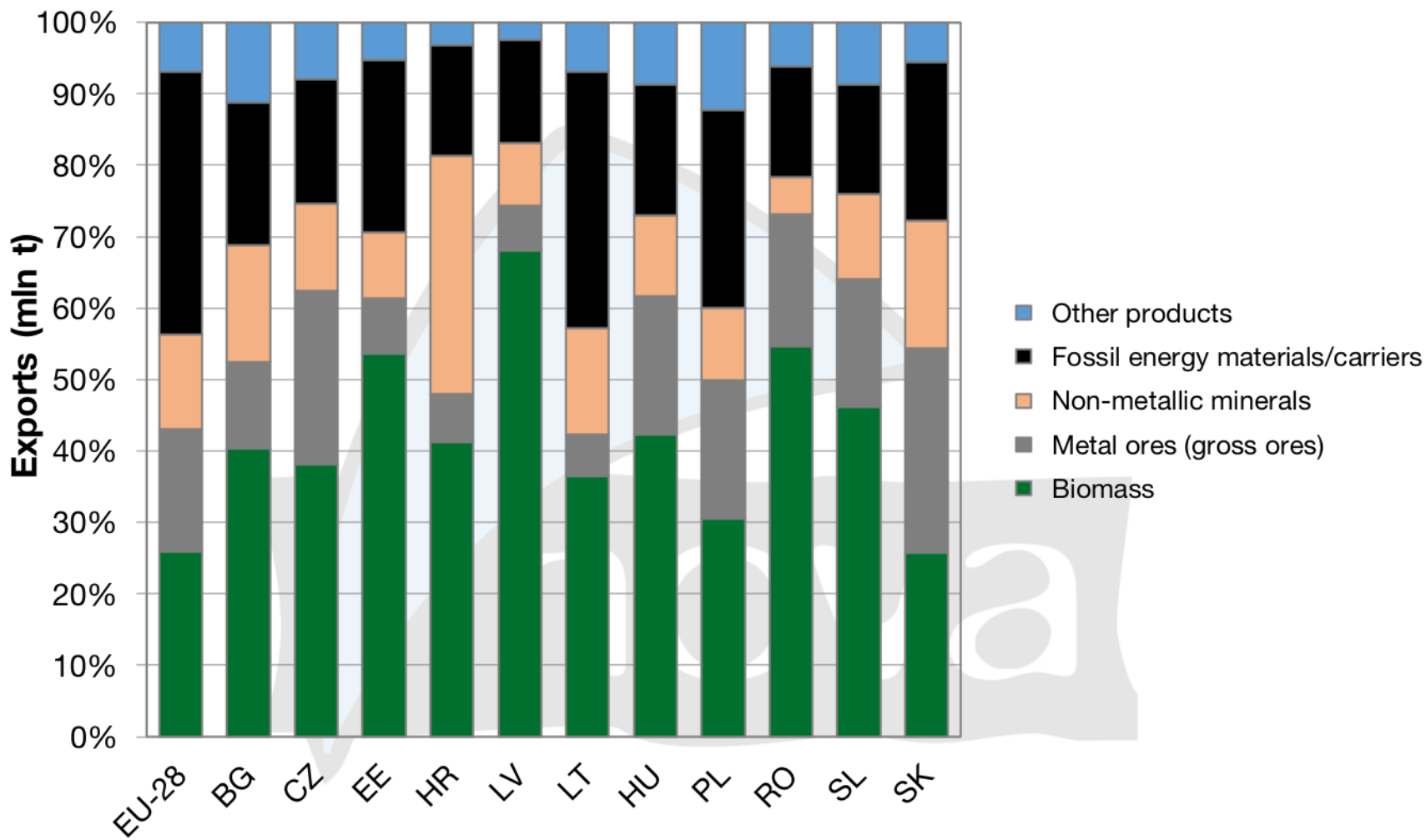
Domestic extraction of all materials in the BIOEAST Member States (2016)



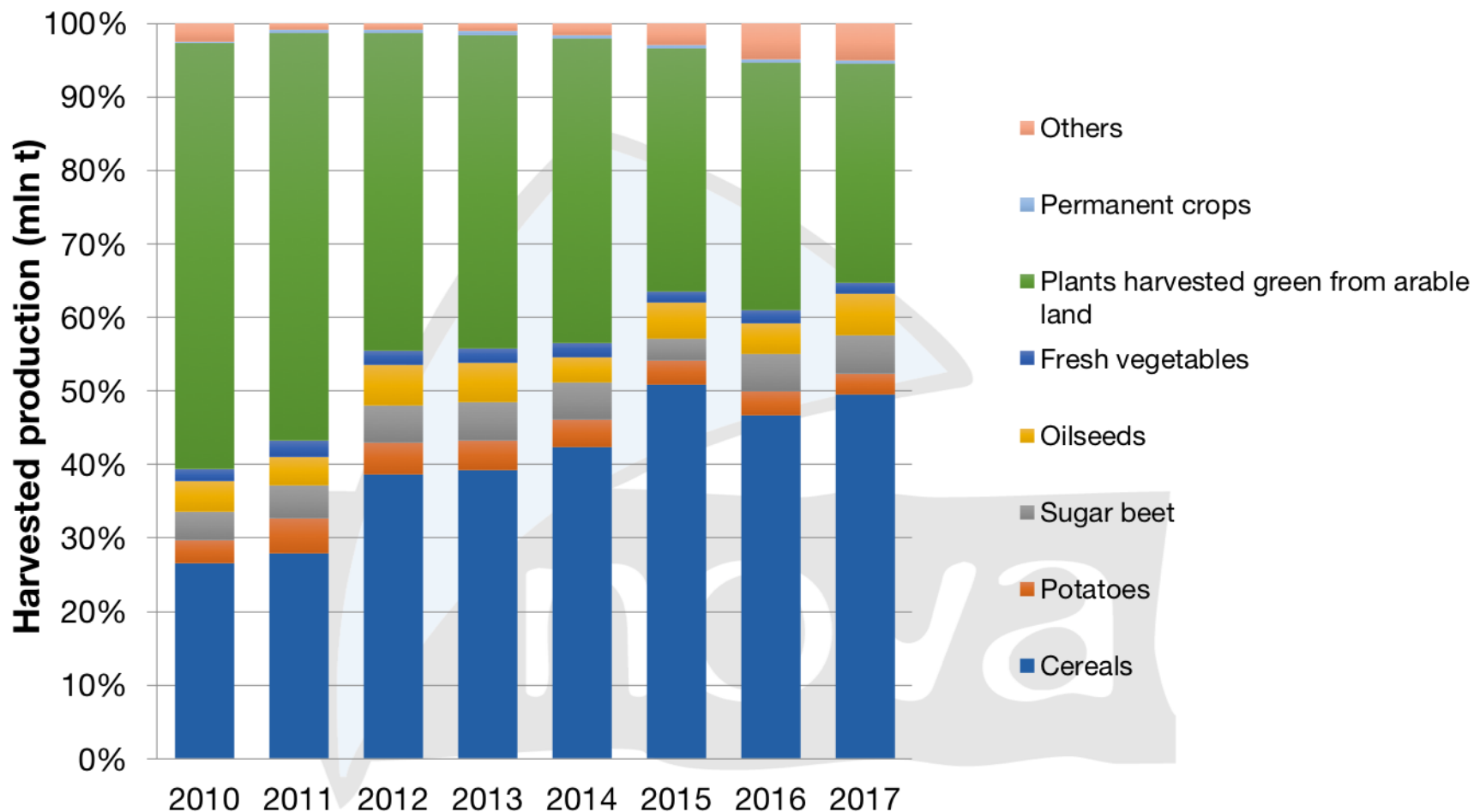
Imports of all materials in the BIOEAST Member States (2016)



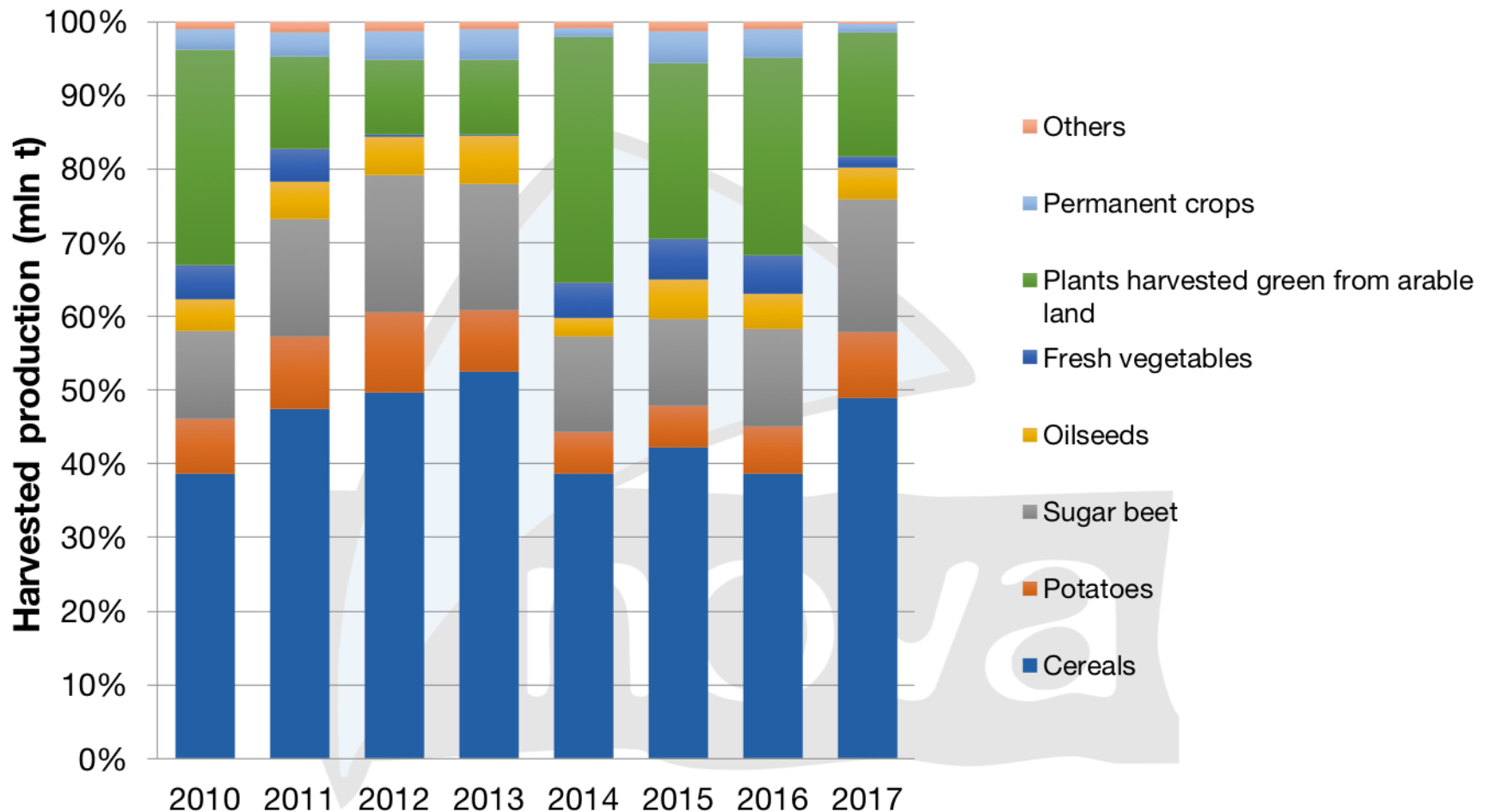
Exports of all materials in the BIOEAST Member States (2016)



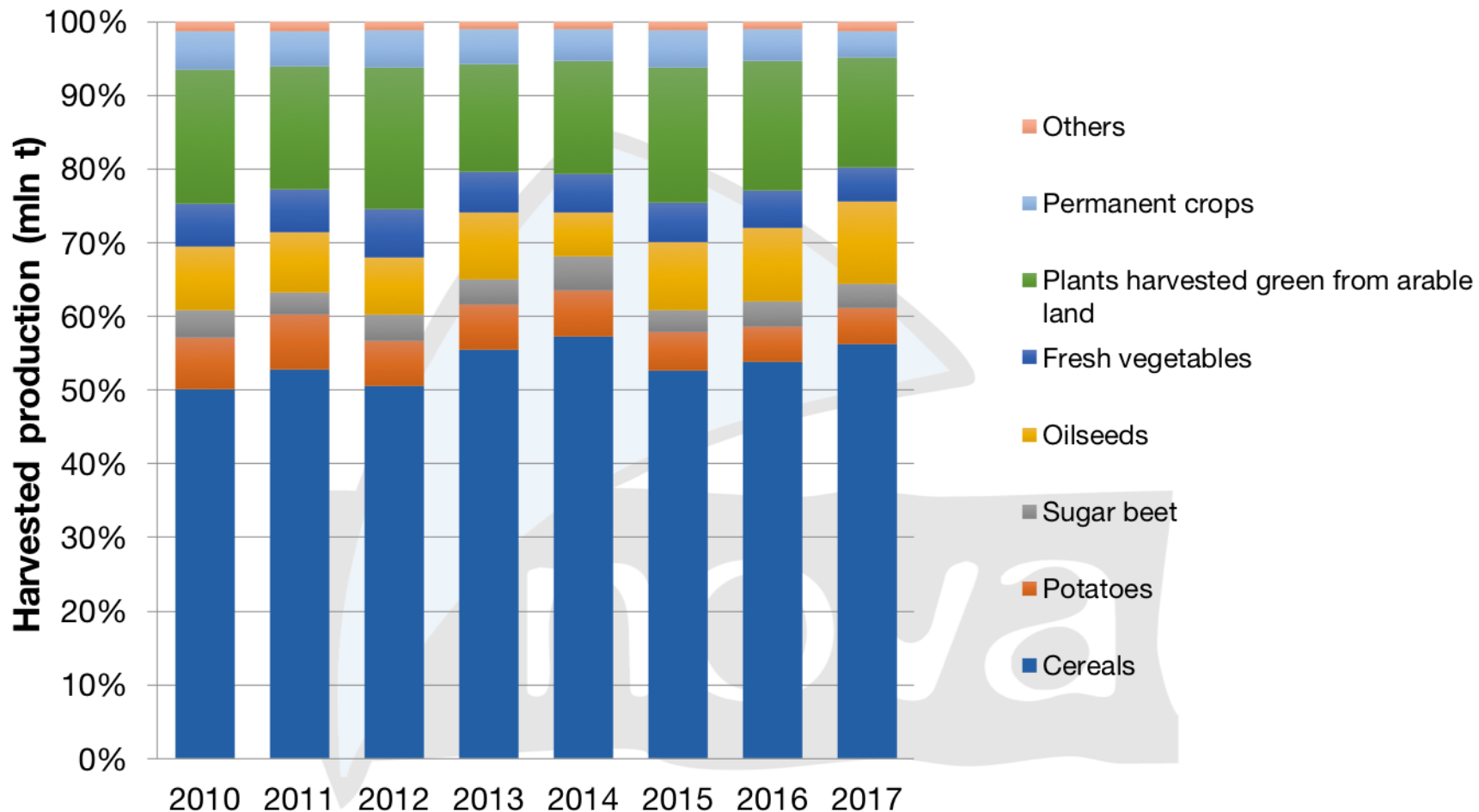
Total agricultural production in the Baltics, 2010-2017



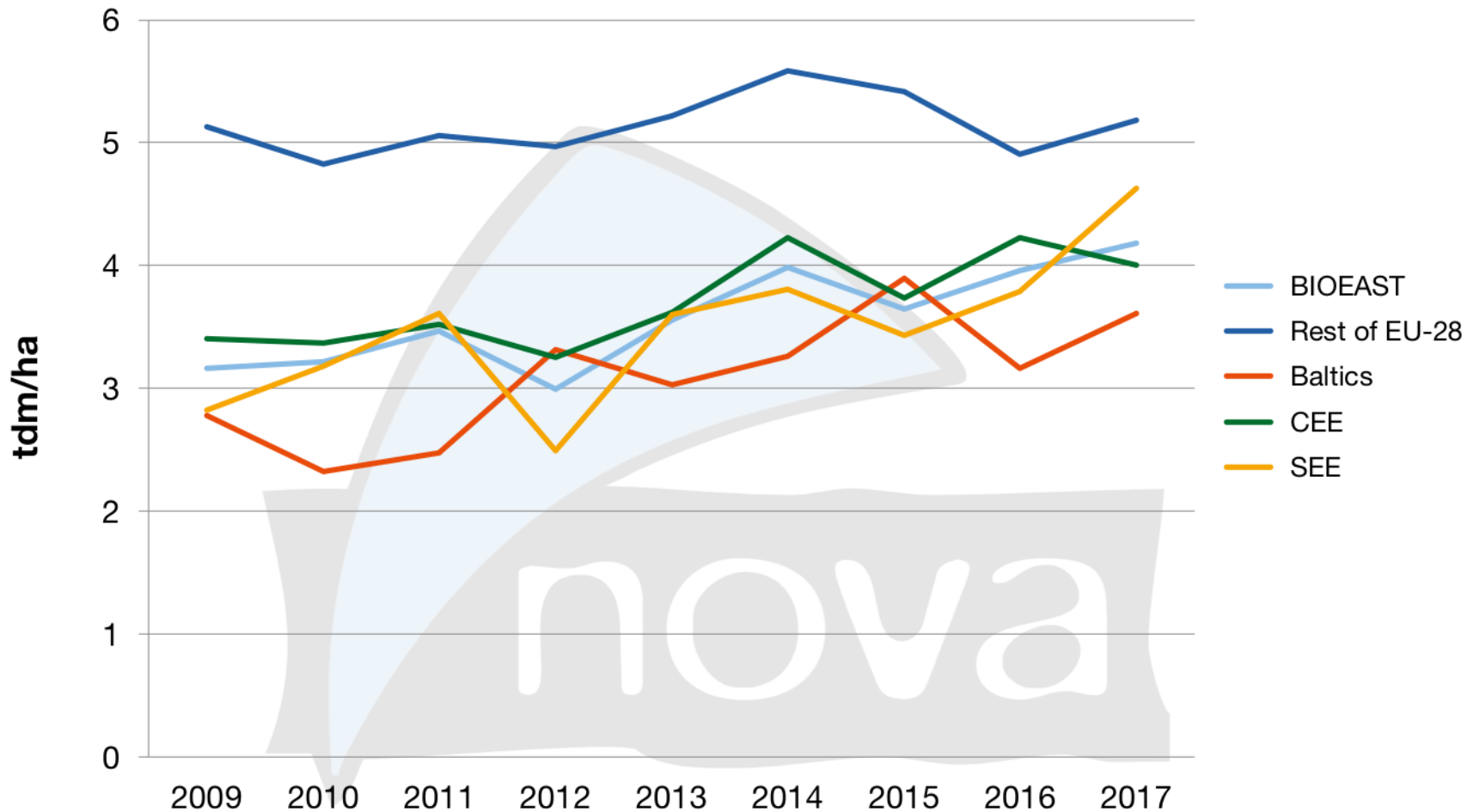
Total agricultural production in the Central-Eastern Europe, 2010-2017



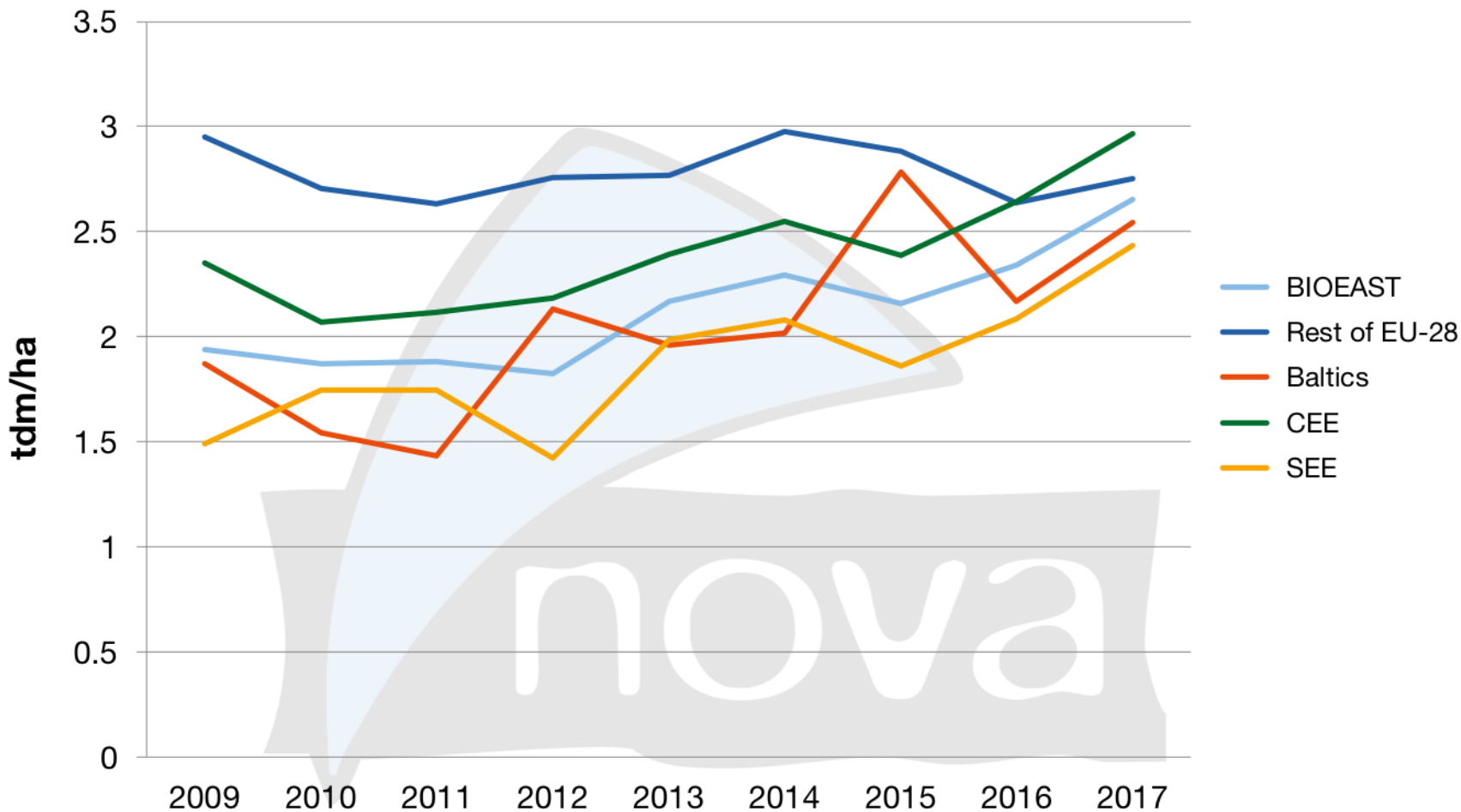
Total agricultural production in South-East Europe, 2010-2017



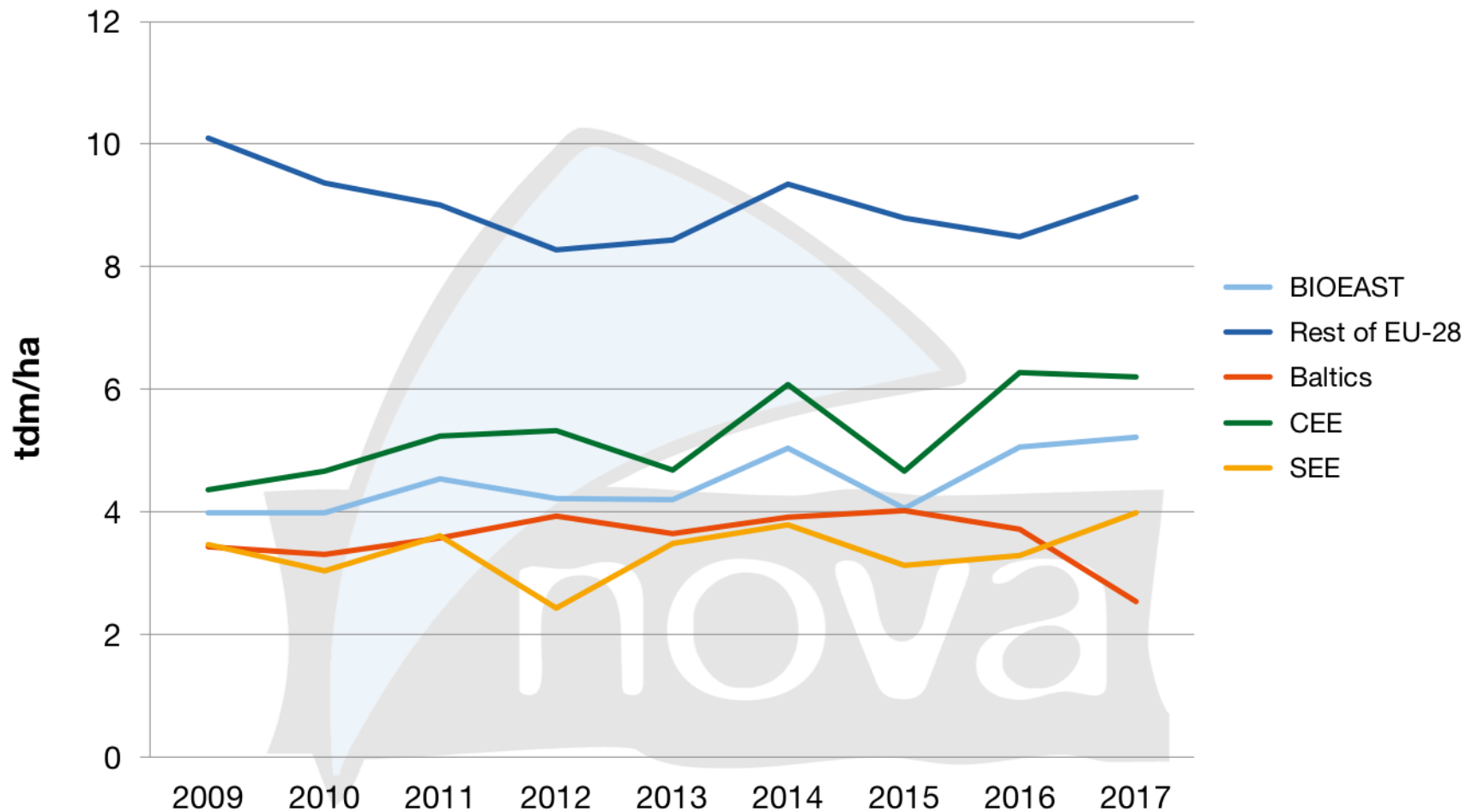
Cereal yields in BIOEAST subregions and rest of EU-28, 2009-2017



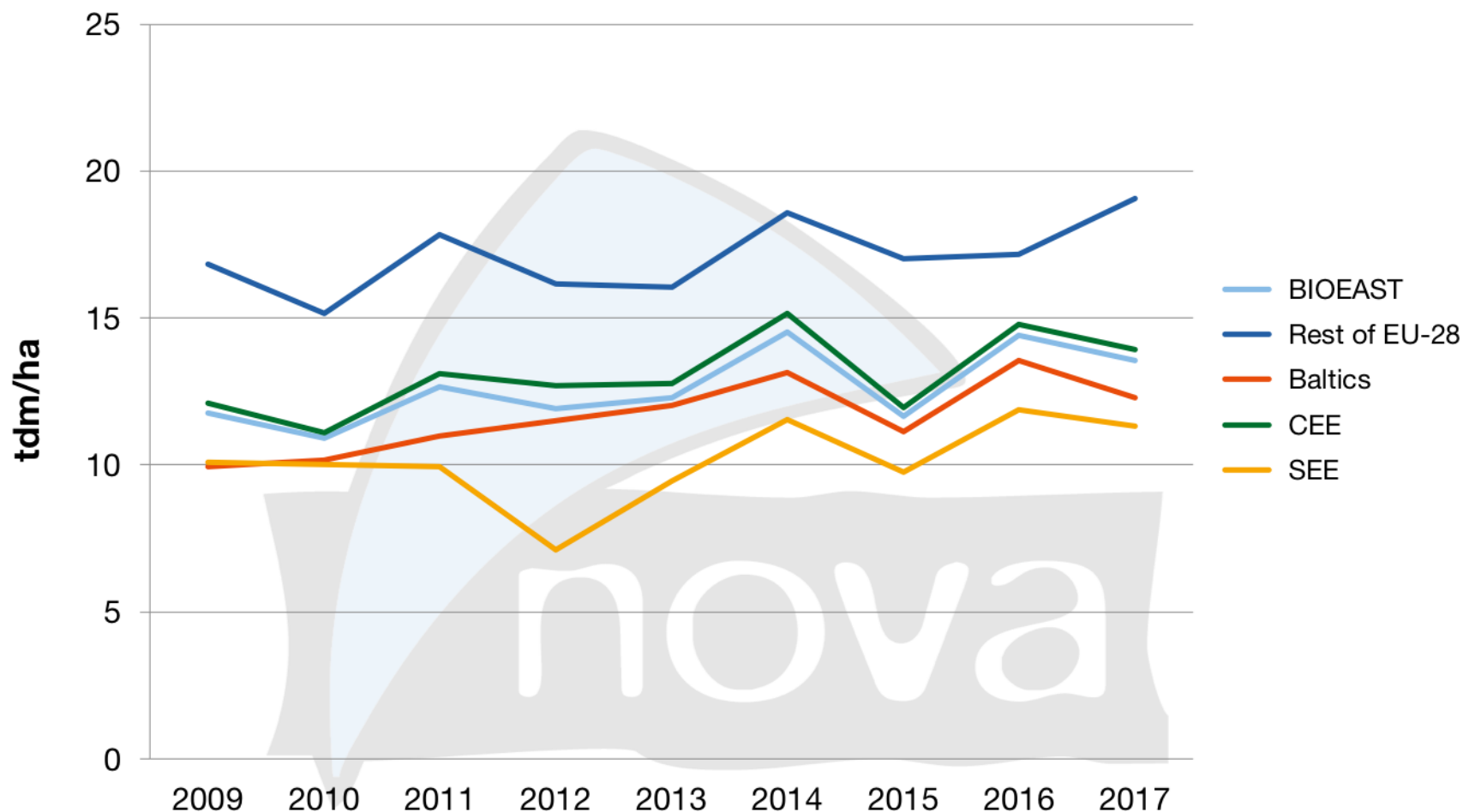
Oilseed yields in BIOEAST subregions and the rest of EU-28, 2009-2017



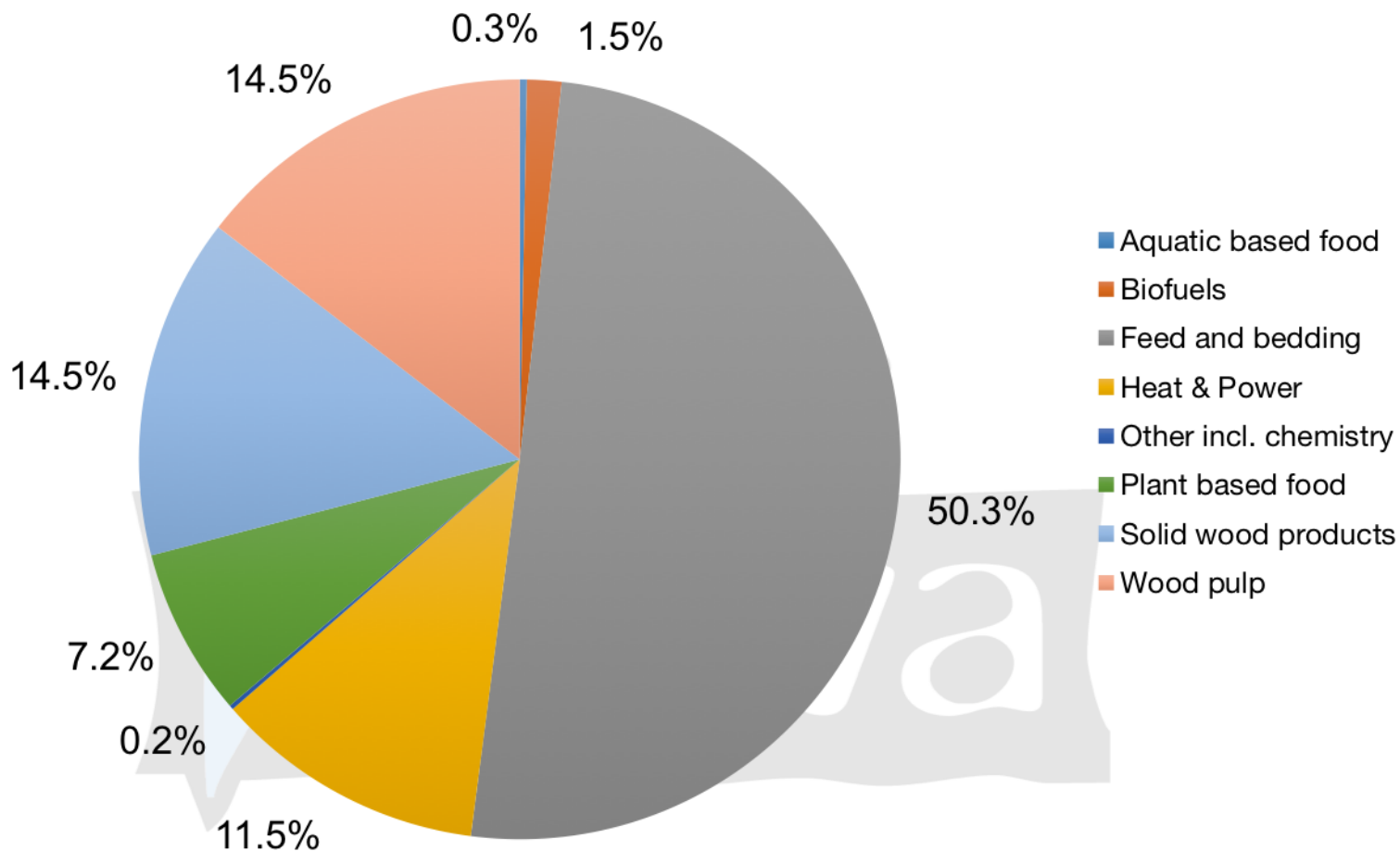
Potato yields in BIOEAST subregions and the rest of EU-28, 2009-2017



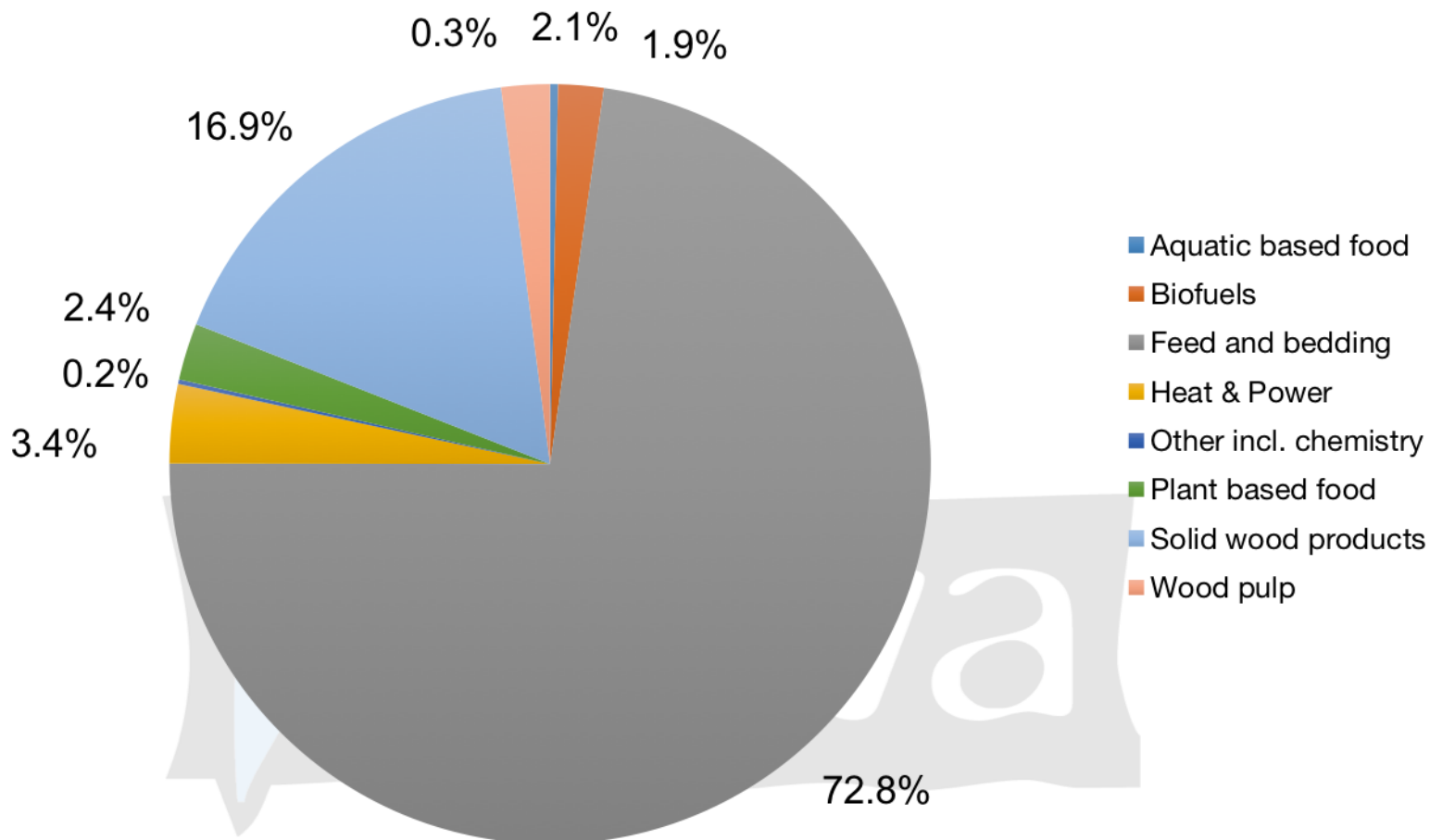
Sugar beet yields in BIOEAST subregions and the rest of EU-28, 2009-2017



Shares of biomass use in the EU-28 by sectors, 2011-2015



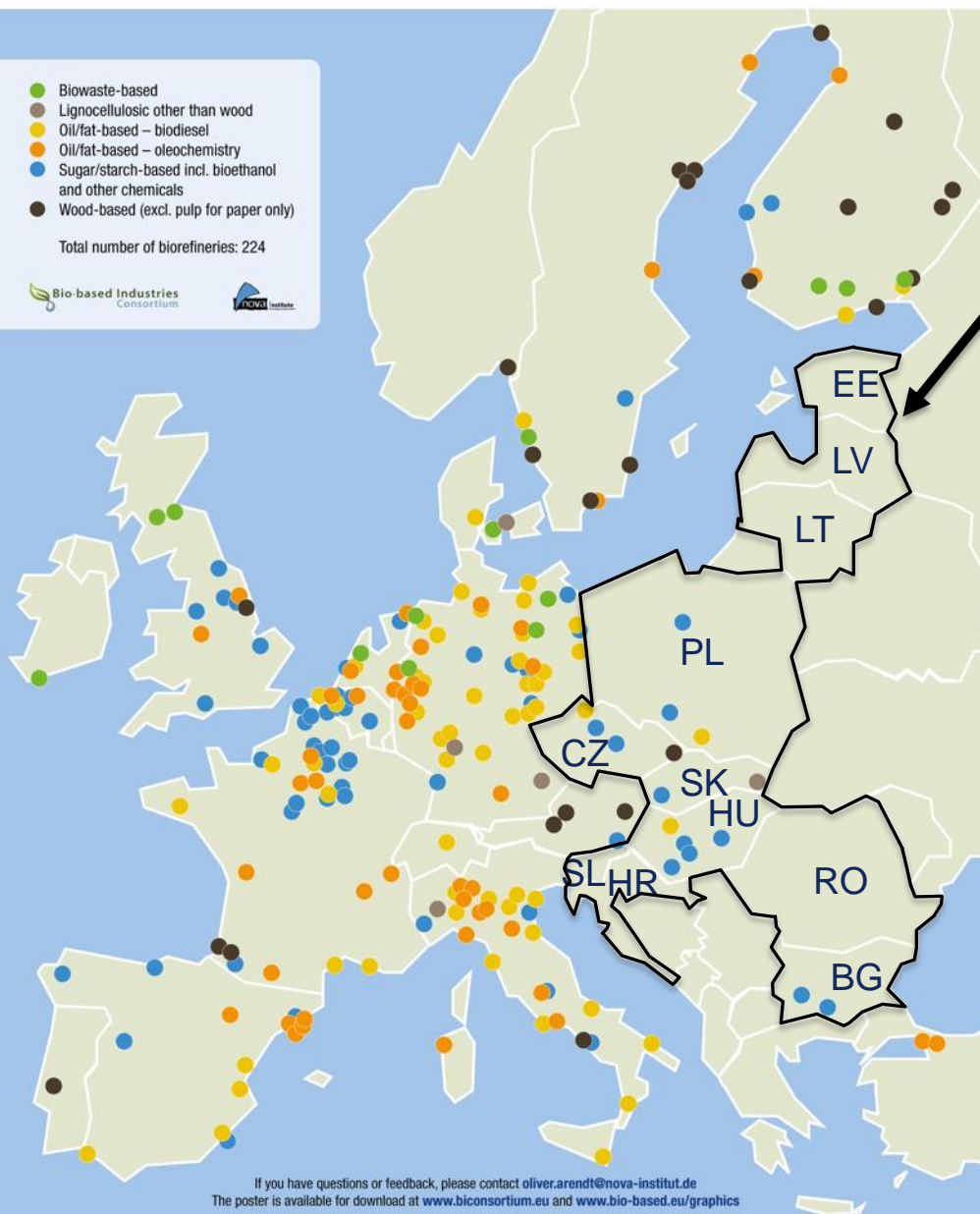
Shares of biomass use in the BIOEAST macro-region by sectors, 2011-2015



Biorefineries in Europe 2017



Lack of biorefineries in BIOEAST, except for some sugar-/starch-based clusters in Central-Eastern Europe



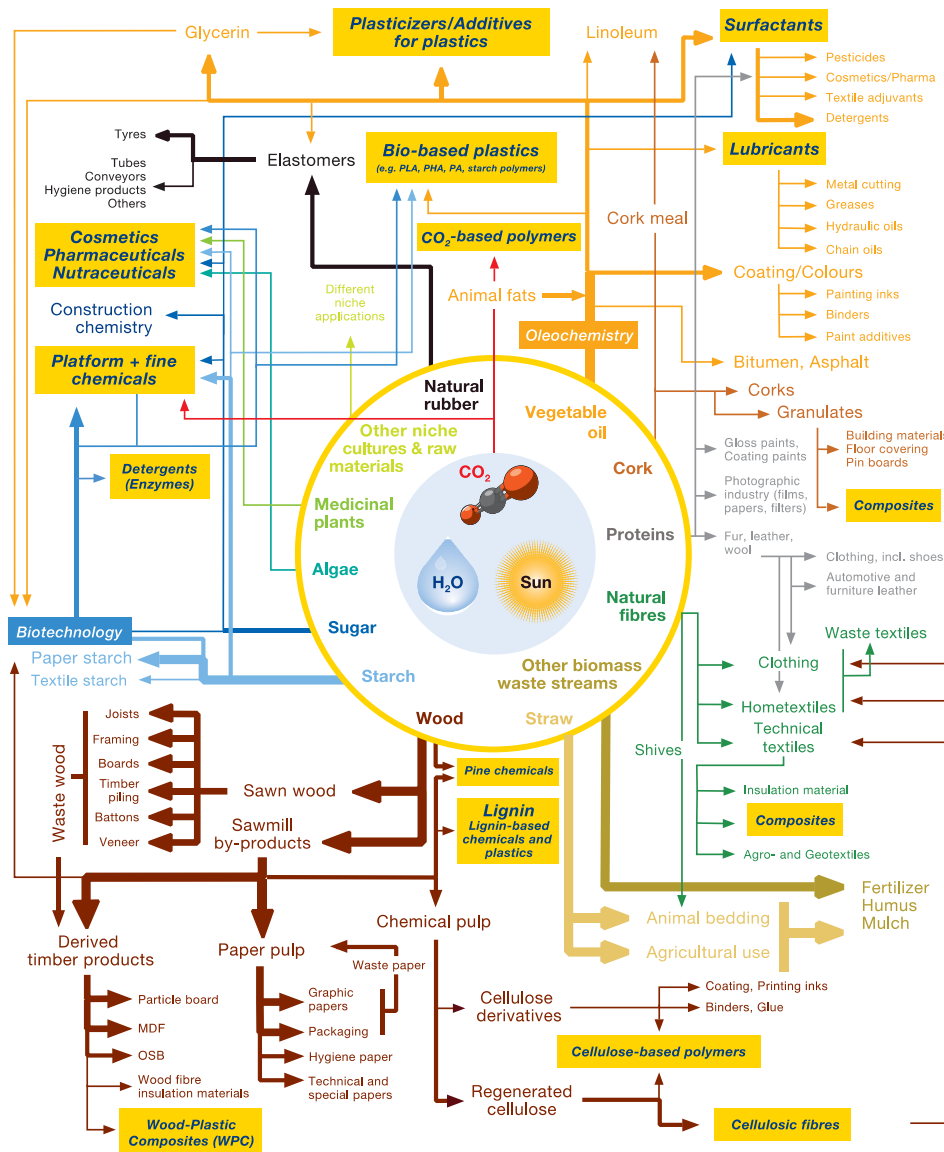
| Biorefineries | | Nr. |
|--|---------------------------------------|-----|
| Biowaste | ● | 13 |
| Lignocellulose other than wood | ● | 5 |
| Oil-/fat-based - biodiesel | ● | 64 |
| Oil-/fat-based - Oleochemistry | ● | 54 |
| Sugar-/starch-based incl. Bioethanol and other chemicals | ● | 63 |
| Wood-based excl. Pulp for paper only | ● | 25 |
| Total | | 224 |

The poster is available for download at www.biconsortium.eu and www.bio-based.eu/graphics

If you have questions or feedback, please contact oliver.arendt@nova-institut.de
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Bio-based products
In 'material use' biomass serves as a raw material for the production of all kinds of goods, as well as their direct use in products. This distinguishes it from energy use, where biomass serves purely as an energy source, and the use for food and feed purposes.
(Carus et al. 2010)



Use of biomass in the EU-27 2011 (domestic and imported)

| | Industrial material use | Bioenergy, incl. electricity, heat, biogas and biofuels |
|----------------------|-------------------------|---|
| Agricultural biomass | 42 Million t | 61 Million t |
| Wood | 123 Million t | 116 Million t |

Source: PIOTROWSKI S. et al. 2015. Sustainable Biomass Potential for Biofuels in Competition to Food, Feed, Bioenergy and Industrial Material – a Global Analysis of Biomass Supply and Demand. Download at www.bio-based.eu/summery.





- 1) Increase productivity in agriculture,
- 2) Increase recovery rates of bio-based wastes
- 3) Identify regional strengths in types of biomasses,
- 4) Produce valued-added industrial products from biomass in the region instead of exporting raw materials,
- 5) Start thinking in bioeconomy clusters where regional feedstock supply, existing industrial infrastructure, know-how and innovation potential and public support are combined.



Thank you for your attention!



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Techno-economic evaluation

Agricultural & forest feedstocks

Data collection and analysis

