

Potential Supply with Biomass from Sustainable Forestry in 28 European Countries for the Period 2000 – 2020

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Biofuels and Bioenergy:
Challenges and Opportunities

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Partial result of the study:

Sustainable Strategies for Biomass Use in the European Context

Analysis in the charged debate on national guidelines and the competition between solid, liquid, and gaseous biofuels

Partners:



Institute for
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Environment



University of
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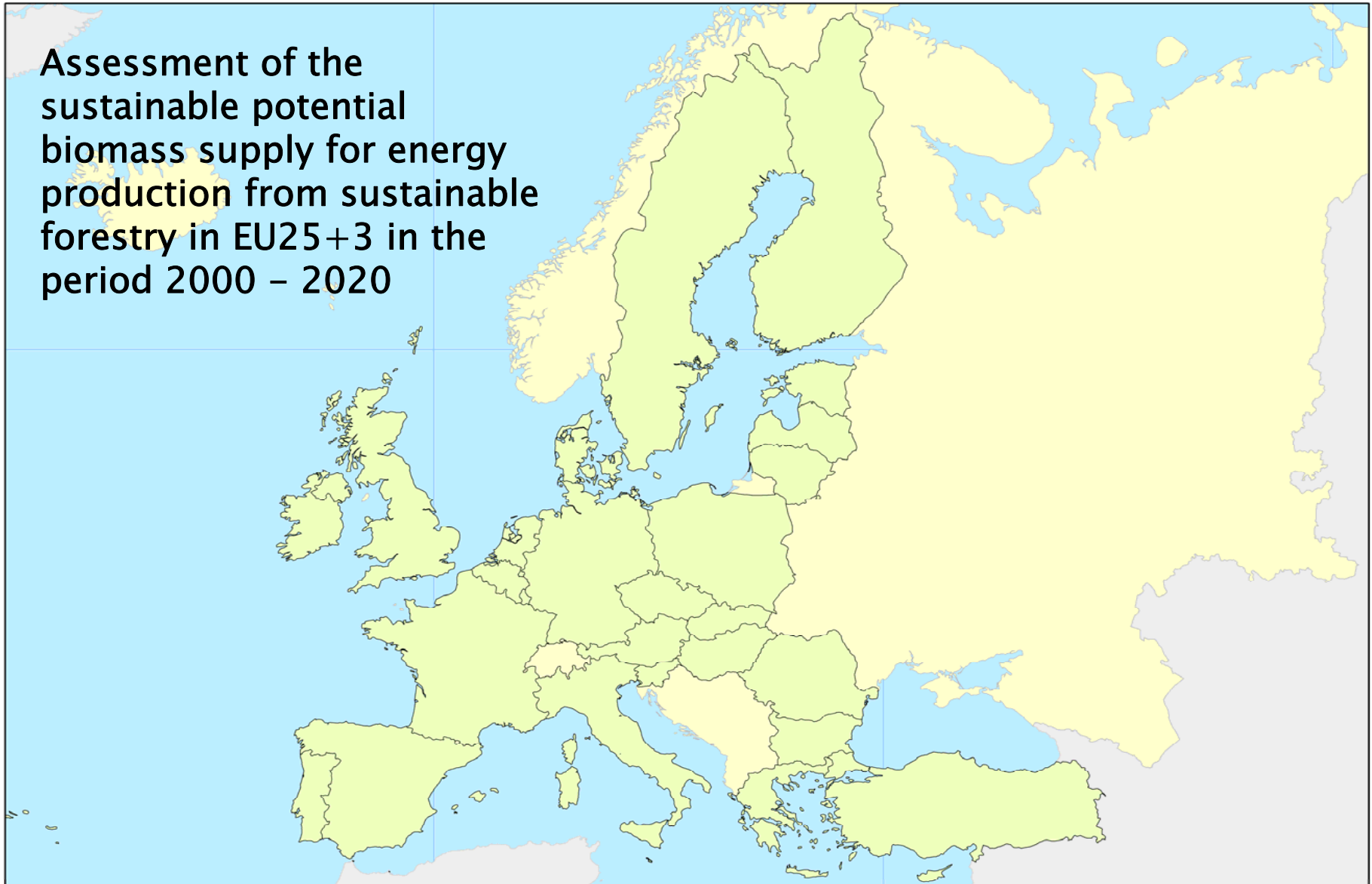
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1. Goal
2. Methodology – How to assess forest biomass supply for energy production?
3. Results – How high is the potential forest biomass supply and how is it structured?
4. Discussion – What could be the potential share of forest biomass to energy supply in EU-25?
5. Conclusions

**Assessment of the
sustainable potential
biomass supply for energy
production from sustainable
forestry in EU25+3 in the
period 2000 – 2020**

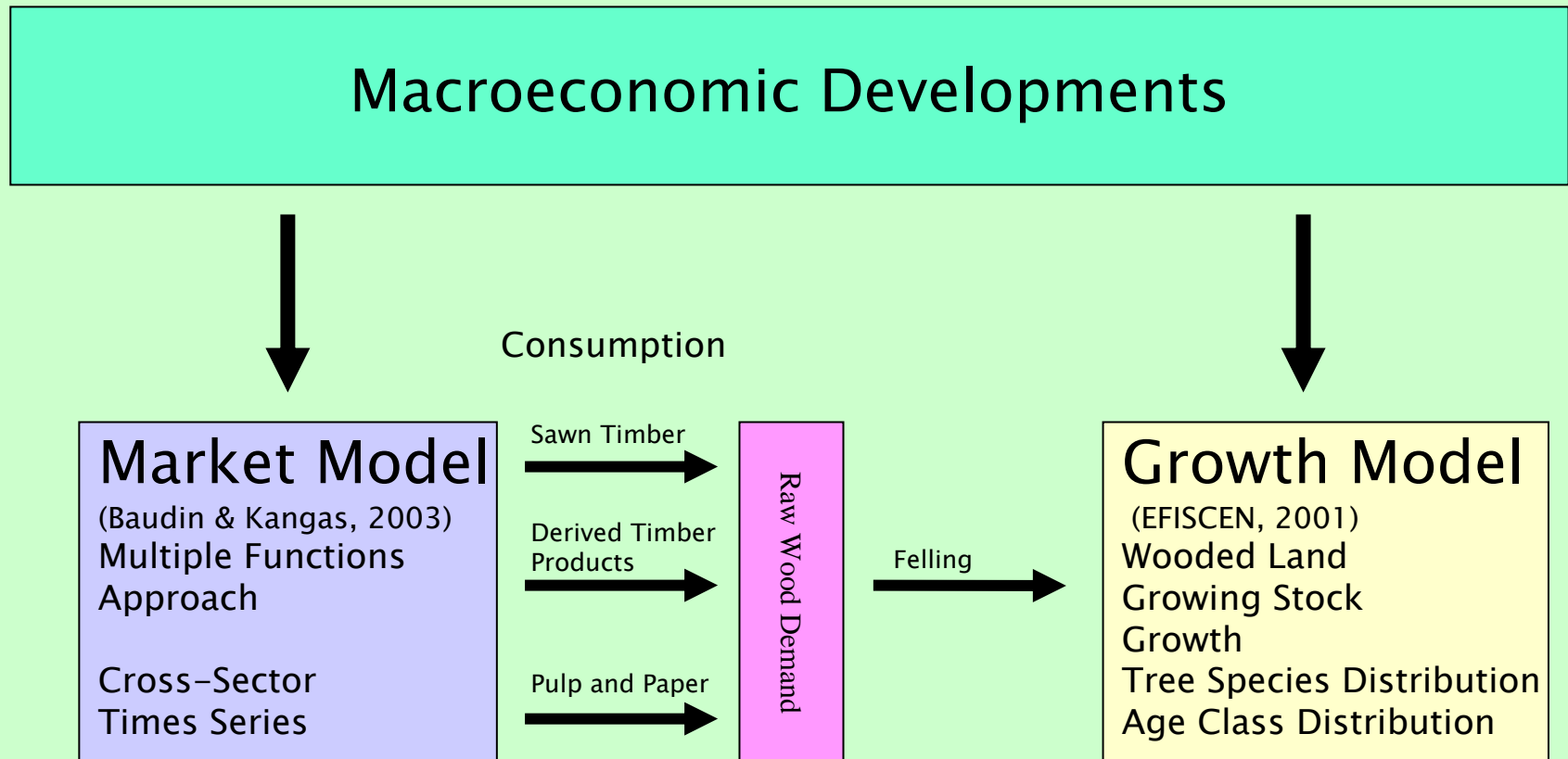


Ex-post assessment of the sustainable forest biomass supply for the year 2000 based on data that are consistent and complete for all 28 countries

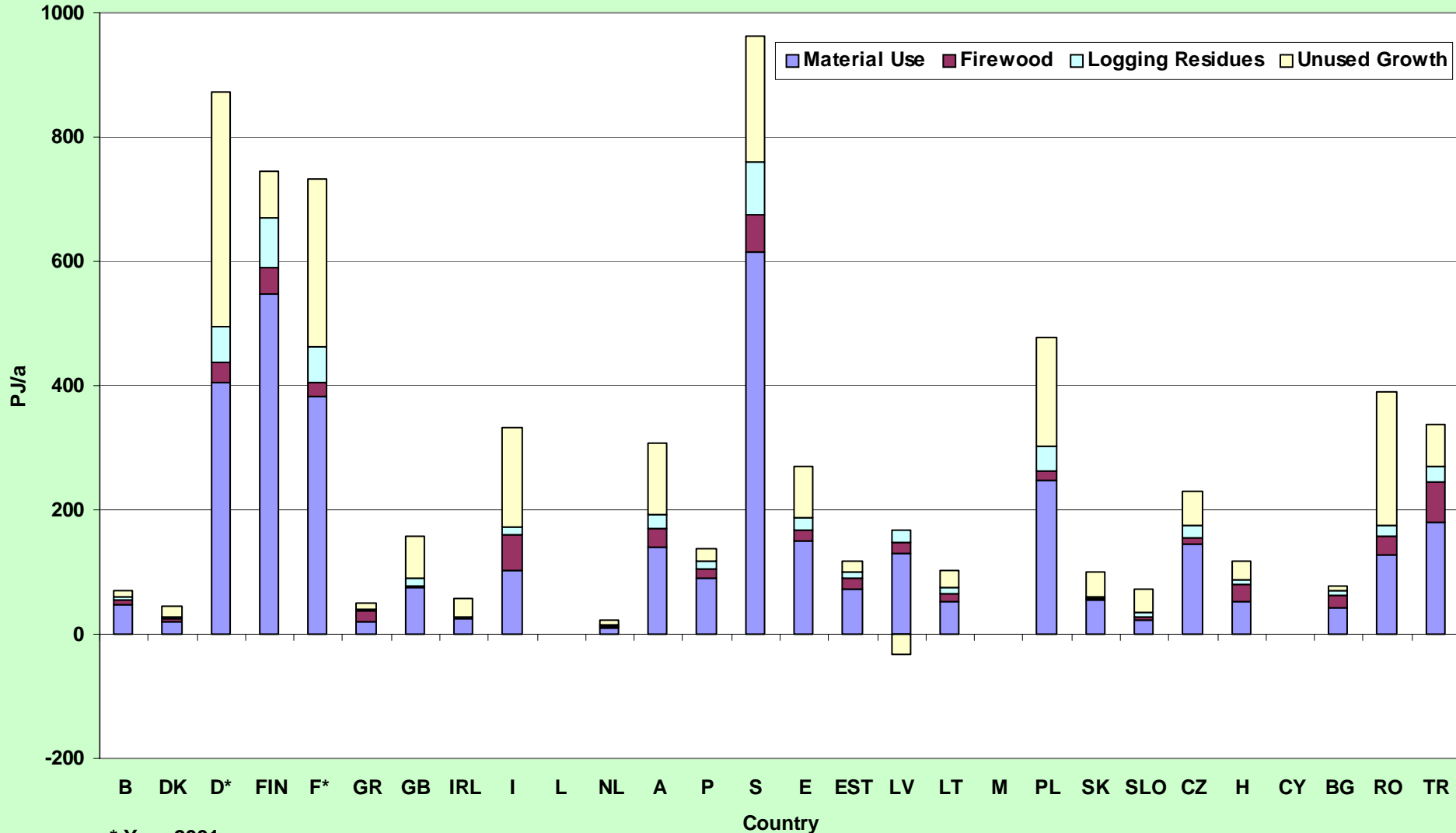
- **FAOSTAT:** FAO Statistical Database
- **EFSOS:** European Forest Sector Outlook Study (UN/ECE & FAO)
- **TBFRA-2000:** Temperate and Boreal Forest Resources Assessment (UN/ECE & FAO)

Ex-ante assessment of the sustainable potential wood supply for the period 2010 – 2020 based on the results of a consistent modelling approach

Structure of the EFSOS approach



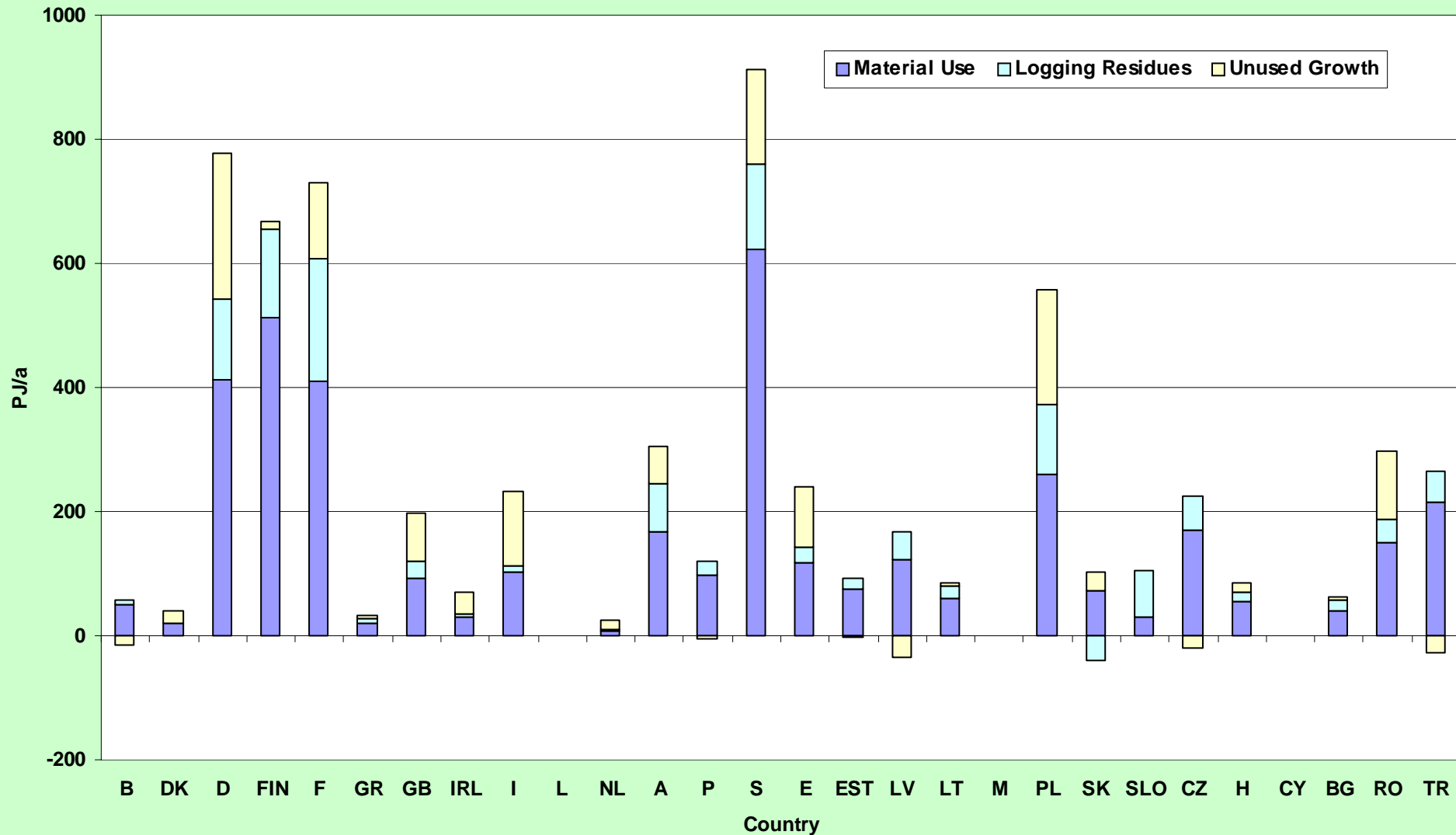
Structure of forest biomass supply in the year 2000



* Year 2001

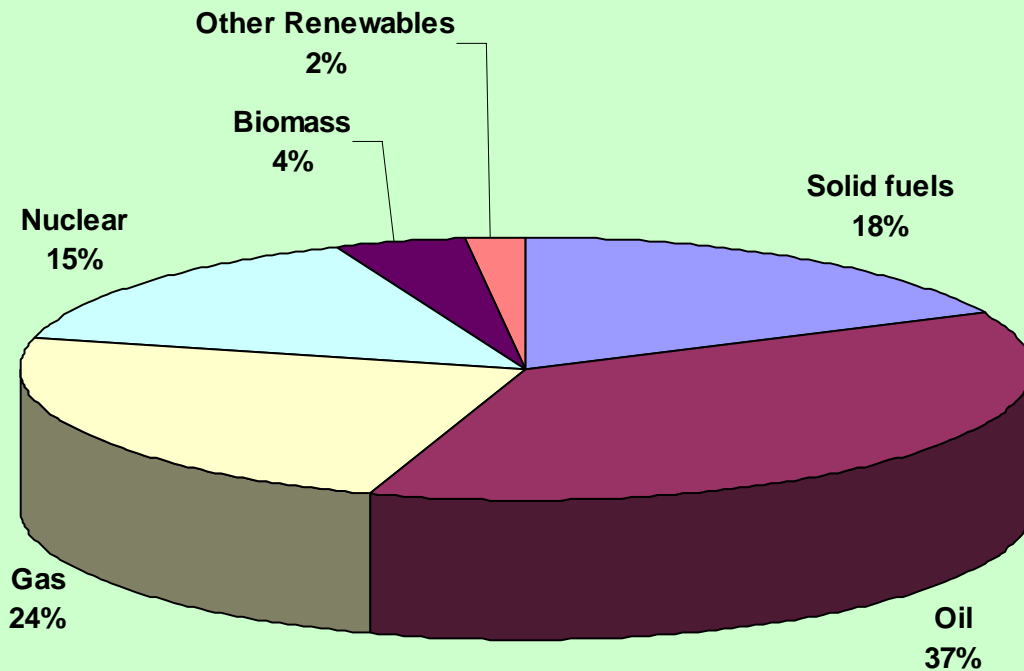
Calculation based on FAOSTAT, TBFRA and EFSOS

Potential structure of forest biomass supply in the year 2020



- Sustainable forest biomass supply potentially available for energetic use (*firewood+logging residues+unused growth*) in EU25+3 was around 165 Mio. bdt or **3,046 PJ** in 2000. It is expected to be around 134 Mio. bdt or **2,480 PJ** in 2020.
- The largest potentials can be found in Germany, France, Sweden and Poland.
- In a few countries felling is expected to exceed the annual increment of the growing stock.

Shares of the Gross Inland Energy Consumption of EU25 in 2003



Gross Inland Energy Consumption of EU25 in 2003:
72,222 PJ

Potential share of forest biomass to the Gross Inland Energy Consumption in EU-25 2010 – 2020

Year		2010	2020
Gross Inland Energy Consumption EU-25 (as of 2004)	PJ	72,222	72,222
Potential forest biomass supply for energetic use:			
logging residues and unused growth	PJ	2,526	2,263
net annual increment of growing stock	PJ	5,718	5,710
Potential share of forest biomass for energetic use of gross inland energy consumption EU-25:			
logging residues and unused growth	%	3.5	3.1
net annual increment of growing stock	%	7.9	7.9

Reasonable potentials of forest biomass for energy production would be available on short call, especially in Germany, France, Sweden and Poland. Due to the rather low energy density of wood, short transport distances and domestic/regional consumption are most likely.

An increasing domestic demand for forest biomass for energy production in countries with rather small forest biomass potentials, limited agricultural land and/or significant forest industry may lead to a growing demand for imports of industrial wood.

Beside confidence in market forces, measurements to support the mobilisation of forest biomass potentials should be promoted.

It should be of high priority to use forest biomass for energy production in a way that substitution effects and efficiency of use are optimal.

Burn it!

with CHP technology