

Co-ordinated empirical research
for a European wood resource balance

Prof. Dr. Udo Mantau





EU monitoring system on woody biomass
- timetable of activities



Phase	Type of activity	Description / Title	Date	Status
I	Enquiry	The Joint Wood Energy Enquiry (JWEE): Improving data on wood energy:	2005 - 2007	done
II	Workshop	Mobilising wood resources (Workshop in Geneva)	January 2007	done
III	Study	Wood resources availability and demands: Overview based on existing data	Mar - Oct 2007	done
	UNECE/FAO Policy Forum	Bioenergy Policies and Forests	10 Oct	
IV	Review / workshop	Review of the data and information presented in the study (phase III) by national correspondents Workshop in spring (March/April) 2008	Nov 07- Mar 08 Apr 08	done ongoing
V	Study	Empirical study on national level in several European countries to gather new and improve existing data on energy use of wood and sources of wood	2008 - 2010	proposed
VI	Study / Process	Incorporating wood supply and demand into sector outlook study	2008 - 2009	proposed



Work Packs:

WP1 Harmonizing/interlinking the structure of wood resource balance

WP2 Empirical studies in European countries

WP3 Development of a European wood resource model on the basis of factors and coefficients

WP4 Calculation of historical data

WP5 Forecasting wood resource markets

WP6 Potential resources

WP1: Structure of the wood resource balance



sources			uses		
	[mio. m ³]	%	%	[mio. m ³]	
industrial Roundwood - JFSQ	381	49%	26%	217	sawmill industry
industrial Roundwood - unrep.	16	2%	11%	88	panel industry
fuelwood – JFS	79	10%	19%	155	pulp industry
fuelwood – unrep.	6	1%	2%	14	other physical utilization
Bark	25	3%	1%	7	wood fuel industry
used logging residues	23	3%	6%	49	power and heat
woody biomass outside forest	20	3%	8%	65	industrial internal
chips, particles & residues	118	15%	11%	92	private households
pulp production co-products	70	9%	16%	135	undifferentiated energy use
recovered wood	29	4%			
processed wood fuel	7	1%			
undefined	47	6%			
∑ total sources:	822	100%	100%	822	∑ total uses

WP2: Empirical studies in European countries



Forest production and forest industries are well documented. However, considerable information gaps exist in new sectors like:

→ Sources	Uses ←
Post consumer wood	Biomass power plants
Trees outside forest	Private households
Mobilization of forest reserves	Biomass to liquid (BTL)
Mobilization of unused harvesting residues	Wood based chemicals
Energy plantations	

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WP2: Empirical studies in European countries



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slide 8

WP3: Development of a European wood resource model on the basis of factors and coefficients



- Monitoring woody biomass sources and uses on a constant basis is costly
- Therefore calculation based on empirical studies factors and co-efficients
- National used wood potentials could be calculated per capita, by business cycles or the proportion of sawmill by products based on information about size structure of national sawmill industries.



= 100 kg per capita
used wood?



= 38,5 % sawnwood
by-products?

- Consequently a calculation model on European level shall be achieved.
- Such a model will be helpful to fill gaps via technical coefficients in countries and sectors where empirical studies cannot be carried out.

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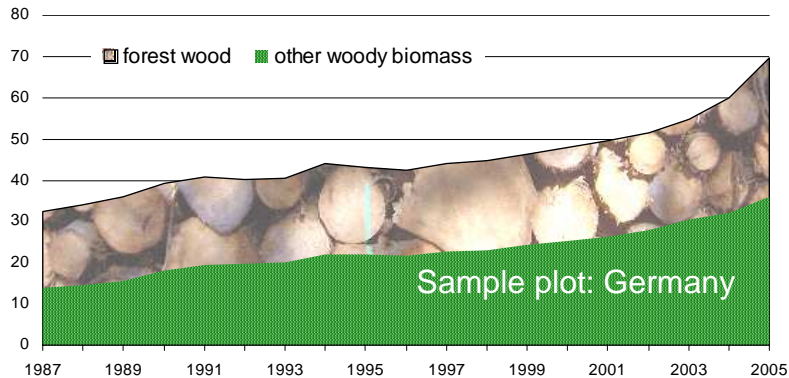
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WP4: Calculation of historical data



Forecasting future developments as well as a better understanding of sustainability over time requires historical time series. In markets where no continuous data collection is available, this is a process of expert evaluations and combination of different data and studies under the condition of "Openness in assumptions and data!"

in mio m³ - comparing plot



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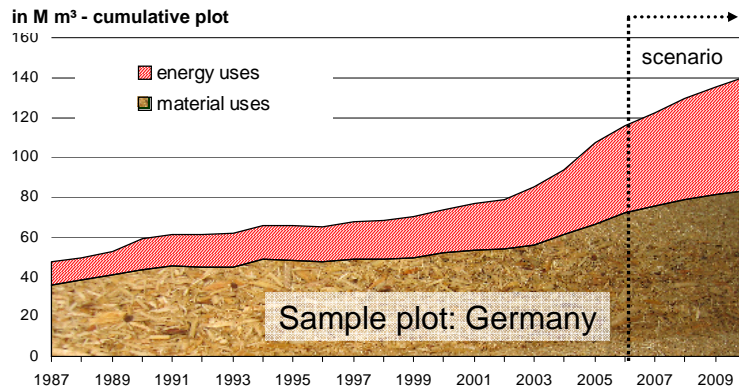
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WP5: Forecasting wood resource markets



In this part existing forecasting models like EFSOS (FAO/UNECE) will be combined with the method of wood resource balance.

All wood resources:



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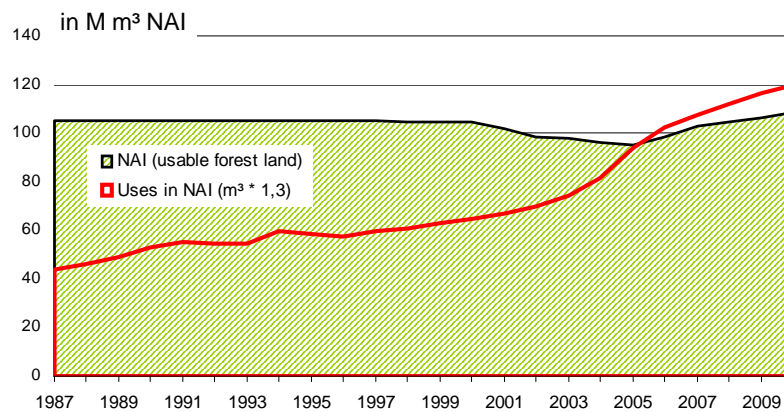
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slide 11

WP6: Potential resources



How does actual use develop in comparison to forest biomass potential?



MANTAU, U. (2008): Konzept der dynamischen, naturalen Nachhaltigkeit (Holzrohstoffnachhaltigkeit)
Concept for a dynamic, natural sustainability (wood resource sustainability), discussion paper

08-03-16

Mantau: Concept of the national wood resource balance

12

First steps...



What about the actual situation?

WP1	Structure of the wood resource balance
WP2	Empirical studies in European countries
WP3	Development of a European wood resource model on the basis of factors and coefficients
WP6	Potential resources

Example... *study on energy use in private households*



Important aspects for projections:

- Include the resident groups for projections.
- What about the letters (central heatings)?
- Control questions for consistency checks (size of the flat).

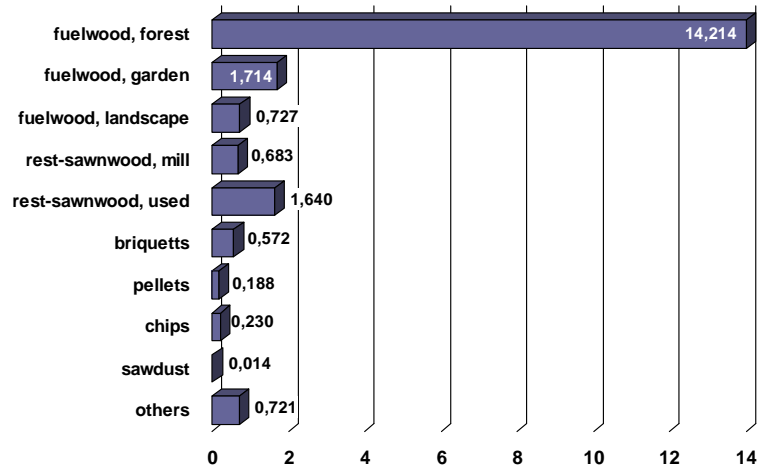
Important aspects for fuelwood quantity:

Differentiate between

- fuelwood consumption and storage.
- fuelwood from garden and from forest.
- all wood fuels.
- stemwood and forest restwood.
- softwood and hardwood

Example... study on energy use in private households

fuelwood assortments used in private households



methods... study on energy use in private households

General method:

Mail panel

high number of interviews (5.000 to 10.000) at reasonable prices

Applications - Countrywise:

T.ex. concentrate on those who live in their own homes.

If the structure of households is similar, technical coefficients may be used to calculate the quantities.

Discussion:



Is this the way to start with?

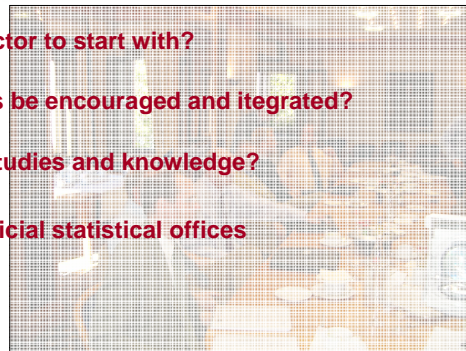
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What is the most important sector to start with?

How can countrywise activities be encouraged and integrated?

How can we include existing studies and knowledge?

What can be expected from official statistical offices in the short and long run?



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slide 17

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The more we know, the better we can guess!

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