



Swiss Centre for Life Cycle Inventories

A joint initiative of the
ETH domain and Swiss
Federal Offices

ETH

EPR

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ART

2nd International ecoinvent Meeting
Lausanne, March 14, 2008



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ecoinvent data v2.0 renewable materials

Hans-Joerg Althaus, Empa

New data in ecoinvent v2.0

- Natural fibres, yarns and textiles
(F. Dinkel & C. Stettler, Carbotech)
- Renewable polymers
(F. Dinkel & C. Stettler, Carbotech)
- Tropical wood (from sustainable forest management)
(F. Werner, Umwelt & Entwicklung)



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Presentation: Hans-Joerg Althaus



Tropical wood

- Azobe (Cameroon)
 - Meranti (Malaysia)
 - Parana Pine (Brazil)
 - Eucalyptus (Thailand)
- Inventories for legally operating, well documented logging companies.

→ Can be used for FSC labelled wood

→ Not standard cases for tropical timber production!



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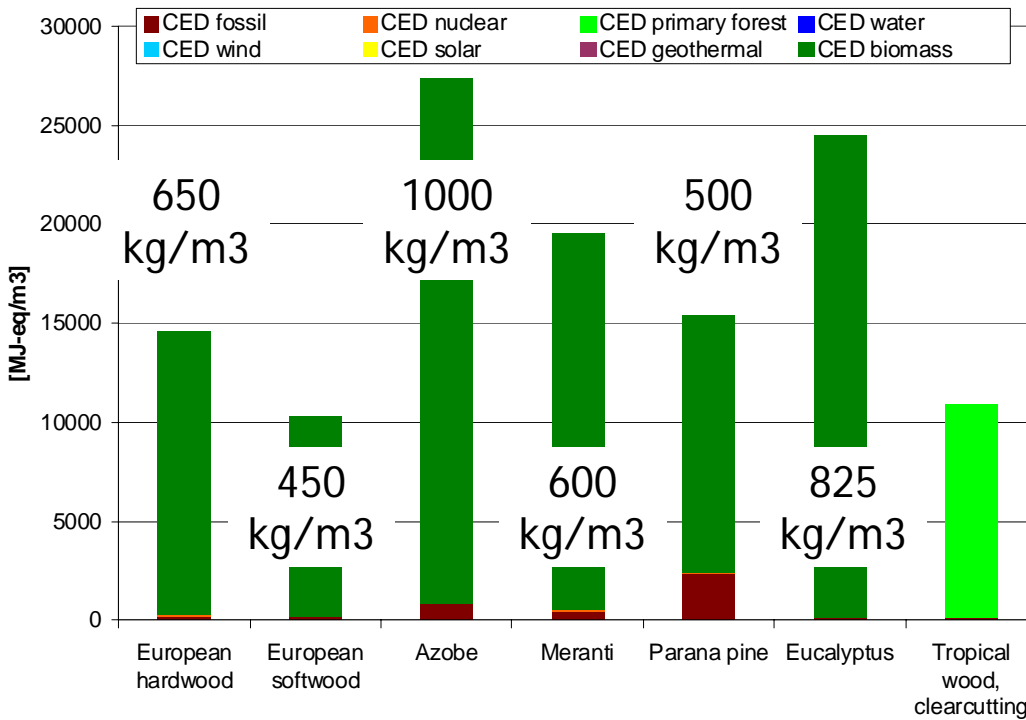
Tropical wood at forest road: CED / m³



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Presentation: Hans-Joerg Althaus



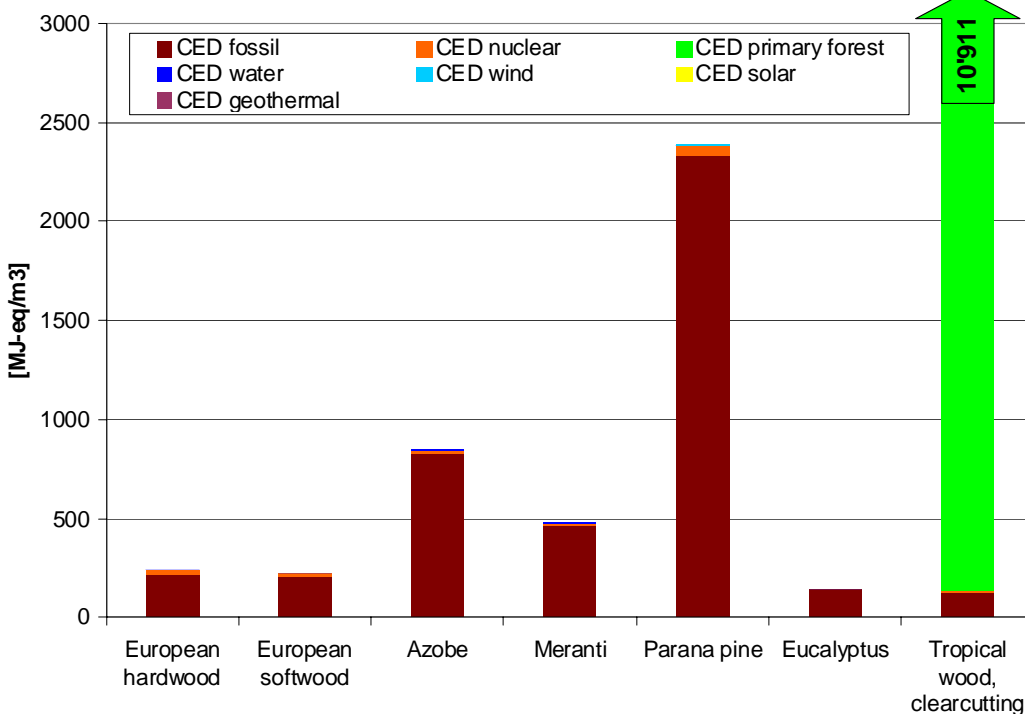
Tropical wood at forest road: CED / m³ (without biomass)



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Tropical wood, machines



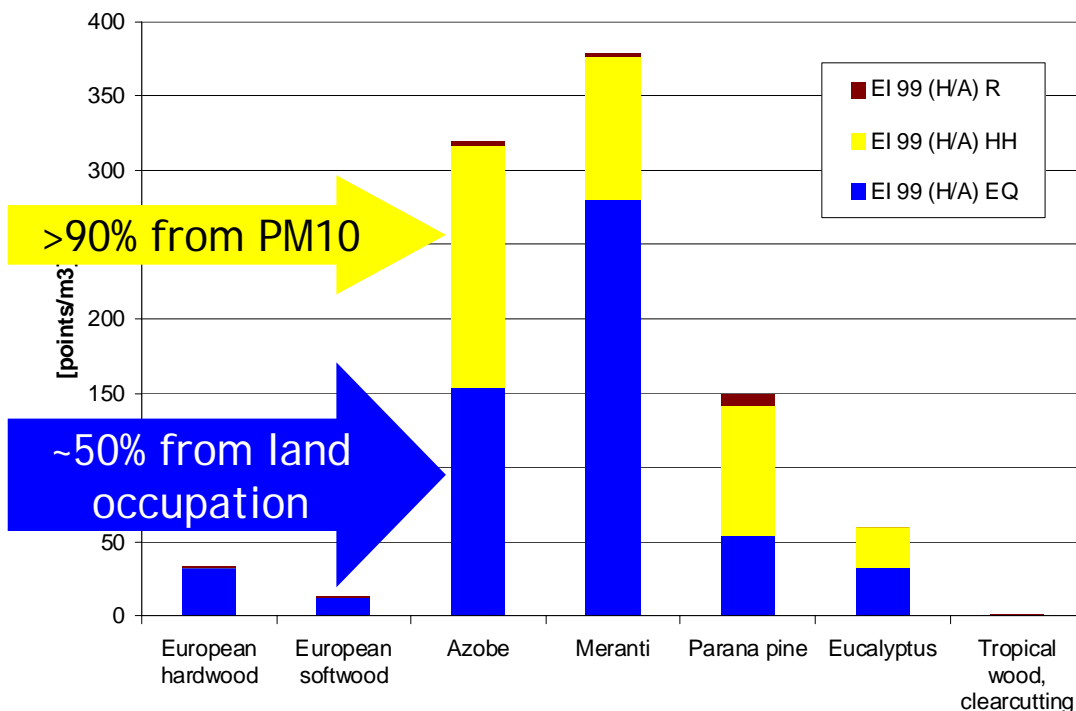
Input	Unit	Azobe at forest road	Meranti at forest road	Pparaná pine at forest road	Eucalyptus at forest road
Location		CM	MY	BR	TH
Unit		m3	m3	m3	m3
diesel, burned in building machine	MJ	551	310	1680	64.8
lubricating oil, at plant	kg	0.91	0.511	0	0.3
power sawing, without catalytic converter	h	0.1	0.0562	0.4	0.25

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Tropical wood at forest road: Ecoindicator 99 (H/A) / m3



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Tropical wood, land use



Input	Unit	Azobe at forest road	Meranti at forest road	Pparaná pine at forest road	Eucalyptus at forest road
Location		CM	MY	BR	TH
Unit		m3	m3	m3	m3
Occupation, tropical rain forest	m2a	17900	32600	0	0
Occupation, forest, intensive	m2a	0	0	6120	0
Occupation, forest, intensive, short-cycle	m2a	0	0	0	360
Transformation from / to	m2	239	435	136	18

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Tropical wood, emissions



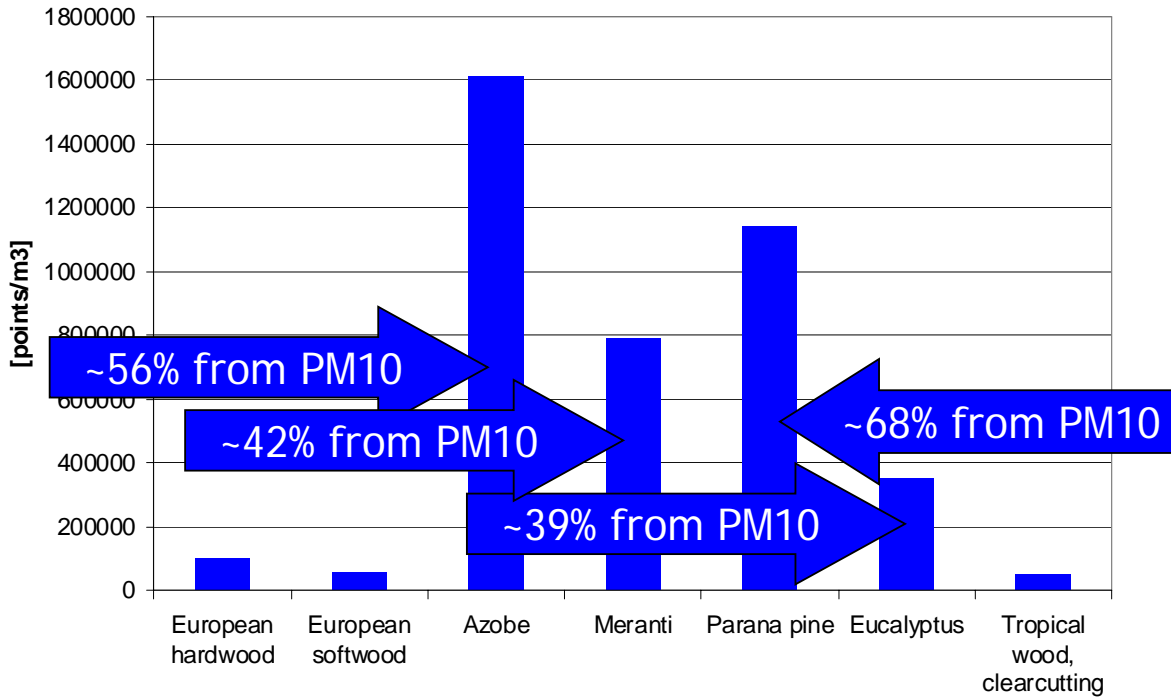
Input	Unit	Azobe at forest road	Meranti at forest road	Pparaná pine at forest road	Eucalyptus at forest road
Location		CM	MY	BR	TH
Unit		m3	m3	m3	m3
Dinitrogen monoxide	kg	0.0118	0.00711	0.00711	0.00197
Methane, biogenic	kg	1.72	1.03	1.03	0.287
Particulates, < 2.5 um	kg	6	3.6	3	0.99
Particulates, > 2.5 um, and < 10um	kg	5	3	2.5	0.825
Particulates, > 10 um	kg	4	2.4	2	0.66

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Tropical wood at forest road: UBP 06 / m3



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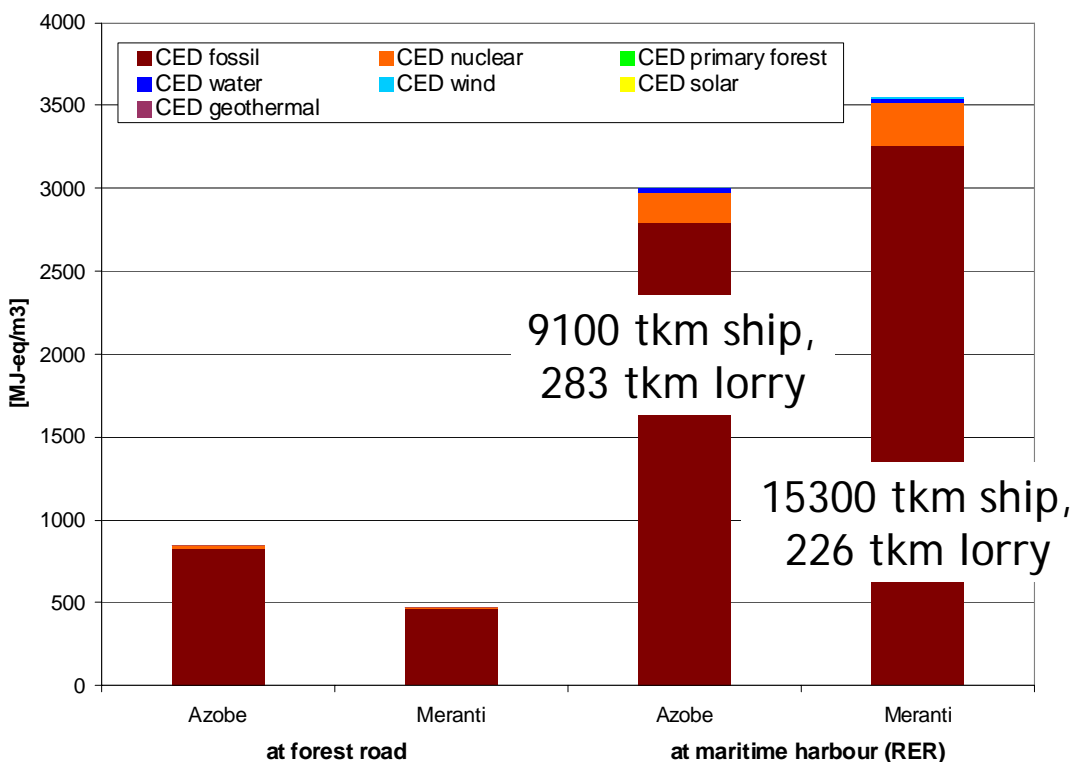


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Tropical wood, transports: CED / m3



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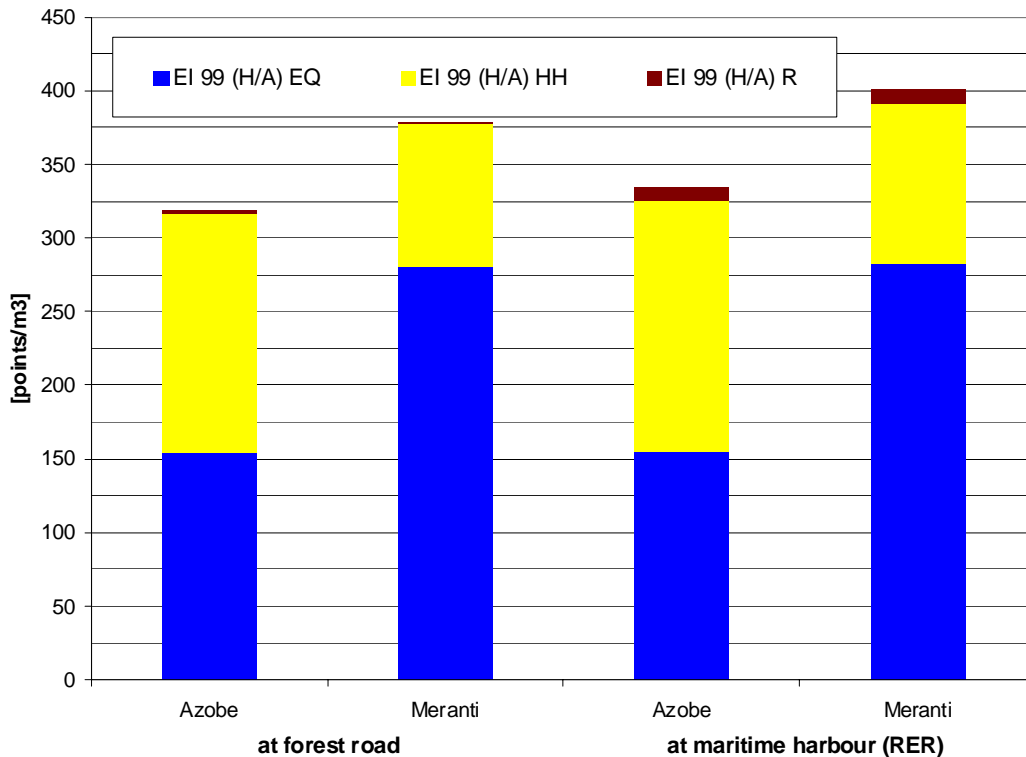


Tropical wood, transports: Ecoindicator 99 (H/A) / m3



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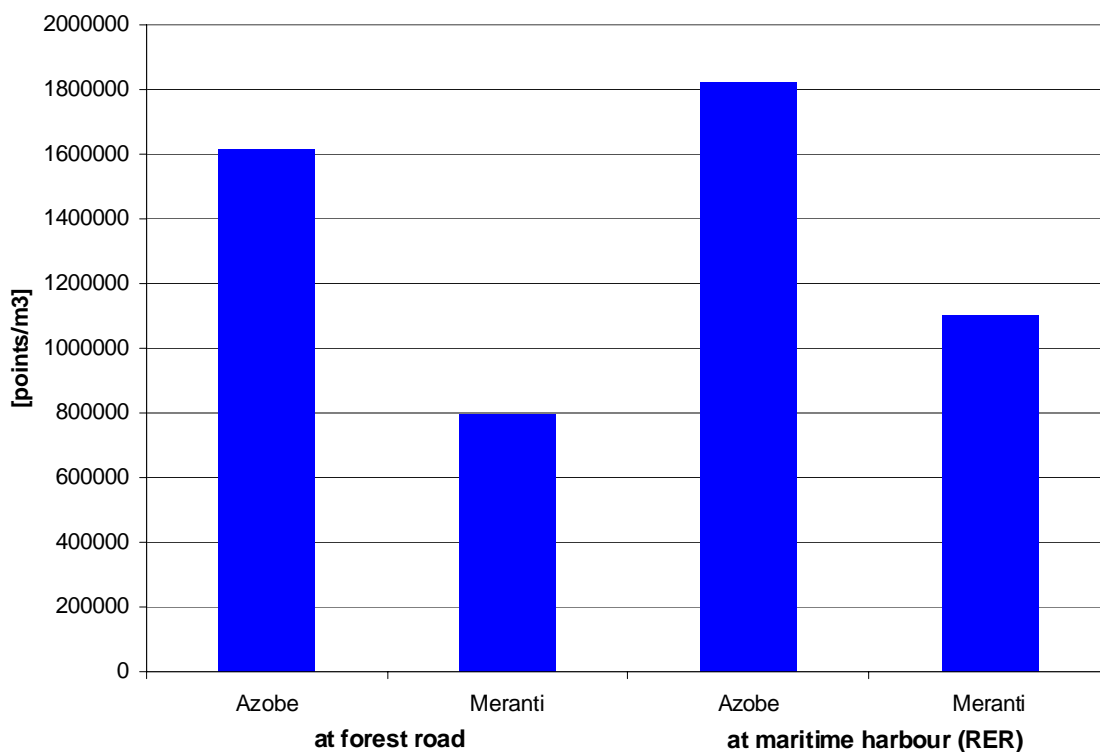


Tropical wood, transports: UBP 06 / m3



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Tropical wood: Conclusions



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- Available data are representative for FSC but not for common practice.
- Environmental (and social) services of tropical forests beyond wood production are not included even though use of tropical timber from sustainable forest management can help to protect rainforests.
→ Assessment of implications of the use of tropical wood in a consequential way?
- Ecoindicator 99 is not suitable for assessing impacts of sustainable tropical timber production.

