



BioXchange houtstromen
Nico Leek

Woody biomass market information



- Used wood GER, NL
- Industrial wood residues NL, GER, SW
- Forestry biomass SW, UK, PL



Outcome data collection

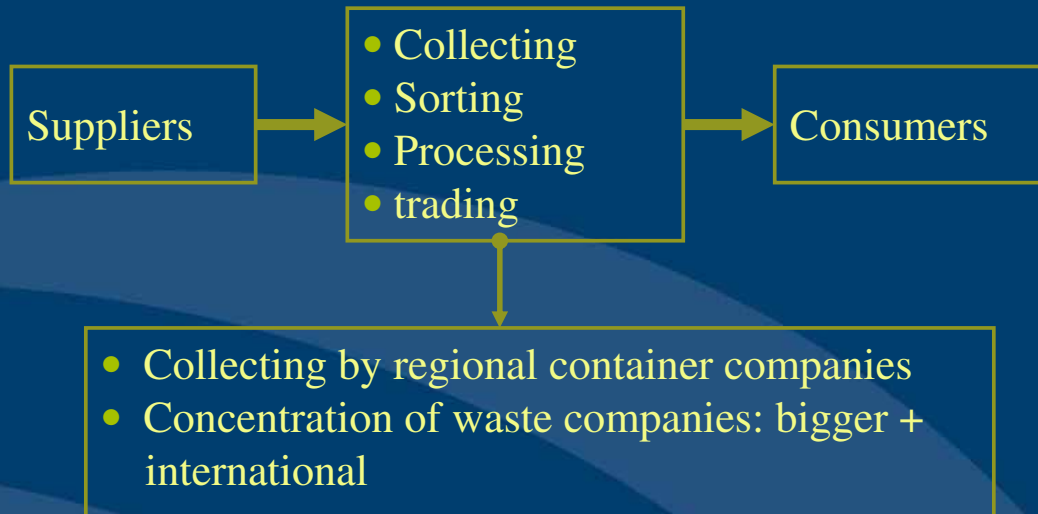
- Market Information on:
 - Market structure
 - Availability
 - Primary disposers
 - Domestic uses
 - Exports
 - Wood prices
 - Market developments



Recovered wood:

1. *Used wood* (or 'post-consumer' wood: demolition wood, timber from building sites, wood fractions from residential, industrial and commercial activities including packaging materials.)
2. *Industrial wood residues* (wood released during processing of [round] wood)

Used wood chain:



Marktstructuur oud hout



1. Primaire ondoeners: huishoudens, gemeentelijke depots, bedrijfsafval en bouw-en sloop projecten
2. Inzamelaars afval en afvalhout: regionale containerbedrijven
3. Bewerkers, sorteerdere en handelaren
4. Afnemere: platenindustrie, diverse producten en energiebedrijven

Oud hout studie in Duitsland



- Prof. Udo Mantau, Universiteit Hamburg
- Uitvoerige studie gestart voor 2001 betaald door houtindustrie
- Identificatie bedrijven: 1800 aangeschreven → 1050 geïdentificeerd met hout → respons 955
- Vervolgstudie voor 2003: 225 bedrijven

Duitsland: bedrijven & hh oud hout



Trade volume (amount gross), collected quantities 2001 and projection 2003 by company size categories

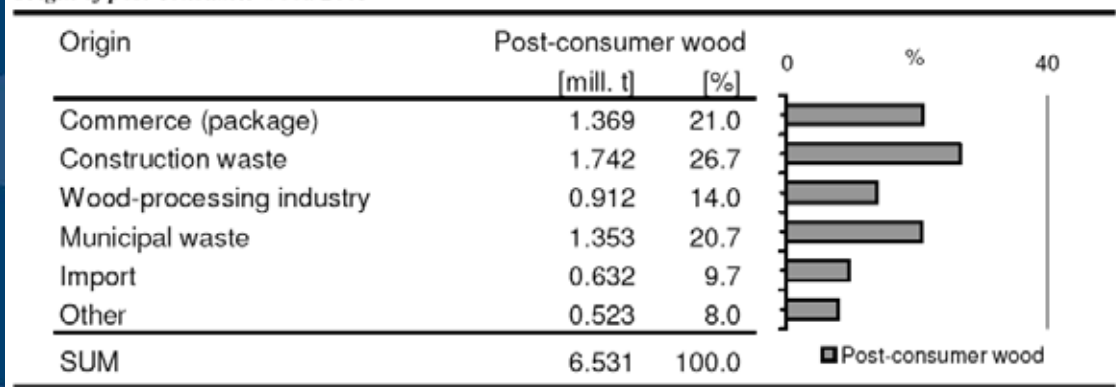
Company size	Companies 2001		Volume traded 2001		Volume traded 2003		
	N	[%]	[mill. t]	[%]	[mill. t]	[m. t oven-dry*]	[%]
up to 499 t	272	28.5	0.047	0.8	0.047	0.038	0.6
500-999 t	142	14.9	0.096	1.6	0.079	0.064	1.1
1,000-2,499 t	210	22.0	0.330	5.3	0.265	0.212	3.6
2,500-4,999 t	113	11.8	0.397	6.4	0.471	0.377	6.5
5,000-9,999 t	85	8.9	0.546	8.8	0.714	0.571	9.8
10,000-19,999 t	56	5.9	0.701	11.4	1.172	0.937	16.1
20,000-49,999 t	48	5.0	1.281	20.8	2.021	1.617	27.7
50,000 t and more	29	3.0	2.772	44.9	2.518	2.015	34.6
SUM	955	100.0	6.170	100.0	7.287	5.830	100.0

* conversion factor tons air-dry to tons oven-dry: 0.8



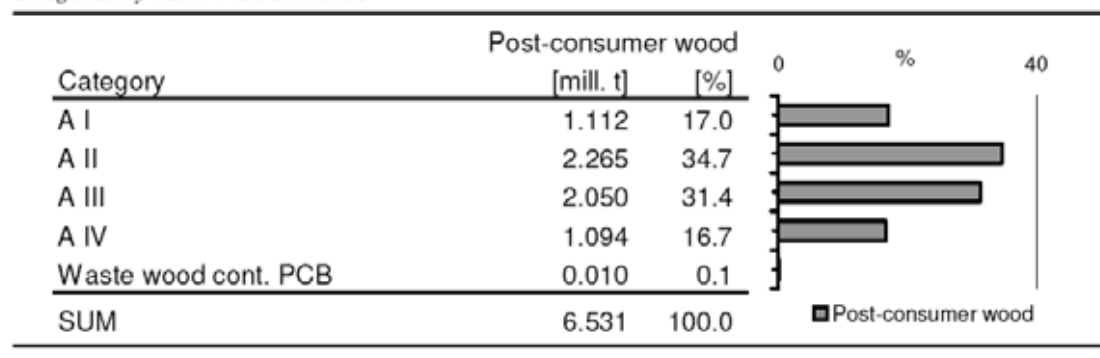
Duitsland: herkomst

Origin of post-consumer wood 2003



Duitsland: kwaliteit

Categories by waste wood ordinance



Duitsland: verkoop



Post-consumer wood utilization by company size category (2001)

Company size	Companies	Resales	To final user		To other conditioners	
	N	[mill. t]	[mill. t]	[%]	[mill. t]	[%]
up to 499 t	272	0.046	0.012	25.7	0.034	74.3
500-999 t	142	0.093	0.035	37.6	0.058	62.4
1,000-2,499 t	210	0.326	0.124	38.0	0.202	62.0
2,500-4,999 t	113	0.378	0.188	49.7	0.190	50.3
5,000-9,999 t	85	0.532	0.288	54.2	0.244	45.8
10,000-19,999 t	56	0.677	0.418	61.8	0.258	38.2
20,000-49,999 t	48	1.219	1.041	85.4	0.178	14.6
50,000-99,999 t	19	1.150	1.146	99.7	0.004	0.3
100,000 t and more	10	1.562	1.562	100.0	0.000	0.0
SUM	955	5.983	4.814	80.5	1.169	19.5

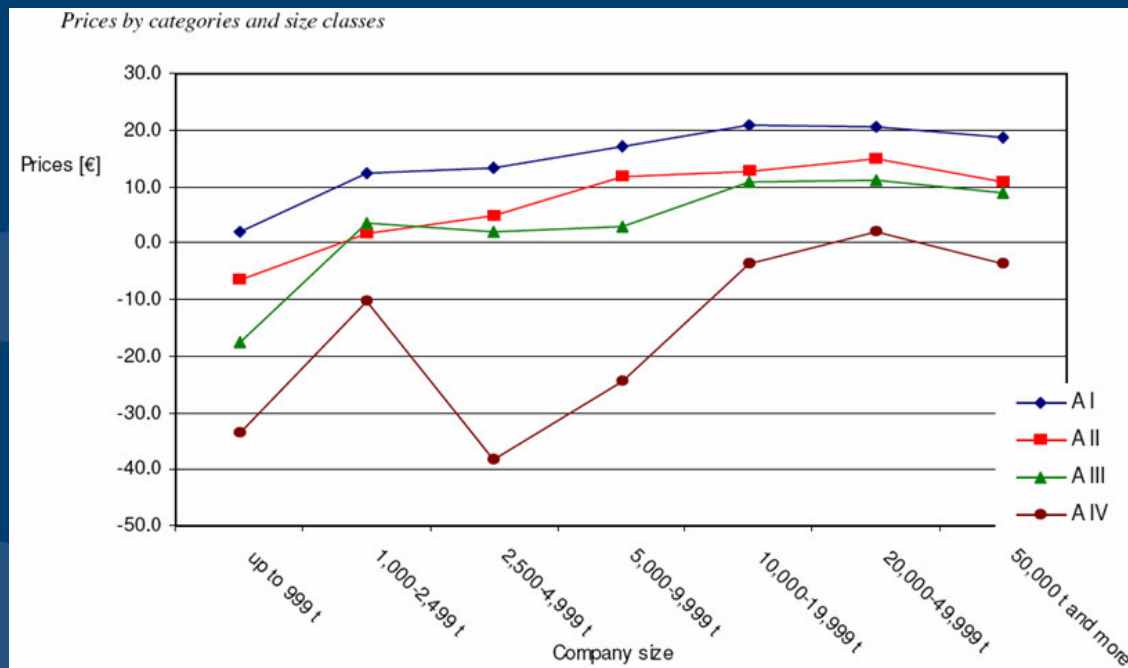
Duitsland: bestemming



Domestic distribution

	2001		2003	
	[mill. t]	[%]	[mill. t]	[%]
Purchaser inland				
Panel industry (substantial)	1.309	25.6	0.958	15.2
Composting/other (substantial)	0.090	1.8	0.053	0.8
Energetic utilization	2.506	49.0	4.345	69.1
Other p.-c. wood disposers	1.169	22.9	0.734	11.7
Commodity trade*	-	-	0.122	1.9
Disposal	0.037	0.7	0.012	0.2
Others	0.001	0.0	0.067	1.1
SUM	5.112	100.0	6.291	100.0

Duitsland: prijzen



Results Post-Consumer wood GER



- Extensive study: 955 companies questionaired
- Market volume in 2003 is 6.5 million tons (former estimates 12 million tons)
- Use for energy 72 % (2001: 56 %)
- 60 % of trade with fixed contracts
- Growing market concentration

Studie oud hout in NL in 2003



- Keuze voor bedrijven met sorteer en handelsfunctie
- Verzonden naar 23 bedrijven
- Respons 18 bedrijven

Bedrijven & hoeveelheden oud hout



Size distribution of companies involved in logistics, sorting and trading of used wood in The Netherlands, representing 90% of all used wood trading

Company size	Number of companies		Amount of used wood	
		%	kton	%
up to 4.999 t	17		9	1
5.000 - 10.000 t	11		20	2
11.000 - 20.000 t	11		40	3
21.000 - 50.000 t	33		226	18
51.000 - 130.000 t	11		205	16
Over 130.000 t	17		750	60
Total	100		1,250	100

Beschikbaarheid oud hout in kton



	Totaal	Export	Verbruik
A hout	495	280	215
B hout	705	655	50
C hout	50	35	15
Totaal	1.250	970	280
Totaal (100 %)	1.390		

Export oud hout in kton



exportland	Spaanplaatindustrie	Energiebedrijven
Duitsland	168	353
Belgie	148	0
Zweden	0	48
Italie	250	0
totaal	566	401

Ontwikkelingen oud houtmarkt



- Minder winstgevend
- Handel in toenemende mate in handen van internationale afvalbedrijven
- Meer mix van A en B hout
- Stagnatie afzet in NL
- Inzet oud hout voor energie gefrustreerd door milieuwetgeving in NL
- Forse exportgroei naar energiebedrijven in D

Forest Biomass



- Story of potentials
- Products: logging residues and small sized trees
- National estimates for energy wood

	million ton d.s.	TWh
PL	3.1- 6.2	17 – 33
UK	1.9	10
SWED	6 – 19.5	30 – 95

- Estimations for regional forest potentials possible with model Skogforsk Yield (Forest Energy for stands)

Balance of wood resources (Mio m³)



domestic sources	actual production	potential	re-serve	domestic users	actual consumption	future consumption	addit. needs
logs	30,3	56,9	9,4	pulp industry	6,4	8,9	2,5
industrial wood	17,2			panel industry	16,8	17,0	0,2
forest rest w.	7,6	32,9	25,3	sawnwood ind.	29,9	33,1	3,2
SBP	10,4	11,6	1,2	oth. mater. u.	3,0	4,7	1,7
bark	2,2	2,4	0,2	energy use > 1 MW	9,8	13,7	3,9
other IRW	3,4	4,8	1,4	energy use < 1MW	3,4	3,9	0,5
used wood	10,0	13,5	3,5	households	12,3	12,3	
landscape c.m.	0,6	1,4	0,8	Potential reserve:		29,9	
total	81,7	123,5	41,8	total	81,7	93,6	11,9

potential and future uses: as far as information is available; potential reserve = potential – actual uses – future uses



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