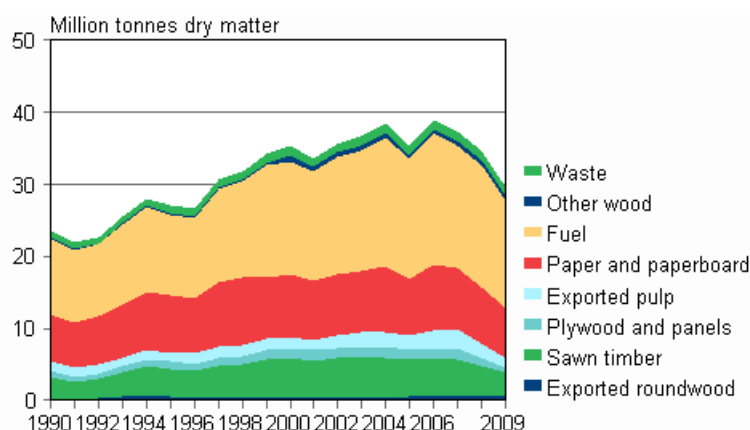


Forest accounts 2009

One-half of wood material used in Finland is burned

Fifty per cent of the total volume of wood material used in Finland in 2009 was burned. Twenty-four per cent of the wood material was tied up in paper and board, 11 per cent in sawn timber, 3 per cent in wood boards and 5 per cent in exported pulp. These data derive from the use and mass balances in the Forest accounts compiled by Statistics Finland.

Tying up of wood material in end products in 1990-2009



The large proportion of fuel use is mainly due to the combustion of the forest industry's wood wastes, such as bark and spent liquor. The proportion has not fluctuated notably in the 2000s although the share of burning has also grown due to increased use of forest chippings in energy production.

The volumes of used wood material have been calculated as dry matter. For example, the average dry matter content of fresh raw timber is 43 per cent. The forest industry's spent liquors contain approximately 70 per cent and board an average of 65 per cent of dry wood matter. In addition to wood matter, paper and board also contain diverse coating and filler substances.

Forest accounts are compiled from statistics produced by the Finnish Forest Research Institute, Statistics Finland, the Finnish Forest Industries Federation, and the National Board of Customs on the supply and use of wood, and from related national accounts figures for the period between 1990 and 2009.

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Appendix table 1. Use balance 2009

	Round wood	Fuel wood	Forest chips	Residues from ind.	Sawn wood	Wood-based panels	Mechan. pulp	Chemic. pulp	Paper and board	Waste liquors	Recycl. paper
	1 000 cubic metres						1 000 tonnes				
BASIC SUPPLY											
Fellings	41 990	5 710	5 710								
Import	4 322	1 022		3 868	527	326	3	349	405		35
Production and other supply	0	0	0	14 509	8 072	1 067	3 214	5 518	10 602	9 420	725
Export	683	7		498	5 109	833	135	1 370	9 688		216
TOTAL SUPPLY	45 629	6 725	6 092	17 879	3 490	560	3 082	4 497	1 319	9 420	544
FOREST INDUSTRY											
Sawing and planing											
as raw material	18 380										
production				9 680	8 072						
Wood-based panels											
as raw material	2 110			290							
production				1 734		1 067					
Mec. pulp prod.											
as raw material	7 530			1 570							
production				535			3 214				
Chem. pulp prod.											
as raw material	23 140			4 500							
production				2 560				5 518		9 420	
Paper, board prod.											
as raw material							3 082	4 397			544
production									10 602		
TOTAL USE AS RAW MATERIAL	51 160			6 360			3 082	4 397			544
OTHER USE											
Power plants as fuel		1 022	5 421	8 039						8 971	
Small-size dwellings as fuel		5 363	671								
Other industries and changes in inventories, as raw material	-5 531	340		3 480	3 490	560		100	1 319	449	
TOTAL	-5 531	6 725	6 092	11 519	3 490	560		100	1 319	9 420	

Appendix table 2. Mass balance 2003–2009

	2003		2004		2005		2006		2007		2008		2009	
TIMBER AND PRODUCTS TOTAL														
million dry-matter tons of wood														
	in	out	in	out	in	out	in	out	in	out	in	out	in	out
Roundwood	29,6		30,6		28,3		30,4		31,3		28,9		19,6	
Fuel wood	2,3		2,3		2,3		2,3		2,3		2,9		2,9	
Forest chips	0,9		1,2		1,3		1,5		1,3		1,9		2,6	
Net import of residues	0,5		0,8		0,9		1,0		1,1		1,6		1,6	
Recycled paper	0,4		0,5		0,4		0,4		0,5		0,5		0,4	
TOTAL	33,7		35,4		33,2		35,6		36,4		35,7		26,8	
Forest industry products		17,7		18,2		16,3		18,2		17,7		14,9		12,4
Sawn goods		5,6		5,5		5,0		5,0		5,1		4,1		3,3
Veneer and boards		1,4		1,5		1,5		1,5		1,5		1,3		0,8
Exported pulp		2,2		2,1		1,8		2,5		2,6		1,9		1,4
Paper and cardboard		8,5		9,1		8,0		9,2		8,6		7,7		6,9
Fuel		16,7		17,8		16,5		18,2		16,9		17,1		14,9
Power plants		14,3		15,4		14,1		15,8		14,5		14,5		12,3
Small-size dwellings		2,4		2,4		2,4		2,4		2,4		2,6		2,6
Other goods		0,6		0,6		0,6		0,6		0,6		0,6		0,5
Wood waste		1,3		1,4		1,2		1,3		1,4		1,3		1,1
TOTAL		36,3		38,0		34,6		38,3		36,6		34,0		28,9
Losses, error		-2,6		-2,6		-1,4		-2,7		-0,1		1,8		-2,1
IMPORT AND EXPORT														
Thousand dry-matter tons of wood														
	import	export	import	export	import	export	import	export	import	export	import	export	import	export
Roundwood, waste wood	6 657	330	7 090	422	8 730	586	8 113	556	7 718	550	8 590	622	3 844	496
Saw logs, pulp wood	5 920	212	6 040	257	7 489	368	6 836	349	6 395	353	6 621	383	1 858	294
Residues	650	113	974	162	1 152	215	1 191	202	1 246	192	1 849	236	1 547	199
Fuel wood	87	5	76	3	89	3	86	5	77	5	120	3	439	3
Forest industry products	684	14 316	778	15 023	980	13 438	1 064	15 364	1 205	14 983	1 193	13 206	1 038	10 639
Sawn goods	141	3 349	166	3 373	211	3 142	239	3 168	259	2 903	195	2 457	216	2 197
Veneer and boards	179	1 197	189	1 276	209	1 216	234	1 267	264	1 213	274	1 002	219	637
Pulp	119	2 162	152	2 133	258	1 842	295	2 509	366	2 316	402	2 015	317	1 368
Paper and cardboard	245	7 608	271	8 241	302	7 238	296	8 420	316	8 551	322	7 732	263	6 297
Recycled paper	25	69	31	68	20	109	21	126	27	96	31	99	23	140

Appendix table 3. Data on environmental load and energy consumption 2000–2009

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Forest industry load to water bodies	1 000 t										
Suspended solid		18,2	18,5	17,4	21,5	18,4	14,4	20,4	15,4	15,1	12,0
Biological oxygen demand BOD7		17,9	15,6	17,1	16,5	13,7	11,6	13,3	12,3	10,4	8,3
Nitrogen emissions		2,8	2,8	2,6	2,6	2,6	2,5	2,7	2,7	2,4	2,2
Phosphorus emissions		0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,1
CO2 emissions from wood combustion ¹⁾	Milj. t	29,3	28,1	30,3	30,8	32,2	29,9	33,8	32,1	32,1	28,1
Industrial combustion		24,4	22,9	25,0	25,5	26,9	24,7	28,6	26,9	26,6	22,6
Small-scale combustion		4,9	5,2	5,3	5,3	5,3	5,2	5,2	5,2	5,5	5,5
Electricity consumption in forest industry	TWh	26,3	25,4	26,1	26,3	27,6	24,9	28,0	27,8	25,2	19,0
DD Manufacture of wood and wood products ²⁾		1,5	1,6	1,6	1,6	1,7	1,6	1,7	1,7	1,7	1,6
DE 21 Manufacture of pulp, paper, paper products		24,8	23,8	24,5	24,7	25,9	23,3	26,4	26,1	23,5	17,4
Fuel consumption in forestry and logging ³⁾	1 000 t	96,9	97,9	96,9	94,2	92,4	89,3	81,9	80,9	83,0	78,2

1) Incl. all wood based fuels

2) Does not include production of wooded furniture

3) Light fuel oil, motor gasoline

Sources: Finnish Forest Research Institute, Finnish Environment Institute, Finnish Forest Industries Federation, Stat.Finland/ Energy Statistics, VTT/TYKO-model

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Source: Forest accounts 2009, Statistics Finland