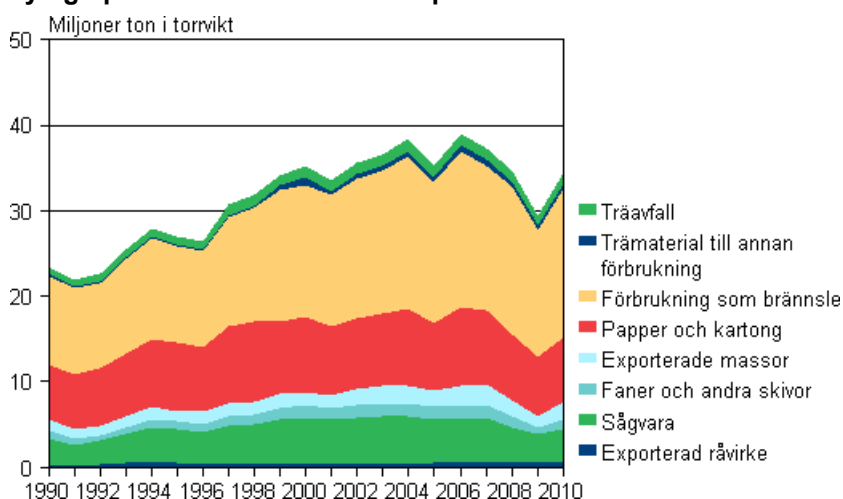


Forest accounts 2010

One-half of wood material used in Finland is burned

Fifty per cent of the total volume of wood material used in Finland in 2010 was burned. Twenty-two 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 6 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 1990-2010



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 2010.

Contents

Tables

Appendix tables

Appendix table 1. Use balance 2010.....3

Appendix table 2. Mass balance 2005–2010.....4

Appendix table 3. Data on environmental load and energy consumption 2000–2010.....5

Appendix tables

Appendix table 1. Use balance 2010

	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	52 590	5 740	6 909								
Import	7 218	175		4 864	628	397	7	412	446		31
Production and other supply				17 137	9 473	1 367	3 775	6 733	11 759	12 205	737
Export	600	22		798	5 838	1 016	165	1 994	10 804		161
TOTAL SUPPLY	59 208	5 893	6 909	21 203	4 263	748	3 617	5 151	1 401	12 205	607
FOREST INDUSTRY											
Sawing and planing											
as raw material	21 890										
production				11 370							
Wood-based panels											
as raw material	2 370					550					
production				2 167		1 367					
Mec. pulp prod.											
as raw material	8 500					1 650					
production				605					3 775		
Chem. pulp prod.											
as raw material	29 370					4 790					
production				2 995					6 733		
Paper, board prod.											
as raw material							3 617	5 051			579
production									11 759		
TOTAL USE AS RAW MATERIAL IN FOREST INDUSTRY	62 130			6 990			3 617	5 051			579
OTHER USE											
Power plants as fuel		175	6 238	9 783						11 624	
Small-size dwelling as fuel		5 363	671								
Other industries and changes in inventories, as raw material	-2 922	355		4 430	4 263	748		100	1 401	581	28
OTHER USE TOTAL	-2 922	5 893	6 909	14 213	4 263	748		100	1 401	12 205	28

Appendix table 2. Mass balance 2005–2010

	2005		2006		2007		2008		2009		2010	
TIMBER AND PRODUCTS TOTAL												
million dry-matter tons of wood												
	in	out	in	out	in	out	in	out	in	out	in	out
Roundwood	28,3		30,4		31,3		28,9		19,6		25,5	
Fuel wood	2,3		2,3		2,3		2,9		2,9		2,5	
Forest chips	1,3		1,5		1,3		1,9		2,6		3,0	
Net import of residues	0,9		1,0		1,1		1,6		1,3		1,6	
Recycled paper	0,4		0,4		0,5		0,5		0,4		0,4	
TOTAL	33,2		35,6		36,4		35,7		26,8		33,0	
Forest industry products		16,3		18,2		17,7		14,9		12,4		14,6
Sawn goods		5,0		5,0		5,1		4,1		3,3		3,9
Veneer and boards		1,5		1,5		1,5		1,3		0,8		1,1
Exported pulp		1,8		2,5		2,6		1,9		1,4		2,0
Paper and cardboard		8,0		9,2		8,6		7,7		6,9		7,6
Fuel		16,5		18,2		16,9		17,1		14,9		17,4
Power plants		14,1		15,8		14,5		14,5		12,3		14,8
Small-size dwellings		2,4		2,4		2,4		2,6		2,6		2,6
Other goods		0,6		0,6		0,6		0,6		0,5		0,6
Wood waste		1,2		1,3		1,4		1,3		1,1		1,3
TOTAL		34,6		38,3		36,6		34,0		28,9		33,9
Losses, error		-1,4		-2,7		-0,1		1,8		-2,1		-0,9
IMPORT AND EXPORT												
Thousand dry-matter tons of wood												
	2005		2006		2007		2008		2009		2010	
	import	export	import	export	import	export	import	export	import	export	import	export
Roundwood, waste wood	8 730	586	8 113	556	7 718	550	8 590	622	3 844	496	5 125	586
Saw logs, pulp wood	7 489	368	6 836	349	6 395	353	6 621	383	1 858	294	3 104	258
Residues	1 152	215	1 191	202	1 246	192	1 849	236	1 547	199	1 946	319
Fuel wood	89	3	86	5	77	5	120	3	439	3	75	9
Forest industry products	980	13 438	1 064	15 364	1 205	14 983	1 193	13 206	1 038	10 639	1 280	12 283
Sawn goods	211	3 142	239	3 168	259	2 903	195	2 457	216	2 197	257	2 394
Veneer and boards	209	1 216	234	1 267	264	1 213	274	1 002	219	637	335	801
Pulp	258	1 842	295	2 509	366	2 316	402	2 015	317	1 368	378	1 960
Paper and cardboard	302	7 238	296	8 420	316	8 551	322	7 732	263	6 297	290	7 023
Recycled paper	20	109	21	126	27	96	31	99	23	140	20	105

Appendix table 3. Data on environmental load and energy consumption 2000–2010

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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	13,8
Biological oxygen demand BOD7		17,9	15,6	17,1	16,5	13,7	11,6	13,3	12,3	10,4	8,3	9,2
Nitrogen emissions		2,8	2,8	2,6	2,6	2,6	2,5	2,7	2,7	2,4	2,2	2,4
Phosphorus emissions		0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,1	0,2
CO2 emissions from wood combustion ¹⁾	Milj. t	29,3	28,5	30,7	31,4	32,9	30,7	34,5	33,1	33,3	29,6	35,3
Industrial combustion		24,4	23,3	25,4	26,1	27,6	25,5	29,3	27,9	28,1	24,1	29,5
Small-scale combustion		4,9	5,2	5,3	5,3	5,3	5,2	5,2	5,2	5,2	5,5	5,8
Electricity consumption in forest industry	TWh	26,3	25,4	26,1	26,3	27,6	24,9	28,1	28,8	26,2	19,7	22,2
DD Manufacture of wood and wood products ²⁾		1,5	1,6	1,6	1,6	1,7	1,6	1,7	1,7	1,9	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	27,1	24,3	18,0	20,6
Fuel consumption in forestry and logging ³⁾	1 000 t	96,9	97,9	96,9	94,2	92,4	89,3	82,6	82,8	83,0	78,2	81,9

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 2010, Statistics Finland