

Timber Harvesting and Long-Distance Transportation of Roundwood in 2006



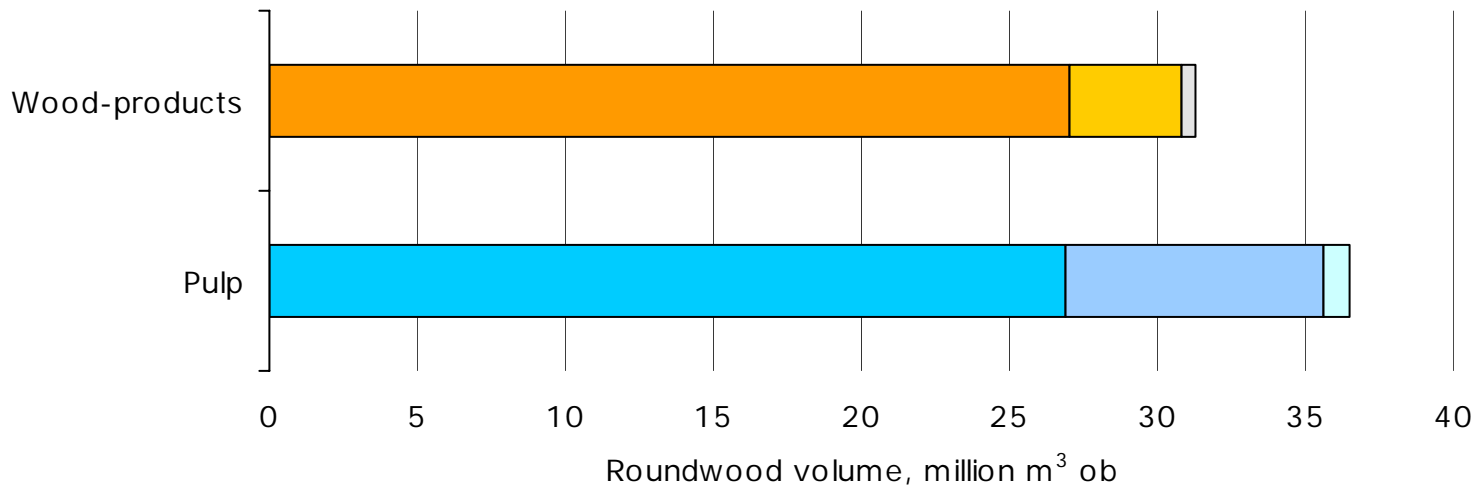
Arto Kariniemi

Target and Publications

- Includes volumes and direct harvesting costs of timber assortments concerning domestic roundwood by the forest industries and State forest enterprise as well as proportions of harvesting methods.
- Statistic covers 86 % of commercial roundwood.
- Look at also Finnish Statistical Yearbook of Forestry (Finnish Forest Research Institute), especially chapter 5 "Harvesting and transportation of roundwood."
- Publications

Metsätehon katsaus 19 (Metsäteho Review):
"Puunkorjuu ja kaukokuljetus vuonna 2005"
(Summary: Harvesting and Long-distance Transportation 2006)

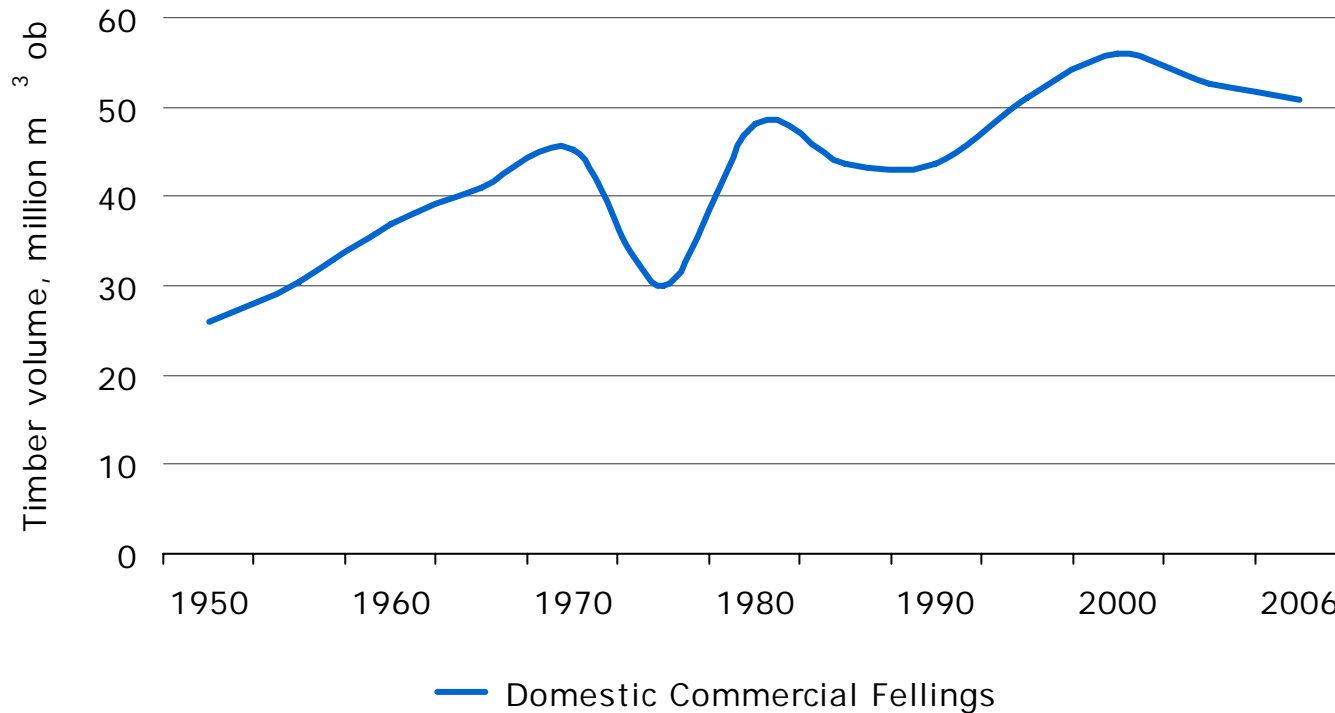
Roundwood Consumption by Category of Use 2005



- Sawmilling
- Plywood and Vaneer Industry
- Other Wood-based
- Chemical Pulp Industry
- Mechanical Pulp Industry
- Semi-chemical Pulp Industry

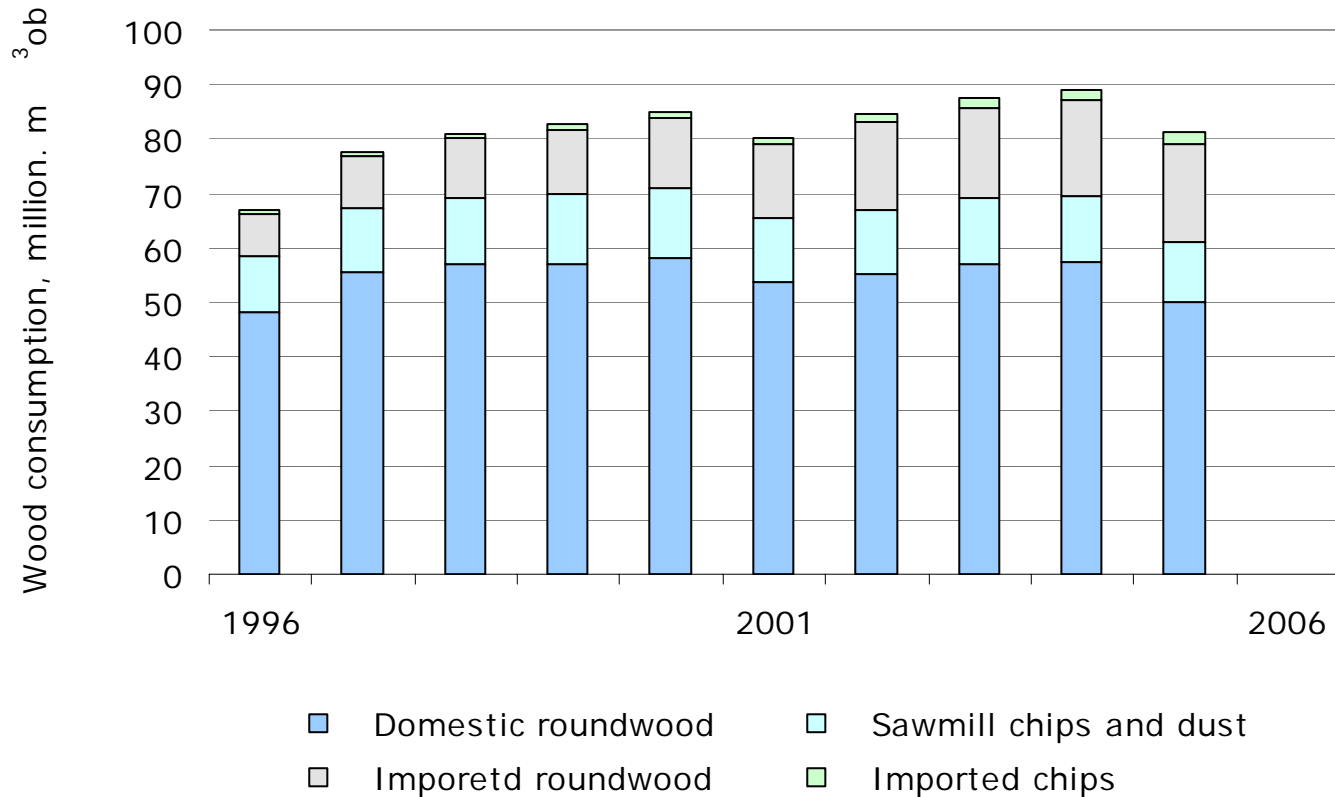
Source: Finnish Forest Research Institute

Domestic Commercial Fellings 1950 - 2006



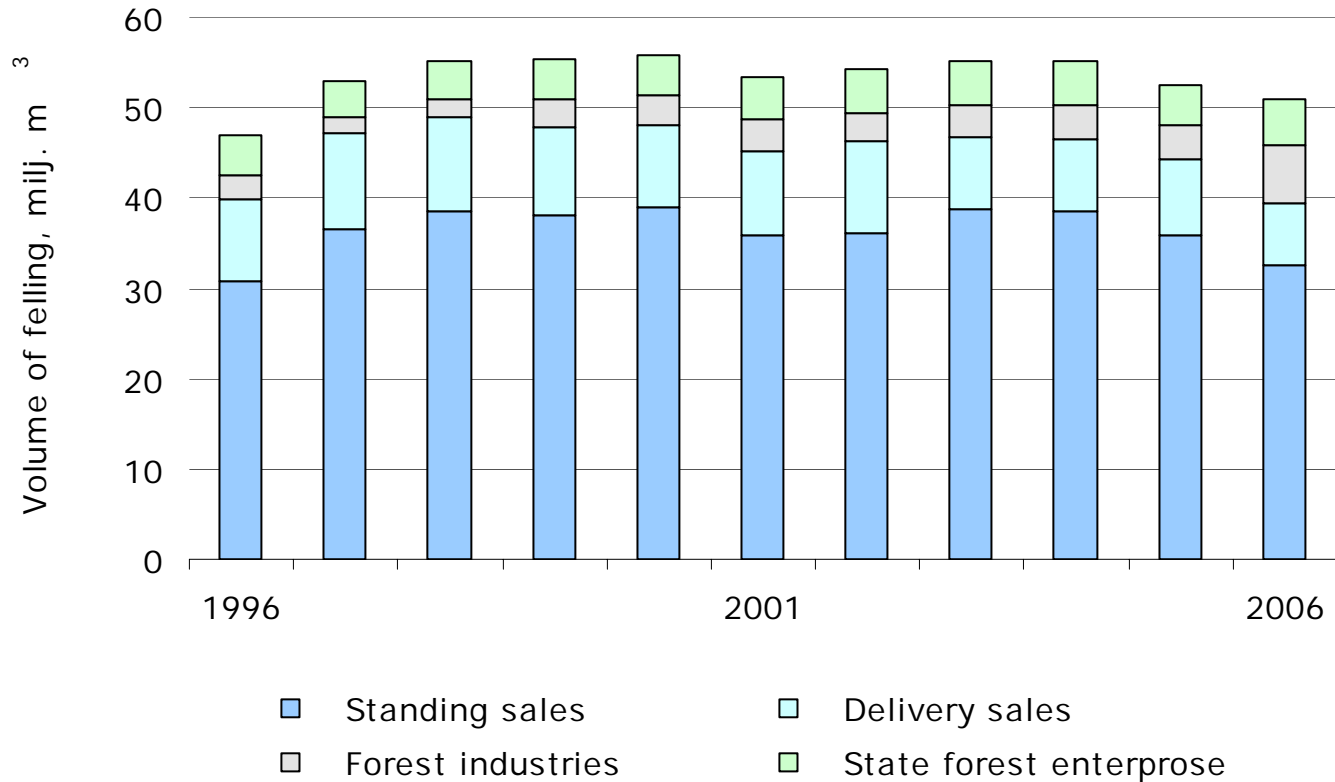
Source: Finnish Forest Research Institute

Roundwood Consumption by Forest Industries 1996 - 2006



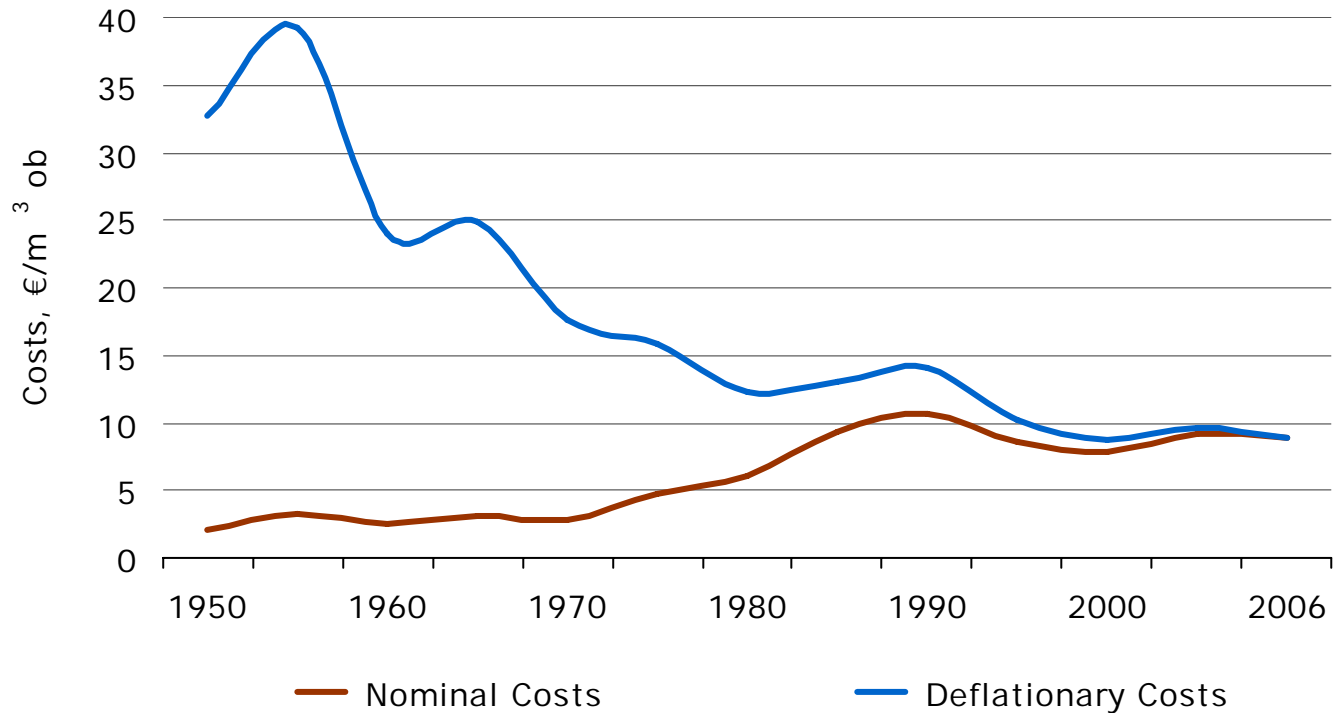
Source: Finnish Forest Research Institute

Commercial Fellings by Forest Ownership Category 1996 - 2006



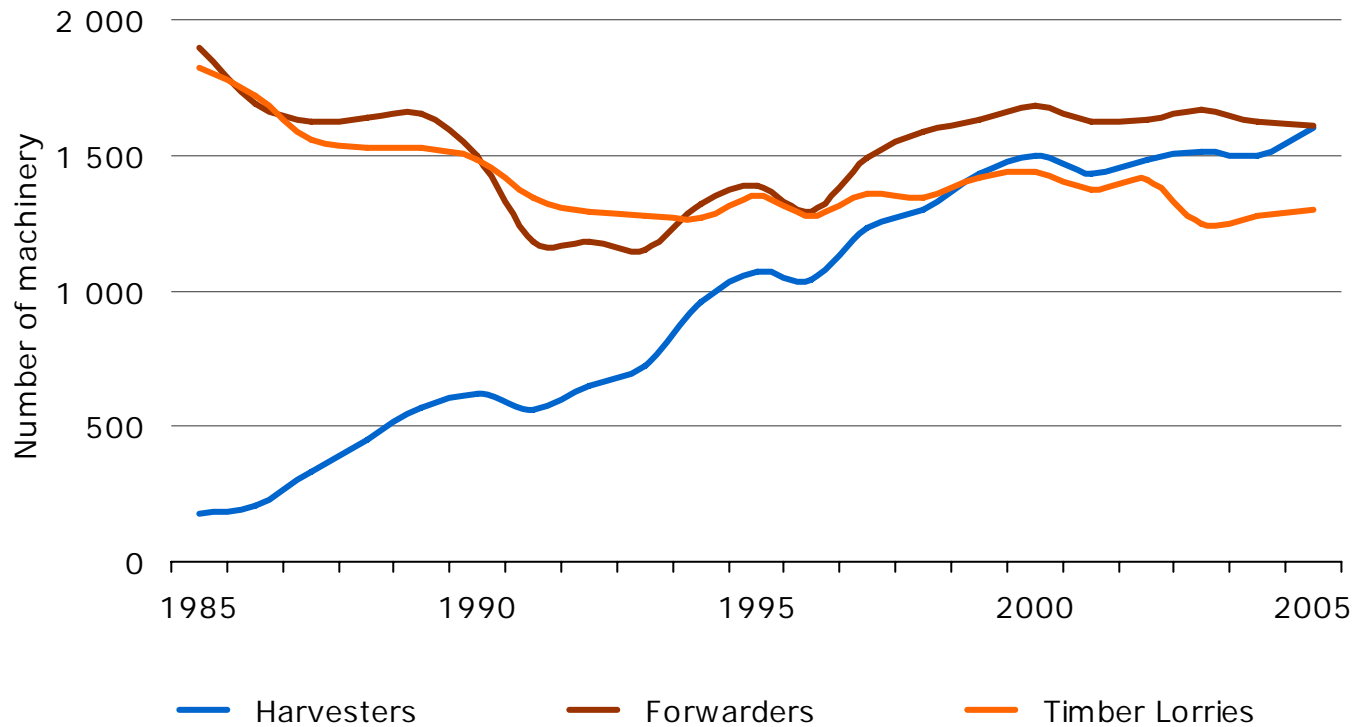
Source: Finnish Forest Research Institute

Unit Costs of Felling 1950 - 2006



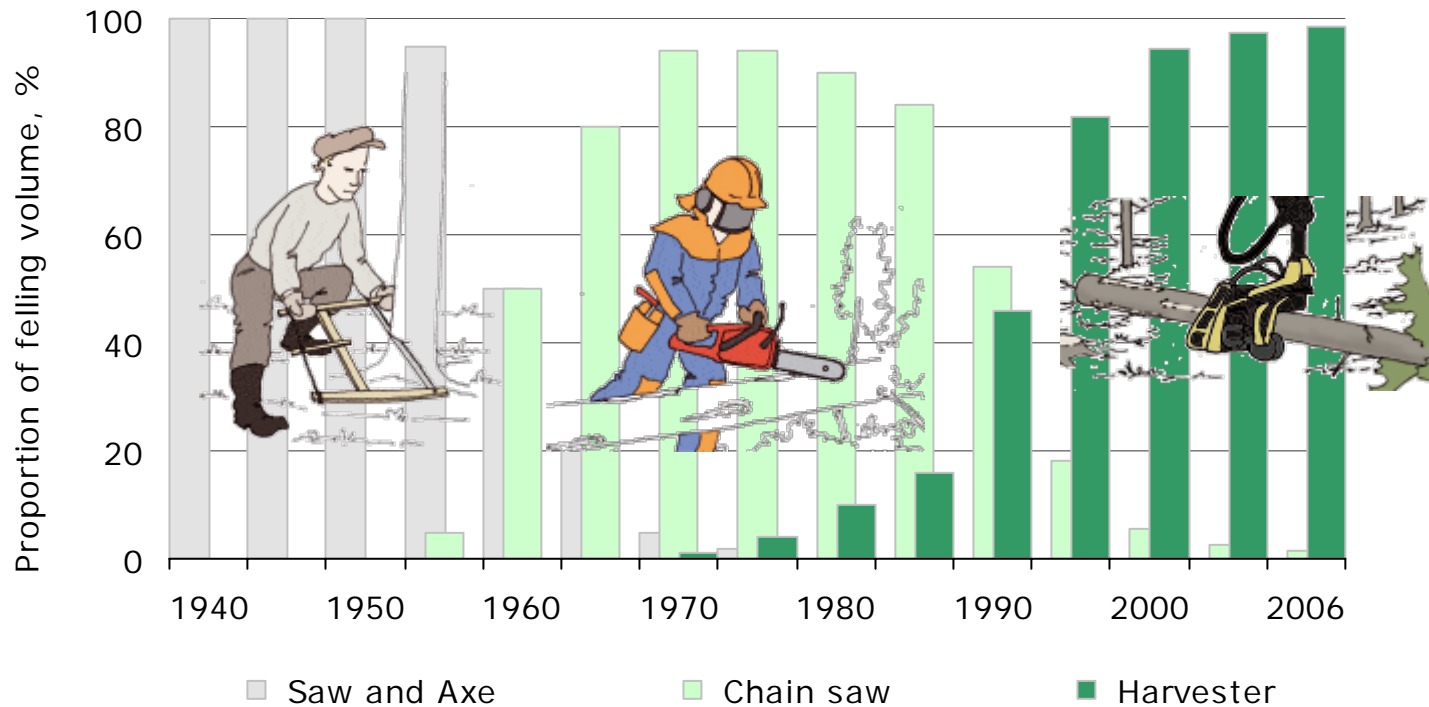
Real costs have been deflated by the wholesale price index (2006=100).

Number of Machines and Trucks 1985 - 2005

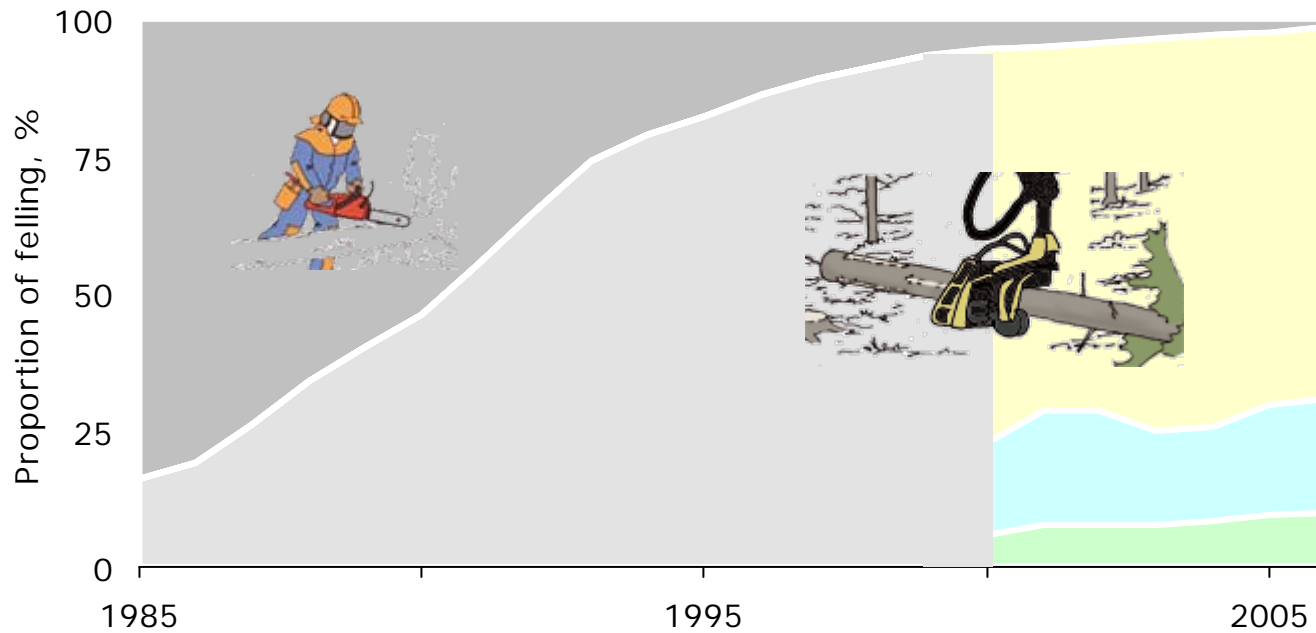


Source: Finnish Forest Research Institute

Felling Techniques 1940 - 2006



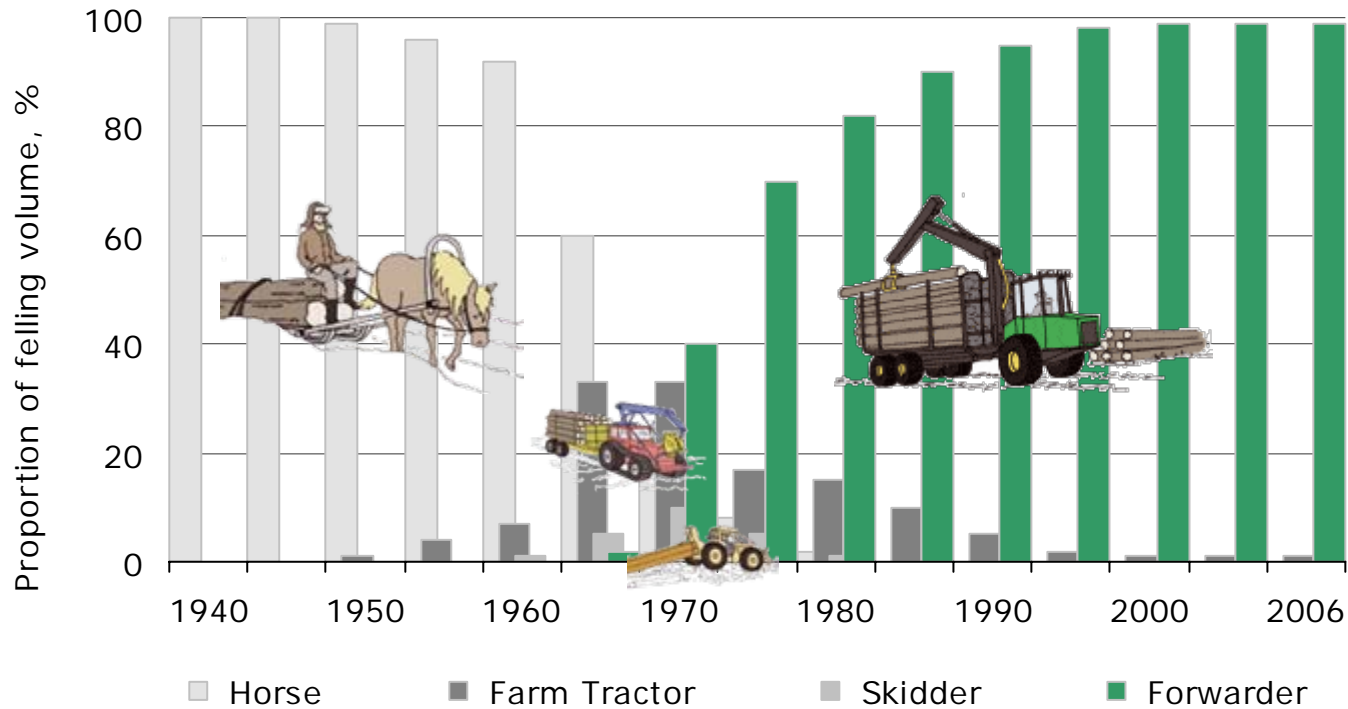
Felling Techniques 1985 - 2006



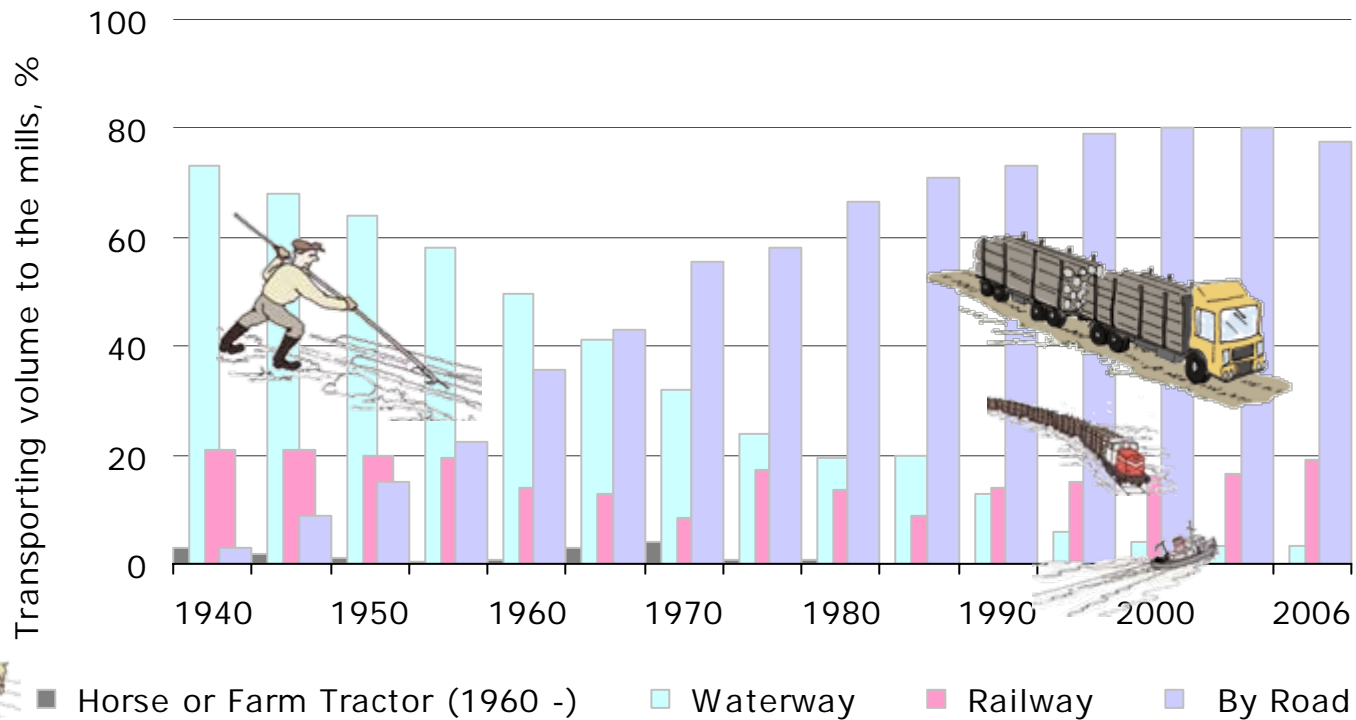
- Mechanised felling
- First thinning
- Other thinning
- Regeneration felling
- Motor-manual felling

2006:
98,4 %

Forest Haulage Techniques 1940 - 2006

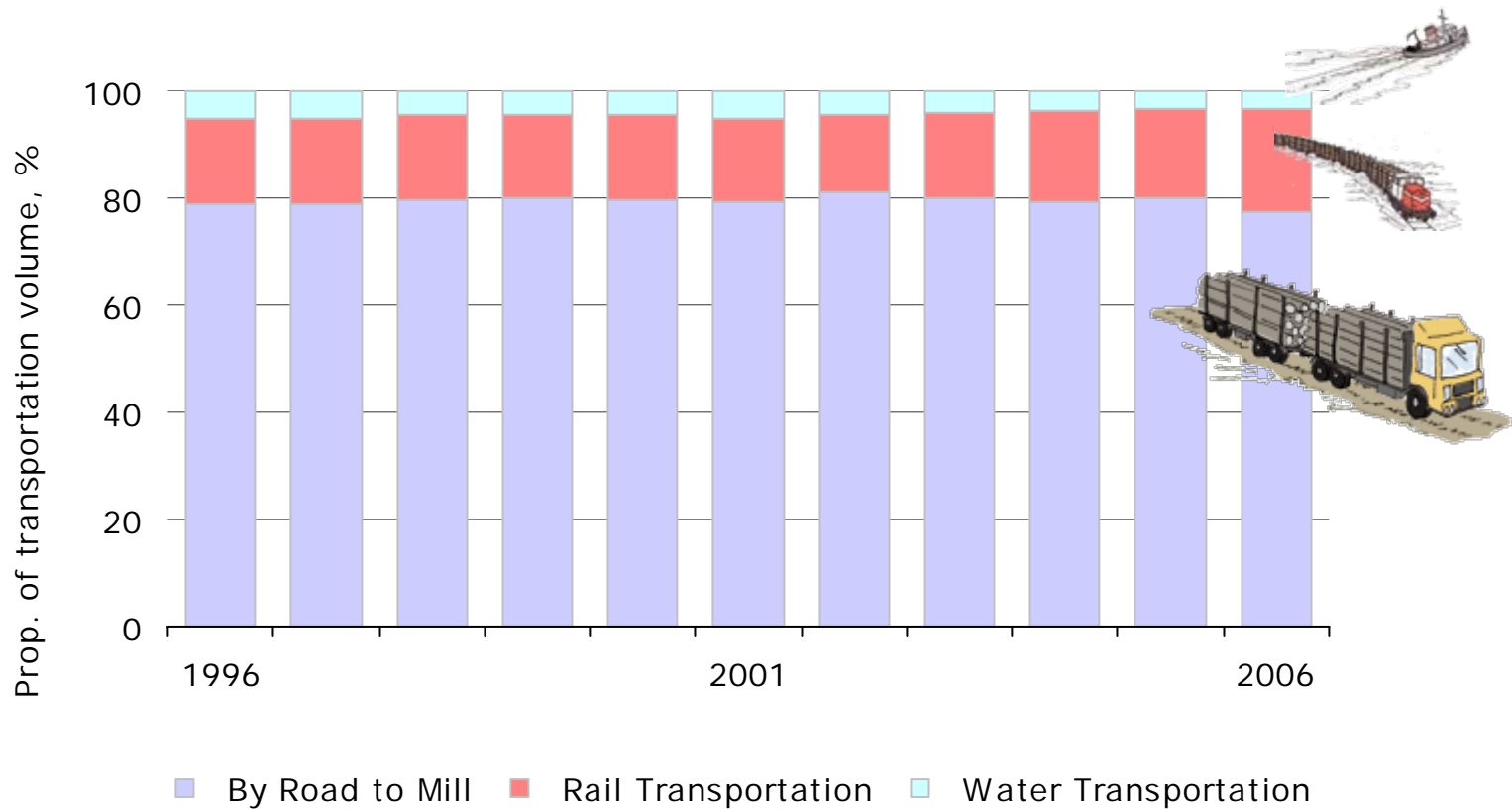


Long-Distance Transportation Techniques 1940 - 2006



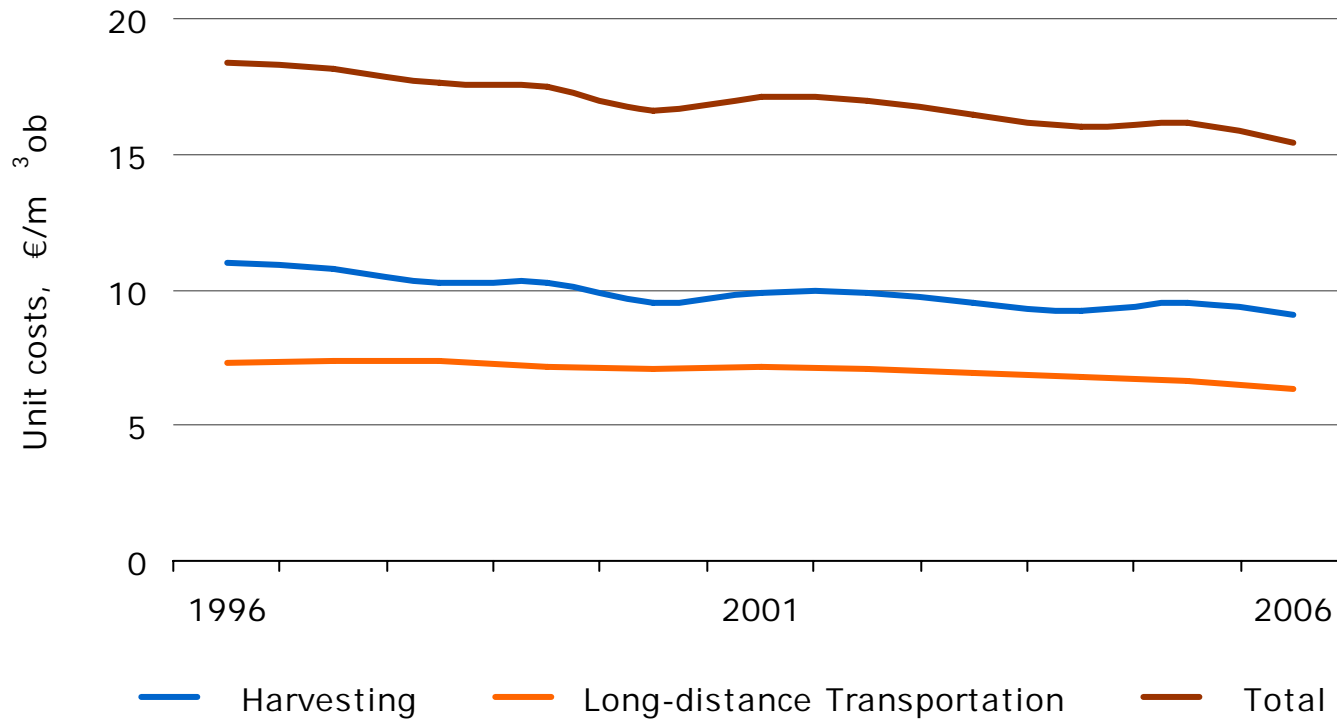
As share of total domestic roundwood transported to yhe mills.

Long-Distance Transportation Techniques 1996 - 2006



As share of total domestic roundwood transported to yhe mills.

Unit Costs of Harvesting and Long-Distance Transportation of Roundwood 1996 - 2006



Real costs have been deflated by Indexes of forest machinery costs and lorry traffic costs (2006=100).

Costs and Timber Volume 2006

	Costs		Timber volume	Transport volume	
	mill. €	%	mill. m ³ ob	mill. m ³ km ob	%
Harvesting	324,9		35,8		
Long-distance transportation	288,5	100		6 948	100
Road transportation	233,3	81		4 291	62
Rail transportation	47,8	17		2 261	33
Water transportation	7,4	3		397	6

Unit Costs of Felling by Felling Method 2006

	First thinning		Other thinning		Regeneration felling		Total	
	€/m ³ ob	%	€/m ³ ob	%	€/m ³ ob	%	€/m ³ ob	%
Harvesting							9,07	
Harvesting, machinery ^{*)}	14,14		12,01		7,04		8,83	
		10,1		21,6		68,4		100

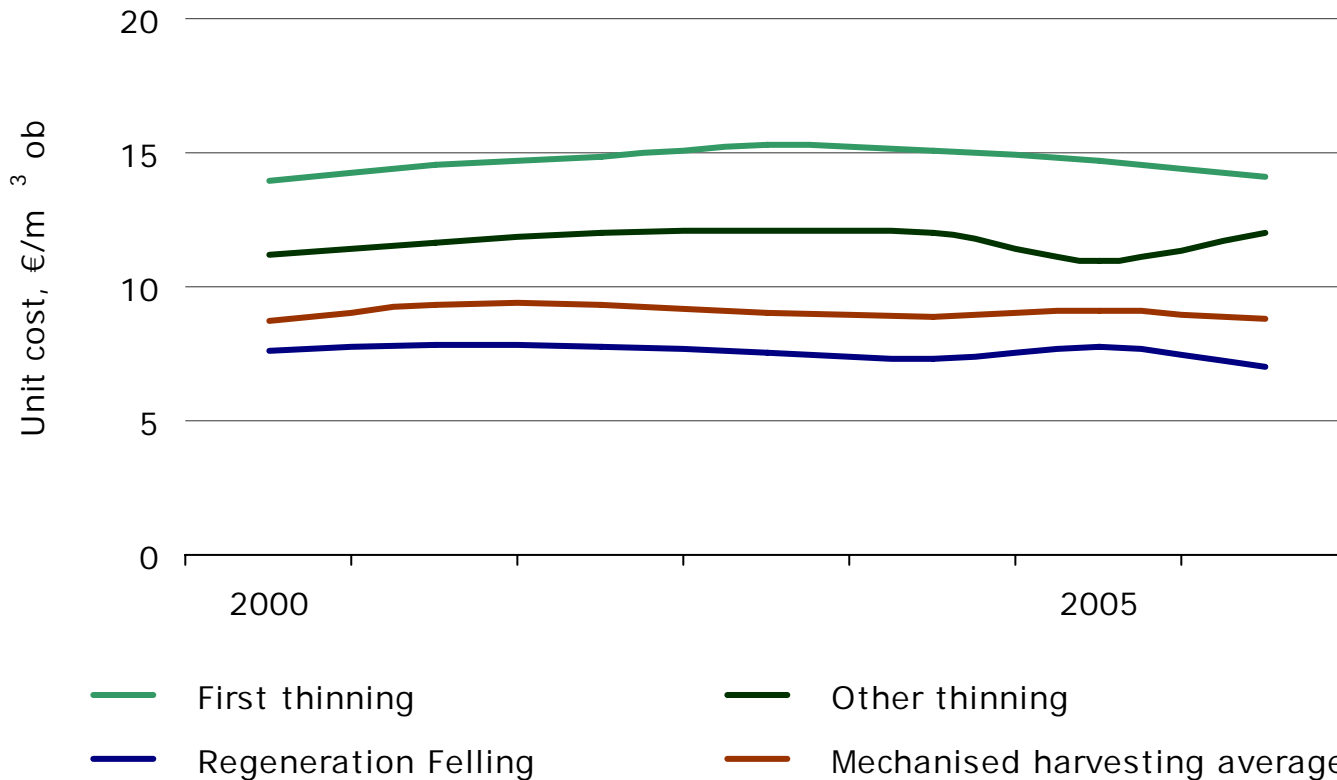
^{*)} Includes mechanised felling as well as forest haulage related to mechanised and motor-manual felling.

Unit Costs of Felling by Timber Assortments 2006

€/m ³ ob	logs			pulpwood			Grand
	Pine	Spruce	Birch	Pine	Spruce	Birch	
Harvesting							9,07
Mechanised harvesting *)	6,20	5,98	6,89	11,33	10,49	12,68	
			6,11			11,35	8,83
Long-distance transportation	6,01	5,24	7,42	7,00	6,51	7,27	
			5,66			6,91	6,36

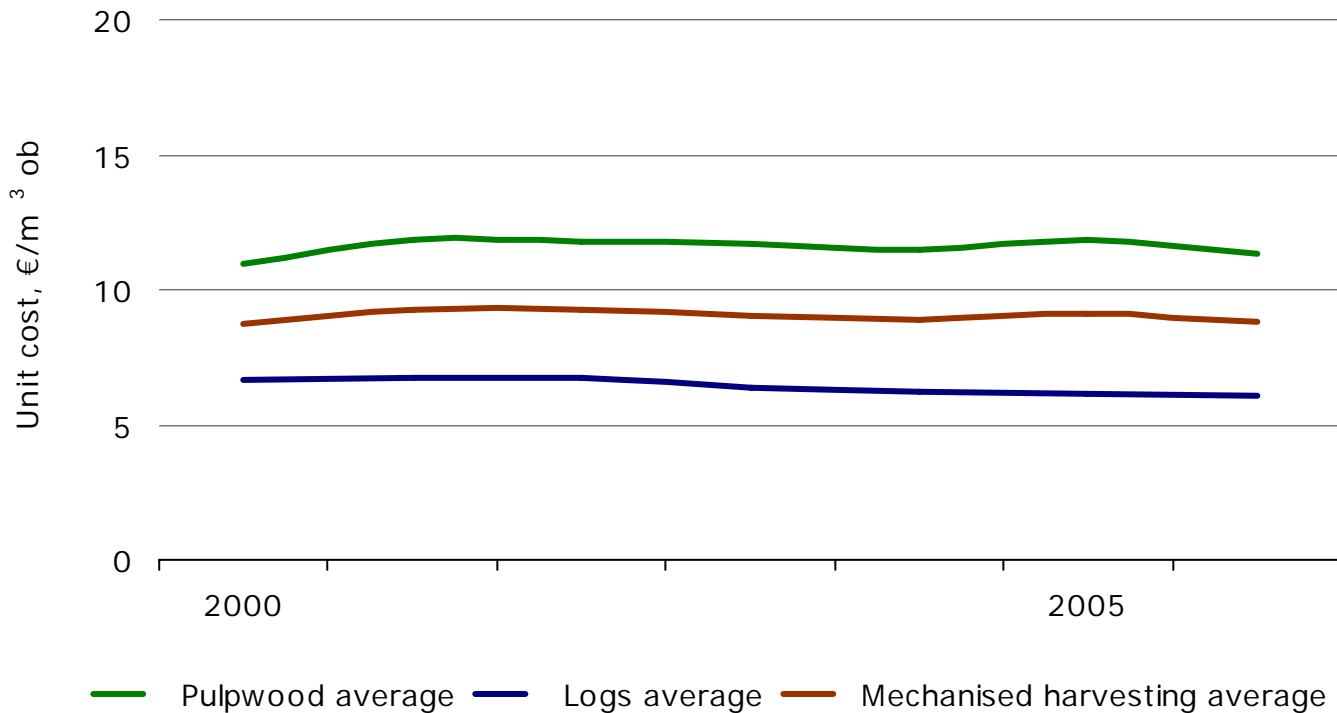
*) Includes mechanised felling as well as forest haulage related to mechanised and motor-manual felling.

Unit Costs of Mechanised harvesting by Felling Method 2000 – 2006



Real costs have been deflated by Index of forest machinery (2006=100).

Unit Costs of Mechanised harvesting by Timber Assortments 2000 - 2006

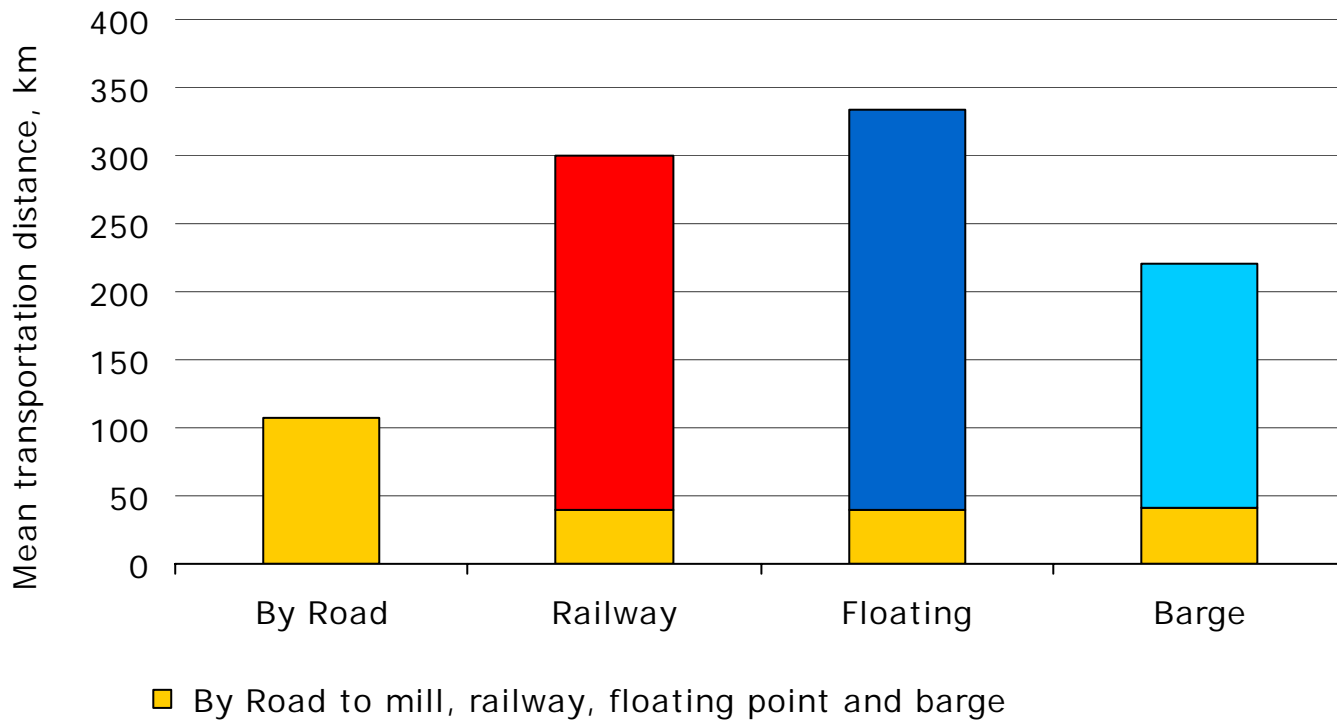


Real costs have been deflated by Index of forest machinery (2006=100).

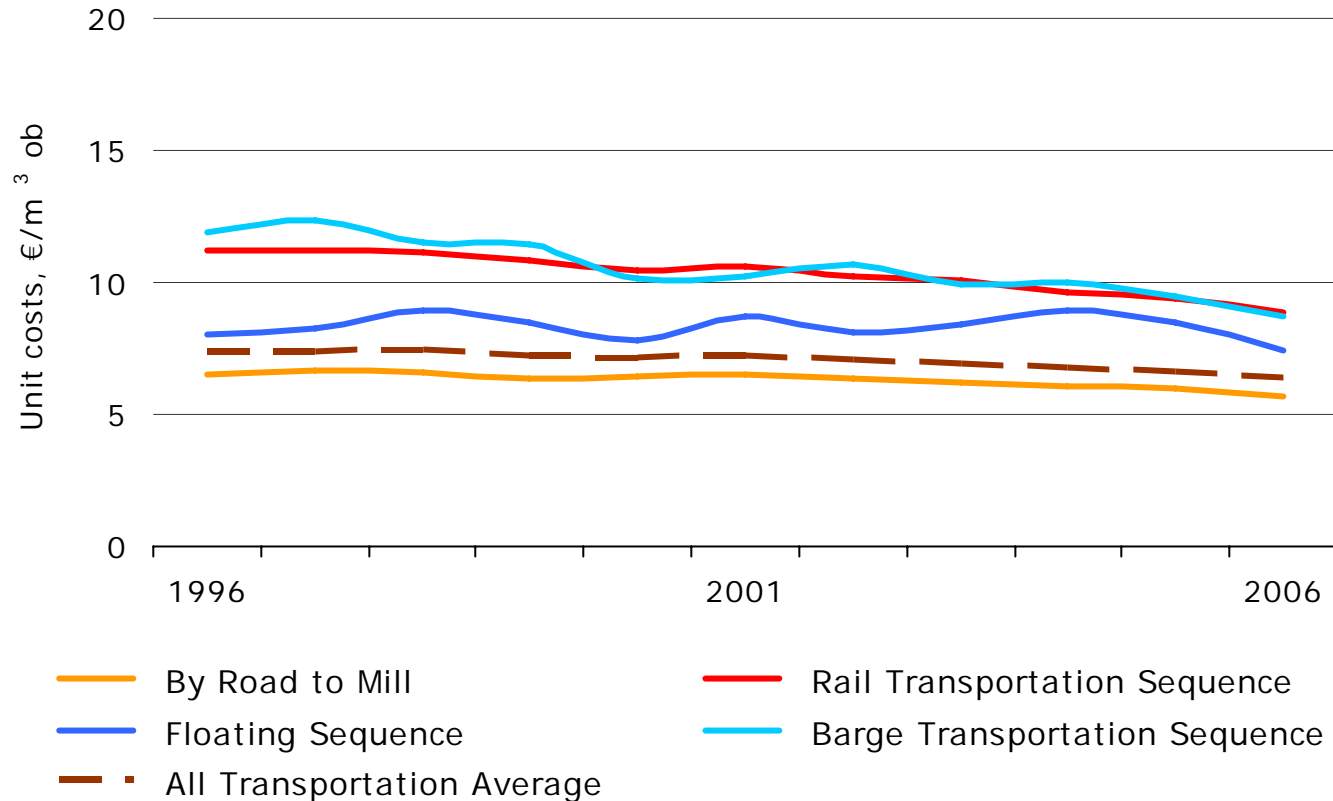
Volumes, Distance and Unit Costs of Long-Distance Transportation 2006

	Domestic roundwood				
	1 000 m ³ ob	%	km	cent/m ³ km	€/m ³
By road to mill	35 121	77,4	107	5,3	5,68
Rail transportation sequence	8 676	19,1	300	3,0	8,86
By road to railway	8 349	18,4	39	8,9	3,50
Rail transportation	8 676	19,1	261	2,1	5,51
Water transportation sequence	1 524	3,4	298	2,6	7,80
<i>Floating sequence</i>	1 065	2,3	334	2,2	7,44
By road to floating point	1 017	2,2	39	8,3	3,26
Floating	1 065	2,3	295	1,5	4,53
<i>Barge transportation sequence</i>	459	1,0	221	3,9	8,68
By road to barge	414	0,9	41	8,6	3,52
Barge transportation	459	1,0	180	3,1	5,50
Total by road	44 902	98,9	96	5,6	5,20
Total long-distance transportation	45 402		151	4,2	6,36

Mean Transportation Distance

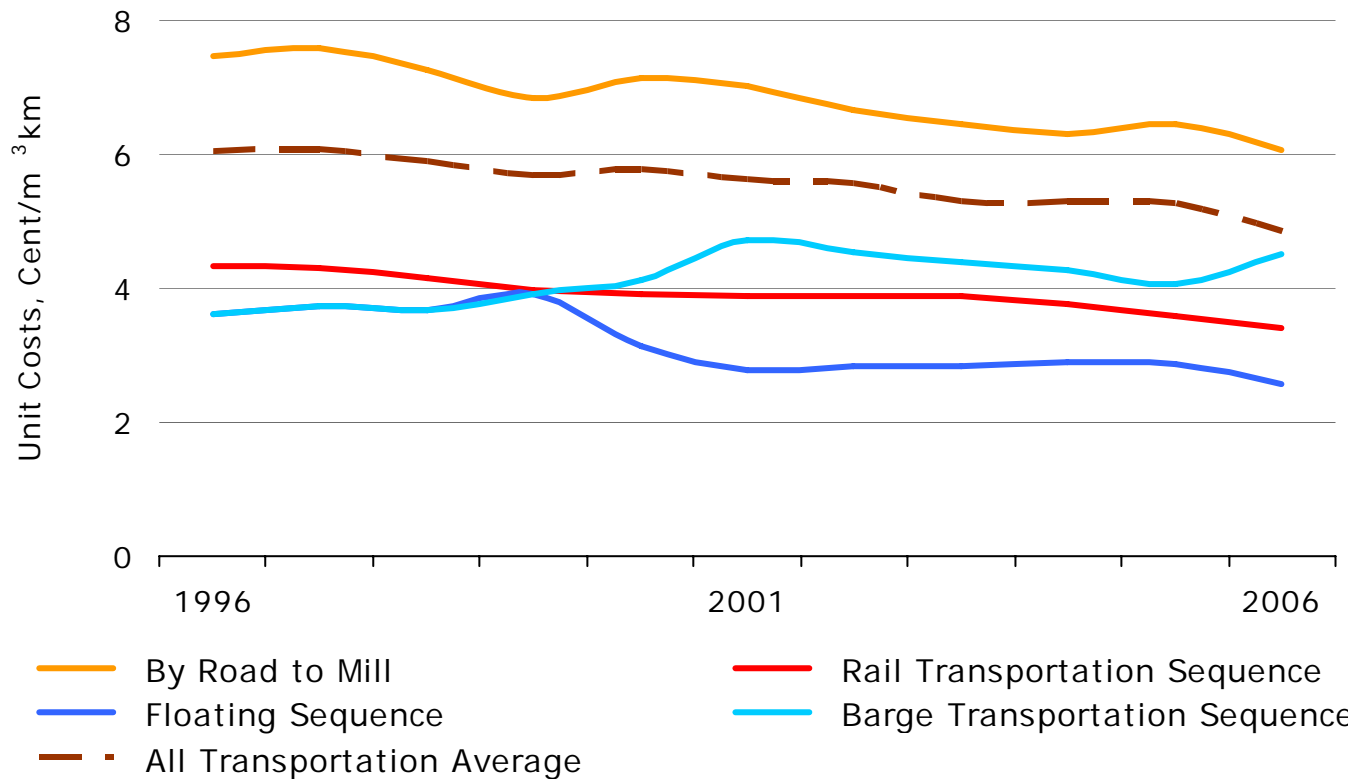


Unit Costs of Long-Distance Transportation by Timber Volume 1995 – 2006



Real costs have been deflated by Index of lorry traffic costs (2006=100).

Unit Costs of Long-Distance Transportation by Transport Volume 1996 – 2006



Real costs have been deflated by Index of lorry traffic costs (2006=100).

Volumes of Imported Roundwood by Transportation Method 1996 – 2006

