



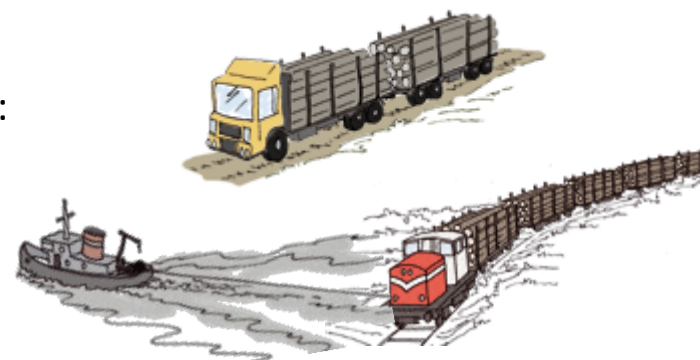
Metsäteho

Timber Harvesting and Long-distance Transportation of Roundwood 2012

Markus Strandström

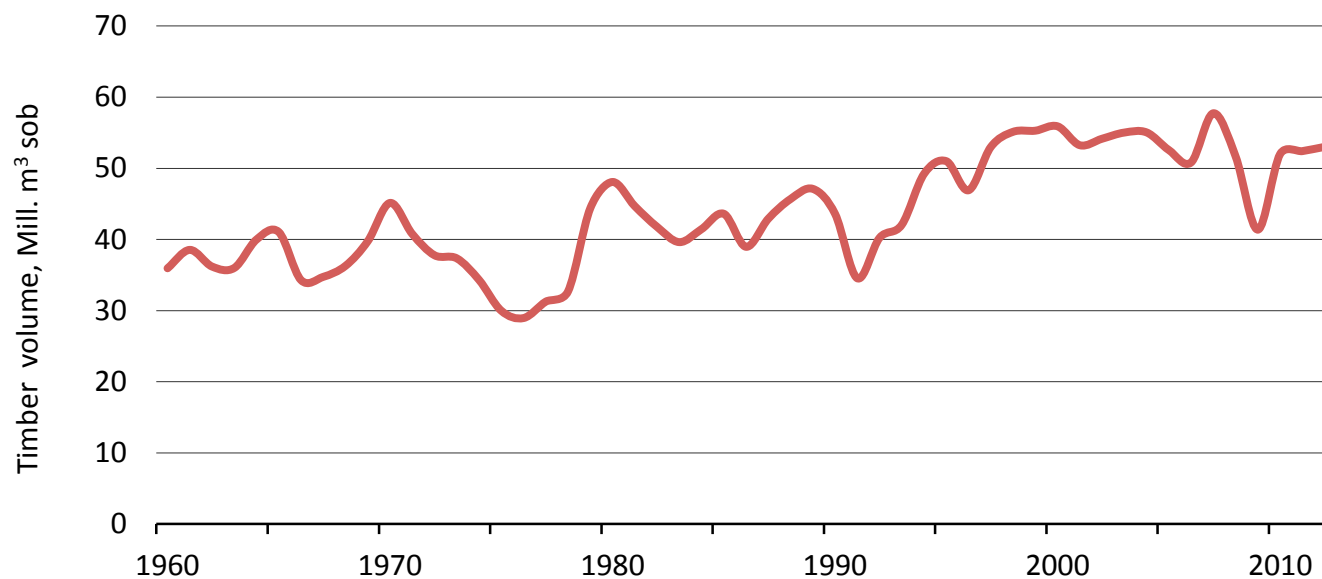
Target and Publications

- 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.
- Look at also Finnish Statistical Yearbook of Forestry (Finnish Forest Research Institute), especially chapter 5 "Harvesting and transportation of roundwood".
- Publications
 - Strandström, M. 2013. Puunkorjuu ja kaukokuljetus vuonna 2012. Metsätehon katsaus nro 49. Summary: Harvesting and long-distance transportation 2012.



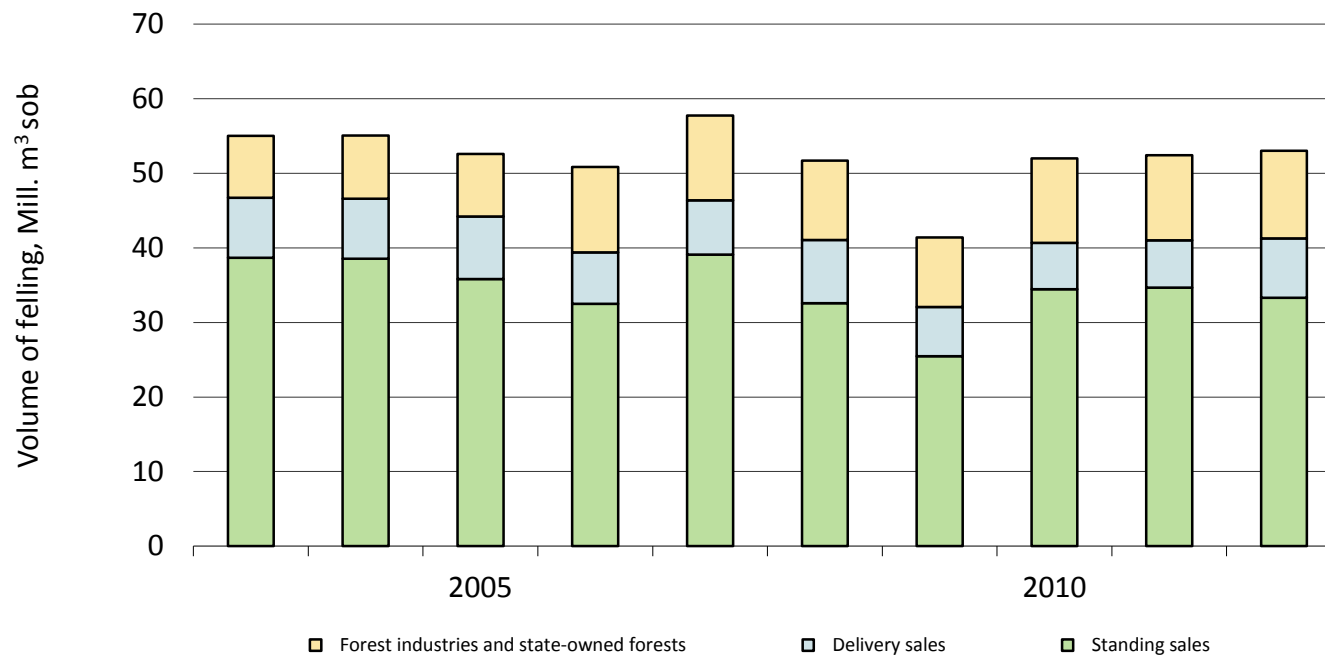
Background Information of Finnish Wood Supply

Commercial Roundwood Removals, 1960–2012



Source: Finnish Forest Research Institute

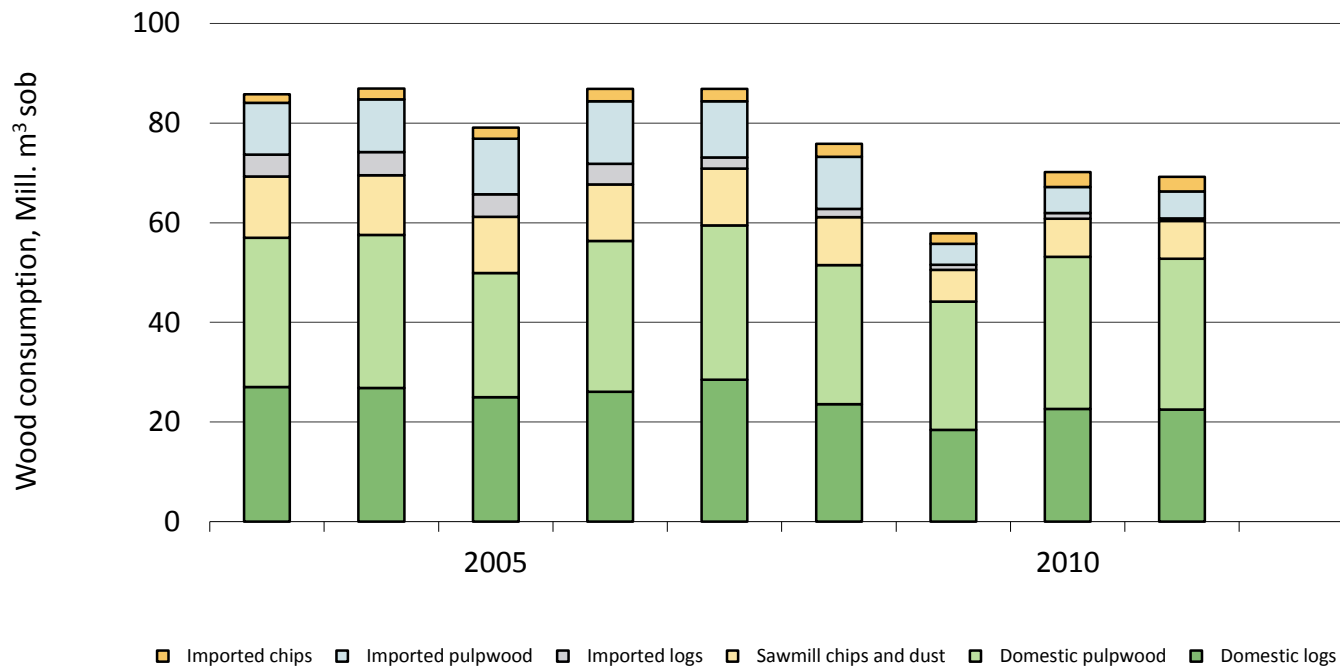
Commercial Roundwood Removals by Forest Ownership Category, 2003–2012



Standing sales + Delivery sales = Non-industrial, private forests

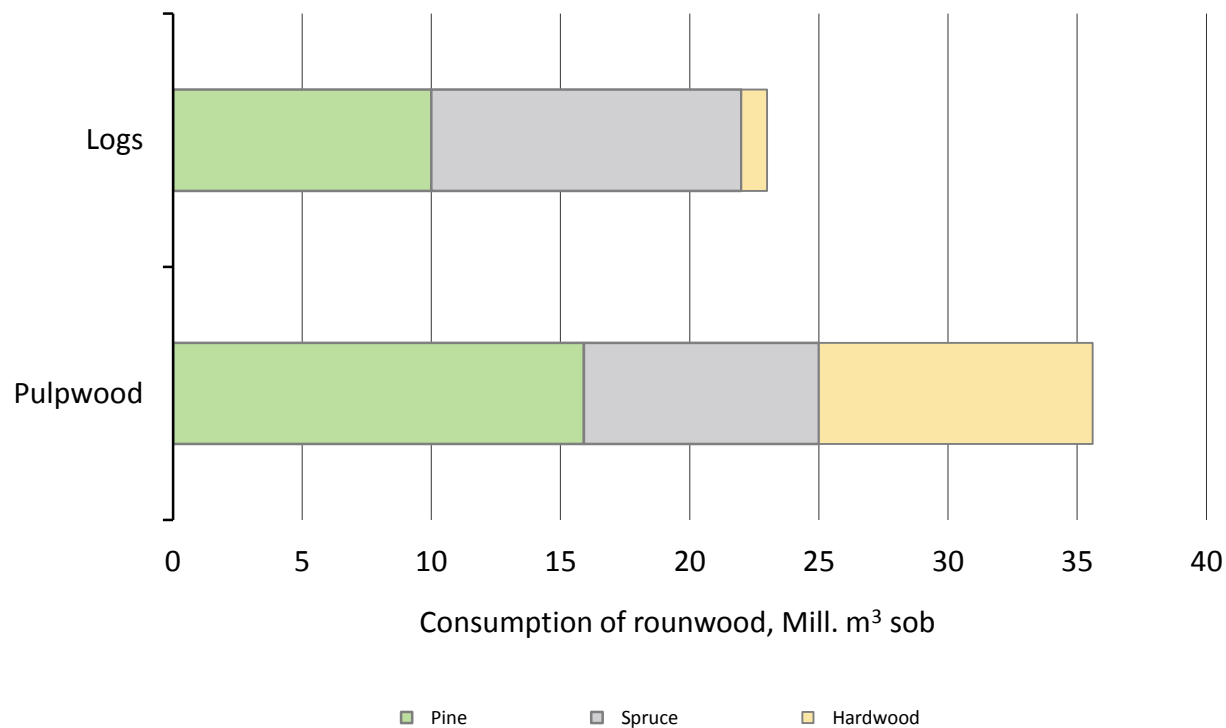
Source: Finnish Forest Research Institute

Roundwood Consumption by Forest Industries, 2003–2012



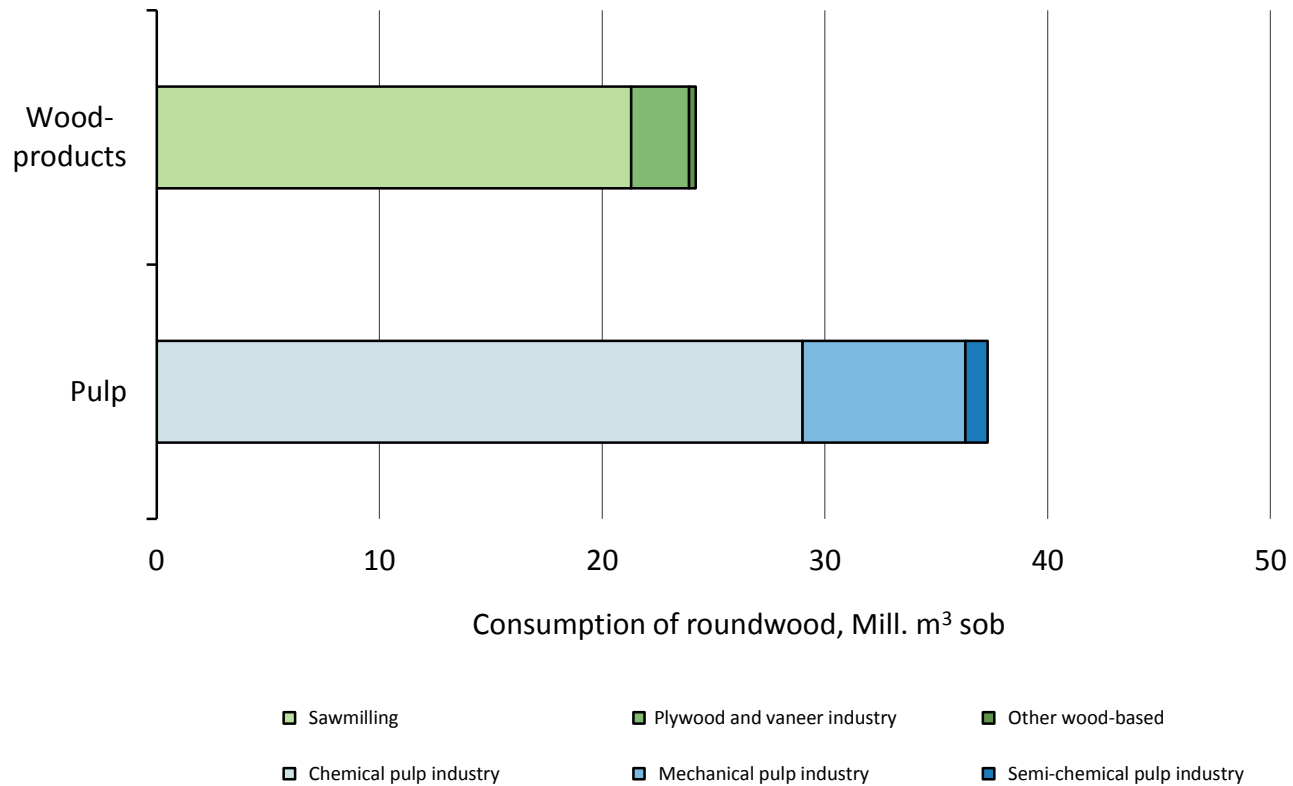
Source: Finnish Forest Research Institute

Wood Consumption by Forest Industries, 2011



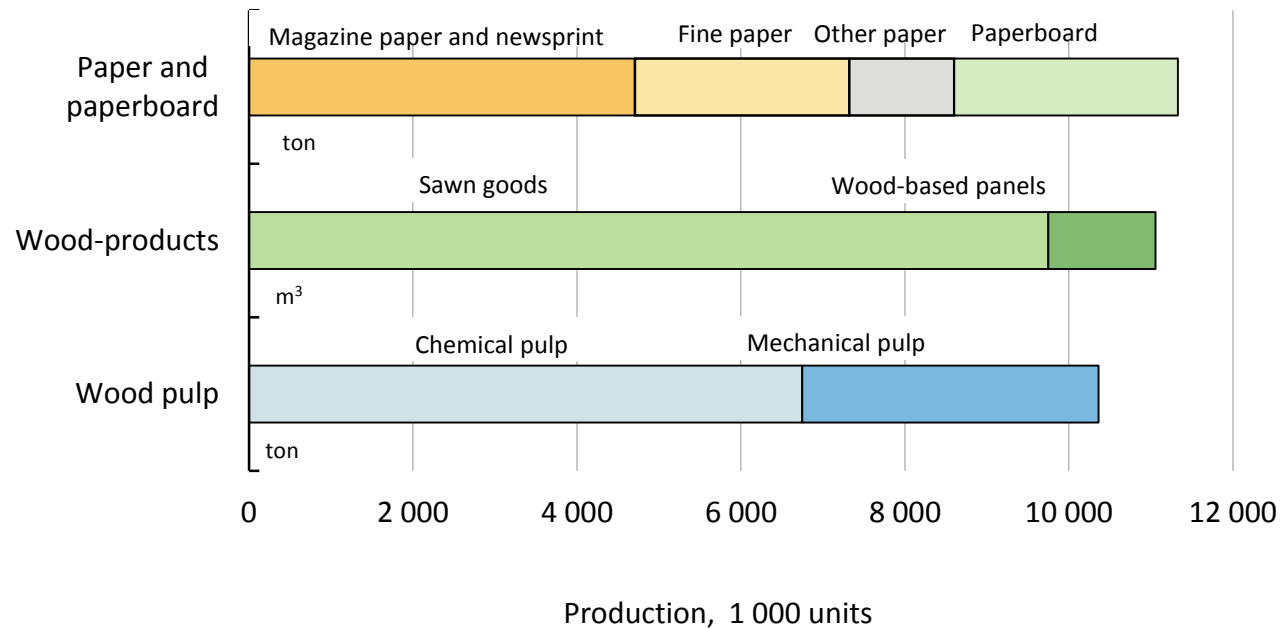
Source: Finnish Forest Research Institute

Roundwood Consumption by Forest Industries by Branch of Industry, 2011



Source: Finnish Forest Research Institute

Production of Forest Industry Products, 2011

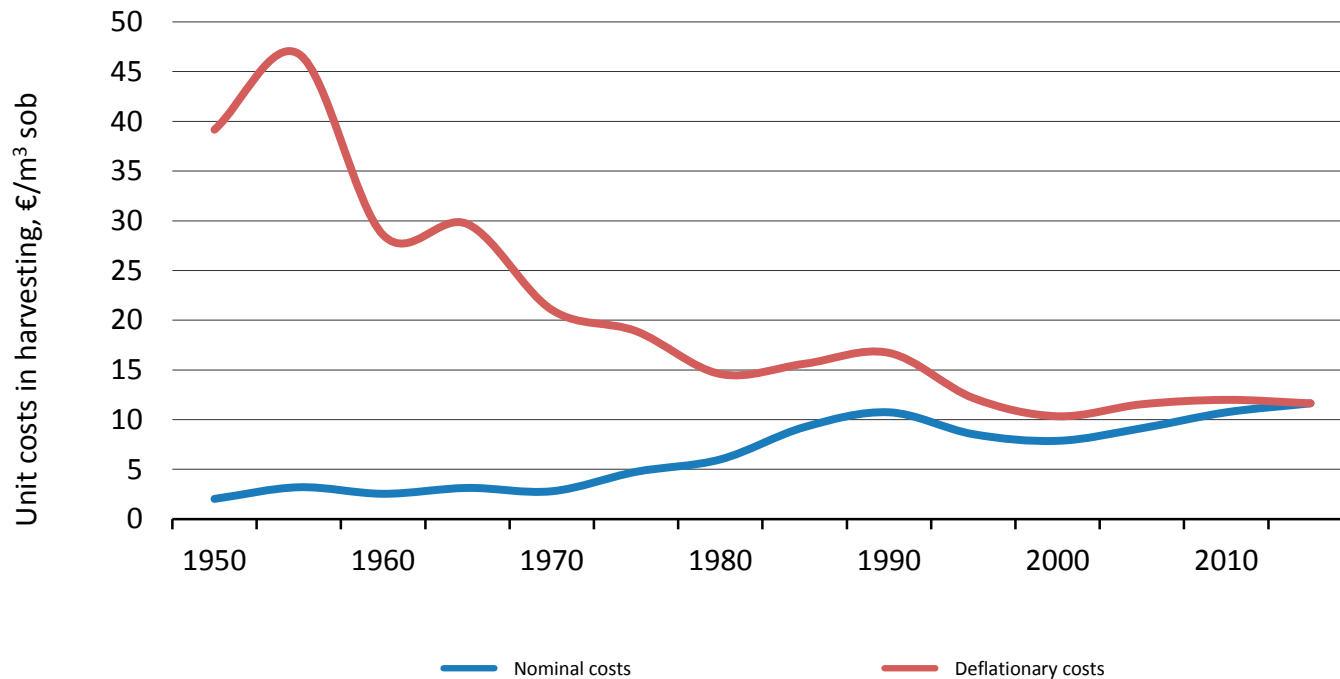


Source: Finnish Forest Research Institute

Long Term Trends of Finnish Wood Supply

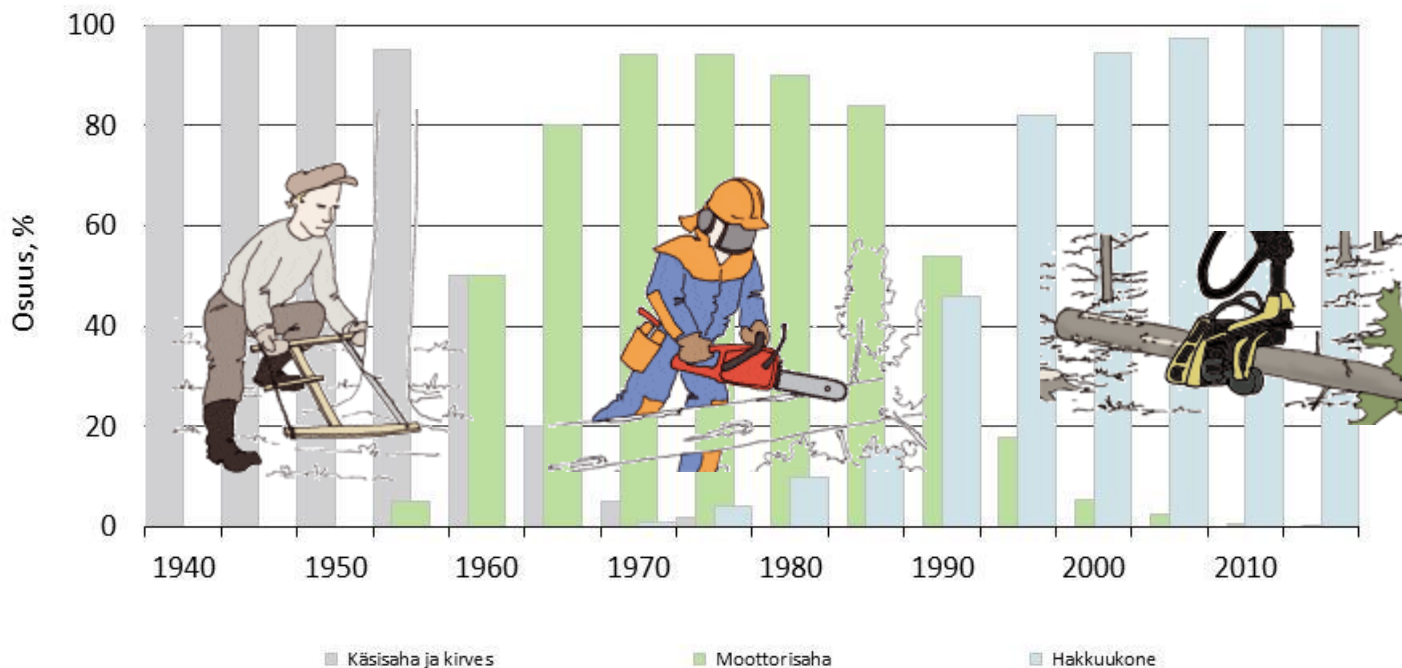
Statistics of Metsäteho

Unit Costs in Timber Harvesting, 1950–2012

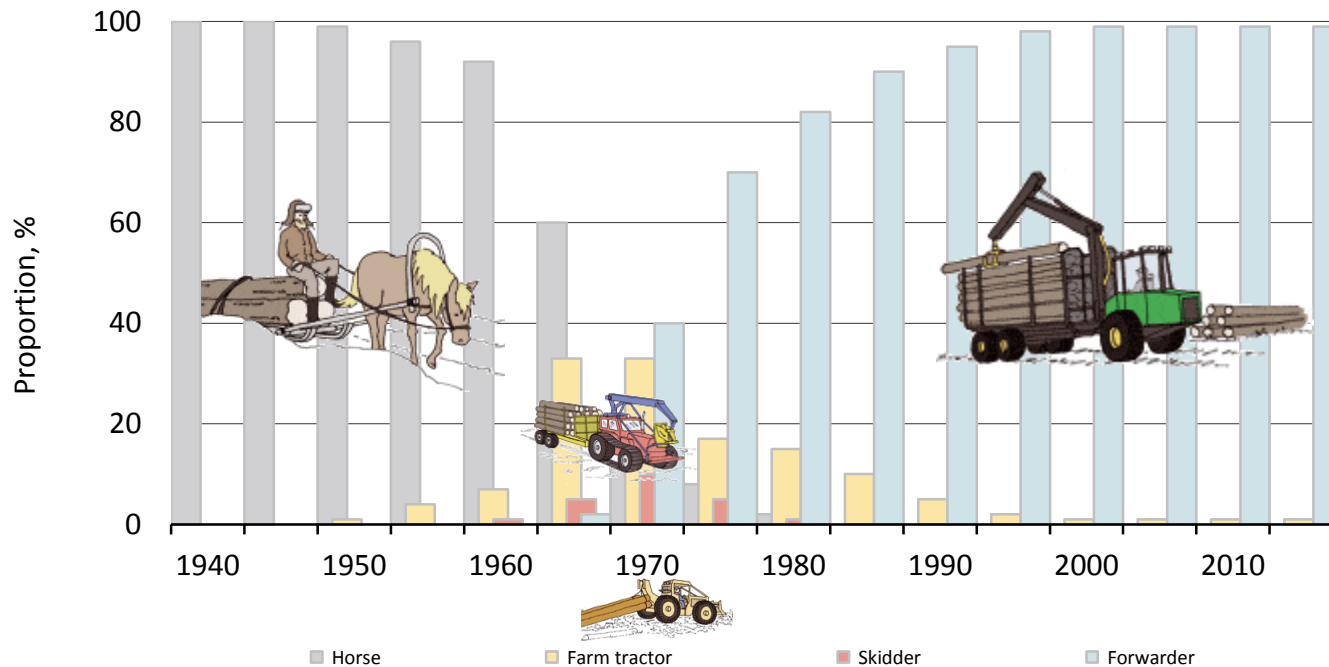


Costs have been deflated by the wholesale price index (2012=100).

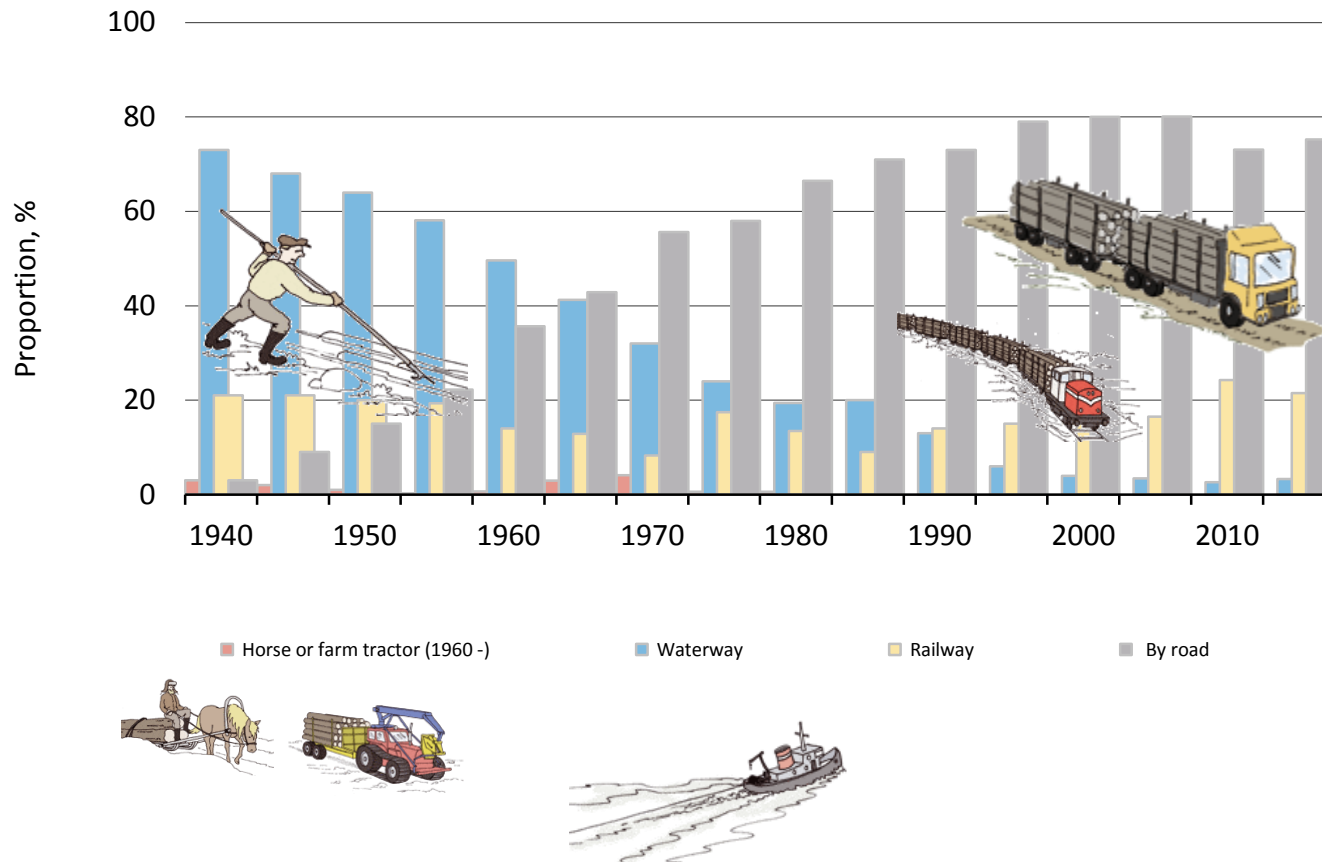
Felling Techniques, 1940–2012



Forest Haulage Techniques, 1940–2012



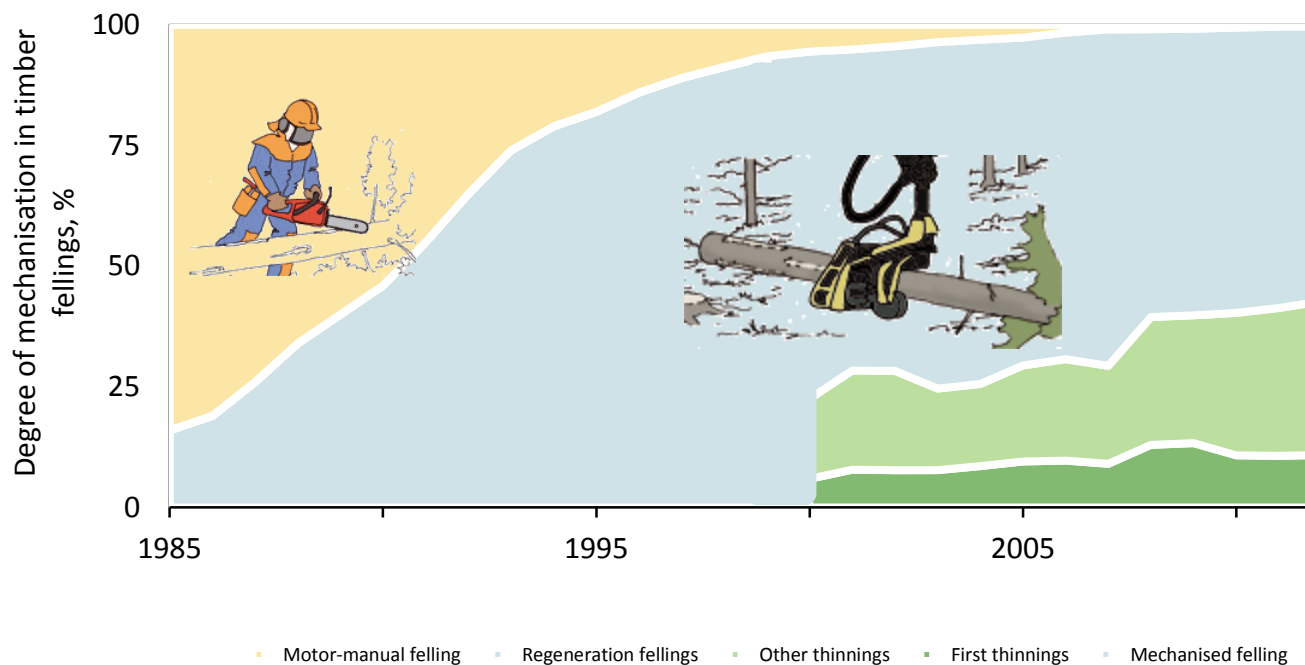
Long-distance Transportation Techniques, 1940–2012



Short Term Trends of Finnish Wood Supply

Statistics of Metsäteho

Mechanisation of Felling, 1985–2012

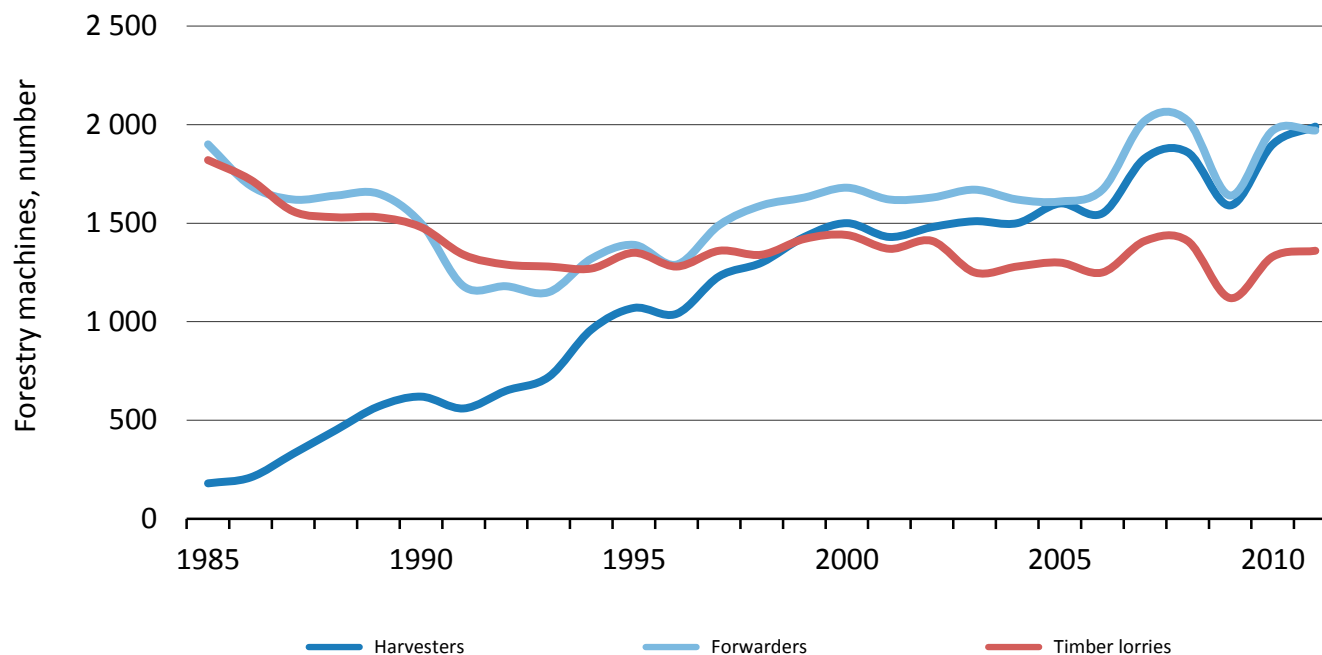


Per cent of mechanised felling year 2012: 99.7%

Long-distance Transportation Techniques, 2003–2012

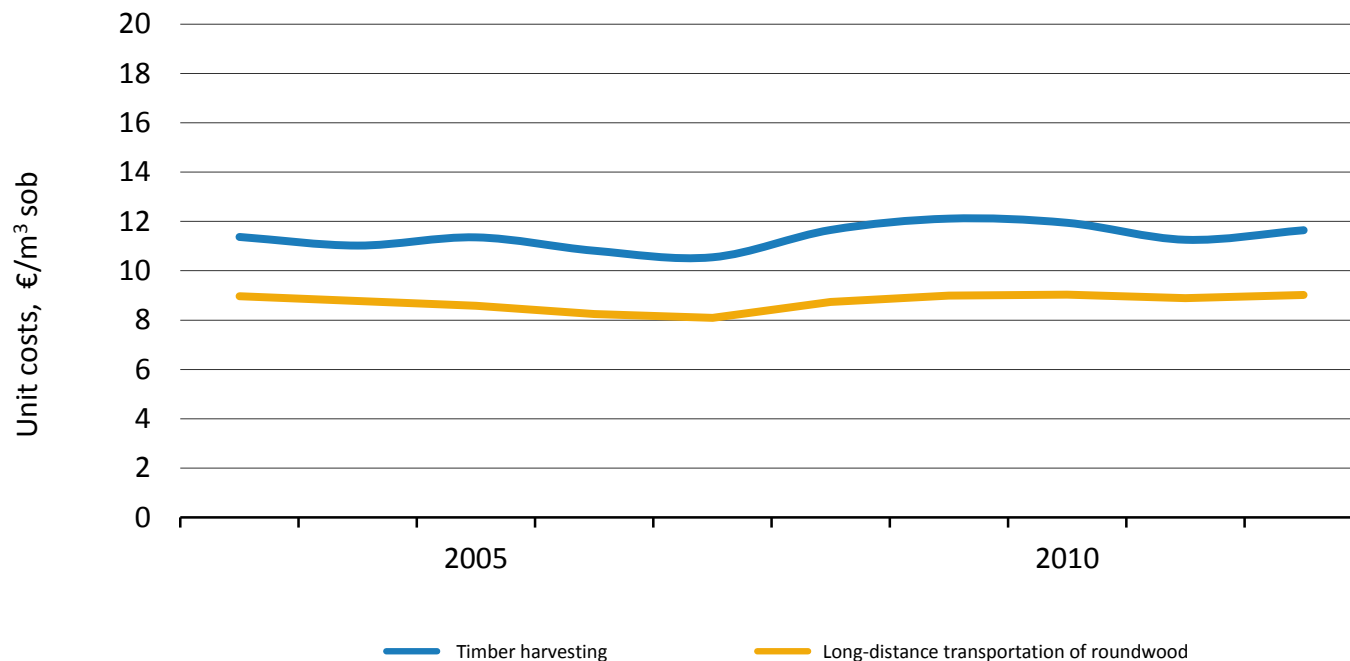


Forestry Machines, 1985–2011



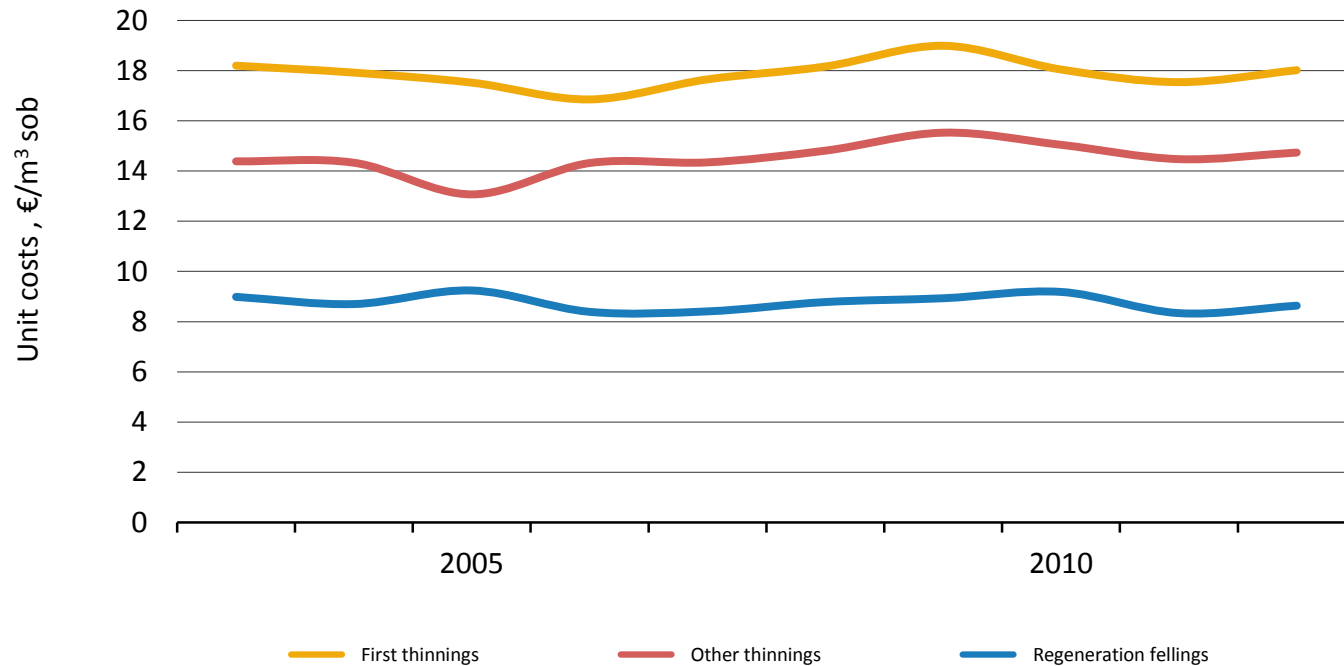
Source: Finnish Forest Research Institute

Unit Costs in Timber Harvesting and Long-distance Transportation of Roundwood, 2003–2012



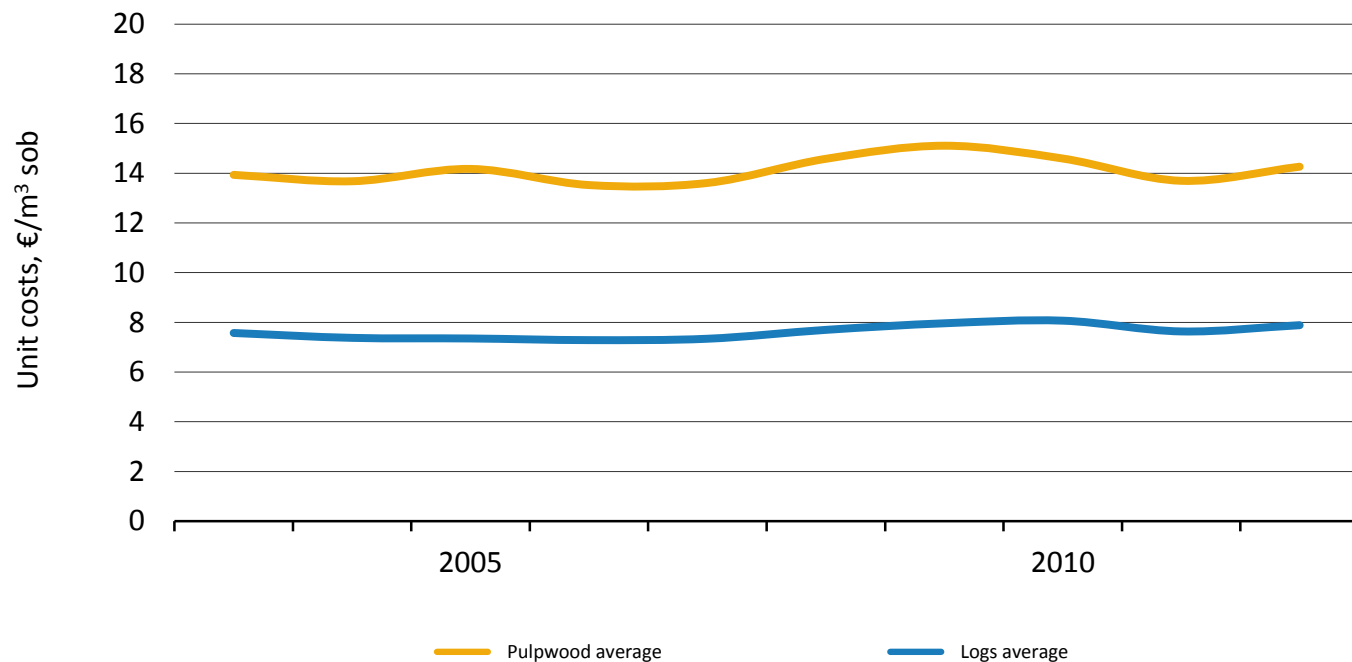
Costs have been deflated by Indexes of forest machinery costs and lorry traffic costs (2012=100).

Unit Costs in Mechanised Harvesting by Felling Method, 2003–2012



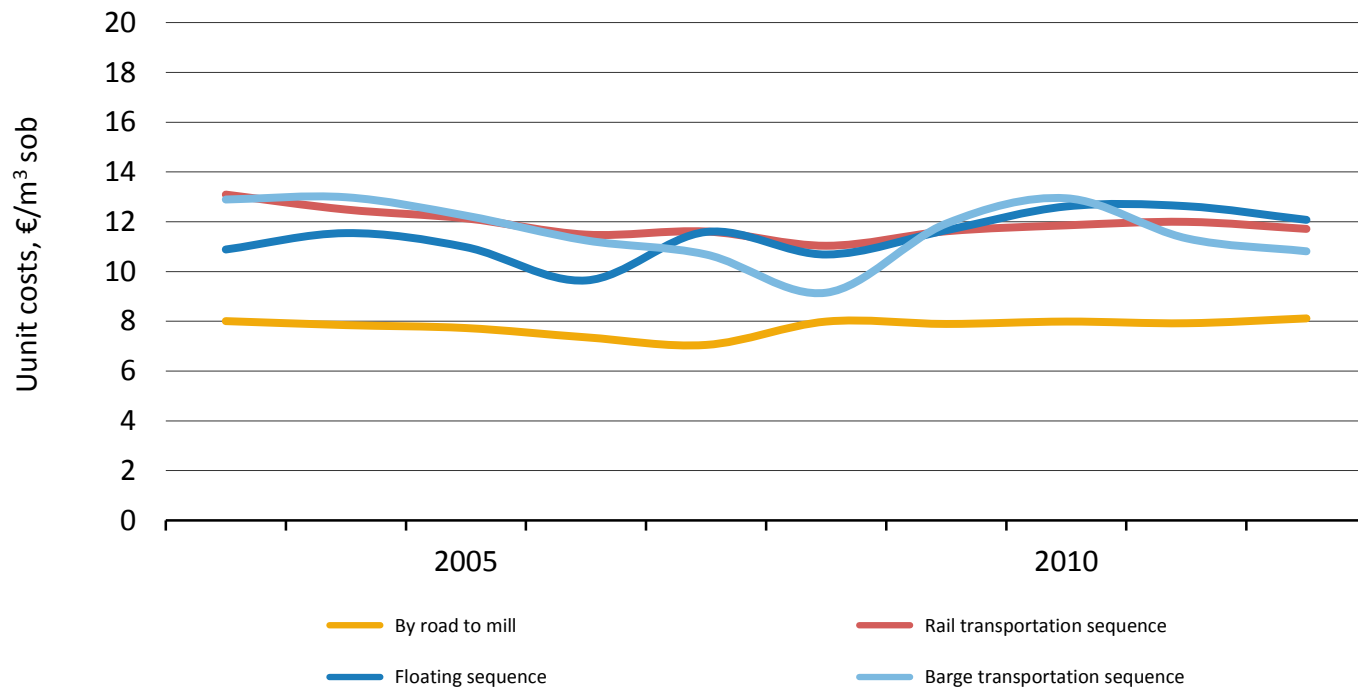
Costs have been deflated by Index of forest machinery (2012=100).

Unit Costs in Mechanised Harvesting by Timber Assortments, 2003–2012



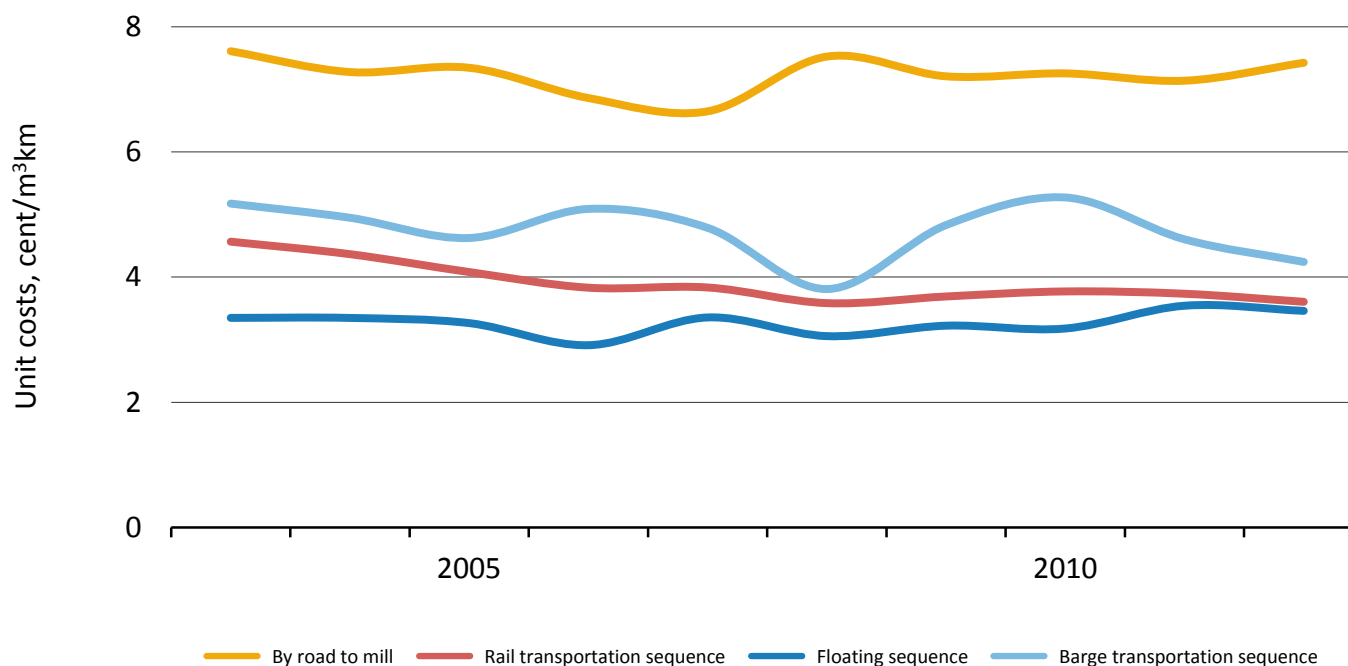
Costs have been deflated by Index of forest machinery (2012=100).

Unit Costs in Long-distance Transportation of Roundwood 2003–2012 (I)



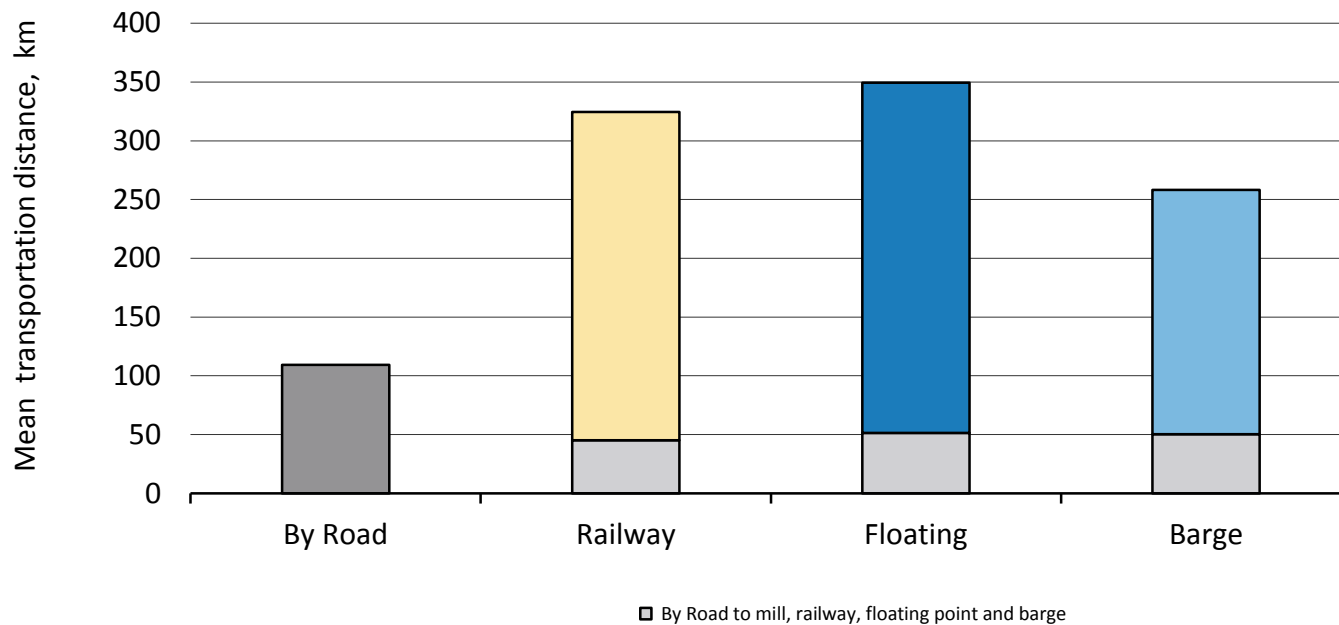
Costs have been deflated by Index of lorry traffic costs (2012=100).

Unit Costs in Long-distance Transportation of Roundwood 2003–2012 (II)

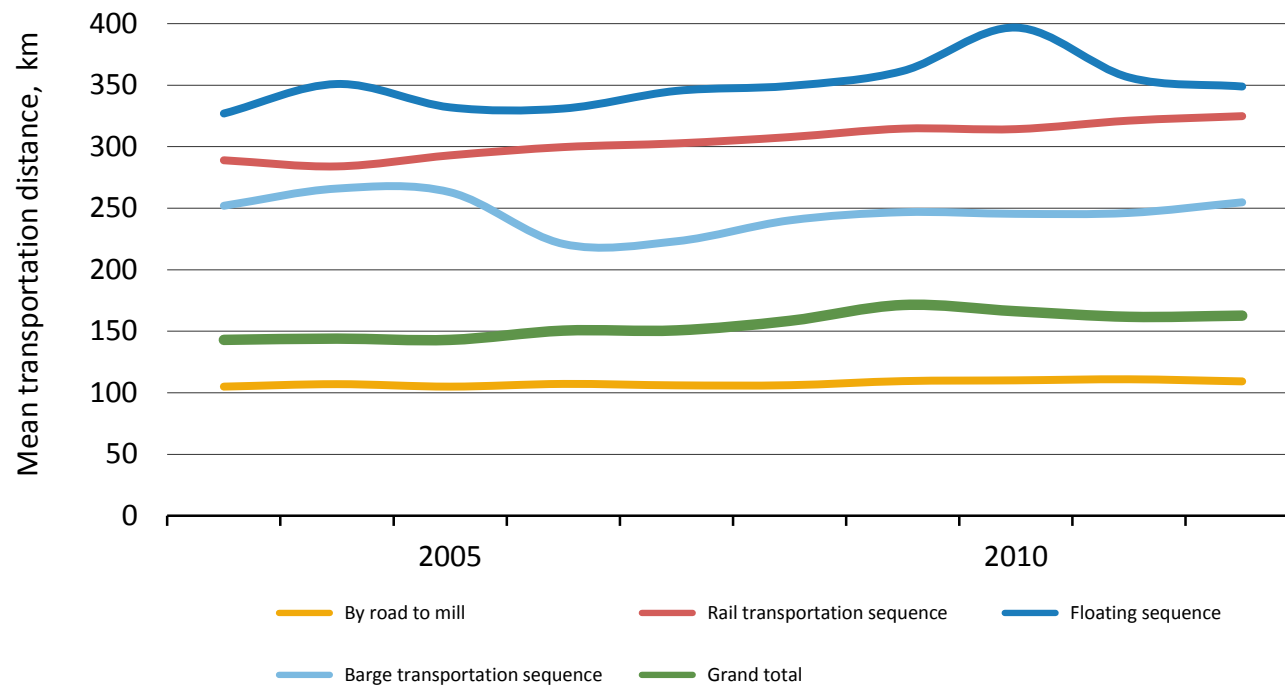


Costs have been deflated by Index of lorry traffic costs (2012=100).

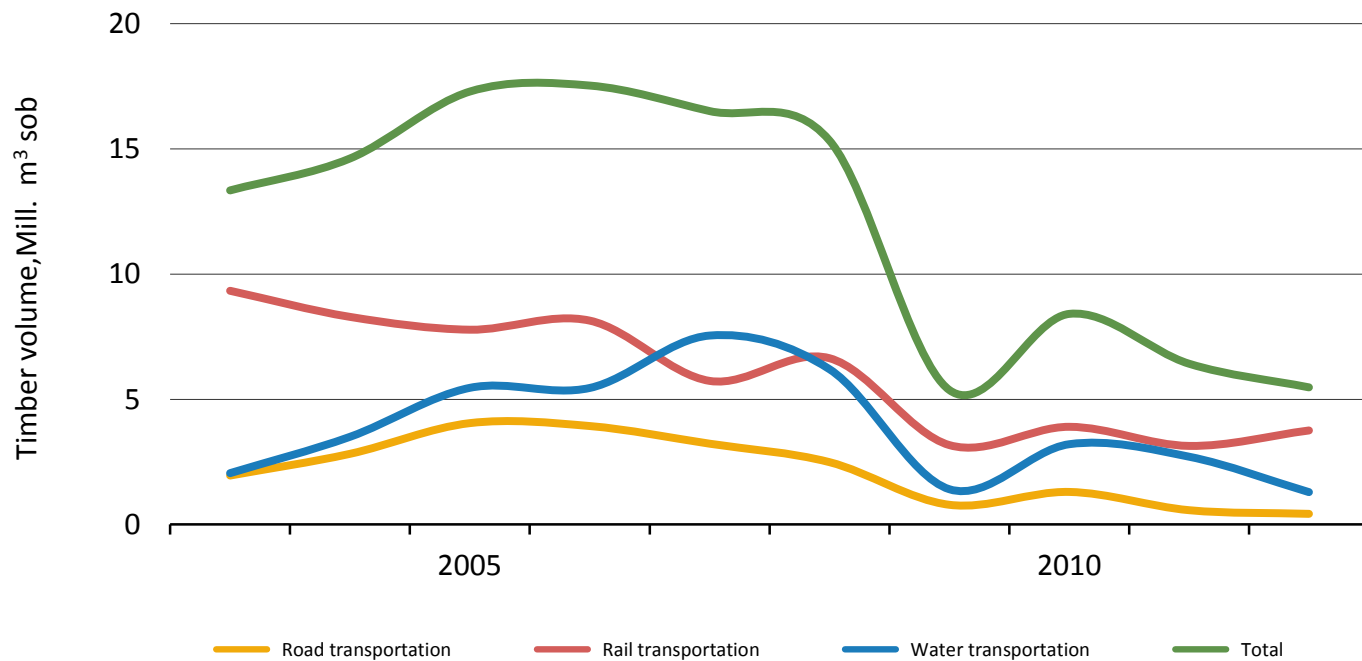
Mean Transportation Distance, 2012



Mean Transportation Distance, 2003–2012



Volumes of Imported Roundwood by Transportation Method, 2003–2012



Statistics 2012 Tables

Statistics of Metsäteho

Costs and Timber Volume, 2012

	Costs		Timber volume	Transport volume	
	Mill. €	%	Mill. m ³	Mill. m ³ km	%
Harvesting	424,8		36,5		
Long-distance transportation	397,4	100		7 225	100
Road transportation	324,6	82		4 133	57
Rail transportation	62,7	16		2 649	37
Water transportation	10,0	3		443	6

(solid over bark)

Unit Costs in Felling by Felling Method, 2012

€/m ³	First thinning	Other thinning	Regeneration felling	Total
Harvesting				11,64
Mechanised harvesting ^{*)}	18,02	14,74	8,63	11,61
- share of volume	10,9	31,9	57,1	100
- share of costs	16,9	40,6	42,5	100

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

(solid over bark)

Unit Costs in Felling by Timber Assortments, 2012

€/m ³	Mechanised harvesting ^{*)}	Long-distance transportation
Pine logs	8,16	8,07
Spruce logs	7,57	7,12
Plywood logs	8,52	10,59
Logs average	7,88	7,73
Pine pulpwood	13,98	9,99
Spruce pulpwood	13,54	8,80
Birch pulpwood	15,67	9,34
Pulpwood average	14,26	9,57
Average	11,61	9,02

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

(solid over bark)

Long-distance Transportation of Roundwood, 2012

	Domestic roundwood				
	1 000 m ³	%	km	cent/m ³ km	€/m ³
Total long-distance transportation	44 119		163	5,5	9,02
Total by road	44 441	100,7	93	7,8	7,31
By road to mill	33 180	75,2	109	7,4	8,11
Rail transportation sequence	9 478	21,5	325	3,6	11,71
By road to railway	9 987		45	10,9	4,91
Rail transportation	9 478		280	2,4	6,62
Water transportation sequence	1 466	3,3	302	3,8	11,42
Floating sequence	708	1,6	349	3,5	12,07
By road to floating point	708		51	9,5	4,90
Floating	708		298	2,3	6,72
Barge transportation sequence	758	1,7	258	4,2	10,81
By road to barge	501		50	10,5	5,28
Barge transportation	758		208	3,5	7,32

(solid over bark)