



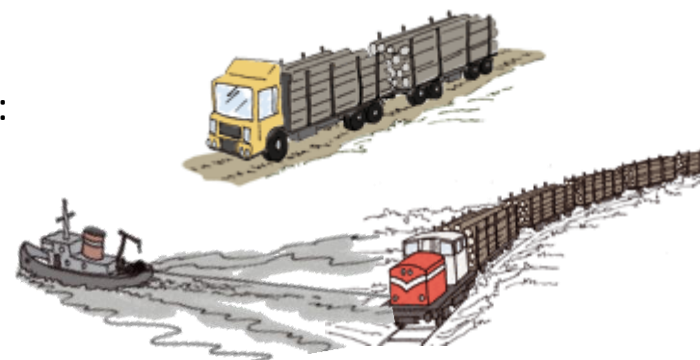
Metsäteho

Timber Harvesting and Long-distance Transportation of Roundwood 2011

Markus Strandström

Target and Publications

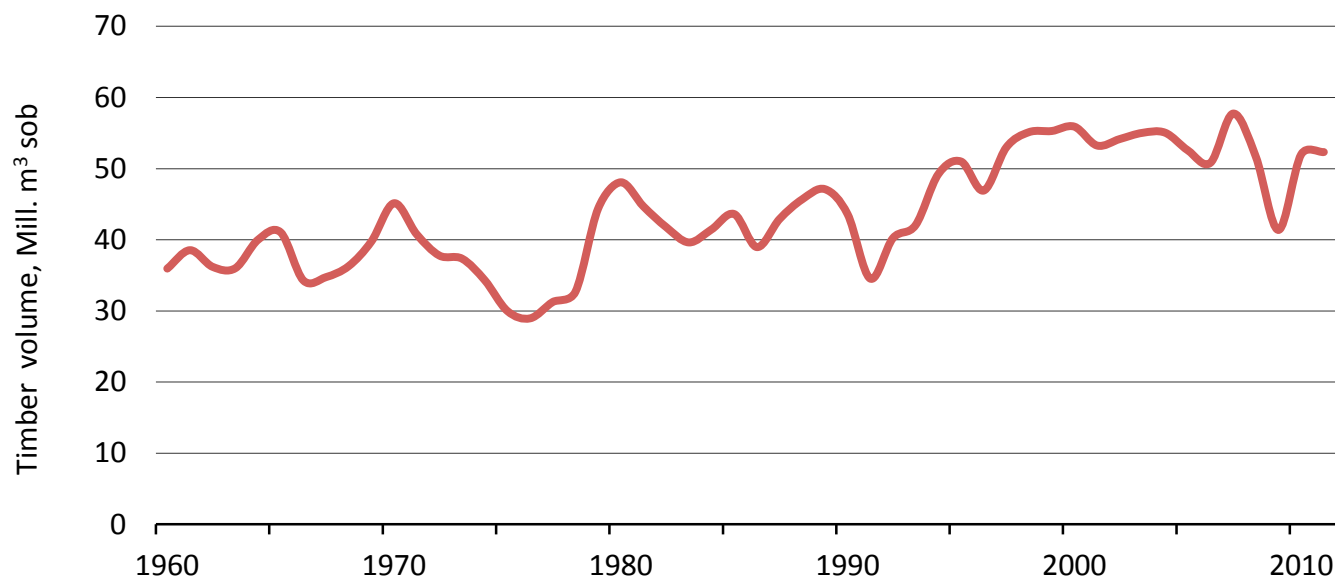
- Includes volumes and direct harvesting costs of timber assortments concerning domestic roundwood by the forest industries and State forest enterprise as well as proportions of harvesting methods.
- Look at also Finnish Statistical Yearbook of Forestry (Finnish Forest Research Institute), especially chapter 5 "Harvesting and transportation of roundwood".
- Publications
 - Strandström, M. 2012. Puunkorjuu ja kaukokuljetus vuonna 2011. Metsätehon katsaus nro 48. Summary: Harvesting and long-distance transportation 2011.



Background Information of Finnish Wood Supply

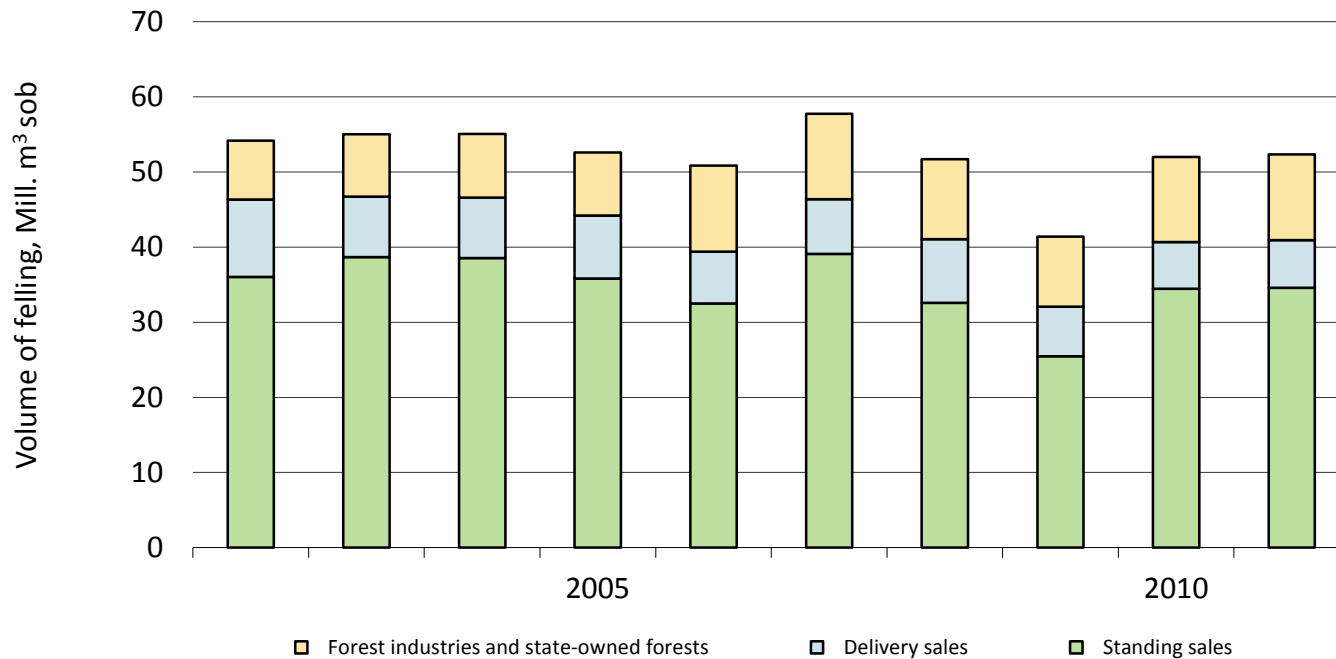
Statistics of Metsäteho

Domestic Commercial Fellings, 1960–2011



Source: Finnish Forest Research Institute

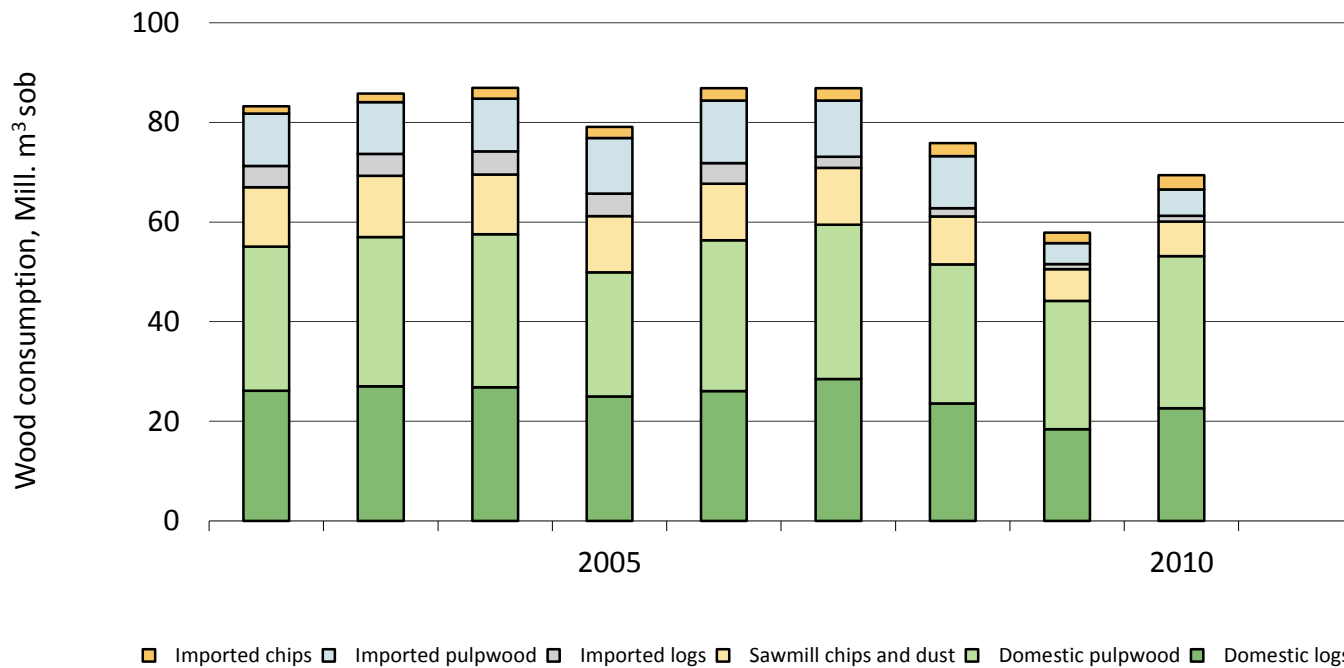
Commercial Roundwood Removals by Forest Ownership Category, 2002–2011



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

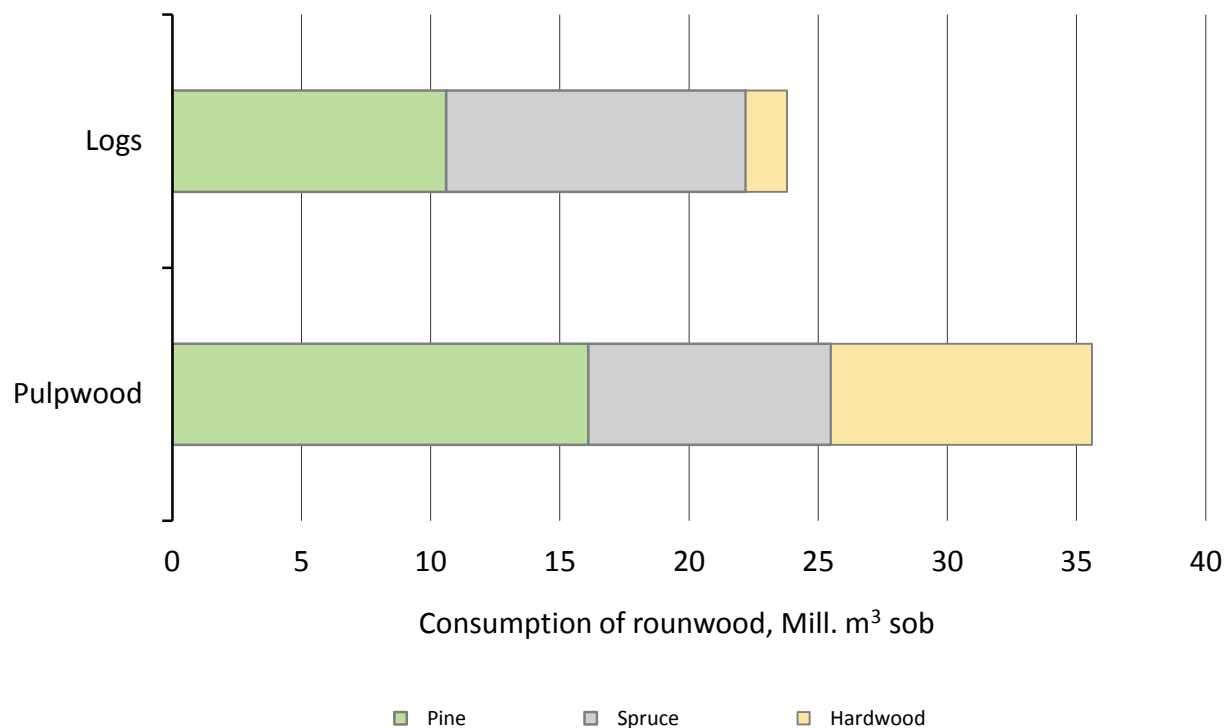
Source: Finnish Forest Research Institute

Roundwood Consumption by Forest Industries, 2002–2011



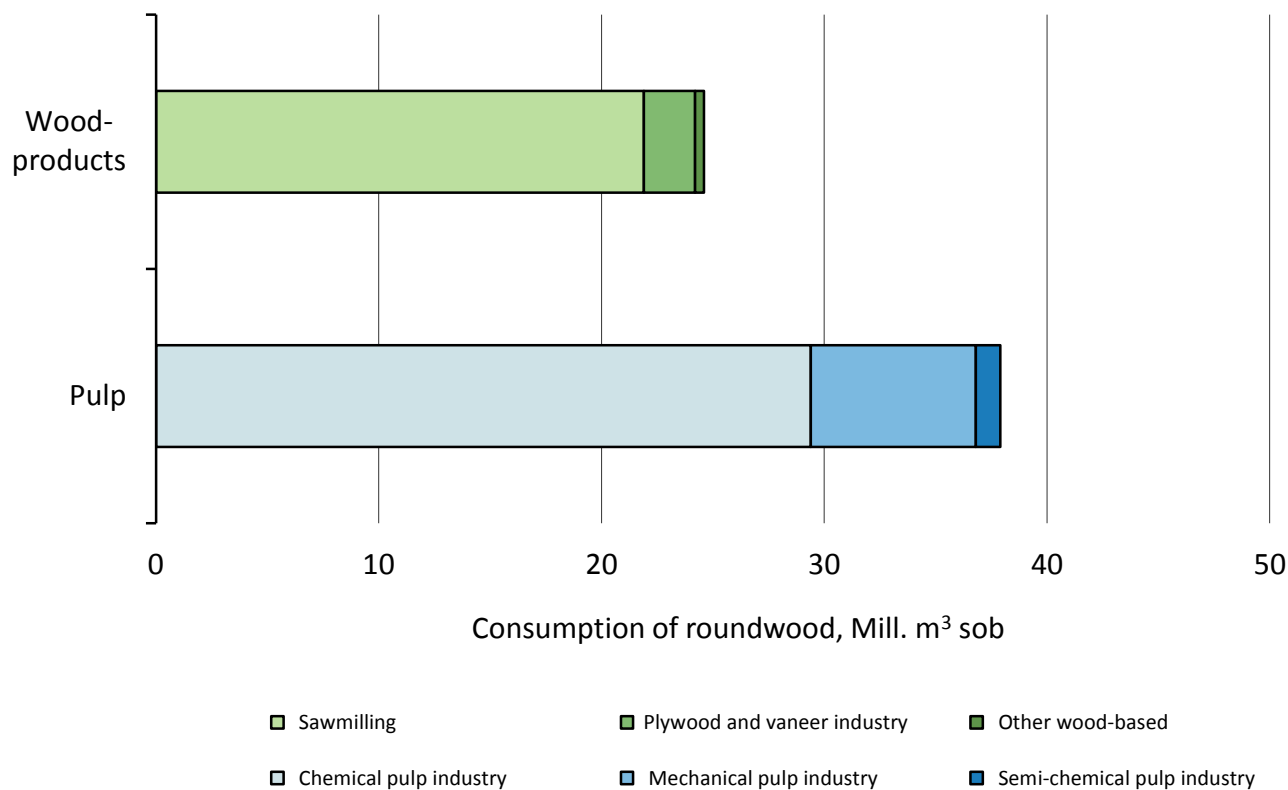
Source: Finnish Forest Research Institute

Wood Consumption by Forest Industries, 2010



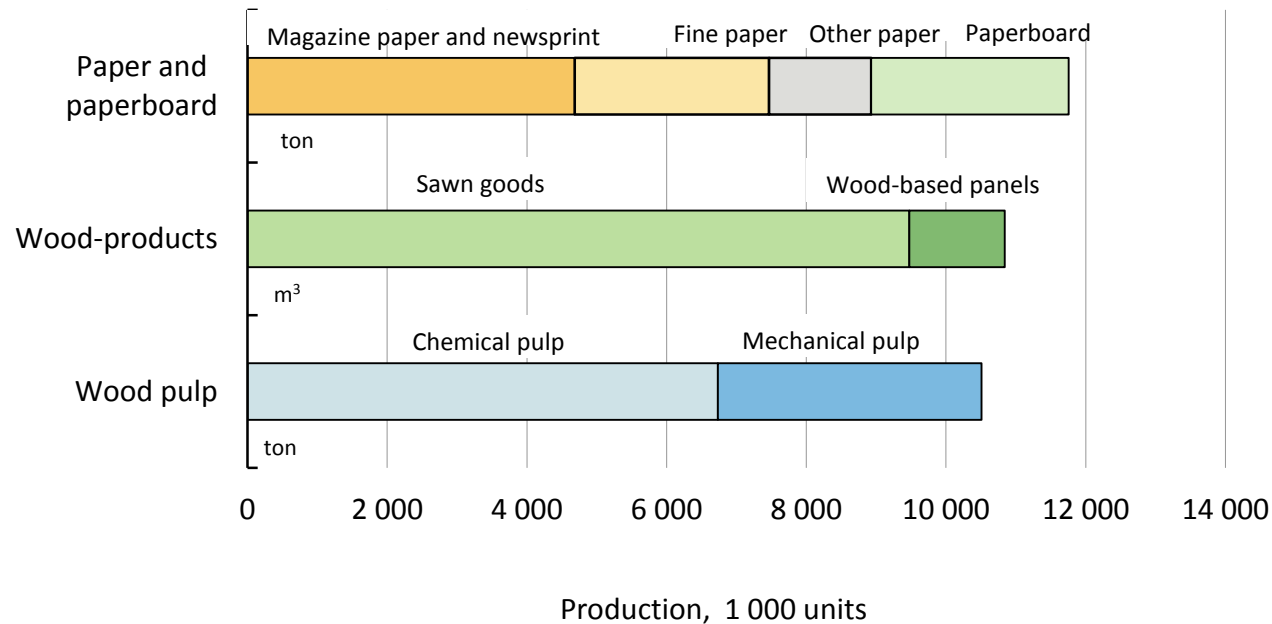
Source: Finnish Forest Research Institute

Roundwood Consumption by Forest Industries by Branch of Industry, 2010



Source: Finnish Forest Research Institute

Production of Forest Industry Products, 2010

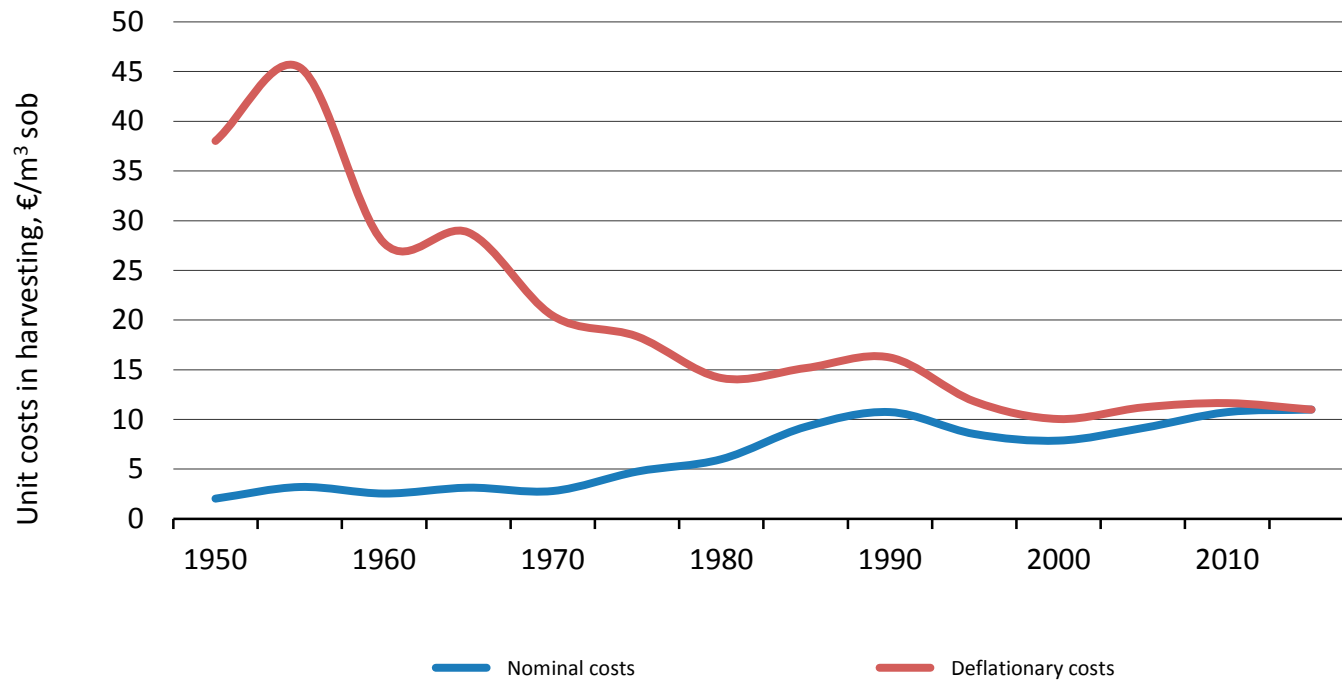


Source: Finnish Forest Research Institute

Long Term Trends of Finnish Wood Supply

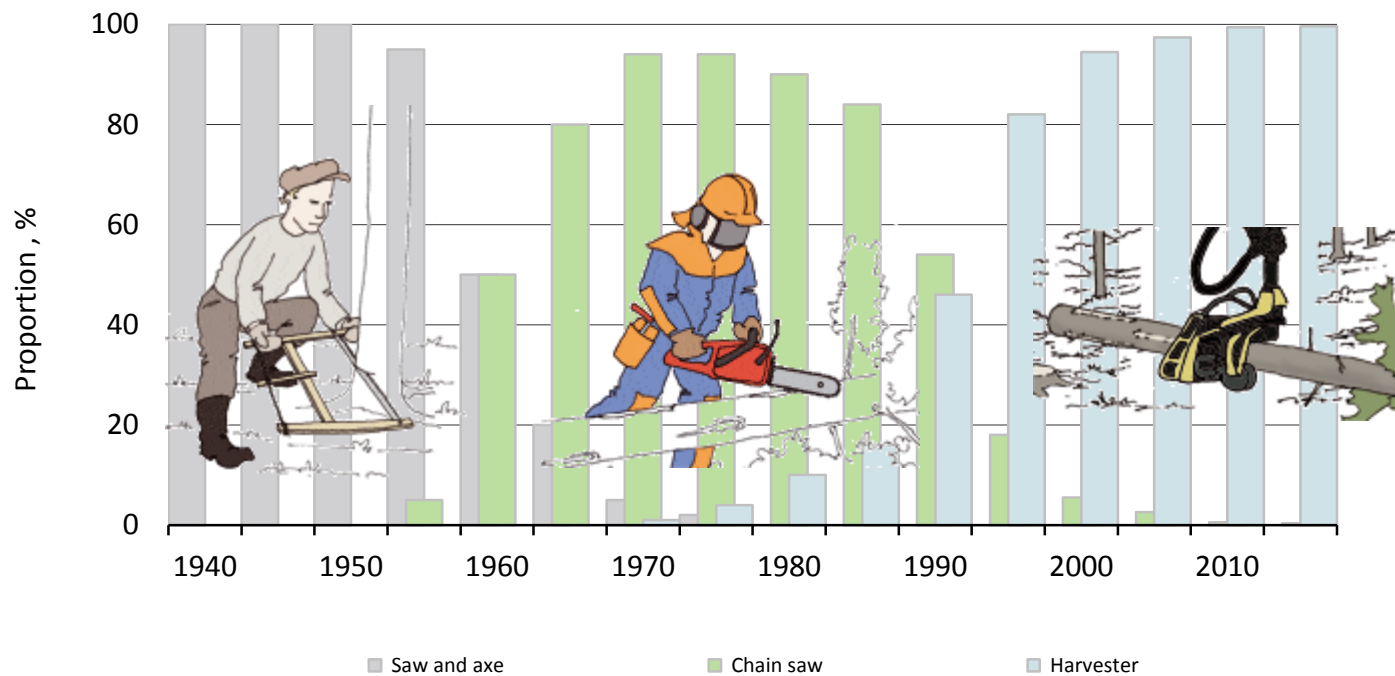
Statistics of Metsäteho

Unit Costs in Timber Harvesting, 1950–2011

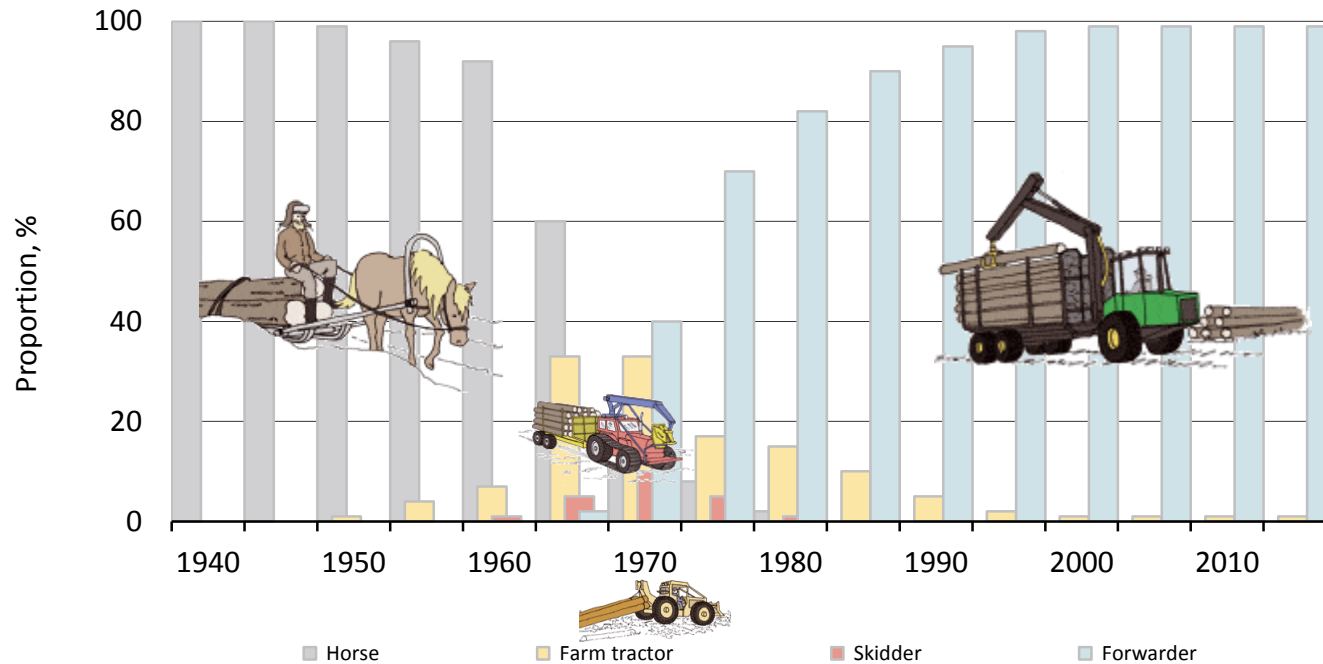


Costs have been deflated by the wholesale price index (2011=100).

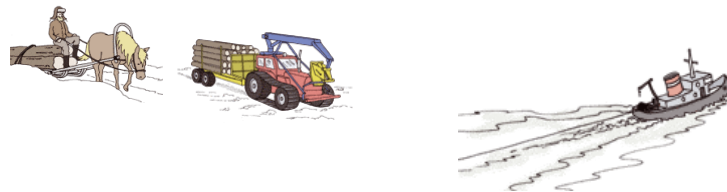
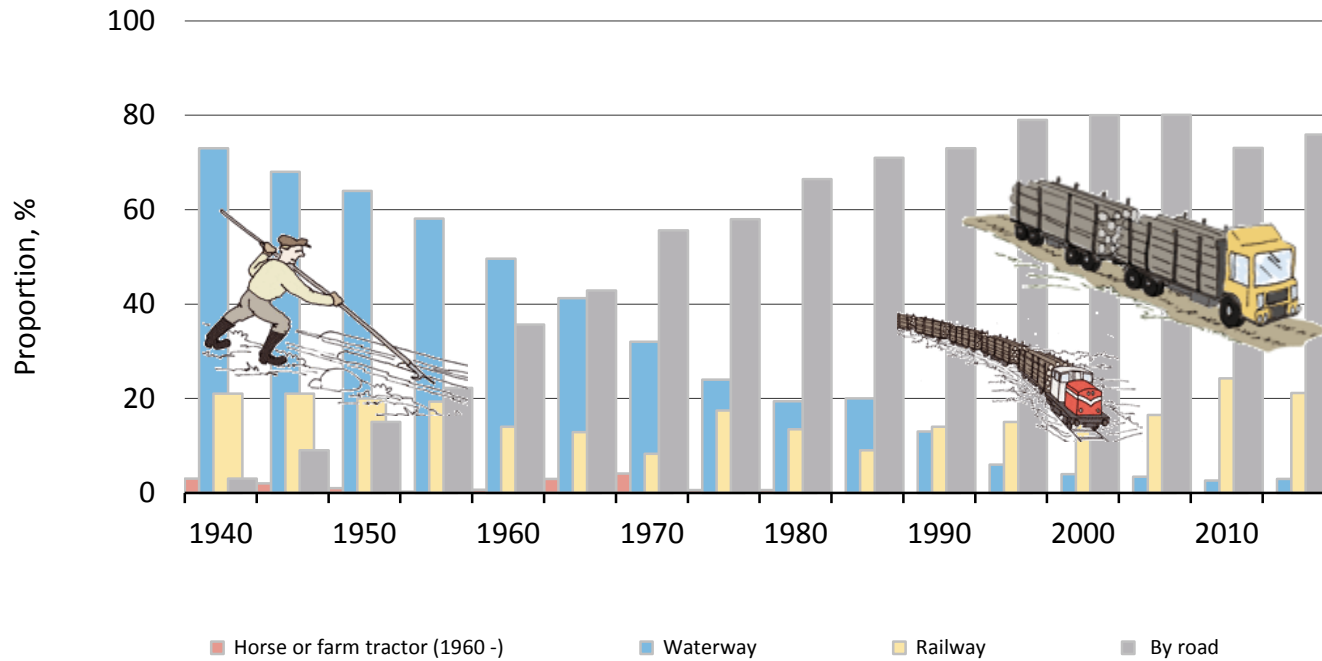
Felling Techniques, 1940–2011



Forest Haulage Techniques, 1940–2011



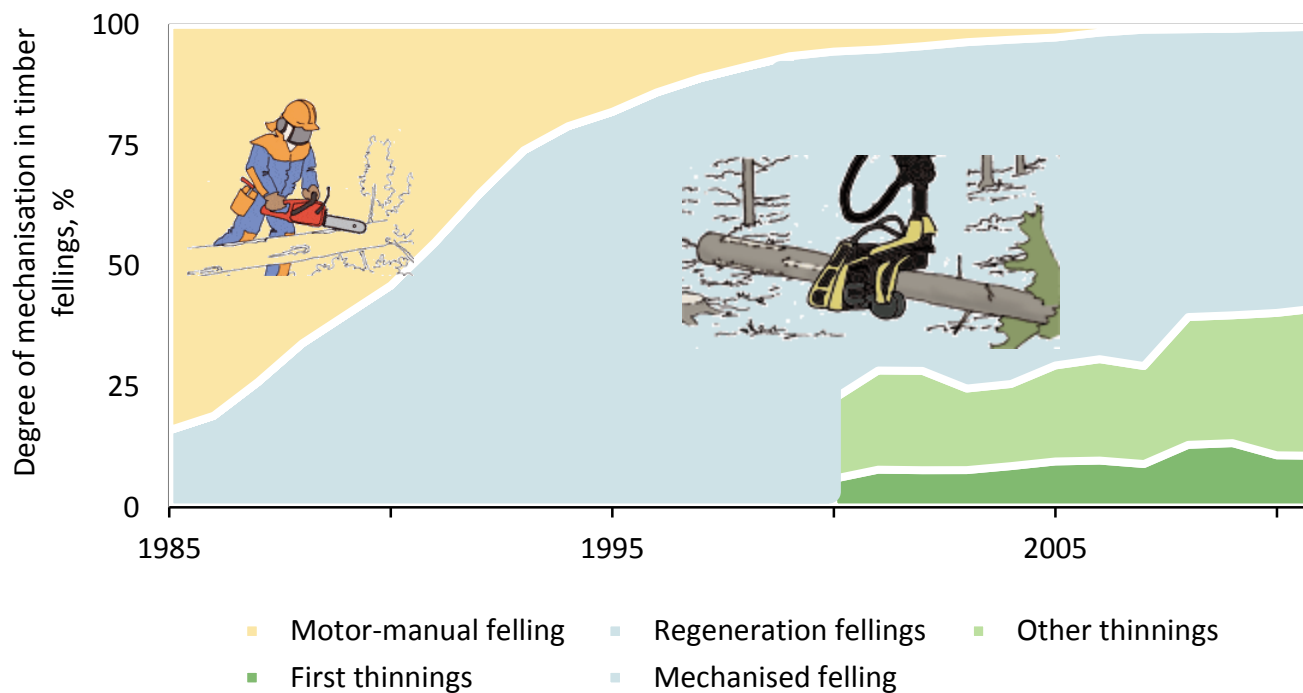
Long-distance Transportation Techniques, 1940–2011



Short Term Trends of Finnish Wood Supply

Statistics of Metsäteho

Mechanisation of Felling, 1985–2011

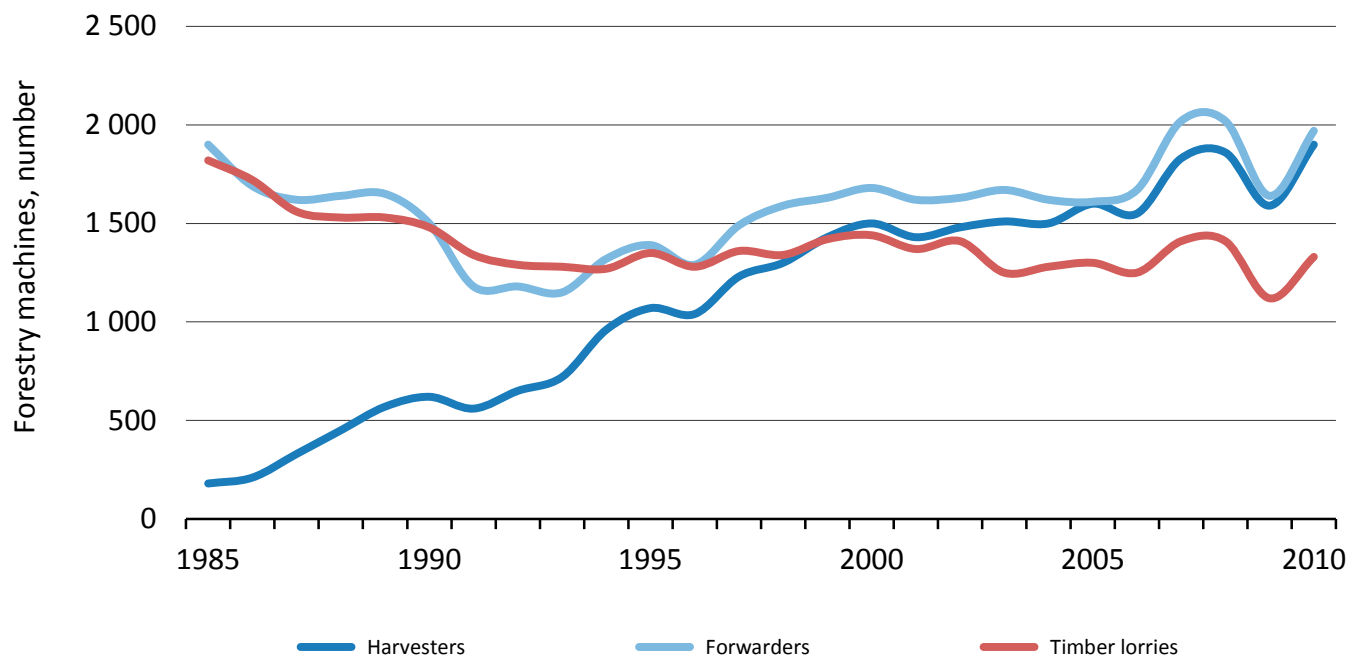


Per cent of mechanised felling year 2011: 99.6%

Long-distance Transportation Techniques, 2002–2011

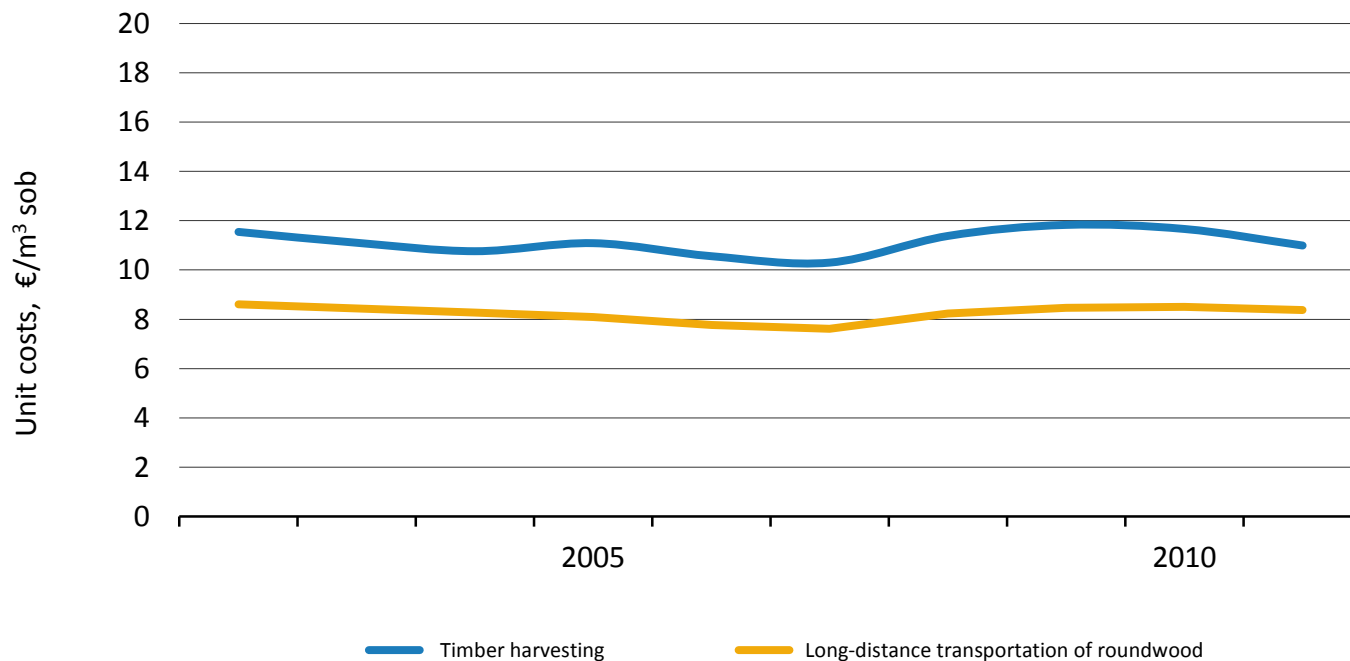


Forestry Machines, 1985–2010



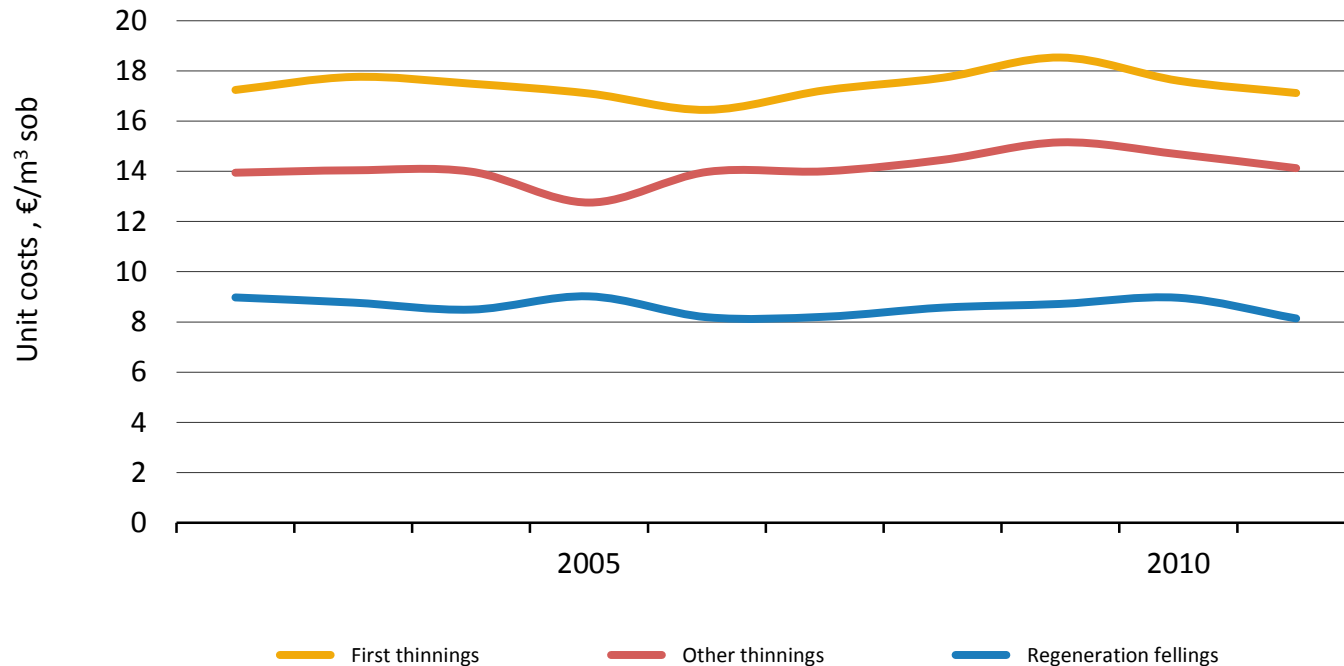
Source: Finnish Forest Research Institute

Unit Costs in Timber Harvesting and Long-distance Transportation of Roundwood, 2002–2011



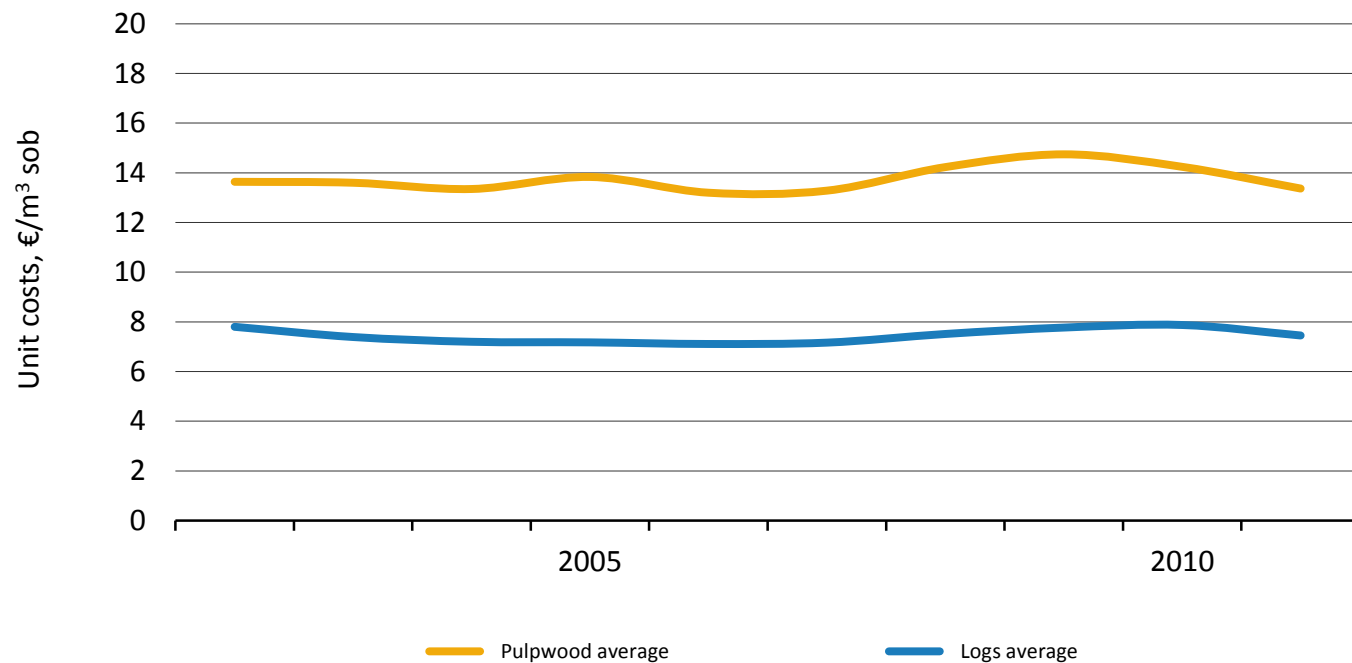
Costs have been deflated by Indexes of forest machinery costs and lorry traffic costs (2011=100).

Unit Costs in Mechanised Harvesting by Felling Method, 2002–2011



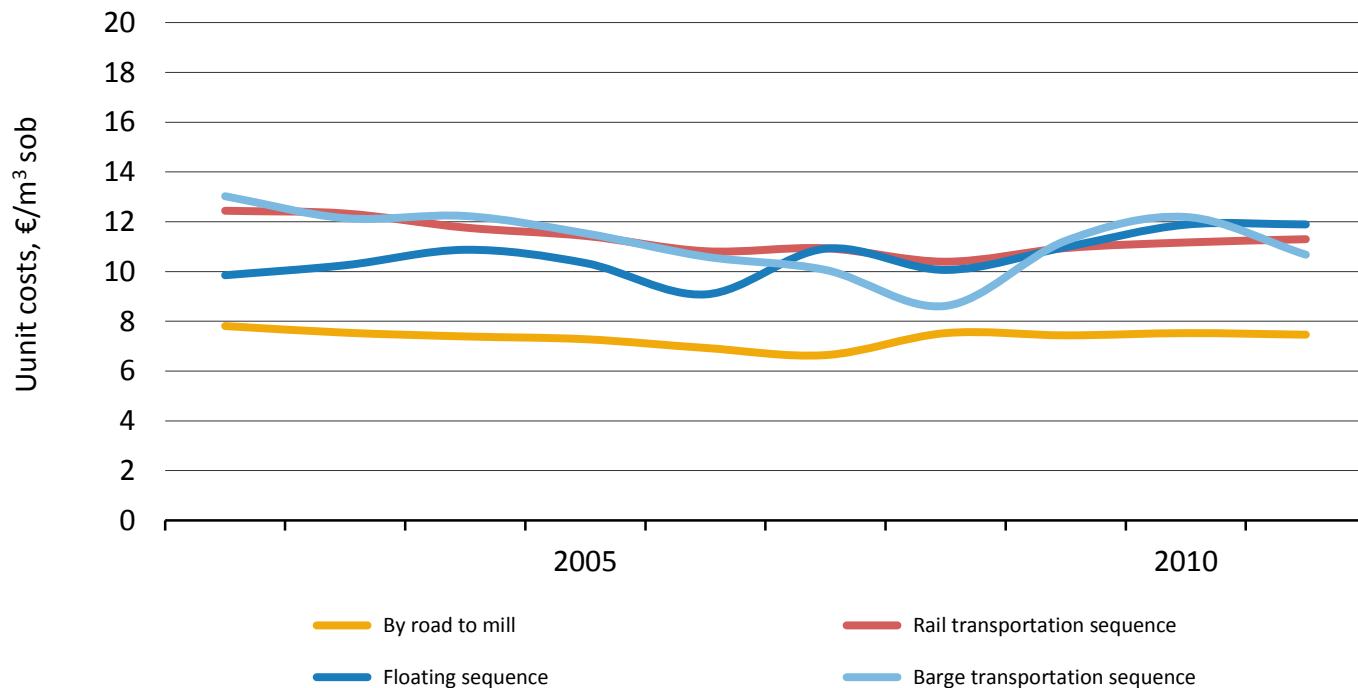
Costs have been deflated by Index of forest machinery (2011=100).

Unit Costs in Mechanised Harvesting by Timber Assortments, 2002–2011



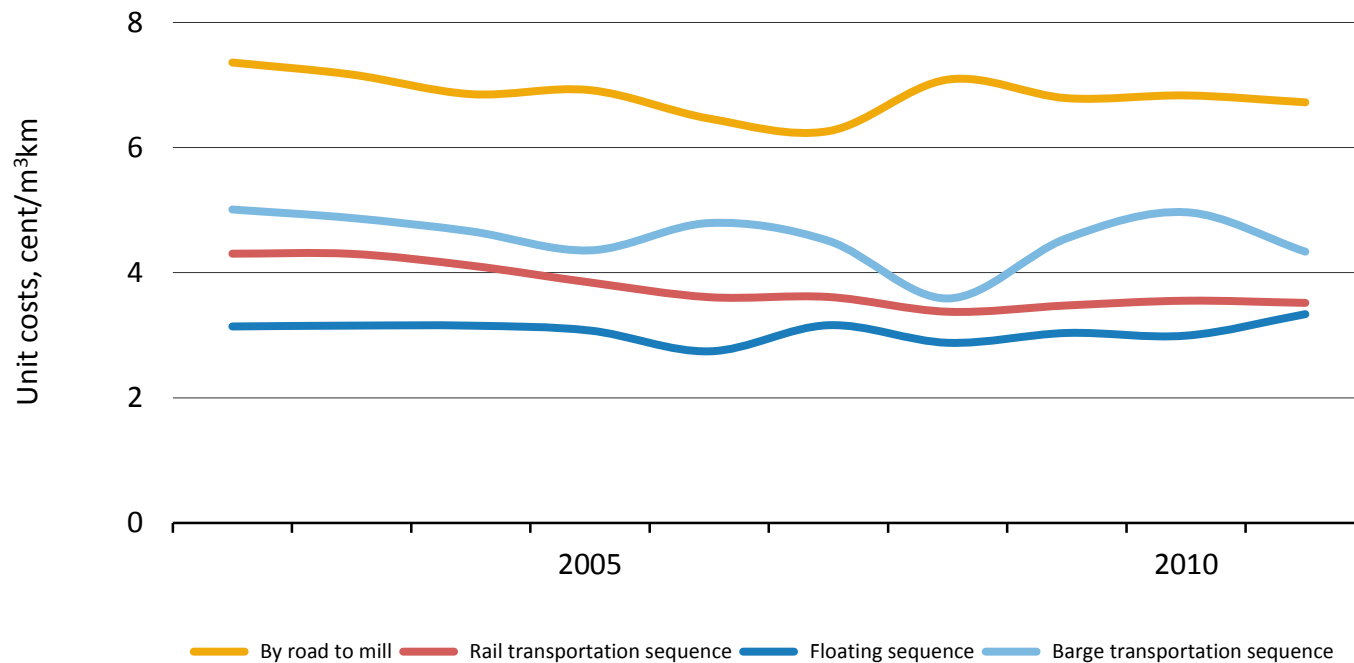
Costs have been deflated by Index of forest machinery (2011=100).

Unit Costs in Long-distance Transportation of Roundwood 2002–2011 (I)



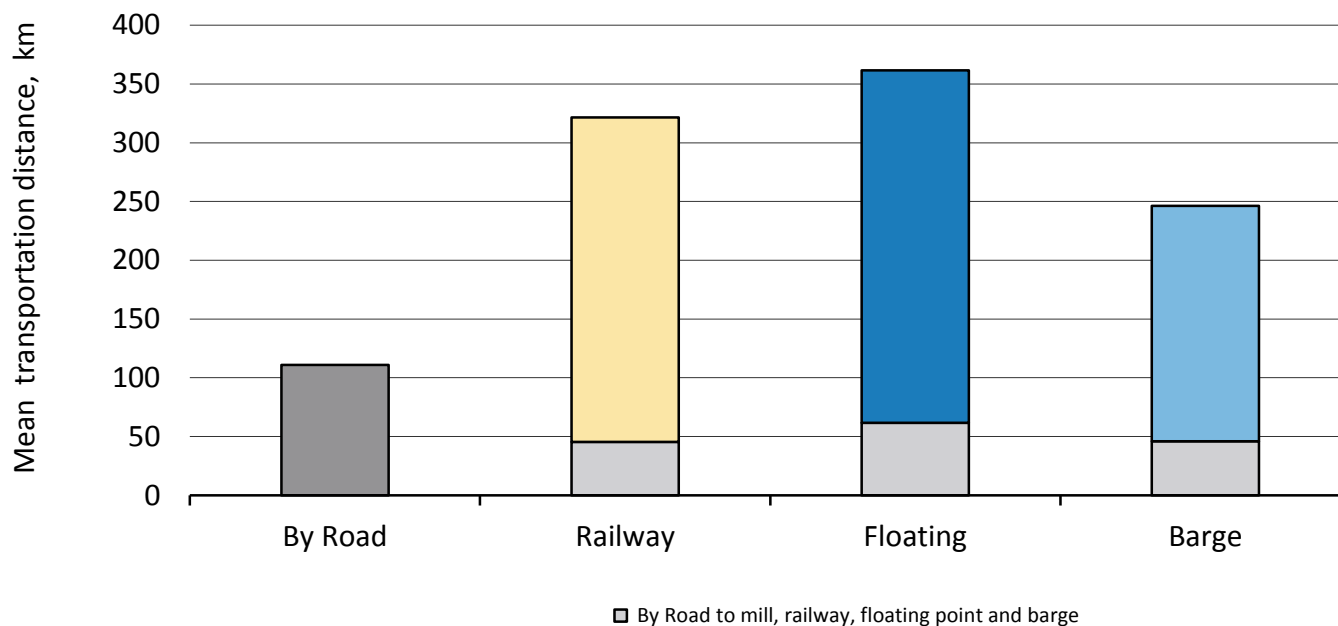
Costs have been deflated by Index of lorry traffic costs (2011=100).

Unit Costs in Long-distance Transportation of Roundwood 2002–2011 (II)

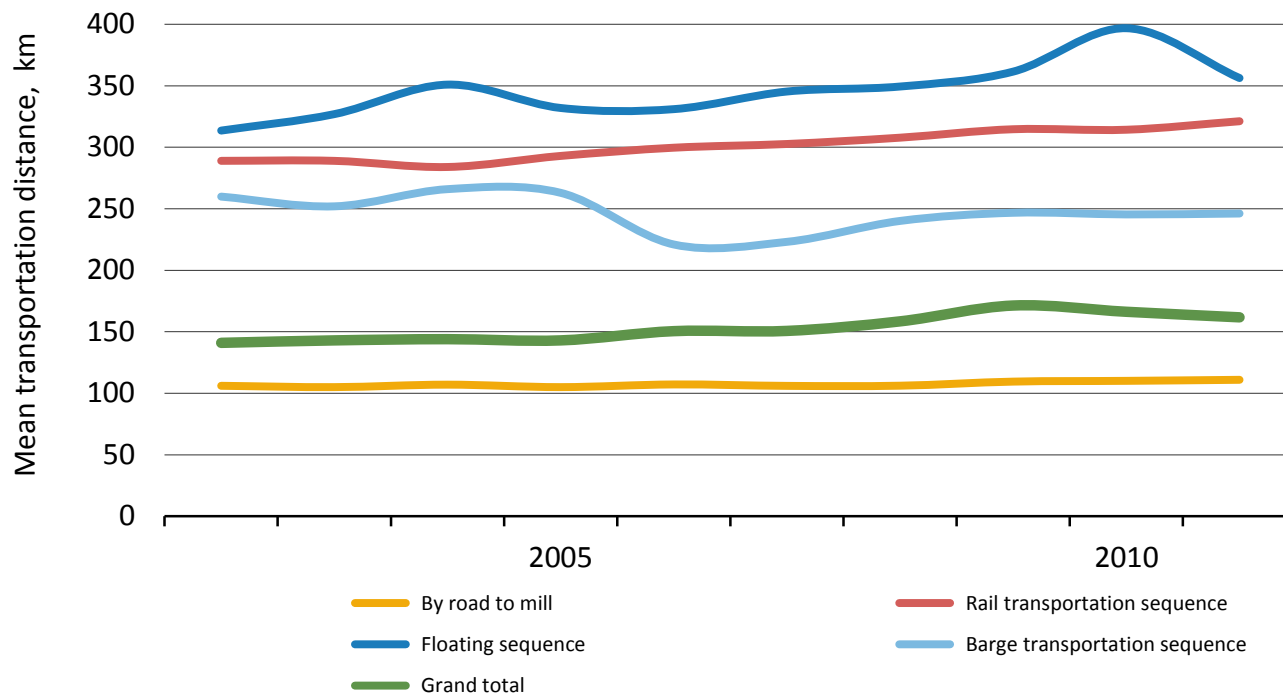


Costs have been deflated by Index of lorry traffic costs (2011=100).

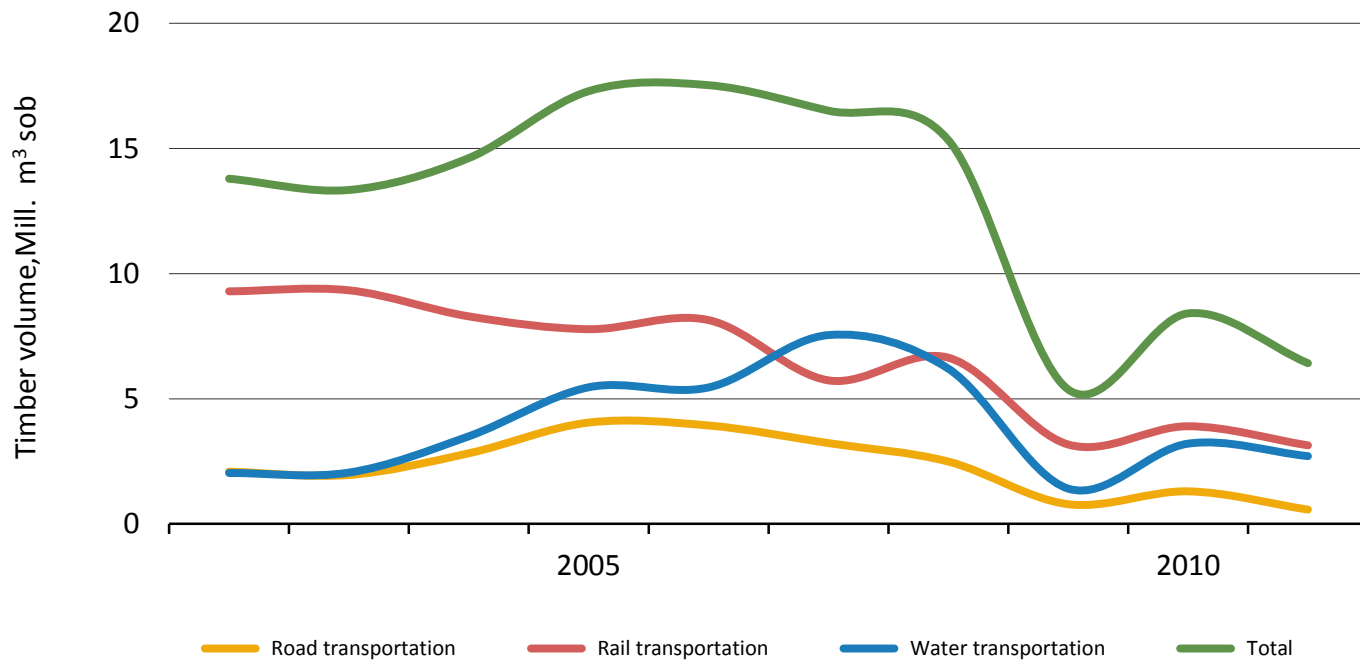
Mean Transportation Distance, 2011



Mean Transportation Distance, 2002–2011



Volumes of Imported Roundwood by Transportation Method, 2002–2011



Statistics 2011 Tables

Statistics of Metsäteho

Costs and Timber Volume, 2011

	Costs		Timber volume	Transport volume	
	Mill. €	%	Mill. m ³	Mill. m ³ km	%
Harvesting	420,4		38,3		
Long-distance transportation	365,9	100		7 097	100
Road transportation	298,0	81		4 150	58
Rail transportation	59,1	16		2 544	36
Water transportation	8,7	2		403	6

(solid over bark)

Unit Costs in Felling by Felling Method, 2011

€/m ³	First thinning	Other thinning	Regeneration felling	Total
Harvesting				10,99
Harvesting, machinery ^{*)}	17,12	14,13	8,14	10,95
- osuus puumäärästä	10,7	30,8	58,5	100
- osuus kustannuksista	16,8	39,7	43,5	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, 2011

€/m ³	Mechanised harvesting ^{*)}	Long-distance transportation
Pine logs	7,77	7,53
Spruce logs	7,11	6,41
Plywood logs	7,97	8,58
Logs average	7,45	7,17
Pine pulpwood	12,73	9,31
Spruce pulpwood	12,94	8,52
Birch pulpwood	15,17	9,06
Pulpwood average	13,37	9,06
Average	10,95	8,37

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

(solid over bark)

Long-distance Transportation of Roundwood, 2011

	Domestic roundwood				
	1 000 m ³	%	km	cent/m ³ km	€/m ³
Total long-distance transportation	43 704		162	5,2	8,37
Total by road	43 681	99,9	95	7,2	6,82
By road to mill	33 016	75,8	111	6,7	7,46
Rail transportation sequence	9 213	21,2	321	3,5	11,30
By road to railway	9 493	21,8	45	10,7	4,84
Rail transportation	9 213	21,2	276	2,3	6,42
Water transportation sequence	1 299	3,0	310	3,7	11,33
Floating sequence	715	1,6	362	3,3	11,89
By road to floating point	715	1,6	62	8,0	4,94
Floating	715	1,6	300	2,2	6,67
Barge transportation sequence	584	1,3	246	4,3	10,68
By road to barge	440	1,0	46	10,5	4,82
Barge transportation	584	1,3	201	3,5	7,05

(solid over bark)