

# Timber Harvesting and Long-distance Transportation of Roundwood 2022

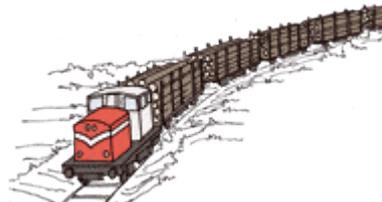
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Metsätehon tulokalvosarja 12-EN/2023  
Metsäteho Result Series 12-EN/2023

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Metsäteho Oy

# About statistics

- Includes volumes and direct harvesting / transportation costs of timber assortments concerning domestic roundwood by the forest industries and State forest enterprise as well as proportions of harvesting methods.



# Timber Harvesting Costs 2022

## Unit cost of timber harvesting increased from 2021

- The average cost of timber harvesting was 12.36 €/m<sup>3</sup> (over bark)
  - change +12.2%, real cost change -0.9%
- The average cost of mechanised timber harvesting was 12.36 €/m<sup>3</sup> (over bark)
  - change +12.2%
- Costs by felling method:
  - First thinning 19.92 €/m<sup>3</sup> (change +13.8%)
  - Other thinning 15.95 €/m<sup>3</sup> (change +13.8%)
  - Regeneration felling 9.42 €/m<sup>3</sup> (change +10.8%)
- The share of mechanised timber harvesting was 100.0%
- The share of timber from regeneration felling was 59.2% (change +0.4 percentage points)
- The share of delivery sales in domestic wood supply was 9.0%



# Long-distance Transportation Costs of Roundwood 2022

## Unit cost of long-distance transportation of roundwood increased from 2021

- The average cost of long-distance transportation was 11.06 €/m<sup>3</sup>
  - change +23.7%, real cost change +6.0%
- The average cost by timber truck to mill was 9.80 €/m<sup>3</sup>
  - change +23.6%, real cost change +5.9%
- The average transport distance lengthened and was 176 km
  - changes: road transportation (+3.6%), railway (+2.2%) and water transportation (+22.6%)
- The share of road transportation decreased by –3.5 percentage points and share of rail transportation and water transportation increased by +2.2 and +1.3 percentage points
- The average overhead of domestic wood procurement was 3.44 €/m<sup>3</sup>
  - change +8.2%



# Statistics 2022 Tables

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Metsäteho Statistics



# Costs and Timber Volume, 2022

	Costs		Timber volume	Transport volume	
	Mill. €	%	Mill. m <sup>3</sup>	Mill. m <sup>3</sup> km	%
Harvesting	567.2		45.9		
Long-distance transportation	568.4	100		9 103	100
Road transportation	461.8	81		4 519	50
Rail transportation	89.2	16		3 855	42
Water transportation	17.4	3		729	8



# Unit Costs in Harvesting by Felling Method, 2022

€/m <sup>3</sup>	First thinning	Other thinning	Regeneration felling	Total
Harvesting				12.36
Mechanised harvesting <sup>*)</sup>	19.92	15.95	9.42	12.36
- share of volume	7.2	33.6	59.2	100
- share of costs	11.5	43.3	45.1	100

<sup>\*)</sup> Includes mechanised felling as well as forest haulage related to mechanised and motor-manual felling



# Unit Costs in Harvesting and Long-distance Transportation by Timber Assortments, 2022

€/m <sup>3</sup>	Mechanised harvesting <sup>*)</sup>	Long-distance transportation
Pine logs	8.90	10.00
Spruce logs	8.18	8.99
Plywood logs	9.19	12.73
Logs average	8.54	9.60
Pine pulpwood	14.72	12.45
Spruce pulpwood	14.97	11.18
Birch pulpwood	16.95	12.02
Pulpwood average	15.34	11.99
Average	12.36	11.06

<sup>\*)</sup> Includes mechanised felling as well as forest haulage related to mechanised and motor-manual felling



# Long-distance Transportation of Roundwood, 2022

	Domestic roundwood				
	1 000 m <sup>3</sup>	%	km	cent/m <sup>3</sup> km	€/m <sup>3</sup>
Total long-distance transportation	51 388		176	6.3	11.06
Total by road	50 601	98.5	89	10.2	9.13
By road to mill	36 485	71.0	104	9.4	9.80
Rail transportation sequence	12 936	25.2	347	3.9	13.62
By road to railway	12 203	23.7	49	15.0	7.29
Rail transportation	12 936	25.2	298	2.3	6.90
Water transportation sequence	1 987	3.9	367	4.5	16.60
By road to floating/barge	1 896		58	13.9	7.99
Water transportation	1 987		309	2.8	8.79

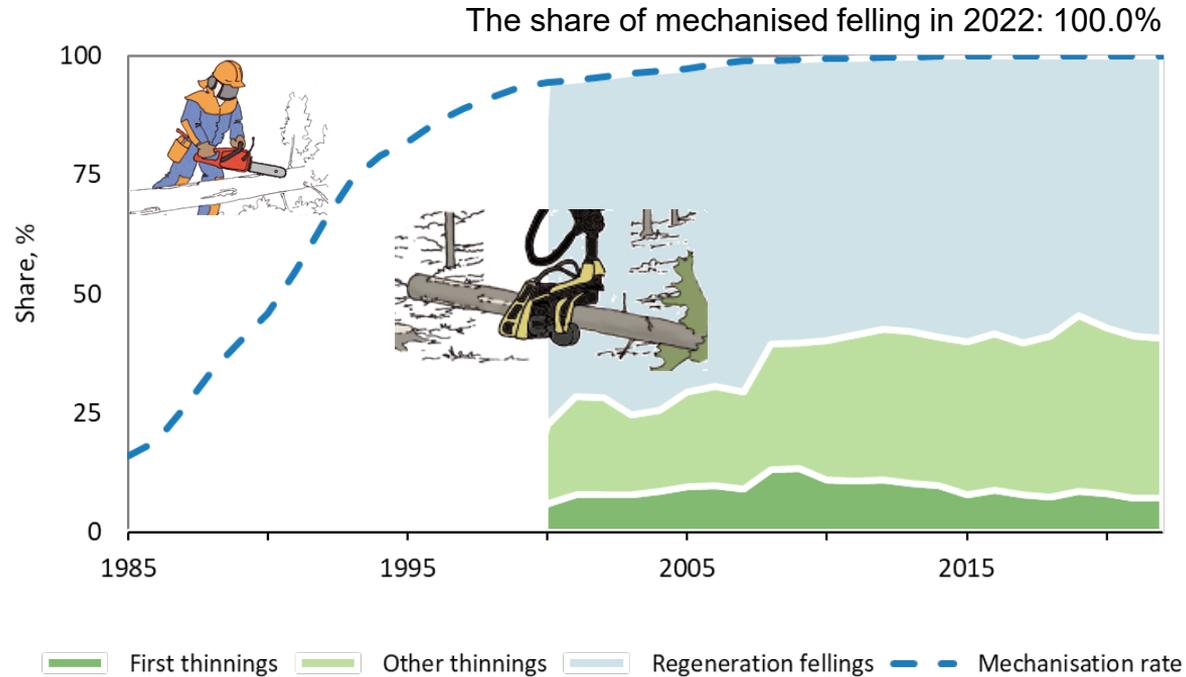
# Short Term Trends of Finnish Wood Supply

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Metsäteho Statistics

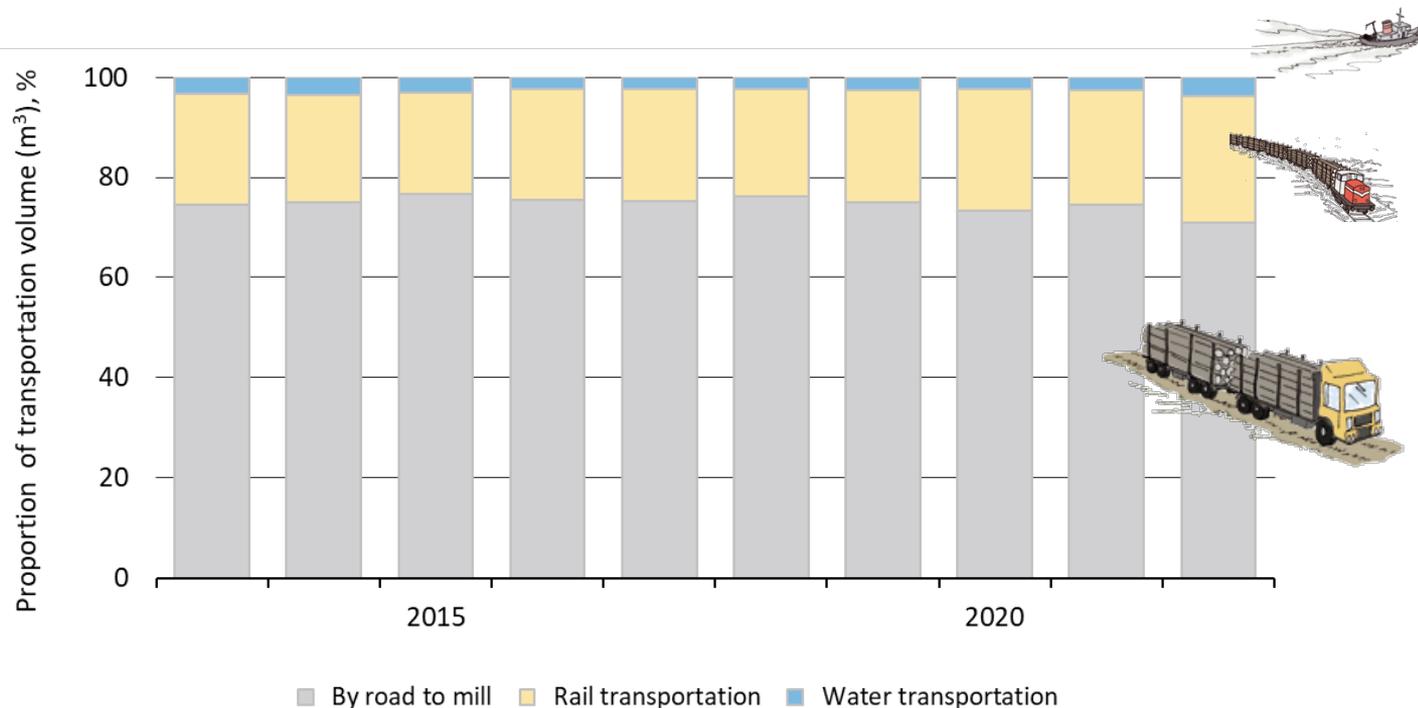


# Mechanisation of Felling, 1985–2022

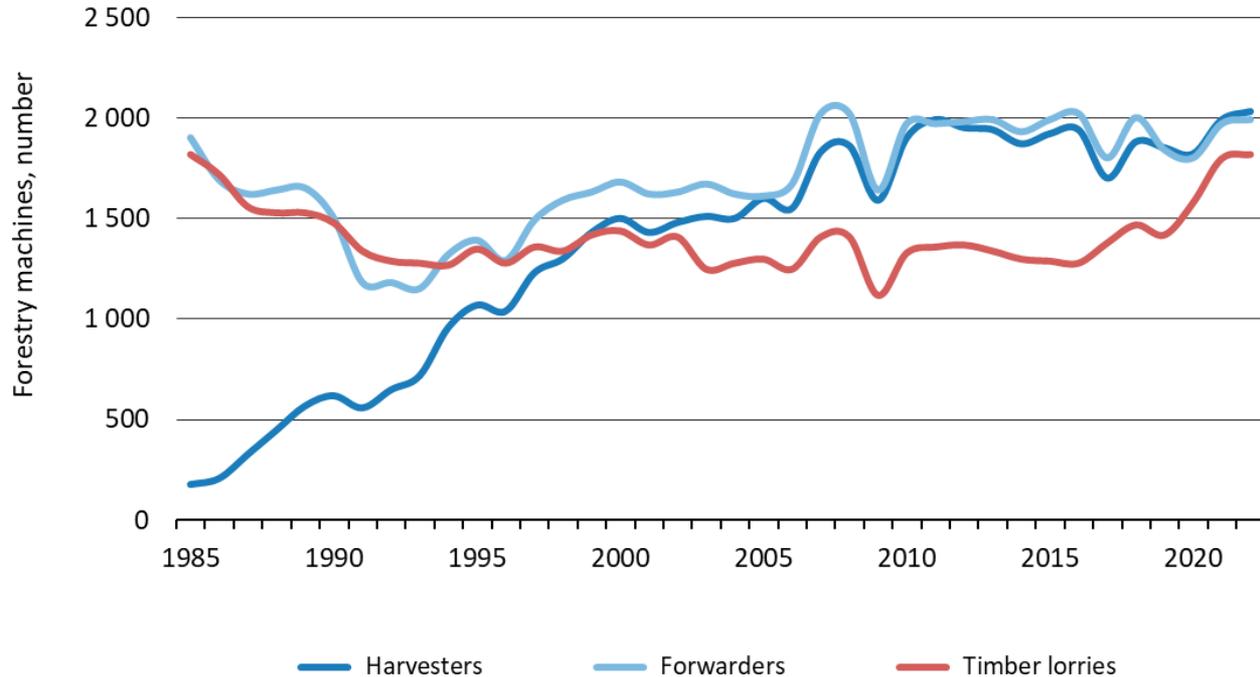


Mechanised felling is presented by felling method since 2000

# Long-distance Transportation Techniques, 2013–2022



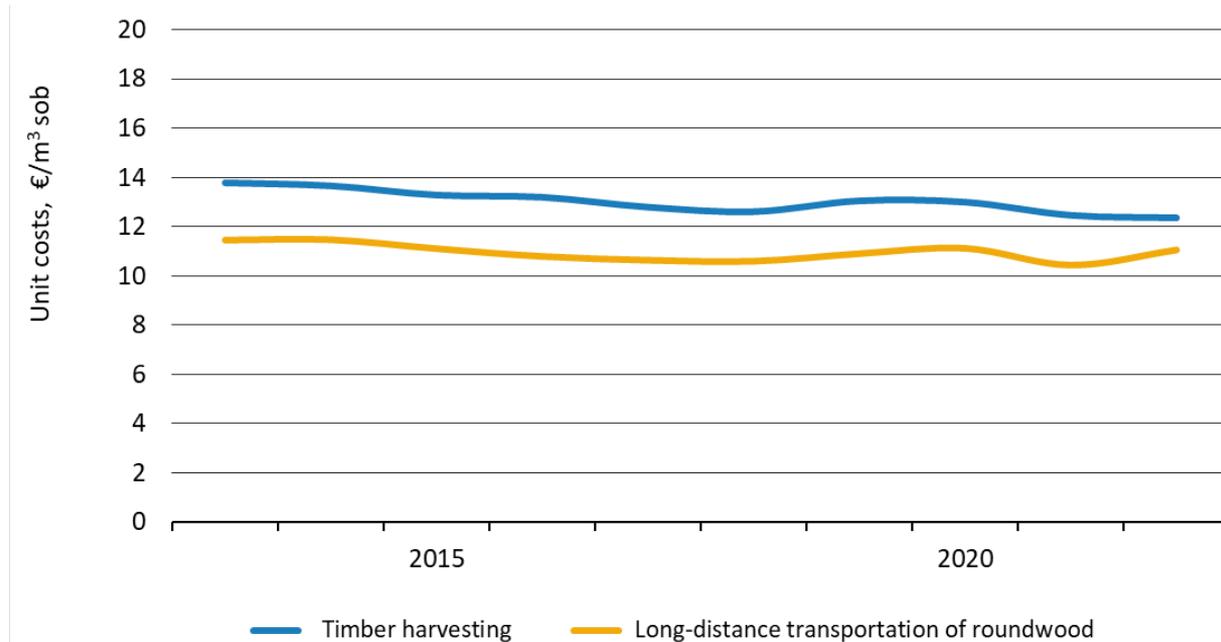
# Forestry Machines, 1985–2022



Source: Natural Resources Institute Finland



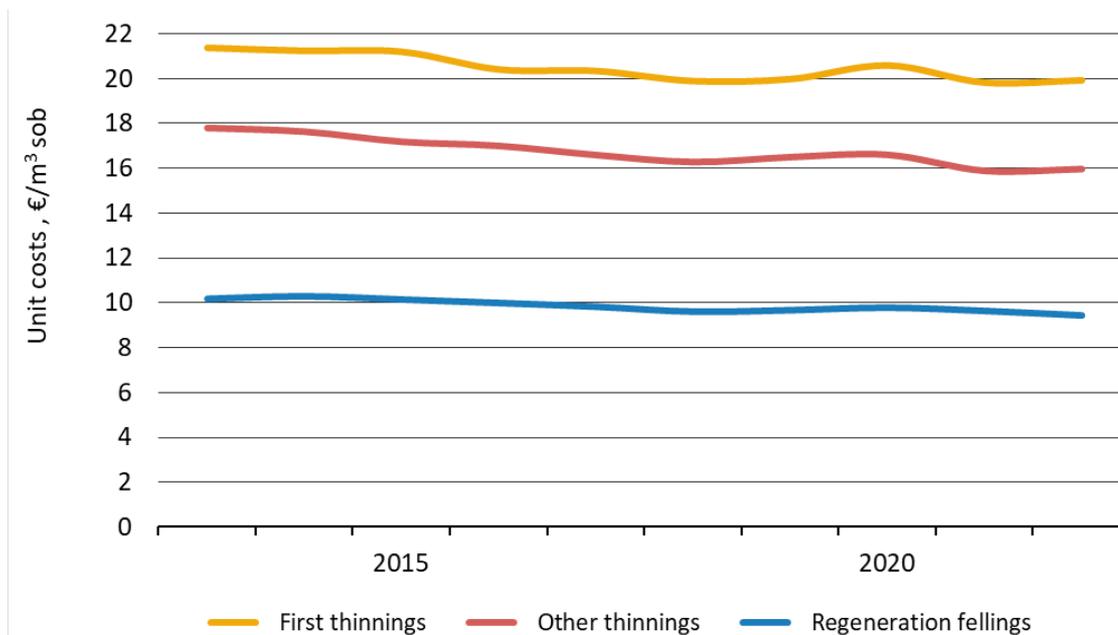
# Unit Costs in Timber Harvesting and Long-distance Transportation of Roundwood, 2013–2022



Costs have been deflated by Indexes of forest machinery costs and lorry traffic costs (2022=100).



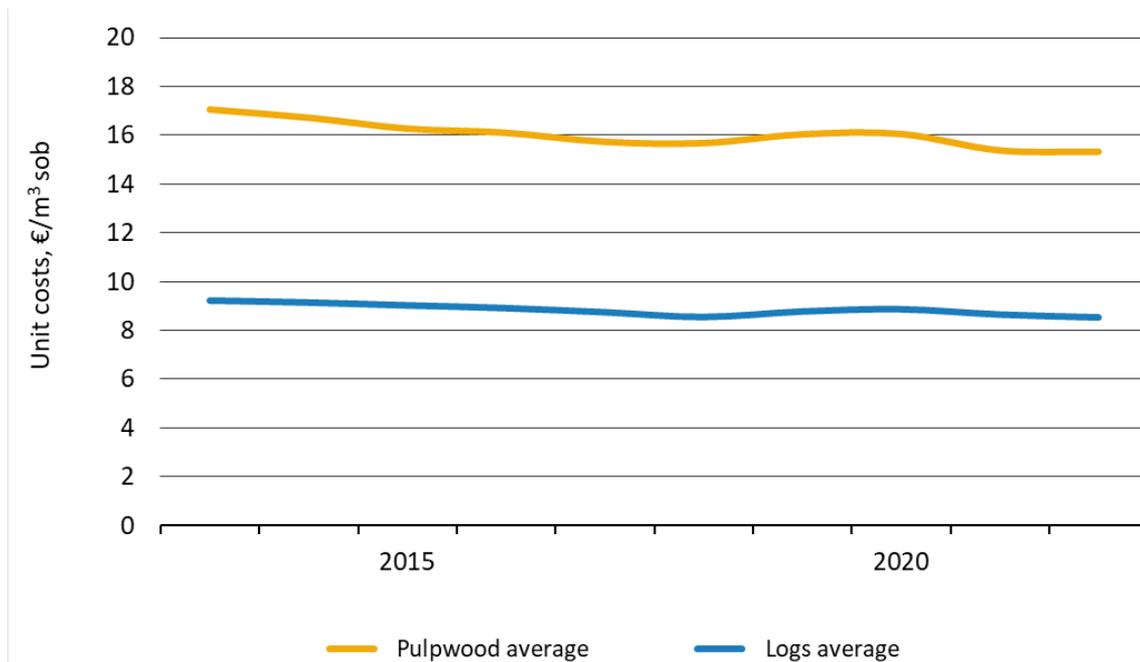
# Unit Costs in Mechanised Harvesting by Felling Method, 2013–2022



Costs have been deflated by Index of forest machinery (2022=100).



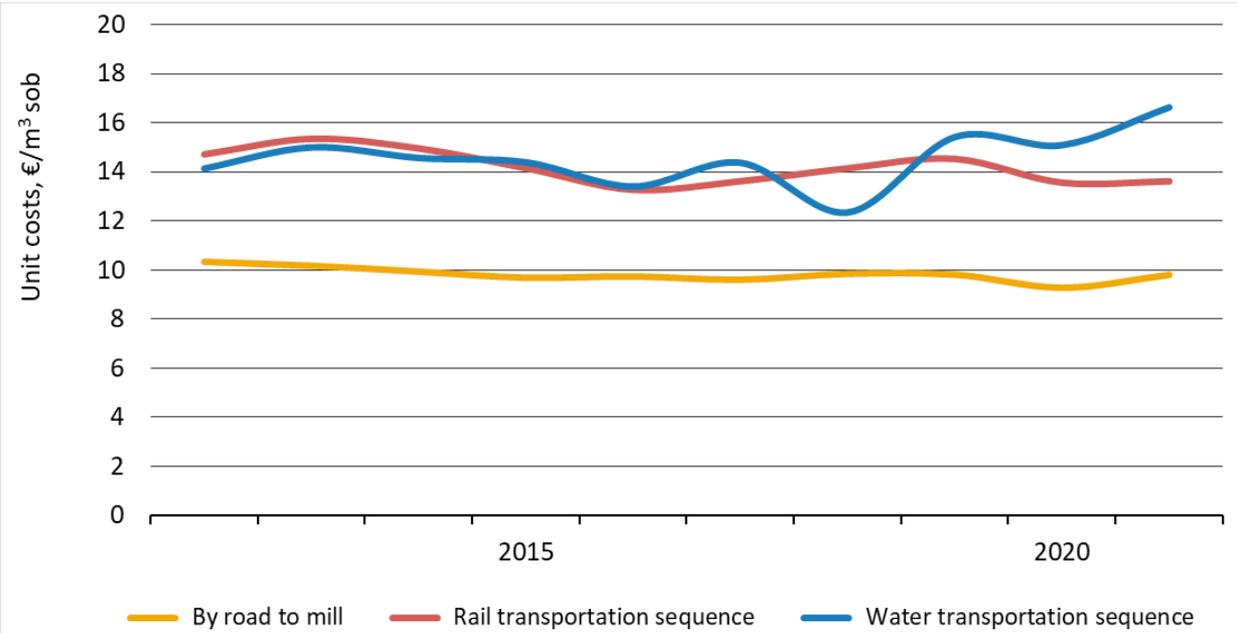
# Unit Costs in Mechanised Harvesting by Timber Assortments, 2013–2022



Costs have been deflated by Index of forest machinery (2022=100).



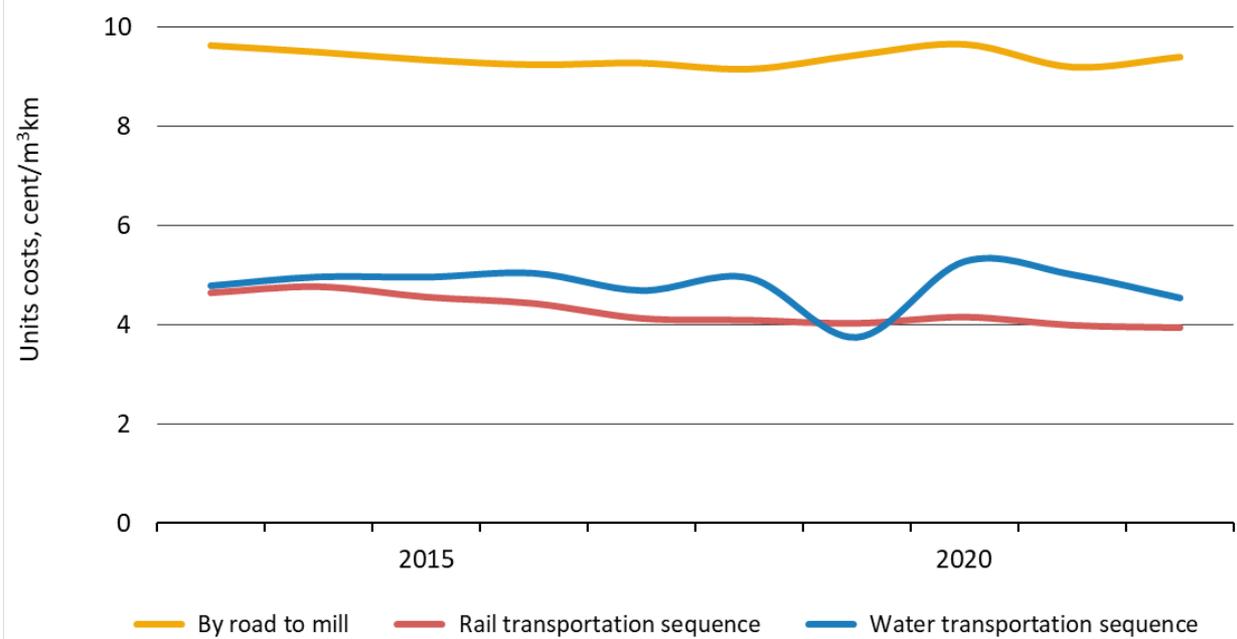
# Unit Costs in Long-distance Transportation of Roundwood 2013–2022 (1/2)



Costs have been deflated by Index of lorry traffic costs (2022=100).



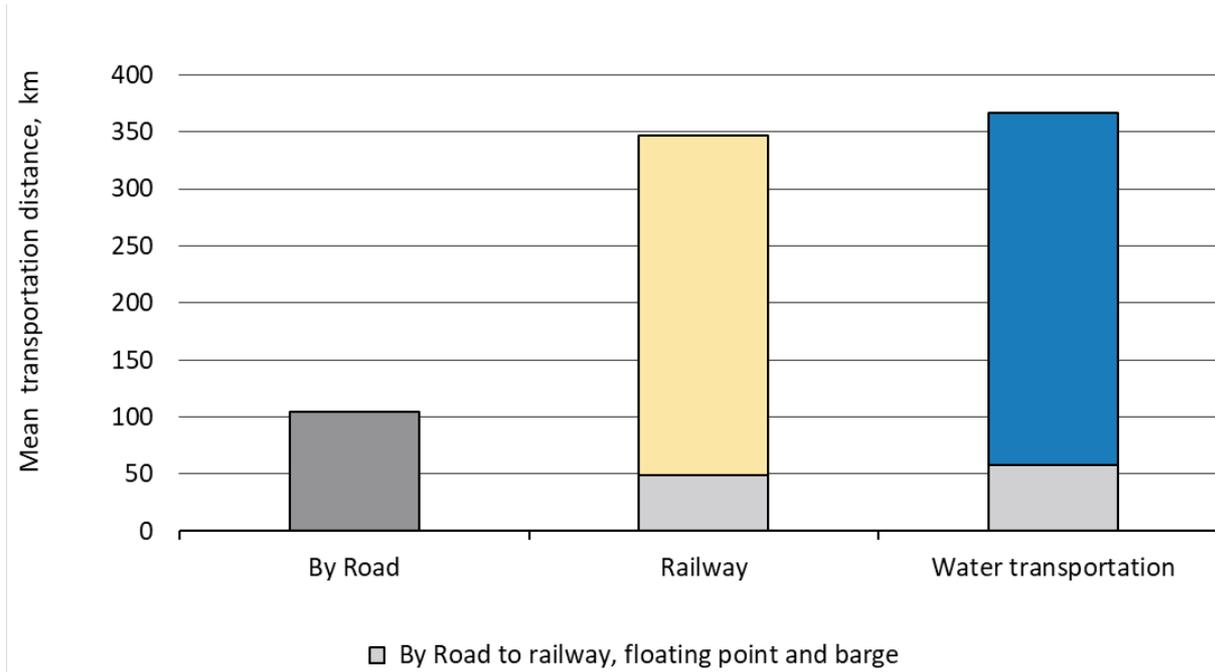
# Unit Costs in Long-distance Transportation of Roundwood 2013–2022 (2/2)



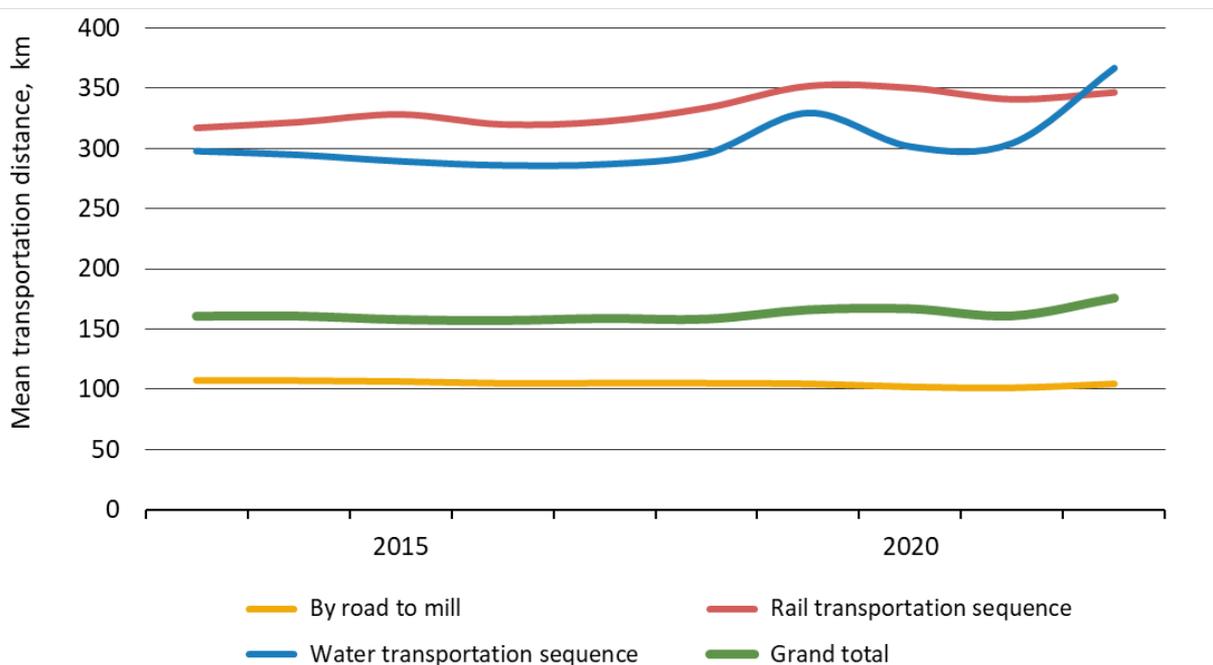
Costs have been deflated by Index of lorry traffic costs (2022=100).



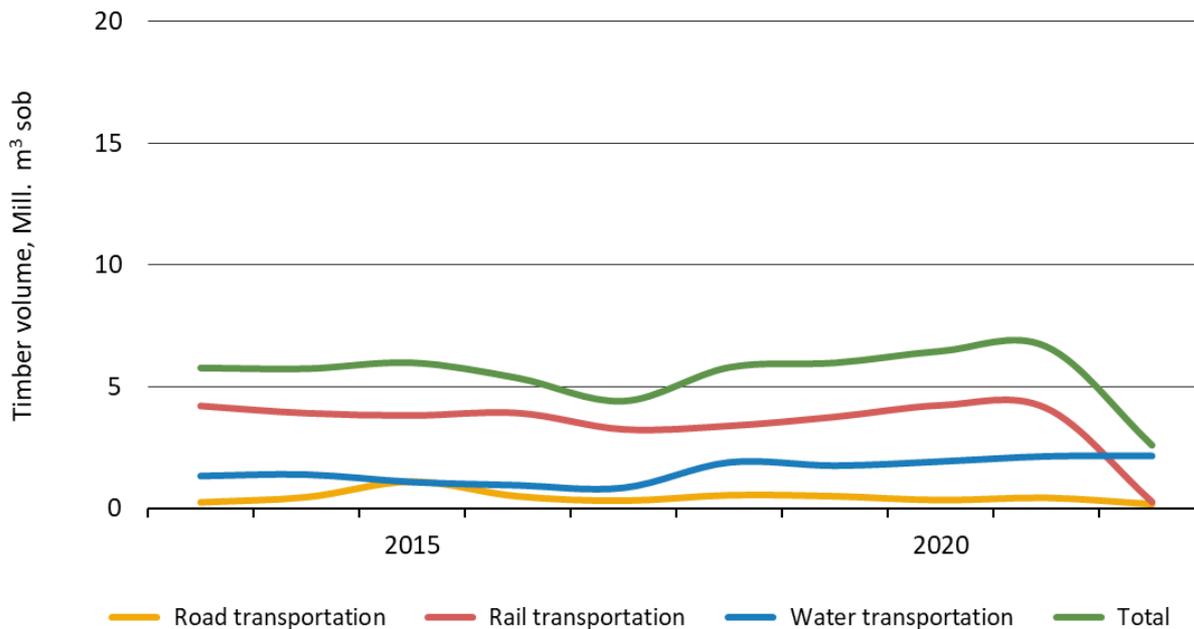
# Mean Transportation Distance, 2022



# Mean Transportation Distance, 2013–2022



# Volumes of Imported Roundwood by Transportation Method, 2013–2022



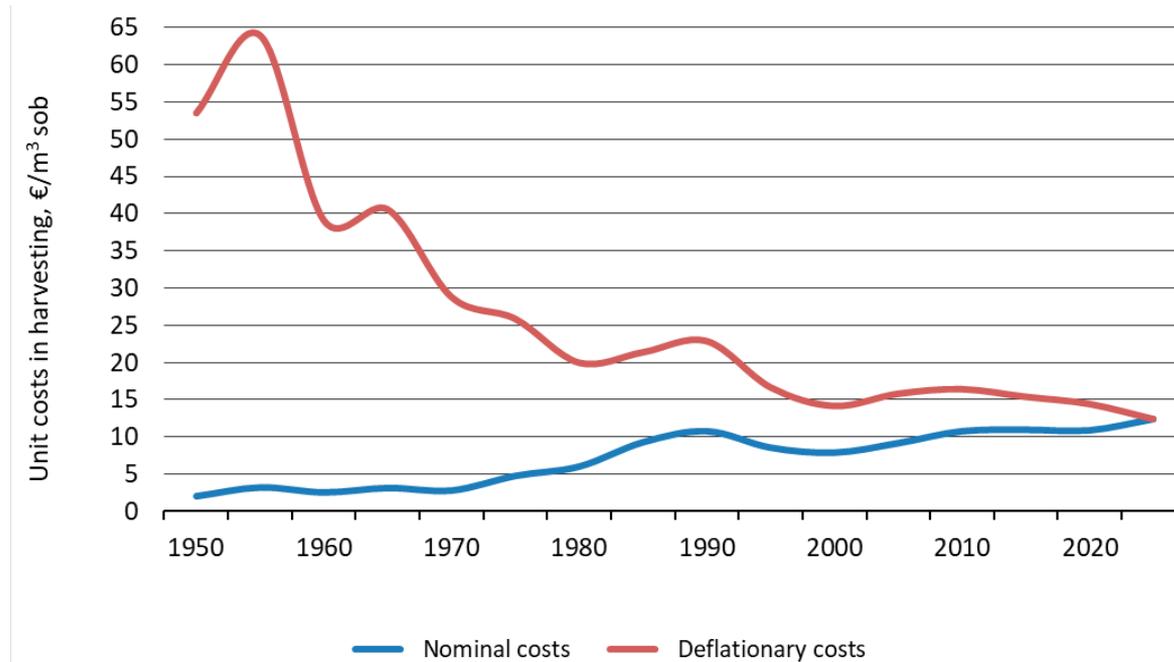
# Long Term Trends of Finnish Wood Supply

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Metsäteho Statistics



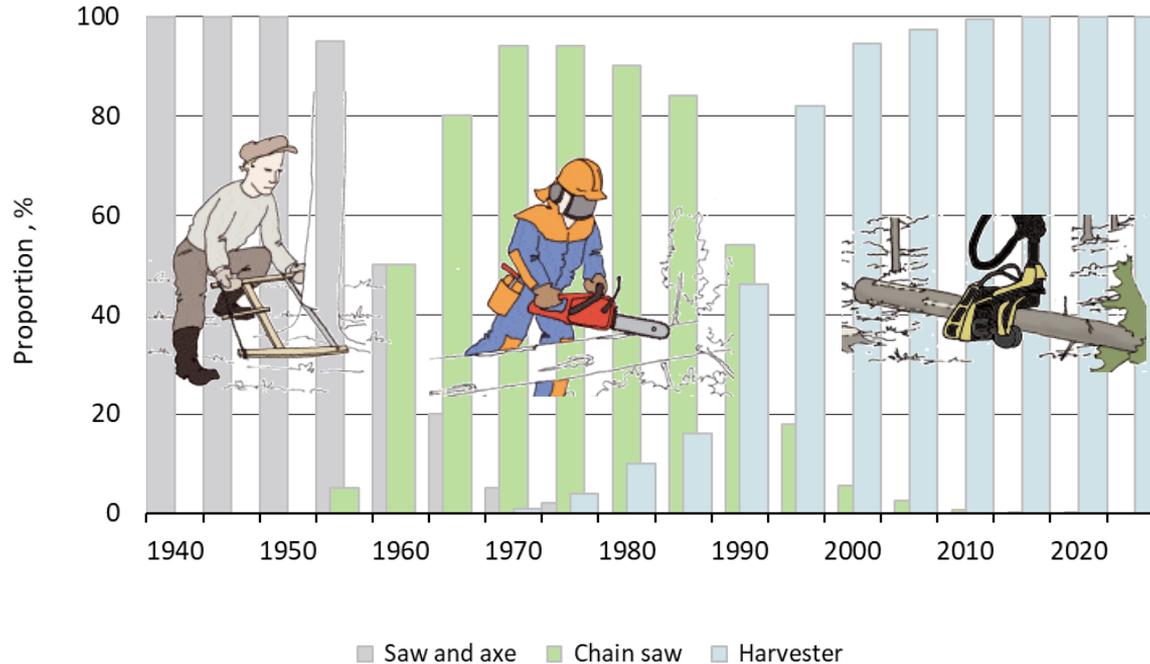
# Unit Costs in Timber Harvesting, 1950–2022



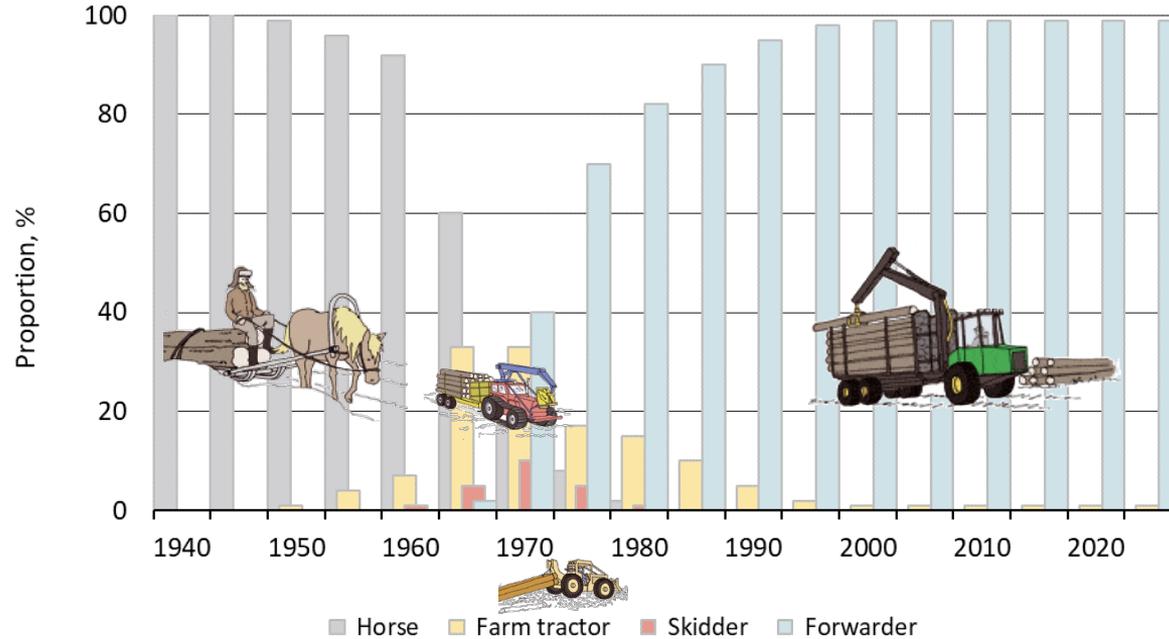
Costs have been deflated by the wholesale price index (2022=100).



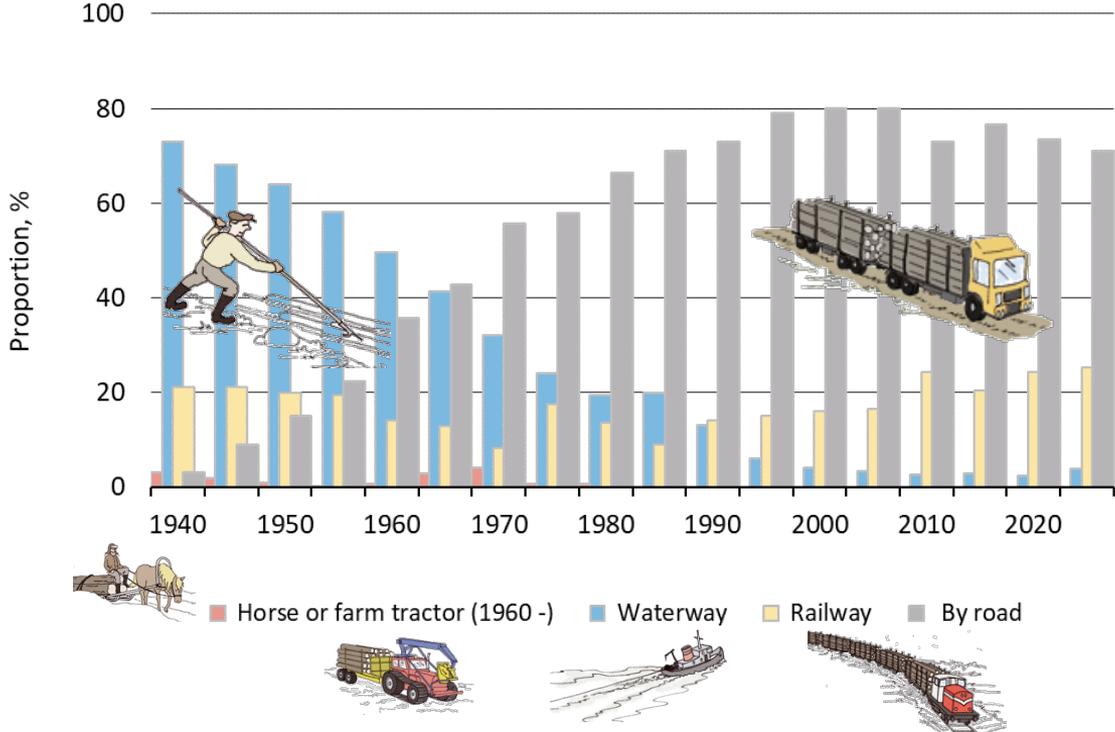
# Felling Techniques, 1940–2022



# Forest Haulage Techniques, 1940–2022



# Long-distance Transportation Techniques, 1940–2022

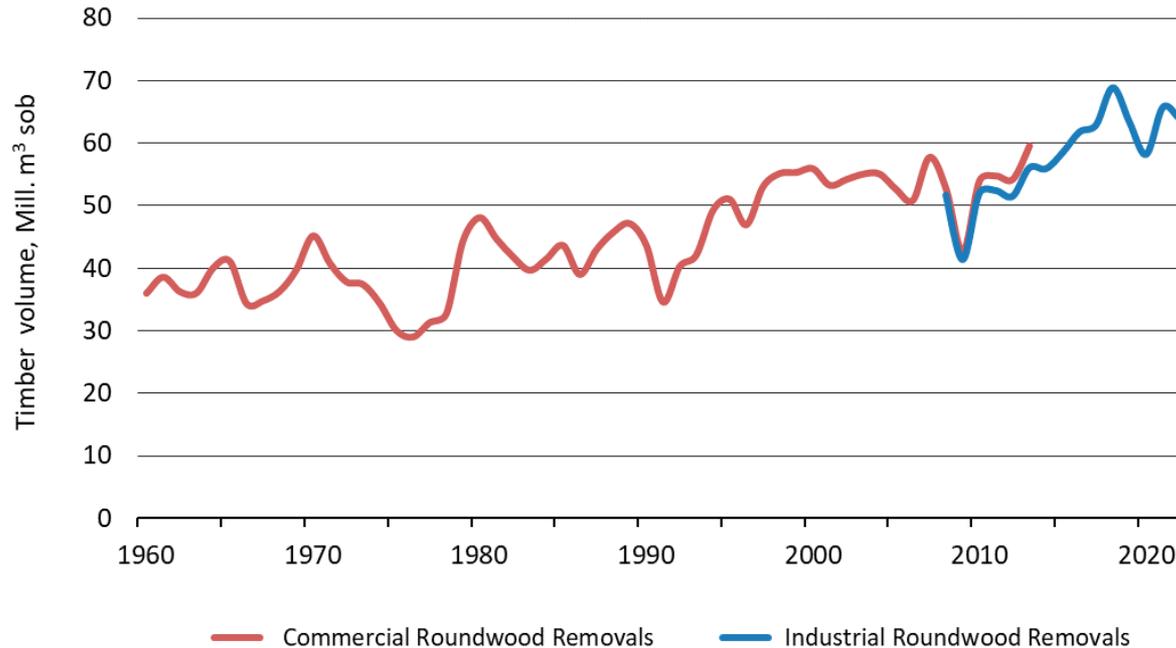


# Background Information of Finnish Wood Supply

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# Commercial Roundwood Removals, 1960–2022

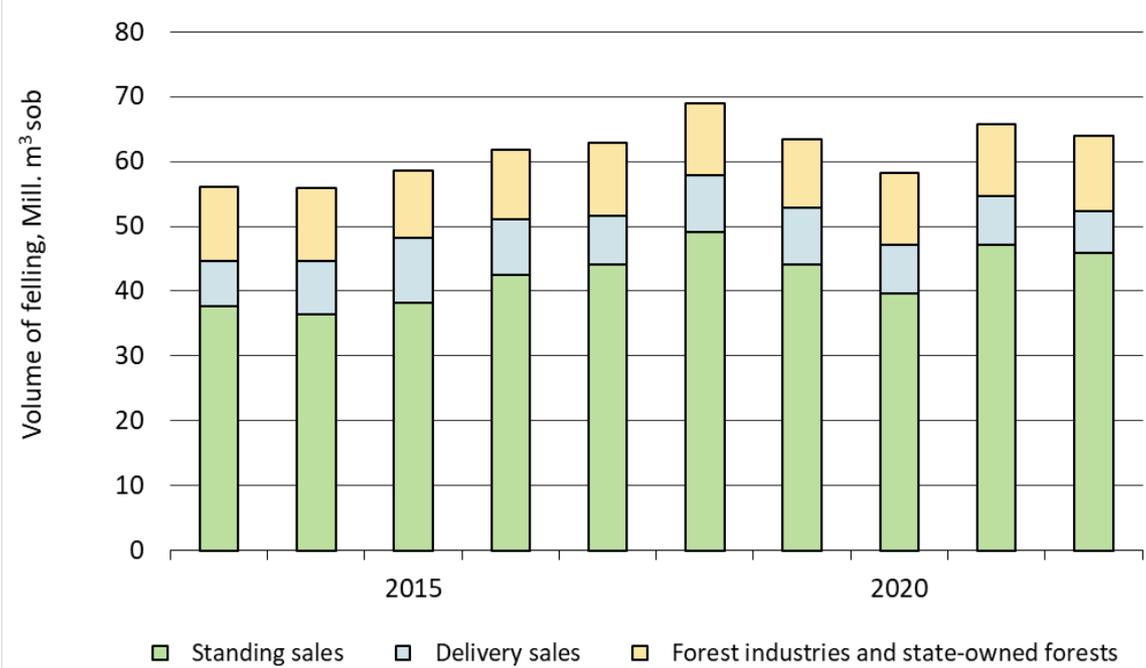


Commercial roundwood removal = industrial roundwood (logs and pulpwood) and energy wood (mainly small-sized trees)

Source: Natural Resources Institute Finland



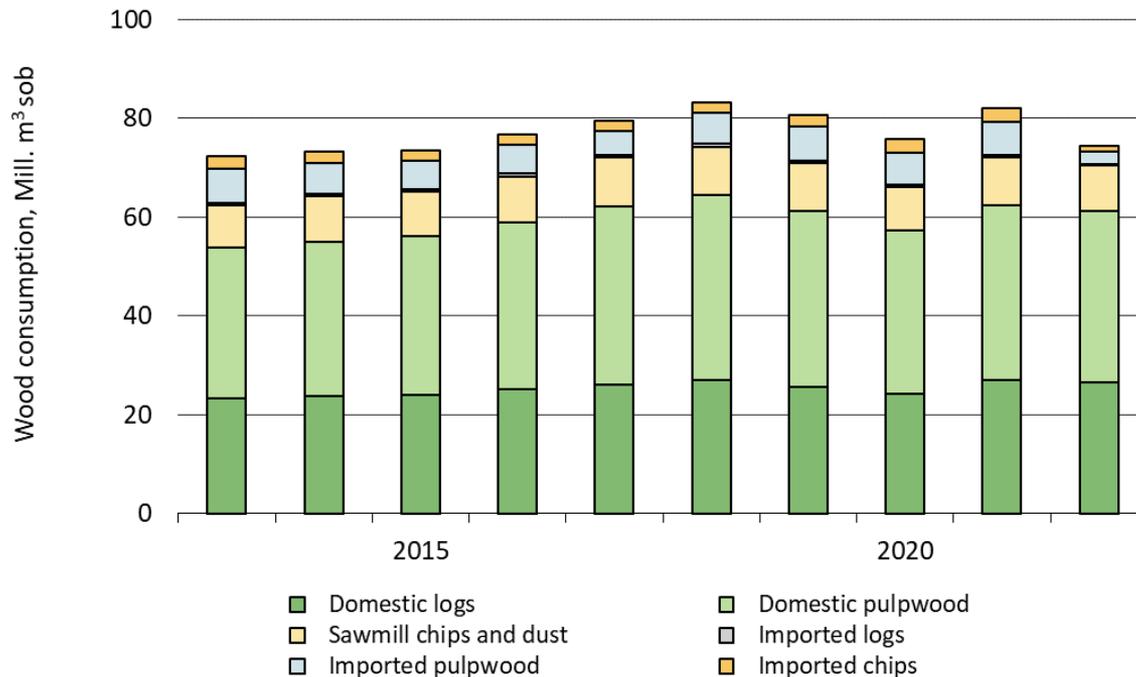
# Industrial Roundwood Removals by Forest Ownership Category, 2013–2022



Source: Natural Resources Institute Finland



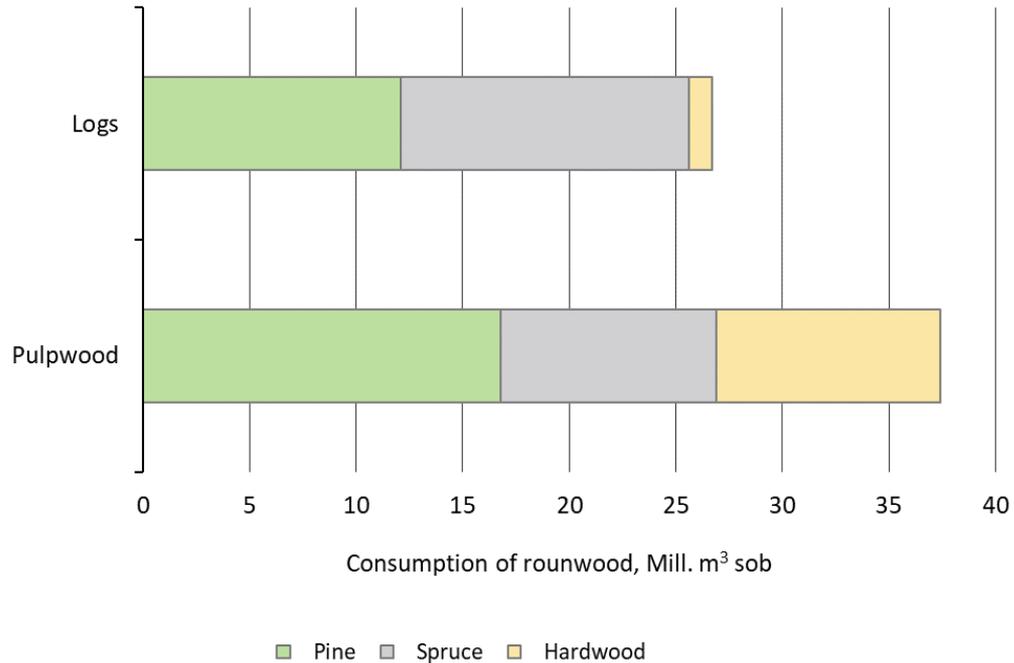
# Roundwood Consumption by Forest Industries, 2013–2022



Source: Natural Resources Institute Finland



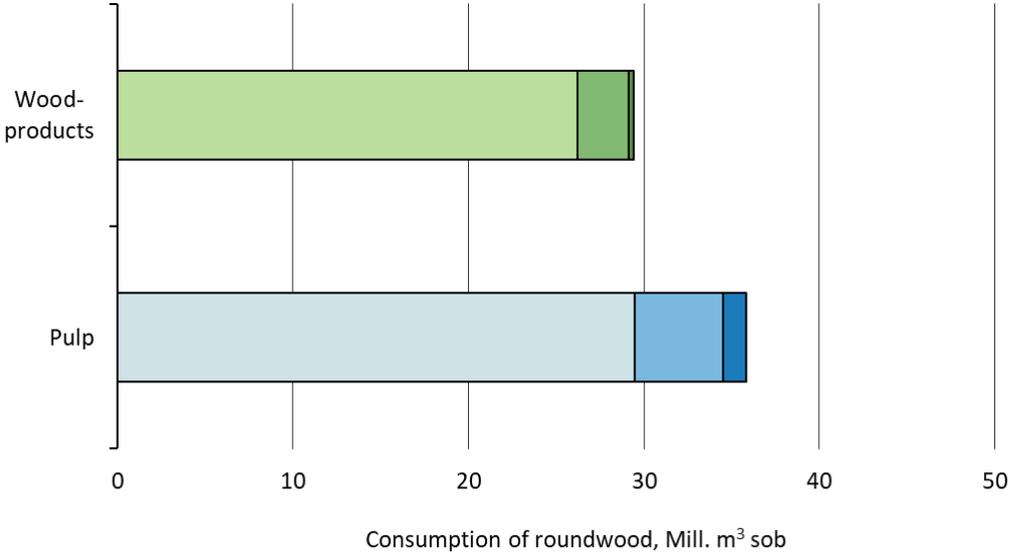
# Wood Consumption by Forest Industries, 2022



Source: Natural Resources Institute Finland



# Roundwood Consumption by Forest Industries by Branch of Industry, 2022



- Sawmilling
- Plywood and veneer industry
- Other wood-based
- Chemical pulp industry
- Mechanical pulp industry
- Semi-chemical pulp industry

Source: Natural Resources Institute Finland

