



# Metsäteho

Wood measuring methods used  
in Finland 2009

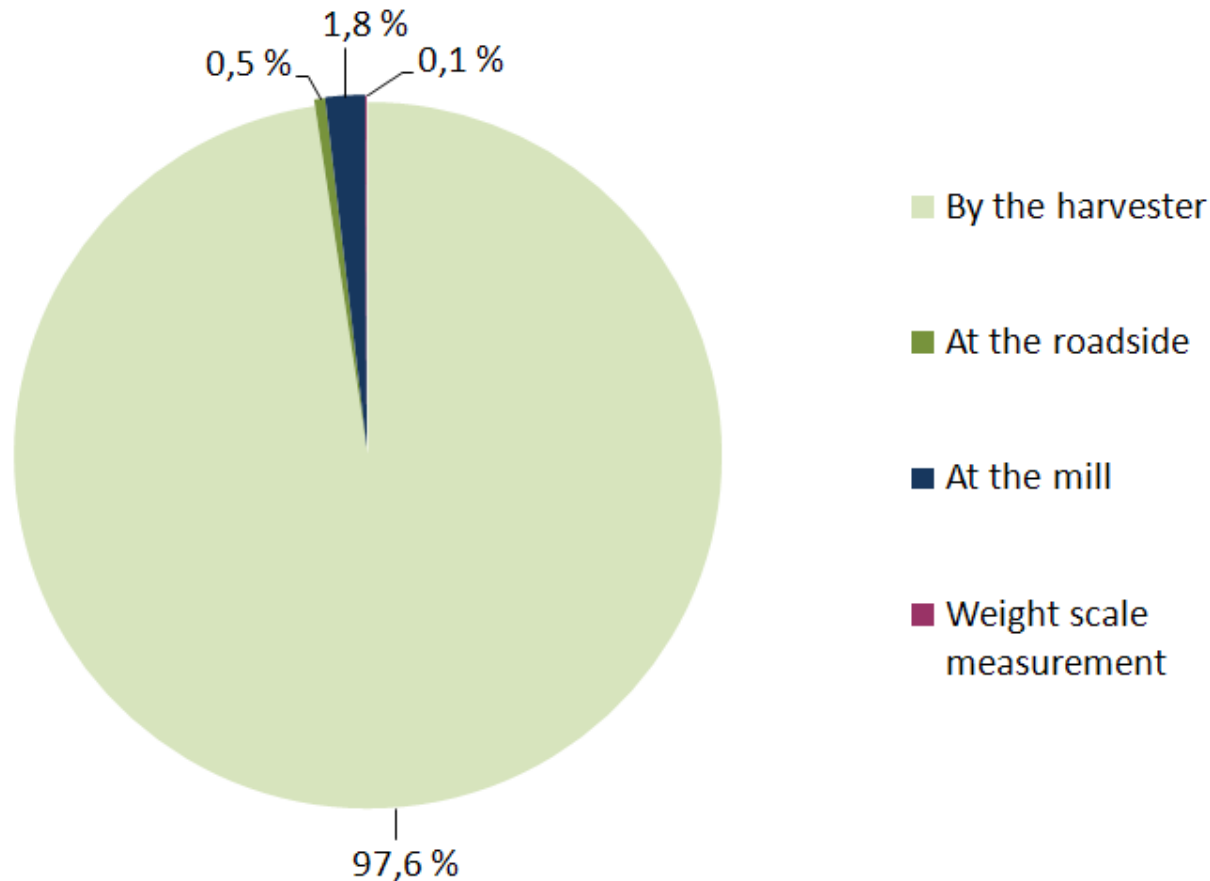
Timo Melkas



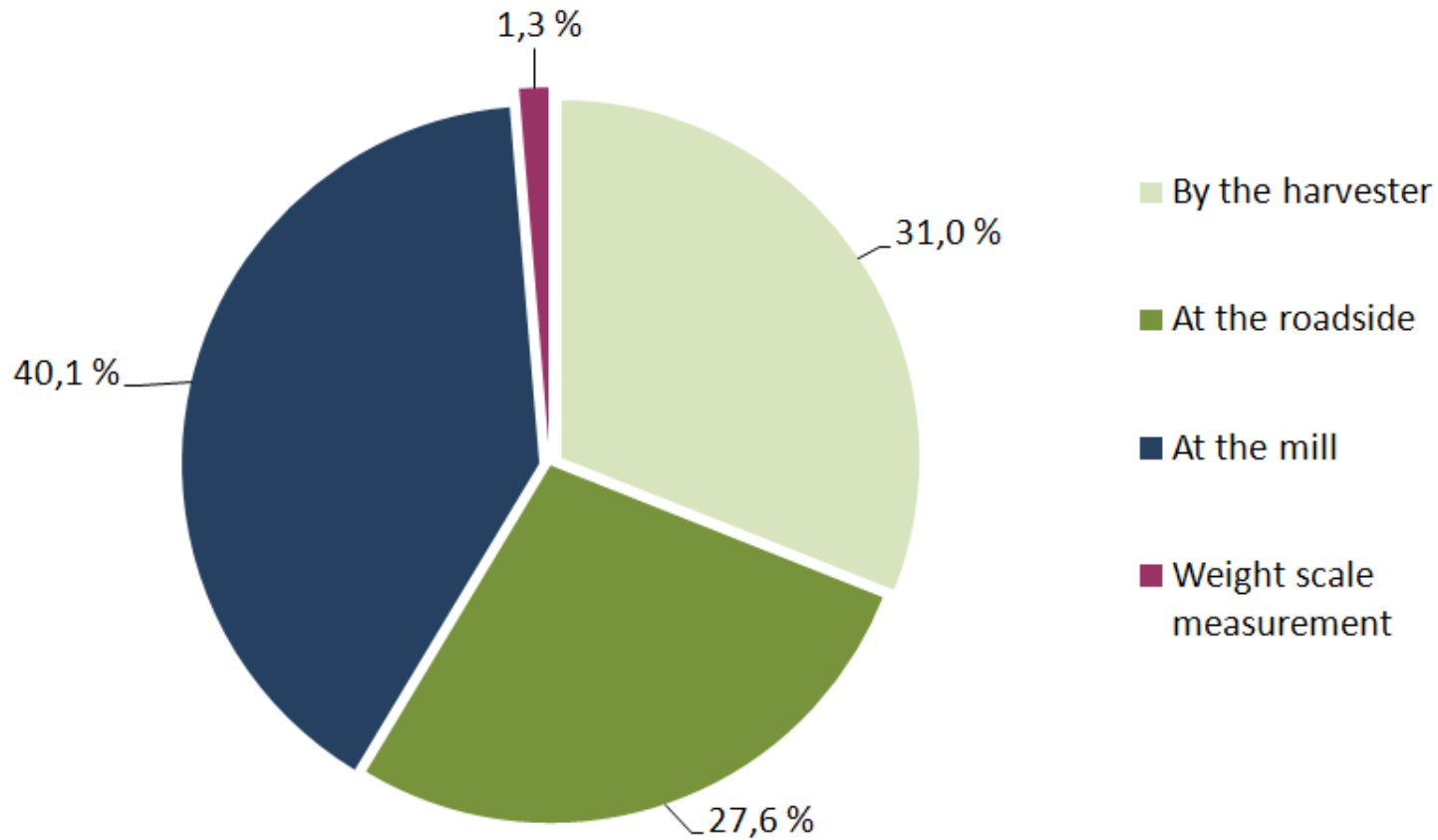
# The volume of wood measuring in 2009

- Wood measuring methods used in 2009 –statistics based on the answers which Metsäteho owners, the Finnish forest industry companies and Metsähallitus, have reported. It consists of only domestic timber felling.
- The used volumes (m<sup>3</sup> sob) in statistics are the next:
  - Standing sales in private-owned forests 19.5 million m<sup>3</sup>
  - Delivery sales in private-owned forests 4.9 million m<sup>3</sup>
  - Forest industry-owned forests and state-owned forests managing by Forest and Park Service 9.1 million m<sup>3</sup>
  - Together 33.5 million m<sup>3</sup>
- In 2009, the volume of standing sales was **25.5** million m<sup>3</sup> sob and delivery sales **6.6** million m<sup>3</sup> sob from private-owned forests. (Source: Metla = Finnish Forest Research Institute)
- Timber felling from industry-owned and state-owned forests totalled **9.3** million m<sup>3</sup> sob. (Source: Metla)
- Commercial roundwood fellings in 2009 stood at **41.4** million m<sup>3</sup> sob in Finland, of which sawlogs amounted to **16.8** and pulpwood **24.2** million m<sup>3</sup> sob. (Source: Metla)
- Timber volume is expressed in cubic metres, real solid volume over bark.

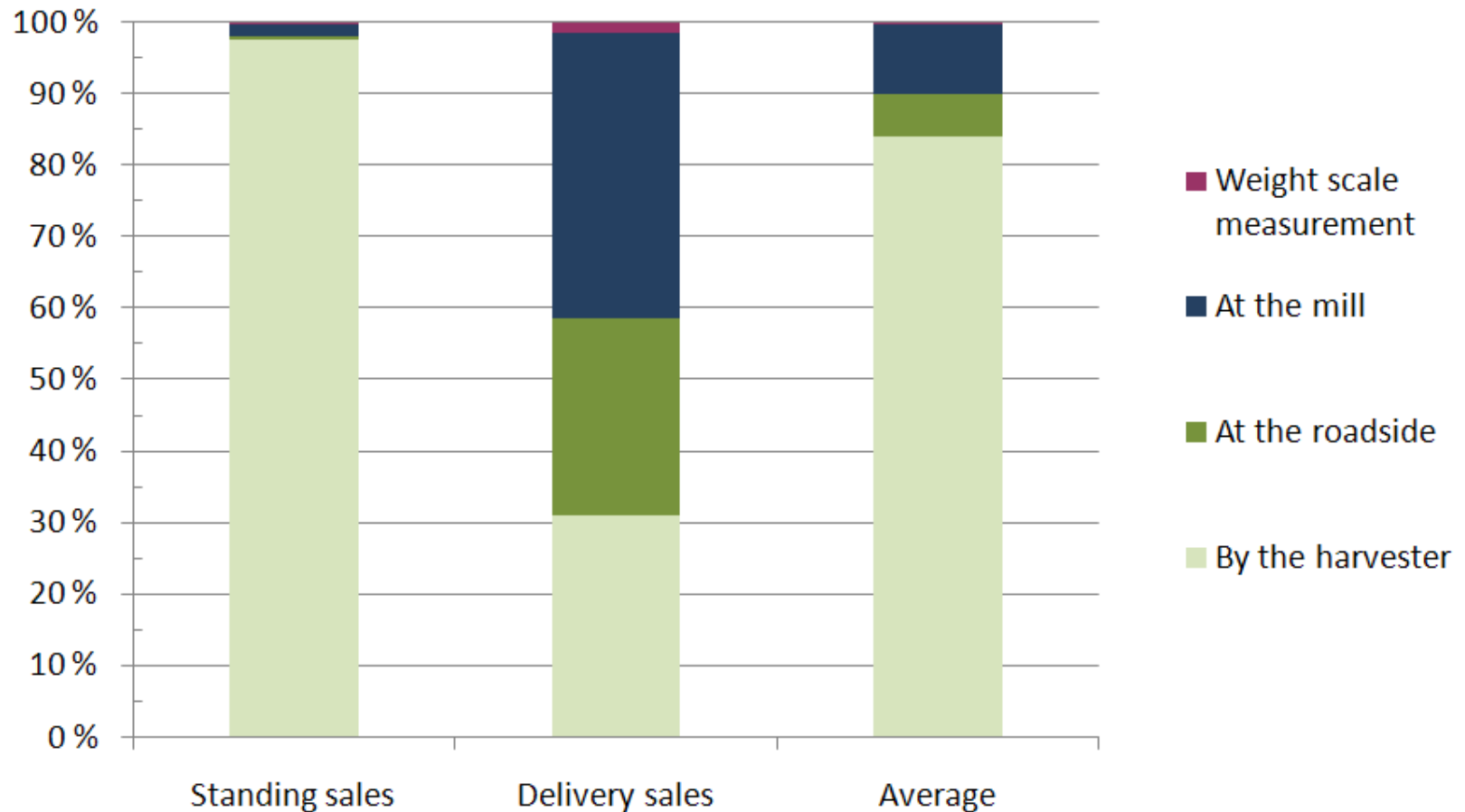
## Measurement methods in standing sales of private-owned forests in 2009 (about 19.5 million m<sup>3</sup>)



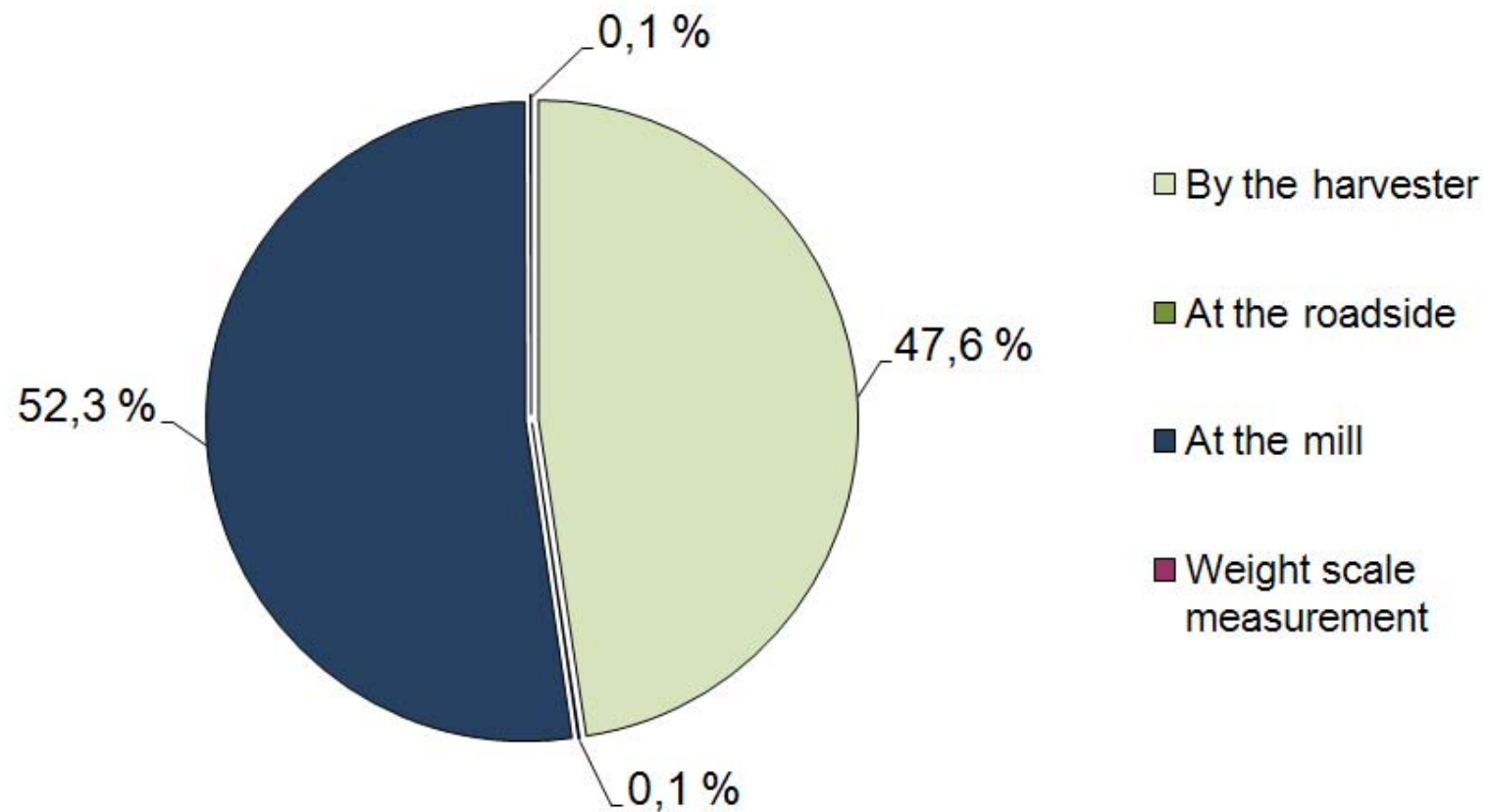
## Measurement methods in delivery sales of private-owned forests in 2009 (about 4.9 million m<sup>3</sup>)



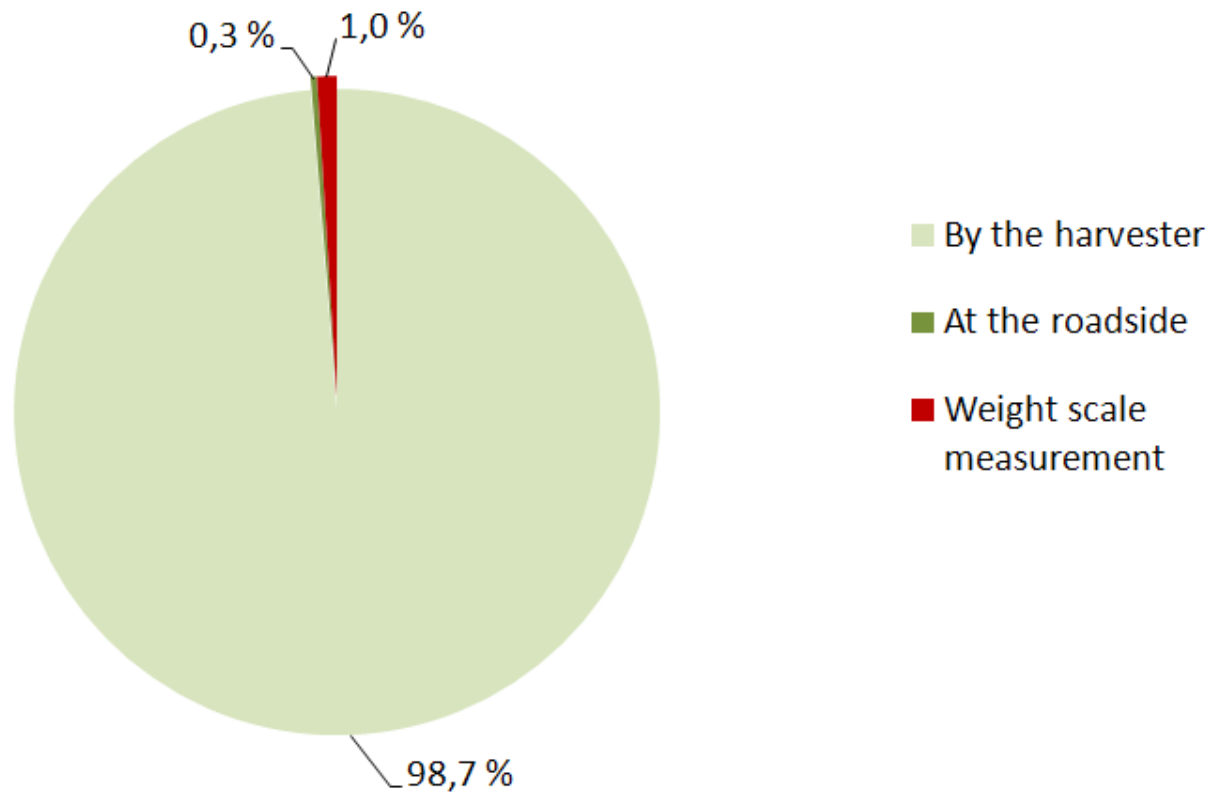
## Measurement methods in private-owned forests in 2009 (standing and delivery sales, about 24.4 million m<sup>3</sup>)



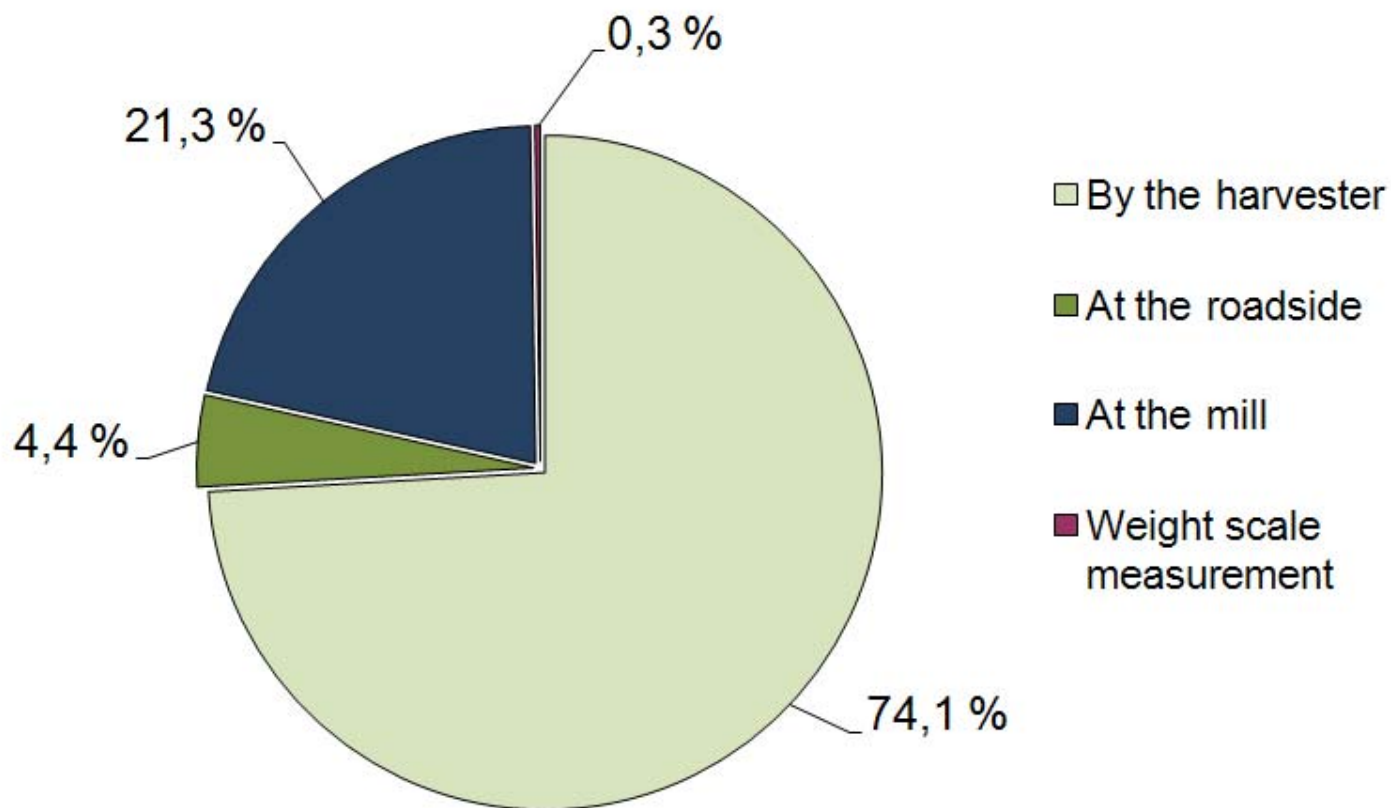
## Measurement methods in industry-owned forests and state-owned forests in 2009 (about 9.1 million m<sup>3</sup>)



## Work measurement methods in industry-owned forests and state-owned forests in 2009 (n. 9.4 milj. m<sup>3</sup>)



## Measuring methods in the total commercial roundwood fellings in 2009 (about 33.5 million m<sup>3</sup>)

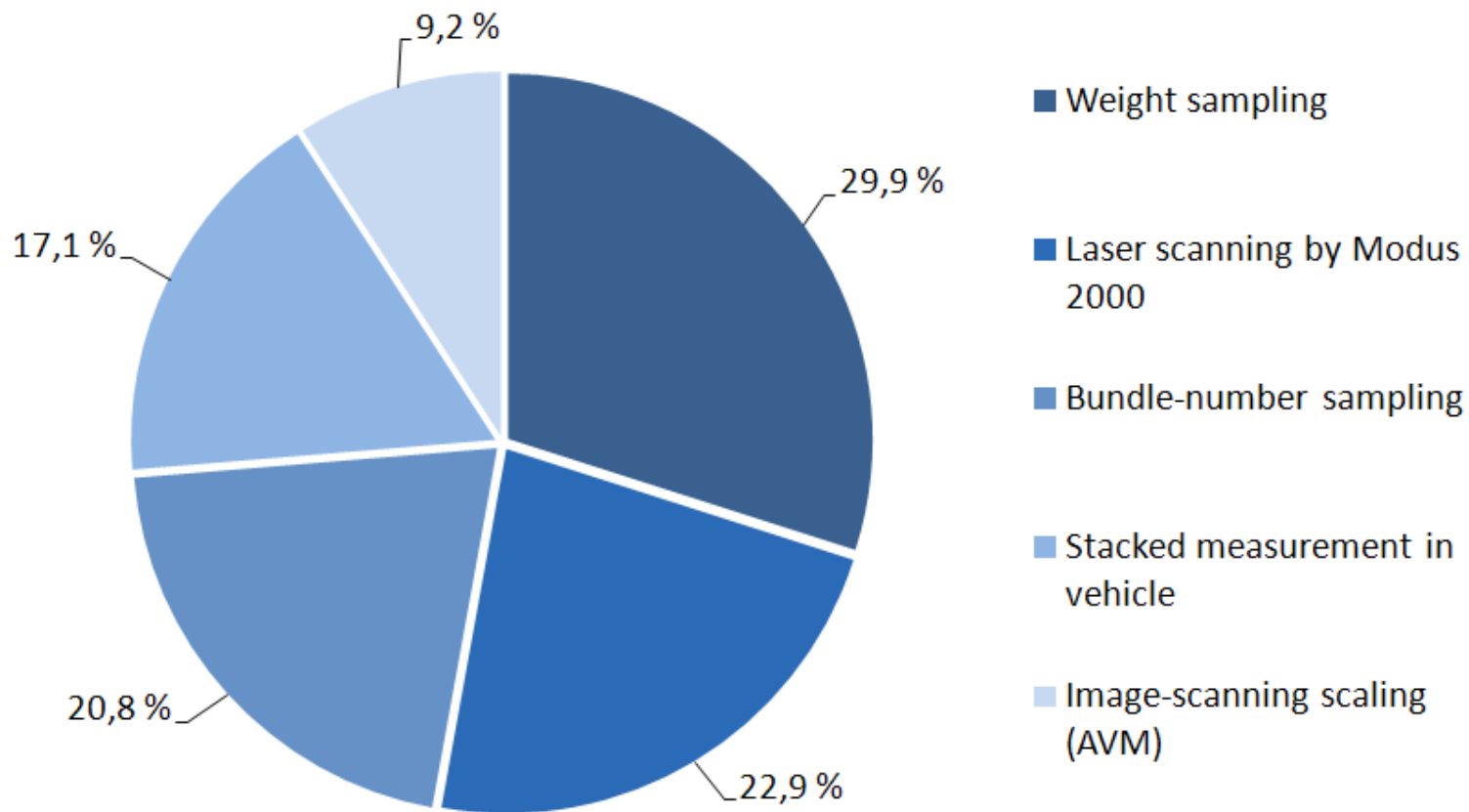




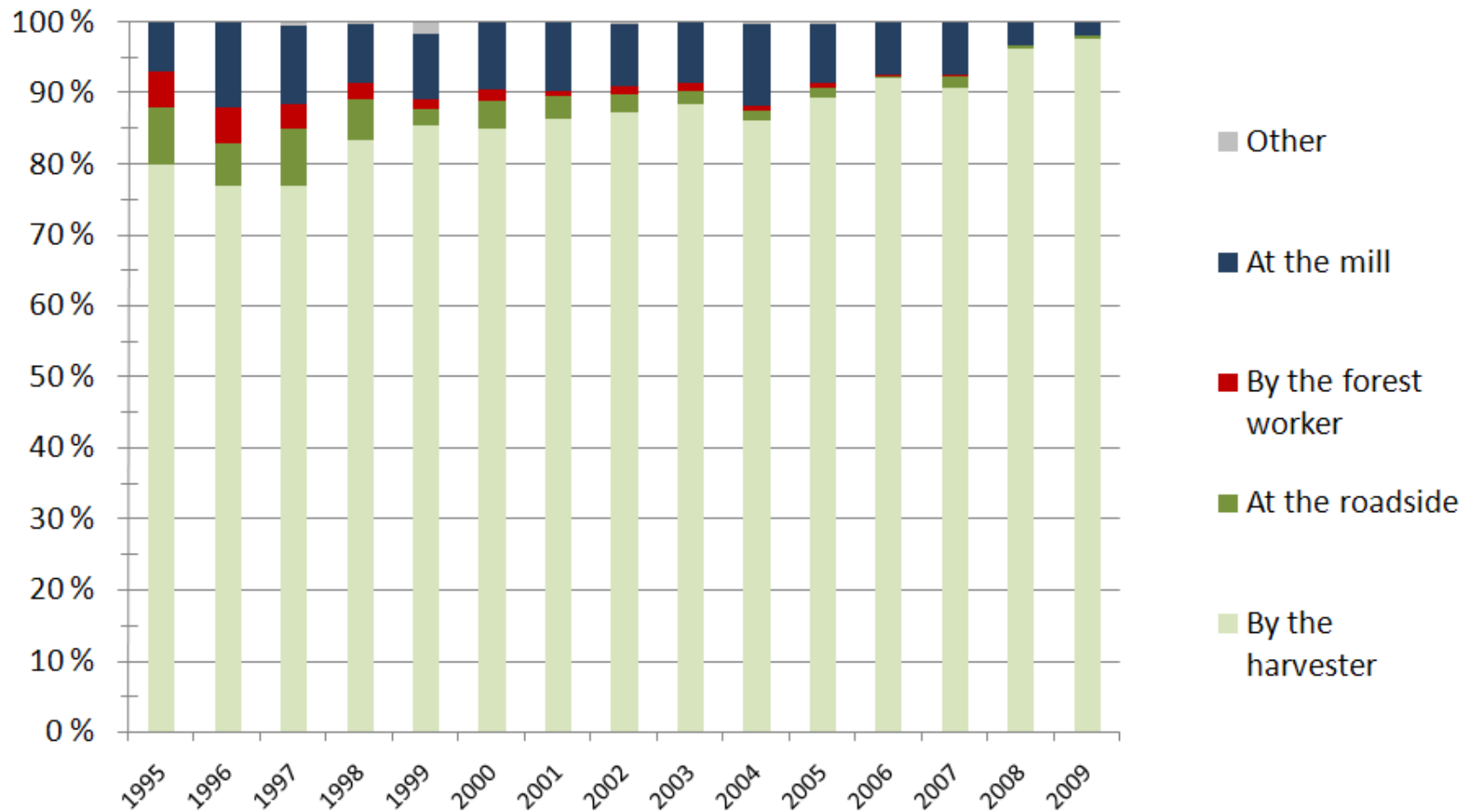
## Sawlogs and pulpwood measured at the mill and at the roadside in 2009

- At the mill altogether 7.1 million m<sup>3</sup> was measured, which represents 21.3 % of total commercial round wood fellings in 2009. The proportion of the sawlogs measured at the mill was 40.6 % and pulpwood 59.4 %.
  - The sawlogs were mainly measured by using log scanners.
  - The pulpwood measuring methods are presented in the next slide (slide number 10).
- At the road side altogether 1.5 million m<sup>3</sup> was measured, which represents 4.4 % of total commercial round wood fellings in 2009. The proportion of sawlogs measured at the mill was 16.3 % and pulpwood 83.7 %.
  - The sawlogs were measured based on the top diameter of the log and the pulpwood was measured by using pile scaling method.

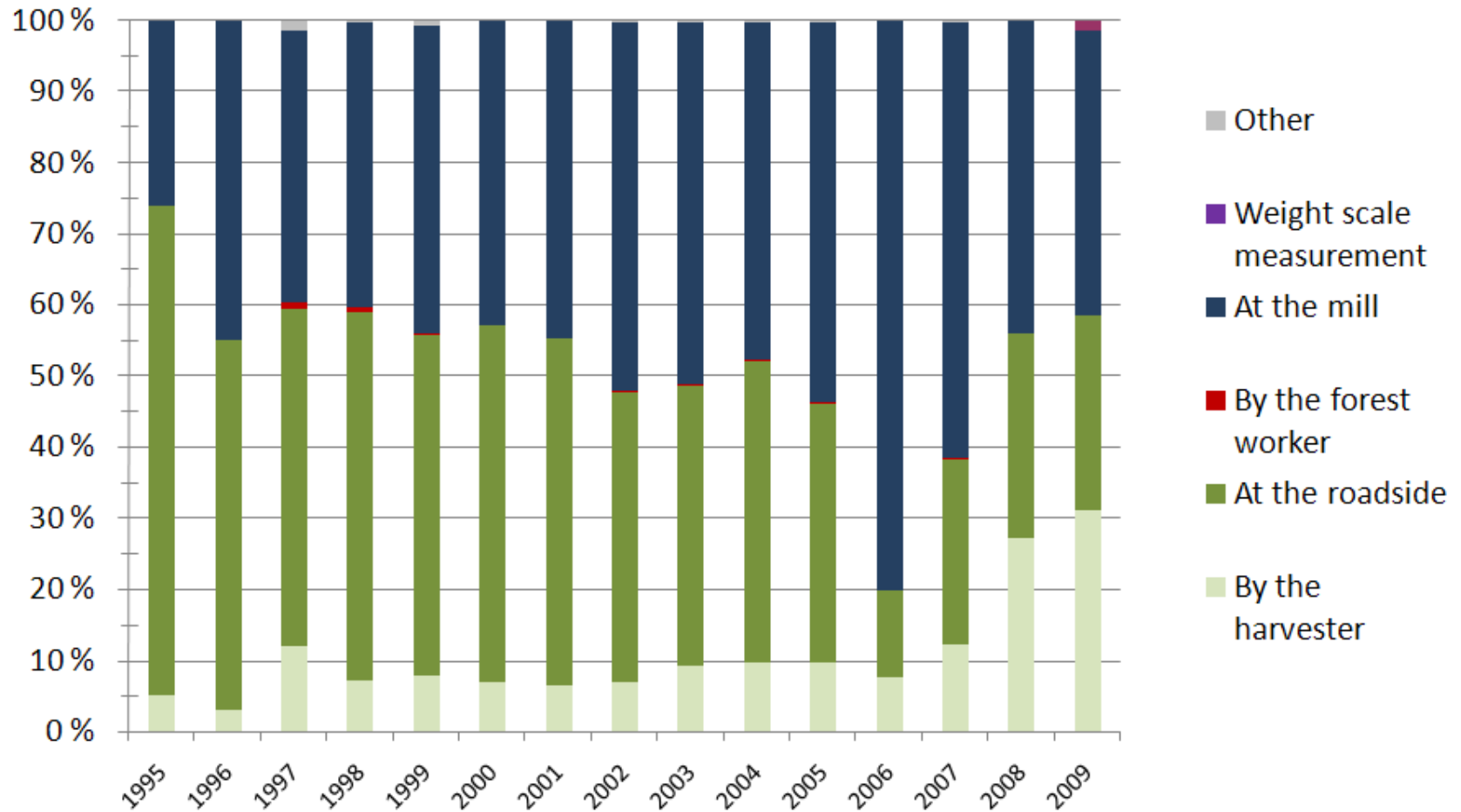
## Methods used for pulpwood measuring at the mills in 2009 (about 4.2 million m<sup>3</sup>)



## Proportions of different wood measuring methods in standing sales, 1995 - 2009



## Proportions of different wood measuring methods in delivery sales, 1995 - 2009



## Wood quantities and proportions of methods in 2009

### Private-owned forests

Method	Total, 1000 m <sup>3</sup>			Total, %		
	Standing sales	Delivery sales	Together	Standing sales	Delivery sales	Average
By the harvester	18 832	1 521	20 353	97,1	30,8	83,6
At the roadside	97	1 355	1 452	0,5	27,4	6,0
At the mill	349	1 964	2 314	1,8	39,7	9,5
Weight scale measurement	17	65	82	0,1	1,3	0
<b>Total</b>	<b>19 295</b>	<b>4 905</b>	<b>24 200</b>	<b>100,0</b>	<b>100,0</b>	<b>100,0</b>

### Industry-owned forests and state-owned forests

Method	Total	
	1000 m <sup>3</sup>	%
By the harvester	4 353	47,6
At the roadside	6	0,1
At the mill	4 778	52,3
Weight scale measurement	5	0,1
Other	2	0,0
<b>Total</b>	<b>9 144</b>	<b>100,0</b>

## Proportions of wood measuring methods, 1995 - 2009

### STANDING SALES OF PRIVATE-OWNED FORESTS

Year	Proportion of method, %					Total
	By the harvester	At the roadside	By the forest worker	At the mill	Other	
1995	80	8	5	7	0	100
1996	77	6	5	12	0	100
1997	77	8	3	11	1	100
1998	83	6	2	9	0	100
1999	85	2	1	9	2	100
2000	85	4	2	9	0	100
2001	86	3	1	10	0	100
2002	87	3	1	9	0	100
2003	88	2	1	9	0	100
2004	86	1	1	12	0	100
2005	89	1	1	8	0	100
2006	92	1	0	7	0	100
2007	91	2	0	7	0	100
2008	96	1	0	3	0	100
2009	98	1	0	2	0	100

### DELIVERY SALES OF PRIVATE-OWNED FORESTS

Year	Proportion of method, %						Total
	By the harvester	At the roadside	By the forest worker	At the mill	Weight scale measurement	Other	
1995	5	69	0	26	-	0	100
1996	3	52	0	45	-	0	100
1997	12	47	1	38	-	1	100
1998	7	52	1	40	-	0	100
1999	8	48	0	43	-	1	100
2000	7	50	0	43	-	0	100
2001	6	49	0	45	-	0	100
2002	7	41	0	52	-	0	100
2003	9	40	0	51	-	0	100
2004	10	42	0	48	-	0	100
2005	10	37	0	54	-	0	100
2006	8	12	0	80	-	0	100
2007	12	26	0	62	-	0	100
2008	27	29	0	44	-	0	100
2009	31	28	0	40	1	0	100