NFI Results

National Forest Inventory Conference
11 July 2007

John Redmond#, Martin Černý*, Radek Russ*

#Forest Service, *Institute of Forest Ecosystem Research

NDP National Development Plan 2007 - 2013

THE DEPARTMENT OF AGRICULTURE, FISHERIES & FOOD
AN ROINN TALMHAÍOCHTA, IASCAIGH AGUS BIA

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Results layout

1. Area
2. Species composition
3. Forest structure
4. Volume
5. Deadwood
6. Forest health and vitality
7. Soil
8. Vegetation and lichens

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Table format

Classifier

Calculated statistics

Confidence interval

Percentage

Rotation type	Area		
	1000 ha	($\alpha = 0.05$)	%
afforestation	406.72	(392.49 – 420.95)	65.0
reforestation	126.06	(114.18 – 137.94)	20.1
semi natural	81.75	(71.69 – 91.81)	13.1
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0

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1.1 Land-use type

Land-use type	Area		
	1000 ha	($\alpha = 0.05$)	%
Forest	697.73	(666.65 – 728.81)	10.0
Hedgerow	272.36	(252.30 – 292.43)	3.9
Other Woodland	49.27	(40.59 – 57.94)	0.7
Bareland within Forest Ownership Boundary	38.05	(30.42 – 45.68)	0.5
Deforestation	6.01	(2.97 – 9.05)	0.09
Total	6,976.11		100.0

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1.2 Land-use category

Land-use category	Area		
	1000 ha	($\alpha = 0.05$)	%
forest	625.75	(596.25 – 655.24)	9.0
forest open area	72.10	(61.62 – 82.57)	1.0
non-forest	6,278.27	(6,247.32 – 6,309.22)	90.0
Total	6,976.11		100.0

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1.3 Ownership

Ownership	Area		
	1000 ha	($\alpha = 0.05$)	%
public	397.46	(381.49 – 413.44)	57.0
private (grant aid)	212.20	(197.39 – 227.01)	30.4
private (other)	88.18	(77.45 – 98.91)	12.6
Total	697.84		100.0

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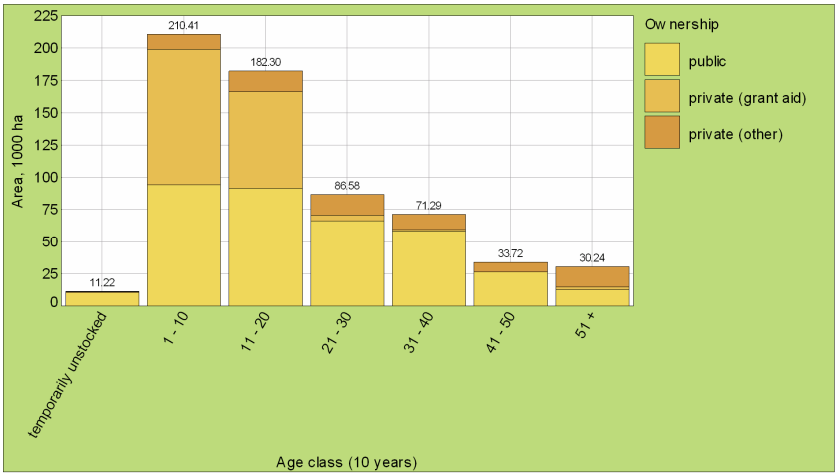
1.4 Age-class



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2. Species composition

2.1 Conifer/broadleaf

Species type (conifer/broadleaf)	Area		
	1000 ha	($\alpha = 0.05$)	%
conifer	462.58	(450.57 – 474.59)	73.9
broadleaf	151.95	(140.34 – 163.55)	24.3
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0

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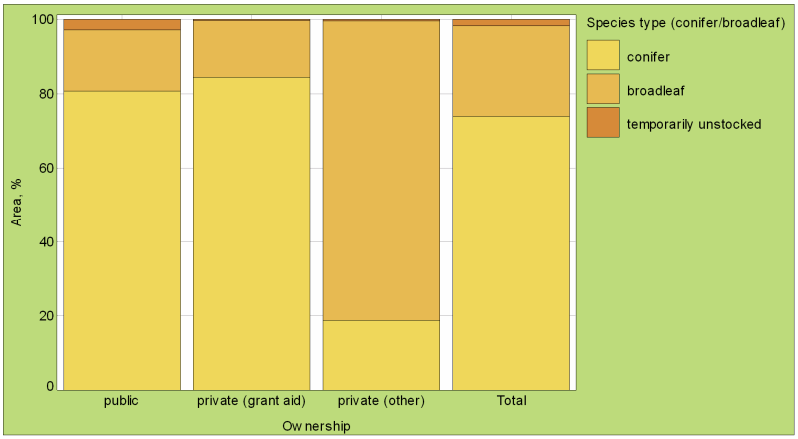
2.2 Conifer/broadleaf by ownership



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2.3 Species group

Species group	Area		
	1000 ha	($\alpha = 0.05$)	%
Sitka spruce	327.83	(314.45 – 341.21)	52.5
Norway spruce	25.96	(20.72 – 31.20)	4.1
Scots pine	7.34	(4.76 – 9.92)	1.2
other pine spp.	63.61	(55.79 – 71.42)	10.2
Douglas fir	10.20	(6.84 – 13.56)	1.6
larch spp.	22.96	(18.17 – 27.74)	3.7
other conifers	4.68	(2.60 – 6.77)	0.7
sessile and pedunculate oak	14.63	(11.11 – 18.15)	2.3
beech	8.71	(6.11 – 11.32)	1.4
ash	19.16	(15.07 – 23.26)	3.1
sycamore	8.06	(5.24 – 10.87)	1.3
birch spp.	29.70	(24.86 – 34.53)	4.7
alder spp.	11.50	(8.16 – 14.83)	1.8
other long living broadleaves	9.55	(7.07 – 12.02)	1.5
other short living broadleaves	50.64	(44.30 – 56.98)	8.1
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0

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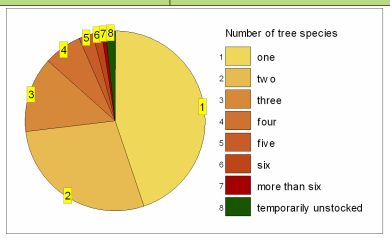
2.4 Tree species diversity

Number of tree species	Area		
	1000 ha	($\alpha = 0.05$)	%
one	280.79	(265.45 – 296.12)	44.9
tw o	177.10	(163.19 – 191.01)	28.3
three	84.15	(73.57 – 94.73)	13.4
four	42.45	(34.65 – 50.25)	6.8
five	15.60	(10.76 – 20.44)	2.5
six	9.64	(5.80 – 13.47)	1.5
more than six	4.81	(2.10 – 7.53)	0.8
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0



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3.1 Rotation type

Rotation type	Area		
	1000 ha	($\alpha = 0.05$)	%
afforestation	406.72	(392.49 – 420.95)	65.0
reforestation	126.06	(114.18 – 137.94)	20.1
semi natural	81.75	(71.69 – 91.81)	13.1
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0

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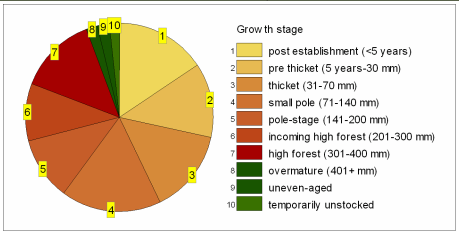
3.2 Growth stage

Grow th stage	Area		
	1000 ha	($\alpha = 0.05$)	%
post establishment (<5 years)	96.92	(85.90 – 107.93)	15.5
pre thicket (5 years-30 mm)	80.53	(70.56 – 90.49)	12.9
thicket (31-70 mm)	90.75	(80.17 – 101.32)	14.5
small pole (71-140 mm)	108.54	(97.09 – 119.99)	17.3
pole-stage (141-200 mm)	68.04	(58.79 – 77.29)	10.9
incoming high forest (201-300 mm)	61.38	(52.45 – 70.31)	9.8
high forest (301-400 mm)	83.39	(73.37 – 93.42)	13.3
overmature (401+ mm)	12.14	(8.35 – 15.93)	1.9
uneven-aged	12.84	(8.47 – 17.21)	2.1
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0



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3.3 Thin status

Total stocked forest estate

Thin status	Area		
	1000 ha	($\alpha = 0.05$)	%
no thinning	166.93	(153.53 – 180.34)	26.7
juvenile forest	373.65	(358.86 – 388.43)	59.7
respacing	0.01	(0.00 – 0.02)	0.001
first thinning	25.47	(19.43 – 31.51)	4.1
2nd thinning	11.90	(7.80 – 15.99)	1.9
subsequent thinning	36.57	(29.77 – 43.37)	5.8
temporarily unstocked	11.22	(7.09 – 15.35)	1.8
Total	625.75		100.0

Forest estate at a stage where thinning is an option

Thin status	Area		
	1000 ha	($\alpha = 0.05$)	%
no thinning	166.93	(153.53 – 180.34)	69.3
respacing	0.01	(0.00 – 0.02)	0.003
first thinning	25.47	(19.43 – 31.51)	10.6
2nd thinning	11.90	(7.80 – 15.99)	4.9
subsequent thinning	36.57	(29.77 – 43.37)	15.2
Total	240.88	(226.20 – 255.57)	100.0

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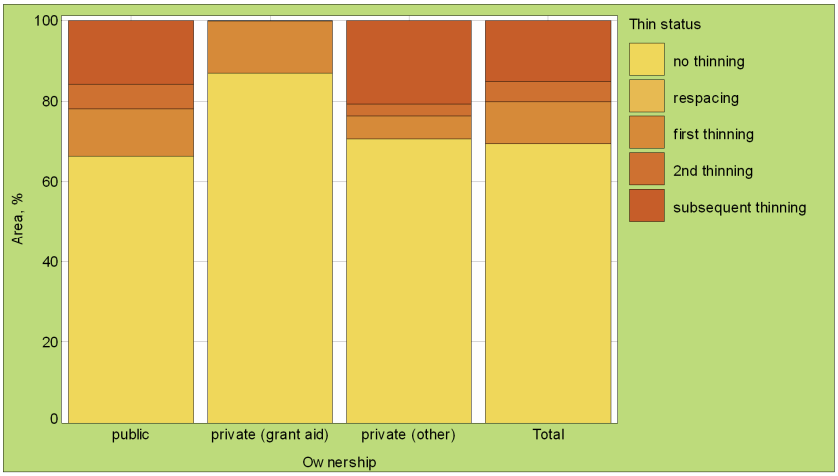
3.4 Thin status by ownership



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4.1 Species group

Species group	Ownership / Volume		
	Total		
	1000 m^3	($\alpha = 0.05$)	%
Sitka spruce	42,512.6	(39,562.8 – 45,462.5)	60.6
Norway spruce	2,770.2	(2,179.5 – 3,361.0)	4.0
Scots pine	916.3	(591.2 – 1,241.4)	1.3
other pine spp.	7,703.9	(6,449.7 – 8,958.1)	11.0
Douglas fir	1,924.2	(1,566.1 – 2,282.3)	2.7
larch spp.	1,588.0	(877.8 – 2,298.2)	2.3
other conifers	1,649.4	(203.5 – 3,095.3)	2.4
sessile and pedunculate oak	2,385.0	(1,779.8 – 2,990.2)	3.4
beech	1,730.5	(1,183.3 – 2,277.8)	2.5
ash	1,502.3	(1,248.3 – 1,756.2)	2.1
sycamore	593.4	(185.4 – 1,001.3)	0.8
birch spp.	1,833.1	(1,563.3 – 2,102.8)	2.6
alder spp.	849.4	(664.5 – 1,034.3)	1.2
other long living broadleaves	778.3	(645.2 – 911.4)	1.1
other short living broadleaves	1,372.8	(1,147.2 – 1,598.5)	2.0
Total	70,109.4	(66,398.6 – 73,820.2)	100.0

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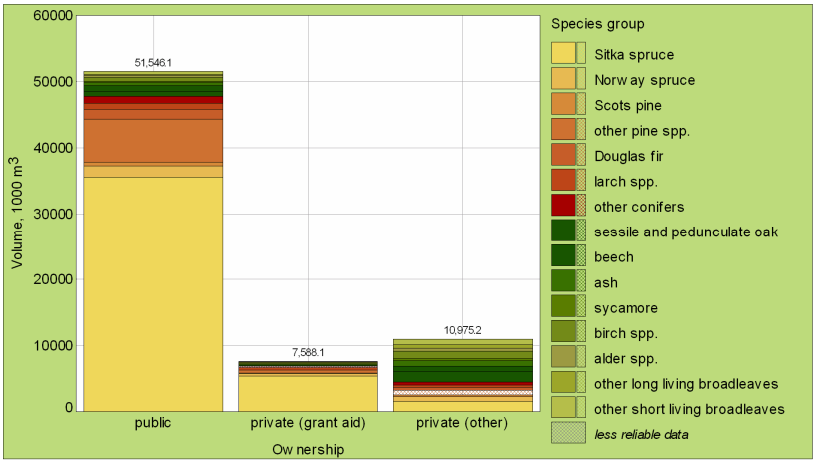
4.2 Species group and ownership



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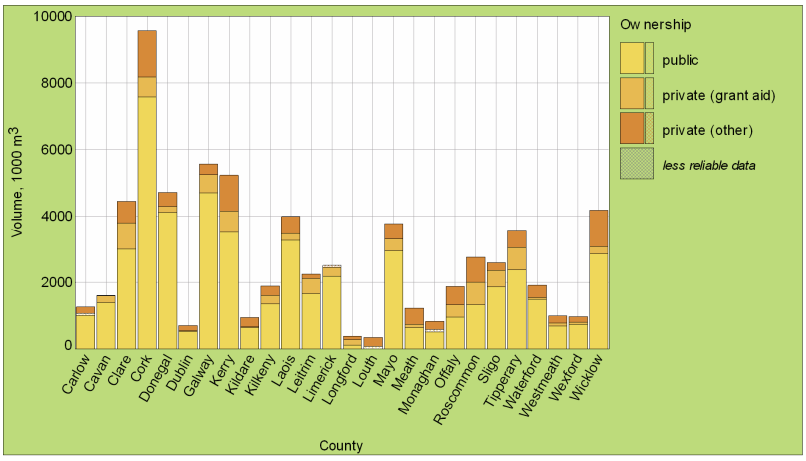
4.3 Volume by county and ownership



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4.4 Mean volume stock per hectare by ownership

Ownership	Volume m^3/ha ($\alpha = 0.05$)
public	145 (134 – 156)
private (grant aid)	41 (34 – 47)
private (other)	137 (113 – 162)
All	112 (104 – 120)

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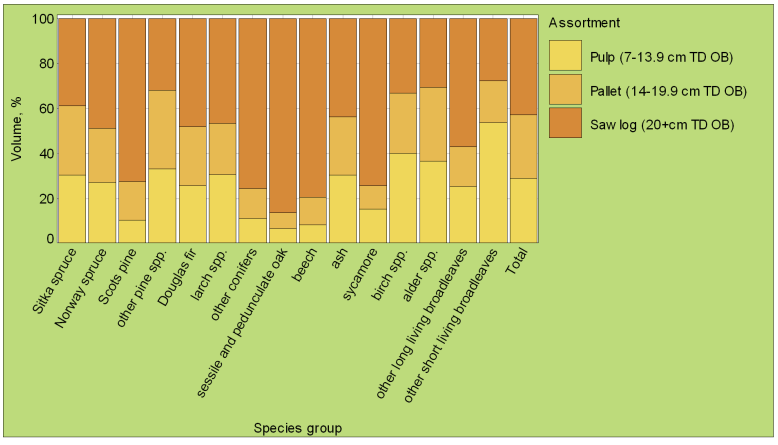
4.5 Volume assortments by species group



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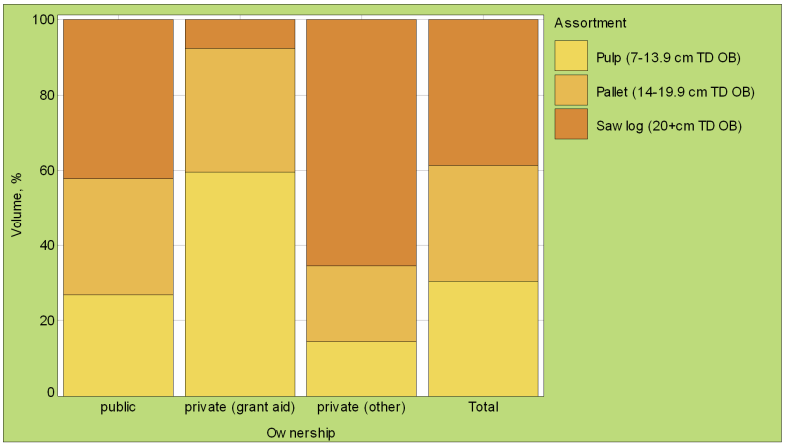
4.6 Sitka spruce assortment volume by ownership



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5. Deadwood

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5.1 Total deadwood volume

Deadwood type	Ownership / Volume		
	Total		
	1000 m^3	($\alpha = 0.05$)	%
lying	2,745.3	(1,835.7 – 3,654.9)	48.6
standing	1,858.4	(1,519.0 – 2,197.8)	32.8
stumps	1,054.3	(864.3 – 1,244.4)	18.6
Total	5,658.0	(4,622.8 – 6,693.3)	100.0

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5.2 Mean deadwood volume stock per hectare

Total stocked forest estate

Ownership	Volume	
	m^3/ha	($\alpha = 0.05$)
public	7.7	(6.0 – 9.3)
private (grant aid)	0.2	(0.1 – 0.3)
private (other)	1.3	(0.8 – 1.7)
All	9.0	(7.3 – 10.7)

Forest estate where deadwood was present

Ownership	Volume	
	m^3/ha	($\alpha = 0.05$)
public	21.5	(17.0 – 26.1)
private (grant aid)	7.7	(4.8 – 10.6)
private (other)	16.4	(11.0 – 21.8)
All	20.1	(16.4 – 23.8)

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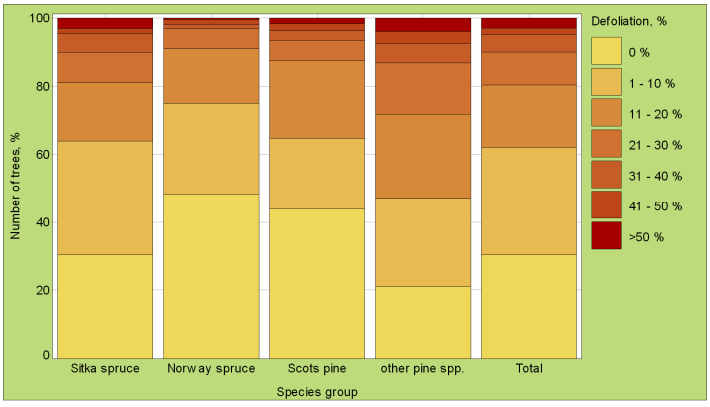
6.1 Defoliation



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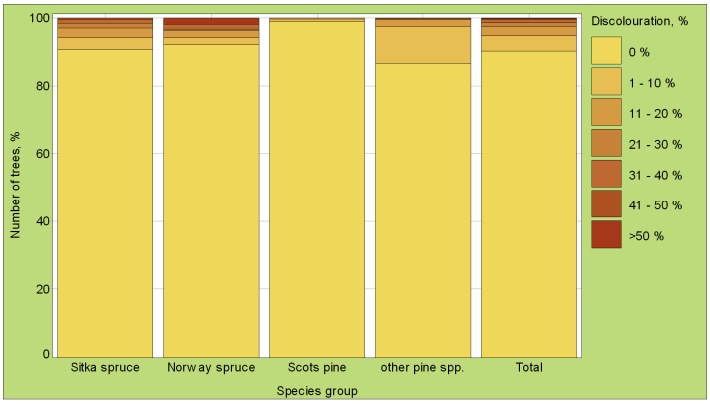
6.2 Discolouration



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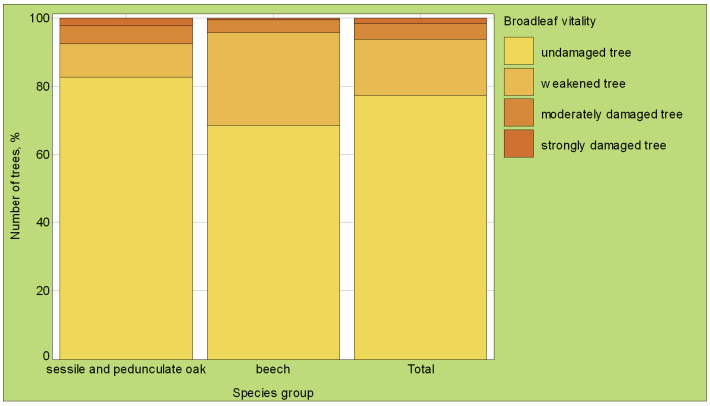
6.3 Broadleaf vitality



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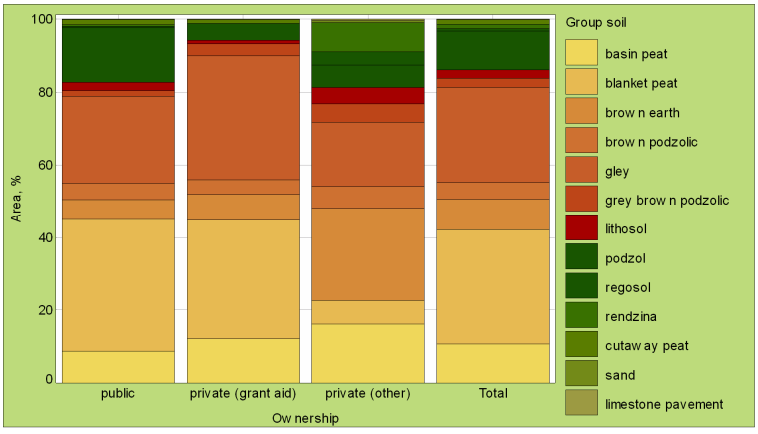
7.1 Group soil



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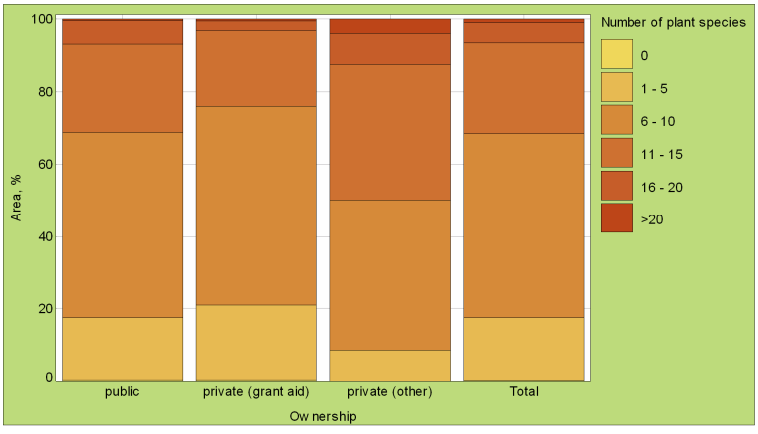
8. Vegetation and lichens

8.1 Number of plant species



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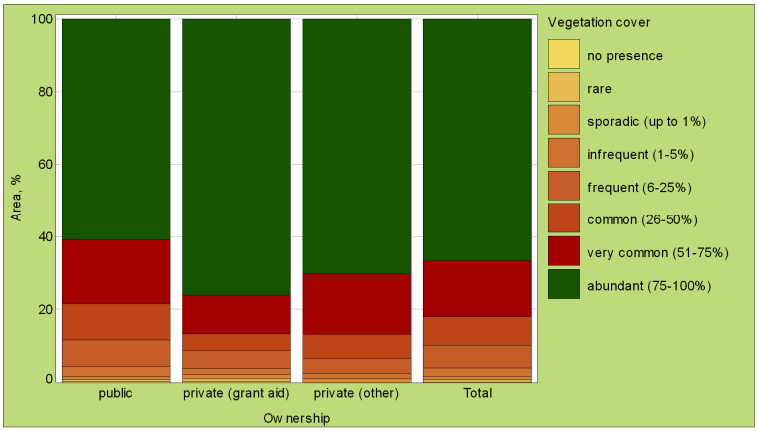
8.2 Vegetation cover



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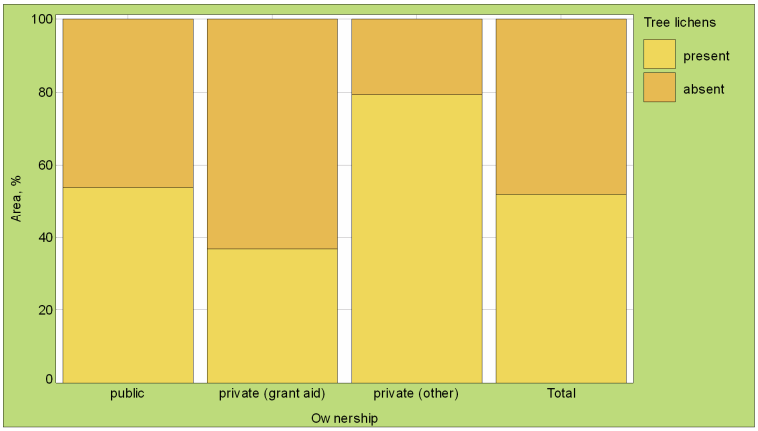
8.3 Tree lichen occurrence



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Summing up…….

Forest area	10% of total area
Species composition	25% broadleaf
Volume	70 million m^3
Thinning	80% of the area that is at a development stage to be thinned has not been thinned.
Age structure	Greater than 60% of the total stocked forest area is less than 20 years old.
SFM indicators	Other indicators such as deadwood.

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