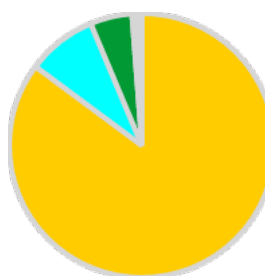


07/05/2021 Gruppo D Lazio 07.05 bio

## Site conditions

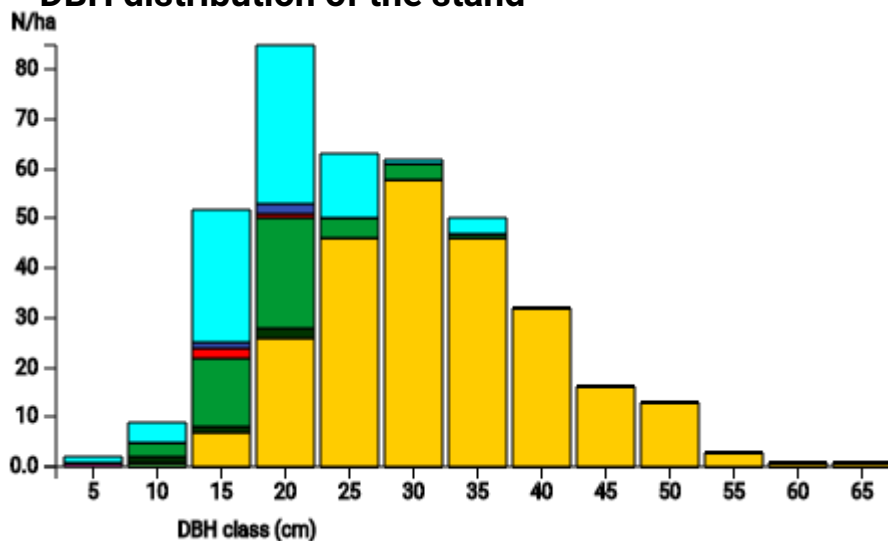
Altitude: 870 m.a.s.l.  
 Geology / Bedrock: Alluvial and mixed beds  
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.  
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum  
 Mean annual temperature: 12.4 C;  
 Mean annual precipitation: 1154 mm; Ownership: State-owned Agency "Sala"; Establishment: 2020

## Tree species distribution by volume (in %)



- Turkey oak: 85.1 %
- European hop-hornbeam: 8.5 %
- Italian maple: 5.1 %
- manna ash: 0.6 %
- field maple: 0.3 %
- hornbeam: 0.3 %
- common beech: 0 %
- downy oak: 0 %

## DBH distribution of the stand



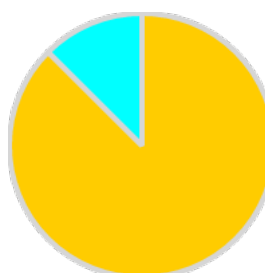
## Initial stand (details by tree species)

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	81	3	34.6	2647	1669	101
Italian maple	47	1.8	20.8	1588	917	65
Turkey oak	249	24.7	346.4	26500	7807	401
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	4	0.1	1.4	104	115	6
hornbeam	3	0.1	1.3	101	24	1
manna ash	3	0.1	2.3	174	38	4
<b>Total</b>	<b>389</b>	<b>29.9</b>	<b>407.1</b>	<b>31140</b>	<b>10570</b>	<b>578</b>

### Removed trees

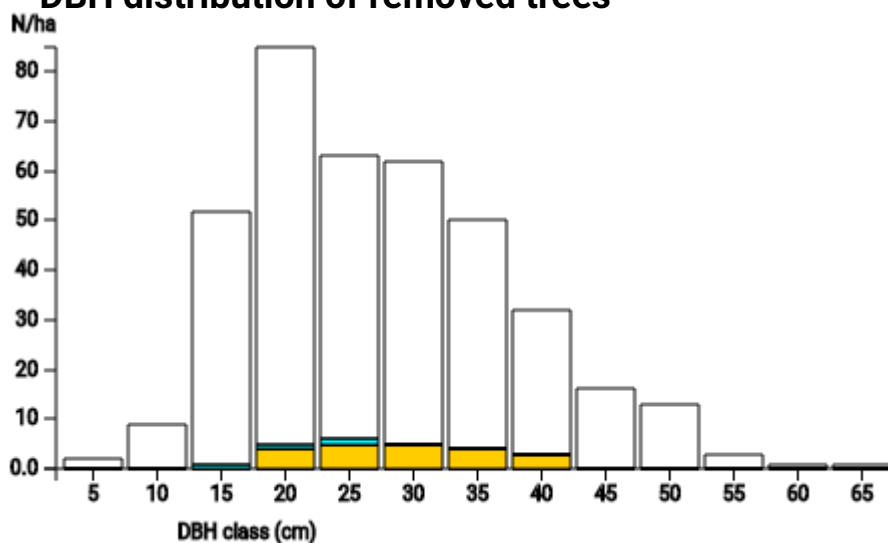
Volume: 24.6 m<sup>3</sup>  
 Basal area: 1.8 m<sup>2</sup>  
 Economic value: 1885 €  
 Habitat value: 599 pts.

### Removed trees (N in %)



- Turkey oak: 87.5 %
- European hop-hornbeam: 12.5 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- Italian maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

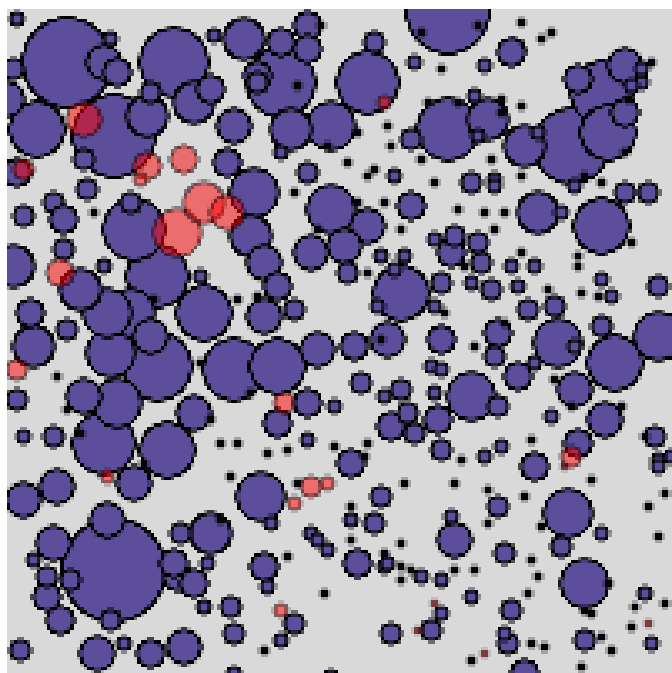
### DBH distribution of removed trees



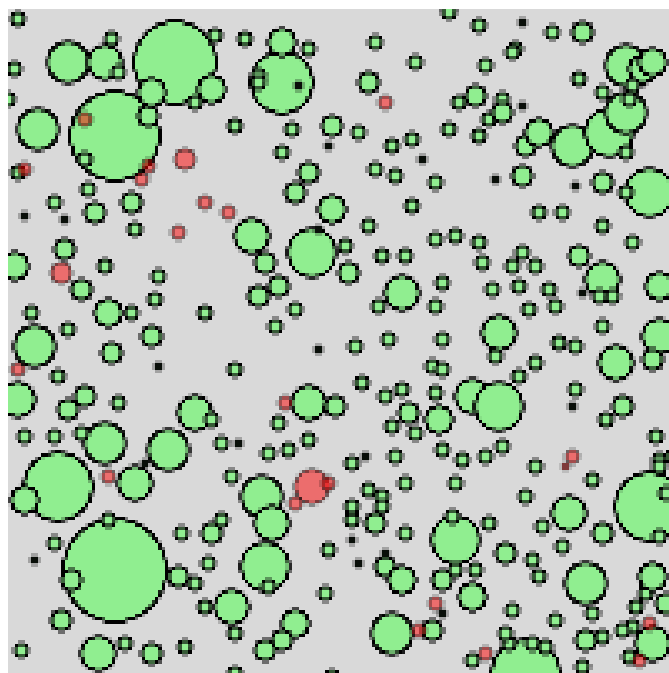
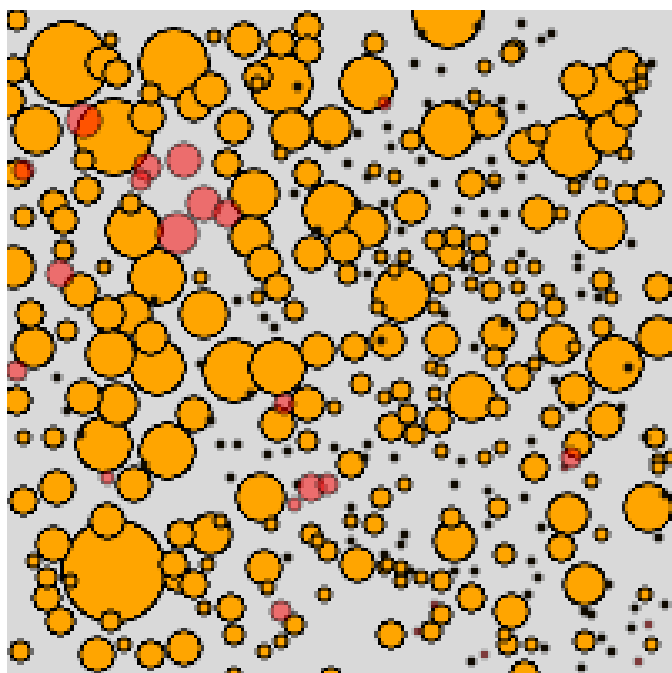
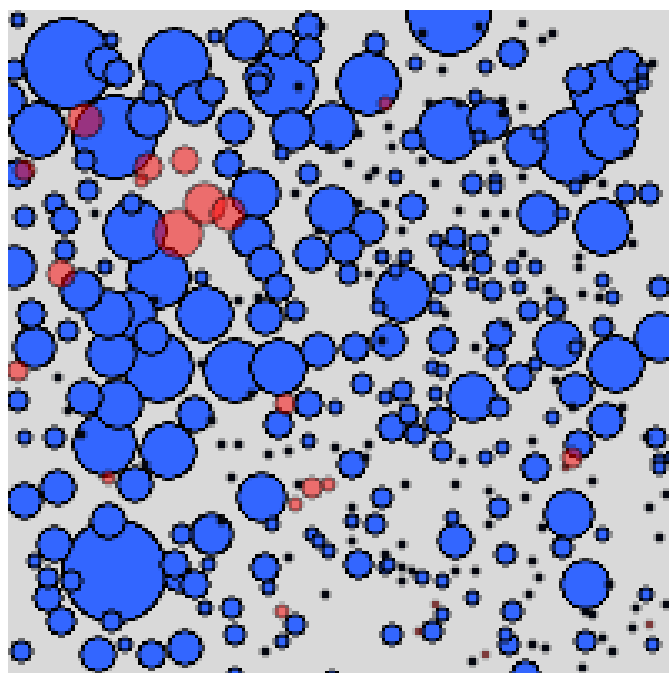
### Removed trees (details by tree species)

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	3	0.1	1.2	91	72	3
Italian maple	0	0	0	0	0	0
Turkey oak	21	1.7	23.4	1794	527	25
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
<b>Total</b>	<b>24</b>	<b>1.8</b>	<b>24.6</b>	<b>1885</b>	<b>599</b>	<b>28</b>

Economic value [EUR]



Habitat value

Basal area [m<sup>2</sup>]Volume [m<sup>3</sup>]**Description:**

Red circles (removed trees); circle size according to numerical values (e.g. large circles mean high values); trees with very low values (e.g. habitat value "0") are not visible.

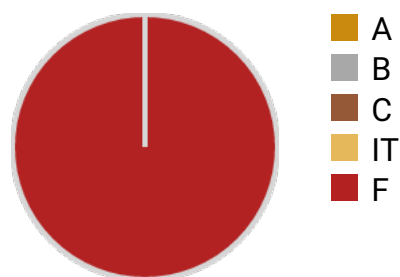
### Economic values

Total value of removed trees: 1885 €  
 Percentage of total stand value: 6.1 %  
 Stand value after harvest: 29255 €

### Economic value by tree species [€]

Tree species	Total	Per m <sup>3</sup>
common beech	0	0
downy oak	0	0
Turkey oak	1794	77
field maple	0	0
Italian maple	0	0
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	91	76
Total	1885	77

### Wood quality distribution (m<sup>3</sup> in %)



Quality class	m <sup>3</sup>	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	24.6	100

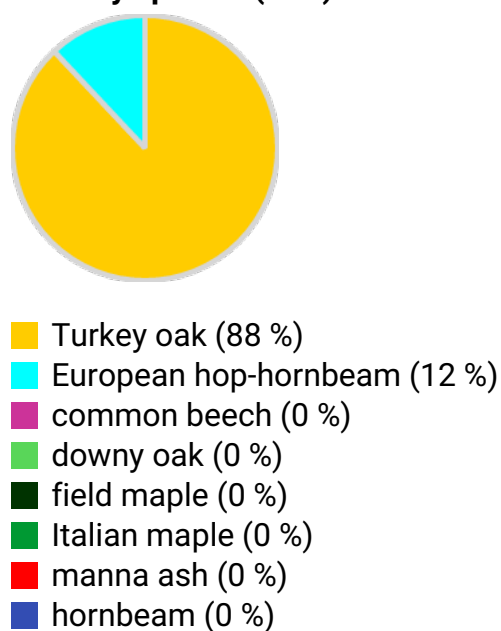
### Habitat values

Total habitat value of removed trees: 599 pts.  
 Percentage of total stand value: 5.7 %  
 Stand value after harvest: 9971 pts.

### Habitat value by tree species [pts.]

Tree species	Total	Per m <sup>3</sup>	Microhabitats [N]
common beech	0	0	0
downy oak	0	0	0
Turkey oak	527	22.5	25
field maple	0	0	0
Italian maple	0	0	0
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	72	60.4	3
Total	599	24.3	28

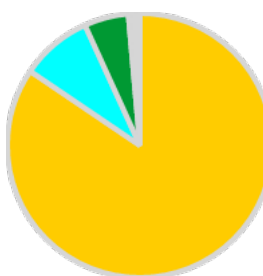
### Habitat value (points) of removed trees by species (in %)



### Remaining stand

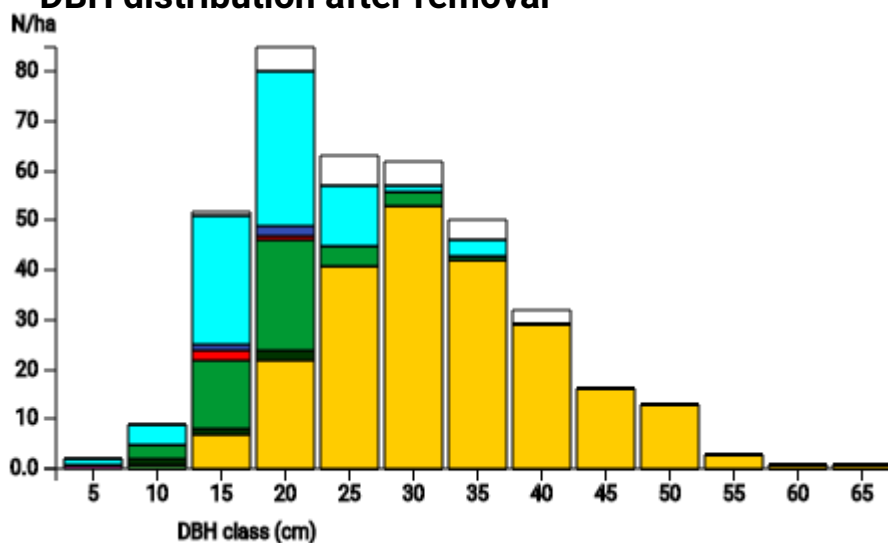
Volume: 382.6 m<sup>3</sup>  
 Basal area: 28.3 m<sup>2</sup>  
 Economic value: 29255 €  
 Habitat value: 9971 pts.

### Remaining trees by volume (m<sup>3</sup> in %)



- Turkey oak: 84.5 %
- European hop-hornbeam: 8.7 %
- Italian maple: 5.4 %
- manna ash: 0.6 %
- field maple: 0.4 %
- hornbeam: 0.3 %
- common beech: 0.1 %
- downy oak: 0 %

### DBH distribution after removal



### Remaining stand (details by tree species)

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	78	2.9	33.4	2556	1597	98
Italian maple	47	1.8	20.8	1588	917	65
Turkey oak	228	23	323	24706	7280	376
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	4	0.1	1.4	104	115	6
hornbeam	3	0.1	1.3	101	24	1
manna ash	3	0.1	2.3	174	38	4
<b>Total</b>	<b>365</b>	<b>28.1</b>	<b>382.4</b>	<b>29255</b>	<b>9971</b>	<b>550</b>

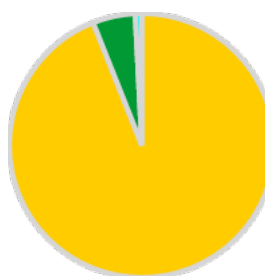
**Retention trees**Volume: 72.7 m<sup>3</sup>

Elite trees: 0

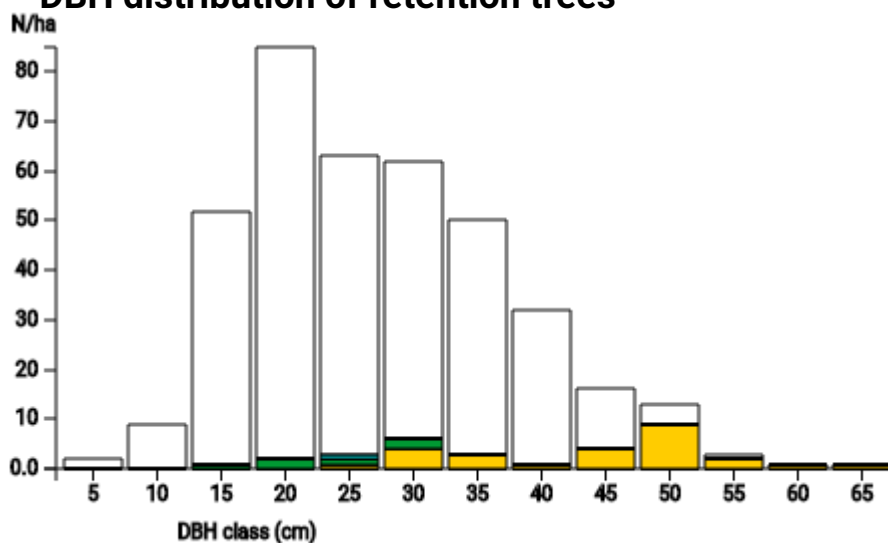
Habitat trees: 30

Economic value: 5559 €

Habitat value: 1606 pts.

**Retention trees by volume (m<sup>3</sup> in %)**

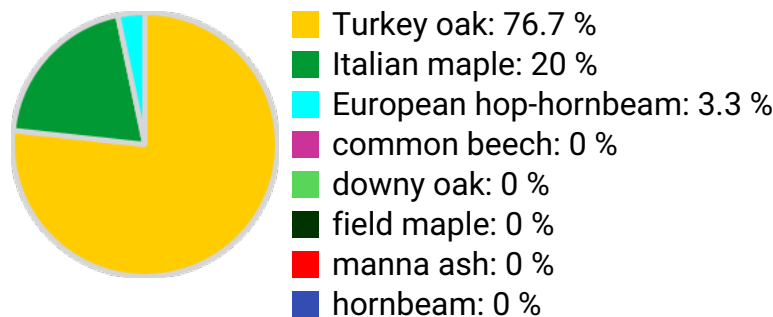
Turkey oak: 94 %
Italian maple: 5.2 %
European hop-hornbeam: 0.8 %
common beech: 0 %
downy oak: 0 %
field maple: 0 %
manna ash: 0 %
hornbeam: 0 %

**DBH distribution of retention trees****Retained trees (details by tree species)**

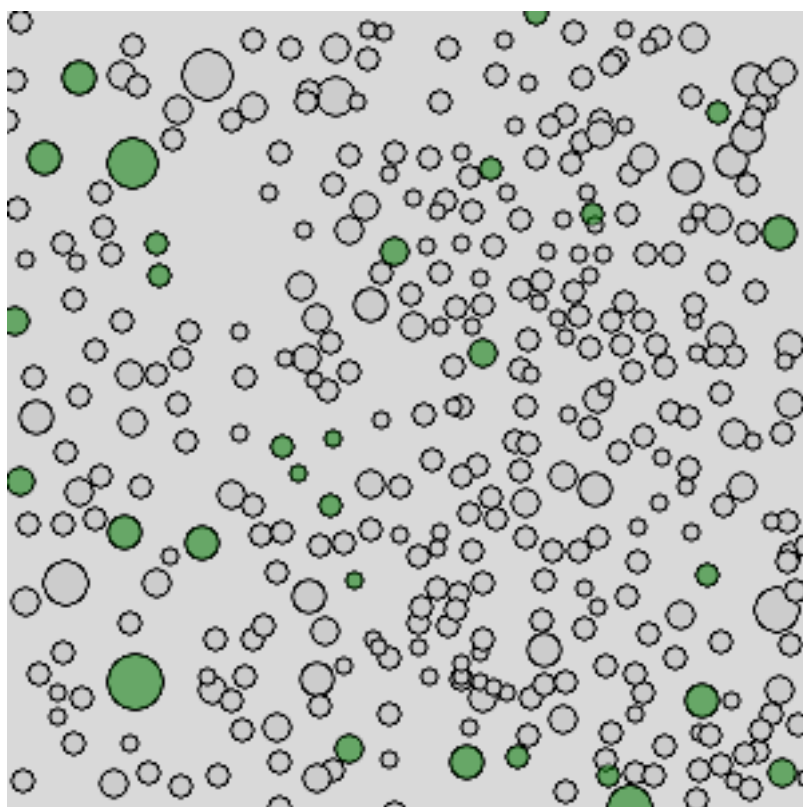
Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	1	0.1	0.6	47	14	1
Italian maple	6	0.3	3.8	289	207	11
Turkey oak	26	4.6	68.3	5223	1385	81
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
<b>Total</b>	<b>33</b>	<b>4.9</b>	<b>72.7</b>	<b>5559</b>	<b>1606</b>	<b>93</b>

Number of habitat trees	[N]	30
Habitat value	pts.	1528
	[% of total]	14.5
Economic value	[€]	4834
	[% of total]	15.5
Number of microhabitats	[N]	89
	[% of total]	15.4

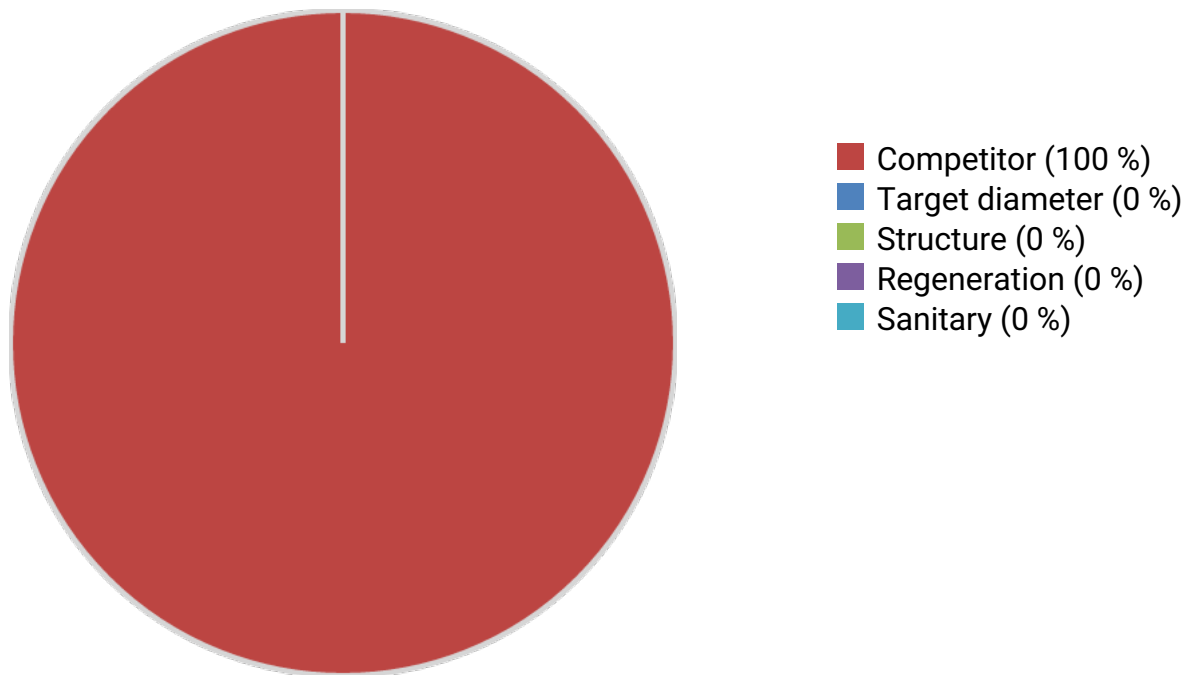
### Habitat tree distribution by species (N in %)



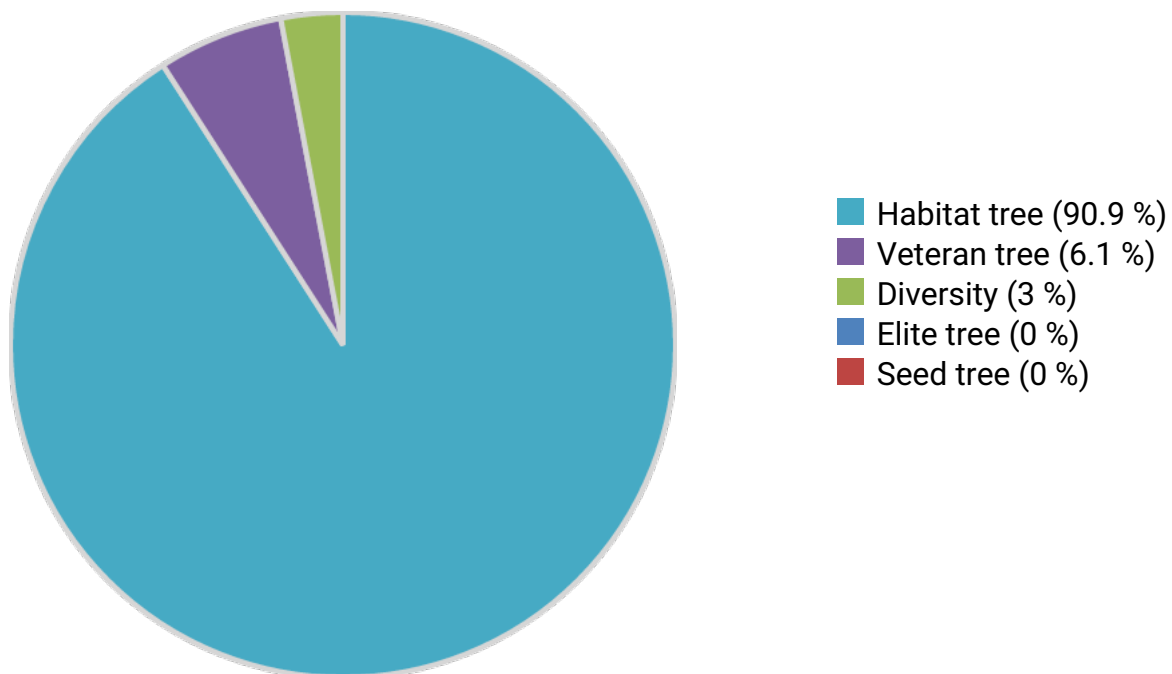
### Spatial distribution of habitat trees



### Reasons for removal

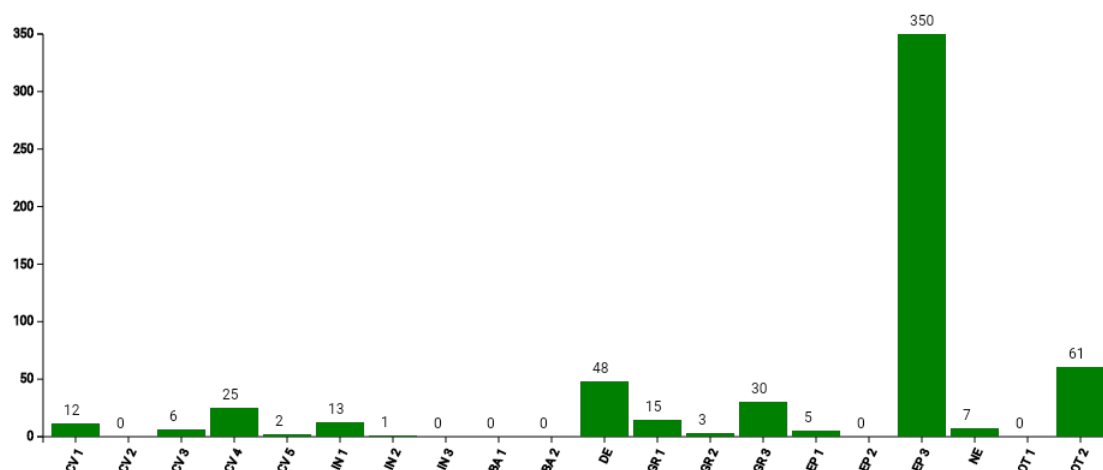


### Reasons for retention

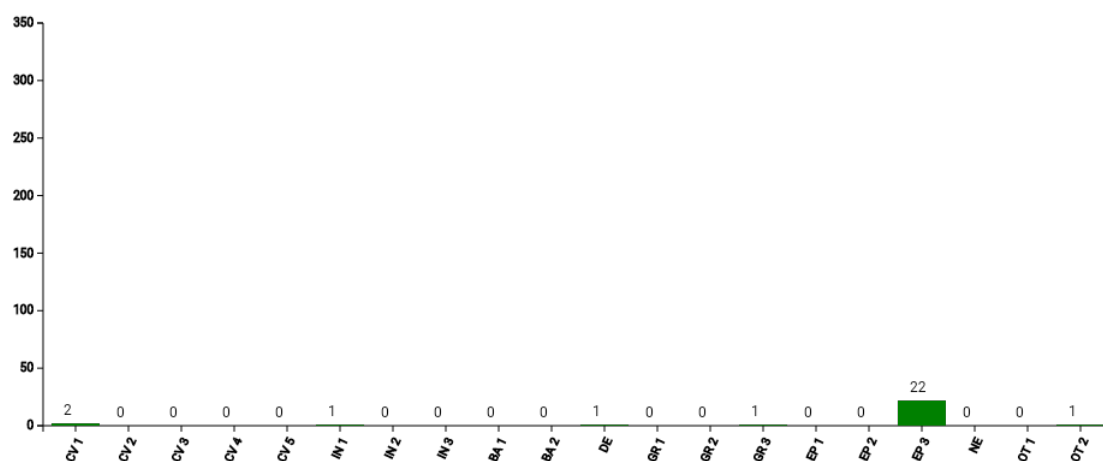




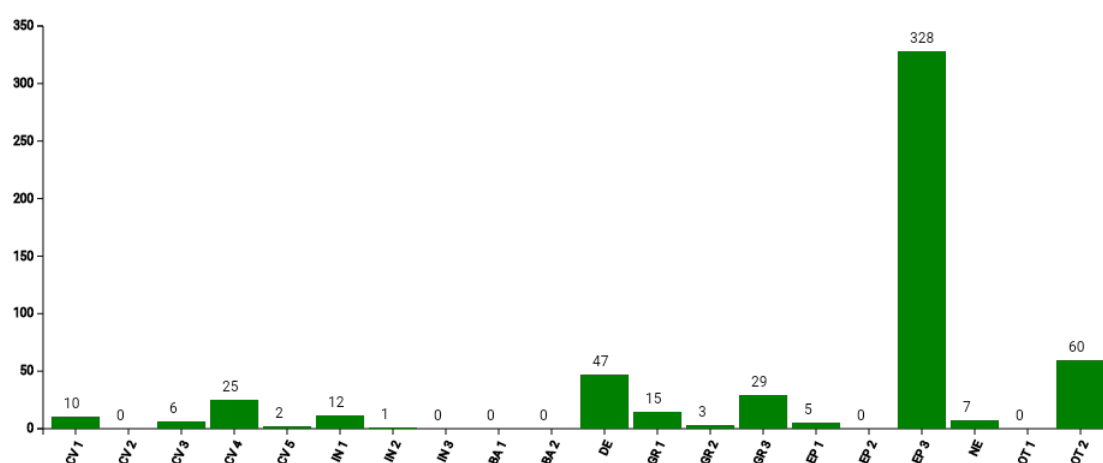
## Distribution of tree microhabitats by code (N total)



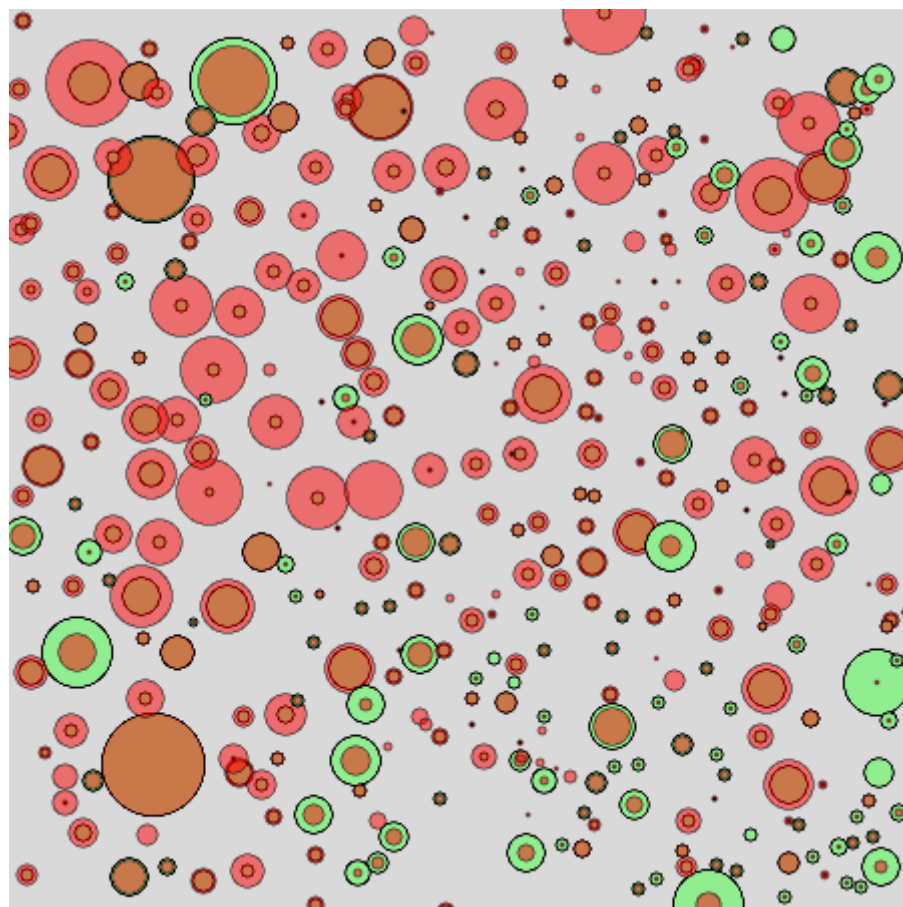
## Removed tree microhabitats by code (N removed)



## Remaining tree microhabitats by code (N after harvest)



For more details on codes consult the field guide "Catalogue of tree microhabitats" or the tree microhabitat app.

**Conflict trees (stand data)****Description:**

Overlay of economic and habitat value: red circles (economic value), green circles (habitat value); circle size according to numerical values (e.g. large circles mean high values); trees with very low values are not visible. Trees where both values overlap considerably represent so called "conflict trees".

## Removed trees

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (51) <i>Quercus cerris</i>	44	0.15	2.5	191	24	Competitor
Turkey oak (27) <i>Quercus cerris</i>	40	0.13	1.9	145	24	Competitor
Turkey oak (32) <i>Quercus cerris</i>	40	0.13	1.4	110	36	Competitor
Turkey oak (45) <i>Quercus cerris</i>	39	0.12	2	151	24	Competitor
Turkey oak (46) <i>Quercus cerris</i>	36.5	0.11	1.7	132	24	Competitor
Turkey oak (31) <i>Quercus cerris</i>	36	0.1	1.5	115	24	Competitor
Turkey oak (55) <i>Quercus cerris</i>	36	0.1	1.5	113	40	Competitor
Turkey oak (112) <i>Quercus cerris</i>	34.5	0.09	1.2	95	60	Competitor
Turkey oak (83) <i>Quercus cerris</i>	32	0.08	1.1	87	24	Competitor
Turkey oak (29) <i>Quercus cerris</i>	32	0.08	1	79	24	Competitor
Turkey oak (194) <i>Quercus cerris</i>	30	0.07	1.1	82	24	Competitor
Turkey oak (145) <i>Quercus cerris</i>	30	0.07	0.9	66	0	Competitor
Turkey oak (111) <i>Quercus cerris</i>	29.5	0.07	0.8	63	24	Competitor
Turkey oak (91) <i>Quercus cerris</i>	29	0.07	1	74	24	Competitor
Turkey oak (37) <i>Quercus cerris</i>	29	0.07	0.9	65	24	Competitor
Turkey oak (114) <i>Quercus cerris</i>	28	0.06	0.9	66	19	Competitor
European hop-hornbeam (299) <i>Ostrya carpinifolia</i>	25	0.05	0.7	51	24	Competitor
Turkey oak (107) <i>Quercus cerris</i>	25	0.05	0.6	47	24	Competitor
Turkey oak (202) <i>Quercus cerris</i>	22.5	0.04	0.5	41	12	Competitor
Turkey oak (275) <i>Quercus cerris</i>	22	0.04	0.4	27	24	Competitor
Turkey oak (277)	21	0.04	0.3	21	24	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (280) Quercus cerris	20.5	0.03	0.3	24	24	Competitor
European hop-hornbeam (247) Ostrya carpinifolia	20	0.03	0.3	26	24	Competitor
European hop-hornbeam (269) Ostrya carpinifolia	17	0.02	0.2	14	24	Competitor

## Retention trees

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (133) Quercus cerris	68	0.36	5.4	409	174	Habitat tree
Turkey oak (16) Quercus cerris	60	0.28	4.6	351	72	Habitat tree
Turkey oak (26) Quercus cerris	57.5	0.26	4.3	329	148	Habitat tree
Turkey oak (287) Quercus cerris	57	0.26	4.3	330	24	Habitat tree
Turkey oak (78) Quercus cerris	52	0.21	3.1	238	24	Habitat tree
Turkey oak (101) Quercus cerris	51	0.2	3.3	253	66	Habitat tree
Turkey oak (384) Quercus cerris	51	0.2	3	229	60	Habitat tree
Turkey oak (49) Quercus cerris	51	0.2	2.4	183	42	Habitat tree
Turkey oak (317) Quercus cerris	51	0.2	3.2	249	24	Diversity
Turkey oak (306) Quercus cerris	50	0.2	3.2	246	24	Habitat tree
Turkey oak (77) Quercus cerris	50	0.2	3	232	0	Habitat tree
Turkey oak (100) Quercus cerris	50	0.2	2.9	219	69	Habitat tree
Turkey oak (298) Quercus cerris	50	0.2	3.3	252	30	Veteran tree
Turkey oak (52) Quercus cerris	49	0.19	3.2	244	24	Habitat tree
Turkey oak (351) Quercus cerris	47	0.17	2.9	224	24	Veteran tree
Turkey oak (28) Quercus cerris	46.5	0.17	2.7	205	66	Habitat tree
Turkey oak (232) Quercus cerris	45	0.16	2.5	192	64	Habitat tree
Turkey oak (54) Quercus cerris	44	0.15	2.1	160	46	Habitat tree
Turkey oak (90) Quercus cerris	39	0.12	1.6	121	28	Habitat tree
Turkey oak (104) Quercus cerris	36.5	0.11	1.2	94	60	Habitat tree
Turkey oak (282)	35.5	0.1	1.3	99	116	Habitat tree

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (284) Quercus cerris	34.5	0.09	1	73	66	Habitat tree
Italian maple (329) Acer opalus	34	0.09	1.1	85	84	Habitat tree
Turkey oak (146) Quercus cerris	33.5	0.09	0.9	72	48	Habitat tree
Turkey oak (278) Quercus cerris	33	0.09	0.9	70	30	Habitat tree
Turkey oak (281) Quercus cerris	32.5	0.08	1	75	24	Habitat tree
Italian maple (318) Acer opalus	30	0.07	0.9	71	27	Habitat tree
Turkey oak (44) Quercus cerris	29	0.07	0.9	73	32	Habitat tree
Italian maple (267) Acer opalus	28	0.06	0.7	52	60	Habitat tree
European hop-hornbeam (336) Ostrya carpinifolia	26.5	0.06	0.6	47	14	Habitat tree
Italian maple (201) Acer opalus	24	0.05	0.5	37	28	Habitat tree
Italian maple (89) Acer opalus	22	0.04	0.3	23	4	Habitat tree
Italian maple (113) Acer opalus	19.5	0.03	0.3	21	4	Habitat tree