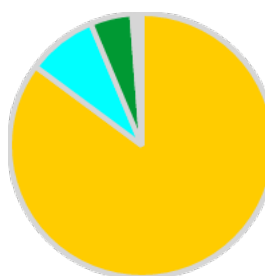


07/04/2021 Laz_Gr2_bio

Site conditions

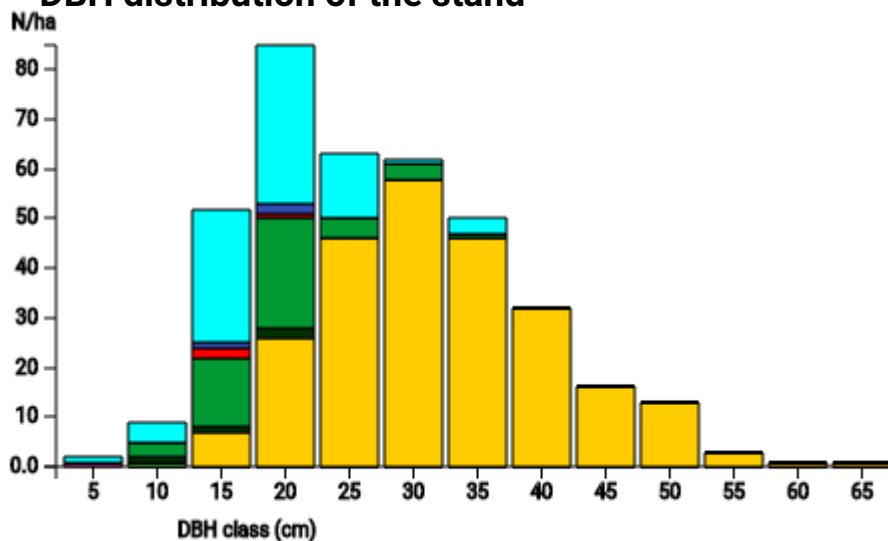
Altitude: 870 m.a.s.l.
 Geology / Bedrock: Alluvial and mixed beds
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum
 Mean annual temperature: 12.4 C;
 Mean annual precipitation: 1154 mm; Ownership: State-owned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



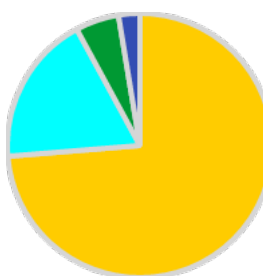
Initial stand (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	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
Total	389	29.9	407.1	31140	10570	578

Removed trees

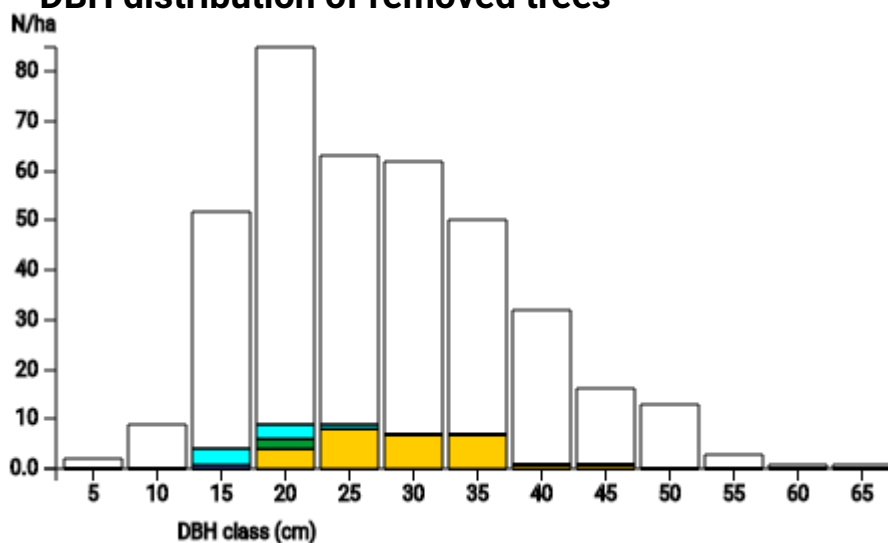
Volume: 35.4 m³
 Basal area: 2.6 m²
 Economic value: 2706 €
 Habitat value: 849 pts.

Removed trees (N in %)



- Turkey oak: 73.7 %
- European hop-hornbeam: 18.4 %
- Italian maple: 5.3 %
- hornbeam: 2.6 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %

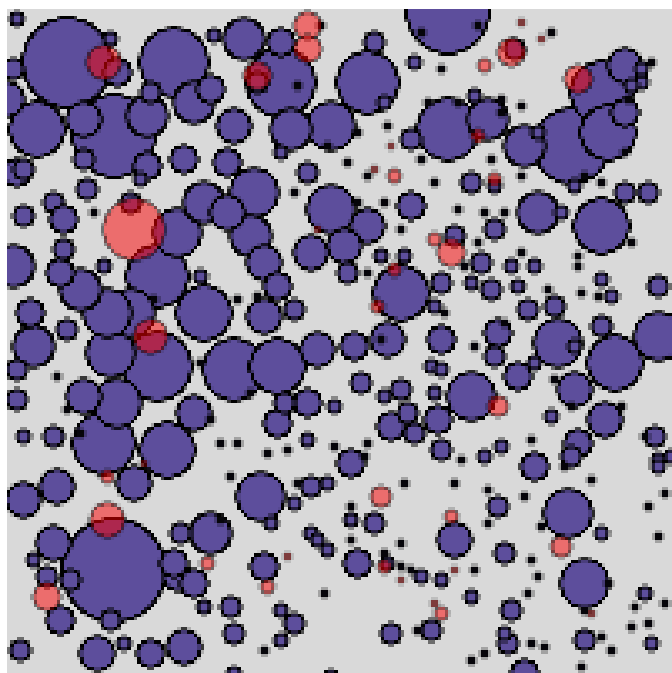
DBH distribution of removed trees



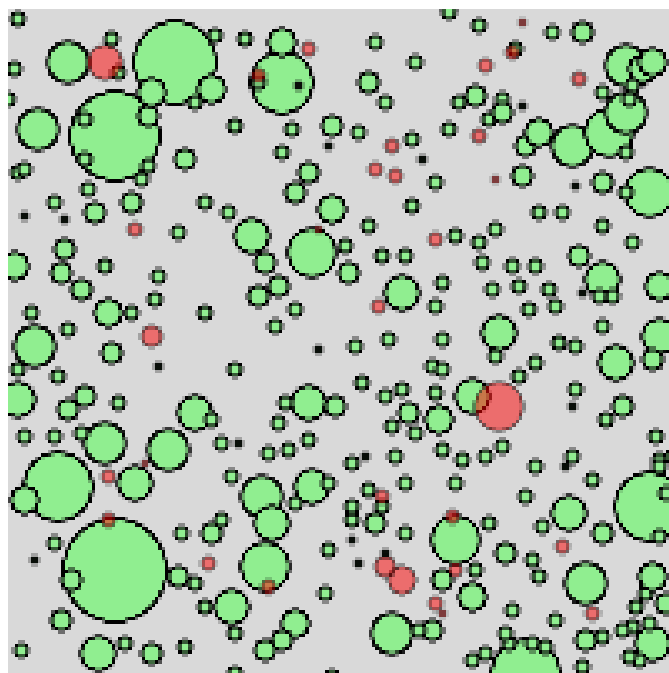
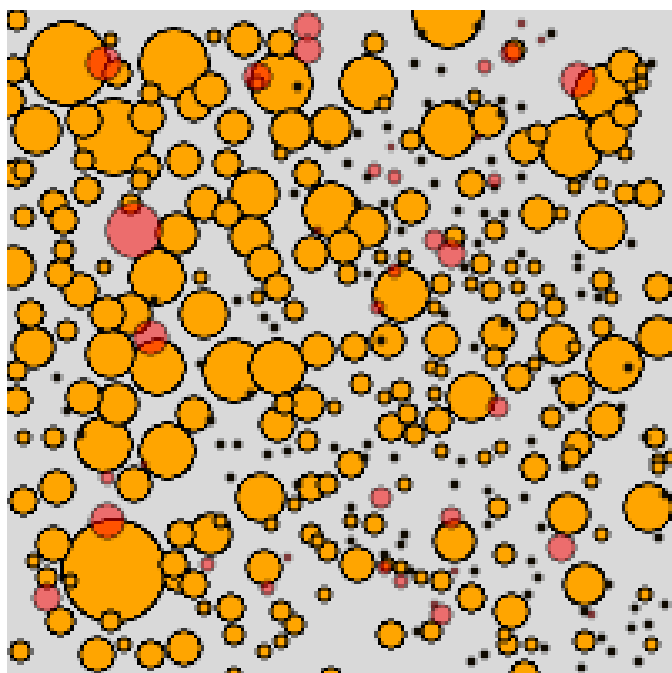
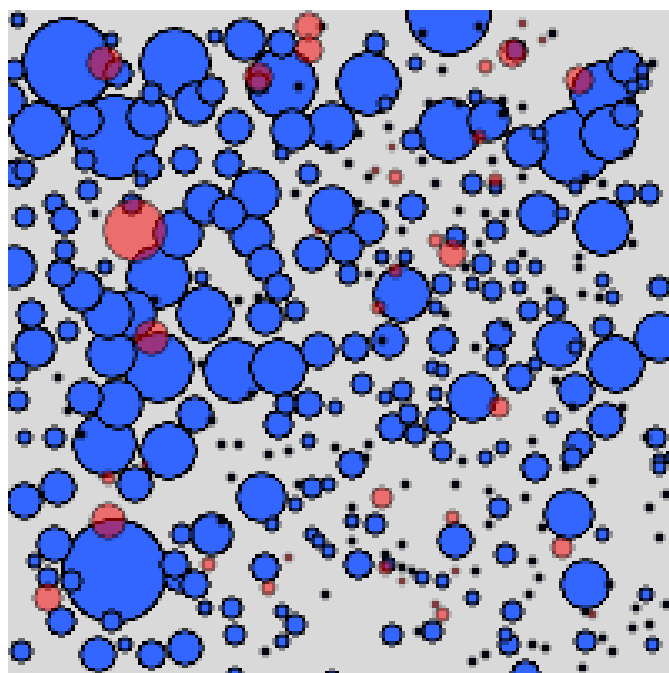
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	7	0.3	2.8	218	136	9
Italian maple	2	0.1	1	74	40	3
Turkey oak	28	2.3	31.2	2390	673	32
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	1	0	0.3	25	0	0
manna ash	0	0	0	0	0	0
Total	38	2.6	35.4	2706	849	44

Economic value [EUR]



Habitat value

Basal area [m²]Volume [m³]**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.

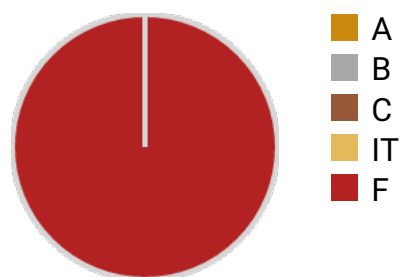
Economic values

Total value of removed trees: 2706 €
 Percentage of total stand value: 8.7 %
 Stand value after harvest: 28434 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	2390	76
field maple	0	0
Italian maple	74	76
manna ash	0	0
hornbeam	25	77
European hop-hornbeam	218	77
Total	2706	76

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	35.4	100

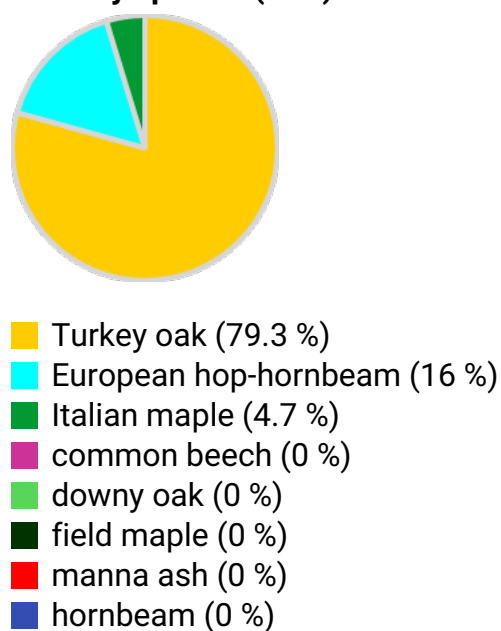
Habitat values

Total habitat value of removed trees: 849 pts.
 Percentage of total stand value: 8 %
 Stand value after harvest: 9721 pts.

Habitat value by tree species [pts.]

Tree species	Total	Per m ³	Microhabitats [N]
common beech	0	0	0
downy oak	0	0	0
Turkey oak	673	21.5	32
field maple	0	0	0
Italian maple	40	41.6	3
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	136	47.8	9
Total	849	24	44

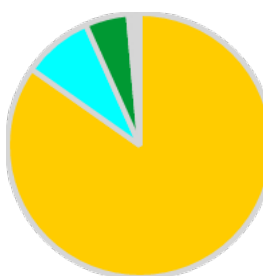
Habitat value (points) of removed trees by species (in %)



Remaining stand

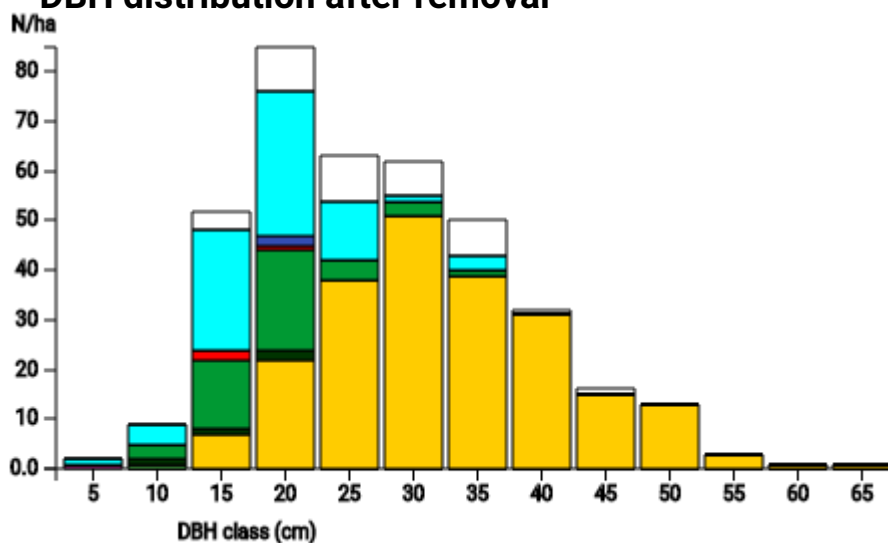
Volume: 371.6 m³
 Basal area: 27.2 m²
 Economic value: 28434 €
 Habitat value: 9721 pts.

Remaining trees by volume (m³ in %)



- Turkey oak: 84.8 %
- European hop-hornbeam: 8.5 %
- Italian maple: 5.3 %
- 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 ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	74	2.7	31.8	2429	1533	92
Italian maple	45	1.8	19.8	1514	877	62
Turkey oak	221	22.4	315.2	24110	7134	369
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	2	0.1	1	77	24	1
manna ash	3	0.1	2.3	174	38	4
Total	351	27.2	371.7	28434	9721	534

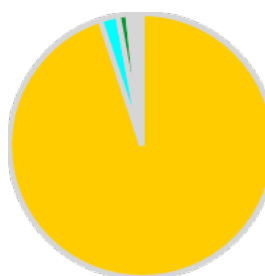
Retention treesVolume: 79 m³

Elite trees: 3

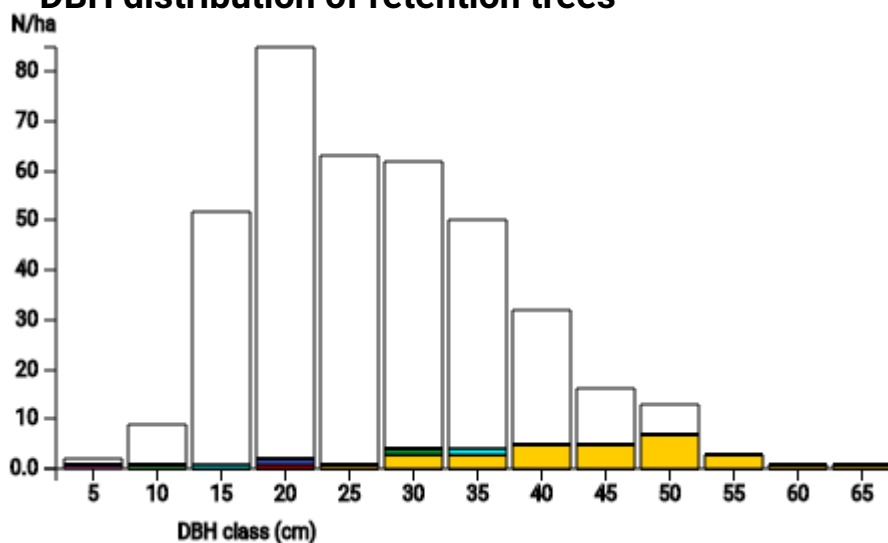
Habitat trees: 29

Economic value: 6039 €

Habitat value: 1871 pts.

Retention trees by volume (m³ in %)

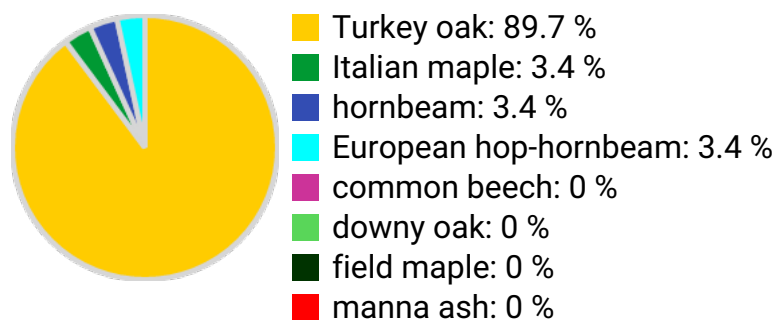
Turkey oak: 95.1 %
European hop-hornbeam: 2.2 %
Italian maple: 1.2 %
manna ash: 0.6 %
hornbeam: 0.6 %
common beech: 0.3 %
downy oak: 0.2 %
field maple: 0 %

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

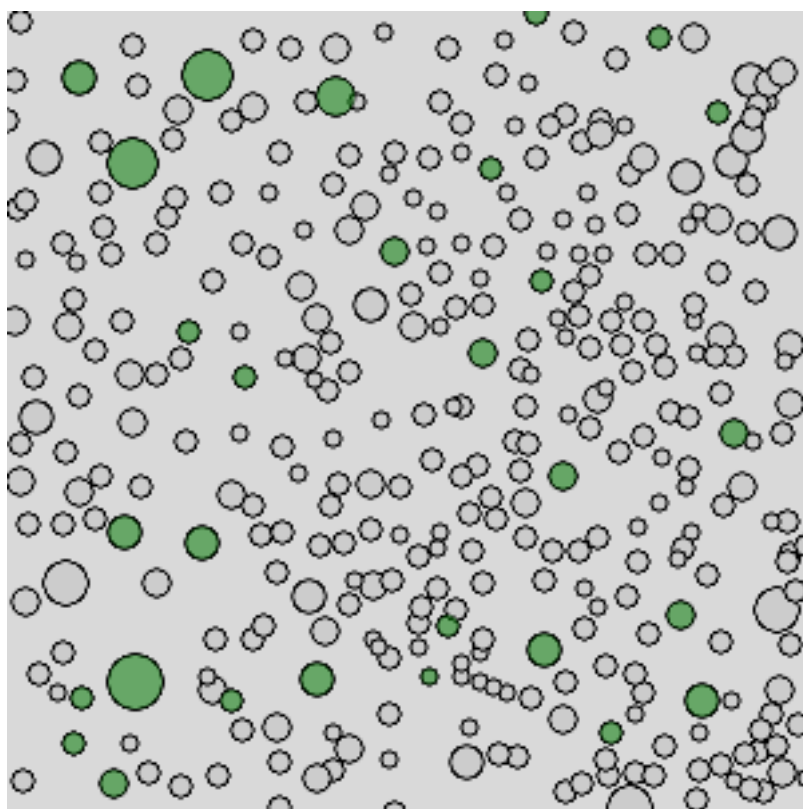
Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	2	0.1	1.7	130	36	2
Italian maple	1	0.1	0.9	71	27	2
Turkey oak	29	5	75.1	5744	1780	105
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	0	0	0	0	0	0
hornbeam	1	0	0.5	35	24	1
manna ash	1	0	0.4	34	4	1
Total	36	5.3	78.9	6039	1871	111

Number of habitat trees	[N]	29
Habitat value	pts.	1677
	[% of total]	15.9
Economic value	[€]	5523
	[% of total]	17.7
Number of microhabitats	[N]	100
	[% of total]	17.3

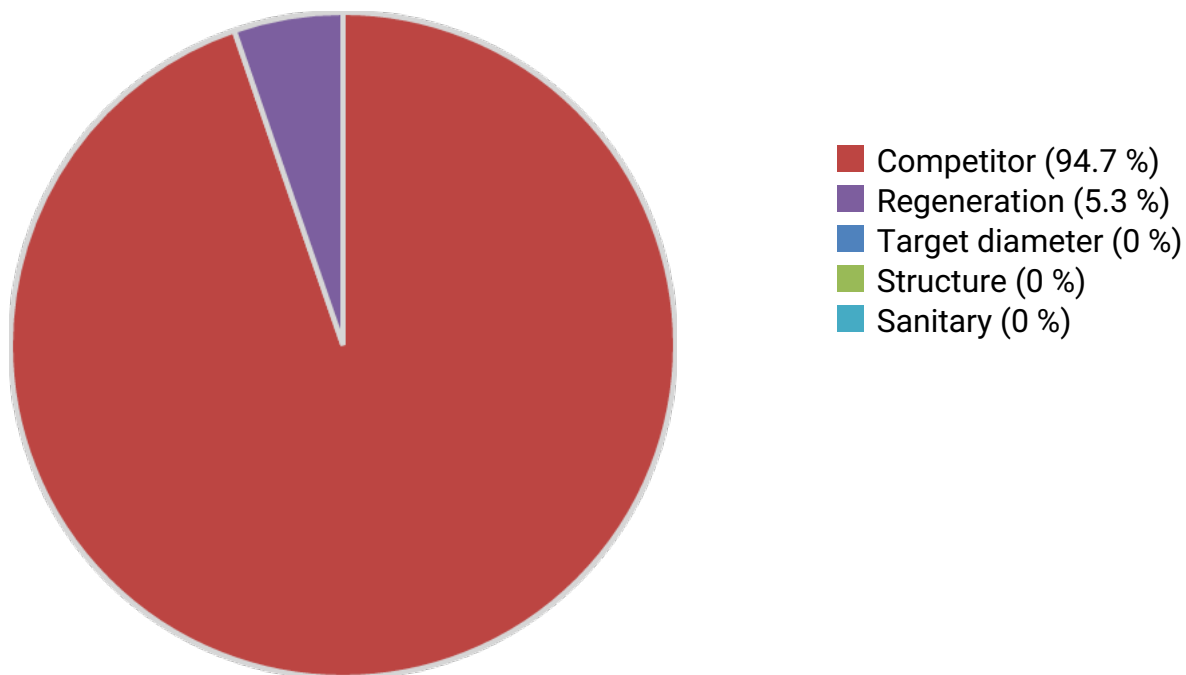
Habitat tree distribution by species (N in %)



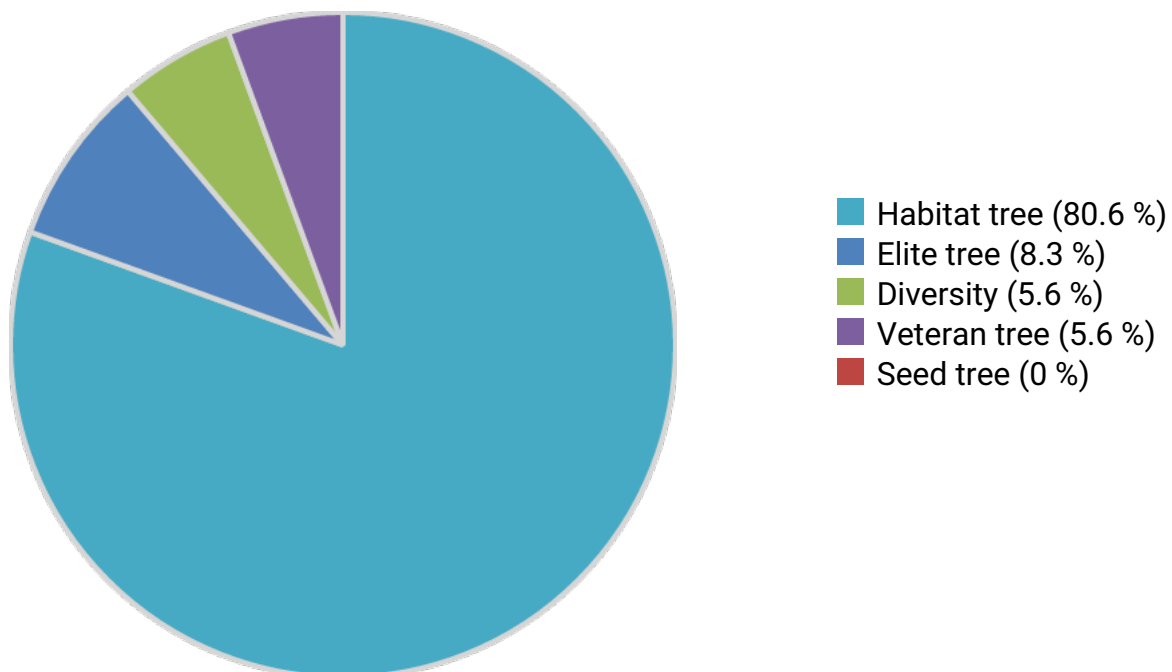
Spatial distribution of habitat trees



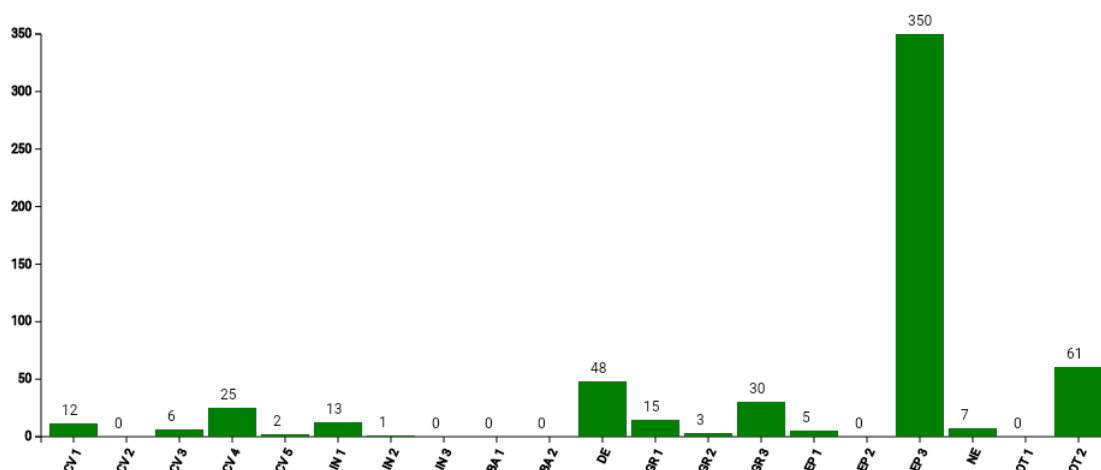
Reasons for removal



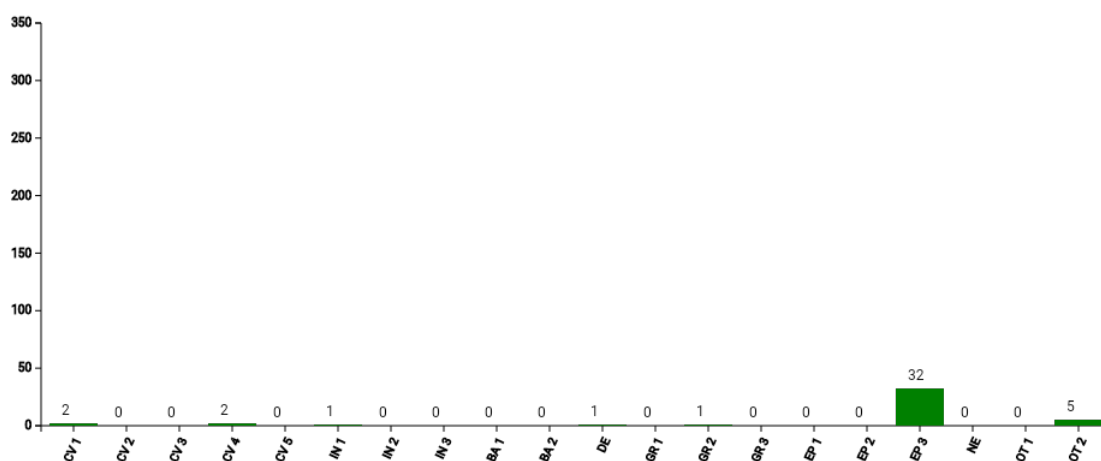
Reasons for retention



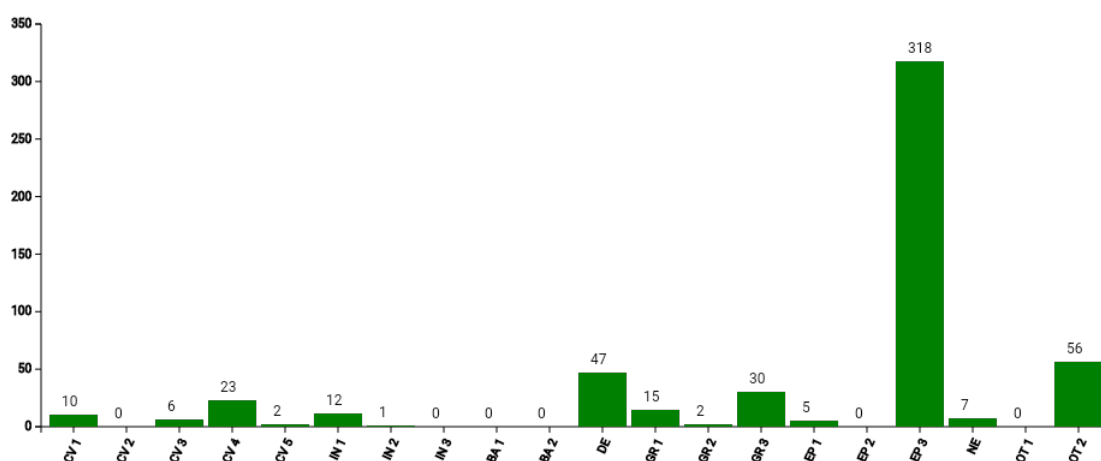
Distribution of tree microhabitats by code (N total)



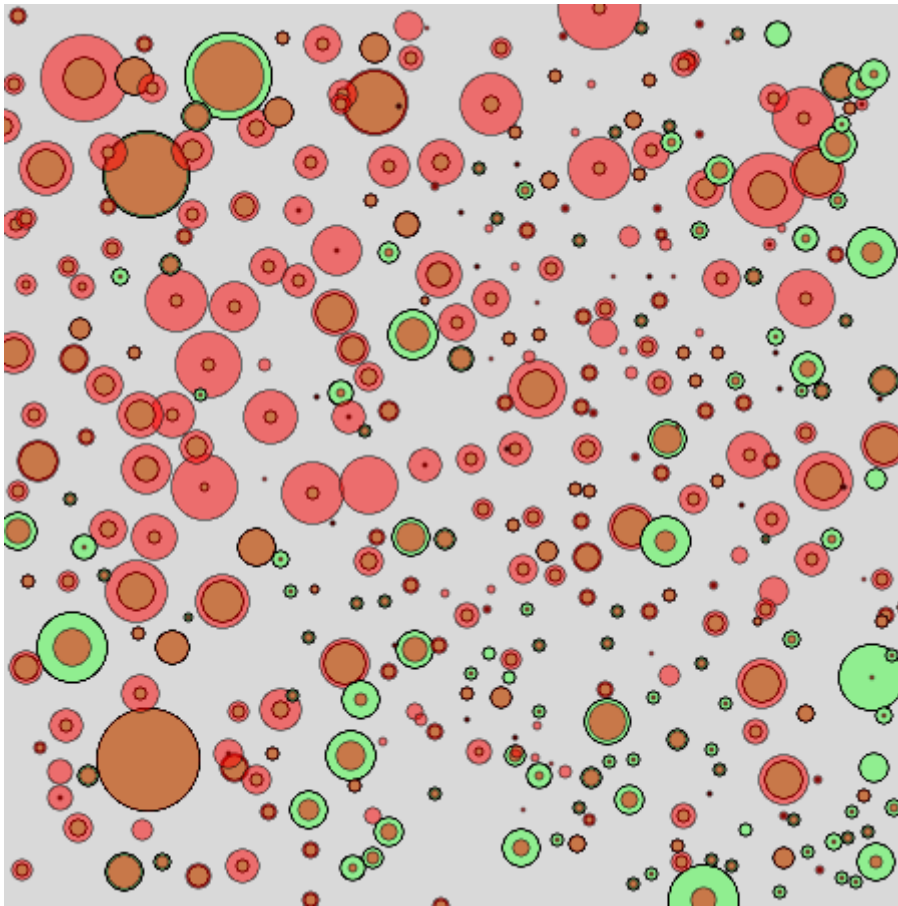
Removed tree microhabitats by code (N removed)



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 ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (52) Quercus cerris	49	0.19	3.2	244	24	Competitor
Turkey oak (15) Quercus cerris	41.5	0.14	1.9	142	60	Competitor
Turkey oak (75) Quercus cerris	39.5	0.12	1.7	131	36	Competitor
Turkey oak (116) Quercus cerris	39	0.12	1.9	146	18	Competitor
Turkey oak (305) Quercus cerris	38	0.11	1.6	123	24	Competitor
Turkey oak (6) Quercus cerris	36	0.1	1.4	111	0	Competitor
Turkey oak (367) Quercus cerris	36	0.1	1.5	113	0	Competitor
Turkey oak (8) Quercus cerris	35.5	0.1	1.3	98	24	Competitor
Turkey oak (11) Quercus cerris	35	0.1	1.5	116	18	Competitor
Turkey oak (226) Quercus cerris	34.5	0.09	1.2	94	24	Competitor
Turkey oak (136) Quercus cerris	34	0.09	1.3	103	4	Competitor
Turkey oak (182) Quercus cerris	33.5	0.09	1.2	90	81	Competitor
Turkey oak (294) Quercus cerris	33	0.09	1.3	101	24	Competitor
Turkey oak (223) Quercus cerris	32	0.08	1	79	24	Competitor
Turkey oak (358) Quercus cerris	30.5	0.07	0.8	63	24	Competitor
Turkey oak (274) Quercus cerris	30	0.07	0.7	55	16	Regeneration
Turkey oak (224) Quercus cerris	29.5	0.07	0.8	63	24	Competitor
Turkey oak (339) Quercus cerris	28	0.06	0.8	60	24	Competitor
Turkey oak (383) Quercus cerris	27.5	0.06	0.8	60	24	Competitor
Turkey oak (143) Quercus cerris	27	0.06	0.6	48	24	Competitor
Turkey oak (129) Quercus cerris	27	0.06	0.7	52	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (258) Quercus cerris	27	0.06	0.6	48	36	Competitor
European hop-hornbeam (336) Ostrya carpinifolia	26.5	0.06	0.6	47	14	Competitor
Turkey oak (295) Quercus cerris	26	0.05	0.7	52	24	Competitor
Turkey oak (107) Quercus cerris	25	0.05	0.6	47	24	Competitor
Turkey oak (365) Quercus cerris	24.5	0.05	0.6	46	0	Competitor
Turkey oak (260) Quercus cerris	24	0.05	0.5	41	44	Competitor
European hop-hornbeam (340) Ostrya carpinifolia	23.5	0.04	0.5	38	24	Competitor
Italian maple (316) Acer opalus	23	0.04	0.6	45	24	Competitor
Turkey oak (127) Quercus cerris	23	0.04	0.5	37	0	Competitor
European hop-hornbeam (321) Ostrya carpinifolia	22	0.04	0.4	34	28	Competitor
Turkey oak (275) Quercus cerris	22	0.04	0.4	27	24	Regeneration
European hop-hornbeam (246) Ostrya carpinifolia	21.5	0.04	0.5	35	24	Competitor
Italian maple (50) Acer opalus	20	0.03	0.4	29	16	Competitor
European hop-hornbeam (289) Ostrya carpinifolia	19.5	0.03	0.4	30	10	Competitor
European hop-hornbeam (243) Ostrya carpinifolia	19	0.03	0.2	18	24	Competitor
European hop-hornbeam (109) Ostrya carpinifolia	17.5	0.02	0.2	15	12	Competitor
hornbeam (292) Carpinus betulus	17.5	0.02	0.3	25	0	Competitor

Retention trees

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	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 (13) Quercus cerris	56.5	0.25	3.7	281	144	Habitat tree
Turkey oak (10) Quercus cerris	54	0.23	3.5	269	106	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 (57) Quercus cerris	51	0.2	3.4	258	24	Habitat tree
Turkey oak (306) Quercus cerris	50	0.2	3.2	246	24	Habitat tree
Turkey oak (100) Quercus cerris	50	0.2	2.9	219	69	Habitat tree
Turkey oak (176) Quercus cerris	49	0.19	3	232	60	Habitat tree
Turkey oak (70) Quercus cerris	48	0.18	2.7	210	24	Habitat tree
Turkey oak (183) Quercus cerris	46	0.17	2.3	179	60	Habitat tree
Turkey oak (232) Quercus cerris	45	0.16	2.5	192	64	Habitat tree
Turkey oak (327) Quercus cerris	45	0.16	2.7	208	76	Diversity
Turkey oak (212) Quercus cerris	44	0.15	2.5	189	60	Habitat tree
Turkey oak (236) Quercus cerris	43	0.15	1.9	143	78	Habitat tree
Turkey oak (128) Quercus cerris	41	0.13	1.5	115	82	Habitat tree
Turkey oak (27) Quercus cerris	40	0.13	1.9	145	24	Veteran tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (150) Quercus cerris	40	0.13	1.8	139	60	Habitat tree
Turkey oak (251) Quercus cerris	38	0.11	1.2	93	24	Habitat tree
European hop-hornbeam (257) Ostrya carpinifolia	38	0.11	1.3	99	12	Habitat tree
Turkey oak (130) Quercus cerris	37	0.11	1.6	119	24	Habitat tree
Turkey oak (137) Quercus cerris	35.5	0.1	1.4	111	30	Habitat tree
Turkey oak (284) Quercus cerris	34.5	0.09	1	73	66	Veteran tree
Turkey oak (357) Quercus cerris	33.5	0.09	1.1	86	24	Habitat tree
Turkey oak (240) Quercus cerris	31.5	0.08	1	78	36	Habitat tree
Italian maple (318) Acer opalus	30	0.07	0.9	71	27	Habitat tree
Turkey oak (140) Quercus cerris	28.5	0.06	1	74	35	Habitat tree
hornbeam (291) Carpinus betulus	21.5	0.04	0.5	35	24	Habitat tree
mannan ash (323) Fraxinus ornus	20.5	0.03	0.4	34	4	Elite tree
European hop-hornbeam (288) Ostrya carpinifolia	19.5	0.03	0.4	31	24	Diversity
downy oak (276) Quercus pubescens	13.5	0.01	0.1	10	0	Elite tree
common beech (7) Fagus sylvatica	9	0.01	0.2	16	0	Elite tree