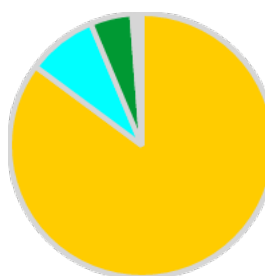


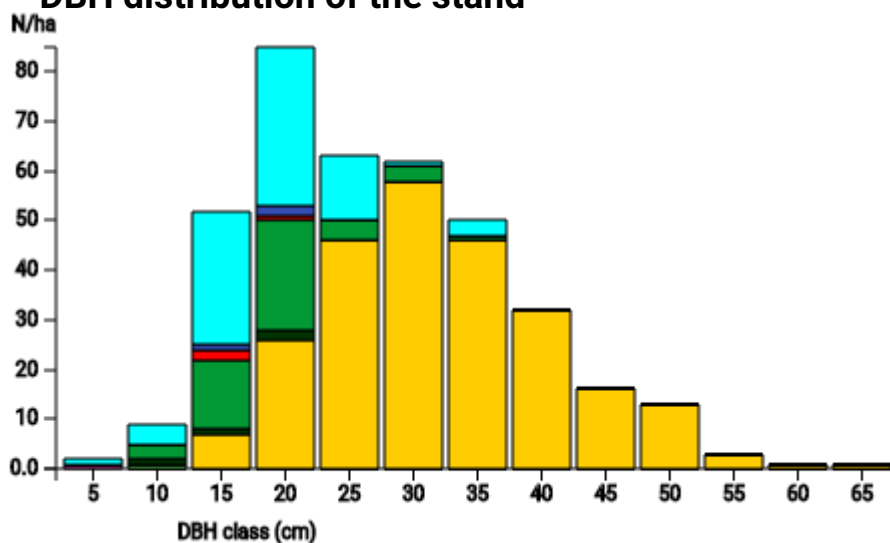
09/04/2021 Laz_grC_bio Turno2

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 %

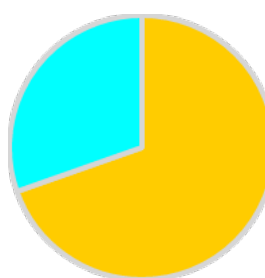
DBH distribution of the stand**Initial stand (details by tree species)**

Tree species	N/ha	Basal area (m²)	Volume (m³)	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

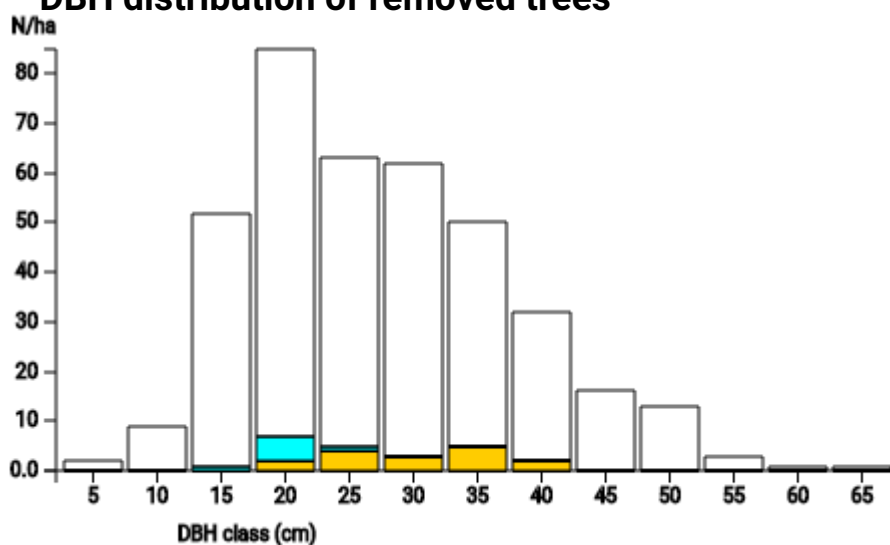
Removed treesVolume: 22.2 m³Basal area: 1.6 m²

Economic value: 1699 €

Habitat value: 473 pts.

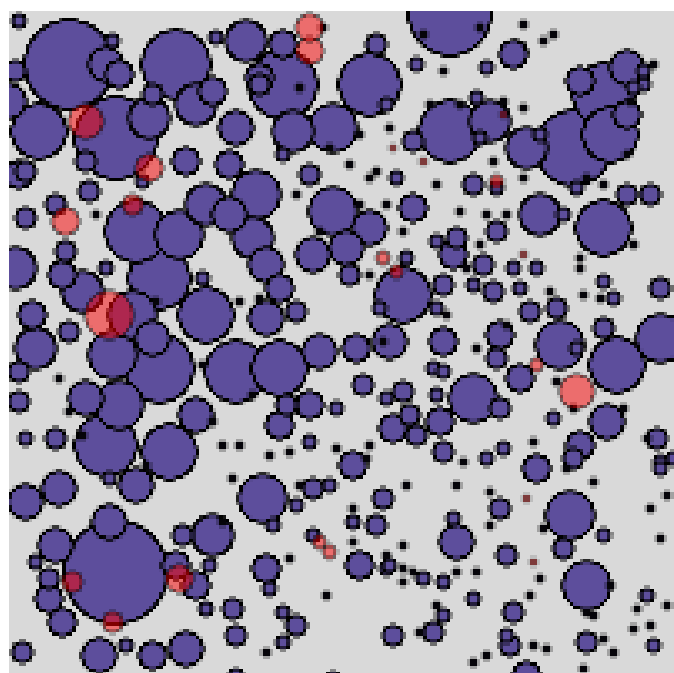
Removed trees (N in %)

Turkey oak:	69.6 %
European hop-hornbeam:	30.4 %
common beech:	0 %
downy oak:	0 %
field maple:	0 %
Italian maple:	0 %
manna ash:	0 %
hornbeam:	0 %

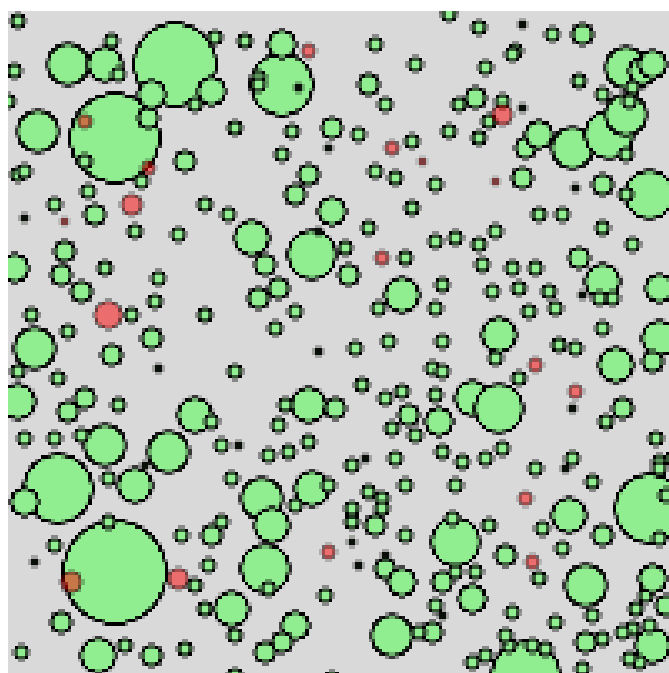
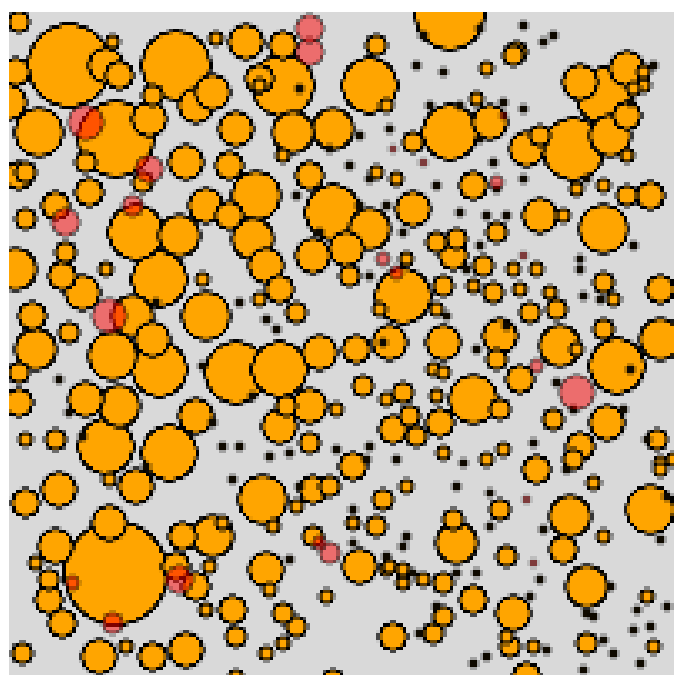
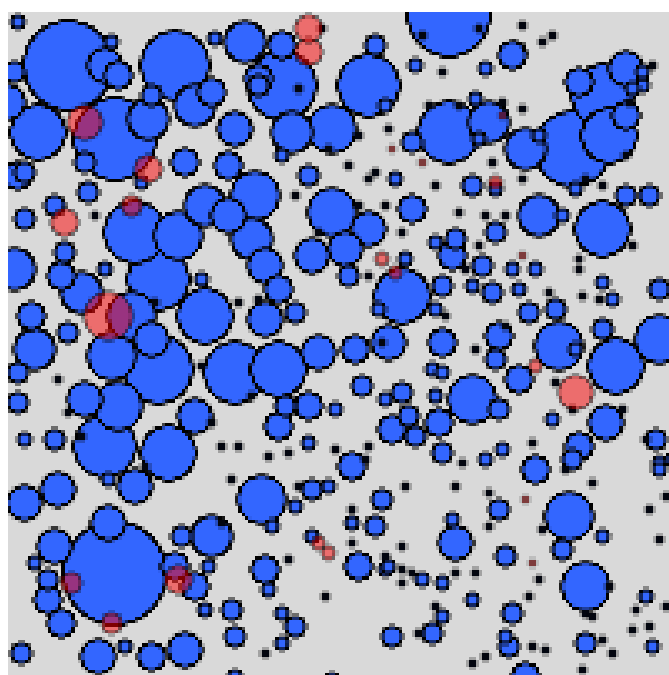
DBH distribution of removed trees**Removed trees (details by tree species)**

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	7	0.3	2.9	222	134	8
Italian maple	0	0	0	0	0	0
Turkey oak	16	1.3	19.3	1477	339	18
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
Total	23	1.6	22.2	1699	473	26

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

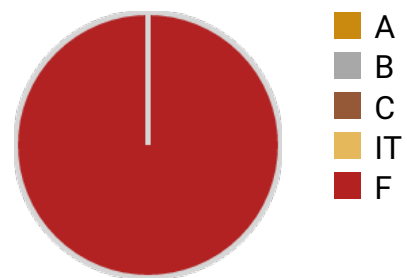
Total value of removed trees: 1699 €

Percentage of total stand value: 5.5 %

Stand value after harvest: 29440 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	1477	77
field maple	0	0
Italian maple	0	0
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	222	77
Total	1699	77

**Wood quality distribution
(m³ in %)**

Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	22.2	100

Habitat values

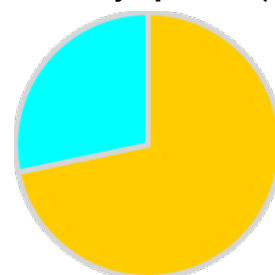
Total habitat value of removed trees: 473 pts.

Percentage of total stand value: 4.5 %

Stand value after harvest: 10097 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	339	17.6	18
field maple	0	0	0
Italian maple	0	0	0
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	134	46.1	8
Total	473	21.3	26

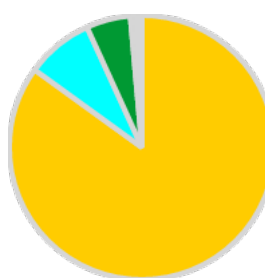
**Habitat value (points) of removed
trees by species (in %)**

Turkey oak	(71.7 %)
European hop-hornbeam	(28.3 %)
common beech	(0 %)
downy oak	(0 %)
field maple	(0 %)
Italian maple	(0 %)
manna ash	(0 %)
hornbeam	(0 %)

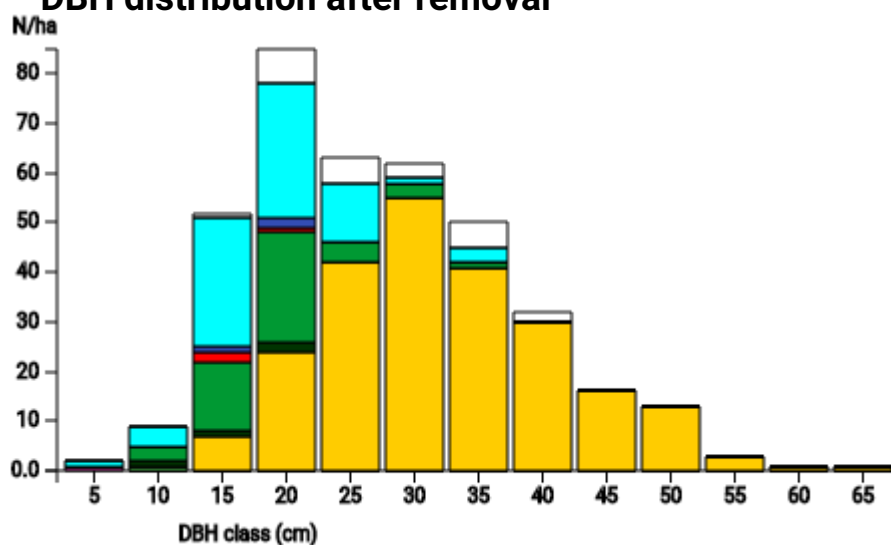
Remaining standVolume: 384.8 m³Basal area: 28.3 m²

Economic value: 29440 €

Habitat value: 10097 pts.

Remaining trees by volume (m³ in %)

- Turkey oak: 85 %
- European hop-hornbeam: 8.2 %
- 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 ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	74	2.7	31.7	2425	1535	93
Italian maple	47	1.8	20.8	1588	917	65
Turkey oak	233	23.4	327.1	25022	7468	383
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	366	28.3	384.8	29440	10097	552

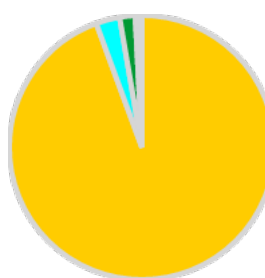
Retention treesVolume: 103.2 m³

Elite trees: 11

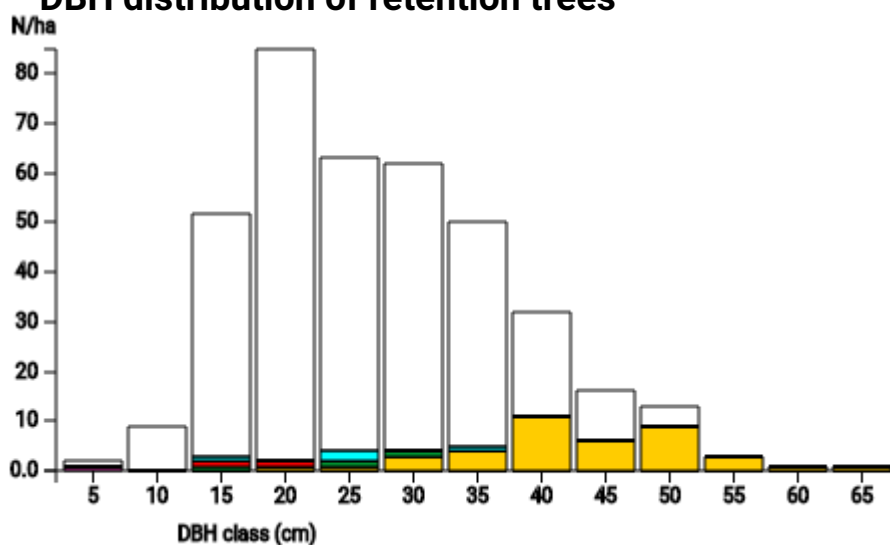
Habitat trees: 33

Economic value: 7895 €

Habitat value: 2526 pts.

Retention trees by volume (m³ in %)

Turkey oak:	94.4 %
European hop-hornbeam:	2.9 %
Italian maple:	1.9 %
manna ash:	0.6 %
common beech:	0.2 %
downy oak:	0 %
field maple:	0 %
hornbeam:	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	4	0.2	3	231	129	7
Italian maple	3	0.2	2	150	55	4
Turkey oak	40	6.6	97.4	7450	2308	131
common beech	1	0	0.2	16	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	2	0.1	0.6	49	34	3
Total	50	7.1	103.2	7895	2526	145

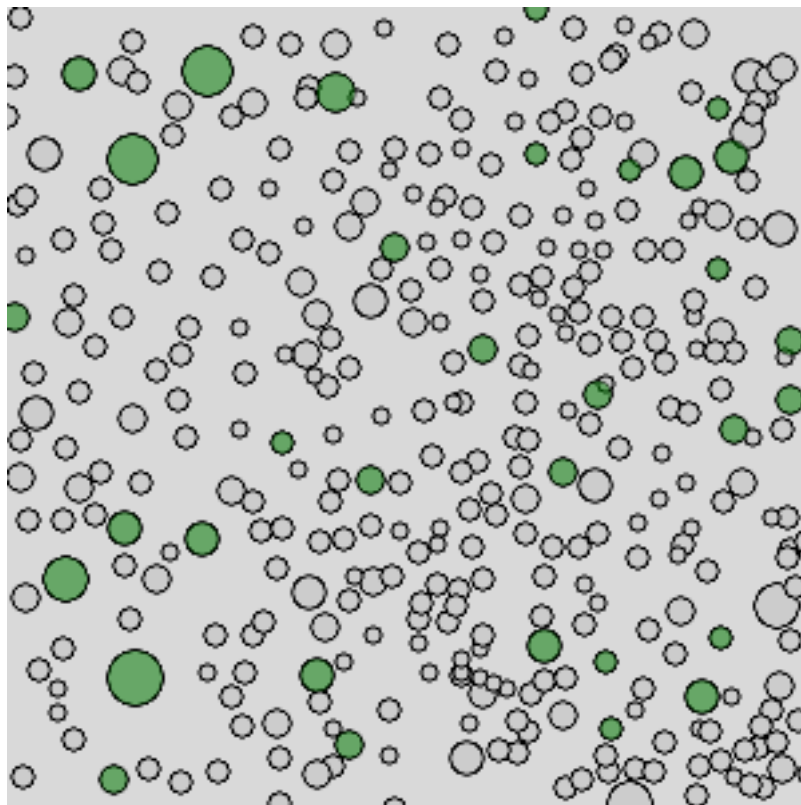
Number of habitat trees	[N]	33
Habitat value	pts.	2119
	[% of total]	20
Economic value	[€]	6583
	[% of total]	21.1
Number of microhabitats	[N]	123
	[% of total]	21.3

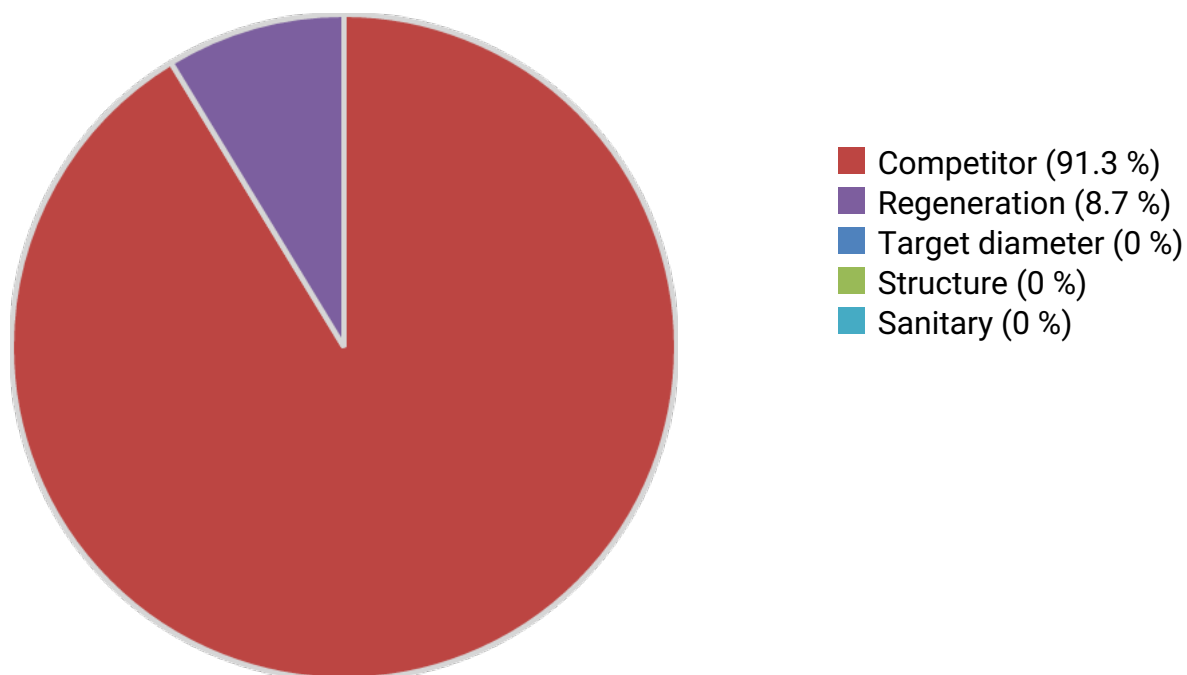
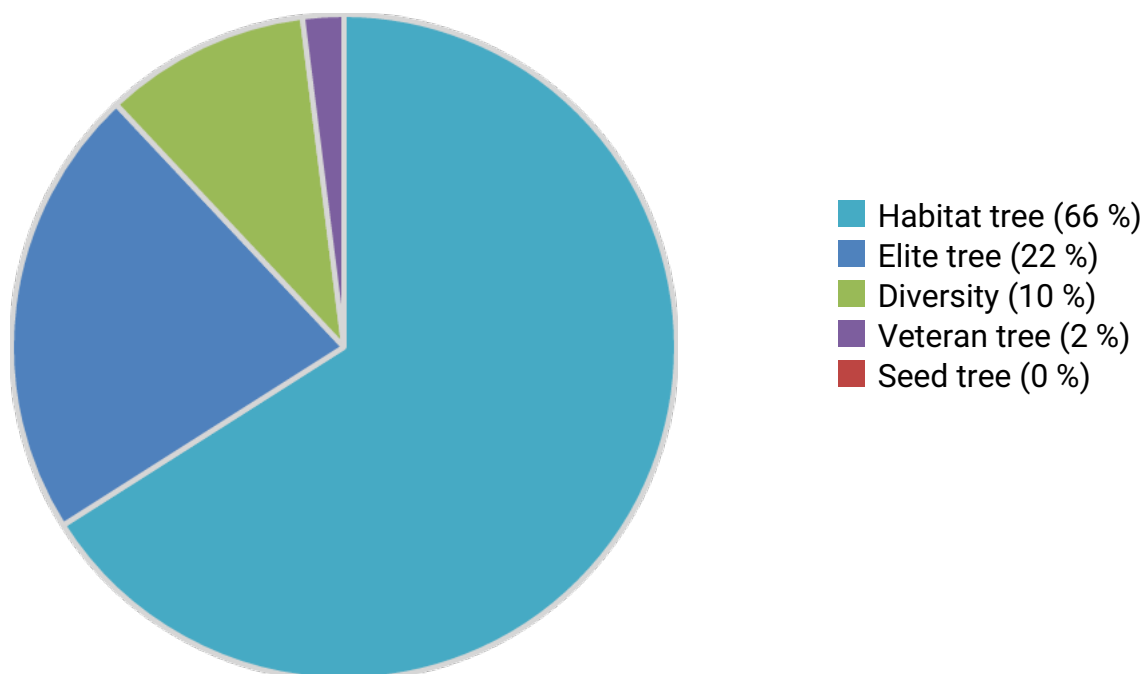
Habitat tree distribution by species (N in %)



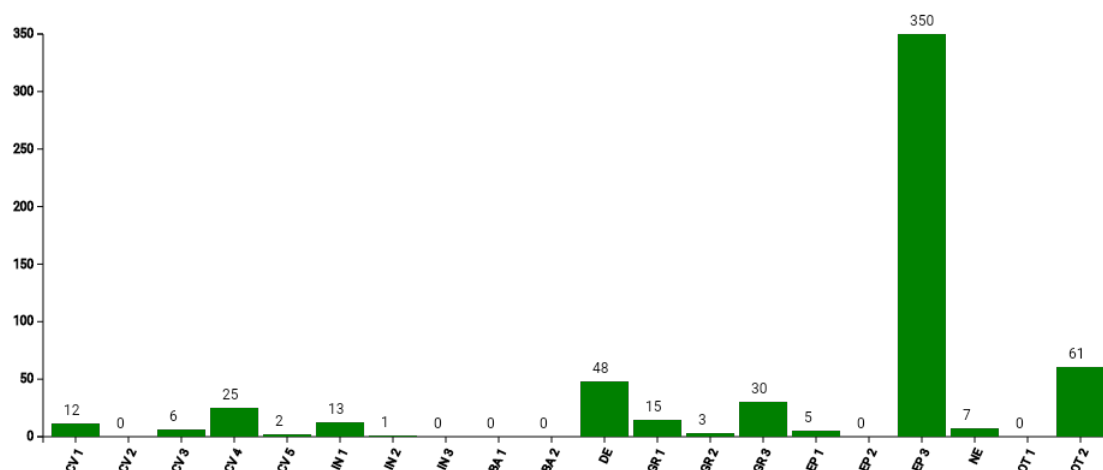
- Turkey oak: 93.9 %
- European hop-hornbeam: 6.1 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- Italian maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

Spatial distribution of habitat trees

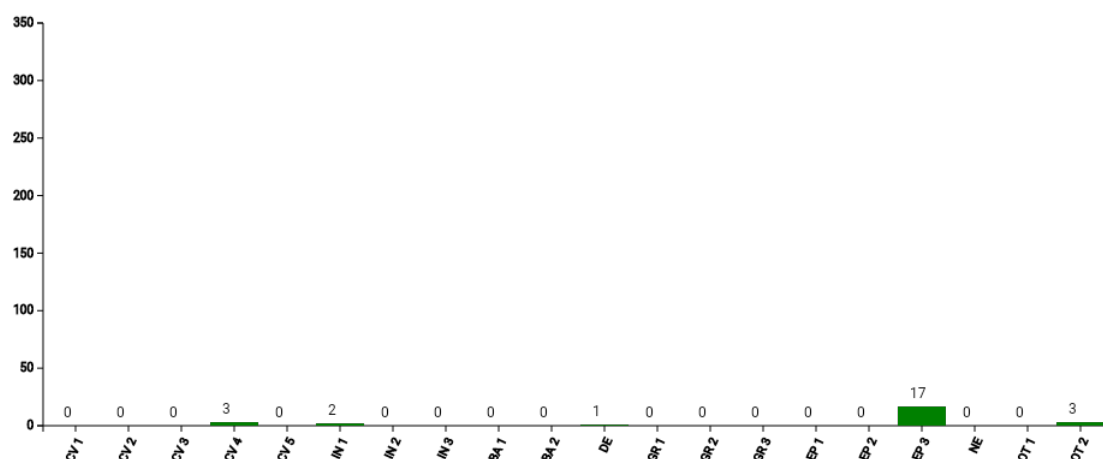


Reasons for removal**Reasons for retention**

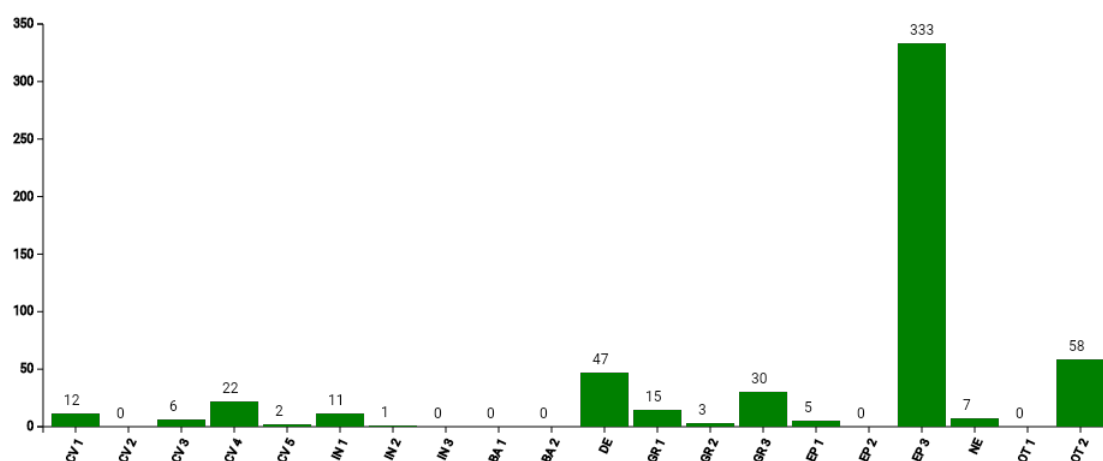
Distribution of tree microhabitats by code (N total)



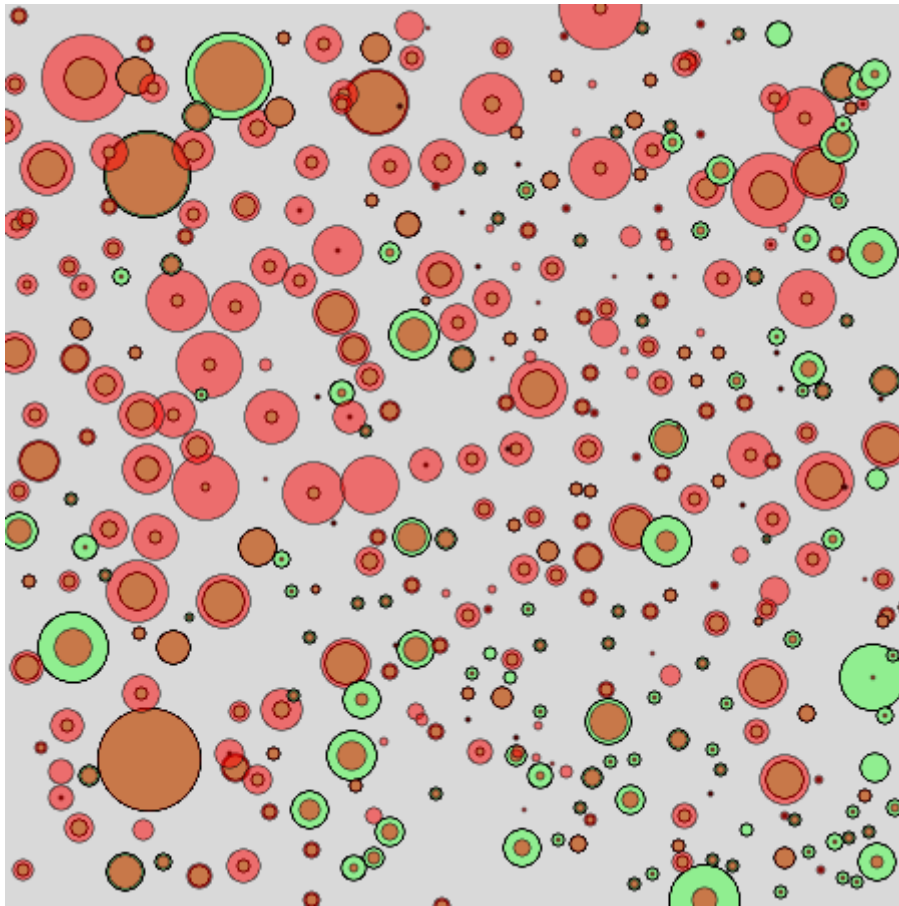
Removed tree microhabitats by code (N removed)



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 (68) <i>Quercus cerris</i>	40.5	0.13	2.3	178	52	Competitor
Turkey oak (27) <i>Quercus cerris</i>	40	0.13	1.9	145	24	Competitor
Turkey oak (175) <i>Quercus cerris</i>	38.5	0.12	1.7	127	24	Competitor
Turkey oak (131) <i>Quercus cerris</i>	37	0.11	1.5	116	40	Competitor
Turkey oak (6) <i>Quercus cerris</i>	36	0.1	1.4	111	0	Competitor
Turkey oak (31) <i>Quercus cerris</i>	36	0.1	1.5	115	24	Competitor
Turkey oak (8) <i>Quercus cerris</i>	35.5	0.1	1.3	98	24	Competitor
Turkey oak (42) <i>Quercus cerris</i>	34	0.09	1.3	98	12	Competitor
Turkey oak (138) <i>Quercus cerris</i>	31.5	0.08	1.1	86	0	Regeneration
Turkey oak (126) <i>Quercus cerris</i>	30.5	0.07	0.8	60	24	Competitor
Turkey oak (44) <i>Quercus cerris</i>	29	0.07	0.9	73	32	Competitor
Turkey oak (140) <i>Quercus cerris</i>	28.5	0.06	1	74	35	Regeneration
European hop-hornbeam (336) <i>Ostrya carpinifolia</i>	26.5	0.06	0.6	47	14	Competitor
Turkey oak (125) <i>Quercus cerris</i>	26	0.05	0.7	53	0	Competitor
Turkey oak (364) <i>Quercus cerris</i>	25	0.05	0.7	54	24	Competitor
Turkey oak (365) <i>Quercus cerris</i>	24.5	0.05	0.6	46	0	Competitor
Turkey oak (173) <i>Quercus cerris</i>	24	0.05	0.6	44	24	Competitor
European hop-hornbeam (354) <i>Ostrya carpinifolia</i>	22.5	0.04	0.4	29	0	Competitor
European hop-hornbeam (321) <i>Ostrya carpinifolia</i>	22	0.04	0.4	34	28	Competitor
European hop-hornbeam (322) <i>Ostrya carpinifolia</i>	22	0.04	0.5	38	6	Competitor
European hop-hornbeam (210) <i>Ostrya carpinifolia</i>	21	0.04	0.3	26	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Ostrya carpinifolia						
European hop-hornbeam (314) Ostrya carpinifolia	20.5	0.03	0.3	26	38	Competitor
European hop-hornbeam (234) Ostrya carpinifolia	19	0.03	0.3	23	24	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 (326) Quercus cerris	53	0.22	3.9	299	66	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	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 (351) Quercus cerris	47	0.17	2.9	224	24	Habitat tree
Turkey oak (183) Quercus cerris	46	0.17	2.3	179	60	Habitat tree
Turkey oak (164) Quercus cerris	45	0.16	2.4	182	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	Habitat tree
Turkey oak (54)	44	0.15	2.1	160	46	Habitat tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (167) Quercus cerris	43.5	0.15	2.4	181	24	Elite tree
Turkey oak (236) Quercus cerris	43	0.15	1.9	143	78	Habitat tree
Turkey oak (179) Quercus cerris	41.5	0.14	1.7	131	24	Diversity
Turkey oak (15) Quercus cerris	41.5	0.14	1.9	142	60	Diversity
Turkey oak (128) Quercus cerris	41	0.13	1.5	115	82	Habitat tree
Turkey oak (117) Quercus cerris	41	0.13	1.9	147	121	Habitat tree
Turkey oak (92) Quercus cerris	41	0.13	1.6	122	60	Habitat tree
Turkey oak (158) Quercus cerris	40	0.13	1.7	126	24	Diversity
Turkey oak (324) Quercus cerris	40	0.13	2	151	36	Habitat tree
Turkey oak (150) Quercus cerris	40	0.13	1.8	139	60	Habitat tree
Turkey oak (108) Quercus cerris	39.5	0.12	1.8	134	54	Diversity
Turkey oak (75) Quercus cerris	39.5	0.12	1.7	131	36	Veteran tree
Turkey oak (161) Quercus cerris	38	0.11	1.4	109	60	Habitat tree
Turkey oak (251) Quercus cerris	38	0.11	1.2	93	24	Habitat tree
European hop-hornbeam (374) Ostrya carpinifolia	35	0.1	1.2	94	51	Habitat tree
Turkey oak (146) Quercus cerris	33.5	0.09	0.9	72	48	Habitat tree
Turkey oak (235) Quercus cerris	32	0.08	1	74	36	Habitat tree
Turkey oak (124) Quercus cerris	31.5	0.08	0.9	65	0	Elite tree
Italian maple (318) Acer opalus	30	0.07	0.9	71	27	Elite tree
Turkey oak (37) Quercus cerris	29	0.07	0.9	65	24	Diversity

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
European hop-hornbeam (216) <i>Ostrya carpinifolia</i>	28	0.06	0.8	61	30	Habitat tree
Italian maple (166) <i>Acer opalus</i>	28	0.06	0.8	60	24	Elite tree
European hop-hornbeam (56) <i>Ostrya carpinifolia</i>	28	0.06	0.7	56	24	Elite tree
Turkey oak (366) <i>Quercus cerris</i>	24	0.05	0.6	46	24	Elite tree
manna ash (323) <i>Fraxinus ornus</i>	20.5	0.03	0.4	34	4	Elite tree
Italian maple (174) <i>Acer opalus</i>	17.5	0.02	0.2	19	4	Elite tree
European hop-hornbeam (217) <i>Ostrya carpinifolia</i>	17	0.02	0.3	19	24	Elite tree
manna ash (43) <i>Fraxinus ornus</i>	15	0.02	0.2	16	30	Elite tree
common beech (7) <i>Fagus sylvatica</i>	9	0.01	0.2	16	0	Elite tree