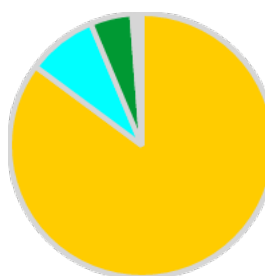


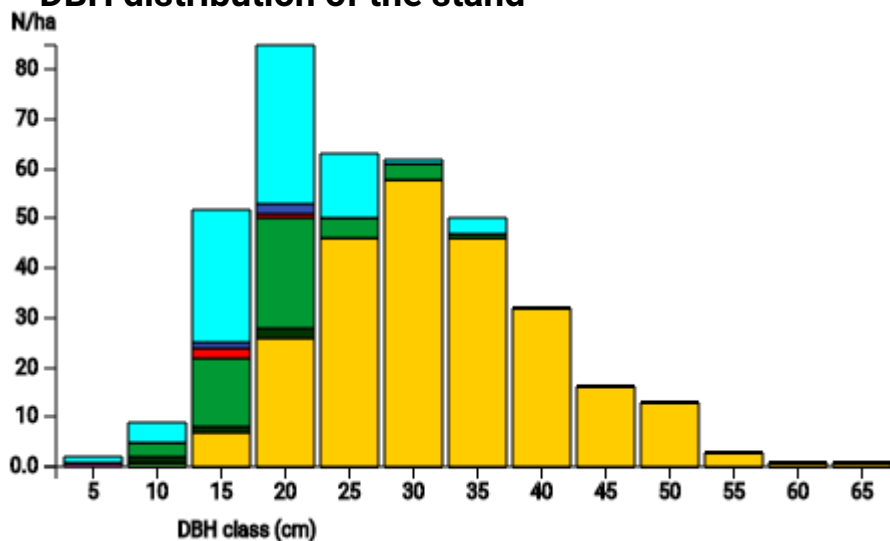
09/04/2021 Laz_GrB_bio turno 2

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-Quercus 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 %

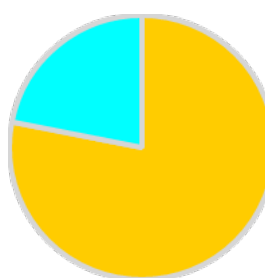
DBH distribution of the stand**Initial stand (details by tree species)**

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

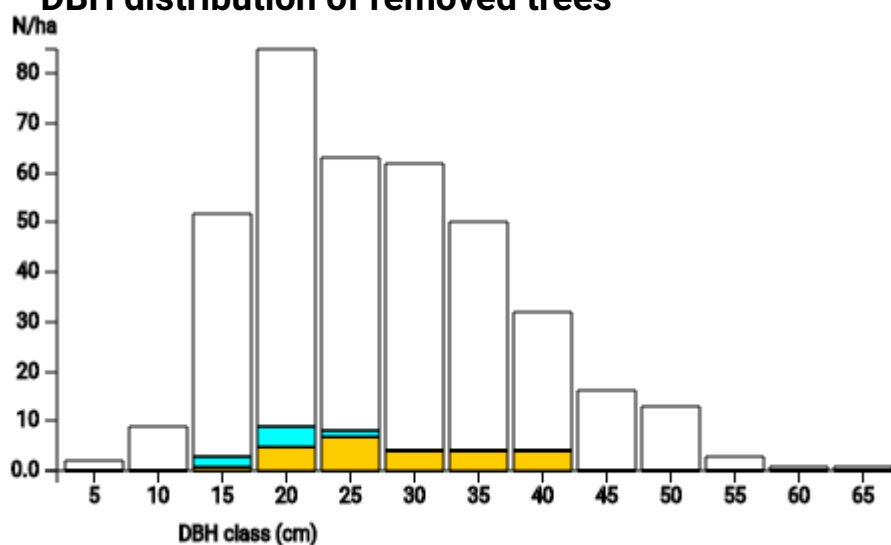
Removed treesVolume: 28.8 m³Basal area: 2.2 m²

Economic value: 2201 €

Habitat value: 692 pts.

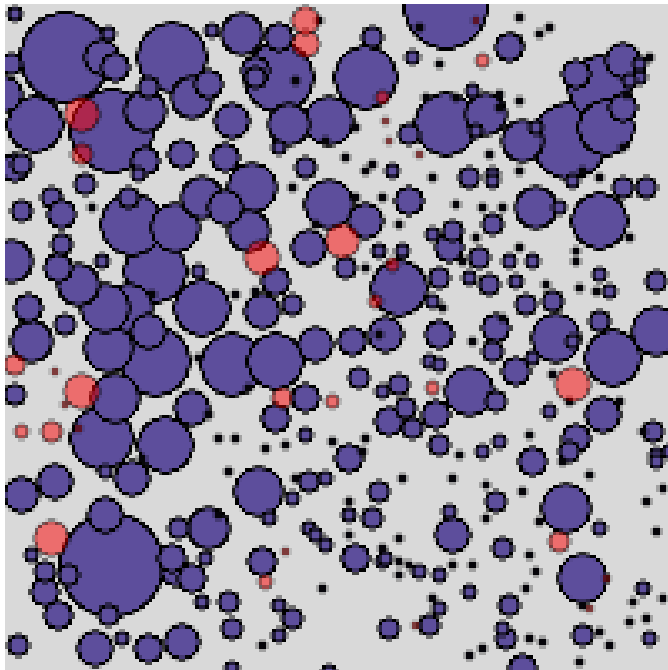
Removed trees (N in %)

- Turkey oak: 78.1 %
- European hop-hornbeam: 21.9 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- Italian maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

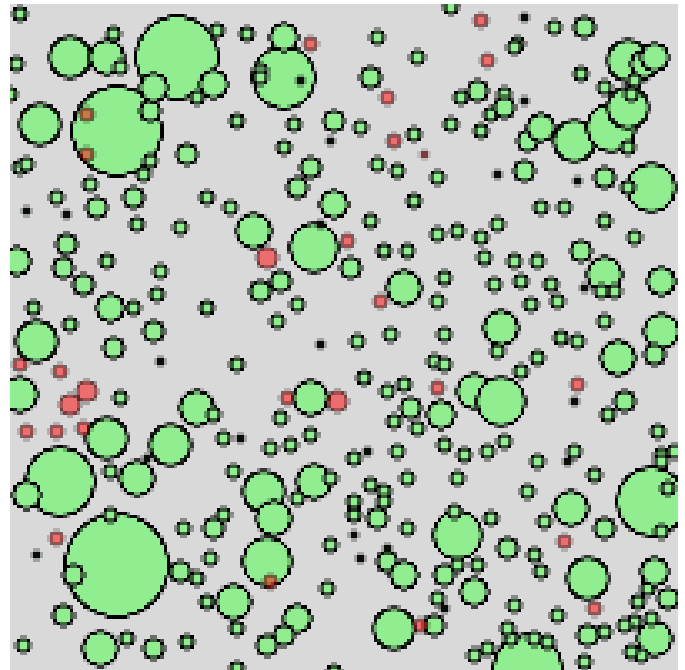
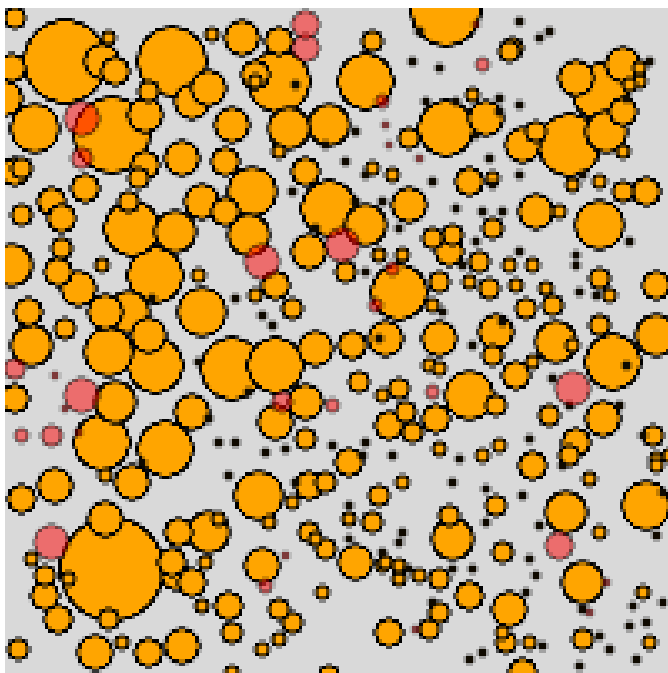
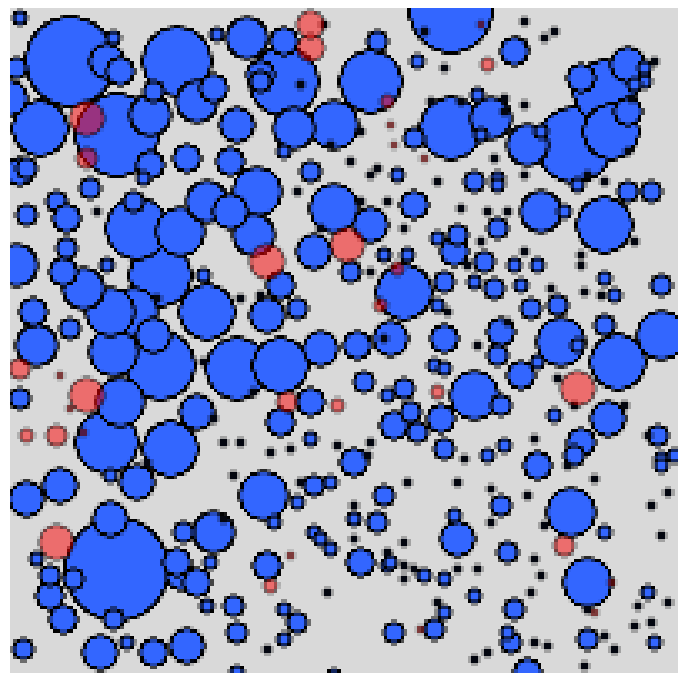
DBH distribution of removed trees**Removed trees (details by tree species)**

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	7	0.2	3.1	240	114	8
Italian maple	0	0	0	0	0	0
Turkey oak	25	1.9	25.6	1962	578	26
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	32	2.2	28.8	2201	692	34

Economic value [EUR]



Habitat value

Basal area [m²]Volume [m³]**Description:**

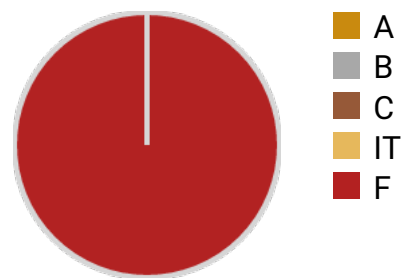
Red circles (removed trees); circle size according to numerical values (e.g. large circles mean high values); trees with very low values (e.g. habitat value "0") are not visible.

Economic values

Total value of removed trees: 2201 €
 Percentage of total stand value: 7.1 %
 Stand value after harvest: 28938 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	1962	77
field maple	0	0
Italian maple	0	0
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	240	77
Total	2201	77

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

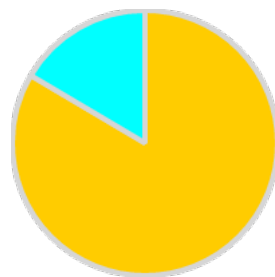
Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	28.8	100

Habitat values

Total habitat value of removed trees: 692 pts.
 Percentage of total stand value: 6.5 %
 Stand value after harvest: 9878 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	578	22.5	26
field maple	0	0	0
Italian maple	0	0	0
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	114	36.4	8
Total	692	24	34

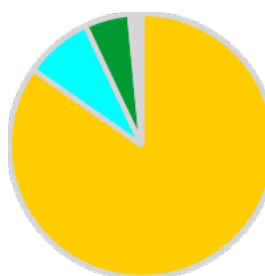
**Habitat value (points) of removed
trees by species (in %)**

Turkey oak	(83.5 %)
European hop-hornbeam	(16.5 %)
common beech	(0 %)
downy oak	(0 %)
field maple	(0 %)
Italian maple	(0 %)
manna ash	(0 %)
hornbeam	(0 %)

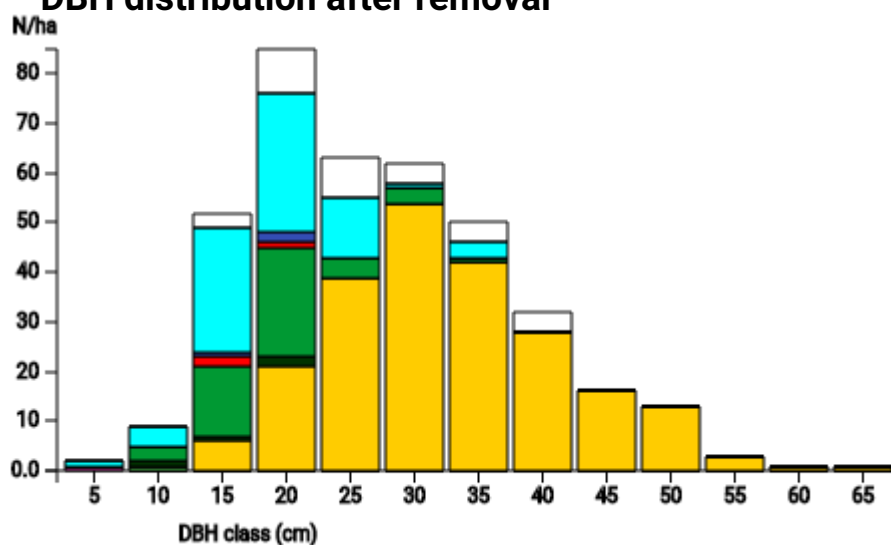
Remaining standVolume: 378.2 m³Basal area: 27.7 m²

Economic value: 28938 €

Habitat value: 9878 pts.

Remaining trees by volume (m³ in %)

- Turkey oak: 84.8 %
- European hop-hornbeam: 8.3 %
- Italian maple: 5.5 %
- manna ash: 0.6 %
- field maple: 0.4 %
- hornbeam: 0.4 %
- 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	31.5	2407	1555	93
Italian maple	47	1.8	20.8	1588	917	65
Turkey oak	224	22.8	320.8	24538	7229	375
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	357	27.7	378.3	28938	9878	544

Retention trees

Volume: 92 m³

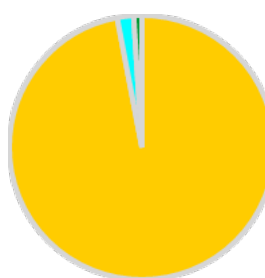
Elite trees: 0

Habitat trees: 30

Economic value: 7034 €

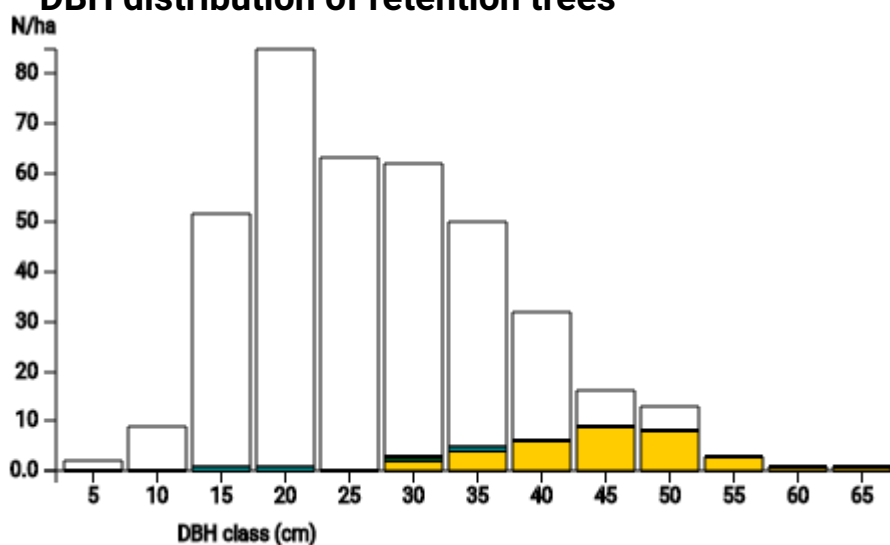
Habitat value: 2117 pts.

Retention trees by volume (m³ in %)



Turkey oak:	97 %
European hop-hornbeam:	2 %
Italian maple:	1 %
common beech:	0 %
downy oak:	0 %
field maple:	0 %
manna ash:	0 %
hornbeam:	0 %

DBH distribution of retention trees

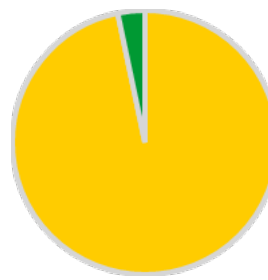


Retained trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	3	0.2	1.9	143	43	4
Italian maple	1	0.1	0.9	71	27	2
Turkey oak	34	6	89.2	6820	2047	115
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	38	6.3	91.9	7034	2117	121

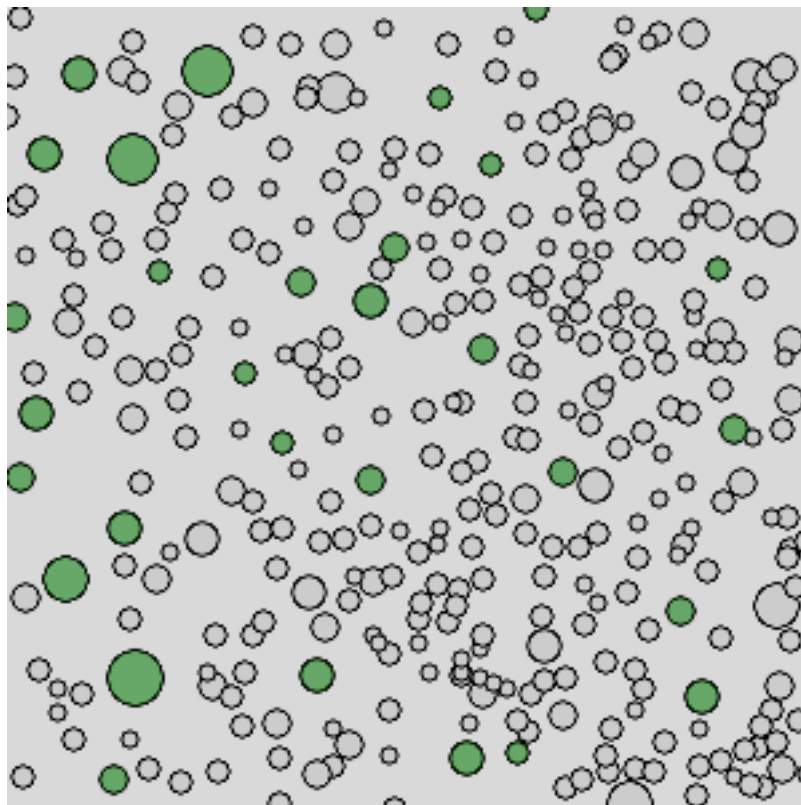
Number of habitat trees	[N]	30
Habitat value	pts.	1927
	[% of total]	18.2
Economic value	[€]	5991
	[% of total]	19.2
Number of microhabitats	[N]	109
	[% of total]	18.9

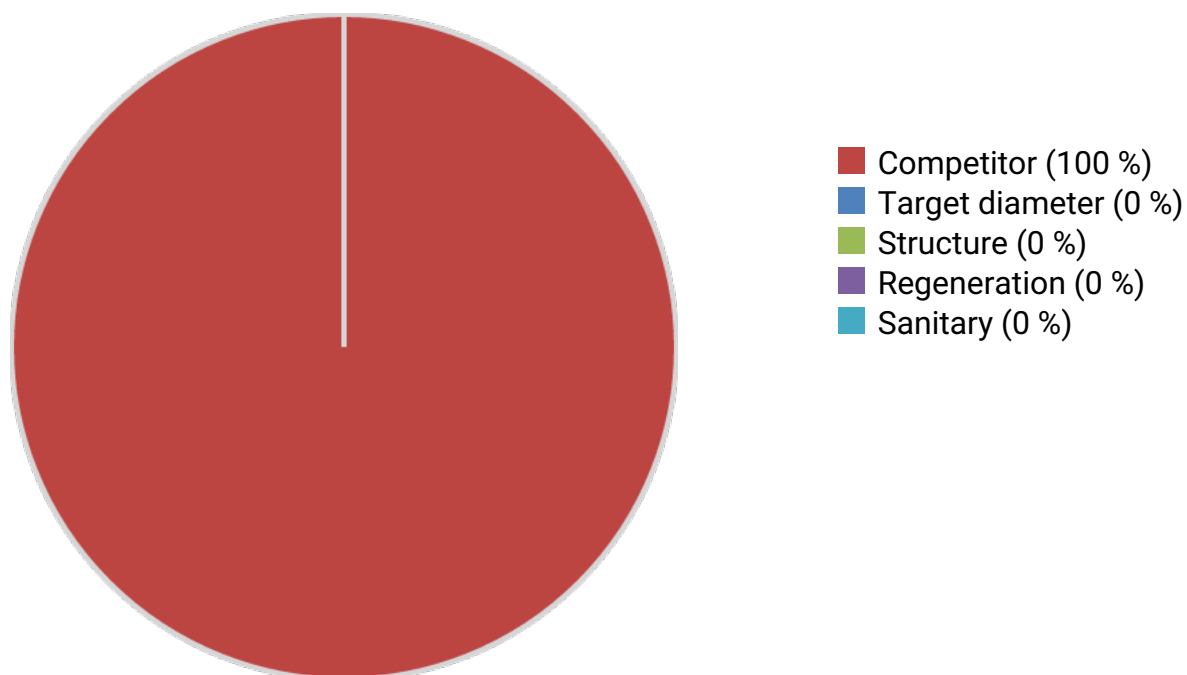
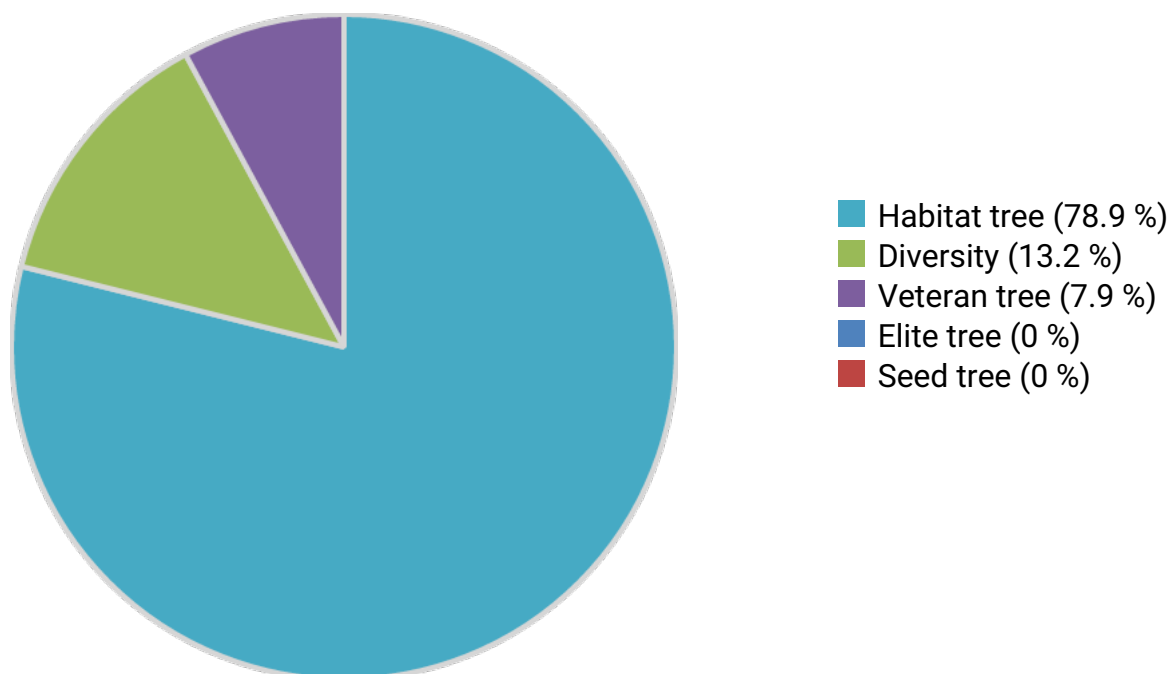
Habitat tree distribution by species (N in %)



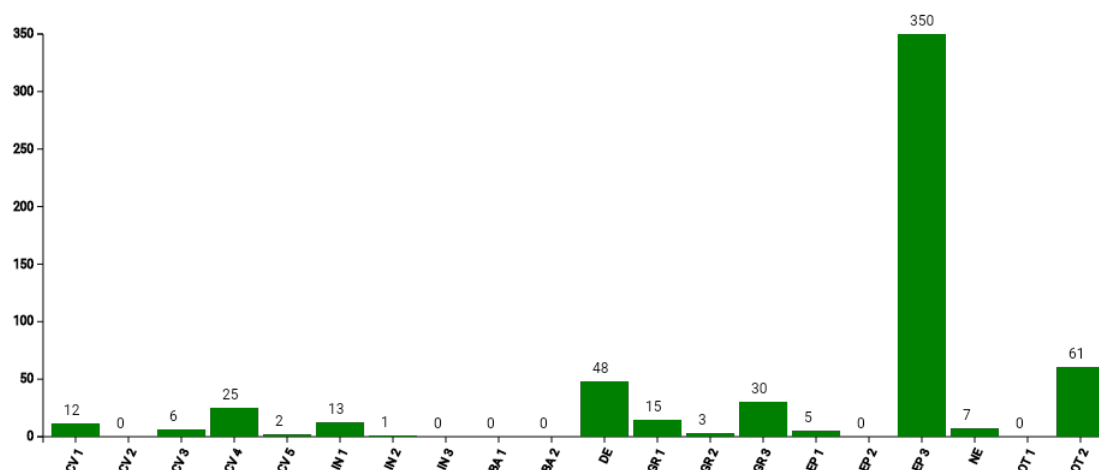
Turkey oak:	96.7 %
Italian maple:	3.3 %
common beech:	0 %
downy oak:	0 %
field maple:	0 %
manna ash:	0 %
hornbeam:	0 %
European hop-hornbeam:	0 %

Spatial distribution of habitat trees

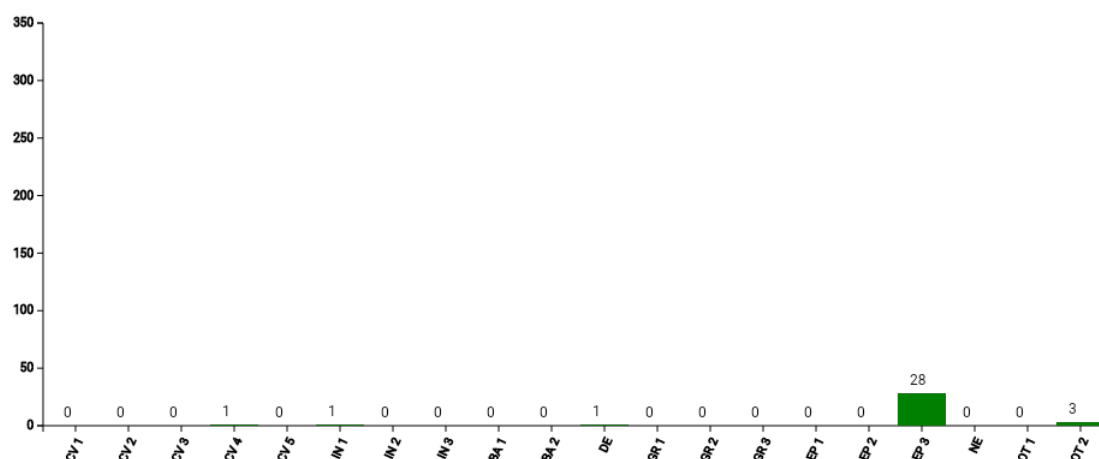


Reasons for removal**Reasons for retention**

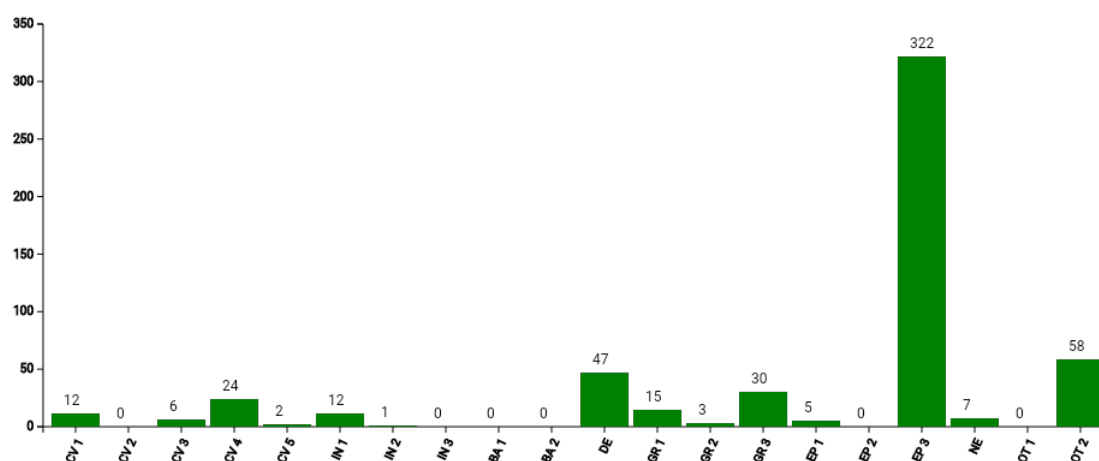
Distribution of tree microhabitats by code (N total)



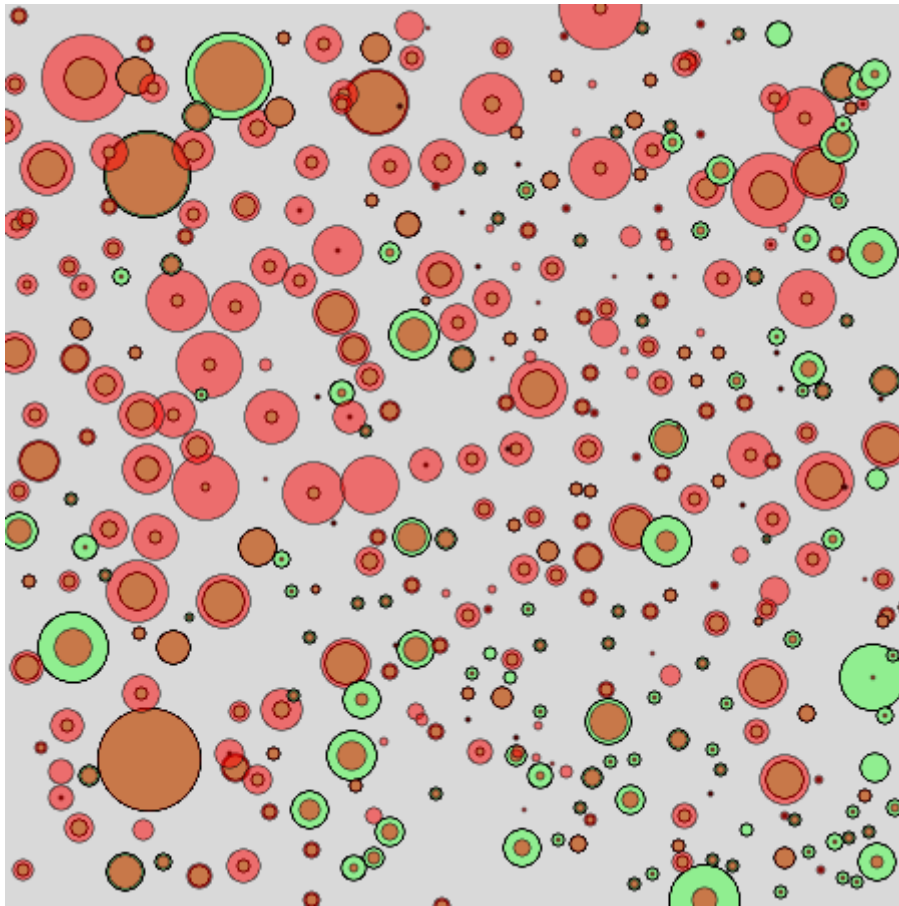
Removed tree microhabitats by code (N removed)



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 (361) <i>Quercus cerris</i>	40	0.13	1.9	147	24	Competitor
Turkey oak (119) <i>Quercus cerris</i>	40	0.13	1.6	126	24	Competitor
Turkey oak (27) <i>Quercus cerris</i>	40	0.13	1.9	145	24	Competitor
Turkey oak (85) <i>Quercus cerris</i>	40	0.13	1.8	141	30	Competitor
Turkey oak (175) <i>Quercus cerris</i>	38.5	0.12	1.7	127	24	Competitor
Turkey oak (60) <i>Quercus cerris</i>	38.5	0.12	1.6	126	40	Competitor
Turkey oak (6) <i>Quercus cerris</i>	36	0.1	1.4	111	0	Competitor
Turkey oak (8) <i>Quercus cerris</i>	35.5	0.1	1.3	98	24	Competitor
Turkey oak (226) <i>Quercus cerris</i>	34.5	0.09	1.2	94	24	Competitor
Turkey oak (83) <i>Quercus cerris</i>	32	0.08	1.1	87	24	Competitor
Turkey oak (106) <i>Quercus cerris</i>	32	0.08	1.1	81	24	Competitor
Turkey oak (30) <i>Quercus cerris</i>	30	0.07	0.9	69	24	Competitor
Turkey oak (91) <i>Quercus cerris</i>	29	0.07	1	74	24	Competitor
Turkey oak (184) <i>Quercus cerris</i>	28	0.06	0.8	64	24	Competitor
Turkey oak (383) <i>Quercus cerris</i>	27.5	0.06	0.8	60	24	Competitor
Turkey oak (143) <i>Quercus cerris</i>	27	0.06	0.6	48	24	Competitor
Turkey oak (93) <i>Quercus cerris</i>	27	0.06	0.8	60	36	Competitor
Turkey oak (105) <i>Quercus cerris</i>	27	0.06	0.7	53	24	Competitor
Turkey oak (295) <i>Quercus cerris</i>	26	0.05	0.7	52	24	Competitor
European hop-hornbeam (299) <i>Ostrya carpinifolia</i>	25	0.05	0.7	51	24	Competitor
Turkey oak (365)	24.5	0.05	0.6	46	0	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (84) Quercus cerris	23	0.04	0.5	36	24	Competitor
Turkey oak (127) Quercus cerris	23	0.04	0.5	37	0	Competitor
Turkey oak (102) Quercus cerris	23	0.04	0.5	38	24	Competitor
European hop-hornbeam (321) Ostrya carpinifolia	22	0.04	0.4	34	28	Competitor
European hop-hornbeam (322) Ostrya carpinifolia	22	0.04	0.5	38	6	Competitor
European hop-hornbeam (246) Ostrya carpinifolia	21.5	0.04	0.5	35	24	Competitor
Turkey oak (277) Quercus cerris	21	0.04	0.3	21	24	Competitor
European hop-hornbeam (231) Ostrya carpinifolia	20.5	0.03	0.3	26	4	Competitor
European hop-hornbeam (288) Ostrya carpinifolia	19.5	0.03	0.4	31	24	Competitor
Turkey oak (103) Quercus cerris	18	0.03	0.3	22	40	Competitor
European hop-hornbeam (319) Ostrya carpinifolia	18	0.03	0.3	25	4	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 (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 (57) Quercus cerris	51	0.2	3.4	258	24	Veteran tree
Turkey oak (77) Quercus cerris	50	0.2	3	232	0	Diversity
Turkey oak (100) Quercus cerris	50	0.2	2.9	219	69	Veteran tree
Turkey oak (298) Quercus cerris	50	0.2	3.3	252	30	Habitat tree
Turkey oak (176) Quercus cerris	49	0.19	3	232	60	Habitat tree
Turkey oak (52) Quercus cerris	49	0.19	3.2	244	24	Habitat tree
Turkey oak (70) Quercus cerris	48	0.18	2.7	210	24	Habitat tree
Turkey oak (351) Quercus cerris	47	0.17	2.9	224	24	Habitat tree
Turkey oak (28) Quercus cerris	46.5	0.17	2.7	205	66	Habitat tree
Turkey oak (183) Quercus cerris	46	0.17	2.3	179	60	Habitat tree
Turkey oak (59) Quercus cerris	45	0.16	2.3	174	60	Habitat tree
Turkey oak (232)	45	0.16	2.5	192	64	Habitat tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (82) Quercus cerris	45	0.16	2.2	169	64	Habitat tree
Turkey oak (54) Quercus cerris	44	0.15	2.1	160	46	Habitat tree
Turkey oak (212) Quercus cerris	44	0.15	2.5	189	60	Habitat tree
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 (150) Quercus cerris	40	0.13	1.8	139	60	Habitat tree
Turkey oak (61) Quercus cerris	39.5	0.12	1.6	125	85	Habitat tree
European hop-hornbeam (257) Ostrya carpinifolia	38	0.11	1.3	99	12	Veteran tree
Turkey oak (104) Quercus cerris	36.5	0.11	1.2	94	60	Habitat tree
Turkey oak (38) Quercus cerris	36	0.1	1.1	81	24	Diversity
Turkey oak (137) Quercus cerris	35.5	0.1	1.4	111	30	Diversity
Turkey oak (284) Quercus cerris	34.5	0.09	1	73	66	Habitat tree
Turkey oak (278) Quercus cerris	33	0.09	0.9	70	30	Habitat tree
Italian maple (318) Acer opalus	30	0.07	0.9	71	27	Habitat tree
European hop-hornbeam (354) Ostrya carpinifolia	22.5	0.04	0.4	29	0	Diversity
European hop-hornbeam (353) Ostrya carpinifolia	16.5	0.02	0.2	15	31	Diversity