

## Supplementary Material

**Tab. S1** - Main characteristics of the forest stands.

| Plot | Location                       | Surface area<br>(ha) | Stand structure | Year of last<br>felling | Age of shoots<br>(years) |
|------|--------------------------------|----------------------|-----------------|-------------------------|--------------------------|
| A1   | 37° 53' 41" N,<br>14° 6' 23" E | 1                    | Coppice         | 2013                    | 1                        |
| A2   | 37° 53' 36" N,<br>14° 6' 24" E | 1                    | Coppice         | 2009                    | 6                        |
| A3   | 37° 53' 41" N,<br>14° 6' 28" E | 1                    | Coppice         | 1993                    | 20                       |
| A4   | 37° 53' 25" N,<br>14° 6' 7" E  | 1                    | Coppice         | 1973                    | 40                       |

**Tab. S2** - Applied diversity and structure indices with the respective equations and classes.

| Index                      | Equation  | Legend   | Range                | Classes  |
|----------------------------|---|--|----------------------|--|
| Shannon Index ( $SH$ )     | $\sum_i^N (-\ln p_i) p_i$   | $N$ is the number of species;<br>$p_i$ is the relative abundance of the $i^{\text{th}}$ species.   | $0 \leq SH < \infty$ | Low level of diversity:<br>$SH \sim 0$<br>High level of diversity:<br>$SH >> 0$  |
| Winkelmaass Index ( $W$ )  | $W = \frac{1}{n} \sum_{i=n}^k W_i$<br>$W_i = \frac{1}{k} \sum_{j=1}^k z_j$<br>$z_j = 1, \alpha_j < \alpha_r$<br>$z_j = 0, \alpha_j \geq \alpha_r$ | $n$ is the number of reference trees;<br>$k$ is the nearest tree to a randomly identified reference tree;<br>$\alpha_r$ is a standard angle between two neighbors equal to $360^\circ/n$ . | $0 \leq W \leq 1$    | Regular distribution of trees: $W \sim 0$<br>Random distribution of trees: $W \sim 0.5$<br>Clumped distribution of trees: $W \sim 1$ |
| Vertical Evenness ( $VE$ ) | $VE = \sum_i^n \ln(N_i) \frac{N_i}{n}$  | $n$ is the number of vertical strata;<br>$N_i$ is the relative crown area of all trees in the $i^{\text{th}}$ stratum.   | $0 \leq VE \leq 1$   | Single-storied stands:<br>$VE \sim 0$<br>Vertically equally distributed trees:<br>$VE = 1$   |

**Tab. S3** - Density of the natural regeneration in the forest stands.

| Plot       | Species   | Regeneration ha <sup>-1</sup> |                                       |             |                                       |
|------------|-----------|-------------------------------|---------------------------------------|-------------|---------------------------------------|
|            |           | sprout origin                 |                                       | seed origin |                                       |
|            |           | h < 130 cm                    | h ≥ 130 cm,<br>D <sub>bh</sub> < 4 cm | h < 130 cm  | h ≥ 130 cm,<br>D <sub>bh</sub> < 4 cm |
| A1- Age 1  | Holm oak  | 22280                         | 0                                     | 250         | 0                                     |
|            | Downy oak | 4917                          | 0                                     | 125         | 0                                     |
|            | Manna ash | 8250                          | 0                                     | 5500        | 0                                     |
|            | Total     | 35447                         | 0                                     | 5875        | 0                                     |
| A2- Age 6  | Holm oak  | 8250                          | 10000                                 | 833         | 0                                     |
|            | Downy oak | 1917                          | 0                                     | 0           | 0                                     |
|            | Manna ash | 8583                          | 833                                   | 2333        | 0                                     |
|            | Total     | 18750                         | 10833                                 | 3166        | 0                                     |
| A3- Age 20 | Holm oak  | 2750                          | 473                                   | 0           | 0                                     |
|            | Manna ash | 2250                          | 95                                    | 0           | 0                                     |
|            | Total     | 5000                          | 568                                   | 0           | 0                                     |
| A4- Age 40 | Holm oak  | 7750                          | 250                                   | 0           | 0                                     |

**Tab. S4** - Structural indices calculated for each forest stand.

| <b>Plot</b> | <b><i>SH</i> Index</b> | <b><i>W</i> Index</b> | <b><i>VE</i> Index</b> |
|-------------|------------------------|-----------------------|------------------------|
| A1          | 1.04                   | 0.71                  | 0.37                   |
| A2          | 1.00                   | 0.83                  | 0.75                   |
| A3          | 0.79                   | 0.63                  | 0.76                   |
| A4          | 0.35                   | 0.46                  | 0.82                   |