

## Supplementary Material

**Appendix 1** – Weather conditions at Mt. Goč (1999-2010). Meteorological data were collected from Goč meteorological station (latitude 43° 33' N, longitude 20° 51' E, altitude 990 m s.m.l.) for the period 1999-2010 (Republic Hydrometeorological Service of Serbia yearbooks). This meteorological station is located 13.7 km southeast from the field site. The reference evapotranspiration (ET<sub>0</sub>) was calculated from meteorological data using the FAO Penman-Monteith equation (FAO 2009).

Years with the most favorable conditions for growth were 2002 and 1999 (Tab. S2). Year 2010 can also be considered as favorable, due to water deficit only at end of the growing season (August-September). The hottest and the driest year was 2000 (Tab. S1 and Tab. S2), followed by 2007. Drought conditions were recorded mainly during the growing season (April-September).

**Tab. S1** - Average monthly air temperature (T, degrees Celsius) at mountain Goč, period 1999-2010.

| T (°C) | I    | II   | III | IV   | V    | VI   | VII  | VIII | IX   | X    | XI  | XII  | % of normal average* |
|--------|------|------|-----|------|------|------|------|------|------|------|-----|------|----------------------|
| 1999   | 0.7  | -2.5 | 3.7 | 8.3  | 12.6 | 15.2 | 16.7 | 17.6 | 14.7 | 9.0  | 3.0 | 0.6  | 102.5                |
| 2000   | -4.4 | -0.1 | 6.2 | 13.5 | 17.2 | 19.8 | 21.7 | 22.2 | 15.6 | 10.1 | 9.4 | 3.7  | 138.8                |
| 2001   | 1.1  | 0.2  | 7.4 | 6.7  | 13   | 13.9 | 17.7 | 18.4 | 12.1 | 11.4 | 1.9 | -6.3 | 100.3                |
| 2002   | -1.9 | 4.5  | 5.1 | 6.9  | 13.7 | 16.5 | 18.1 | 16.4 | 11.8 | 9.3  | 7   | -1.3 | 109.2                |
| 2003   | -1.8 | -6.8 | 1.9 | 6.0  | 15.5 | 18.1 | 17.1 | 20.0 | 12.1 | 6.9  | 6.3 | 0.2  | 98.3                 |
| 2004   | -4.0 | 0.0  | 2.4 | 8.5  | 10.0 | 14.6 | 17.0 | 16.8 | 12.1 | 11.4 | 3.6 | 0.5  | 95.6                 |
| 2005   | -1.8 | -4.2 | 0.8 | 7.3  | 12.4 | 14.1 | 17.2 | 15.7 | 13.2 | 8.2  | 2.9 | -0.6 | 87.7                 |
| 2006   | -4.7 | -2.1 | 2.0 | 8.3  | 12.2 | 15.1 | 18.1 | 16.3 | 13.6 | 10.6 | 5.5 | 1.8  | 99.5                 |
| 2007   | 3.5  | 2.5  | 5.0 | 9.2  | 13.5 | 17.6 | 20.0 | 19.0 | 11.4 | 7.3  | 1.4 | -1.9 | 111.6                |
| 2009   | 0.5  | 1.2  | 4.0 | 8.5  | 13.6 | 16.8 | 17.6 | 18.2 | 11.5 | 10.2 | 5.1 | 0.2  | 110.5                |
| 2010   | -1.3 | -2.1 | 1.9 | 9.9  | 14.0 | 15.6 | 17.6 | 17.6 | 14.1 | 7.8  | 7.3 | 1.1  | 106.5                |
| AVG    | -1.4 | -0.8 | 3.6 | 8.4  | 13.3 | 16.1 | 18.0 | 17.9 | 12.9 | 9.0  | 5.1 | -0.2 | 104.8                |

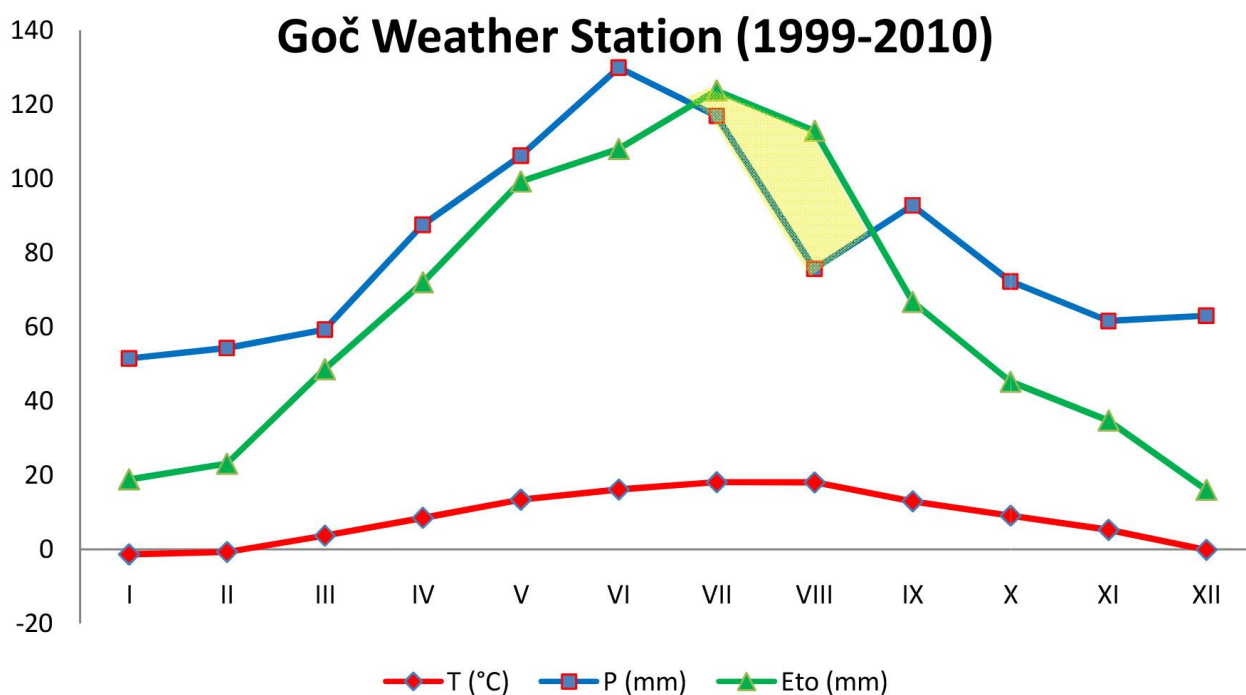
\* normal average values for the period 1961-1990 at Goč (Ivetić et al. 2010).

**Tab. S2** - Monthly precipitation (mm) and reference evapotranspiration (mm) at mountain Goč, period 1999-2010.

|      |                 | I     | II   | III  | IV    | V     | VI    | VII   | VIII  | IX    | X     | XI   | XII   | % of normal average* |
|------|-----------------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|----------------------|
| 1999 | P               | 54.0  | 78.3 | 74.5 | 182.1 | 105.1 | 134.4 | 234.4 | 21.7  | 92.5  | 76.6  | 71.1 | 138.1 | 159.0                |
|      | ET <sub>o</sub> | 24.8  | 19.6 | 49.6 | 72    | 86.8  | 93    | 96.1  | 105.4 | 66    | 43.4  | 30   | 21.7  |                      |
| 2000 | P               | 99.1  | 59.0 | 53.5 | 38.0  | 66.5  | 79.2  | 52.2  | 44.2  | 120.6 | 26.9  | 58.7 | 39.3  | 92.8                 |
|      | ET <sub>o</sub> | 18.6  | 37.7 | 80.6 | 114   | 158.1 | 180   | 195.3 | 189.1 | 96    | 65.1  | 51   | 21.7  |                      |
| 2001 | P               | 34.1  | 63.6 | 55.9 | 209.2 | 103.5 | 147.7 | 98.2  | 79.6  | 188.3 | 8.5   | 86.2 | 68.8  | 144.0                |
|      | ET <sub>o</sub> | 18.6  | 25.2 | 65.1 | 60    | 96.1  | 105   | 105.4 | 105.4 | 63    | 46.5  | 27   | 9.3   |                      |
| 2002 | P               | 43.0  | 41.7 | 64.2 | 101.8 | 104.2 | 110.7 | 150.0 | 100.5 | 148.3 | 91.0  | 29.0 | 65.7  | 132.2                |
|      | ET <sub>o</sub> | 15.5  | 39.2 | 55.8 | 60    | 93    | 108   | 111.6 | 83.7  | 57    | 52.7  | 39   | 12.4  |                      |
| 2003 | P               | 62.3  | 58.2 | 13.1 | 75.5  | 136.4 | 96.3  | 82.3  | 10.8  | 72.6  | 120.0 | 42.1 | 87.4  | 107.9                |
|      | ET <sub>o</sub> | 15.5  | 14   | 37.2 | 60    | 105.4 | 117   | 114.7 | 133.3 | 69    | 40.3  | 30   | 18.6  |                      |
| 2004 | P               | 125.9 | 80.8 | 30.0 | 72.0  | 66.6  | 138.4 | 124.6 | 50.3  | 67.1  | 48.0  | 99.4 | 29.2  | 117.4                |
|      | ET <sub>o</sub> | 12.4  | 23.2 | 37.2 | 66    | 83.7  | 96    | 108.5 | 99.2  | 60    | 55.8  | 27   | 18.6  |                      |
| 2005 | P               | 33.9  | 55.1 | 43.8 | 48.5  | 168.5 | 73.2  | 193.5 | 149.5 | 99.1  | 64.4  | 68.3 | 65.5  | 133.9                |
|      | ET <sub>o</sub> | 18.6  | 16.8 | 34.1 | 66    | 89.9  | 87    | 102.3 | 74.4  | 51    | 40.3  | 27   | 15.5  |                      |
| 2006 | P               | 29.2  | 35.7 | 97.8 | 70.2  | 48.4  | 144.9 | 50.0  | 150.5 | 49.5  | 59.3  | 44.5 | 55.2  | 105.1                |
|      | ET <sub>o</sub> | 12.4  | 16.8 | 40.3 | 66    | 89.9  | 90    | 117.8 | 102.3 | 63    | 52.7  | 36   | 21.7  |                      |
| 2007 | P               | 59.9  | 63.6 | 62.2 | 25.0  | 182.6 | 76.9  | 33.1  | 51.4  | 101.7 | 102.0 | 85.3 | 16.6  | 108.3                |
|      | ET <sub>o</sub> | 40.3  | 28   | 55.8 | 84    | 93    | 117   | 182.9 | 127.1 | 69    | 31    | 24   | 15.5  |                      |
| 2008 | P               | 23.8  | 18.2 | 83.1 | 64.2  | 52.8  | 75.3  | 131.2 | 41.0  | 116.0 | 47.8  | 31.2 | 83.0  | 96.6                 |
|      | ET <sub>o</sub> | 24.8  | 26.1 | 52.7 | 75    | 99.2  | 99    | 120.9 | 117.8 | 57    | 49.6  | 27   | 9.3   |                      |
| 2009 | P               | 24.3  | 45.9 | 73.5 | 42.5  | 90.1  | 223.8 | 132.5 | 145.7 | 23.1  | 140.0 | 88.7 | 67.9  | 138.2                |
|      | ET <sub>o</sub> | 12.4  | 14   | 31   | 78    | 99.2  | 108   | 120.9 | 105.4 | 75    | 37.2  | 45   | 12.4  |                      |
| 2010 | P               | 28.6  | 52.1 | 60.2 | 121.7 | 149.0 | 258.6 | 120.8 | 63.2  | 34.9  | 83.1  | 34.7 | 39.7  | 131.8                |
|      | ET <sub>o</sub> | 12.4  | 16.8 | 43.4 | 63    | 96.1  | 96    | 108.5 | 111.6 | 75    | 27.9  | 54   | 15.5  |                      |
| AVG  | P               | 51.5  | 54.3 | 59.3 | 87.5  | 106.1 | 129.9 | 116.9 | 75.7  | 92.8  | 72.3  | 61.6 | 63.0  | 122.2                |
|      | ET <sub>o</sub> | 18.8  | 23.1 | 48.5 | 72    | 99.2  | 108   | 123.7 | 112.9 | 66.7  | 45.2  | 34.7 | 16.02 |                      |

\* normal average values for the period 1961-1990 at Goč (Ivetić et al. 2010).

**Fig. S1** - Average monthly temperature (T, in °C), precipitation (P, in mm) and reference evapotranspiration (ETo, in mm) at the Goč weather station in period 1999-2010. Monthly referenced evapotranspiration exceeded monthly precipitation in July and August (yellow polygon).



## References

FAO (2009). ETo Calculator. Land and Water Digital Media Series, N° 36. FAO, Rome, Italy.

Ivetić V, Isajev V, Krstić M (2010). Interpolation of meteorological data by kriging method for use in forestry. Bulletin of the Faculty of Forestry 101: 49-66.

Republic Hydrometeorological Service of Serbia yearbooks (1999-2010). [online] URL: [http://www.hidmet.gov.rs/ciril/meteorologija/klimatologija\\_godisnjaci.php](http://www.hidmet.gov.rs/ciril/meteorologija/klimatologija_godisnjaci.php)