

## **Supplementary material to:**

Title: Non-stomatal processes reduce gross primary productivity in temperate forest ecosystems during severe edaphic drought

Louis Gourlez de la Motte<sup>1i</sup>, Quentin Beauclaire<sup>1</sup>, Bernard Heinesch<sup>1</sup>, Mathias Cuntz<sup>2</sup>, Lenka Foltýnová<sup>3</sup>, Ladislav Šigut<sup>3</sup>, Natalia Kowalska<sup>3</sup>, Giovanni Manca<sup>4</sup>, Ignacio Goded Ballarin<sup>4</sup>, Caroline Vincke<sup>5</sup>, Marilyn Roland<sup>6</sup>, Andreas Ibrom<sup>7</sup>, Denis Lousteau<sup>8</sup>, Lukas Siebicke<sup>9</sup>, Bernard Longdoz<sup>1</sup>

<sup>1</sup>University of Liège – Gembloux Agro-Bio Tech, Terra Teaching and Research Center, Belgium

<sup>2</sup>Université de Lorraine, AgroParisTech, INRA, UMR Silva, 54000 Nancy, France

<sup>3</sup>Global Change Research Institute CAS : Brno, Moravian region, CZ

<sup>4</sup>European Commission, Joint Research Centre (JRC), Ispra, Italy.

<sup>5</sup>Earth and Life Institute, UCLouvain

<sup>6</sup>University of Antwerp, Plants and Ecosystems, Universiteitsplein 1, 2610 Wilrijk, Belgium

<sup>7</sup>Technical University of Denmark (DTU), Department of Environmental Engineering, Bygningstorvet 115, DK 2800 Lyngby, Denmark

<sup>8</sup>INRA, UMR ISPA, Villenave d'Ornon, F-33140.

<sup>9</sup>Bioclimatology, University of Goettingen, Büsgenweg 2, 37077 Goettingen, Germany

## 1 Tables

Table 1: soil sensor list with their associated depth, wilting point (WP), field capacities (FC) and coarse fractions (CF).

Sensor n°	Depth (cm)	WP	FC	CF
BE-Bra (rooting depth = 1m)				
1	7	5	22	1
2	15	5	20	1
3	40	5	17	2
4	60	5	17	1
BE-Vie (rooting depth = 1.4 m)				
1	5	9	33	1
2	18	9	33	1
3	42	11	26	3
4	76	14	26	20
5	110	14	31	20
CZ-Lnz (rooting depth = 1.2 m)				
1	5	13	31	--
2	10	6	23	--
3	20	6	23	--
4	50	6	27	--
Cz-Raj (rooting depth = 0.7m)				
1	5	11	22	--
2	10	11	22	--
3	20	11	25	--
4	50	12	24	--
Cz-Stn (rooting depth = 0.7m)				
1	10	11	44	--
2	50	11	45	--
DE-Hai (rooting depth = 0.7m)				
1	8	19	45	--
2	16	17	36	--
3	32	30	48	--
DK-Sor (rooting depth = 1m)				
1	15	10	31	--
2	30	11	37	--
3	50	15	31	--
4	100	15	20	--
FR-Bil (rooting depth 1.1 m)				
1	5	5	17	--
2	8	5	17	--
3	12	5	17	--

4	24	5	15	--
5	47	5	15	--
6	105	5	17	--
FR-Hes (rooting depth 1.6m)				
1	5	9	30	--
2	10	9	30	--
3	20	13	30	--
4	40	14	38	--
5	80	21	40	--
IT-Sr2 (rooting depth 1.2m)				
1	5	5	13	--
2	15	5	13	--
3	25	5	13	--
4	45	5	13	--
5	95	5	13	--

## 2 Figures

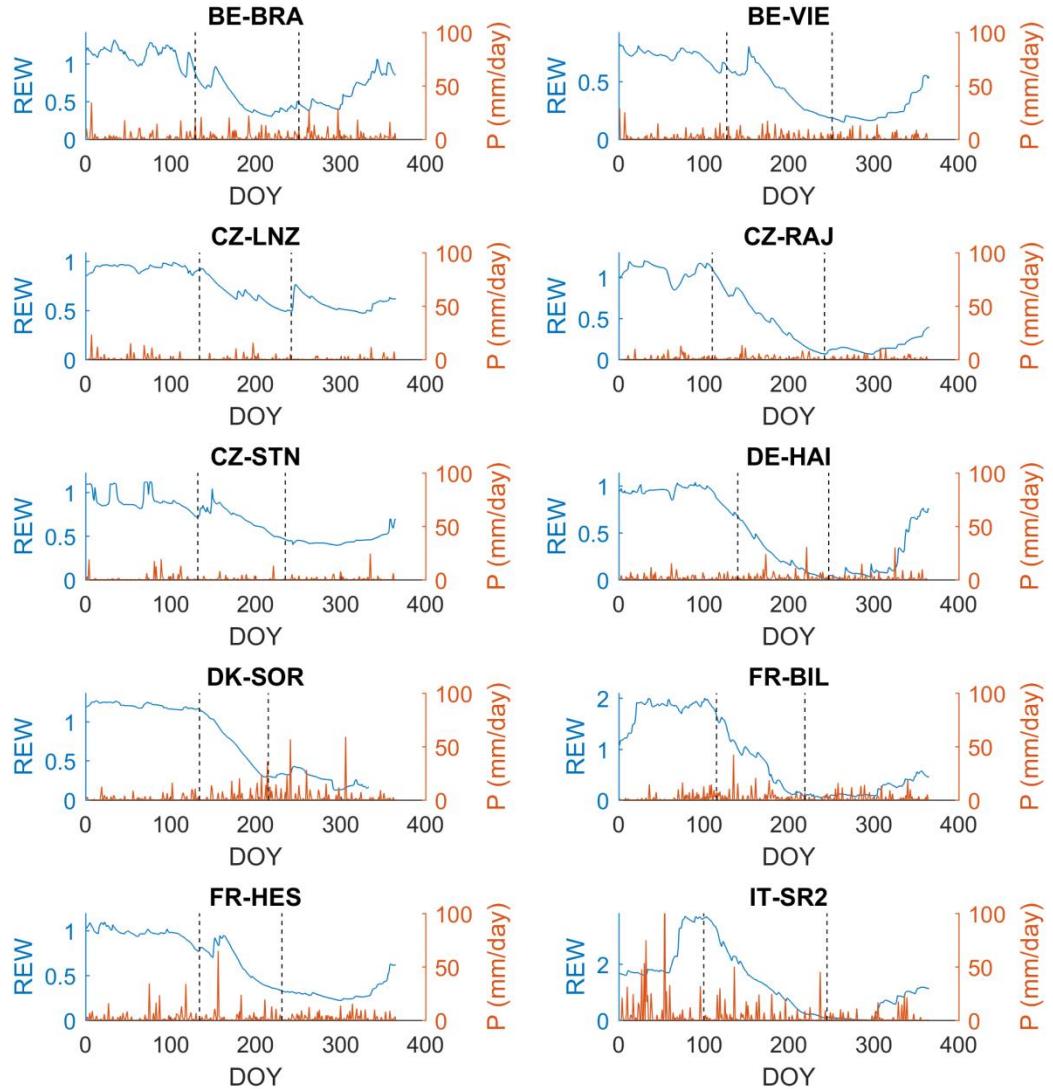


Figure 1: Evolution of the relative extractable water content (REW) and precipitations (P) with day of year (DOY) in 2018 for each site. Dashed vertical lines mark the beginning and the end of the growing season.