

**Table S3 | Summary of Fourier analysis of climate variables**

| Site name | Altitude<br>(m) | Variable               | Dominant cycle<br>(month) | Significance of the cycle<br>(null) | Significance of the cycle<br>(average) | One-year cycle†<br>(12 ± 1.5 month) |
|-----------|-----------------|------------------------|---------------------------|-------------------------------------|--|-------------------------------------|
| POR       | 550             | Mean daily temperature | 12.5                      | *                                   | *                                      | One-year cycle                      |
| POR       | 550             | Relative humidity      | 12.5                      | *                                   | *                                      | 5 / 7 variables                     |
| POR       | 550             | Actual vapor pressure  | 15.0                      | N.S.                                | *                                      |                                     |
| POR       | 550             | Saturation deficit     | 12.5                      | *                                   | *                                      | Significant one-year cycle          |
| POR       | 550             | PAR                    | 12.5                      | *                                   | *                                      | (null spectrum) 5 / 7 variables     |
| POR       | 550             | Evapotranspiration     | 12.5                      | *                                   | *                                      | (avr. spectrum) 7 / 7 variables     |
| POR       | 550             | Rain                   | 7.5                       | N.S.                                | *                                      |                                     |
| PHQ       | 1650            | Mean daily temperature | 12.0                      | *                                   | *                                      | One-year cycle                      |
| PHQ       | 1650            | Relative humidity      | 12.0                      | *                                   | *                                      | 4 / 7 variables                     |
| PHQ       | 1650            | Actual vapor pressure  | 6.0                       | *                                   | *                                      |                                     |
| PHQ       | 1650            | Saturation deficit     | 12.0                      | N.S.                                | *                                      | Significant one-year cycle          |
| PHQ       | 1650            | PAR                    | 5.9                       | *                                   | *                                      | (null spectrum) 3 / 7 variables     |
| PHQ       | 1650            | Evapotranspiration     | 12.0                      | *                                   | *                                      | (avr. spectrum) 4 / 7 variables     |
| PHQ       | 1650            | Rain                   | 1.7                       | N.S.                                | N.S.                                   |                                     |
| CAR       | 2700            | Mean daily temperature | 25.0                      | N.S.                                | *                                      | One-year cycle                      |
| CAR       | 2700            | Relative humidity      | 12.5                      | N.S.                                | *                                      | 2 / 7 variables                     |
| CAR       | 2700            | Actual vapor pressure  | 6.3                       | N.S.                                | *                                      |                                     |
| CAR       | 2700            | Saturation deficit     | 12.5                      | N.S.                                | *                                      | Significant one-year cycle          |
| CAR       | 2700            | PAR                    | 6.3                       | N.S.                                | *                                      | (null spectrum) 0 / 7 variables     |
| CAR       | 2700            | Evapotranspiration     | 8.4                       | N.S.                                | *                                      | (avr. spectrum) 2 / 7 variables     |
| CAR       | 2700            | Rain                   | 25.0                      | N.S.                                | *                                      |                                     |
| LAB       | 3270            | Mean daily temperature | 12.0                      | *                                   | *                                      | One-year cycle                      |
| LAB       | 3270            | Relative humidity      | 12.0                      | N.S.                                | *                                      | 3 / 7 variables                     |
| LAB       | 3270            | Actual vapor pressure  | 6.0                       | *                                   | *                                      |                                     |
| LAB       | 3270            | Saturation deficit     | 12.0                      | N.S.                                | *                                      | Significant one-year cycle          |
| LAB       | 3270            | PAR                    | 6.0                       | *                                   | *                                      | (null spectrum) 1 / 7 variables     |
| LAB       | 3270            | Evapotranspiration     | 6.0                       | *                                   | *                                      | (avr. spectrum) 3 / 7 variables     |
| LAB       | 3270            | Rain                   | 2.7                       | N.S.                                | N.S.                                   |                                     |

†This column indicates how many study sites exhibited annual seasonality (i.e., one-year cycle). "One-year cycle" indicates the number of study sites of which dominant cycle is 12 ± 1.5 months. "Significant one-year cycle" indicates the number of study sites which showed significant annual seasonality compared with null or average spectrum.