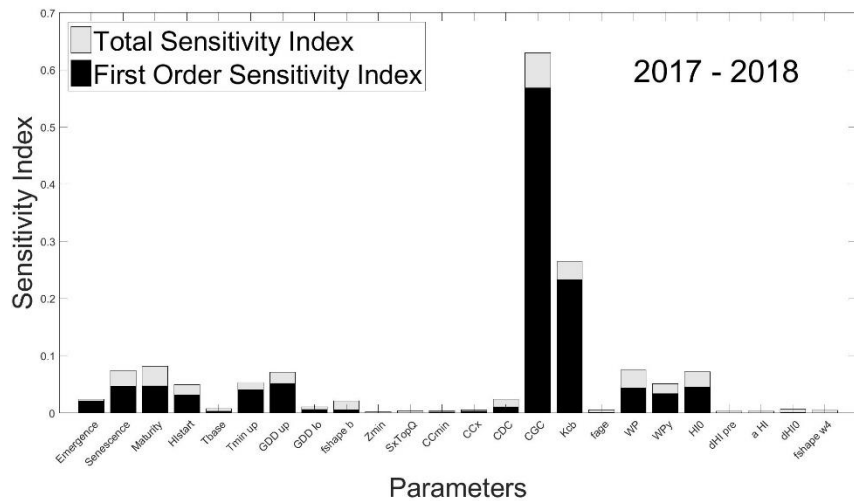
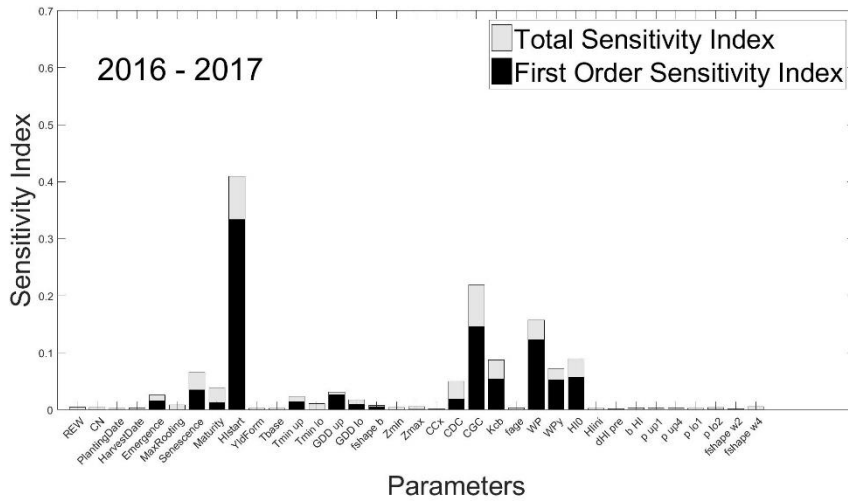
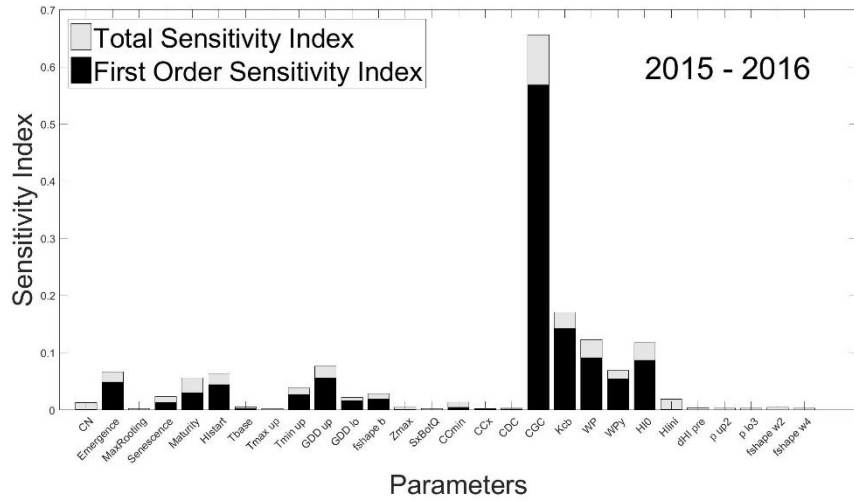


**Figure S1.** Standardised Precipitation-Evapotranspiration Index 3-month cumulative values trends for the Maccarese and Xiaotangshan sites for the periods used in the study (downloaded from <https://spei.csic.es/index.html>). Dotted lines show thresholds for Extremely Wet SPEI > 1.5 (blue) or Severely Dry SPEI < -1.5 (red) conditions.



**Figure S2.** First-order and total-order EFAST SI for different years for Xiaotansghan. Only the parameters with a total sensitivity index higher than the sensitivity index of the dummy parameter are shown. The details on the parameters can be found in Table 1.

