1  **The 2010-2015 mega drought in Central Chile:**

2  **Impacts on regional hydroclimate and vegetation**

3  **Supplementary Figures**
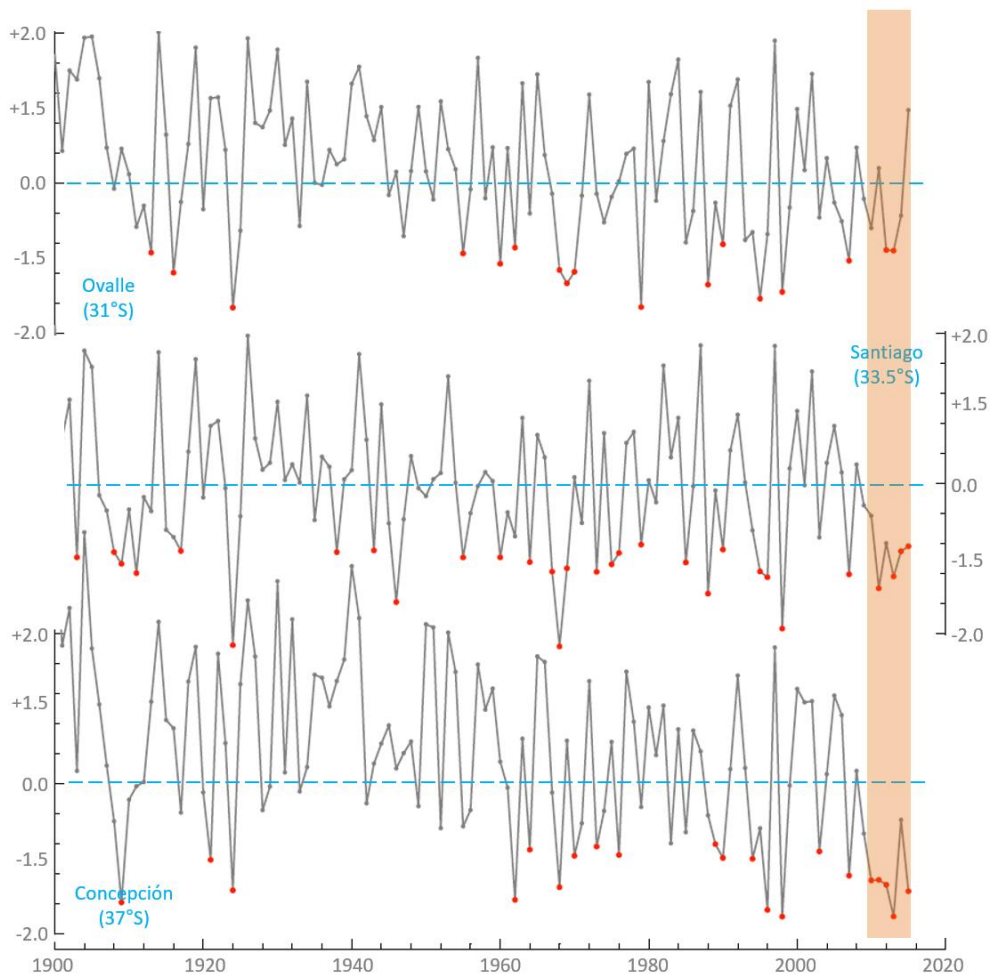
**Figure S1.** Standardized Precipitation Index (SPI) with 12-month time scale evaluated

in December of each year for stations Ovalle, Santiago and Concepción. The MD period

is indicated.

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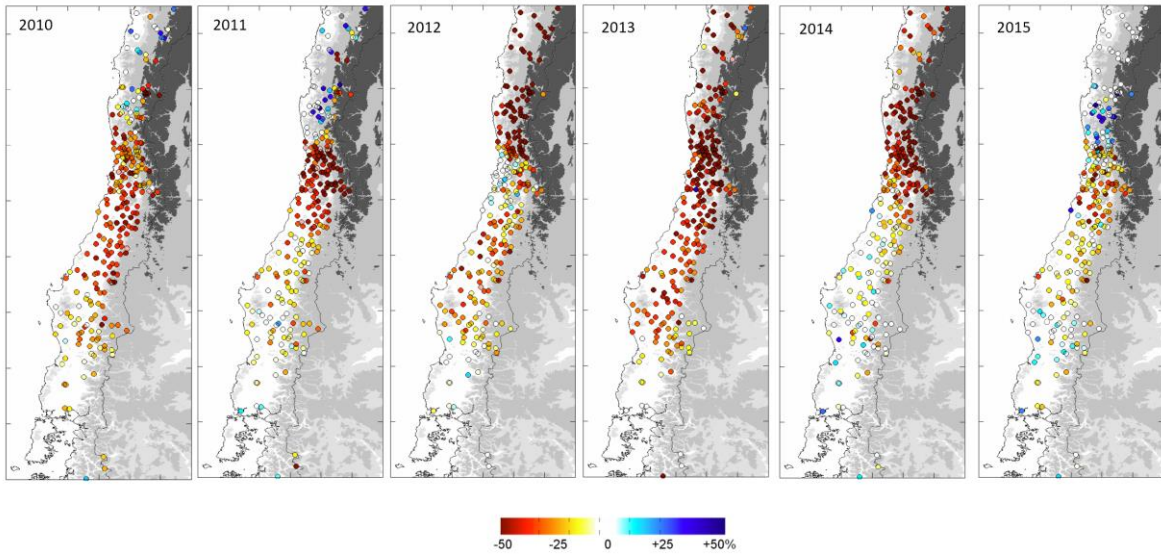
**Figure S2.** Annual rainfall anomalies (relative to the 1980-2010) for each year within

the MD.

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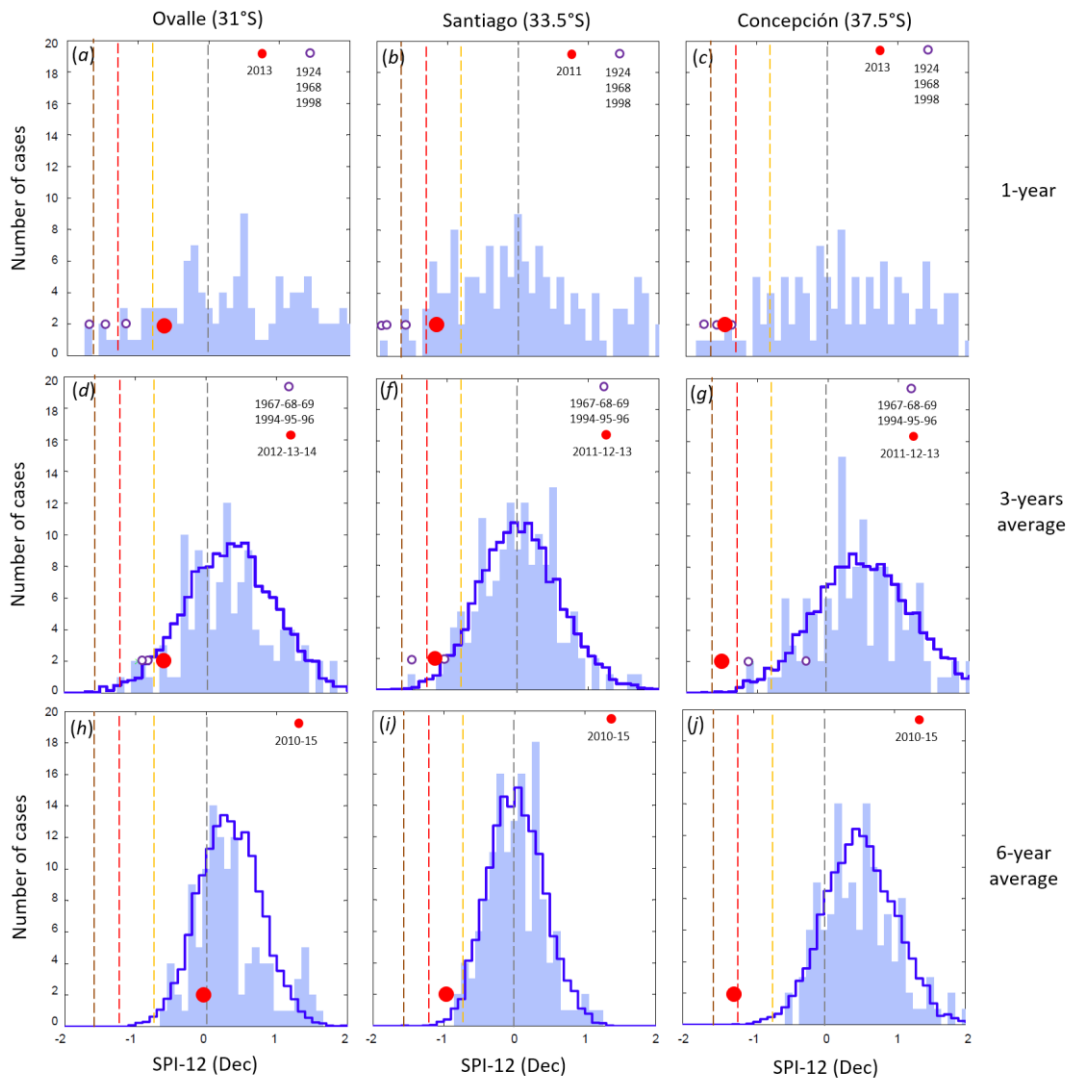
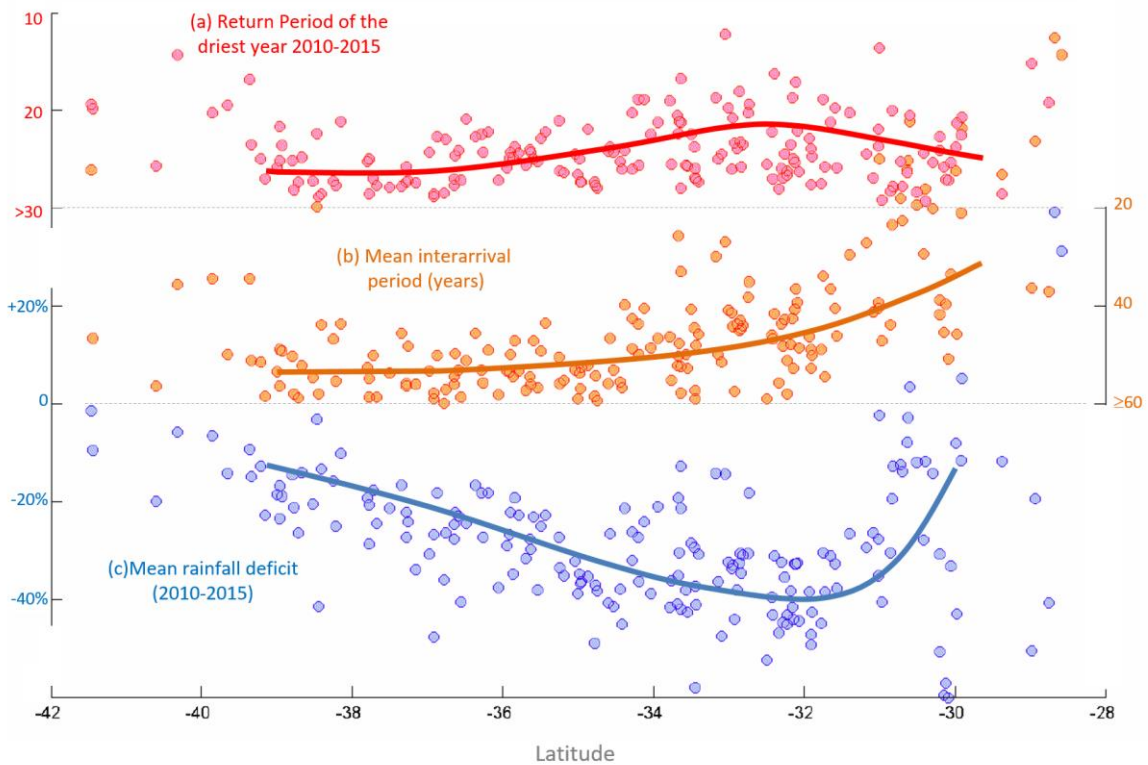


**Figure S3.** Upper panels: Histograms of the historical SPI-12D values (light blue bars; 1915-2009) for stations Ovalle, Santiago and Concepción. The red circle indicates the worst year during the MD, the smaller purple circles indicate the values in contemporaneous droughts. Middle and lower panels: as before but for 3-years and 6-years average, respectively. The blue thick line is the distribution obtained from 5000 three-year periods formed by randomly selecting three/six years in the historical period.

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23 **Figure S4.** (a) Return period of the driest year within the MD (2010-2015) calculated

24 as the average recurrence interval within the historical period (1960-2009) in each

25 station. (b) Mean interarrival period (in years) of a dry spell (sequence of years with

26 rainfall deficit > 25%) equal or longer than the current MD in each station. (c) Mean

27 rainfall deficit during the MD (Jan. 2010 to Dec. 2015). The horizontal axis is the

28 station latitude.

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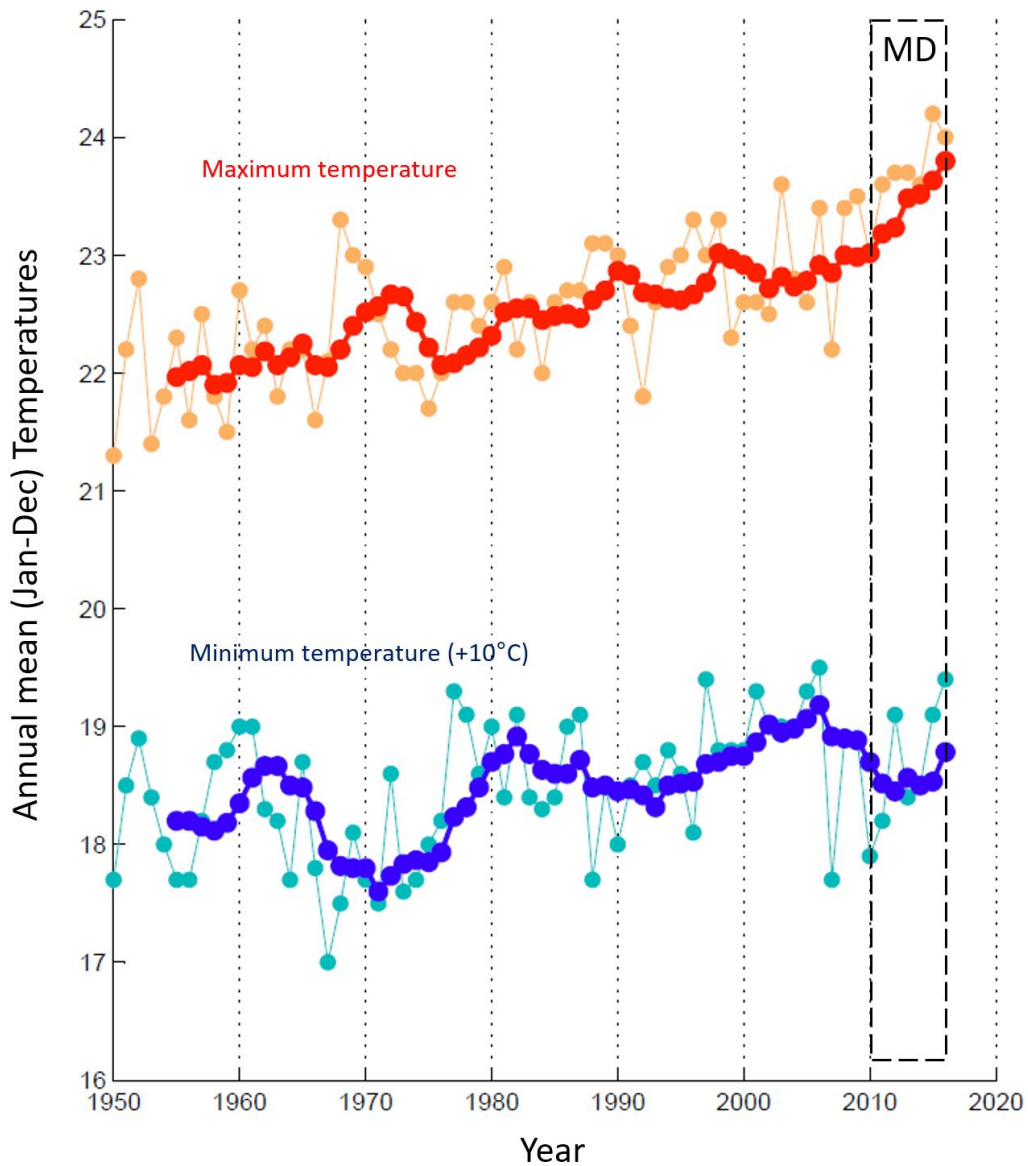
**Figure S5.** Annual mean (Jan-Dec) maximum (red and orange curves) and minimum

(blue and cyan curves) temperatures in station Quinta Normal (Santiago; 33.5°S,

70.4°W, 525 m ASL). The thin lines are annual values. The thick lines are the average

of the last 6 years (the last data point is the average 2011-2016). The MD period is

indicated.