

South America | Meteorological Drought 2010-2019



Map information

- The time series of 2010-2019 of the drought frequency and severity was used to represent the drought and its trends in comparison with the previous period 1950-2009.
- Increased drought severity (during 2010-2019, compared to 1950-2009) was experienced by the majority of countries, particularly across Chile (the largest increase) and Argentina, but also in Peru and Brazil.
- Increased drought frequency (2010-2019, compared to 1950-2009) was experienced also in this case by the majority of the continent, particularly across central-southern countries, namely Bolivia (the largest increase) and Argentina.
- Combining frequency and severity, it is possible to identify "hotspots" affected more frequently but also severely by drought during 2010-2019, compared with previous decades: Argentina, Bolivia, French Guiana and Chile, followed by Peru and Venezuela.

¹Severity represents the severity of drought events per decade (per country), and uses the Standardized Precipitation-Evapotranspiration Index at the 3-months accumulation period (SPEI-3). The difference between SPEI-3 values and a threshold is computed for all events, and the results are summed overall to obtain the severity.

²Frequency represents the number of events per decade (per country), and uses the SPEI-3. A drought event starts once the SPEI-3 falls below the threshold for at least two consecutive months, and ends when the SPEI-3 turns above 0.

³Area with Aridity Index (AI) < 0.2. Computed drought severity and frequency does not take into account this Arid/Hyper-arid area (regarding countries that contain it).

More info: JRC GDO (Global Drought Observatory), Spinoni et alii, 2019, 2014, JRC WAD (World Atlas of Desertification).

Not analysed countries/territories: Costa Rica, Falkland (UK), Galápagos (EC), Nicaragua, Panama, South Georgia (UK), Trinidad and Tobago.

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