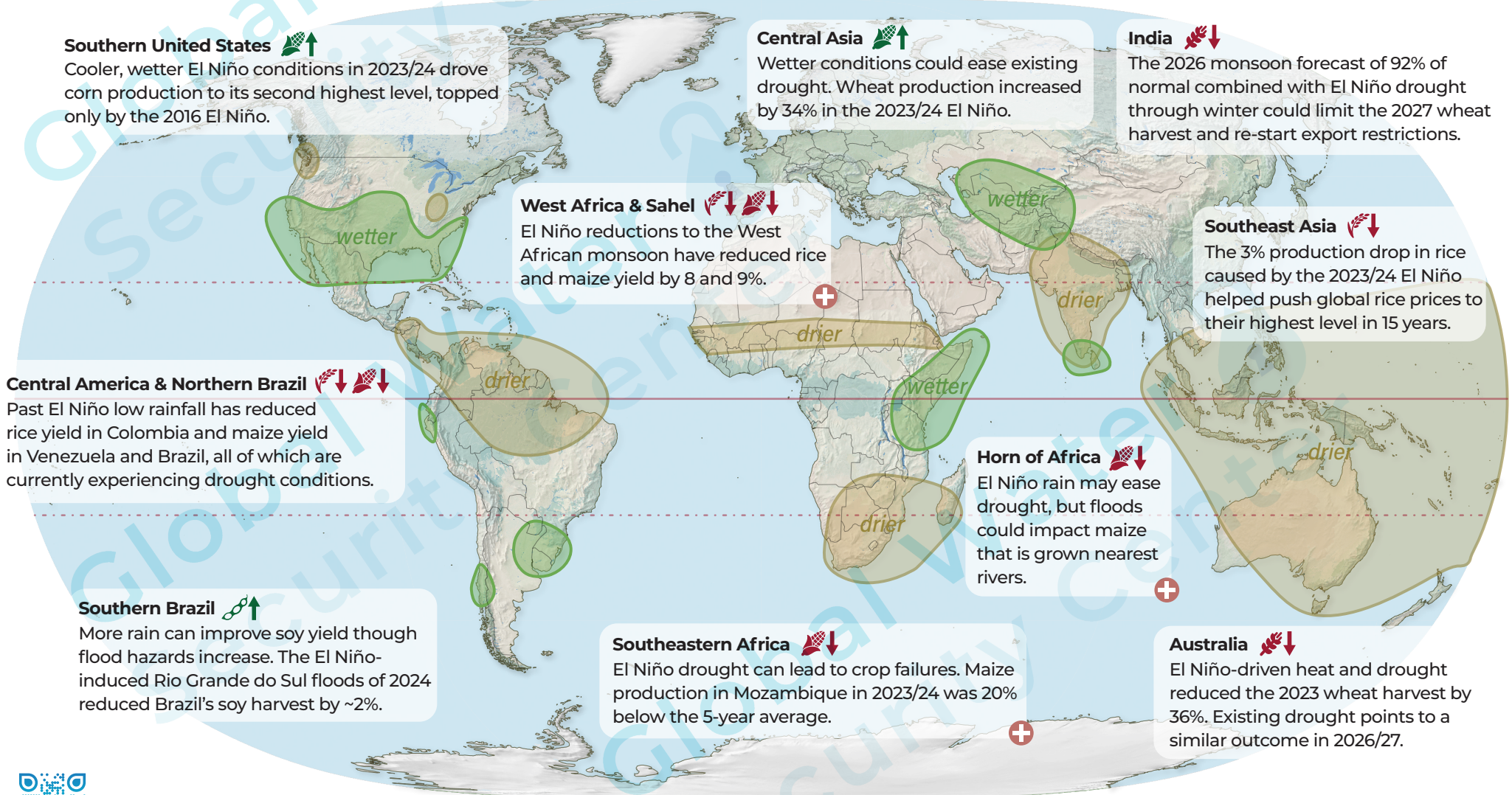


**BLUF** El Niño-driven heat, drought, and floods may spike global food prices and increase aid need in poor countries through 2027.

**Moderate and strong El Niños produce similar heat and rain patterns across the globe that differ in intensity.**

*El Niño typically peaks around November and fades the following April. Floods and drought can begin in the months leading up to the peak and lag long after it dissipates. This map shows general El Niño trends. For the heat and rainfall forecast, see Supplemental Materials pg 3. El Niño-related crop disruptions will be further complicated by fertilizer shortages.*



**+** Increased food aid need



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Made with Natural Earth. Free vector and raster map data @ [naturalearthdata.com](http://naturalearthdata.com).

## Data Analysis Methods:

**DATASETS:** Agriculture data from the UN Food and Agriculture Organization Crops and Livestock Production Data. Sub-seasonal forecasts from The North American Multi-Model Ensemble (NMME) Seasonal Forecast, Precipitation Rate Anomaly from the May 2026 run. 5 models were used: COLA-RSMAS-CCSM4, CanCM4i-IC3, GEM5.2-NEMO, NASA-GEOSS2S, NCEP-CFSv2. Accessed at: <http://weather.ou.edu/~kpegon/nmme/forecasts/data/>. Trade data from United Nations. (2025).

**CALCULATIONS:** Seasonal climate indicators were derived using North American Multi-Model Ensemble (NMME) forecast data and Food and Agriculture Organization (FAO) agricultural statistics. Monthly precipitation anomalies were aggregated across the forecast period to calculate cumulative seasonal precipitation anomalies, while monthly land surface temperature anomalies were averaged across the forecast period to estimate seasonal temperature conditions. Raster-based anomaly outputs were summarized spatially to evaluate the proportion of forecast grid cells exhibiting below-average temperature conditions (negative anomalies). FAO agricultural production, yield, and harvested area data were processed at the country level and aggregated annually to evaluate historical trends, calculate long-term means, and estimate year-over-year changes in agricultural production metrics from 1995-2024. Precipitation and land surface temperature were also disaggregated by region to identify geospatial nuances.

### Precipitation

Monthly precipitation anomaly: Daily precipitation rate anomalies (mm/day) multiplied by the number of days in each month to get a total monthly anomaly (mm).

Seasonal precipitation anomaly: The sum of the monthly precipitation anomalies occurring during a season of interest.

Monthly total precipitation: Monthly precipitation anomaly added to monthly normal precipitation (mm).

### Temperature

Monthly land surface temperature anomaly: Daily land surface temperature anomalies (degrees) averaged within each month to produce a monthly temperature anomaly (degrees).

Seasonal land surface temperature anomaly: The mean of the monthly temperature anomalies occurring during a season of interest.

Monthly total land surface temperature: Monthly land surface temperature anomaly added to monthly normal land surface temperature (degrees).

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# Supplemental Materials

## Temperature and Precipitation Anomaly Maps

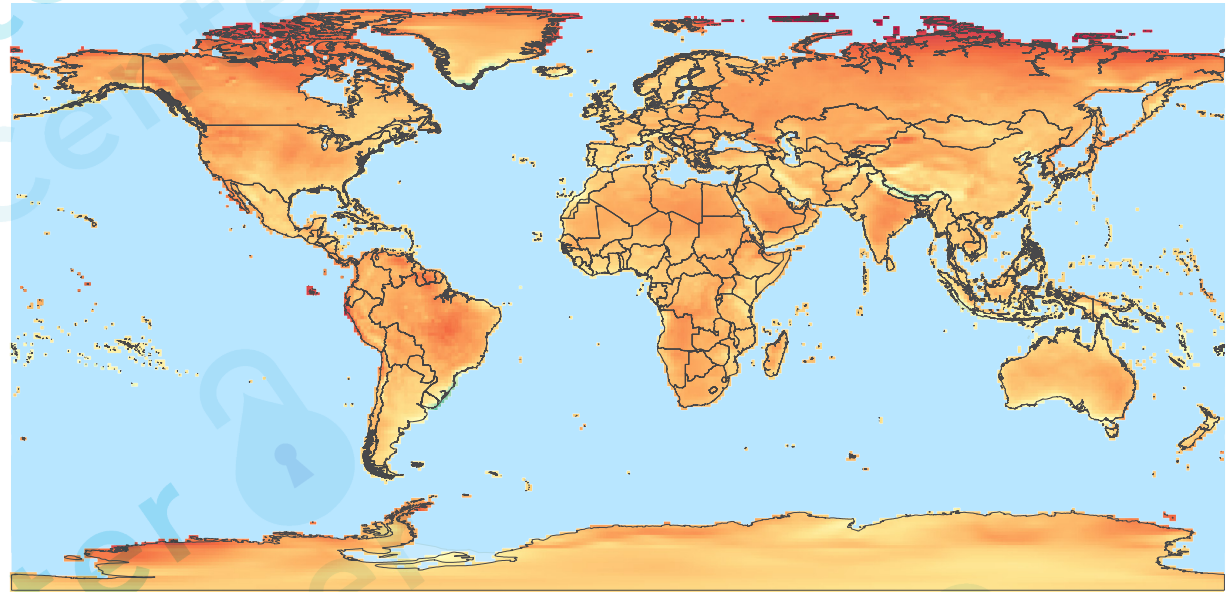
### Temperature

Roughly 96% of the planet's land surface is forecast to experience above-normal temperatures leading up to the El Niño peak in November. Arctic anomalies are projected to be the most extreme at 3-4°C above normal.

six-month anomaly (degrees)



Forecasted Land Temperature Anomalies for June-Nov 2026 (from May 2026 NMME)



### Precipitation

The six-month cumulative rainfall anomaly forecast shows El Niño patterns taking shape in the form of severe drought across Central America and Oceania.

six-month anomaly (mm)



Forecasted Precipitation Anomalies for June-Nov 2026 (from May 2026 NMME)

