



## El Niño Datasets: an Explanation of La Niña/El Niño/Southern Oscillation Visualizations

This page provides a brief description of the datasets available in the El Niño interface. Also see “Background information about El Niño and La Niña”.

### Predicted Anomaly Maps

These maps show predicted temperature, precipitation and sea surface temperature anomalies for the current El Niño event. Maps are available monthly and quarterly for the period November 1997 through August 1998, and are based on a forecast model run on October 1, 1997.

An anomaly is the departure of a value from normal conditions. For example, if the average air temperature for your region for January is 10.0 °C, but the average temperature for January 1998 is 12.5 °C, then the temperature anomaly for January 1998 is +2.5 °C.

A special numerical weather prediction (forecast) model is used to generate these prediction maps. This model, called the coupled ocean-atmosphere general circulation model, is actually a combination of two separate models, an ocean model that produces forecasts of sea surface temperature, and a global circulation model that produces atmospheric forecasts based on the sea surface temperatures predicted by the ocean model. The forecasts are produced by the Climate Prediction Center (CPC).

### Long-Term Monthly Averages

These maps show monthly averages of mean air temperature and total precipitation (rain plus melted snow) for the 30-year period from 1961-1990. These maps were produced from weather data from about 6000 stations worldwide. To be included in the analysis, a station had to report data for at least 70% (22) of the 30 year period.

Several variations of this dataset were produced to highlight weather variations associated with El Niño:

1. All Years: These maps show averages over the entire 30-year period, and can be considered to be representative of the long-term normal values.
2. El Niño Years: For these maps, the months used were those during which an El Niño was occurring. A [list of El Niño events](#) is available for reference.
3. La Niña Years: For these maps, the months used were those during which a La Niña was occurring. A [list of La Niña events](#) is available for reference.

4. Normal Years: For these maps, the months used were those during which neither an El Niño nor a La Niña was occurring.
5. non-El Niño Years: For these maps, the months used were those during which an El Niño was not occurring. Thus, this dataset includes both "Normal" and La Niña years.

### **Mean Differences**

These maps, produced for both temperature and precipitation, show the differences between several of the above datasets. These maps are valuable because the differences are generally subtle and hard to see by simply comparing two maps side-by-side.