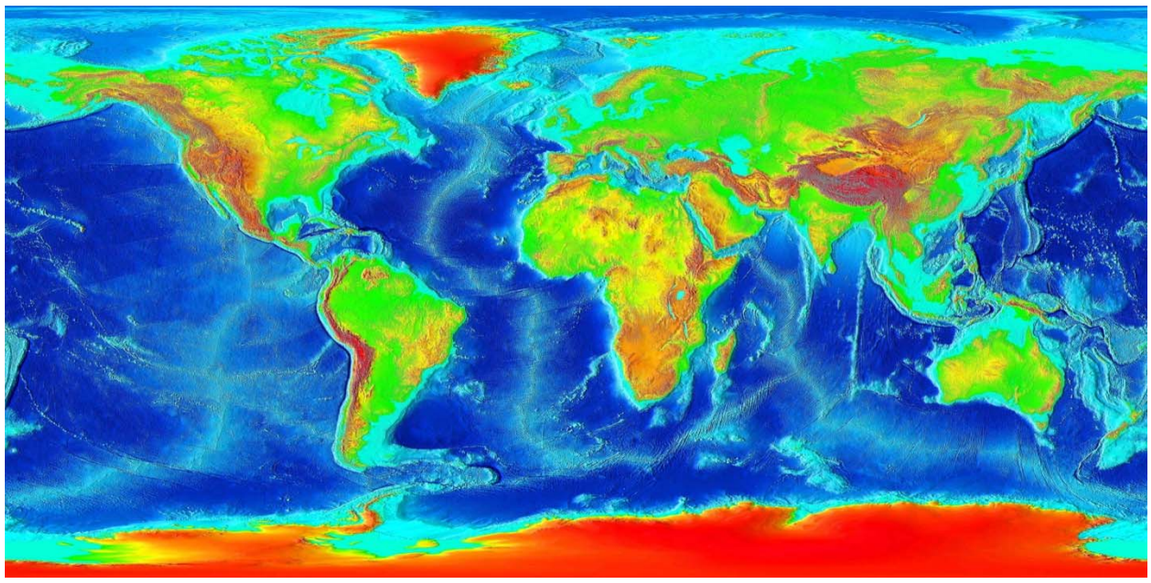
Viewing NOAA 30 Year Climate Data in Google Earth



Viewing NOAA 30 Year Climate Data in Google Earth

To provide a unique interactive experience viewing climate data, download **Google Earth** at http://www.google.com/earth/index.html and open the following link **NOAA 30 Year Climate Data** http://globe.gov/docs/climate_influences/NOAA 30 Year Climate Data.kml

Getting Started: When the NOAA 30 Year Climate Data set opens in Google Earth, Click on ***Viewing NOAA 30 Year Climate Data in Google Earth***, highlighted in blue in the side menu bar. This will display a pop up window with links to instructional documents (Image 1).

Image 1

Displaying Data: To display City Data, select the city by clicking on it either on the side menu bar or on the map display. To download the city data, select the format, ***Excel or CSV***, below the graph. (Image 2)

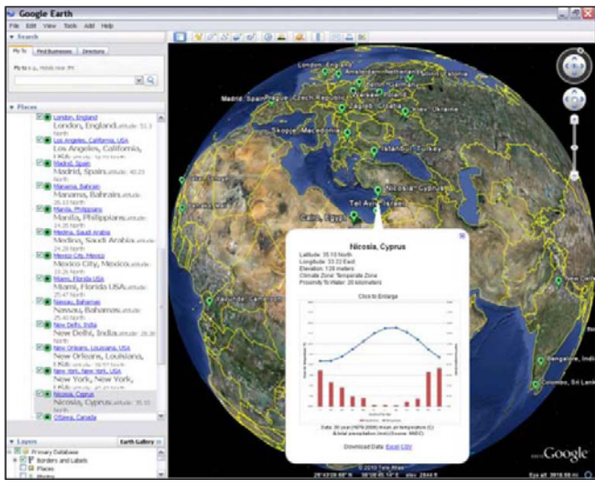


Image 2

To enlarge the graph inside of Google Earth, simply click on the graph. To return to the map display select Back to Google Earth at the top left. (Image 3)

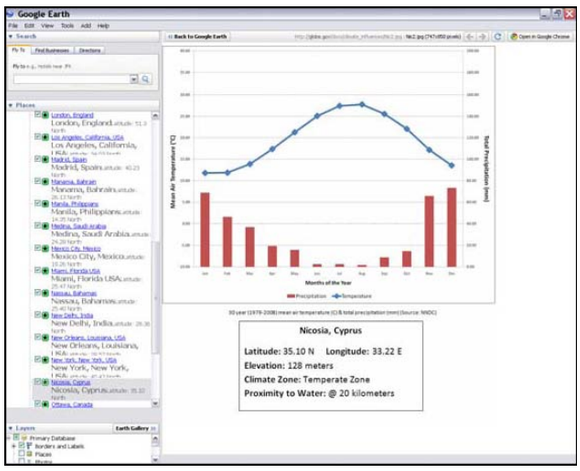


Image 3

Data Formatting

Temperature

Daily mean air temperature is calculated by averaging the daily minimum and maximum air temperatures. **Monthly mean air temperature** is calculated by averaging the mean daily air temperature for a given month. In some countries, it will be necessary to convert temperature values from degrees Fahrenheit to degrees Celcius: **(°F – 32) x 5/9 = °C**

A **long-term monthly mean air temperature** is calculated by averaging the mean monthly air temperature (for a given month) over several years. This data set is from the year 1979 to 2008.

Precipitation

Daily precipitation is the total amount of precipitation that falls in a given day. **Monthly precipitation** is the sum of the daily precipitation totals for a given month. In some countries, it will be necessary to convert precipitation from inches to millimeters:
inches x 25.4 = millimeters

A **long-term monthly total precipitation** is calculated by averaging the monthly total precipitation (for a given month) over several years. This data set is from the year 1979 to 2008.

Explore Further

See the GLOBE Seasons and Biomes Learning Activity *How to make a Climograph from Your Local Weather Data* at: http://www.globe.gov/documents/10157/2596335/Seasons-Biomes_ClimographActivity-10-28-2010.pdf. This learning activity will guide students in an exploration of air temperature and precipitation data for their general area. Students calculate simple statistics (30- year means) and make a climograph, also known as a time series, of their calculated values.

Finding and Formatting Temperature, Precipitation & Location Data for Student Research

Find the Latitude and Longitude of a Study Site (city)

Use the MY NASA Data Lat / Long Tool to locate your location anywhere on earth http://mynasadata.larc.nasa.gov/LatLon.html Pan and zoom the map to find your location and double click to show your latitude and longitude.

Temperature & Precipitation Data Set

1) Open the NOAA NNDC Climate Data Server
   http://www7.ncdc.noaa.gov/CDO/cdoselect.cmd?datasetabbv=GSOD&countryabbv=&georegionabbv=
2) Select your Region or Country (Click Continue)
3) Select your State or Region if needed (Click Continue)
4) Select the desired weather station (Click Continue

Select time range: All other values should remain on default (Click Continue)

5) When data opens in a new window, right click (Your txt file) and select (save link as) to save your data.
6) Data Variable: Mean temperature for the day (measured in degrees Fahrenheit)
7) Data Variable: Total precipitation for the day (measured in inches)