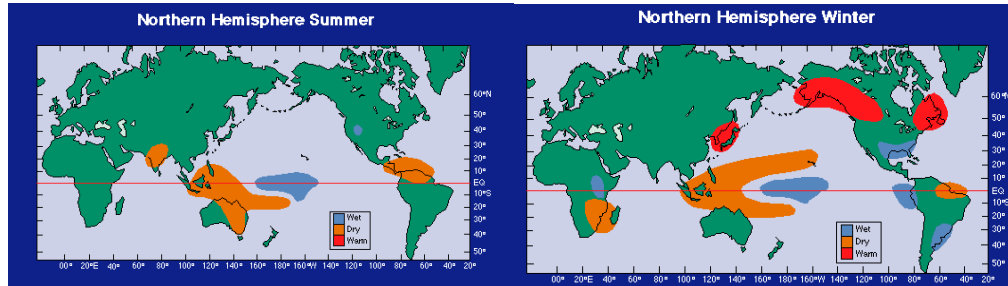


El Niño and Earth Observations

El Niño is a disruption of the ocean-atmosphere system in the Tropical Pacific having important consequences for weather and climate around the globe.



Precipitation anomalies during El Niño in (a) Summer and (b) Winter

Among these consequences are increased rainfall across the southern tier of the US and in Peru, which has caused destructive flooding, and drought in the West Pacific, sometimes associated with devastating brush fires in Australia.



Melbourne dust storm (8 Feb. 1983), generated by dust raised in rural areas as a result of drought.

In October 1982 a meeting was held to discuss the state of our knowledge about El Niño. Some asked about conditions in the tropical Pacific at the time, and one of the more famous oceanographers of the day replied to the effect there were no indications of an El Niño developing at that time. He did not know, because we did not have data to monitor conditions out there, that one of the biggest El Niño events of the 20th century was almost fully developed at that very moment. When this later became clear, actions were taken to develop and implement an "ENSO Observing System" which has been providing real time data since the early 1990s. Observations of conditions in the tropical Pacific are considered essential for the prediction of short term (a few months to 1 year) climate variations. The result is that we'll never again be surprised by an El Niño. Of course, we have learned subsequently that there is some forecast skill for Niño, thanks to the data we now routinely collect. Nations around the world alter their plans for the coming seasons because of Niño forecasts.