
The hot-and-cold extremes of El Niño/Southern Oscillation (ENSO) are expressed as sea surface height anomalies. Higher (warmer) than normal water appears as white and red, and lower (cooler) than normal as blue and purple.

Images courtesy of NASA JPL TOPEX/POSEIDON Project

Replacement of warm water by cold water causes air temperature swings and humidity changes, affecting cloud patterns and winds.

Images courtesy of Global Hydrology and Climate Center

All of these changes steer storms and rainfall to new locations.

Images courtesy of NASA GSFC Scientific Visualization Studio

Drought contributes to dust and smoke aerosols in the atmosphere.

Images courtesy of NASA GSFC TRMM Project

Pathfinder AVHRR NDVI data reveal regional shifts in vegetation cover. Areas are highlighted for comparison.

Images courtesy of NASA EO5 DAC