

El Niño in Tucson

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The Power of Perspective

Artist's view of a U.S. Landsat satellite. Credits: NASA.

El Niño is a part of a climate cycle driven by changes in circulation in the tropical Pacific Ocean.

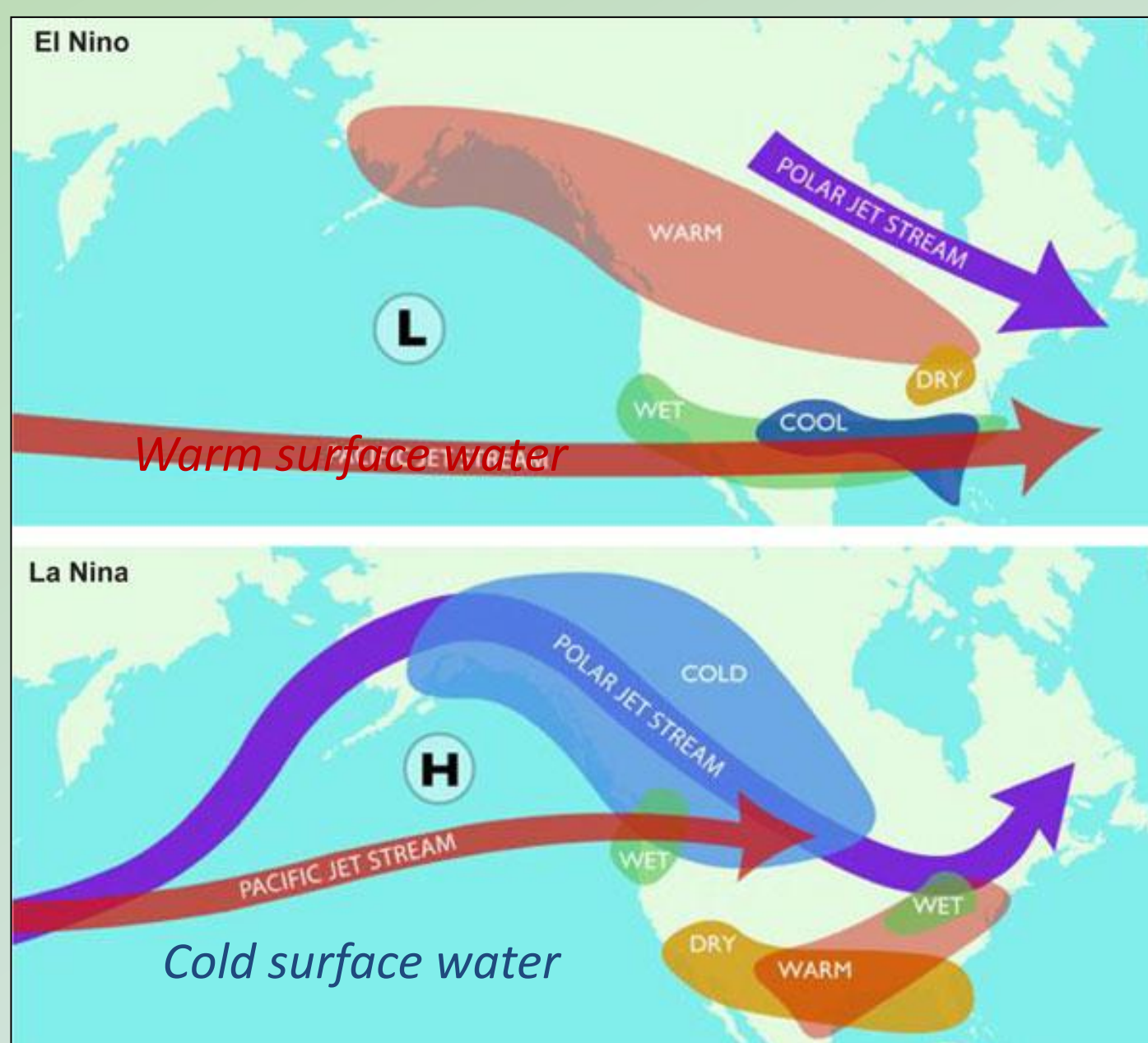
It has effects on weather all over the globe. In the Southwest US, El Niño years generally bring more winter rain than normal. This leads to more growing vegetation as shown by the bright green color in these images.



False-color Landsat image of Tucson Basin, normal precipitation year, April 2002.



False-color Landsat image of Tucson Basin, El Niño year, April 2003. The spring green-up of mountain tops extends further down-slope into the valleys.



Jet stream locations during El Niño and La Niña events.
Credit: Smithsonian Institution

During an El Niño event, the ocean surface in the eastern tropical Pacific is unusually warm. This warm water has impacts on the atmosphere, causing more storms to form off the coast of California and pulling the Pacific Jet Stream southward. The combined effect is to deliver wetter than normal winters to the Southwest US.

The opposite happens during periods known as **La Niña**, where the eastern tropical Pacific is colder than usual, and the Southwest US gets drier weather.