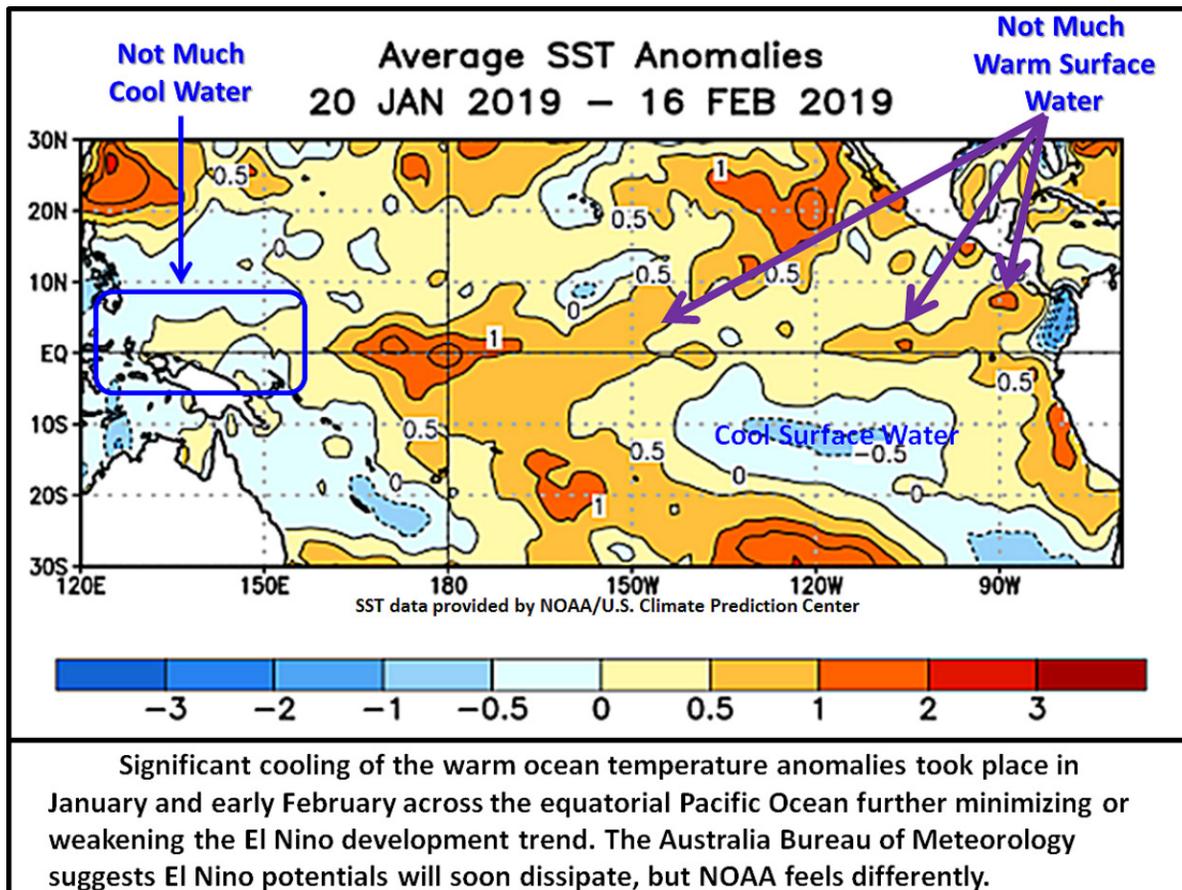


EL Nino Development To Increase During March, Early April

By Drew Lerner

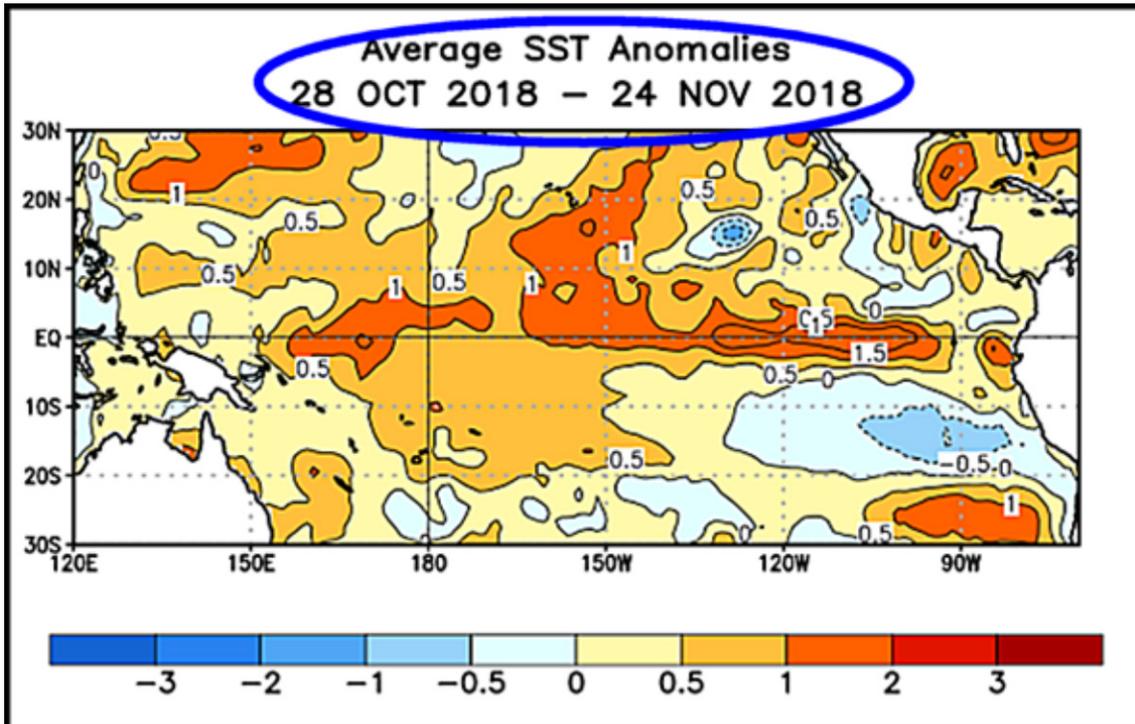
Kansas City, February 19 (World Weather Inc.) – Ocean temperature anomalies in stopped warming in the eastern equatorial Pacific Ocean during January and most of the ocean temperature anomalies decreased so that neutral ENSO conditions were more common than a warm phased event with temperature anomalies notably above average. [The Australian Bureau of Meteorology looked at the data last month and predicted El Nino would dissipate soon, but today, the organization is not convinced that dissipation is coming. Some of the latest ENSO data from the U.S. National Oceanic and Atmospheric Administration has evidence that some short term warming of sea surface ocean temperatures may be returning briefly, but the model went on to suggest that El Nino conditions would diminish greatly this summer and autumn.](#) This is quite a change from that of a few weeks ago, but World Weather, Inc. suggests conditions may still become more supportive of El Nino like conditions once again as time moves along – mostly because of a strong relationship between solar minimums and El Nino events. There is still some potential that El Nino or El Nino-like conditions will prevail for a longer-than-expected period of time in 2019.



The latest ENSO data from the eastern equatorial Pacific Ocean this week clearly showed a highly weakened El Nino event over that which was present a few weeks ago. Look at how the ocean temperature anomalies have changed since late January. The

EL Nino Development To Increase During March, Early April

warmer than usual ocean surface data was much more El Nino like back in December and those conditions prevailed in January as well.



Ocean temperatures anomalies from November into January still had a considerable amount of El Nino like parameters and the evolution of El Nino conditions seemed under way. However, the Southern Oscillation Index (SOI) became a contrarian indicator when fourth quarter index values became consistently positive which is totally opposite of that which should occur in El Nino events. Rainfall in many areas around the world was greater than that which occurs in a more typical El Nino event and for that reason very few areas experienced seriously adverse weather.

Eastern Australia rain in December abated in January as excessive heat and dryness kicked in. The anomaly was somewhat related to El Nino, but not entirely. Nevertheless, eastern and southern Australia was excessively hot and dry. Southeast Asia, however, had more routinely occurring rainfall during the Northern Hemisphere winter months leaving palm oil and other production areas in the region dealing with well-timed precipitation, seasonable precipitation and favorable production.

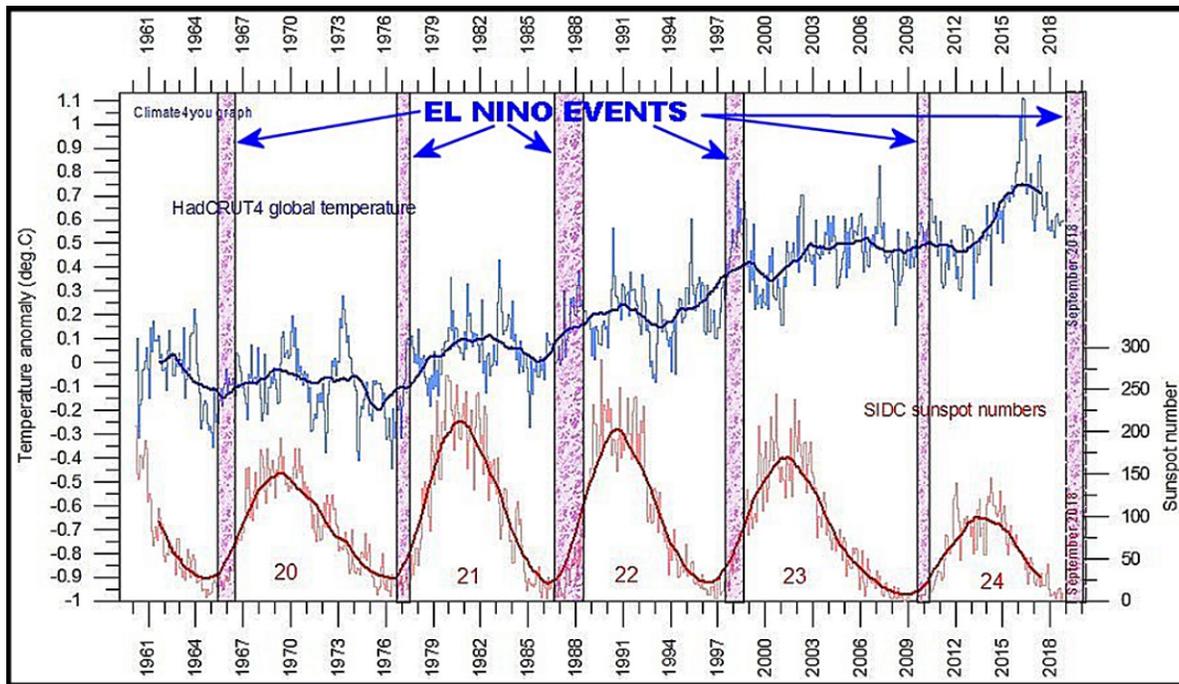
In South America one could make a case for El Nino's influence on Argentina, but Brazil weather was nothing like that of an El Nino year with dryness dominating many areas. U.S. weather should have been drier biased in the Midwest and warmer than usual in the northwestern states as well as across Canada's Prairies. Some of these anomalies were around briefly during the late autumn and early winter, but it was clear that anomalous weather in North America was being less influenced by El Nino as time moved along into the first quarter of 2019.

Dryness was present in Colombia, Venezuela, a part of Central America and Mexico as if El Nino was present, but rain in New Zealand and eastern Australia during the fourth quarter of 2018 was certainly not traditional El Nino.

EL Nino Development To Increase During March, Early April

The latest ENSO data has been extremely weak even though the ONI (Oceanic Nino Index) was looking to be a moderate supporter of El Nino for a while in October, November and January.

The latest data from the equatorial Pacific Ocean today is not nearly as supportive of El Nino as it was a month ago and that is reason enough for the Australia's Bureau of Meteorology to predict that El Nino would soon dissipate. Certainly, the data does not support much development at the moment, but *World Weather, Inc. is puzzled by a long term relationship with El Nino events that occurs near the solar minimum. Since 1950, there has not be any solar cycle that did not end without El Nino developing shortly after the running mean of sunspots reached its minimum. The data is very convincing.*



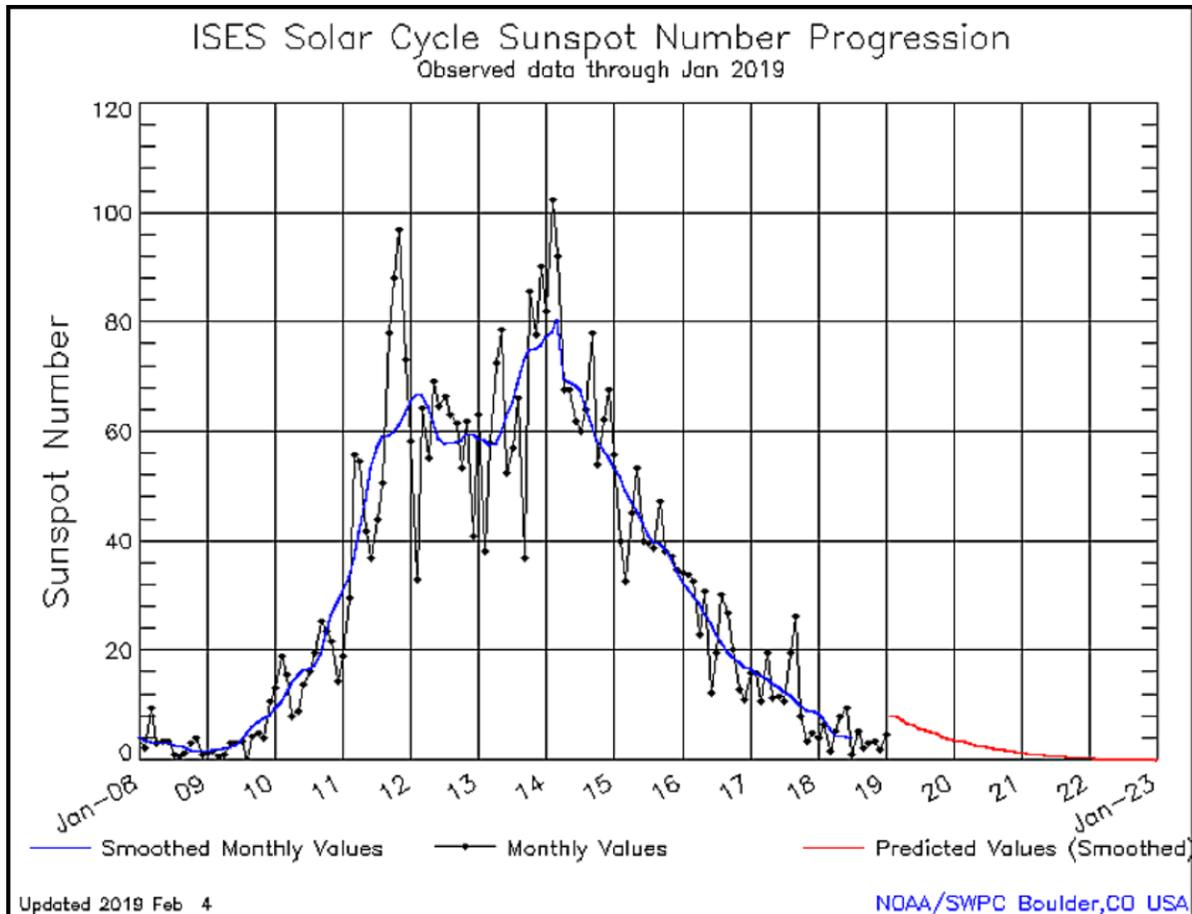
What is most interesting is that the El Niño events of the past that occurred near the solar minimum would last for several months, but the event would never begin until the running mean of sunspot numbers reaches its minimum. NASA and NOAA have both suggested the solar minimum has not occurred yet which could justify the lack of an El Niño event in 2018 or early 2019.

It we assume for now that the solar minimum will occur in 2019 then the statistics suggest that El Niño will likely evolve and last for several months. However, that comment is based on the assumption that solar cycle 25 will begin normally later this year. If NASA and NOAA are correct suggesting an extended period of solar minimum (lasting for several years) is correct there is potential that predicting El Niño will either become extremely difficult or the forecasts will bust over and over again.

An extended solar minimum lasting into 2023 has been suggested by NASA and NOAA. If that forecast is correct then we have never been in this environment before. All of the highly correlated weather data associated with solar minimums are bound to change and that could have quite an impact on long range forecasting as well as the impact on crop production around the world.

EL Nino Development To Increase During March, Early April

The data certainly suggests a close watch on what anomalous weather occurs in the next few years. World Weather, Inc. is totally convinced that it will include more volatility with multiple weather extremes occurred in each growing season in various locations around the world.



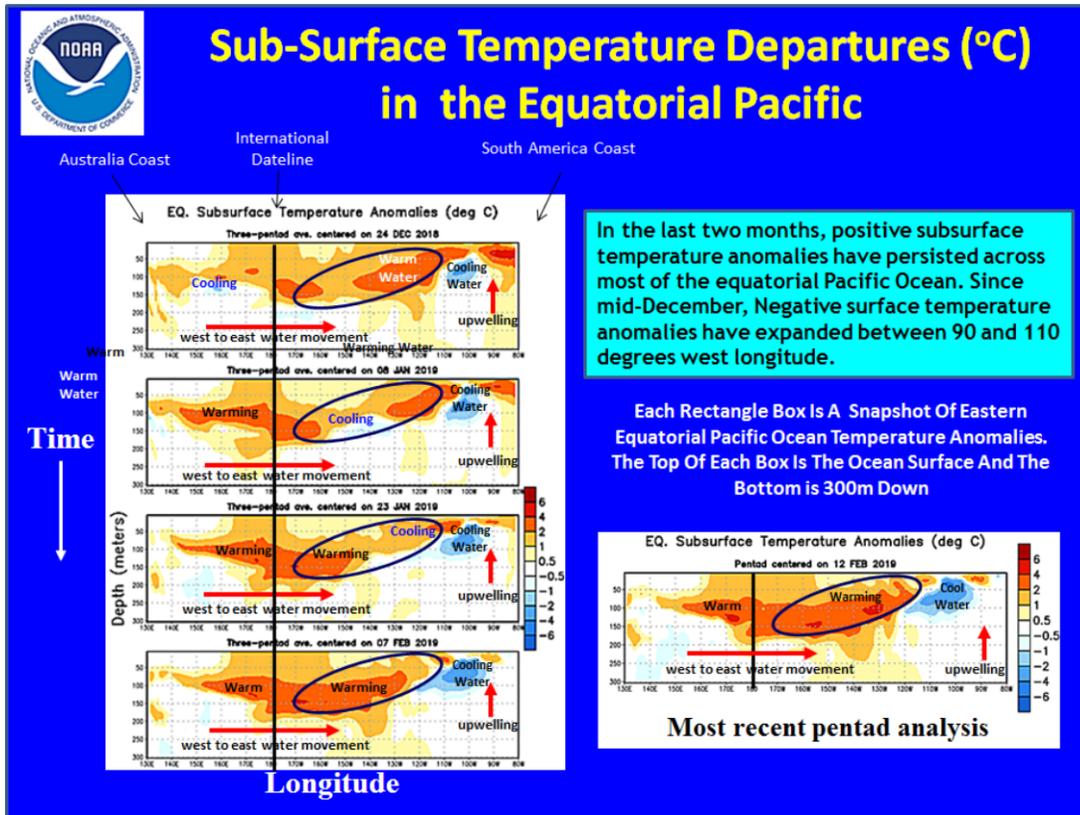
In the meantime, El Nino is expected to intensify briefly in March and possibly April because of warming subsurface ocean water deep below the surface of the ocean from the International Dateline to the coast of South America.

A recent trend change in the eastern Equatorial Pacific Ocean shows some notable warming occurring in the ocean below the surface. As the warmer water moves east across the Pacific Ocean it will run into an upwelling current in the eastern tropical Pacific Ocean. The upwelling current will force anomalously warm ocean subsurface water to rise toward the surface to the ocean. Once warming begins along the surface of the ocean in March and April there is likely be a temporary resurgence in El Nino or El Nino like conditions impacting many areas around the world.

The impact of changing ocean conditions is not likely to be traditional, but if the warming trend is significant there may be some return of more "traditional" El Nino weather anomalies during the Northern Hemisphere spring season. Those anomalies might include dryness in Northern South America, Central America, Mexico, West-central Africa, South Africa and perhaps portions of Southeast Asia. Southeast Asia weather might trend drier than usual while North America weather trends wetter in the southern and central parts

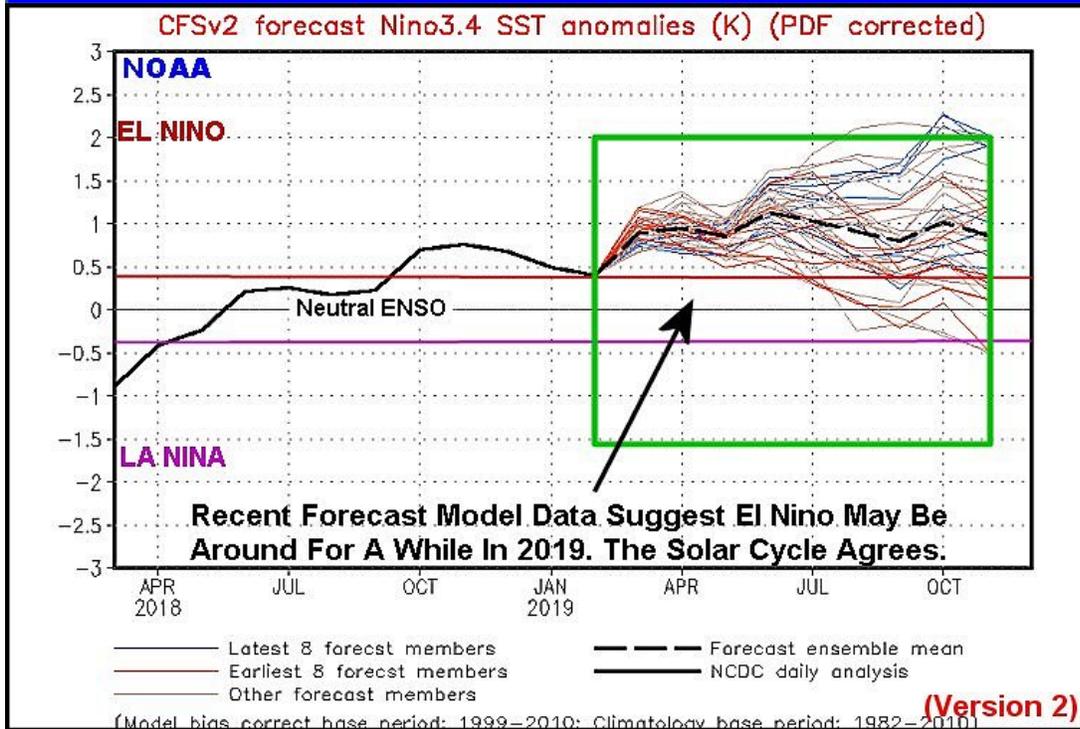
EL Nino Development To Increase During March, Early April

of the United States while Canada's Prairies trend drier and warmer biased from central Saskatchewan to the northwestern U.S. Plains and Pacific Northwest. Wetter than usual weather might evolve during the spring in northern Alberta crop areas and across the southern and central parts of the United States.



In the last two months, positive subsurface temperature anomalies have persisted across most of the equatorial Pacific Ocean. Since mid-December, Negative surface temperature anomalies have expanded between 90 and 110 degrees west longitude.

Each Rectangle Box Is A Snapshot Of Eastern Equatorial Pacific Ocean Temperature Anomalies. The Top Of Each Box Is The Ocean Surface And The Bottom is 300m Down



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