# La Nina Near Its Second Peak; Weakening Likely

**By Drew Lerner**

Kansas City, February 11 (World Weather Inc.) – ***Weak La Nina conditions have had a mixed influence on weather around the world. Some areas, like South America, portions of the United States and Southeast Asia have seen traditional La Nina influences while India, North Africa, southwestern Europe and South Africa have not. This is a classic example of weak La Nina events and the variance has to do with the strength of other prevailing weather patterns. The recent strong rise in the Southern Oscillation Index (SOI) is occurring after another bout of strong easterly trade winds and new upwelling occurred in the eastern equatorial Pacific Ocean. All of these factors are related to a short term strengthening in the La Nina event. The event is just about to peak out and most indicators now suggest weakening will begin in late February and continue throughout March.***

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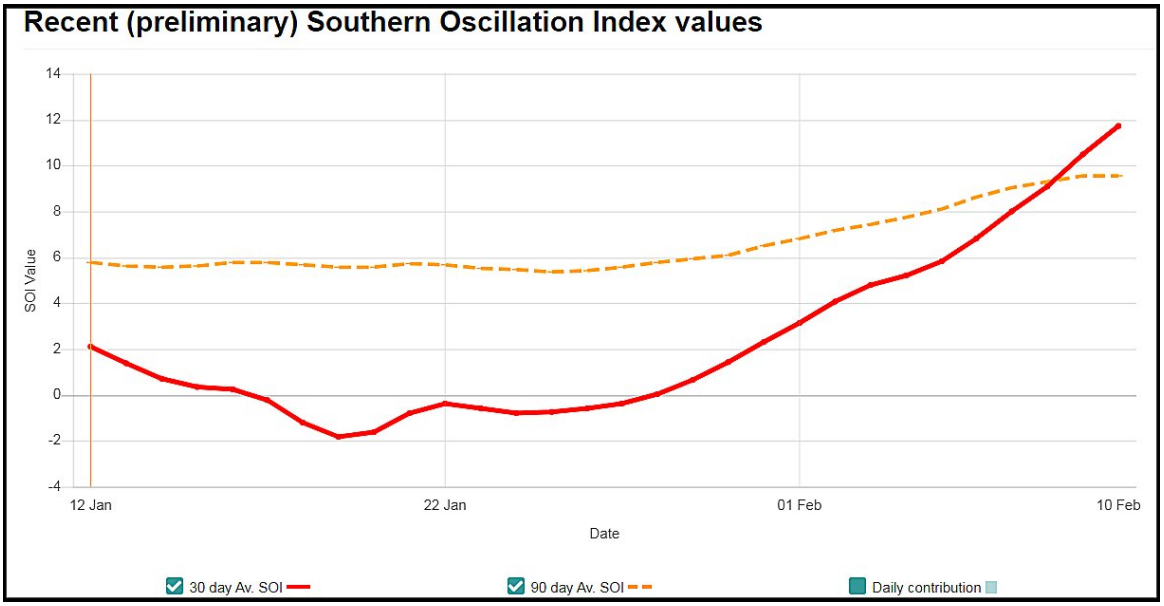
The changes forthcoming may not be fully noticeable, although as time moves along in the next few weeks some of the recent weather anomalies are expected to give way to changing conditions. For Argentina, that may bring some greater rainfall and for Brazil it may eventually lead to less rain. Some of these South America trend changes are already noted in the medium range forecast.




A strong rise in the Southern Oscillation Index over the past two weeks mirrors that which occurred in December immediately following a period of stronger than usual easterly trade winds across the eastern equatorial Pacific Ocean. As World Weather, Inc. has noted before, strong easterly winds that blow across the ocean's surface in the eastern equatorial Pacific Ocean transports surface ocean water from east to west. This is similar to someone standing in a swimming pool or bathtub and taking their arm and pushing the surface water from one direction to another. This transport of surface water always results in upwelling and ocean temperature anomalies below the surface of the ocean are allowed to move to the surface after the surface water is displaced.

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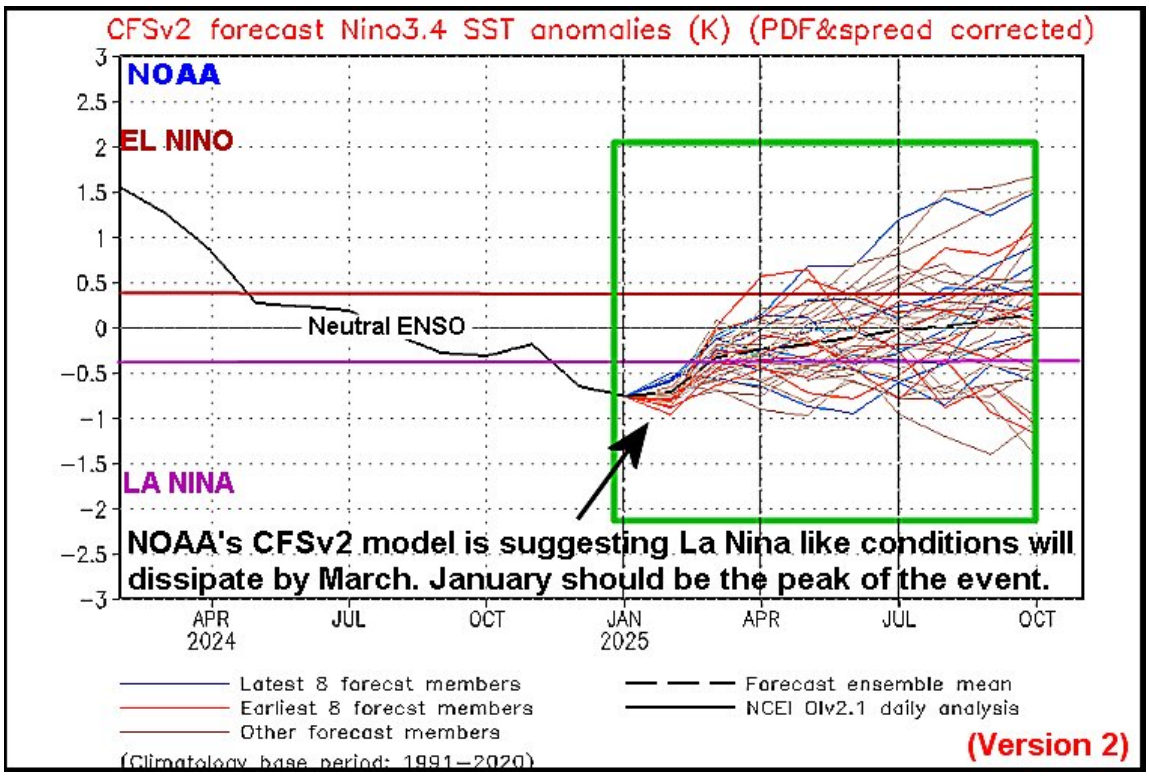
That is exactly what has been occurring over the past couple of weeks. Greater upwelling has occurred in response to the stronger easterly trade winds. Cold water beneath the ocean's surface has been allowed to move upward in the ocean. The greater ocean surface cooling has temporarily strengthened La Nina; however, the strong easterly winds causing the upwelling are already subsiding and the cooling ocean water is expected to end during the next two weeks.

***Less upwelling of colder water will prevent further intensification of La Nina and the next change likely across the eastern equatorial Pacific Ocean will be warming water, although the warm up is not expected very quickly. That should allow weak La Nina conditions to prevail through the first half of March, though no further strengthening is likely.***

***Despite some short term changes in weather occurring in Argentina and Brazil in the next two weeks, the same anomalies that have been prevailing in recent weeks may continue. There is growing evidence that La Nina will begin a more significant weakening trend in the second half of March. Until then, world weather is expected to vary somewhat, although most of the anomalies that have been prevailing will continue.***

That does not suggest an immediate change of significance for Argentina, Brazil, Southeast Asia or portions of North America. The changes seen in Argentina and Brazil this next week to ten days should prove to be temporary and some additional dry and warm weather will return to Argentina for a little while late this month and in early March while Brazil continues to see periodic rain in center west crop areas.




***India may be the biggest area of concern and its weather anomaly has nothing to do with La Nina. Normally, India would be wetter and milder than usual while La Nina is playing out. Instead India has great potential for being drier and warmer than usual***

***during the latter part of February and March. That may lead to crop stress and production concerns.***

**Indonesia and Malaysia** have been quite a bit wetter than usual at times this season along with the eastern Philippines. Much of that wet bias has been the result of more aggressive and more frequent Madden Julian Oscillation (MJO) events this year. Strong La Nina events normally produce abundant rain in these two countries because of warm ocean water surrounding the islands. Some warm weather is present and the MJO events have been inducing strong rising motion in the atmosphere at times carrying greater volumes of water vapor rising up off the warm ocean surface water surrounding the islands and inducing greater rainfall.

**North America** weather has had traditional La Nina conditions in recent weeks, but some of that has been associated with strongly negative Pacific Decadal Oscillation (PDO) which has also been prevailing. Both La Nina and negative PDO produce similar anomalies of below normal precipitation in the west-central and southwestern Plains, portions of the upper Midwest and all of the southwestern desert region of the U.S. and northern Mexico. ***These conditions are expected to prevail into the early days of spring, despite some short term bouts of precipitation like that coming this week in hard red winter wheat country***. The precipitation event this week is not a signal suggesting a change in weather patterns, but it is a short term perturbation in the trend.

**Southeastern China's coastal provinces** are experiencing drier than usual weather which is also similar to traditional La Nina events. Rapeseed areas in the south of China have received some timely rainfall, although amounts have continued lighter than usual and that will prevail into the warmer days of March, but with La Nina weakening that should end by late March and April.

**Eastern Australia** typically has a wet bias during La Nina events. Most of eastern Australia has been drying out recently – at least in grain and cotton areas, but torrential rain fell earlier this month along the upper Queensland coast. A short term bout of rainy weather is expected in grain and cotton areas of Queensland and New South Wales in the next couple of weeks, although some drier weather may return later this month and in March.

**South Africa** is expected to trend wetter over the next couple of weeks in response to the recent intensification of La Nina, but those conditions should abate later this month and especially in March as La Nina begins a faster pace of weakening.

**Northern Mexico's drought and dryness in the southwestern United States** is unlikely to change much, until La Nina weakens more significantly in mid- to late March and April at which time some rain is expected to begin to evolve.

Cold temperatures in **western Canada and the north-central United States** looks much like La Nina and there is certainly some influence, but winter seasons that follow the solar maximum tend to be colder than usual in North America and that has certainly been the trend this year. The sunspot cycle has likely had much to do with the colder weather this winter, but the pattern has also been reinforced by the lunar cycle and La Nina.

**The bottom line** to this discussion is that La Nina is nearing its peak of intensity, but it is unlikely to induce serious changes in weather until mid- to late March when the phenomenon weakens more dramatically. Until then, expect more of the same, although many areas around the world are likely to encounter some short term perturbations from the dominating pattern of the past two months.

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