Name of Student

Name of Professor

Name of Class

Day Month Year

El Niño Southern Oscillation

***Introduction***

Taking a look at the **Pacific Ocean**, it could be seen that there is some type of oscillation in it periodically. Scientists have observed that the ocean water used to oscillate back and forth and cause the warm and cold water to move in both the directions (back and forth). Researches have shown that there are three phases of oscillation first is neutral, second is **El Niño** and the last one is **La Nina**. For scientists, the most important phase is of El Niño. El Niño-Southern Oscillation is (ENSO) is being declared as the irregular periodic variation in the wind. Temperature of the sea surface also changes over the tropical eastern Pacific Ocean that cast an impact on the temperature on the overall climate in most of the tropics and sub-tropic areas. This warming phase of the sea temperate is termed as El Niño Southern Oscillation by scientists. Along with El Niño Southern oscillation atmospheric component couples with the sea temperature. Over the western tropical Pacific, El Niño is accompanied by the high air surface and on the other hand, there could be seen low surface air pressure over the La Niño. Scientists claimed that these two periods last for several months and occur continuously after a few years but the intensity varies as per each period. In simple words, it could be said that El Niño is the natural turbulent fluctuation in weather that is known as **El Niño-Southern Oscillation** or **ENSO.**

***Discussion***

Scientists studying environmental conditions believe that El Niño- Southern Oscillation is the most important inter-annual phenomenon that occurs on this planet. It is the only phenomenon that impacts climate patterns worldwide. Veritably, El Niño is older than its name. Before the climate scientists started making researches on El Niño, fishermen in Southern America sort out ways for predicting whether the coming year would be El Niño year or not as they become expert to read it on the water (Godoi,et,al, 2019). According to the fishermen of Southern America, during the El Niño year, they witnessed a rise of 30 cm in the eastern Pacific and water felt to be palpably warner to the touch. There are various researches that are being made by the climate experts who are engaged predicting El Niño year. According to the Pohang University of Science and technology, it is hard to accurately predict the El Niño year, but studies have found that there is a distant oscillation in water that helps the scientists for predicting climatic events. Scientists claimed that prediction for El Niño is still limited to only a year or less before the Swing of the ENSO.

“*The developing El Niño conditions are likely to contribute to the warmer global average temperature in 2019-it is a little too early to say whether or not it will be a record year"*

There are several means used by climatic scientists for predicting El Niño. These means include moored ATLAS, satellites, PROTEUS buoys, sea level analysis, XBT's and drifting buoys (Wang,et,al,2017). According to the research of some climatic scientists, abnormal temperature drop in the sea surface water, especially in the Northern Atlantic in the start of spring, predicted the conditions for El Niño in the Pacific Ocean about some nine months before. As per the scientific studies and researches, **Climate Prediction Center at the National Oceanic and Atmospheric Administration,** claimed that around eighty percent of El Niño had already begun in 2019 that would last till the end of February 2019.

*"A significant increase in sea surface temperature over the eastern and central equatorial Pacific that occurs at irregular intervals, generally ranging between two and seven years"*

According to the researches, there has been observed various effects of El Niño. These effects include flooding, rains, food insecurity, malnutrition and rise of temperature, etc. Talking about impacts of El Niño particularly on California; records affirm that jet stream of Southern side hits California that beholds storms and moisture (Timmermann,et,al,2018). In California, there has been recorded increased rainfall along with landslides, coastal erosion and floods because of El Niño. Climate experts support the research of many scientists that El Niño terribly affects Indonesia. Evidence show that El Niño effect after every two to seven years when the warm water moves back eastward across the Pacific Ocean. Impacts of El Niño include floods, bushfire, landslides, and drought that affect the lifestyle of Indonesia.

***Conclusion***

Taking a look at the various sources, it could be asserted that El Niño is a natural phenomenon of oscillating warm and cold water to and fro in the Pacific Ocean. This oscillation cast great impacts of the countries worldwide. By utilizing new technology, scientists predict in which country or location people are going to face issues because of El Niño. Number of events could be witnessed across the world because of El Niño oscillations. These events involve landslides, drought, increased rainfall, and bushfire, etc. Pieces of evidence from **WMO's** climate prediction showed that there is no El Niño expected in the coming few years that would be as powerful as El Niño of 2015-2016. As a whole, it won’t be wrong to say that scientists have observed various impacts of El Niño at different locations. In many of the countries, El Niño oscillation becomes the cause of different diseases as well. Scientists are devising new ways and instruments for more accurate predictions about El Niño oscillation.

Work Cited

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