# Development of a Weak El Nino

## Why in news?

The National Oceanic and Atmospheric Administration (NOAA) of the U.S. recently announced the development of a weak El Nino in the equatorial Pacific Ocean.

## What is an El Nino?

- El Nino is a phenomenon of unusual warming of waters in the equatorial Pacific Ocean off the coast of Chile and Peru.
- It largely impacts weather events across the world, with excessive rainfall in some areas and dry spells in regions like India, Indonesia and Australia.
- In India, over the years, El Nino has been found to have strong links in suppressing the monsoon rainfall.
- On the other hand, the opposite phenomenon of La Nina (unusual cooling) has been found to be helpful in bringing good rainfall.

## What is the NOAA outlook?

- Status of El Nino at this time of the year usually indicates the kind of rainfall to be expected during the monsoon season later in the year.
- Weak El Nino conditions had already built up in January 2019.
- It is likely to continue (with 55% probability) until the spring season in the northern hemisphere (mid-March to mid-June).
- NOAA said that the probability of El Nino persisting into the summer (beyond June) was 50% or less.
- Significantly, the warming in the Nino 3.4 region of the Pacific Ocean has been forecast to remain in excess of 0.5°C above normal.
- This is the region whose sea surface temperature (SST) has more connection to the impact on India's rainfall.

## What is the likely impact for India?

- The data for the last 100 years shows that if the SST in Nino 3.4 is over

0.5°C above normal in the monsoon season, rainfall over India gets affected.
- However, prediction through the northern spring season (instead of summer) has higher degree of uncertainty.
- So there is a need for better prediction, for clearer understanding of the impact on Indian monsoons.
- Moreover, past records show that the impact of El Nino in the monsoon months is relatively high when it is preceded by a La Nina in the winter.
- Notably, in this winter, sea surface temperatures were above normal, almost close to El Nino; in other words, absence of La Nina.
- So, even if it occurs, the impact of an El Nino event might not be very large this monsoon.
- Nevertheless, if El Nino strengthens beyond spring and grows into the summer, India may witness a drought.
- Some weather events like winds over the western tropical Pacific will finally determine whether El Nino will grow beyond spring.

## Is El Nino frequency changing?

- El Nino events repeat themselves in a 2-to-7-year cycle, with a strong El Nino expected every 10-15 years.
- However, since 2000, 5 El Nino events have already happened, and this year could witness a sixth one.
- New scientific research is pointing to increased frequency of extreme El Ninos due to climate change.
- Such extreme events could happen twice as often as today if the average annual global temperatures reach 1.5°C above pre-industrial times.
- However, the increasing frequency could be because of other reasons as well.
- They are related with the fact that trade winds got stronger and the eastern equatorial Pacific Ocean has remained colder since 1998, which makes El Nino more active.
- The stronger trade winds are not easily explained by global warming, hinting at more complicated reasons.

**Source: Indian Express**

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