



Current Affairs of the Day

PAPER 1:

- Heavy rain as Cyclone Nivar approaches the coast.
- Jallikattu is India's entry for Oscar awards.
- El Nino Modoki.



Heavy rain as Cyclone Nivar approaches the coast

News: Cyclone Nivar is expected to begin the landfall process that occurs before the storm actually crosses the land, by 10.30 p.m. on Wednesday. The 'very severe cyclonic storm' is the third one that will make landfall in India this year.

Highlights:

1. According to the India Meteorological Department (IMD), the cyclone is likely to blow until midnight with wind speeds of 120-130 kmph, gusting up to 145 kmph.
2. With the convective cloud bands lying over coastal Tamil Nadu, the centre of the cyclone is approaching the Tamil Nadu coast. It intensified into a very severe cyclonic storm by afternoon over southwest Bay of Bengal.
3. Meteorologists noted that severe weather events would begin four to five hours ahead of the cyclone making landfall.
4. Cyclone associated intense rain spells helped Chennai overcome its rainfall deficit. This cyclone may not be sufficient to wipe out the deficit of the entire State but it may help bring down the number of rain-deficit districts.

Learn Through Graphics:





Understanding the Terms:

Type	Wind speed in km/h	Wind speed in knot (mps)
Low pressure area (L)	Less than 31	Less than 17 (09)
Depression (D)	31–49	17–27 (9–14)
Deep depression (DD)	50–61	28–33 (15–17)
Cyclonic storm (CS)	62–88	34–47 (18–24)
Severe cyclonic storm (SCS)	89–118	48–63 (25–32)
Very severe cyclonic storm (VSCS)	119–221	64–119 (33–61)
Super cyclonic storm (Sup. CS)	222 or more	120 (62) or more

Generic name like tropical cyclone or cyclone is used to represent CS, SCS, VSCS and Sup. CS as a whole

Process of Formation of Tropical Storms

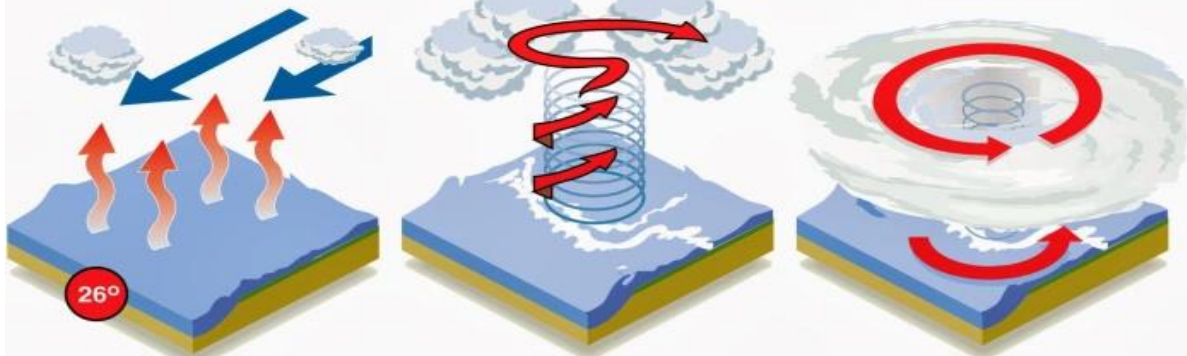
How tropical storms are formed

High humidity and ocean temperatures of over 26°C are major contributing factors

Water evaporates from the ocean surface and comes into contact with a mass of cold air, forming clouds

A column of low pressure develops at the centre. Winds form around the column

As pressure in the central column (the eye) weakens, the speed of the wind around it increases



Saffir-Simpson hurricane wind scale

Category 1	Category 2	Category 3	Category 4	Category 5
Minimal damage	Moderate damage	Extensive damage	Extreme damage	Catastrophic
Winds 119-153 kph	Winds 154-177 kph	Winds 178-208 kph	Winds 209-251 kph	Winds 252 kph and more

Source: NHC

AFF



Jallikattu is India's entry for Oscar awards

News: Malayalam film Jallikattu, directed by Lijo Jose Pellissery, has been selected as India's official entry for the Best International Feature Film category for the 93rd Academy Awards.

Highlights:

The selection has been made by a 14-member committee of the Film Federation of India from a shortlist of 26 films.

Background:

1. Jallikattu is an old tradition. An ancient reference to bull taming is found in a seal discovered at Mohenjodaro, which is dated between 2,500 BC and 1,800 BC. The sport was called Eru thazuval or "embracing the bull".
2. The term 'jallikattu,' comes from Tamil terms 'salli kaasu' which means coins and 'kattu' which means a package tied to the horns of bulls as prize money.
3. So, in this popular bull-taming sport held alongside annual harvest festivities in rural Tamil Nadu young men demonstrate their valour by pouncing on fleeing bulls.

Ethics and Culture:

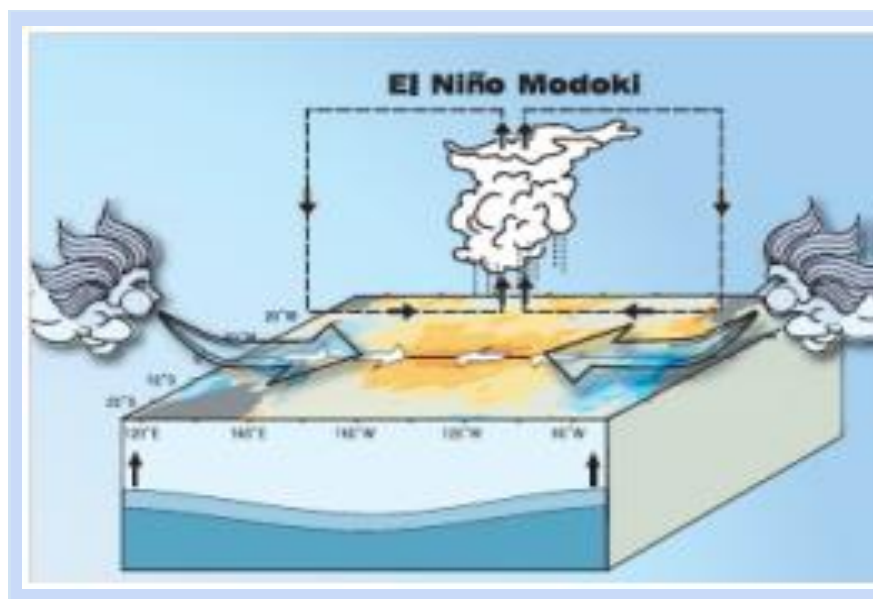
1. In 2014, the Supreme Court had banned the event after a plea filed by the Animal Welfare Board of India and the People for the Ethical Treatment of Animals (PETA).
2. However, the state government insisted that Jallikattu is a crucial part of its culture and identity. The ban was lifted in January 2017 after massive protests in Chennai.
3. Although there are systems in place to check the treatment of the bulls and ensure the safety of participants and spectators, activists allege that animal cruelty still continues.
4. Kambala is a traditional bull buffalo race which generally takes place in coastal Karnataka from November to March. PETA has alleged that Kambala too involves acts of cruelty on animals which are not physiologically suited for racing.



Apex Court

1. In 2014 the SC had banned Jallikattu after declaring it to be an act of “inherent cruelty”. The Bench said “taming a bull” to perform in an event runs counter to the concept of welfare of the animal.
2. Animal welfare is the basic foundation of the Prevention of Cruelty to Animals Act of 1960.
3. Also, the Article 51A of the constitution which includes our fundamental duties and states that citizens should safeguard the wildlife and forests and have compassion for living creatures.
4. The court threw out Tamil Nadu’s argument that the ban affected the fundamental right to religion under Article 25.

El Nino Modoki



El Nino Modoki

El Niño Modoki has recently been identified as a coupled ocean-atmosphere phenomenon in the tropical Pacific Ocean and has been shown to be quite different from the normal El Niño/Southern Oscillation (ENSO) in terms of its spatial and temporal characteristics as well as its teleconnection patterns. Traditionally the term “El Niño” was used for the El Niño associated with warming in the eastern tropical Pacific. However, as we realize now, during El

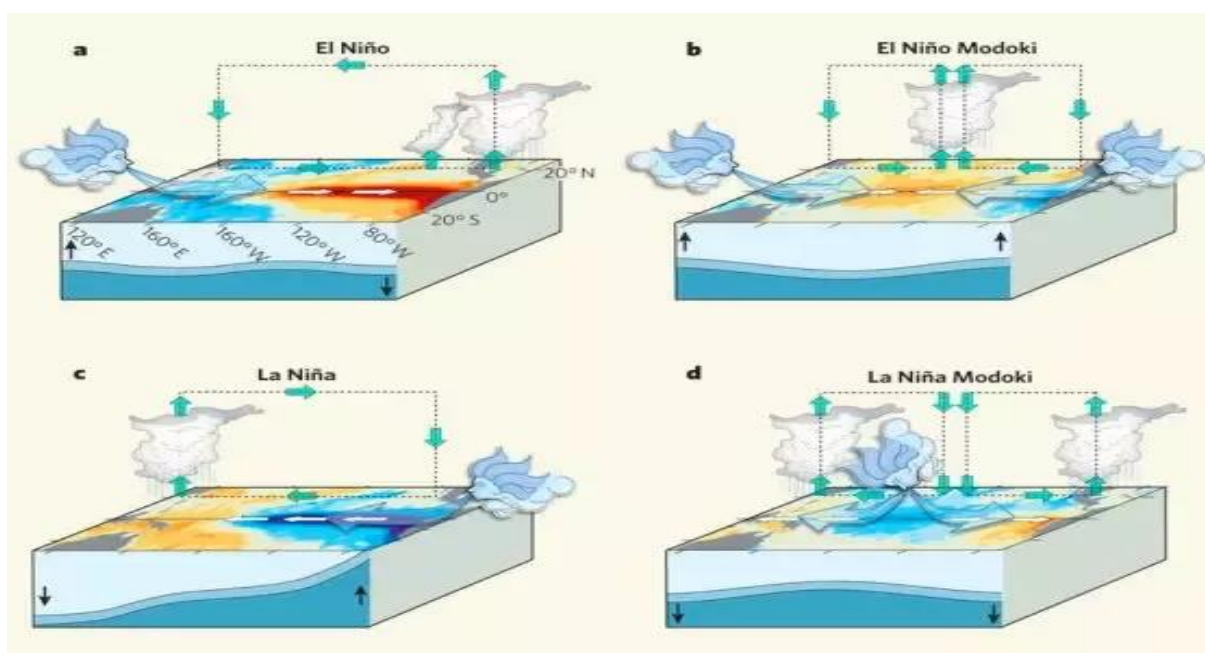


Nino Modoki the sea surface temperature (SST) anomaly in eastern Pacific is not affected, but a warm anomaly arises in the central Pacific flanked by cold anomalies on both sides of the basin as shown in the diagram.

Together with its counterpart La Nina Modoki, when the colder central Pacific is flanked by warmer eastern and western Pacific, the new phenomenon is now called the ENSO Modoki that assumes both warm and cold phases of its behaviour. Several studies have shown that the ENSO Modoki has become more prominent in recent times, as compared to ENSO, and thereby changing the teleconnection pattern arising from the tropical Pacific. Moreover, the associated decadal changes in the sea level are shown to affect not only the islands of the central Pacific but remote regions off California and the southwestern Indian Ocean.

The ENSO Modoki has distinct teleconnections and affects many parts of the world. For example, the West Coast of the United States of America is wet during El Nino but dry during El Nino Modoki. Recent studies show that teleconnections associated with ENSO Modoki influence the rainfall over India and South Africa.

El Nino- La Nina, Modoki





Southern Oscillation:

Southern Oscillation, in oceanography and climatology, is a coherent inter-annual fluctuation of atmospheric pressure over the tropical Indo-Pacific region.

WHAT IS SOUTHERN OSCILLATION ?

Southern Oscillation is the atmospheric component of ENSO and measured in terms of the difference in standardized pressure anomalies over Tahiti and Darwin, and wind anomaly at low level winds (850 mbs level).

Southern Oscillation Index: Negative SOI - 'El Niño'

EL NIÑO CONDITION

Southern Oscillation Index: Positive SOI - 'La Niña'

LA NIÑA CONDITION

El Nino (EN)	Warm water in Eastern Pacific + Coldwater in Western Pacific
Southern Oscillation (SO)	Low Pressure over Eastern Pacific + High Pressure over Western Pacific
ENSO	Warm water in Eastern Pacific + Low Pressure over Eastern Pacific] + [Cold water in Western Pacific + High Pressure over Western Pacific



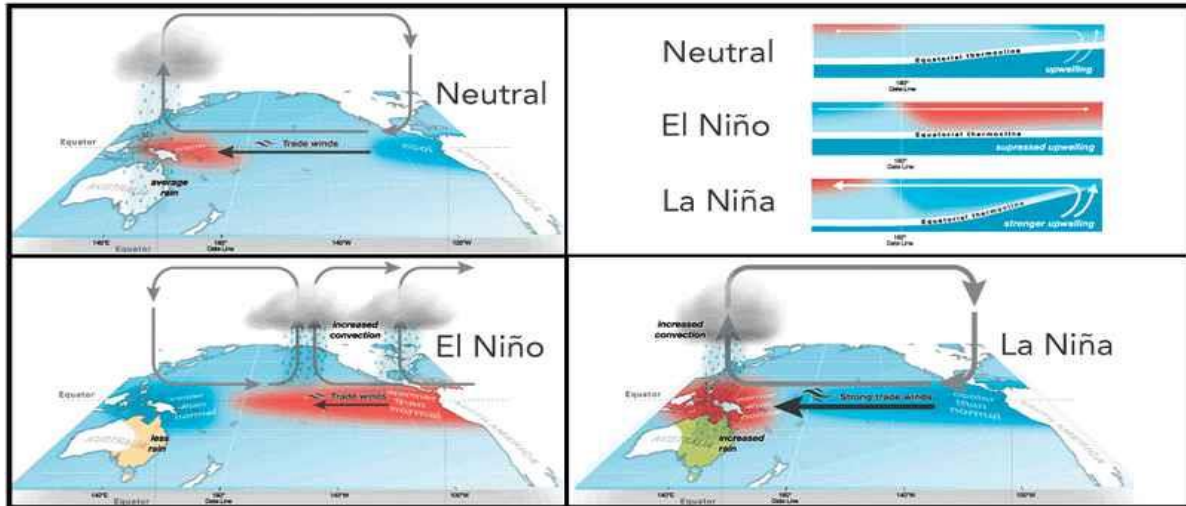
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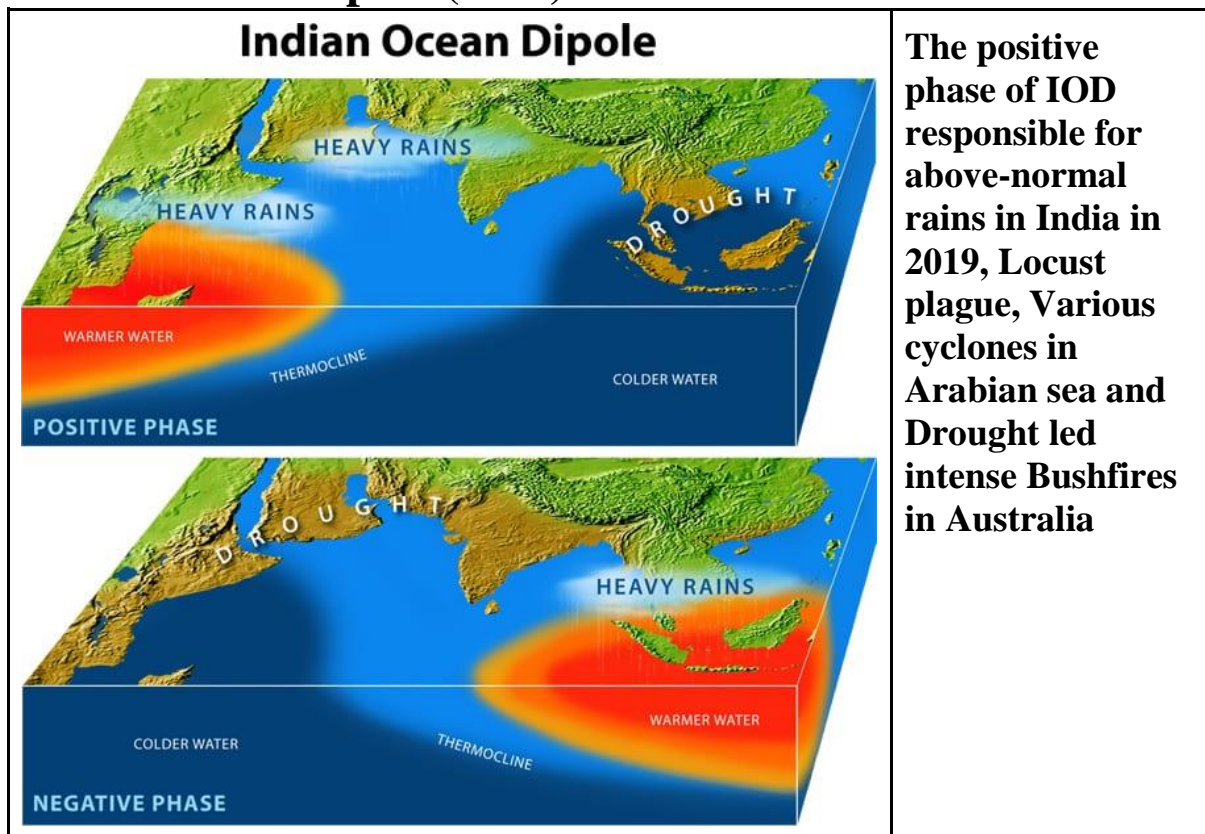


<http://www.sriramsias.com>

3 Phase of ENSO:



Indian Ocean Dipole (IOD):





1. The Indian Ocean Dipole (IOD) is defined by the difference in sea surface temperature between two areas (or poles, hence a dipole) – a western pole in the Arabian Sea (western Indian Ocean) and an eastern pole in the eastern Indian Ocean south of Indonesia.
2. IOD develops in the equatorial region of Indian Ocean from April to May peaking in October.
3. With positive IOD winds over the Indian Ocean blow from east to west (from Bay of Bengal towards the Arabian Sea). This results in the Arabian Sea (the western Indian Ocean near the African Coast) being much warmer and eastern Indian Ocean around Indonesia becoming colder and dry.
4. In the negative dipole year (negative IOD), the reverse happens to make Indonesia much warmer and rainier.
5. It was demonstrated that a positive IOD often negated the effect of ENSO, resulting in increased Monsoon rains in several ENSO years like 1983, 1994 and 1997.
6. Further, it was shown that the two poles of the IOD – the eastern pole (around Indonesia) and the western pole (off the African coast) were independently and cumulatively affecting the quantity of rains for the Monsoon in the Indian subcontinent.

Impact on IOD on Cyclonogenesis in Northern Indian Ocean

1. Positive IOD (Arabian Sea warmer than the Bay of Bengal) results in more cyclones than usual in the Arabian Sea.
2. Negative IOD results in stronger than usual cyclone genesis (Formation of Tropical Cyclones) in the Bay of Bengal. Cyclone genesis in the Arabian Sea is suppressed.

Mains:

1. Positive Phase of the Indian Ocean Dipole (IOD) is responsible for Multiple disasters in Indian Ocean countries. Comment.