

Pacific Decadal Oscillation

August 31, 2023 • vajiramandravi.com



About Pacific Decadal Oscillation (PDO):

- It is a long-term ocean **fluctuation of the Pacific Ocean**.
- The term PDO was coined in about 1996 by Steven Hare at the University of Washington.
- It can be known **only after several years of measuring ocean temperatures** and their interaction with the atmosphere.
- The PDO waxes and wanes **approximately every 20 to 30 years**.
- From ocean surface topography data, together with other ocean and atmospheric data, scientists can determine **whether we are in a 'cool' phase or a 'warm' phase**.
 - **Cool phase:** It is characterized by a cool wedge of lower than normal sea-surface heights/ocean temperatures **in the eastern equatorial Pacific and a warm horseshoe pattern** of higher than normal sea-surface heights connecting **the north, west and southern Pacific**.
 - **'Warm' or 'positive' phase:** In this the **west Pacific Ocean becomes cool** and the wedge in the east warms.

How does this affect climate?

- The change in location of the cold and warm water masses **alters the path of the jet stream.**
 - The jet stream in the northern hemisphere **delivers storms across the United States.**
-

Q1) What is Jet streams?

Jet streams are bands of strong wind that generally blow from west to east all across the globe. They impact weather, air travel and many other things that take place in our atmosphere.

Source: [Cyclone frequency may rise over Indian coast from the warming of Pacific: study](#)

Source: <https://vajiramandravi.com/current-affairs/pacific-decadal-oscillation/>

© Vajiram & Ravi. For personal use only.