

Indian Ocean basin-wide (IOBW) Index

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About Indian Ocean basin-wide (IOBW) Index:

- It represents the **average sea-surface temperature** variations across the **tropical Indian Ocean**.
- It has emerged as a key indicator for predicting the magnitude and timing of dengue epidemics in each country.
- IOBW index's association with the **Southern Hemisphere is stronger** than that with the Northern Hemisphere.
- The index has a more pronounced **impact on temperatures in tropical regions**. Brazil, for example, bears a higher burden of dengue in the Southern Hemisphere.
 - The Northern Hemisphere witnesses a peak dengue epidemic period between July and October and the Southern Hemisphere in February and April, both in the summers.

- Further, the amplitude of dengue incidence was high when the **index was positive** and low when it was negative.
- The link between the Indian Ocean's temperature and dengue incidence is likely due to its influence on regional temperatures through teleconnections, large-scale atmospheric patterns that can transfer heat and moisture across vast distances.

Key facts about Dengue

- It is caused by the **dengue virus (DENV)**
 - **Transmission:** It is transmitted to humans through the bites of infected female mosquitoes, primarily the *Aedes aegypti* mosquito.
 - The severe form of dengue fever, also called dengue hemorrhagic fever, can cause serious bleeding, a sudden drop in blood pressure (shock) and death.
 - It is more common in **tropical and subtropical climates**.
 - **Symptoms:** The most common symptoms are high fever, headache, body aches, nausea and rash.
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Q1: What is the Indian Ocean Dipole?

Indian Ocean Dipole is sometimes referred to as the Indian Nino, is a similar phenomenon, playing out in the relatively smaller area of the Indian Ocean between the Indonesian and Malaysian coastline in the east and the African coastline near Somalia in the west.

Source: [Can changes in Indian Ocean temperatures help predict dengue outbreaks? New paper finds links](#)

Source: <https://vajiramandravi.com/current-affairs/indian-ocean-basin-wide-iobw-index/>

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