



Typhoon Yagi

[Source: IE](#)

Recently, **Typhoon Yagi** has caused severe damage across [Southeast Asia](#), affecting the **Philippines, China, Laos, Myanmar, Thailand**, and particularly **Vietnam**.

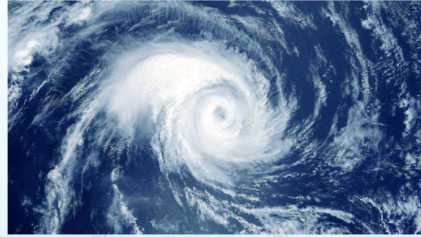
- It is the **strongest tropical cyclone Asia** has encountered till September 2024 and the second most powerful globally after **Hurricane Beryl (Atlantic Ocean)**.
- It originated as a **tropical storm (wind speed upto 63 kmph)** in the western Philippine Sea but became [Category 5 typhoon](#) with winds of **260 kmph**.
 - The **Saffir-Simpson Hurricane Wind Scale** categorizes tropical cyclones from **Category 1 (119-153 kmph) to Category 5 (252 kmph or higher)**. Storms reaching Category 3 and higher are considered major tropical cyclones due to their potential for significant damage."
 - Storm systems with winds of 119 kmph and above are classified as hurricanes, typhoons, or tropical cyclones."
- India launched **Operation "Sadbhav"** to provide aid and urgent supplies to Vietnam, **Laos, and Myanmar**.
 - Operation Sadbhav is part of India's broader effort to contribute to [Humanitarian Assistance and Disaster Relief \(HADR\)](#) within the [ASEAN region](#), in line with its longstanding '[Act Fast Policy](#)'.
- **Reasons for More Intense Typhoons:** Global mean **sea surface temperatures** have **increased** by approximately **0.9°C since 1850**, and **about 0.6°C** in the **past four decades**.
 - Higher sea surface temperatures drive **marine heat waves** and increased **evaporation**, leading to more intense typhoons that form closer to coastlines and intensify rapidly.

Note: Typhoon Bebinca made landfall in **Shanghai, China**. It is the **strongest storm** to hit Shanghai in **75 years**. It is **rare** for Shanghai to get a **direct hit** from strong typhoons, which tend to make landfall further south in China.

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CYCLONE

Cyclones are rapid **inward** air circulation around a **low-pressure** area.

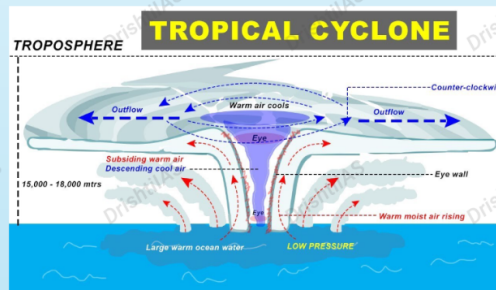


Cyclone v/s Anticyclone

Pressure System	Pressure Condition at the Center	Pattern of Wind Direction	
		Northern Hemisphere	Southern Hemisphere
Cyclone	Low	Anticlockwise	Clockwise
Anticyclone	High	Clockwise	Anticlockwise

Classification

- **Tropical Cyclones;** originate between the **Tropics of Capricorn and Cancer**
- **Extra Tropical/ Temperate Cyclones;** originate in the **Polar Regions**



Conditions for Formation

- Large sea surface with temperature $>27^{\circ}\text{C}$.
- Presence of the **Coriolis force**
- Small **variations in the vertical wind speed**
- **A pre-existing weak low- pressure area**
- **Upper divergence** above the sea level system

Different Names for Tropical Cyclones

- **Typhoons** - Southeast Asia and China
- **Hurricanes** - North Atlantic and eastern Pacific
- **Tornados** - West Africa and southern USA
- **Willy-willies** - Northwest Australia
- **Tropical Cyclones** - Southwest Pacific and Indian Ocean

Nomenclature

- Nodal Authority - **World Meteorological Organization (WMO)**
- Indian Ocean Region - **Bangladesh, India, Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand** contribute to naming cyclones that occur in this region.

Cyclones in India

- **Bi-annual Cyclone Season** - March to May and October to December
- Recent Cyclones - **Tauktae, Vayu, Nisarga and Mekanu** (in Arabian Sea) and **Asani, Amphan, Fani, Nivar, Bulbul, Tittli, Yaas and Sitrang** (in Bay of Bengal)

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