

Distinguish, differentiate, compare and explain what is the difference between Hurricane and Typhoon. Comparison and Differences:

Cyclones, Hurricane and typhoon are storm systems that can produce extremely powerful winds, torrential rain, high waves and damaging storm surges, and can spawn tornadoes. These storm systems origin and develop over large bodies of warm water and eventually may move over land. They are among the most devastating naturally occurring hazards and are capable of producing large-scale devastation on human populations.

## Difference between Hurricane vs Typhoon

1. [Hurricane](#) is tropical cyclone that affects the Atlantic and northeast Pacific ocean. Typhoon is a tropical cyclone that develops in the northwest Pacific ocean.
2. There are about 6 - 10 hurricanes per year. There are about 25 - 30 typhoons per year.
3. Occurrence of Hurricane is possibly between June to November month. Possibility of Typhoon is from May to October.



### What is a Hurricane Definition?

A hurricane is a tropical cyclone in the North Atlantic Ocean, the Northeast Pacific Ocean, east of the dateline, or the South Pacific Ocean east of 160E. The Atlantic hurricane season lasts from June 1 to November 30, with the peak season from mid-August to late October. The Eastern Pacific hurricane season begins May 15 and ends November 30.

Hurricanes are classified according to intensity using the Saffir-Simpson Scale. The destructive power of a hurricane can result in:

- Loss of life
- Buildings destroyed
- Beach and dune erosion
- Road and bridge damage along the coast

The major hazards associated with hurricanes are:

- Storm surge and storm tide
- Heavy rainfall and inland flooding
- High winds
- Rip currents
- Tornadoes

## What are the different names of hurricanes ?

Hurricanes are known by different names depending on where they occur in the world. In the Atlantic and eastern Pacific Ocean, they are called hurricanes. In the western Pacific, they are known as typhoons, and in the Indian Ocean, they are called cyclones.

These storms are essentially the same meteorological phenomenon, but they are given different names based on regional conventions.

## What is a Typhoon by Definition or What causes a Typhoon ?

A typhoon is a tropical cyclone in the Northwest Pacific Ocean west of the International Date Line with sustained winds of (or those that exceed) 74 mph. Typhoons can happen at any time of year, but the season typically runs from July 1 to September 30.

## Classification of Cyclone, Hurricane and Typhoon Based on Geographic Location

- **Hurricane:** North Atlantic Ocean the northeast Pacific Ocean east of the dateline, or the South Pacific east of 160E.
- **Typhoon:** Northwest Pacific Ocean west of the dateline
- **Severe Tropical Cyclone:** Southwest Pacific Ocean west of 160E or southeast Indian Ocean east of 90E
- **Severe Cyclone:** North Indian Ocean
- **Tropical Cyclone:** Southwest Indian Ocean

## What are different types of Hurricane or Cyclones ?

Hurricanes, also known as tropical cyclones, can be categorized into different types based on their intensity and characteristics. Here are some common classifications:

**Tropical Depression:** This is the weakest form of a tropical cyclone, characterized by organized thunderstorms with a defined surface circulation and maximum sustained winds of 38 mph (62 km/h) or less.

**Tropical Storm:** A tropical cyclone becomes a tropical storm when its maximum sustained winds reach between 39 mph (63 km/h) and 73 mph (118 km/h). At this stage, it is assigned a name.

- **Category 1 Hurricane:** A Category 1 hurricane has maximum sustained winds of 74 mph (119 km/h) to 95 mph (153 km/h). It is considered a weak hurricane, but can still cause damage.
- **Category 2 Hurricane:** A Category 2 hurricane has maximum sustained winds of 96 mph (154 km/h) to 110 mph (177 km/h). It is stronger than a Category 1 hurricane and can cause extensive damage.
- **Category 3 Hurricane (Major Hurricane):** A Category 3 hurricane has maximum sustained winds of 111 mph (178 km/h) to 129 mph (208 km/h). It is considered a major hurricane and can cause devastating damage, including widespread power outages and structural damage.
- **Category 4 Hurricane (Major Hurricane):** A Category 4 hurricane has maximum sustained winds of 130 mph (209 km/h) to 156 mph (251 km/h). It is an extremely dangerous storm capable of causing catastrophic damage.
- **Category 5 Hurricane (Major Hurricane):** A Category 5 hurricane has maximum sustained winds of 157 mph (252 km/h) or higher. It is the most powerful and destructive type of hurricane, capable of causing widespread destruction and loss of life.

These categories are based solely on wind speed and do not necessarily reflect the full extent of a hurricane's impact, which can also include storm surge, rainfall, and other factors.

## Cyclone Facts

1. The word "cyclone" is derived from the Greek word "kyklon," meaning "coil of a snake."

2. The strongest winds in a cyclone are found in the eyewall, which surrounds the calm center called the eye.
3. Cyclones can release energy equivalent to thousands of nuclear bombs during their lifespan.
4. The deadliest cyclone disaster on record occurred in 1970 in Bangladesh (then East Pakistan), causing around 300,000 fatalities.
5. Cyclones rotate counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere due to the Coriolis effect.
6. Storm surges, caused by cyclones pushing seawater ashore, can be the most damaging aspect of a cyclone, causing widespread flooding and coastal erosion.
7. Cyclones can affect regions far inland, bringing heavy rainfall and flooding hundreds of kilometers from the coast.
8. The eye of a cyclone can sometimes be visible from space as a distinct feature, surrounded by a symmetrical cloud structure.
9. Cyclones can have secondary effects on ecosystems, including disrupting marine habitats, altering coastal landscapes, and influencing weather patterns.

These information and facts capture the awe-inspiring and sometimes devastating nature of cyclones while also highlighting their importance in Earth's atmospheric and oceanic systems.

## **Super typhoon**

*Super typhoon* is a term used to describe typhoons that reach maximum sustained 1-minute surface winds of at least 150 miles per hour (240 kilometers per hour). These are extremely intense tropical cyclones, equivalent to Category 4 or 5 hurricanes on the Saffir-Simpson Hurricane Wind Scale used in the Atlantic Basin.

Super typhoons are capable of causing catastrophic damage due to their powerful winds, heavy rainfall, and storm surge. They can devastate coastal areas, causing widespread destruction to infrastructure, homes, and vegetation. The impacts of super typhoons can be particularly severe in densely populated regions, especially if proper preparedness measures and evacuation procedures are not in place.