Cyclone Tauktae

A low-pressure area over the Arabian Sea first concentrated into a depression and later intensified into a cyclonic storm named 'Cyclone Tauktae'. The West Coast of India has been affected by the cyclone. It is the first cyclone of 2021.

Some brief facts about Tauktae Cyclone for the IAS Exam are given below:

What kind of a cyclone is Tauktae?	It is a tropical cyclone, termed as 'Extreme Severe Cyclonic Storm' (ESCS) and 'Very Severe Cyclonic Storm' (VSCS)
What is the meaning of the name 'Tauktae'?	It means 'Gecko' (in Burmese Language) which is a highly vocal lizard
Which country has given the name 'Tauktae'?	Myanmar has named this cyclone 'Tauktae'.
How are cyclones named?	13 countries of the World Meteorological Organization/United Nations Economic and Social Commission for Asia and the Pacific (WMO/ESCAP) Panel on Tropical Cyclones (PTC) name the cyclones

In 2020, the following cyclones hit the Indian regions:

1. Cyclone Nisarga
2. Cyclone Amphan

Arabian Sea and Cyclone Tauktae

Due to global warming Arabian Sea has been warming up in recent years and Cyclone Taukate is the fourth cyclone in consecutive years to have originated from the sea. Typically, out of the average of five cyclones that develop annually in the Bay of Bengal and Arabian Sea region, four are formed over the Bay of Bengal (It being warmer than the Arabian Sea).

The warmer temperature supports active convection, heavy rainfall, and intense cyclone activity.

However, Arabian Sea water too is warming up which provides an ample amount of energy that enables the intensification of tropical cyclones. Cyclone Tauktae is the result of the same process where the warm waters of the Arabian Sea (up to the depths of 50 metres) led to a low-pressure system that underwent multiple stages of intensification to form a cyclone.

Facts about Cyclone Tauktae

1. It has originated over the Arabian Sea.
2. After Cyclone Vayu of 2019 and Cyclone Nisarga of 2020, Taukate Cyclone has come very close to the west coast of India for the third consecutive year.
3. Cyclone Tauktae has made 2021 the fourth consecutive year to witness the development of a cyclone over the Arabian Sea in a pre-monsoon period.
4. The Indian coastal regions of the following states are affected by Cyclone Tauktae:
    - Gujarat
    - Maharashtra
    - Goa
    - Kerala
    - Karnataka, and
    - Tamil Nadu

For upcoming prelims examination, revise previous year Topic-wise UPSC Prelims Questions compiled in the linked article.

Cyclone Tauktae – State Preparedness

IMD

Indian Meteorological Department (IMD) is the Indian agency to monitor the development of tropical cyclones in its area of responsibility and provides advisory information to ICAO, DGCA, Meteorological Watch offices in the country and neighbouring countries as well.

In the wake of Cyclone Tauktae, IMD has released relevant information and put places on alerts to avoid any severe impact caused by it.

As of 17th May 2021, the IMD released the following information:

- The Cyclone Tauktae that originated over the East Central Arabian Sea has moved north and northwestwards with a speed of 15kmph.
- Coastal Mumbai, South-South East of Diu, South-South East of Veraval (Gujarat) are to be impacted.
- It is expected to reach Gujarat Coast and cross it between Porbandar and Mahuva with a speed of 155-165 kmph by the evening of Monday (17th May.)

As per the IMD, the track and intensity of the Cyclone Tauktae are given below:

Image Source – IMD

Date/Time	Maximum Sustained Speed	Cyclonic Disturbance Category
17th May 2021 (3AM-6PM)	180-190kmph to 150-160 kmph by evening	Extremely Severe Cyclonic Storm to Very Severe Cyclonic Storm
18th May 2021 (12 AM to 12 PM)	110-120kmph to 70-80 kmph by noon	Severe Cyclonic Storm to Cyclonic Storm
19th May 2021 (12 AM)	40-50 kmph	Depression

- **INSAT-3D**

ISRO's meteorological satellite is being used which is designed for enhanced meteorological observations and monitoring of land and ocean surfaces for weather forecasting and disaster warning. The imagery released by INSAT 3D is helping track the cyclone.

Conclusion

A few terms/topics in relation to cyclones that a UPSC 2021 candidate should know about:

1. Cyclogenesis – The development and strengthening of cyclones in the atmosphere.
2. Low-pressure area – The region where the atmospheric pressure at sea level is below that of surrounding locations. Areas of wind divergence that occur in upper levels of the troposphere are associated with low-pressure systems.
3. High-pressure area – Light winds at the surface and subsidence at the lower portion of the troposphere are commonly associated with high-pressure areas.
4. Cyclone Disaster Management – Read about it in the linked article.

5. Extra-Tropical Cyclones – Read about it in the linked article.