Arabian Sea- hotbed of cyclones

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In news: Recently **extremely severe cyclonic storm Tauktae** pummelled India's western coasts from Kerala and Tamil Nadu to Maharashtra and Gujarat.

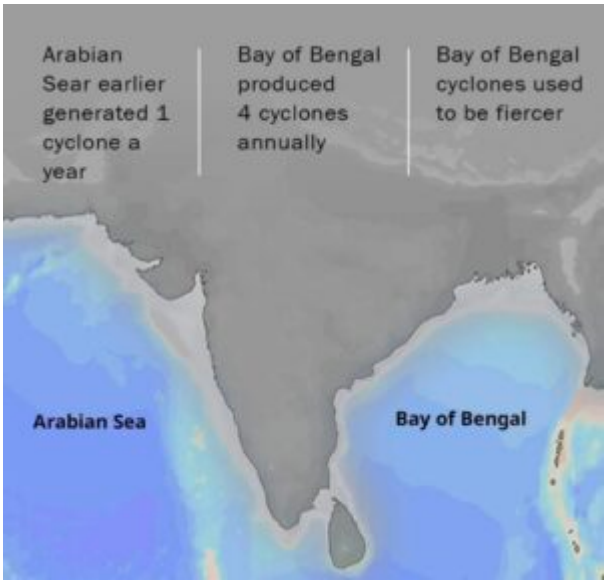
About frequency of Cyclones in Arabian Sea-

- It is the first major cyclone to originate in the Arabian Sea in 2021.
- As per convention, the average number of cyclones building in the north Indian Ocean has been five in a year and only one of the five usually emerge in the Arabian Sea.
- However, in 2018, while the Bay of Bengal maintained its average of four cyclones a year, the Arabian Sea produced three cyclonic storms.

- **In 2019, the Arabian Sea overtook the Bay of Bengal with five cyclones to three.**

- In 2020, the Bay of Bengal produced three cyclonic storms while the Arabian Sea generated two.
- Scientists have attributed the increased frequency of cyclones in the Arabian Sea to **climate change.**
- According to the Intergovernmental Panel on Climate Change (IPCC), the sea surface temperature of the Arabian Sea is rising.
- Since satellite records began in India in 1980, this is the **first time that pre-monsoon cyclones have been recorded in the Arabian Sea for four consecutive years.**
- The western tropical Indian Ocean has turned out to be the largest contributor to the overall trend in the **global mean sea surface temperature (SST).**
- As Indian ocean has absorbed 90% of the excess heat

generated by greenhouse gas (GHG) emissions since 1970, it has led to **anomalous ocean warming**, which in turn makes cyclones intensify rapidly.



IMD classification of cyclones:

Cyclones are classified on the **basis of the wind speed.**

- The lowest official classification used in the North Indian Ocean is a **Depression**, which has a 3-minute sustained wind speeds of between ***20–31 mph (31–50km/h).***
- **Deep Depression:** If the depression intensifies further then it will become a Deep Depression, which has speeds of between ***32–38 mph (51–62 km/h).***
- **Cyclonic storm:** If the Deep Depression develops gale force wind speeds of between ***39–54 mph (63–88 km/h),*** it is called a Cyclonic storm and the Indian Meteorological Department (IMD) assigns a name to it.
- **Severe Cyclonic Storm:** They have storm force wind speeds of between ***55–72 mph (89–117 km/h).***
- **Very Severe Cyclonic Storm:** They have hurricane-force winds of ***73–102 mph (118–165 km/h).***
- **Extremely Severe Cyclonic Storm:** They have hurricane-force winds of ***104–137 mph (166–220 km/h).***

Super Cyclonic Storm: The highest classification used in the

North Indian Ocean which have hurricane-force winds of above ***138 mph (221 km/h).***

More information- The naming of cyclones – JournalsOfIndia