Cyclones

1

LA FRESQUE DU CLIMAT
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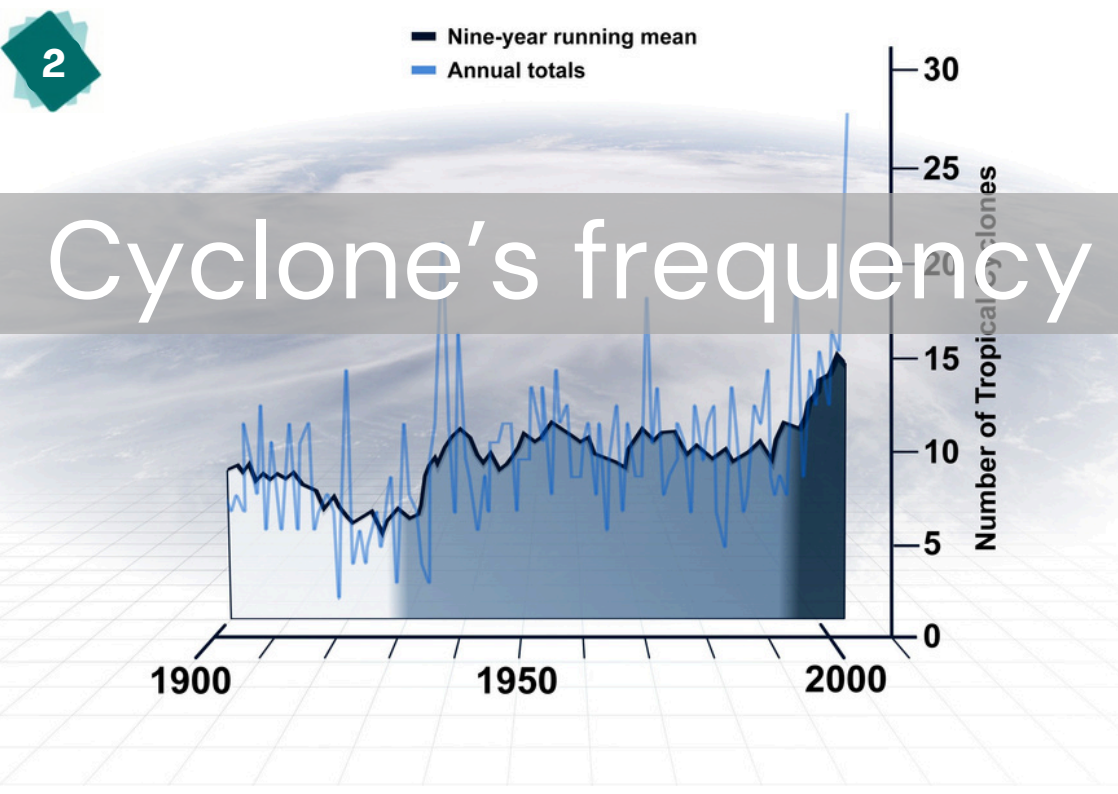
A cyclone is a weather phenomenon characterized by low atmospheric pressure at its center, surrounded by circulating winds that spiral inward. Depending on their location, cyclones can ba called hurricanes or typhoons. These storms are accompanied by strong winds, heavy rainfall, and storm surges. They form over warm ocean waters and can cause widespread damage to infrastructure and ecosystems.

2

Cyclone’s frequency



2

LA FRESQUE DU CL!MAT
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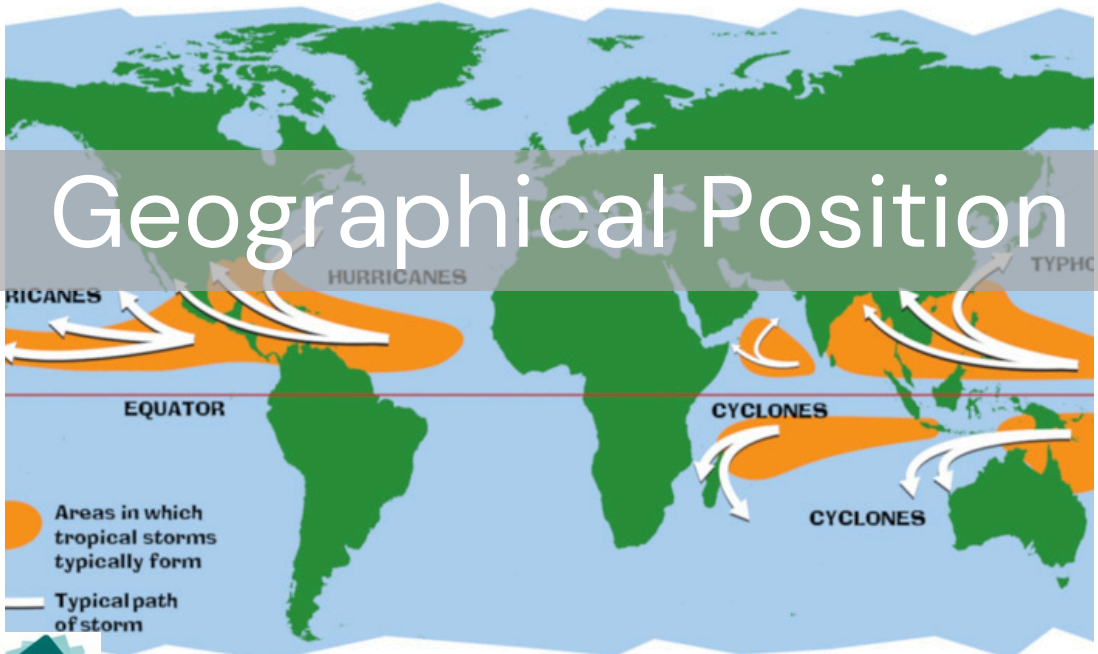
Since the 1970s, there has been an observed increase in tropical cyclone activity in the North Atlantic, with a sharper rise in the 2000s. In 2020, a record 30 cyclone systems were recorded. The 1991-2020 climatology over the North Atlantic shows an average of 14 named storms per year, including 3 major hurricanes and 4 other hurricanes.

Geographical Position



3

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The geographic position plays a pivotal role in cyclone formation. Warm ocean waters between the tropics of Cancer and Capricorn provide the ideal breeding ground. Key factors include sea surface temperature, thermal energy, Coriolis force, and wind shear. Understanding these geographical elements is essential for predicting and preparing for cyclones.

Environment Impacts

4

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Cyclones devastate ecosystems, uprooting trees, altering landscapes, and disrupting marine life. Heavy rains cause soil erosion and introduce pollutants, while coastal areas suffer from flooding and habitat loss. Understanding these impacts is crucial for disaster preparedness and conservation efforts to mitigate environmental damage.

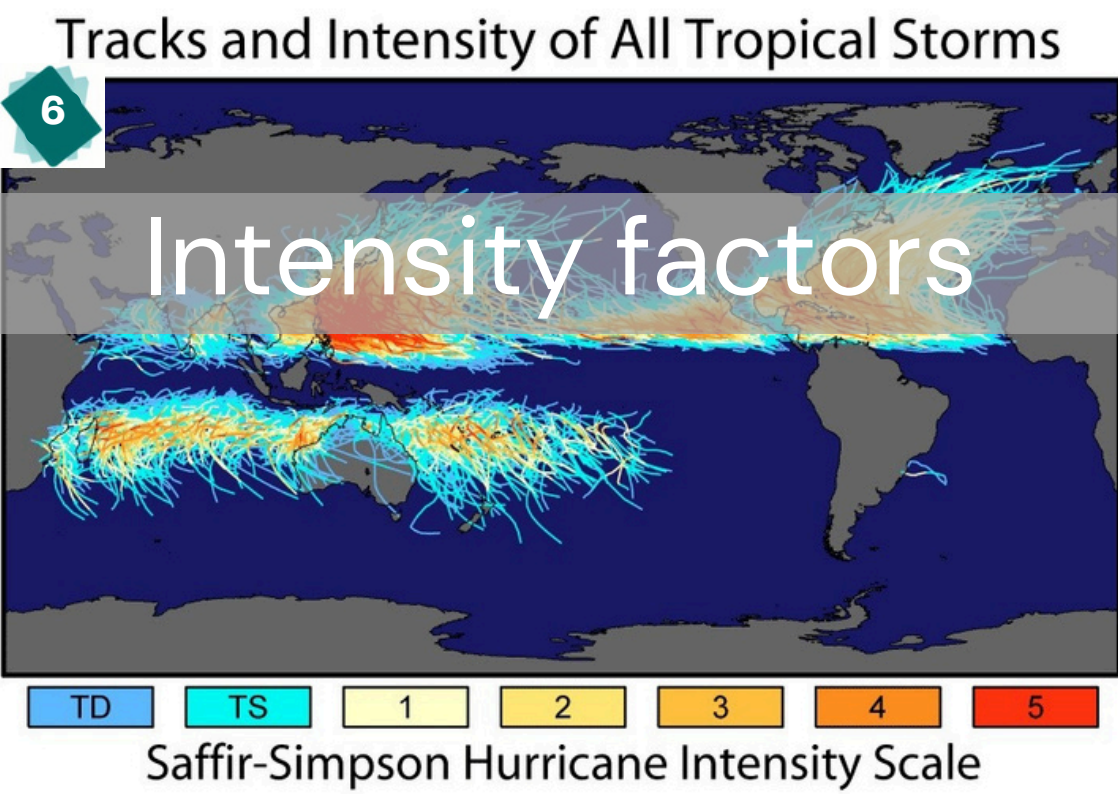
Human consequences

5

Cyclones particularly affect the most vulnerable communities, causing numerous deaths, social disruptions, and economic losses. A genuine understanding of these impacts is crucial for developing effective strategies and managing the resulting issues, aiming to reduce the social consequences of cyclones and assist communities in their recovery.

6

Intensity factors



6

LA FRESQUE DU CL!MAT
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Tropical cyclones are powerful weather phenomena. Their intensity is influenced by sea surface temperature, vertical wind shear, atmospheric humidity, Coriolis force, and wind convergence near the Intertropical Convergence Zone. Pre-existing atmospheric disturbances and underwater topography can also play a role. The Simpson scale classify this intensity, from 1 to 5.