

Tropical Cyclones

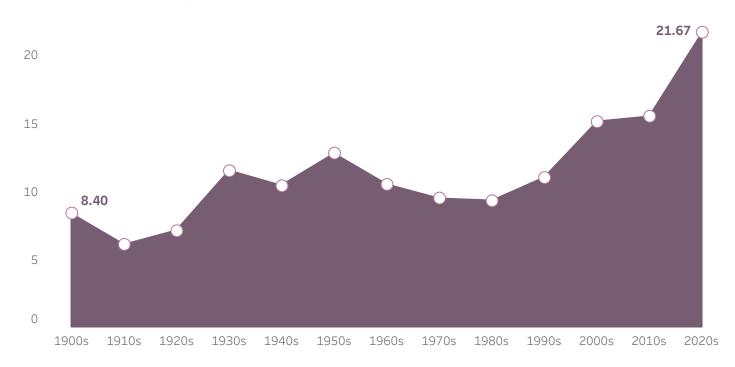
More than 125 million people,

have been displaced by tropical cyclones between

1985 and 2020 with a further 300

thousand people losing their lives to these ferocious weather events. These powerful weather events can be classified into three categories: tropical depressions, with maximum sustained winds of 38 mph or less, tropical storms, with sustained winds between 39 mph and 73 mph and hurricanes, the strongest type of tropical storm, with sustained winds of 74 mph or higher. As global temperatures rise and atmospheric moisture increases, we are witnessing more frequent and severe tropical cyclon..

Frequency of annual named storms in the North Atlantic Ocean between 1900 and 2022, by decade average



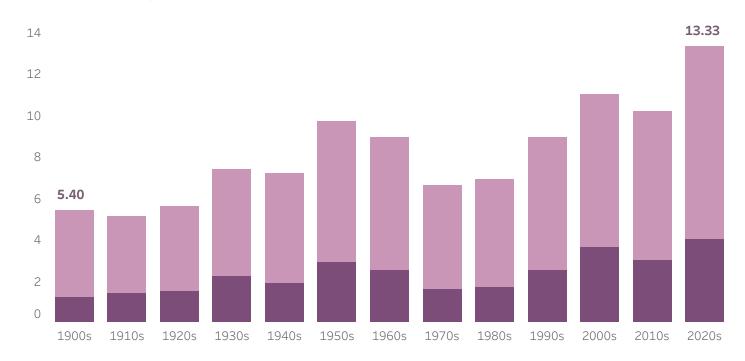
The most severe and dangerous tropical cyclones that are either tropical storms or hurricanes are often given names in order to make it easier to communicate between meteorologists and the public.

In 2020, there were 30 named storms witch set a record for the number of named storms in a calendar year.

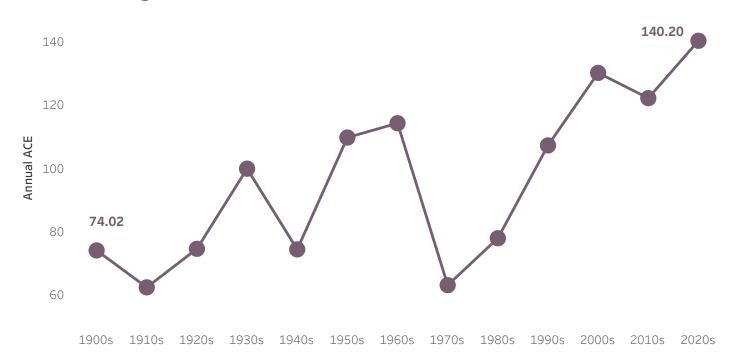
Hurricanes, the most deadly type of tropical storms, are assigned a category between 1 and 5 based on their wind speeds and severity. The most dangerous hurricanes, known as major hurricanes, are those that are at least a category 3.

So far, the 2020s, have seen an average of 9.33 annual hurricanes in the North Atlantic, setting a record for the highest frequency of the most dangerous storms of any decade on record.

Frequency of **Hurricanes** and **Major Hurricanes** in the North Atlantic Ocean, 1900-2022, by decade average



Annual accumulated Cyclone energy in the North Atlantic, 1900-2022, by decade average



Accumulated Cyclone Energy (ACE) is a metric used to express the energy released by a tropical cyclone during its lifetime. It is calculated by summing the square of a storm's maximum sustained winds, measured every six hours. The annual accumulated cyclone energy refers to the sum of all tropical cyclones' energy over a calendar year.

Once again, we see a record average annual ACE in the 2020s, with an average of 140