

# Derecho

July 9, 2022

**In news**– Several states in the US were hit by a **storm system called a derecho** that turned the sky green in the country recently.

## **What is Derecho?**

- Derechos are **fast-moving bands of thunderstorms with destructive winds**. The winds can be as strong as those found in hurricanes or even tornadoes.
- According to the US's National Weather Service **derecho is a widespread, long-lived, straight-line windstorm** that is **associated with a band of rapidly moving showers or thunderstorms**.
- **The name comes from the Spanish word 'la derecha' which means 'straight'**.
- Straight-line storms are those in which thunderstorm **winds have no rotation unlike a tornado**. These storms travel hundreds of miles and **cover a vast area**.
- **Being a warm-weather phenomenon, a derecho generally, not always occurs during summertime** beginning May, with most hitting in June and July. They mostly **occur across central and eastern parts of the United States**.
- However, **they are a rare occurrence as compared to other storm systems like tornadoes or hurricanes**.
- **Derecho fall into three categories** – progressive, serial and hybrid.
  - **A progressive derecho is associated with a short line of thunderstorms** that may travel for hundreds of miles along a relatively narrow path. It is a summer phenomenon.
  - **A serial derecho, on the other hand, has an extensive squall line**, wide and long – sweeping across a large area. It usually occurs during spring or fall.

- **Hybrid ones have the features of both progressive and serial derechos.**
- **For a storm to be classified as a derecho it must have wind gusts of at least 93 km per hour; wind damage swath extending more than 400 km and the time gap between successive wind damage events should not be more than three hours.**
- **The May 8, 2009 “Super Derecho” was one of the “most intense and unusual derechos ever observed” in the US as it swept from Kansas to Kentucky with wind speeds reaching up to 170 km/hr.**
- **Derechos have also been documented elsewhere across the world. In 2010, Russia witnessed its first documented derecho.**
- **They have also swept through Germany and Finland, and more recently in Bulgaria and Poland.**

**Why did the sky turn green during the derecho that hit US recently?**

- **Severe thunderstorms result in a ‘green sky’ due to light interacting with the huge amount of water they hold.**
- **It is believed that the big raindrops and hail scatter away all but the blue wavelengths due to which primarily blue light penetrates below the storm cloud.**
- **The report also stated that this blue then combines with the red-yellow of the afternoon or the evening sun to produce green.**