Polar vortex brings spring snow to parts of North America

Part of: GS-I- Geography (PT-MAINS-PERSONALITY TEST)

Winter in May - snowfall covers parts of northeast United States and Canada. A polar vortex has brought cold weather and springtime snow to parts of the northeast United States and Canada. The stream of arctic air slipped south on Saturday, bringing the unusual weather. In many areas, snow flurries fell against a backdrop of sunny skies, green trees and flowers. The US National Weather Service issued a freeze warning extending into early Sunday for most of the country's northeast. Parts of New Jersey woke up to a rather cold surprise on Saturday with a dusting of snow as temperatures in some areas of the US state dropped to below zero degrees Celsius.

What it is?

Recently, the United States is grappling with extreme cold with temperature reaching to -30°C in cities like Chicago and Dakota.

- This is caused by a blast of Arctic air, which is a result of a “polar vortex” event.
- The polar vortex is a large area of low pressure and cold air surrounding both of the Earth’s poles. It was also known as the Polar Pig.
- The term "vortex" refers to the counterclockwise flow of air that helps keep the colder air near the Poles. It always exists near the poles, but weakens in summer and strengthens in winter.
- However, many times during winter in the northern hemisphere, the polar vortex will expand, sending cold air southward. This occurs fairly regularly during wintertime and is often associated with large outbreaks of Arctic air in the United States and portions of Europe and Asia.
- It is also not a feature that exists at the Earth’s surface, rather it exists tens of thousands of feet up in the atmosphere.
- By itself, the only danger to humans is the magnitude of how cold temperatures will get when the polar vortex expands, sending Arctic air southward into areas that are not typically that cold.

How is it Linked to Global Warming

- The global temperature has risen by 0.8°C since 1880.
- The Arctic has warmed over twice the average.
- The temperature difference between North Pole and regions like North America has reduced.
- The energy generated by the jet stream travels upward and disrupts the polar vortex, causing it to split.
- One of these two "child" vortices has visited North America this week, causing the record temperatures.