VEGETATION IN ANTARTICA : ENVIRONMENT

NEWS : As green patch spreads in Antarctica, here's what is worrying scientists

WHAT'S IN THE NEWS ?

In a new analysis, researchers used satellite imagery and data to conclude that the extent of vegetation in the Antarctic Peninsula has increased 14 times in just 35 years.

Warming and Vegetation Growth in Antarctica:

Antarctica Warming:

- Antarctica is warming at twice the global average (0.22-0.32°C per decade).
- The Antarctic Peninsula is warming five times faster than the global average.
- Since 1950, the Antarctic Peninsula has warmed by almost 3°C.

Record Heat:

- In July 2024, ground temperatures were 10°C higher than normal, with some areas seeing a 28°C increase.
- In March 2022, East Antarctica experienced a heatwave with temperatures 39°C above normal.

Vegetation Growth:

- Between 1986 and 2021, plant cover (mosses and lichens) increased 14-fold on the Antarctic Peninsula.
- Plant cover expanded from less than 1 sq km to almost 12 sq km.
- The greening rate accelerated by 30% between 2016 and 2021, attributed to climate change.

Sea Ice Reduction:

- In 2024, the extent of sea ice was the second smallest on record.
- Warmer seas create wetter conditions, supporting plant growth.

Concerns:

- **Invasive Species**: Increased plant cover may lead to soils that allow invasive species, potentially threatening native species.
- **Sunlight Reflection**: Increased vegetation reduces sunlight reflection (albedo), leading to more heat absorption and further warming.

Ice Loss and Sea Level Rise:

- Antarctica lost 280% more ice in the 2000s and 2010s compared to the 1980s and 1990s.
- Rising temperatures will accelerate ice loss, contributing to global sea level rise.

Future Outlook:

- As greenhouse gases accumulate, further warming and increased vegetation in Antarctica are expected.

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