Triple Cyclones in South Pacific Ocean

Why in News?

Satellite imagery has recently revealed a rare meteorological event in the South Pacific Ocean, with three tropical cyclones being simultaneously active in the region.

- Cyclones, named ***Rae, Seru, and Alfred***, developed within a span of 5 days.
- They are currently swirling in waters off the *eastern coast of Australia* and extending approximately 8,000 kilometres into the Pacific Ocean.
- **Unusual Phenomenon -** The occurrence of 3 such storms simultaneously is especially unusual this season, as the planet is currently experiencing a ***La Nina phase.***
- La Nina climate phase usually ***cools ocean temperatures***, reducing the energy available to fuel tropical storms.
- As a result, scientists had predicted fewer than average tropical cyclones for the region this year.
- **Influencing Factors -** The climate crisis is playing a role in intensifying such weather events, as rising ocean temperatures provide additional energy for tropical storms.
- The year 2024 has already recorded the highest ocean temperatures in history.
- While global warming is not increasing the overall number of storms, it is contributing to a rise in the frequency and intensity of higher-category cyclones.
- **Madden-Julian Oscillation (MJO)** - It is also pointed to the presence of a phenomenon known as the Madden-Julian Oscillation (MJO).
- This atmospheric fluctuation creates a zone of rising air and increased rainfall that moves around the globe, lasting for 30 days or more.
- MJO appears to be moving across the south-western Pacific in a manner that could amplify cyclone activity.
- Research also suggests that these storms are moving more slowly over land, increasing their potential for destruction.
- This rare event highlights the complexity of atmospheric systems and the challenges in forecasting extreme weather patterns.

Reference

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