GOSAT-GW Satellite

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Why in news?

Recently Japan launched its third satellite in the Japan's mission to greenhouse gases in the atmosphere.

- **GOSAT-GW –** Global Observing Satellite for Greenhouse gases and Water cycle.
- **Developed by** – **Japan Aerospace Exploration Agency (JAXA)**.
- **Aim** - To monitor carbon, methane, and other greenhouse gases in the atmosphere.
- It monitors aspects of the global water cycle, including sea surface temperature and precipitation.
- **Launch** – It is launched on June 29, 2025, from Tanegashima Space Center, Japan.
- It is launched using Japan's H-2A rocket, which completed its 50th mission.
- **GOSAT series** – It is the third satellite in the **GOSAT series** following GOSAT and GOSAT-2.
- **Global collaboration** – Within one year, it will begin distributing data to users worldwide, including the U.S. National Oceanic and Atmospheric Administration (NOAA).
- **Significance** – It supports climate change mitigation efforts by providing high-resolution environmental data.
- It aims to improve global understanding of greenhouse gas emissions, water cycle changes and aids in tracking progress toward net-zero emissions targets.
- It supports disaster management through better rainfall and ocean temperature data.
- It helps in monitoring of sea surface temperature and precipitation.
- It supports global climate models and policies by providing high-resolution data.

Quick Facts

• **H-2A rocket** – It is introduced in 2001 and carried major missions like Japan's SLIM moon lander and Hayabusa2 asteroid probe.
• It is retired after this mission and will be replaced by H3 rocket, designed to be more cost-competitive and capable of carrying larger payloads.

Reference

The Hindu| Japan launches climate change monitoring satellite

