

# GEMINI (Gagan Enabled Mariner's Instrument for Navigation and Information)

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**Why in news?**

The Union Ministry of Earth Sciences has launched its GEMINI system.

**What is GEMINI?**



- It is a device developed to effectively disseminate emergency information and communication to fishermen on Ocean States Forecasting and Mapping of Potential Fishing Zones (PFZ).
- Ocean States Forecast provides accurate information about the oceans which includes the forecasts related to winds, waves, ocean currents, water temperature, etc. PFZ provide information about the probable locations of fish aggregation in the seas to the fishermen.
- GEMINI is a portable receiver that is linked to ISRO-satellites. With this device, the fishermen outside the signal range of their phone companies can get warnings and alerts, as the device can send signals up to 300 nautical miles. It will facilitate satellite-based communication that will be highly useful while dealing with cyclones, high waves, and tsunamis.
- Indian National Centre for Ocean Information Services (INCOIS) in collaboration with the Airports Authority of India utilized the GAGAN (GPS Aided Geo Augmented Navigation) satellite while developing the GEMINI device.

- GAGAN was developed by ISRO and the Airports Authority of India. It is India's first satellite-based global positioning system that relies on ISRO's GSAT satellites. The drawback of this device is that it only allows one-way communication, meaning it can't be used by fishermen to make calls. Also, it is relatively expensive for the average fisherman.