

GEMINI

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

Source: *Press Information Bureau*

For seamless and effective dissemination of emergency information and communication on disaster warnings, Potential Fishing Zones (PFZ) and Ocean States Forecasts (OSF) to fishermen, the Government launched the **Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI) device.**

Key highlights

- **Potential Fishing Zones (PFZ):** PFZ Advisories provide information on the probable locations on fish aggregation in the seas
- **Ocean States Forecasts (OSF):** OSF provide the accurate state of the ocean and Ocean State Forecasts include the forecasts on winds, waves, ocean currents, water temperature, etc. at every 6 hrs on daily basis for next 5 days helping fishermen in maximizing their earnings, ensuring safety and in planning of fishing activities
- **Indian National Centre for Ocean Information Services (INCOIS),** an autonomous body under the Ministry of Earth Sciences (MoES) joined hands with Airports Authority of India (AAI) to utilize the GAGAN (GPS Aided Geo Augmented Navigation) satellite system to transmit the PFZ, OSF and disaster warnings to fishermen with GAGAN system consisting of three geosynchronous satellites (GSAT-8, GSAT-10 and GSAT-15).
- GAGAN foot-print covers the entire Indian Ocean round the clock
- On the occasion, the Earth Science Minister also inaugurated the PFZ forecasts, newly developed by INCOIS

which will provide advisories on PFZ to fishermen 3 days in advance.

- The Minister stated, that the PFZ advisories have become part of the value chain of the fishing community, over 6 lakh fishermen are regularly accessing advisories directly through their mobiles to avoid the wastage of time for searching shoals of fish.
- **The PFZ forecasts are generated using numerical models operationalized by INCOIS** and helps overcome the operational difficulties in providing the PFZ advisories during overcast skies based on satellite data.

Who developed GEMINI?

- To receive the messages transmitted through the GAGAN satellites, **INCOIS together with AAI developed a low-cost GAGAN system-enabled GEMINI** (GAGAN Enabled Mariner's Instrument for Navigation and Information) device and **electronically designed and manufactured by a private industry M/S Acord, Bangalore** under Make in India Program.

How does GEMINI work?

The GEMINI device receives and transfers the data received from GAGAN satellite/s to a mobile through Bluetooth communication. A mobile application developed by INCOIS decodes and displays the information **in nine regional languages.**