



INS TARINI: DEFENCE

NEWS: INSV Tarini crosses Point Nemo, the Oceanic Pole of Inaccessibility in South Pacific

WHAT'S IN THE NEWS?

INSV Tarini successfully sailed through Point Nemo, marking a historic milestone in the Navika Sagar Parikrama II mission. This scientific and exploratory expedition is focused on global circumnavigation, oceanographic research, and maritime excellence, strengthening India's naval prowess. The mission also includes collecting water samples from the world's most remote oceanic location, Point Nemo, which will be analyzed by the National Institute of Oceanography for valuable data on marine biodiversity and chemical composition.

1. Navika Sagar Parikrama II – India's Global Maritime Expedition

Objective & Significance

- Aims to enhance India's presence in oceanic research, naval exploration, and scientific collaboration.
- Supports maritime and scientific diplomacy by engaging in environmental research and navigation excellence.
- Promotes women's participation in naval missions, following the success of Navika Sagar Parikrama I (2017-18).

Mission Timeline & Route

- **Start Date:** October 2, 2024, from Goa.
- **Duration:** 8 months (expected to complete in May 2025).
- **Voyage Route:**
 1. Goa → Lyttelton Port, New Zealand
 2. Point Nemo, South Pacific Ocean
 3. Port Stanley, Falkland Islands
 4. Return to Goa

Historical Context – Navika Sagar Parikrama I

- Conducted in 2017-18, it was India's first all-women circumnavigation mission, led by six women officers of the Indian Navy.
- It set a precedent for gender inclusivity in naval operations and showcased India's maritime expertise.



2. INSV Tarini – India’s Advanced Sailing Vessel

Specifications & Capabilities

- **Built by:** Aquarius Shipyard Ltd., Goa, under the **Make in India** initiative.
- **Inducted into the Indian Navy:** February 2017.
- **Type:** 56-foot sailing vessel designed for **long-duration global voyages**.

Advanced Features

- **Raymarine navigation suite** for precise tracking.
- **Satellite communication system** for real-time data transmission.
- **Emergency steering and life-support systems**, ensuring safety in extreme conditions.
- Capable of sailing in **harsh weather** and handling **long-haul oceanic missions**.



3. Point Nemo – The Most Remote Location on Earth

Geographical & Scientific Importance

- Also known as: **The Oceanic Pole of Inaccessibility**.
- **Location:** South Pacific Ocean.
- **Distance from the nearest landmass:** 2,688 km (from Ducie Island, Pitcairn Islands).



- Farthest point from any human settlement – the nearest human presence is the International Space Station (ISS), orbiting above at approx. 400 km altitude.

Spacecraft Graveyard – A Strategic Decommissioning Site

- Point Nemo is used by space agencies (NASA, Roscosmos, ESA, etc.) to deorbit old satellites and spacecraft.
- Prevents space debris from falling into populated areas by ensuring safe oceanic reentry.

4. Scientific Exploration at Point Nemo – Water Sample Collection & Research

Oceanographic Research Initiative

- INSV Tarini collected water samples from Point Nemo, which will be analyzed by the National Institute of Oceanography.
- **Key Research Areas:**
 - **Marine biodiversity:** Studying rare microorganisms and deep-sea life in an isolated ecosystem.
 - **Chemical composition:** Examining water salinity, pollutants, and microplastics.
 - **Climate change impact:** Understanding carbon absorption and temperature variations in remote oceanic waters.
- **Significance of the Study:**
 - Enhances India's contribution to global oceanographic research.
 - Supports environmental and climate science by assessing pollution levels and biodiversity patterns in the most isolated marine region on Earth.

Source: <https://www.thehindu.com/news/national/insv-tarini-crosses-point-nemo-the-oceanic-pole-of-inaccessibility-in-south-pacific/article69159751.ece>