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National Centre for Polar and Ocean Research (NCPOR)

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The **six himalayan glaciers**, monitored by the National Centre for Polar and Ocean Research (NCPOR), have been **retreating** in the range of **13 to 33 millimetres per year**.

- Six glaciers i.e. Sutri Dhaka, Batal, Bara Shigri, Samudra Tapu, Gepang Gath and Kunzum, are monitored for mass, energy and hydrological balance.
Debris of thickness above two centimetres have reduced the melting rates up to 70 %, whereas the debris cover of below two centimetres thickness has accelerated melting up to 10 % of the total melting.
- The NCPOR has undertaken studies in the Western Himalaya in Chandra basin in Lahaul-Spiti (Himachal Pradesh) since 2013.
- The NCPOR has also established a high altitude research station named 'Himansh' in **Himalaya** at 4,000 metres altitude at Sutri Dhaka.
- It was established as an autonomous Research and Development Institution of the Ministry of Earth Sciences on the 25th May 1998.
- Earlier known as **National Centre for Antarctic and Ocean Research (NCAOR)**, NCPOR is India's **premier R&D institution** responsible for the country's research activities in the Polar and Southern Ocean realms.
- It is the **nodal agency** for planning, promotion, coordination and execution of the entire gamut of polar and southern ocean scientific research in the country as well as for the associated logistics activities.

- Its responsibilities include:
 - Management and upkeep of the **Indian Antarctic Research Bases** “Maitri” and “Bharati”, and the **Indian Arctic base** “Himadri”.
 - Management of the Ministry’s research vessel **ORV Sagar Kanya** as well as the other research vessels chartered by the Ministry.

The Ocean Research Vehicle (ORV) Sagar Kanya is a versatile ocean observing platform equipped with technologically advanced scientific equipment and related facilities.
 - Playing a facilitatory role in the scientific research activities being undertaken by several national institutions and organizations in Antarctica, the Arctic and in the Indian Ocean sector of the Southern Ocean.
 - Playing a lead role in the geoscientific surveys of the country’s **Exclusive Economic Zone (EEZ)** and its extended continental shelf beyond 200m, deep-sea drilling in the Arabian Sea basin through the International Ocean Discovery Program (IODP), exploration for ocean non-living resources such as **gas hydrates** and multi-metal sulphides in mid-ocean ridges.
- It is **located** in the state of **Goa**.

International Ocean Discovery Program (IODP)

- It is an **international marine research collaboration** that explores Earth's history and dynamics using ocean-going research platforms to recover data recorded in seafloor sediments and rocks and to monitor subseafloor environments.
- It is in **Phase II** (tenured **2013-2023**) of what was formerly known as the **Integrated Ocean Drilling Program – Phase I**.

Phase I which was envisioned in the year 2003, ceased in October 2013, after which its 26 participating nations have continued collaboration through the International Ocean Discovery Program: Exploring the Earth under the sea. India joined the Phase I in the year 2009 as an Associate Member.
- India’s continued participation in Phase II as a member of the International Ocean Discovery Program is a result of an agreement signed in September 2014.
- NCPOR is the nodal agency for all the IODP related activities in India.