



PRITHvi Vigyan Scheme

For Prelims: PRITHvi Vigyan (PRITHVI) Scheme, [ACROSS Scheme](#), [O-SMART Scheme](#), [PACER](#)

For Mains: Earth System Sciences, Modeling systems for understanding climate change science, Government Policies, Disaster Management

[Source: PIB](#)

Why in News?

The Union Cabinet recently approved the comprehensive scheme "**PRITHvi Vigyan (PRITHVI)**" by the **Ministry of Earth Sciences**.

- This initiative spans five sub-schemes, aiming to enhance Earth System Sciences and provide crucial services for societal, environmental, and economic well-being.
- The Cabinet also approved an agreement between the [Indian Space Research Organisation \(ISRO\)](#) and **Mauritius Research and Innovation Council (MRIC)** to jointly develop a "small satellite."

Note

- India and Mauritius have a history of cooperation since the 1980s when ISRO established a **ground station in Mauritius** for tracking and telemetry support for ISRO's launch vehicle and satellite missions.

What is the "PRITHvi Vigyan (PRITHVI)" Scheme?

- **About:**
 - It is an overarching scheme of the Ministry of Earth Sciences (MoES) for the period from 2021 to 2026.
 - It encompasses five ongoing sub-schemes, namely:
 - [ACROSS: Atmosphere and Climate Research-Modelling Observing Systems & Services.](#)
 - [O-SMART: Ocean Services, Modelling Application, Resources and Technology.](#)
 - [PACER: Polar Science and Cryosphere Research.](#)
 - **SAGE:** Seismology and Geosciences
 - The scheme includes six activities, including seismological monitoring and microzonation. SAGE aims to strengthen **earthquake monitoring and research on the Earth's solid components.**
 - [REACHOUT: Research, Education, Training and Outreach.](#)

- PRITHVI scheme comprehensively addresses the **five components of Earth System Sciences: atmosphere**, hydrosphere, geosphere, **cryosphere**, and biosphere.
 - This holistic approach aims to enhance understanding and deliver reliable services for the country.

▪ **Objectives:**

- To augment and sustain long-term **observations of the atmosphere, ocean**, geosphere, cryosphere and solid earth to record the vital signs of the Earth System and change
- Development of modelling systems for understanding and **predicting weather, ocean and climate hazards** and understanding the science of **climate change**.
- Exploration of **polar and high seas regions of the Earth** towards discovery of new phenomena and resources;
- Development of technology for exploration and sustainable harnessing of oceanic resources for societal applications.
- Translation of knowledge and insights from Earth systems science into services for societal, environmental and economic benefit.

▪ **Benefits for India:**

- PRITHVI provides **advanced warning services** for natural disasters like **cyclones, floods, heatwaves**, and **earthquakes**, facilitating prompt and **effective disaster management**.
 - Additionally, the scheme ensures **precise weather forecasts** for both land and oceans, enhancing safety and minimizing property damages in adverse weather conditions.
- PRITHVI extends its reach to explore the three poles of the Earth; **Arctic, Antarctic, and Himalayas** facilitating valuable insights and knowledge about these regions.
- The scheme encourages the development of technology for exploration and sustainable harnessing of oceanic resources, aligning with modern advancements in Earth Science.

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