

India's Climate Preparedness Gets a Boost as Dr. Jitendra Singh Unveils Major Initiatives on Earth Sciences Ministry's Foundation Day

At 19th Foundation Day in Delhi, Minister announces 14 scientific products, hails decade of transformation, and pitches deep ocean mission as key to future economy

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In a significant push toward building a climate-resilient and scientifically empowered India, Union Minister Dr. Jitendra Singh today unveiled a set of new scientific tools and digital services developed by the Ministry of Earth Sciences (MoES), while calling for deeper public engagement and wider awareness of science-driven citizen services. Marking the 19th Foundation Day of the Ministry at an event held in the national capital, the Minister said the past decade had seen a remarkable turnaround in the Ministry's visibility, outreach, and real-time impact on people's lives.

Dr. Jitendra Singh said that science and innovation were not just central to ecological sustainability but would also play a pivotal role in India's economic rise in the coming decades. "We are now at a stage where even a casual user can access live weather alerts, cyclone warnings, air quality updates, and ocean forecasts on their mobile phones. This is the result of a Government that works in mission mode and a Ministry that has turned itself into a citizen-service institution," he said.

During the celebrations, the Minister formally launched 14 major products and initiatives developed by various institutes under the MoES. These included rainfall monitoring and crop-weather calendars, advanced weather forecasting systems like the Bharat Forecast System – Extended Range Prediction (BharatFS-ERP), high-resolution rainfall datasets, updated wave atlases and seabed charts, air quality forecasting systems, marine biodiversity reports, and seismic microzonation studies of four Indian cities. A new documentary titled Life Saving Impact, produced by the India Meteorological Department, was also released.



Referring to the transformation over the last ten years, Dr. Jitendra Singh noted that the number of Doppler weather radars in the country had increased from just 15 to 41 today. Similarly, seismic and weather stations, upper-air observation systems, lightning detection networks, and rain gauges have all more than doubled. “From two to three minutes after an earthquake, we now issue alerts that are instantly accessed by lakhs of people online. Such is the demand that our servers crashed during a recent Delhi tremor due to the rush of users,” he observed.

He praised the IMD’s progress in cyclone forecasting and said that extreme weather alerts now have a lead time of up to 10 days. He recalled how Odisha’s loss of 10,000 lives in the 1999 super cyclone spurred many improvements, with recent storms being managed with minimal casualties thanks to timely alerts.

Dr. Jitendra Singh also highlighted how the Ministry’s work is supporting critical sectors like agriculture and fisheries. He said over seven lakh farmers are registered on the Ministry’s Meghdoot app, using its advisories to plan sowing, irrigation, and harvest schedules. Similarly, fishermen across the coast rely on daily SMS updates to determine safe and fuel-efficient fishing zones.

The Minister stressed the need to enhance communication and public outreach. “Many people still don’t know about the tools we’ve developed. We must communicate in the language people understand best,” he said, suggesting closer coordination with other ministries and government communication platforms.



He also drew attention to India's efforts in ocean-based sustainability, especially in the Lakshadweep islands, where six Ocean Thermal Energy Conversion (OTEC) desalination plants now provide 1.5 lakh litres of potable water daily. "For centuries, these islanders had no fresh water despite being surrounded by the sea. Now they are not only water-sufficient but water-rich," he said.

Calling the Deep Ocean Mission a potential game-changer, Dr. Jitendra Singh said India's unexplored underwater wealth could be a major driver of future economic growth. "Just as we aim to send one Indian into space through Gaganyaan next year, we may soon see Indians diving 6 km below sea level with Samudrayaan. One up, one down—that's the vision," he remarked.



The Minister also noted that the Ministry's budget had risen from ₹1,281 crore in 2014 to ₹3,658 crore in 2024, enabling ambitious projects and advanced research. He credited this shift to the sustained support of the current Government and urged the scientific community to carry this momentum forward.

The Foundation Day saw the participation of Secretary, MoES, Dr. M. Ravichandran; Joint Secretary, Shri D. Senthil Pandiyan; Director General, IMD, Dr. Mrutyunjay Mahapatra; Programme Head Dr. Vijay Kumar; and Guest of Honour Prof. Dev Niyogi, UNESCO Chair at the University of Texas, who joined virtually.

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