

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 4133
TO BE ANSWERED ON 18.08.2025

Centralised Digital Platform to ensure Transparency

4133. DR. PRADEEP KUMAR PANIGRAHY:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the details of investments being made in supercomputing and AI-driven climate modelling to improve forecasting of extreme weather events (cyclones, floods, droughts);
- (b) whether these models being shared with State Disaster Management Authorities for proactive planning; and
- (c) whether there is a plan to create a centralized digital platform (blockchain-based or otherwise) to track corporate environmental compliance, forest carbon offsets and Environmental, Social and Governance (ESG) reporting to ensure transparency?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) and (b) The Ministry of Earth Sciences (MoES) provides weather forecasting and climate services using several numerical weather prediction (NWP) models. The supercomputers are used to run weather and climate models routinely at various temporal and spatial scales. These include coupled ocean–atmosphere–biosphere–cryosphere models and associated data assimilation processes, all of which are highly compute-intensive tasks. The total sanctioned cost for the procurement of the High Performance Computing (HPC) system at Indian Institute of Tropical Meteorology (IITM), Pune, and the National Centre for Medium Range Weather Forecasting (NCMRWF), Noida is Rs. 900 crores. It is used for monsoon prediction, air quality assessment, and forecast of extreme weather events (cyclones, fog, etc.). The enhanced computational capability helps to efficiently use new advanced technologies such as Artificial Intelligence (AI) and Machine Learning (ML) to enhance the accuracy of NWP products thereby significantly improving the forecast products rendered to various stakeholders, including for disaster preparedness. Artificial intelligence is being used to improve weather, climate, and ocean forecasting skills across the country. Weather forecasts and disaster warnings generated from these models are being shared with the State Disaster Management Authorities.

(c) In pursuance of the spirit of ‘Digital India’ and capturing the essence of Minimum Government and Maximum Governance, the government had launched single window portal “PARIVESH (Pro Active and Responsive Facilitation by Interactive and Virtuous Environmental Single-window Hub)” on 10.08.2018 at Central level and on 16.08.2019 at State

level for handling clearances (Environment clearance, Forest clearance, Wildlife and Coastal Regulation Zone clearance) for all developmental projects while ensuring due diligence and adherence to environmental standards safeguards while examining project proposals.

In addition, the Carbon Credit Trading Scheme (CCTS), 2023 has been introduced under the Energy Conservation (Amendment) Act, 2022, which provides for offset mechanism allowing voluntary participation to earn carbon credits by reducing emissions from 10 sectors including forestry. Development of a portal for registration of projects as well as platform for trading of carbon credits is envisaged under CCTS.

Furthermore, in 2021, Securities and Exchange Board of India (SEBI) mandated the top 1000 listed companies (by market capitalization) to make Environmental, Social and Governance (ESG) disclosures as per the Business Responsibility and Sustainability Reporting (BRSR) from FY 2021-22 on a voluntary basis and mandatorily from FY 2022-23.
