

National Centre for Medium Range Weather Forecasting (NCMRWF)

Ministry of Earth Sciences

Press Release

The High Performance Computer (HPC) System was inaugurated at NCMRWF, NOIDA by Dr. Harsh Vardhan, Union Minister for Science & Technology, Earth Sciences, and Environment, Forest & Climate Change on 30th January 2018, NOIDA.

Honorable Union Minister for Science & Technology, Earth Sciences and Environment, Forest & Climate Change Dr. Harsh Vardhan today dedicated to the nation the High Performance Computer (HPC) System named '**Mihir**', meaning the Sun which has been established at the National Centre for Medium Range Weather Forecasting (NCMRWF), NOIDA.

The Ministry of Earth Sciences has augmented its HPC facility to 6.8 Peta Flops (PF) which has been installed at two of its constituent units namely, Indian Institute of Tropical Meteorology (IITM), Pune with 4.0 Peta Flops capacity and National Centre for Medium Range Weather Forecasting (NCMRWF), Noida with 2.8 Peta Flops capacity. The HPC facility 'Pratyush' at IITM was dedicated to the nation by Dr. Harsh Vardhan on 8th January 2018.

The HPC system will be a national facility for improving weather/climate forecasts and services under the umbrella of the Ministry of Earth Sciences (MoES), Govt. of India. While inaugurating the facility at IITM, Pune, Dr. Harsh Vardhan said that it will be India's largest HPC facility in terms of peak capacity and performance. India's ranking will move from the current 368th position to around the top 30 in the Top500 list of HPC facilities in the world. India will also be placed at the 4th position after Japan, UK and USA for dedicated HPC resources for weather/climate community.

This facility is part of Ministry's continuous endeavor to provide world class forecast services to the citizens of India through its various operational and research and development activities. The Ministry of Earth Science has developed several services for societal benefits catering to a variety of sectors of economy by building

state-of-the-art systems for multi-hazard risk reduction from cyclones; floods/droughts; heat/cold waves; earthquakes; tsunamis; etc.

The Ministry of Earth Sciences in collaboration with Indian Council of Agricultural Research (ICAR) is providing district level agro meteorological advisories to farmers through 130 agro-meteorological field units. At present about 24 million farmers receive these advisories with information of weather forecasts at district level (about 650 districts). These services will now be extended to block level (for about 6500 blocks) by establishing district centres (630 centres) with the help of ICAR Krishi Vigyan Kendras. It is planned to reach about 45 million farmers by July 2018. These advisories are extensively used by farmers in day to day agricultural operations like sowing, irrigation etc.

The new HPC facility is expected to improve the following services:

- Weather forecasts at block level over India which can predict extreme weather events.
- High resolution seasonal/extended range forecasts of active/break spells of Monsoon.
- Very high resolution coupled models for prediction of cyclones with more accuracy and lead time.
- Ocean state forecasts including marine water quality forecasts at very high resolution.
- Tsunami forecasts with greater lead time.

This new HPC facility will not only help in meeting the operational requirements of IMD, INCOIS and NCMRWF but also support the research and development activities of these three organisations and research students from Universities.