

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 4532
TO BE ANSWERED ON WEDNESDAY, 30TH MARCH, 2022**

MODERNIZATION OF IMD

4532. SHRI DULAL CHAND GOSWAMI:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) the status of the programme related to the modernization of India Meteorological Department (IMD);
- (b) whether the Government proposes the modernization and upgradation of all the weather forecasting centres across the country; and
- (c) if so, the details thereof?

ANSWER

**THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)**

- (a) To address the demand for more accurate and user specific weather & climate services, a comprehensive modernization programme of IMD was initiated during 11th Five Year Plan (2007-12). Implementation of this programme resulted in commissioning of state of art observing systems throughout the country with their networking and integration, utilizing them in high resolution numerical models in high performance computing facility, their visualization, archival and dissemination to the user community in a skilful manner.

Even though work began on all projects & sub-projects but some of the projects could not be completed during 11thFYP in all aspects. The partially completed projects of 11th FYP were continued during 12th FYP (2012-17) and beyond along with implementation of some new projects to ensure the continuity & sustenance of observations and optimal enhancement of facilities required for the betterment of weather forecasting services. All these projects were part of the umbrella scheme “Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)” of Ministry of Earth Sciences (MoES).

The activities under ACROSS are continuing programs from previous plan periods encompassing various activities in an integrated manner aimed at strengthening the observational, communication, computing and modelling systems.

An independent Review Committee constituted by MoES evaluated the ACROSS scheme and the respective sub-schemes and strongly recommended the continuation of all the schemes during 2017-20 & beyond to the 15th Finance Commission for improved functional efficiency and further expansion of weather, climate and related hazard detection, monitoring and warning services.

Following sub-schemes under the umbrella scheme ACROSS are being implemented in IMD during 2021-26.

1. Commissioning of Polarimetric Doppler Weather Radars (PDWR)
2. Upgradation of Forecast System (UFS)
3. Weather and Climate Services (WCS)
4. Atmospheric Observations Network (AON)

(b) - (c) To upgrade the forecasting capabilities throughout the country including modernization/ upgradation of forecasting centres, various programs are being implemented in IMD under all the above sub-schemes of IMD under ACROSS. Details of activities under ACROSS being implemented during 2021-26 are as follows:

Commissioning of 11 C-band Polarimetric Doppler Weather Radars:

- Improve upon the spatial and temporal density of Radar observational network,
- Effective Nowcasting and timely as well as precise warnings for severe weather events like Thunderstorms, Heavy Rainfall, Downburst, Gale winds, Hail, etc.

Upgradation of Forecast System:

- Augmentation and sustenance of Communication Systems Development of an advanced Operational Forecast System, Automation of Nowcast, Thunderstorm Testbed, Urban Meteorological Services and Positional Astronomy services.
- Upgradation of Hydrometeorological Services.
- Integrated Himalayan Meteorological Programme for Western & Central Himalayas aimed at establishing the dense observational network through commissioning of Doppler Weather Radars, Automatic Weather Stations, Automatic Rain Gauges, Snow Gauge sensors, HAWOS, surface observatories etc.
- Capacity building, Outreach, R&D, Publication etc.

Weather & Climate Services:

- Setting up of District Agro-Met Units (DAMUs) at all the districts complementarily with existing AMFUs in the country for extension of Agromet Advisory Services (AAS).
- To expand the outreach of weather based Agromet advisories to the farmers through multiple means of communication, collection of feedback and impact assessment of AAS.
- Major upgradation of Meteorological facilities at all airports through commissioning of State-of-art Integrated Aviation Weather Observing Systems (AWOS), Microwave Radiometers, Doppler LIDARs, Wind Profilers etc to support Aeronautical MET Services.
- Setting up of automated Heliport Weather Observing & Transmitting System (HAWOS) at Heliports, Landing ground, and other strategic locations to support the helicopter and low level flight operation of IAF, Indian Army and CPMF and also at important tourist and pilgrimage locations.

- Sustenance & maintenance of Aviation Meteorological instruments and facilities through repairs, procurement of sensors, spares, CAMC/AMC etc.
- Establishment of a state-of the-art Climate Data Centre with integrated advanced Climate Data Services portal for rendering national and regional climate services.
- To provide a comprehensive set of improved and specialized climate services for the country through upgradation of the existing operational activities of climate monitoring, climate prediction, climate data management and climate applications.
- Providing upgraded climate services to south Asia as WMO recognized Regional Climate Centre (RCC) for the region.
- To upgrade the training infrastructure and facilities to enhance the capacity of the training establishment. To support in the building & development capacity in the field of operational weather & Climate services to the countries in RA-II region as a WMO recognized Regional Training Centre (RTC) for the region. Contributions among WMO/RIMES/ESCAP/Global Framework for Climate Services (GFCS) in South Asia etc.

Atmospheric Observations Network

- Integrated Meteorological Services for the North-East (NE) region through commissioning of DWRs, AWOS/ HAWOS, AWSs/ARGs/ SGs, Microwave Radiometers, Wind LiDARsetc, and establishment/ upgradation of Meteorological Centres aimed at improving weather and climate services over the region.
- Sustenance and Augmentation of observational networks comprising of Doppler Weather Radars (DWRs), Automatic Rain Gauges (ARGs), Automatic Weather systems (AWSs), Upper Air (RS/RW and PB), Surface, Environmental and Polar Observatories etc.
- Establishment/ upgradation and maintenance of Multi processing, computing and communication facilities for Satellite Meteorological Applications
