Recent Achievement

- Initiated for Upgradation for state of art Integrated AWOS system at 18 airports having more than 500 flights per week.
- Upgradation and enhancement of AMIs facilities and maintenance of existing instruments at other airports.
- Collaborative development of Cloud LiDAR (Ceilometer) and Aerosol LiDAR undertaken with Laser Science and Technology Centre (LASTEC), DRDO.
- Three (3) Nos. transmissometer - RVR (Drishti System) installed at Kochi, Trivandrum and Bhubaneswar making it to a total of 44 transmissometer – RVR (Drishti System).
- New Aeronautical Meteorological Stations (AMS) commissioned under RCS-UDAN Scheme.
- Total of 27 Aerodrome Climatological summaries (ACS) have been prepared.

New Initiatives

- Verification of Aviation Forecasts.
- Development of Software for Aviation Forecast Verification.
- Evaluation of Cloud base height (CBH) measurements from Ceilometer and satellite data over IGI Airport, New Delhi.
- Fog/Low clouds detection over IGI Airport, New Delhi using DRISHTI Transmissometer and INSAT-3D/3DR Satellite data.
- Generation of Four-Dimensional (4D) visualization of NWP output for aviation community.
- Preparation of Polar diagram of visibility landmarks related to Latitude and longitude locations.
- Development of CAMD-Web portal.
- Development of e-learning cum training portal for aviation.

Airport Meteorological Instrument

Transmissometer

Ceilometer

Wind sensor

Temperature /Humidity

AMIs

For further details, Kindly contact: -

Central Aviation Meteorological Division (CAMD)
India Meteorological Department
Mausam Bhawan, Lodi Road, New Delhi - 110003

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Central Aviation Meteorological Division (CAMD)

केंद्रीय विमानन मौसम विज्ञान प्रभाग

India Meteorological Department

भारत मौसम विज्ञान विभाग

Ministry of Earth Sciences

पृथ्वी विज्ञान मंत्रालय

Government of India

भारत सरकार

India Meteorological Department (IMD) is the National Meteorological Service of the country and the principal Government agency in all matters relating to Meteorology and allied disciplines and provides weather and climate services for public safety and socio-economic benefits.

About CAMD

Central Aviation Meteorological Division (CAMD) at DGM, New Delhi is the nodal office for the aviation services in the country. It also maintains the liaison with ICAO, WMO, DGCA, AAI and Airlines on technical aspects of aviation. The installation and maintenance of Airport Meteorological Instruments are done by IMD (SI Division), Pune. The telecommunications requirements for aviation are managed by the IMD (Telecommunication Division) functioning at New Delhi and by the telecommunication unit of Airport Authority of India.

Meteorological Services for Aviation in India

India Meteorological Department (IMD) provides a crucial service to the National and International Civil Aviation sector in fulfilment of the requirements prescribed by the Director General of Civil Aviation of India (DGCA) and International Civil Aviation Organisation (ICAO). The principal requirements in the aviation point of view are:

- *Supply of current weather observations to all aeronautical users*
- *Issue of forecast and warnings on meteorological hazards to users*
- *Adherence to procedures and formats for dissemination of products to aviators*

IMD provides this service in association with Airports Authority of India (AAI) and for these purposes it has established 4 Meteorological Watch Office (MWO) functioning at Delhi, Mumbai, Kolkata, and Chennai airports and 17 Aerodrome Meteorological Offices (AMO) and 72 Aeronautical Meteorological Stations (AMS) located at various National and International airports of the country.

Stakeholders & Users of Aviation MET Services

Aviation Products, Observation, Forecast & Warnings

Aviation Products

- *Coverage of Low, Middle, High and Convective cloud and its base and top.*
- *Freezing level height*
- *Visibility*
- *10m Wind + Gust +2m RH, Max Wind (in kt) and its height (in km)*
- *Meteograms*
- *GFS model based hourly forecast valid for 36 hours for 20 airports.*

Aviation Observation

- *METAR/MET Report*

Aviation Forecast & Warnings

- *Terminal Aerodrome Forecast (TAF)*
- *Significant Meteorological Information (SIGMET)*
- *Area/local Forecast*
- *Take-off Forecast*
- *Trend Forecast*
- *Route/Flight Forecast*
- *Aerodrome Warnings*

Aviation Forecast Accuracy

As per ICAO guidelines the accuracy for wind direction, wind speed, visibility, precipitation should be 80% and for cloud amount, cloud height should be 70%.

On-line Briefing System (OLBS)

On-line Briefing System (OLBS) is a web-based pre-flight information briefing system provided by IMD for flights originating from FIRs in India. OLBS is being maintained by the meteorological offices functioning at the international airports at Chennai and New Delhi. Through this on-line system an authorised Pilots / Flight Despatchers can avail Met. Briefing and download all required documents for flight planning.

Reports, Forecast & warnings products issued & uploaded on the IMD-OLBS

Type of product	Time of issuing	Validity Period
Met Report, METAR and Trend forecast	Half hourly round the clock	2 hrs
Significant weather information (SIGMET)	Whenever Sig. weather, Cyclone, Volcanic Activity expected, observed .	As per situation & requirement
Local forecast (for aerodrome & 100NM around)	0530UTC and updated at every 8-hours	0600UTC-1400UTC (8-hours) and so on
Take-off Forecast (wind , temp, pressure)	0730UTC and updated at every 3 hourly	1030-1330 UTC(3-hours) and so on
Significant weather chart	6-hourly at 0530 , 1130,1730, 2330 UTC	0600UTC-2400 UTC(18 Hrs) and so on
Aerodrome weather warning	On expected occurrence of Thunderstorm, Squall, Dust storm at the aerodrome at least 30 min in advance	Not exceeding 4Hrs/ As per situation
Terminal Aerodrome Forecast(TAF)	3 hourly (2330, 0230, 0530 UTC……) and 6 hourly (0230,0830, 1430 & 2030 UTC)	09 Hrs (National) 30 Hrs (International)
Route Forecast (ROFOR)	As per requirement	As per requirement
Light Aircraft Warning (also for helicopter & gliders) - whenever w. speed is 17 knots or more	At least 1 hr before the period of validity	Max 4 hrs.

IMD-Aviation Meteorological Network