



## **Dr. Mrutyunjay Mohapatra**

**Director General of Meteorology,  
India Meteorological Department  
Permanent Representative of India with  
World Meteorological Department**

### **Curriculum Vitae**

1. **Name:** Dr. Mrutyunjay Mohapatra
2. **Designation:** Director General of Meteorology
3. **Affiliation:** India Meteorological Department
4. **Address:** India Meteorological Department, Mausam Bhavan, Lodi Road, New Delhi-110003  
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**E-mail:** m.mohapatra@imd.gov.in; [mohapatraimd@gmail.com](mailto:mohapatraimd@gmail.com)
5. **Date of Birth:** 12.08.1965
6. **Educational qualification:** M.Sc. & Ph.D (Physics)
7. **Experience:** 30 years experience in (i) Weather Forecasting, (ii) Cyclone Warning, (iii) Research and Development, (iv) Project/Programme Management and (v) Capacity building through Organising trainings/ conferences and delivering lectures
8. **Research contributions/achievements:**
  - a) **Publications:**
    - ❖ **Papers published in reviewed Journals:** 124 (H-index:26; I10: 61)
    - ❖ **Books/chapters in books:** 44
    - ❖ **Books/journal edited:** 20
    - ❖ **Editor of Journal of Climate Change, International Journal of Tropical Cyclone Research & Review, Journal Mausam and Guest Editor of Geography & You**
    - ❖ **Reviewer for the Journals:** 18 Journals
  - b) **Number of National/International Conference/Meetings organized:** 16
  - c) **Number of National/International training-workshops organized:** 32
  - d) **Guide/Supervisor for 9 Ph. D students (2 Awarded)**
9. **Awards and recognitions received:**
  - (i) **International**
    - a) **Appreciation from WMO for accurate prediction of cyclones Phailin (2013), Hudhud (2014), Sagar & Mekunu (2018), Luban & Titli (2018), Fani (2019) and Amphan (2020)**
    - b) **Appreciation from Regional Association II for Cyclone Phailin(2013).**
    - c) **Appreciation from United Nation for pin point accuracy during cyclone Fani(2019).**
  - (ii) **National**
    - a) **Honoris Causa, Doctor of Science from Odisha University of Agriculture & Technology (2022), FM University, Balasore (2020) and Kalinga University (2020)**
    - b) **Disaster Risk Reduction Award - 2022 from World Congress of Disaster Management**
    - c) **Environment & Societal Development Association (ESDA) Environmental Excellence Award-2022 during World Environment Summit 2022**
    - d) **Pride of India Award 2022 by South Asian Institute for Advanced Research and Development, Kolkata**
    - e) **Most Inspirational Personality Award 2022: Interview Times**

- f) **Fellow Indian Climate Congress and Indian Meteorological Society (2019)**
- g) **Young Scientist Award - 2008 by Ministry of Earth Sciences for contribution in Atmospheric Science & Technology**
- h) **25<sup>th</sup> Biennial Mausam Award (2008-09) for the best paper in Journal Mausam**
- i) **Achiever's Award-2013 for Excellence in Cyclone Warning Services from IMD**
- j) **Commendation by Defense Research & Development Organisation for contribution in Integrated Guided Missile Development Programme - 1989**
- k) **President of Indian Meteorological Society during 2020-2022 and Vice President during 2016-18**

### **(iii) Capacity Building initiatives**

- a) **Appreciation from WMO for contribution in training workshop on severe weather forecasting and warning services in 2013.**
- b) **Appreciation from WMO for lectures during International workshop on Dvorak technique and Tropical Cyclone Forecasting in 2014.**
- c) **Appreciation from WMO for organising 43<sup>rd</sup> Session for PTC (2016).**
- d) **Appreciation from WMO for organising RSMC training in 2020 & 2022.**

## **II. India's Contribution to WMO activities:**

### **(a) RSMC Tropical Cyclones New Delhi**

- ❖ **IMD acts as RSMC, New Delhi to provide tropical cyclone and storm surge advisories to 13 countries under WMO/ESCAP Panel (Bangladesh, India, Iran Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen).**
- ❖ **Tropical Cyclone Advisory Centre (TCAC) to provide cyclone advisories to Asia Pacific countries and Middle East countries for civil aviation.**
- ❖ **Support for Global Maritime Distress Safety System (GMDSS) for Area VIII- N covering North Indian Ocean.**
- ❖ **Provides capacity building support through organising training, documentation, publication, research & SOPs**

### **(b) SWFP South Asia and Southeast Asia**

- ❖ **IMD is leading WMO's Severe Weather Forecasting Project (SWFP) – South Asia. Provides daily severe weather guidance on heavy rainfall, strong wind, storm surge, high waves and cyclonic disturbances to 9 member countries including Thailand, Myanmar, Bangladesh, Nepal, Bhutan, India, Sri Lanka, Maldives and Pakistan through dedicated webpage**
- ❖ **Training to Forecasters of member countries**

### **(c) South Asia Flash Flood Guidance:**

- ❖ **IMD, New Delhi acts as WMO's Regional Centre for Flash Flood Guidance at sub catchment scale over South Asian region (Nepal, Bhutan, Bangladesh, Sri Lanka & India) with focus on hilly regions, steep terrains and urban centres.**
- ❖ **Provide guidance on impact based flood warning, urban flood warning, riverine/channel routing etc.**

### **(d) Regional Climate Centre (RCC):**

- ❖ **IMD, Pune acts as one of 7 WMO's Regional Climate Centres and is involved in providing Long Range Forecast (LRF), climate monitoring, data services and training to support regional and national climate services.**
- ❖ **India will be RCC for Third Pole region.**

#### **(e) South Asia Climate Forum (SASCOF)**

RCC located at Pune, India provides the seasonal forecast outlook for the rainfall and temperature over south Asia under SASCOF w.e.f. monsoon season 2010

#### **(f) Contribution to Science of Climate Change statement**

India provides scientific contribution in terms of climate change detection to WMO for Annual Climate Statement for South Asia and Globe Centre for Climate change research, India runs earth system model and provides projection for formulating IPCC statement. Experts from India contribute to different aspects of IPCC report

#### **(g) Observational Support**

Radar support to neighboring countries including Myanmar, Nepal, Bhutan, Bangladesh, Sri Lanka, Maldives and Pakistan through IMD Radars along the border areas

#### **(h) Modeling support**

Modeling support from 4 Global Models (Global Forecast System-GFS , Global Ensemble Forecast System-GEFS, NCMRWF Unified Model-NCUM and NCMRWF Ensemble Prediction System- NEPS)

#### **(h) Early Warning for All**

IMD endorses UN-WMO initiative and has implemented ® Impact based Forecast ® Common Alerting Protocol ® Multi-hazard Early Warning System Capacity building support through training to South Asian, Southeast Asian and ® Middle East countries Peer advisors for implementation of Systematic Observational & Forecasting Facilities (SOFF) initiative of WMO

#### **(i) Regional Meteorological Centre, Pune**

IMD acts as W M O recognized Regional Meteorological Training Centre (RMTTC) Participates in voluntary co-operation programme Provides training to candidates nominated by the NMHSs of countries within region

### **III. My contribution to WMO activities**

#### **(a) Contribution towards Tropical Cyclone Programme (TCP)**

- (i) Improved cyclone warning services to 13 WMO/ESCAP Panel member countries with reduction in track & intensity forecast errors by 25% and landfall errors by 40-70% upto 72 hrs period during 2018-22 compared to 2013-17
- (ii) Annual updation of Tropical Cyclone Operational Plan (TCP-21) for region as Rapporteur since 2014
- (iii) Chief Editor of Annual Cyclone Review since 2014
- (iv) Conducted training for cyclone forecasters of PTC and Typhoon Committee countries since 2005
- (v) Delivered lectures to trainees in International Training Programmes
- (vi) Developed synergized SOP for coastal hazards for WMO/ESCAP Panel on TCs and typhoon committee
- (vii) Rapporteur to finalise 169 names based on suggestions of 13 WMO/ESCAP panel member countries in 2019 implemented since 2020

#### **(b) Contribution towards WMO SWFP**

- (i) Conceived and implemented SWFP-South Asia as Head of RSMC, New Delhi to provide services to 9 member countries
- (ii) Prepared the Regional Sub – Project Implementation Plan for WMO SWFP-South Asia
- (iii) Planned, organized and delivered lectures during training programmes and workshops on severe weather forecasting

### **(c) Contribution to expert Committees of WMO**

#### **(i) Chairman of the Committees:**

- ❖ WMO/ESCAP Panel on Tropical Cyclones (2017-18)
- ❖ Regional Sub-project Management Team of SWFP-South Asia
- ❖ Executive Council, South Asia Hydromet Forum
- ❖ WMO RA II task Team for review of regional partnership and sub-regional cooperation (TT-RP)
- ❖ Evaluation Committee for WMO Young Scientist Award

#### **(ii) Expert Member of the Committees:**

- ❖ International Organising Committee for 8<sup>th</sup> & 9<sup>th</sup> International Workshop on Tropical Cyclones (IWTC)
- ❖ WMO's working groups for IWTC-8 on various aspects of Tropical Cyclone and Evaluation Committee
- ❖ WMO's working groups for 3<sup>rd</sup> & 4<sup>th</sup> International workshop on tropical cyclone landfall processes (IWTCLP)
- ❖ Expert team on climate impact on tropical cyclones
- ❖ Executive Council of Panel of Experts on Polar & High Mountain Observations,
- ❖ Research & Services
- ❖ Member of SWFP-South East Asia Development of strategy document for Regional Planning and Partnership
- ❖ Development of strategy document for Regional Planning and Partnership Capacity Building
- ❖ Capacity Building
- ❖ Evaluation Committee for International Meteorological Organisation (IMO) Prize
- ❖ WMO Committee for selection of Väisälä Award-2021

### **IV. Outcome:**

- ❖ Paradigm shift in regional support provided by India to countries in South-Asia & Middle East
- ❖ Significant reduction in loss of lives due to cyclones and severe weather over the region
- ❖ Saving to economy of the region through effective Early Warning System for Disaster Risk Reduction  
Enhanced collaborations among the NMHSs

### **V. My Vision**

Weather Ready and Climate Smart Organisations to meet the global, societal and economic needs and ensure zero casualties due to extreme weather

### **VI. My Mission**

- ❖ Implementation of UN-WMO Mission on "Early Warning for All" and hence facilitate MHEWS, IBF and CAP in all countries especially developing & least developed countries and small Island Nations
- ❖ Improve observational and modelling applications, especially in developing and least developed countries with a dual engine concept utilizing Numerical model and Data Science (AIML)
- ❖ Enhancement of hydro-meteorological & environmental observations, communication and modelling infrastructure and exchange of data & information among countries
- ❖ Data analytics and Infographics capabilities enhancement
- ❖ Facilitate research & development and exchange of knowledge and technology thereof among countries for weather and climate services
- ❖ Enhancement of hydro-meteorological and environmental services in the existing and newly emerging sectors through improved knowledge and technology enterprise and utilising public private partnership
- ❖ Capacity Building of NMHSs to meet the requirement towards DRR, socio-economic growth, resilience to climate variability and change and sustainable use of natural resources
- ❖ Facilitate security to natural resources including water, environment and renewable energy