



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

Dr. M. Mohapatra

Director General of Meteorology

&

3rd Vice President of World Meteorological Organisation

Cordially invites you to the Inaugural Function of

20th Tropical Cyclone Forecasters Training

On Monday, the 19th August, 2024 at 1000 hours IST
at **Arnav Hall, Prithvi Bhawan,**
Ministry of Earth Sciences
New Delhi-110003

Dr. M. Ravichandran

Secretary,

**Ministry of Earth Sciences and Science & Technology
has kindly consented to be the Chief Guest**

R.S.V.P.

Dr. D R Pattanaik

Head

RSMC New Delhi

India Meteorological Department, New Delhi

Mobile: 91-9868554029

Inaugural Ceremony on 19th August, 2024 during 1000-1130 IST		
Time (IST)	Time (UTC)	Minute to Minute
1000-1005	0430-0435	Welcome address by Dr. D R Pattanaik, Sc. F & Head, RSMC
1005-1015	0435-0445	Address by Dr. M. Mohapatra, Director General of Meteorology, India Meteorological Department & PR of India to WMO
1015-1025	0445-0455	Address by Dr. Taoyong Peng, Chief TCP Division, WMO
1025-1035	0455-0505	Address by Dr. Sanjay Srivastava, Chief DRR, UN ESCAP
1035-1045	0505-0515	Inaugural Address by Dr M Ravichandran, Secretary Ministry of Earth Sciences
1045-1050	0515-0520	Vote of Thanks by Dr. R.K. Giri, Scientist- F & Head (Organisation), IMD
1050-1100	0520-0530	Group Photo

Online participants may join the Inaugural Ceremony and Training Programme **on 19th August** through following link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_Y2I1NDM4NDAtMjYwNC00ZDA5LTgyNGEtNWNhYjkwYzZTMz%40thread.v2/0?context=%7b%22Tid%22%3a%224150af11-2862-4a15-bbb1-680088a91e26%22%2c%22Oid%22%3a%22d20eb772-93f6-47b7-a820-289a02c1d262%22%7d

Link to join the training online from 20th August onwards:

<https://imd-mb.webex.com/imd-mb/j.php?MTID=m2dc71e97057660478583dc65a91dfd22>

**(Tentative Schedule) 20th RSMC New Delhi Attachment Training Schedule
[19-30 August 2024 during 0400-1230 UTC (0930-1800 IST)]**

(1) Online participants may join the **Inaugural Ceremony and Training Programme on 19th August** through following link:

https://teams.microsoft.com/join/19%3ameeting_Y2I1NDM4NDAtMjYwNC00ZDA5LTgyNGEtNWNhYjkwYzZTMz%40thead.v2/0?context=%7b%22id%22%3a%224150af11-2862-4a15-bbb1-680088a91e26%22%2c%22oid%22%3a%22d20eb772-93f6-47b7-a820-289a02c1d262%22%7d

(2) II. Link to join the training online from 20th August onwards:

<https://imd-mb.webex.com/wbxmjs/joinservice/sites/imd-mb/meeting/download/a6bf15615d434a39811ca51d3e882d1f?siteurl=imd-mb&MTID=m2dc71e97057660478583dc65a91dfd22>

(3) Detailed Training Programme is given below:

Time (UTC)	Time (IST)	19 th August: Day-1 (Monday)
0430-0530	1000-1100	Inauguration
0430-0435	1000-1005	Welcome address by Dr. D R Pattanaik, Sc. F & Head, RSMC
0435-0450	1005-1015	Address by Dr. M. Mohapatra, Director General of Meteorology, India Meteorological Department & PR of India to WMO
0450-0505	1015-1025	Address by Dr. Taoyong Peng, Chief TCP Division, WMO
0505-0525	1025-1035	Address by Dr. Sanjay Srivastava, Chief DRR, UN ESCAP
0525-0530	1035-1045	Inaugural Address by Dr M Ravichandran, Secretary Ministry of Earth Sciences
	1045-1050	Vote of Thanks by Dr. R.K. Giri, Scientist-F & Head (Organisation), IMD
0530-0535	1050-1100	Group Photo
0535-0600	1100-1130	High Tea
0600-0700	1130-1230	Operational responsibility of RSMC New Delhi by Dr. D R Pattanaik, Sc. F & Head RSMC New Delhi, IMD
0700-0800	1230-1330	Climatology of TCs over North Indian Ocean by Dr. A. K. Das, Scientist-F, IMD
0800-0900	1330-1430	Lunch Break
0900-1000	1430-1530	Demonstration of Web Atlas of India by Dr. B Geetha, Scientist-D, IMD
1000-1100	1530-1630	Hazard and Vulnerability Atlas of IMD by Dr. R Chattopadhyay, Sc, E, IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Overview of Satellite Meteorology by Dr. A K Mitra, Sc. F
		20th August: Day-2 (Tuesday)
0400-0500	0930- 1030	Satellite products for TC monitoring by Dr. A K Mitra, Scientist-F, IMD
0500-0600	1030-1130	Dvorak technique for TC location & intensity determination by Mr. Chinmaya Khadke, Scientist-D, IMD
0600-0630	1130-1200	Tea Break
0630-0800	1200-1330	Practicals on Dvorak technique by Dr. Satyaprakash, Scientist -D & Mr. Chinmaya Khadke, Scientist-D, IMD
0800-0900	1330-1430	Lunch Break
0900-1000	1430-1530	Synoptic aspects of Cyclone Monitoring and Prediction by Dr AK Das,

		Scientist-D
1000-1100	1530-1630	Dynamical Aspects of Cyclones (Theory of formation, Balance of forces, Vorticity Advection Equation, Fujiwara Effect). Theory of Genesis, Track Intensity Structure by Dr. B Geetha and Mrs Monica Sharma, Scientist D, IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Dynamical Aspects of Cyclones (Theory of formation, Balance of forces, Vorticity Advection Equation, Fujiwara Effect). Theory of Genesis, Track Intensity Structure by Dr. B Geetha and Mrs Monica Sharma, Scientist D, IMD (continued)
		21st August: Day-3 (Wednesday)
0400-0500	0930- 1030	Fundamentals on Radar Technology and radar products by Mrs. Arpita Rastogi, Sc. D, IMD
0500-0600	1030-1130	Radar input for Cyclone monitoring & prediction by Mr. B.A.M Kannan, Scientist-F, IMD
0600-0630	1130-1200	Tea Break
0630-0800	1200-1330	Practical on Radar applications: cyclone warning by Mr. B.A.M Kannan, Scientist F, IMD
0800-0900	1330-1430	Lunch Break
0900-1000	1430-1530	Short and Medium range Models for TC prediction by Dr. D R Pattanaik, Scientist-F, IMD
1000-1100	1530-1630	Extended range Models for TC prediction by Dr. D R Pattanaik, Scientist-F, IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Practical on identification of weather systems using NWP Models with examples of westerly trough, jet streams, ridges, anticyclonic circulation, cyclonic circulation etc. role in movement and intensification by Dr Naresh Kumar, Sc. F, IMD
		22nd August: Day-4 (Thursday)
0400-0500	0930- 1030	HWRF Model for TC track & intensity prediction by Mr. Arun Sharma, Sc-D, IMD
0500-0600	1030-1130	NCMRWF deterministic model for TC prediction by Dr. Mohan S Thota, Scientist-E, NCMRWF
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	Ensemble Prediction System for TC prediction, by Dr. Anumeha, Scientist-E, NCMRWF
0730-0900	1300-1430	Lunch Break
0900-1000	1430-1530	IITM Models for TC track & intensity prediction by Dr. Medha Deshpande, IITM Pune
1000-1100	1530-1630	Statistical-dynamical modelling for TC forecasting by Dr. S.D. Kotal, Scientist-F, IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Multi Model Ensemble Technique by Sh. Arulalan T, Scientist-C, IMD
		23rd August: Day-5 (Friday)
0400-0500	0930- 1030	Marine Weather Monitoring and Forecasting by Dr. Amit Bhardwaj, Scientist-C, IMD
0500-0600	1030-1130	Wave and Swell monitoring and forecasting by Dr. Remya, Scientist-E, INCOIS
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	Storm surge, coastal inundation and wave height monitoring and

		forecasting by Prof. AD Rao, Retd Prof IIT Delhi
0730-0900	1300-1430	Lunch Break
0900-1000	1430-1530	Practical on storm surge and coastal inundation monitoring and forecasting by Dr. P L N Murty, Scientist-E, IMD
1000-1045	1530-1615	Practical on Wave height monitoring and forecasting, Dr. Amit Bhardwaj, Scientist C, IMD
1045-1115	1615-1645	Tea Break
1115-1230	1645-1800	Equatorial Waves Monitoring and Prediction by Mrs Monica Sharma, Scientist-D, IMD and Dr. A K Das, Sc. F, IMD (Teory & Practical)
		24th August: Day-6 (Saturday)
0400-0500	0930- 1030	Role of MJO & El Nino on Tropical Cyclones: Dr. D.R. Pattanaik, Scientist-F, IMD
0500-0600	1030-1130	Practical on Preparation of daily tropical Weather Outlook and Weekly Extended Range Forecast by Mrs Monica Sharma, Scientist-D, IMD
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	SWFP- South Asia by Dr. D.R. Pattanaik, Scientist-F, IMD
0730-0900	1300-1430	Lunch Break
0900-1000	1430-1530	TC Structure Monitoring and Forecasting, by Mrs Monica Sharma, Scientist-D, IMD
1000-1100	1530-1630	Operational cyclone track and intensity forecasting by Dr M Mohapatra, DGM, IMD and Mrs Monica Sharma, Scientist-D
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Practical on TC genesis, location, intensity & structure monitoring and prediction by Dr. M. Mohapatra, DGM, IMD and Mrs Monica Sharma, Scientist-D
		26th August: Day-7 (Monday)
0400-0500	0930- 1030	Practical on Operational cyclone track and intensity forecasting by Dr M Mohapatra, DGM, IMD and Mrs Monica Sharma, Scientist-D
0500-0600	1030-1130	Characteristics of Heavy rainfall associated with cyclones by Dr. Satya Prakash, Scientist-D, IMD
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	Cyclone forecast verification: Mrs. Monica Sharma, Sc. D, IMD
0730-0900	1300-1430	Lunch Break
0900-1000	1430-1530	TCFP by Mrs. Monica Sharma, Scientist-D, IMD
1000-1100	1530-1630	Visit to NWFC & ISSD (briefing) by Dr. Soma Sen Roy & Dr Shankar Nath, Scientist-F, IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Visit to Satellite Division (briefing) by Dr. A K Mitra, Scientist-F, IMD
		27th August: Day-8 (Tuesday)
0400-0500	0930- 1030	Operational TC forecasting at RSMC Tokyo by Dr. Ryo Oyama, Scientist, RSMC Tokyo
0500-0600	1030-1130	Preparation of user specific bulletins in India by Ms. Bharati Sabade, Sc.D, IMD
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	Characteristics of monsoon circulations over the RSMC region by Dr. O P Sreejith, Scientist-E, IMD
0730-0900	1300-1430	Lunch Break
0900-1230	1430-1800	Visit to NCMRWF
		28th August: Day-9 (Wednesday)

0400-0500	0930- 1030	Impact based forecasting by Team UNESCAP
0500-0600	1030-1130	Impact based forecasting by Team UNESCAP
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	Flash flood guidance in India & South Asia by Mr Asok Raja, Scientist-D, IMD
0730-0900	1300-1430	Lunch Break
0900-1000	1430-1530	TC hazard and impact forecasting: IWTC X recommendations, Mrs. Monica Sharma, Sc. D, IMD
1000-1100	1530-1630	Impact based forecasting of TCs with Web DCRA in India by Dr. A.K. Das, Scientist-F, IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Impact Based Forecast of heavy rainfall by Dr. R.K. Jenamani, Scientist-G, IMD
		29th August: Day-10 (Thursday)
0400-0500	0930- 1030	Tropical Cyclone Advisory for Civil Aviation: Role of TCAC New Delhi: Dr. Suresh Ram, Scientist-F
0500-0600	1030-1130	Preparedness and Pre-cyclone Exercise Meeting by Dr AK Das, Scientist F, IMD
0600-0630	1130-1200	Tea Break
0630-0730	1200-1300	Cyclone Warning dissemination methods including CAP demonstration by Dr. Sankar Nath, Scientist-E, ISSD
0730-0900	1300-1430	Lunch Break
0900-1000	1430-1530	RSMC Website: An overview by Mrs Monica Sharma, Scientist D, IMD
1000-1100	1530-1630	Countdown with disaster management agencies and public for cyclone management by Dr. M. Mohapatra, DGM IMD
1100-1130	1630-1700	Tea Break
1130-1230	1700-1800	Countdown with disaster management agencies and public for cyclone management by Dr. M. Mohapatra, DGM IMD (contd.)
		30th August: Day-11 (Friday)
0400-0530	0930- 1100	Assessment Test
0530-0600	1100-1130	Tea Break
0600-0700	1130-1230	Discussion under the Chairmanship of Dr M Mohapatra, DGM IMD
0700-0800	1230-1330	Valedictory Function (Participants, Resource persons, DGM, Head RSMC, Head CWD and IMD Officers)
0800-0900	1330-1430	Lunch Break
0900 onwards	1430 onwards	Technical Visit

LIST OF PARTICIPANTS ATTENDING

RSMC New Delhi Attachment Training for Forecasters

19th - 30th August 2024

International Participants joining in-person

1. Kanda Durage Sujeewa, SriLanka
2. Ms. NwetNwet Yin, Myanmar
3. Said Aubad Ali AlhamarAlkathiri, Oman
4. Mr. Md. Abdur Rahman, Bangladesh
5. Ms Maryam Zaid Alshehhi, UAE
6. Ms Esra Waleed Alnaqbi, UAE
7. Jaifar Hamed 'Abdullah Al-Busa'idi, Oman
8. Aysha Juma Salim Al Qasimi, Oman
9. Kauthar Sulaiman Ali Al Jabri, Oman

International Participants joining Online

1. Dr. Zaheer Ahmad Babar, Pakistan
2. Mr. Muhammad Aleem ul Hassan, Pakistan
3. P.H.C. De Silva, SriLanka
4. Jeewan Karunaratne, SriLanka
5. Janaka Kumara, SriLanka
6. Shanika Disanayake, SriLanka
7. Mr. G.S. Wijenayake, SriLanka
8. Mr. E.I.B. Ekanayaka, SriLanka
9. Mr. P.A. Athula Priyantha, SriLanka
10. Ali Mohammed Al-Ahmari, Saudi Arabia
11. MOHAMMED NAZIR ALAM MIRAJALDEEN, Saudi Arabia
12. MOHAMMED AHMED KABLI, Saudi Arabia
13. Ms Maythaa Abdulrahman Almansoori, UAE
14. Thahumeena Abdul Kareem, Maldives
15. Aishath Rasheeda, Maldives
16. Ahmed Shabin, Maldives
17. Ms. Han Swe, Myanmar
18. Dr. Khin Win Maw, Myanmar
19. Ms. Htway Htway Linn, Myanmar
20. Miss NapornpanRitmahun, Thailand
21. Mr.RakchaiSrinuan, Thailand
22. Preecha Jintanawat, Thailand
23. ThaphanaChankun, Thailand
24. MR. SorotSawatdiraksa, Thailand

25. Anan Sirithanyarat, Thailand
26. Premwadee, Thailand
27. Charkrit Thongbai, Thailand
28. KittinunKaewtae, Thailand
29. Mr. PolkritUppamon, Thailand
30. Mr. PutchaphanSirisap, Thailand
31. Surajit Jitarerat, Thailand
32. NuthakitSinghaphet, Thailand
33. WuttisakRatinonsakul, Thailand
34. Hussein Mastaneh, Iran
35. SaeidehKhwarazmi, Iran
36. Ali Mollashahi, Iran
37. Mohammad Taghi Rastegar Moghddam, Iran
38. Hajar SHojaeeian, Iran
39. Martha Abbasi Moheb, Iran
40. Mina Rajabali, Iran
41. Leila Rashidian, Iran
42. Safieh Farrokhi Moghaddam, Iran
43. Maryam Kamali, Iran

National Participants joining in-person

1. Dr. Suprit Kumar, Sc- E, NWFC
2. Mr. Surendra Pratap Singh, Sc-D, M.C. Port Blair
3. Dr. Arvind Kumar Sc -D, ACWC Chennai
4. Dr S Sagili Karunasagar, Sc. D, MC Amravati
5. Dr. Anwasha Bhattacharya, Sc-C, ACWC Kolkata
6. Dr. VPM Rajshree, SC C, MC Goa
7. Mr. Sudhakar Mallick, Met-B, Bhubaneshwar
8. Mr. G. Srinivasa Rao, Met-B, CWC Visakhapatnam
9. Mr. Sudhir S. Gawli, Met-A, RWFC Mumbai
10. Mr. M. D. Rawal, Met-A, MC Ahmedabad
11. Mr. G. Rajesh, Met-A, CWC Thiruvananthapuram
12. Mr. Santosh Singh, Met-A, CWD
13. Mr. Mukesh Kumar, Met-A, CWD
14. Mr. Vijay Kumar Singh, Met-A, CWD
15. Mr. Ashish Rawat, S.A., CWD
16. Mr. Vishal Maurya, S.A., CWD
17. Mr. Mohd Gulvez, S.A., CWD
18. Mr. Gaurav Kumar Srivastav, S.A., CWD
19. Ms. Neeru Barak, S.A., CWD
20. Ms. Neelam Meena, S.A., CWD