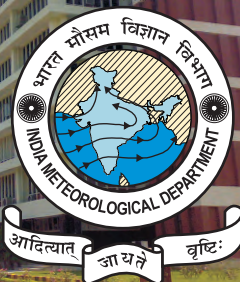


# मौसम विज्ञान विभाग समाचार IMD NEWS



INDIA METEOROLOGICAL DEPARTMENT  
(Ministry of Earth Sciences)

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JAN – MAR 2016

Volume 9

Number 1

### Important Events / Activities

#### IMD Foundation Day



Dr. Harsh Vardhan Inaugurating the function

The 141<sup>st</sup> IMD Foundation Day was celebrated on 15<sup>th</sup> January, 2016 at Mausam Bhawan , New Delhi in the august presence of Dr. Harsh Vardhan, Hon'ble Minister of Science & Technology and Earth Sciences. Dr. M. Rajeevan, Secretary MoES also graced the occasion with his presence. Dr. L.S. Rathore, DGM while addressing the gathering, welcomed the Hon'ble Minister and Secretary MoES to IMD's Foundation Day and showcased IMD's achievements of the previous year comprising mainly of initiatives in the field of Digital India, infrastructure development, services and steps taken in the direction of Make in India. The Hon'ble Minister while applauding IMDs confident strides into forecasting appreciated the sincerity and dedication of the IMD personnel in working round the clock and providing excellent services to the nation in terms of better and accurate forecasts emphasizing that accurate forecasts for rain and cyclones saved thousands of lives. Information provided through SMS to about 1 crore farmers and fisherman reflects in a direct increase of the GDP. He suggested working in Arctic and Antarctica, inside sea for new searches and also setting our goal in the field of climate change.



Release of books

#### International Women's Day

International Women's Day was celebrated at 'Vrishti' hall in Mausam Bhawan Complex, New Delhi on 8<sup>th</sup> March 2016. This is the first time the day was observed by the IMD New Delhi Office. Dr. Kamaljit Ray, Scientist 'F' and Chairperson, ICC welcomed the Guest of Honor, Prof. Tripurari Sharma, Director Acting, National School of Drama and other senior officials of IMD. Dr. L.S. Rathore, DGM, addressed the gathering and emphasized on the importance of beginning the awareness on gender parity at home. Prof. Tripurari Sharma, Director, Acting, National School of Drama was the Guest of Honour at the event. She engaged the audience with her talk with the wisdom which can be acquired only through vast experience. Dr. Surinder Kaur, Scientist 'F', the senior most woman officer of IMD shared some of her experiences on working in IMD. Shri A.K. Sharma, Scientist 'G' was the Chief Guest of the function and delivered talk on this years' theme "Planet 50-50 by 2030: Step It Up for Gender Equality". Shri S.B. Tyagi, Scientist 'E' gave a brief presentation on awareness of harassment at work place. Formal vote of thanks on behalf of the organizers was proposed by Smt. Ranju Madan, Scientist 'F'. The response from the officials of IMD New Delhi office was encouraging as was evident from the participation.



Dr. L.S. Rathore welcoming the guest



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## World Meteorological Day Celebrations

World Meteorological Day was celebrated at HQ jointly by IMD and Indian Meteorological Society (Delhi) with the theme “**Hotter, Drier, Wetter, Face the future**”. Scientific talks on “**Challenges and Management of Climate Extremes**” by Shri Kamal Kishore, Member, National Disaster Management Agency and “**Environment, Law & Society**” by Hon'ble Judge Naveen Kashyap, Delhi were delivered and Hindi Play “**Faltoo Dawakhana**” was presented by artists from IMD. More than 300 officials attended the event.



WMO Day celebrations at IMD HQs

Adaptation Research, Anna University, Chennai. This function was attended by various scientific organizations, students from University of Madras, Anna University and colleges, IMS Chennai Chapter members and retired IMD officers.



WMO Day celebrations at RMC Chennai

An open house and meteorological exhibits were organized on WMO Day at MC Bangalore. About 400 visitors visited the Observatory and they were explained the function of Automatic Weather Station, Surface Observatory, WRF model, Surface and Upper Air instruments, variation of temperature and rainfall and weather forecasting techniques etc.



Newspaper cuttings of WMO Day celebration at MC Bangalore

World Meteorological Day was celebrated at RMC Chennai on 23<sup>rd</sup> March, 2016. The theme chosen for this year was “**Hotter, Drier, Wetter, Face the Future**”. An open house and meteorological exhibits were organized at RMC Chennai, AMO Chennai and DWR Chennai for students, teachers and public. About 500 students from different schools and colleges of city along with general public visited the office. They were explained of the various activities of Regional Meteorological Centre, Chennai.

A scientific meeting on the occasion of the WMO Day was arranged at RMC Chennai in which Guest of Honor was Prof. S. Kanmani, Director, Centre for Environmental Studies, Dept. of Civil Eng., Anna University, Chennai and the Chief Guest was Prof. A. Ramachandran, Former Director, Centre for Climate Change and

Scientific talks on “**Satellite based Agro Meteorology**” by Dr. P.P. Nageswara Rao, Professor, Karnataka State Remote Sensing Applications Centre, Bengaluru and on “**Climate Change**” by Dr. Ramakrishna Danmle, Professor Department of Physics, Bangalore University were also arranged.

CDR Karaikal celebrated WMO Day with about 700 visitors including 10 media, students and public visiting the office.

WMO Day was celebrated with much enthusiasm at CSO, Shillong office Campus in collaboration with State Council of Science, Technology & Environment (SCSTE), Govt. of Meghalaya. Dr. S Choudhury, Director, Science & Technology, Admin. Incharge, North Eastern Council, Development of North Eastern Region, Shillong was the Chief Guest and Prof. Manmohan Singh, Dean of Education, North Eastern Hill University, Shillong & Mr. A.S. Suting, Officer on Special Duty, SCSTE, Meghalaya and other officers were also present apart from teachers & 240 students from 8 Schools.



WMD celebrations at CSO Shillong



Students visiting RMC Kolkata on WMO Day

मौसम कार्यालय अहमदाबाद में विश्व मौसम विज्ञान दिवस मनाया गया तथा कार्यालय के प्राणण में मौसम की जानकारी देने वाले उपकरणों की एक प्रदर्शनी का भी आयोजन किया गया।



मौसम कार्यालय अहमदाबाद में विश्व मौसम विज्ञान दिवस का आयोजन

AMS Coimbatore celebrated WMO Day by inviting Shri G. Prakash Reddy, Airport Director, Shri V. Pradeep Kumar, Joint General Manager (Air Traffic Control) and Shri Joven Varghese, Assistant Manager (Security) of Coimbatore international Airport and had discussion on global warming and climate change. The officer-in-charge of AMS Coimbatore, Shri A. Raja, A.M. Gr.I briefed about the theme for this year's World meteorological Day and the need to strengthen climate change adaptation in addition to mitigation.

WMO Day was celebrated at RMC, Kolkata with much enthusiasm and zeal. Posters and banners depicting the event, the theme of WMD 2016, operation of various meteorological instruments and technical activities of RMC Kolkata were displayed at vantage points in the office compound. Slide shows and documentary films on activities of IMD and on subjects like meteorology, seismology, radar, astronomy etc. were presented in the form of power-point projections on screen at Seminar Hall. A class-room type lecture was also arranged simultaneously at Conference Room for the enthusiastic pupils of different institutions who visited the Centre on that day. An exhibition was arranged at the foyer of the main building. Necessary briefing of exhibits was constantly given to the visitors during the exhibition. Significance of this year's WMD Motto: "Hotter, Drier, Wetter --- Face the Future" was also explained to the visitors in a precise manner.

मौसम केन्द्र रायपुर में विश्व मौसम दिवस 2016 का आयोजन किया गया इसके तहत मौसम संबंधी उपकरणों तथा पूर्वानुमानों की जानकारी हेतु मौसम केन्द्र रायपुर का कार्यालय प्रातः 11 बजे से सायं 4 बजे तक आम जनता के लिए खुला रहा। इस वर्ष का विषय भविष्य में उष्णतर और आर्द्रतर जलवायु का सामना के तहत विभिन्न चित्रों व चलचित्रों की प्रदर्शनी भी लगाई गई। इसके अलावा मौसम वैज्ञानिक श्री पी. एल देवांगन द्वारा मौसम सेवाओं की उपयोगिता विषय पर प्रस्तुतीकरण भी दिया गया।

**National Productivity Week 2016** was observed during 12-18 February, 2016 at workshop premises, ADGM(R) Pune. Dr. D. Pradhan, Scientist 'G' (Inst.) was present during the closing ceremony and distributed the certificates among the participants of ISO training.

**Pre-monsoon Cyclone Exercise** was conducted successfully on 28<sup>th</sup> March, 2016 at Seminar Hall, RMC Kolkata under the chairmanship of Dr. G.C. Debnath, Scientist 'F'. High level central and state government authorities and several NGOs took part in intense interactive sessions. Dr. G. C. Debnath, Scientist 'F', Shri A. Chanda, Scientist 'E' & Shri G. K. Das Scientist 'D' delivered lectures on related topics.

## Important Policy Decisions Taken

A national level meeting was organized on Severe Weather Forecasting Demonstration Project (SWFDP) on 6<sup>th</sup> January, 2016 to chalk out the plan of action for its implementation from 23<sup>rd</sup> March, 2016.

A Meeting was conducted on 3<sup>rd</sup> March, 2016 between India Meteorological Department and Indian Space Research Organisation (ISRO) for handing over of Doppler Weather Radar at Sriharikota High Altitude Range (SHAR) to ISRO.

## New Projects/ Schemes/ Programmes Approved/ Initiated/ Completed

**RS/RW observatories upgraded :**

Upper air laboratory of the O/o DDGM(UI), New Delhi has upgraded 13 numbers of RS/RW observatories by installing GPS radiosounding

systems. Systems were installed at RS/RW Agartala, Gorakhpur, Jalpaiguri, Jodhpur, Karaikal, Kochi, Lucknow, Mangalore, Machilipatnam and Ranchi. In addition to this defunct RS/RW observatories at Jammu, Manali and Sasoma being managed by Snow & Avalanche Study Establishment (SASE) were discontinued and instead RS/RW observations started at IMD Jammu, PBO Dehradun and PBO Sunder Nagar after installation of the GPS based radiosounding system.

Entire RS/RW network of IMD consisting of 39 stations is now based on GPS radiosounding systems.



GPS Radiosonde Ascent

### Make in India Initiative :

Field trials of Indigenous GPS Radiosonde as part of Technical Evaluation for procurement of GPS Radiosondes from Indian manufacturers under Make in India initiative by IMD was completed at RMO Ayanagar from 16–20 March 2016.



Field trials of Indigenous GPS Radiosonde

IITM-IMD (MoES) fog campaign completed in February 2016 at **Indira Gandhi International Airport (IGIA), New Delhi**: Ministry of Earth Sciences, with the help of their institutional scientists and research scholars, jointly conducted a special scientific observational Fog campaign at Delhi from 20 December, 2015 to 10 February, 2016. The major objective was to collect data and study role of various met parameters and pollutants at various levels near surface and its nearest boundary layer on fog formation and also detail sampling of fog droplets and aerosols up to nanometers to understand its chemistry which will help in improving dynamic based fog forecasting system. A total of thirty-one equipment were deployed in the fog campaign out of which almost 95% of total

instruments were installed at IGIA. Some of the instruments deployed to capture fog related data, are used for the first time in India for any such fog event. The other major impact of this campaign in terms of improving fog forecast system has been to analyze and identify various complex micro-physical and other processes of fog formation at Delhi.



Top left: Flux tower team inside IGIA during its erecting stage. Top right: Tether sonde balloon observations up to 1000M were taken during 3-23 January 2016

**Rainfall Design Storm Studies** for under mentioned seven projects were completed:-

- Sirkaribhyol Rupsiabagar Hydroelectric Project, Uttarakhand
- Mawblei Hydroelectric Project, Meghalaya
- Amarja Reservoir Project, Karnataka
- Doimukh Hydroelectric Project, Arunachal Pradesh
- Malaprabha Dam, Karnataka
- Interlinking Project from Brahmani to Banas river in Rajasthan
- Mumari Dam under Bhatsa Project, Maharashtra.

### Land acquired for new office:

Lands for Keonjargarh and Chandbali stations have been acquired by Regional Meteorological Centre Kolkata for setting up of Departmental offices.

## Human Resource Development Activities (Conferences/Seminars/Symposia/Trainings/Higher Qualification Acquired/Workshops etc.)

### Conferences

**AMR/ACR meeting** held at New Delhi during 28-29 January 2016.

**Dr. M. Mohapatra**, Scientist 'G' presented on "Cyclone Services Achievements during 2015 And Future Plan" in the Annual cyclone Review meeting held at New Delhi on 29<sup>th</sup> January, 2016.

**Smt. Suman Goyal**, Scientist 'E' participated in Second session of CBS Inter Programme Expert Team on Satellite Utilization and Product (IPET-SUP-2) at Geneva, Switzerland during 23-26 February, 2016.



**Dr. B. Mukhopadhyay**, Scientist 'G' participated in a conference on climate change on 4<sup>th</sup> March, 2016 organised by Sir Parshurambhau College, Pune.



**Dr. Mukhopadhyay at the conference on climate change**

WMO Consultation on 'Third Pole & High Mountain Region' hosted jointly by IMD and WMO during 9-11 March 2016 at Jaipur was inaugurated by Dr. M. Rajeevan, Secretary Ministry of Earth Sciences. 50 experts from countries of 3<sup>rd</sup> Pole region, WMO Geneva, RIMES Thailand, USA, Australia, Germany and other Global and Indian institutions participated in the consultation. **Dr. D. R. Pattanaik**, Scientist 'E' delivered an invited talk on "Global Framework for Climate Services (GFCS) – Climate and Health" in the Regional Stakeholder Consultation on Climate Services for the Third Pole Region.



**WMO Consultation on 'Third Pole & High Mountain Region'**

**Dr. S. O. Shaw**, Scientist 'E' attended a panel discussion on "COP 21 and After: Action plan of and for India with special reference to North East India" organized by Assam Engineering College, Guwahati on 26<sup>th</sup> March, 2016.

## Trainings

Barometer Calibration and meteorological instruments training was conducted for Mr. Htay Lwin, Executive Engineer and Mr. Zaw Min Htwe, Deputy Superintendent of Department of Meteorology and Hydrology, Myanmar from 15-19 February 2016.

**Dr. M. Mohapatra**, Scientist 'G'(S) participated in training programme on "Disaster Risk Reduction Strategies for Sustainable Development Planning & Policy Instruments" during 17-18 February, 2016 at New Delhi organised by National Institute of Disaster Management (NIDM).

One-week training programme organized to train six Part-time-observers during 22-26 February 2016 at RMC Chennai.

21 officials of M.C. Ahmedabad have been trained and successfully cleared Internal Auditors examination.

Familiarization training imparted to 13 Officers from Air Force Administrative College (AFAC), Coimbatore on "Satellite Meteorology" during the period from 14 -15 March, 2016.

Training of GPS based radiosounding systems was imparted to IMD officers and staff at 13 locations by the Engineers from M/S Jinyang Industrial Company, Korea.



**IMD officers and staff undergoing training of GPS radiosounding systems**

Most of the officers and staff members of M.C. Ahmedabad have undergone awareness training regarding Quality management system for obtaining ISO 9001:2008 certification.

## Higher Qualification Acquired

**Shri U. K. Choudhary**, AM-II completed his PhD degree in Physics from the Department of Geophysics, Banaras Hindu University (BHU) and received degree on 22<sup>nd</sup> February 2016 on the occasion of centenary convocation of BHU. Title of his thesis was "Effect of sea surface temperature of Indian Ocean on Indian summer monsoon rainfall".

## Workshops

**Surface Instrument Division**, Pune organized a National Workshop on "Atmospheric Instrumentation & Meteorological Sciences: Theory & Challenges" in association with Vishwakarma Institute of Technology, Pune during 19- 21 January 2016.





**Dr. S. Balachandran**, Scientist 'E' and **Dr. A. K. Mitra**, Scientist 'D' participated in the Annual Monsoon workshop 2015 and National Symposium on “Understanding and Forecasting the Monsoon Extremes” at Indian Institute of Tropical Meteorology, Pune during 23-24 February 2016 and delivered invited talks on “An overview on Northeast Monsoon-2015” and on “INSAT-3D Satellite data utilization for monitoring of south west monsoon 2015” respectively.

**Dr. M. Mohapatra**, Scientist 'G' participated and presented an invited talk on “Role of IMD in the management of Meteorological hazards in India” in UN-India disaster risk reduction workshop during 8-10 March, 2016 at Hyderabad.

**Shri S. C. Bhan**, Scientist 'F' participated in a Workshop on Strengthening State Level Heat Action Plan of Odisha organized by Odisha State Disaster Management Authority on 14<sup>th</sup> March, 2016 at Bhubaneswar.

**Dr. S. C. Sahu**, Scientist 'F' participated in the state level workshop on learning from heat wave response on 18<sup>th</sup> March, 2016 at Bhubaneswar.

## Lectures

**Dr. M. Mohapatra**, Scientist 'G' delivered a lecture on “Cyclone Warning System & Communication in India” on 13<sup>th</sup> January, 2016 at 5 day national level training programme on “Communication Systems in Disaster Situations” during 11-15 January, 2016 conducted by National Institute of Disaster Management (NIDM), New Delhi.

**Shri S. C. Bhan**, Scientist 'F' delivered a lecture on “Weather Analysis from Observations to Forecasting” during the National Workshop on “Atmospheric Instrumentation and Meteorological Sciences : Theory & challenges” organized by Viswakarma Institute of Technology(VIT) Pune in association with IMD during 19-21 January 2016 at VIT Campus Pune.

**Dr. S. D. Attri**, Scientist 'F' delivered a talk on “**Environment Monitoring And Techniques**” at VIT Pune on 21<sup>st</sup> January, 2016.

**Dr. S. Balachandran**, Scientist 'E' delivered a lecture on “Cyclone Disaster Management” to stakeholders of state on 27<sup>th</sup> January, 2016 in a training programme on “Disaster Management for All Sectors” arranged at Anna Institute of Management, Chennai.

**Dr. Jayanta Sarkar**, Scientist 'E' delivered lectures on Rainfall climatology for agricultural planning & effects of temperature on crops to Departmental Met. Gr.II trainees Batch No.21, during 8-12 February 2016 at IMD, Shivajinagar, Pune.

**Dr. S. C. Sahu**, Scientist 'F' delivered lectures on “Disaster need assessment, weather forecasting, warning and dissemination system for preparedness, evacuation and other measures” and “Climate change adaptation and disaster need assessment” on 22<sup>nd</sup> February, 2016 at Gopabandhu Academy of Administration, Bhubaneswar.

**Shri J. L. Gautam**, Scientist 'E' delivered a lecture on “Real time Earthquake monitoring and data processing in National Centre for seismology” on 26<sup>th</sup> February, 2016 in a training programme conducted by National Hydroelectric Power Corporation (NHPC) from 25–27 February, 2016 on “Seismological consideration in hydropower design & accelerograph data processing” at NHPC Limited Corporate Office, Faridabad.

**Shri G. K. Das**, Scientist 'D' delivered a lecture on “Heavy to Very Heavy Rainfall/Meteorological Flood During Monsoon Season in Eastern India in Recent Years” at a seminar on “Natural Disaster Phenomenon-Contemporary Development” held at Department of Atmospheric Sciences, University of Kolkata on 26<sup>th</sup> February, 2016.

**Dr. D. Pradhan**, Scientist 'G' visited Indian Statistical Institute Kolkata and Indian Institute of Technology, Kharagpur on 2<sup>nd</sup> March, 2016 and delivered lectures on Dual Polarised Radar and Doppler Weather Radar utilization. He also discussed with Director, IIT about the installation of DWR and GPS based Radio Sonde system at IIT Kharagpur.

**डॉ. जयंता सरकार** वैज्ञानिक ई एवं निदेशक ने जी आई डी एम गॉंधी नगर में दिनांक 29 मार्च 2016 को आपदा प्रबंधन के विषय पर व्याख्यान दिया।

## Awards & Recognition

Regional Meteorological Centre, Kolkata was adjudged the best RMC by HQ., New Delhi for the year 2015. A certificate and a trophy were awarded in recognition of the honor.

Recipients of IMD Best Employee Awards for the year 2016 : Dr. A.K. Das, Scientist 'D'; Ms. V.K. Mini, Scientist 'D'; Mr. R.P. Sharma, A.M.-I; Ms. Sarita Joshi, Hindi Officer; Ms. Usha Krishnan, A.M.-II, Ms. Mousumi Dutta, S.A.; Mr. K. Baiju, S.A.; Mr. R.M. Kamble, A.M.-II; Ms. A.E. Kujur, Assistant; Ms. Surabhi Purohit, U.D.C.; Mr. Prodip Mallick, U.D.C.; Mr. U.G. Alhat, Mechanic Gr-I; Mr. S.R. Narada, Staff Car Driver; Mr. Sachin Kumar, MTS; Mr. Jagat Singh, MTS; Mr. Sanjoy Barua, MTS; Mr. A.C. Das, MTS; Mr. Anil Kumar, MTS; Mr. Laxmi Narayan, MTS; Mr. A. Arulsamy, MTS and Mr. K.M. Raveendran, MTS.



**Dr. A. K. Das receiving the best employee award**



The 27<sup>th</sup> Biennial Mausam Award for the Biennial period 2012-2013 has been awarded jointly to S/Shri Kuldeep Srivastava, Sharan S. Y. lau, H. Y. Yeung, T. L. Cheng, Ms. Rashmi Bhardwaj, A. M. Kannan, S. K. Roy Bhowmik and Hari Singh.

The 5<sup>th</sup> Biennial Mausam Shodh Puraskar has been awarded jointly to सर्वश्री एम. एस. शेखर, एम. श्रवण कुमार, अजय कुमार एवं अशवाघोष गंजु for their scientific research paper in Hindi.

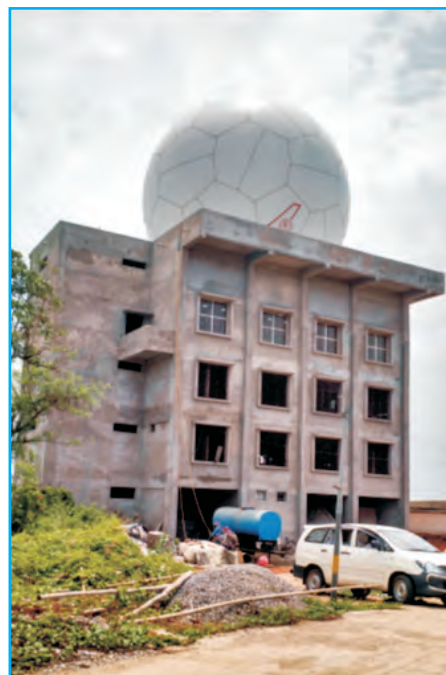
**Dr. A. C. Lyngdoh**, Scientist 'D', attended inauguration of Shillong Geophysical Research Centre on 18<sup>th</sup> January, 2016. He was presented momento by Dr. Harshvardhan, Minister of Science & Technology & Earth Science, Government of India.

**Ms. B. Amudha**, Scientist 'D' was nominated as a member of the expert committee of Price Fixing Committee for review and fixing prices of Solar Radiation Resource Assessment data by National Institute of Wind Energy, Chennai.

**Dr. M. Mohapatra**, Scientist 'G' (Services) has been nominated as a member of National Organizing committee for the 30<sup>th</sup> National conference Disaster Management preparedness to be held in September 2016 at New Delhi by International Development Centre foundation.



Installation work of DWR Gopalpur has been completed.



**Doppler Weather Radar Gopalpur**

Installation work for Goa Doppler Weather Radar is in progress.



**Doppler Weather Radar building under construction at Goa**

## Infrastructure Development & Installation

Installation of Antenna & Radome at Doppler Weather Radar (DWR) Kochi has been completed.



**Doppler Weather Radar Kochi**

**Dr. A. C. Lyngdoh**, Scientist 'D' was on tour to Kohima, Mokochung and Jorhat during 7-9 February, 2016 for installation of solar panel & batteries at North East seismic telemetry stations.

**Dr. S. I. Laskar**, Scientist 'D' and Shri Satindra Kumar, AM II were on tour to MC Patna for installation of Nowcast software WDSSII during 27<sup>th</sup> March to 1<sup>st</sup> April 2016.

Global Navigation Satellite Systems (GNSS) equipments were installed at sixteen stations for Integrated Precipitable Water Vapour (IPWV) measurements.





ISO 9001:2008 Certification has been awarded to Central Aviation Meteorological Division (CAMD) on 27<sup>th</sup> February, 2016.

ISO Certification of Meteorological Centre Bhubaneswar, Area Cyclone Warning Centre & Doppler Weather Radar Kolkata is under process.

Approval for QMS certified external audit bodies for obtaining ISO 9001:2008 certificate is under process at M.C. Ahmedabad.

Installations carried out by O/o DDGM(SI), Pune during January – March 2016 :

1. Installation of UV-B Radiometer at Lakshdweep island stations (Amini & Minicoy).
2. Installation of Diffuse shading ring assembly at Anand, Amini, Port Blair, Jaisalmer.
3. New acrylic protection box for Radiation receiving system at Jaisalmer, Jaipur and Jodhpur.
4. Calibration of Radiation sensors at Anand, Jaisalmer, Jodhpur, Port Blair.
5. High Wind Speed Recorder (HWSR) station installed at Machilipatnam.
6. Drishti system installed at Varanasi airport in January 2016.
7. HWSR station installed and commissioned at Naliya, Gujarat.
8. HWSR stations installed at Balasore, Puri, Digha and Paradeep have been revived during March 2016.
9. Two new CWIS installed and commissioned at Runway 12 and Runway 30 at Chennai airport in March 2016.
10. Installation of HWSR at Safdarjung (New Delhi) in March 2016.
11. Total 138 nos. of Digital Station Barometers installed at observatories till date:

RMC Mumbai	:	15
RMC Nagpur	:	13
RMC New Delhi	:	32
RMC Chennai	:	40
RMC Kolkata	:	20
RMC Guwahati	:	17
Bharati, Antarctica	:	01



Installation of HWSR at Naliya, Gujarat

## Inter-Agency Meetings

**Shri S. Bagulayan Thampi**, Scientist 'F' and **Shri Virendra Singh**, Scientist 'E' participated in a meeting on the WMO project on Severe Weather Forecast Demonstration – Bay of Bengal (SWFDP-BoB) on 6<sup>th</sup> January, 2016 at New Delhi.

**Shri L. Ramesh Babu**, Scientist 'D' along with **Shri Somashekara Bhatta** AM-I, AMO Bengaluru attended the monthly "Airport Facilitation Committee" meeting conducted by KIAL, Bengaluru on 12<sup>th</sup> January, 2016.

**Shri R. B. Verma**, Scientist 'D' attended a meeting on Disaster management conducted by Disaster Management Division under Ministry of Home Affairs on 13<sup>th</sup> January, 2016.

संसदीय राजभाषा समिति की दूसरी उपसमिति द्वारा दिनांक 16-18 जनवरी 2016 तक राजभाषा संबंधी निरीक्षण में ओखा में आयोजित समन्वय बैठक में डॉ. जयंता सरकार वैज्ञानिक ई एवं श्रीमती मनोरमा मोहंति वैज्ञानिक डी उपस्थित हुए।

**Shri A.K. Sharma**, Scientist 'G', participated in 2<sup>nd</sup> Hindi Parliamentary Committee/Sub Committee Inspection Meeting at Okha, Gujarat on 18<sup>th</sup> January, 2016.

A meeting on development of standard operation procedure for Dam safety during cyclone period was held at IMD, New Delhi with experts from Cyclone Warning Division, Hydrometeorology Division of IMD and Central Water Commission on 20<sup>th</sup> January, 2016.

**Dr. S.K. Roy Bhowmik**, Scientist 'F' attended CTCZ Subgroup meeting on 20<sup>th</sup> January, 2016 at Indian Institute of Science, Bangalore.

**Dr. Jayanta Sarkar**, Scientist 'E' had a meeting with the CEO Green Environment Services, Ahmedabad on 27<sup>th</sup> January, 2016.

श्रीमती मनोरमा मोहंति वैज्ञानिक डी ने दिनांक 28 जनवरी 2016 को न.रा.का.स., अहमदाबाद की बैठक में उपस्थित हुईं।

**Shri Virendra Singh**, Scientist 'E' attended the 13<sup>th</sup> session of WMO Consultative Meeting (CM-13) at Geneva during 28-29 January, 2016 for high level policy matter on satellite focusing on the vision of WIGOS (WMO Integrated Global Observing System) comparing space based component system in 2040, data exchange policy and architecture for climate monitoring from space.

**Dr. A. C. Lyngdoh**, Scientist 'D' attended a meeting at Meghalaya main Secretariat, Shillong organised by Meghalaya Basin Development Authority (MBDA) on the 2<sup>nd</sup> February, 2016.

**Shri D. Joardar**, Scientist 'E' attended HPC committee meeting under the chairmanship of Dr. M. Ravichandran, Scientist 'G' Indian National Center for Ocean Information Services (INCOIS) on 8<sup>th</sup> February, 2016 at INCOIS, Hyderabad and furnished details of floating point calculation for each application/code to be operationally executed for productions and storage requirement for next five years in ESSO-IMD.

**Dr. S. C. Sahu**, Scientist 'F' attended meeting of the state Steering committee on heat wave action plan on 22<sup>nd</sup> February, 2016 in Orissa State Disaster Mitigation Authority (OSDMA), Bhubaneswar.





**Shri S. B. Thampi**, Scientist 'F' participated in a meeting of committees constituted by Secretary, MoES in connection with the preparation of vision document and also to chalk out the work plan on 2<sup>nd</sup> March 2016 and 31<sup>st</sup> March 2016 at National Institute of Ocean Technology, Chennai.

**Dr. Geeta Agnihotri**, Scientist 'E' attended a meeting of State Level Coordination Committee on Crop Insurance (SLCCCI) at Samruddhi Video Conference Hall, Agriculture Department on 04<sup>th</sup> March, 2016.

**Dr. M. Mohapatra**, Scientist 'G' (Services) chaired a meeting for interaction among all collaborators of Heat Action Plan to review the preparedness for providing temperature forecast guidance for the above plan on 9<sup>th</sup> March, 2016 at IMD HQ.

**डॉ जयंता सरकार**, वैज्ञानिक ई ने नई दिल्ली में 9 मार्च 2016 को आयोजित हीट एक्शन प्लान बैठक में भाग लिया।

IMD has been actively supporting the Ahmedabad Heat Action Plan (HAP) 2015 by providing early warning of heat wave to Ahmedabad Municipal Corporation and Indian Institute of Public Health (IIPH), Gandhinagar. An Interaction meeting of all the collaborators of HAP 2016, under the chairmanship of Shri Kamal Kishore, Member, National Disaster Management Authority (NDMA) New Delhi, was organized on 9<sup>th</sup> March 2016 at HQ to review the preparedness for the Heat Action Plan 2016 in view of expansion of the plan to Surat, Nagpur region (5 cities) and Bhubaneswar region (2 cities). High level officers from NDMA, State Disaster Management Authority, State Health Department, Public Health Foundation of India, IIPH Ahmedabad, IIPH Bhubaneswar, National Research Development Corporation and IMD participated in the meeting.



Interaction Meeting of Collaborators of HAP 2016

**Dr. M. Mohapatra**, Scientist 'G' (Services) participated in the 1st meeting of Indo-Russia joint commission for cooperation in the field of Disaster management on 22<sup>nd</sup> March, 2016 at New Delhi and presented the Early warning system of IMD.

**Shri S. B. Thampi**, Scientist 'F' attended the 36<sup>th</sup> State Level Coordination Committee Meeting on Crop Insurance on 29<sup>th</sup> March, 2016 organized by the Agriculture Ministry, Government of Tamil Nadu.

**Shri D. Joardar**, Scientist 'E' and **Dr. Anand Kumar Das**, Scientist 'D' attended a meeting in Indian Institute of Science (IISC), Bangalore before the 'Need Aspects Committee' under the chairmanship of Prof. Ravi Nanjundiah, to justify future HPC requirement in respect of number of processors, total computing power in TFlops and disk storage in PBytes in each of envisaged programs in ESSO-IMD.

**Dr. Surinder Kaur**, Scientist 'F' chaired the "Pre-Flood Meeting on Preparedness" which was held on 29<sup>th</sup> March, 2016 between IMD and Central Water Commission officers at New Delhi.

## Research & Publication

A research paper entitled "Climatology of Tornadoes over northwest India and Pakistan; and Meteorological Analysis of recent Tornadoes over the Region" by Shri S. C. Bhan, Surender Pal, Kalyan Chakravarthy, Rahul Saxena, Kamaljit Ray and Neetha K. Gopal published in 20(1) Issue of Journal of Indian Geophysical Union, January 2016.

An article in Tamil written by Dr.K.V.Balasubramanian AM Gr I on "Weather, Climate and El-Nino" was published in 'Arivial Poonga' Tamil Magazine.

An article entitled, "Monitoring Moods of the Climate" written by Dr. S.O. Neil Shaw, Scientist 'E' was published in Eastern Chronicle Guwahati on 23<sup>rd</sup> March, 2016.

## Media Interaction

**Dr. A. C. Lyngdoh**, Scientist 'D' attended discussion panel on Earthquake Disaster Management at Doordarshan Kendra Shillong on 12<sup>th</sup> January, 2016.

**Dr. Geeta Agnihotri**, Scientist 'E' attended Mass Media Meeting at Doordarshan on 19<sup>th</sup> February, 2016 and on 9<sup>th</sup> March, 2016.

A talk in Tamil by Shri S. B. Thampi, Scientist 'F' on the theme of World Meteorological Day-2016 "Hotter, Drier, Wetter, Face the Future" was broadcasted in AIR Chennai 'A' Channel on 23<sup>rd</sup> March, 2016.

World Meteorological Day celebrations at MC Bhubaneswar were telecasted by Doordarshan Kendra Bhubaneswar on 23<sup>rd</sup> March, 2016.

An interactive session on WMO Day-2016 theme comprising Dr. S.R. Ramanan, Scientist 'F', Smt. S. Stella, Scientist 'D', Shri N. Meenatchi Nathan, Scientist 'D' and Shri A. Prasad, AM Gr.II was telecasted in two parts on 23<sup>rd</sup> March, 2016 and on 30<sup>th</sup> March, 2016.

**Dr. Geeta Agnihotri**, Scientist 'E' briefed DD, E.TV Kannada, Raj TV, TV9, AIR and Times of India on theme of World Meteorological Day.

**Dr. G. C. Debnath**, Scientist 'F' participated in a talk on WMO Day 2016 at Akash Bani Bhavan, All India Radio.

A talk in Tamil on "Types of clouds" by Shri S.B. Thampi, Scientist 'F' was broadcasted in AIR Chennai 'A' Channel on 30<sup>th</sup> March, 2016.





## Visitors

World Bank Implementation Support Mission including Country Director, World Bank visited Odisha from 13- 18 January 2016.

14 students of M.Sc. (Geophysics) from BHU were on study tour to Sat. Met. Division on 18<sup>th</sup> January, 2016.

70 students and 2 Faculty members of Parul Polytechnic Institute, Civil Engineering Department, Vadodara visited M.C. Ahmedabad on 20 & 21 January 2016 in two batches (20+20) respectively and were shown the observatory and briefed about forecasting.

314 students from various local schools visited Sat. Met. Division during January – March, 2016.

40 students from GMERS, Sola Medical College visited M.C. Ahmedabad on 27<sup>th</sup> January, 2016 in two batches. They were shown the observatory and briefed about the forecast Cyclone response & preparedness.

**Dr. M. Rajeevan**, Secretary, MoES & Chairman ESSO, New Delhi visited Surface Instrument Workshop, Pune on 2<sup>nd</sup> February, 2016 and also inaugurated Met. Museum.

40 students of BA (Geography) from Delhi University were on study tour to Sat. Met. Division on 12<sup>th</sup> February, 2016.

Visitors to O/o DDGM (SI), Pune during January-March 2016:

(a) 41 cadets from NBC Coy Course-06 were familiarized with surface meteorological instruments on 6<sup>th</sup> January, 2016.

(b) 150 students B. A. Geography of Nowrosjee Wadia College, Dept. of Geography, Pune were familiarized with surface meteorological instruments from 27- 29 January 2016.

(c) 40 Members of Indian Meteorological Society, Pune Chapter visited Radiation Lab on 31<sup>st</sup> January, 2016. (d) 50 students from AISSMS, polytechnic college, Pune visited Surface Meteorological Instruments lab during 2- 4 February, 2016.

(e) 60 students of Computer Science & I.T. streams of Jawaharlal Nehru Institute of Technology, Pune, visited the Surface Meteorological Instruments lab on 17<sup>th</sup> February, 2016.

(f) 80 students from P.V.P. College of Architecture Pirangut, Pune visited Surface Meteorological Instruments Lab on 2<sup>nd</sup> March, 2016.

Prof. Petteri Talaas, Secretary General of World Meteorological Organisation visited IMD on 7<sup>th</sup> March, 2016 and held discussion with Dr. L.S. Rathore, DGM and Senior Officers of IMD. This is the first visit of Dr Taalas to any National Meteorological Services in the world after taking over charge as Secretary General of WMO w.e.f. 1<sup>st</sup> January, 2016. He also met Hon'ble Minister of Science and Technology and Earth Sciences and Secretary, Ministry of Earth Sciences.



**Dr. L. S. Rathore holding discussion with Secretary General, WMO**

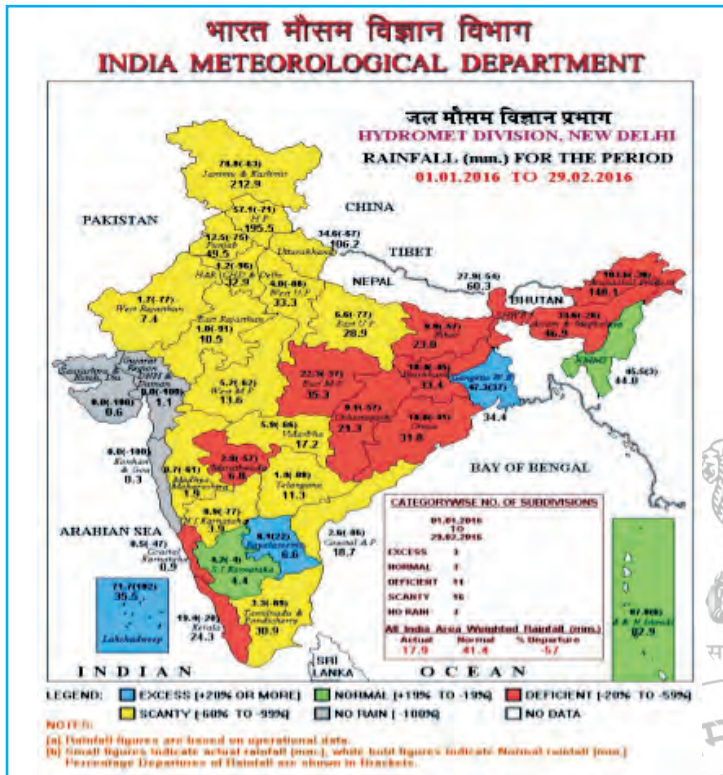
## National/International Collaboration

**Dr. Elachi**, Director of Jet Propulsion Laboratory visited India on 17<sup>th</sup> February, 2016 to finalize the joint satellite launch of NASA India Synthetic Aperture Radar (NISAR). **Dr. M. Mohapatra**, Scientist-G, (S) participated in discussion meeting and gave a brief account of global satellite data fields used in global/regional data assimilation forecast system.

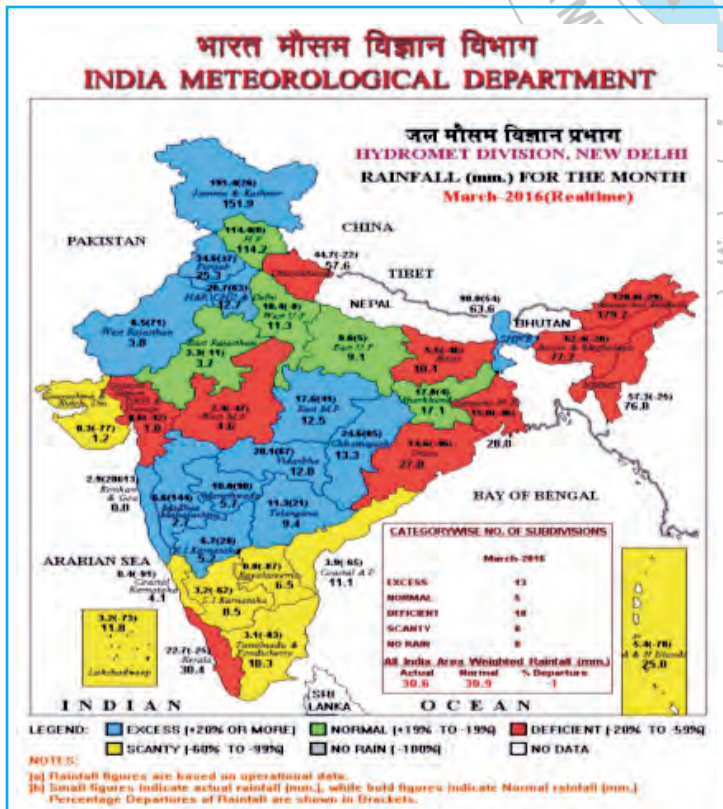
**Dr. M. Mohapatra**, Scientist 'G' and **Dr. Ranjeet Singh**, Scientist 'F' participated in stakeholders meeting convened by the National Disaster Management Authority on 3<sup>rd</sup> March, 2016 to discuss upon the scheme to strengthen the existing capacities of community volunteers specifically in disaster response capability and skill sets.

## Weather Summary

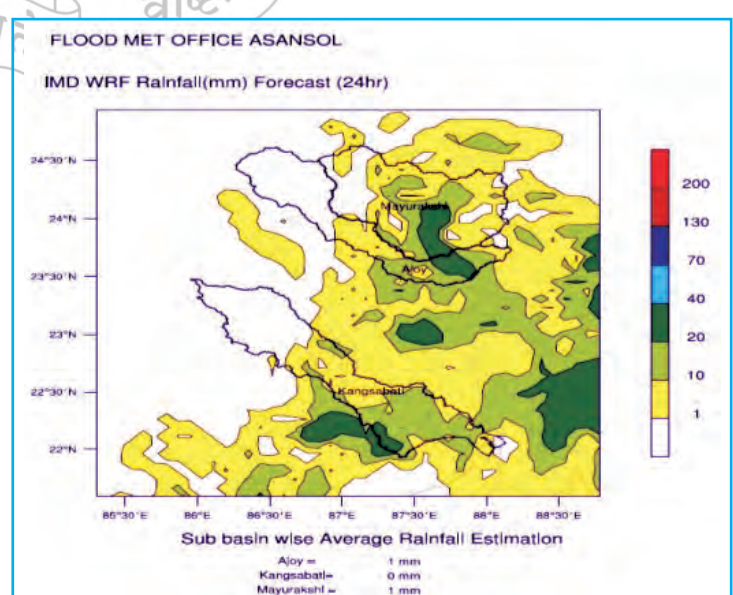
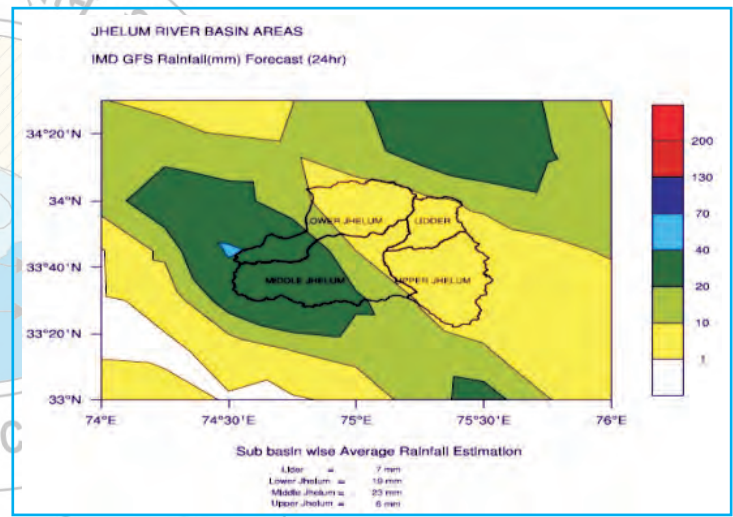
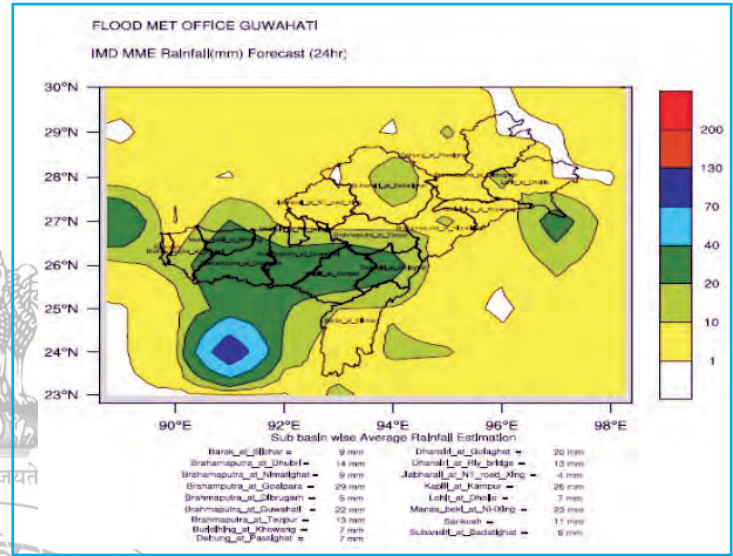
Real time rainfall statistics for the winter season - 2016 was prepared. The rainfall for the country as a whole for the winter season - 2016 has been recorded as 17.9 mm against the normal rainfall for the season as 41.4 mm (departure -57%). In all, 3 met subdivision recorded Excess; 3 Normal; 11 Deficient; 16 Scanty and 3 No rainfall. The subdivision-wise real time rainfall map for the winter season - 2016 is given below:



The rainfall for the country as a whole for the month of March - 2016 has been recorded as 30.6 mm against the normal rainfall for the month as 30.9 mm, received 99% of its Long Period Average (LPA). In all, 13 Met subdivisions received Excess rainfall, 5 Normal, 10 Deficient and 8 scanty rainfall. The subdivision-wise real time rainfall map for the month of March – 2016 is given below:



Sub-basin wise Quantitative Precipitation Estimate for Day-1, Day-2, Day-3, using WRF ARW (9kx9km) based on 00UTC & 12 UTC, MME(0.25°x0.25°) based on 0000 UTC and Day1 to Day7 using GFS((0.25°x0.25°) based on 0000 UTC run by IMD were computed and uploaded on IMD website operationally.





## Miscellaneous

मौसम केन्द्र, अहमदाबाद में दिनांक 22 जनवरी 2016 को सुश्री रेवा शर्मा, वरिष्ठ हिन्दी अधिकारी एवं अन्य सहकर्मियों ने हिन्दी कार्यशाला का आयोजन किया जिसमें कार्यालय में हो रहे हिन्दी कार्यों की जांच एवं समीक्षा की गई। तदोपरांत हिन्दी में और अधिक कार्य करने के लिए दिशा निर्देश जारी किए गए।

The Annual Hindi in-house magazine "Pavandooth", Vol. 7 was released by Shri S. Bagulayan Thampi, Scientist 'F' at RMC Chennai on 23<sup>rd</sup> February 2016. The Chief Guest Shri M. Anandan, Dy. Director General, Doordarshan Kendra, Chennai received the first copy of the magazine.

One day 'Hindi Sangosthi' on 'Usefulness of meteorology in day-to-day life and climate change' was held at M.C. Bhubaneswar on 04<sup>th</sup> March, 2016. Delegates from IIT Bhubaneswar, IMD HQ New Delhi, RMC Mumbai, RMC Nagpur and RMC Kolkata participated in the Seminar.



**SOLAR Eclipse, 9<sup>th</sup> March, 2016**  
Photograph taken from the rooftop of PAC building



**Release of Pavandhoot vol.7**

A total solar eclipse occurred on 9<sup>th</sup> March, 2016 which was visible as a partial solar eclipse from India at the time of sunrise. An observation of the event was made from the rooftop of Positional Astronomy Centre (PAC), Kolkata building by setting up 11" and 6" telescopes. Reporting of the event was made to local print and electronic media and local electronic media ETV news made live telecast of the event from PAC office.



**Observation during Solar Eclipse on 9<sup>th</sup> March, 2016 from the rooftop of PAC building**



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