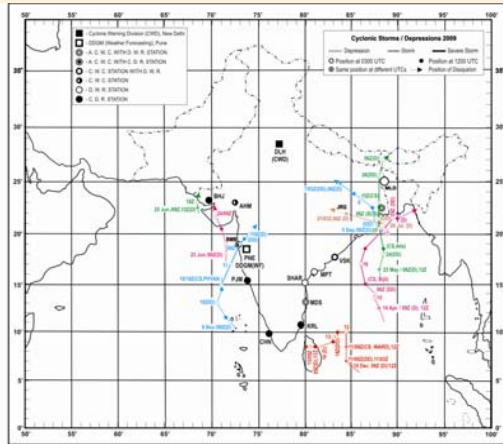


CYCLONIC DISTURBANCES OVER NORTH INDIAN OCEAN

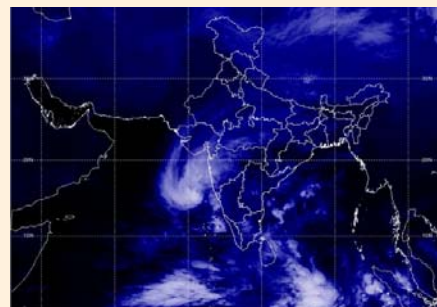
The North Indian Ocean witnessed the formation of two cyclonic storms during the period October-December, 2009. The cyclonic storm 'PHYAN' formed over the Arabian Sea in the month of November and the other cyclonic storm 'WARD' formed over the Bay of Bengal during December. Tracks of these two disturbances formed are given below.



Tracks of the systems

CYCLONIC STORM "PHYAN"

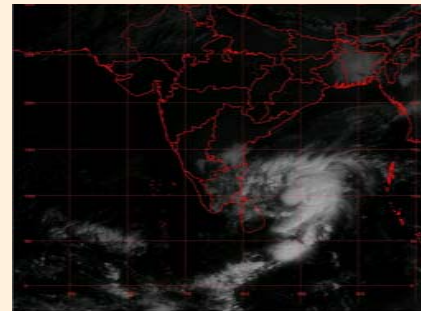
The cyclonic storm "PHYAN" developed over the southeast Arabian Sea in association with active northeast monsoon surge. It initially moved northwestwards and recurved afterwards towards the northeast. It crossed Maharashtra coast between Alibag and Mumbai between 1530 & 1630 hrs (IST) of 11th November, 2009. Widespread rainfall with isolated heavy to very heavy falls occurred over Goa, Konkan and Madhya Maharashtra on 10th and 11th. Fairly widespread rainfall also occurred over south Gujarat region due to the cyclone on 11th. Maximum surface wind was about 60-70 kmph along Maharashtra coast at the time of landfall. Cyclone, 'Phyan' moved very fast prior to landfall. It moved about 450 km during 0530 to 1730 hrs (IST) on 11th November 2009 (about 38 kmph). Though it crossed as a cyclonic storm, it slightly weakened before the landfall.



Enhanced IR Satellite Imagery Kalpana-I, 1800 UTC on 10th November 2009 - "PHYAN"

CYCLONIC STORM 'WARD'

The Cyclone 'WARD' over the Bay of Bengal (10-15 December, 2009) formed in association with an active inter-tropical convergence zone (ITCZ). Cyclone, 'WARD' followed a rare track, as it moved initially in a northerly direction and then moved west-southwestwards across Sri Lanka. It was a slow moving system, as it traveled at the average rate of 200 km per day. It weakened into deep depression over the Sea before the landfall. In association with the cyclone, the northeast monsoon was vigorous over coastal Tamil Nadu and Puducherry during 13-16th December 2009. Widespread rainfall with isolated heavy to very heavy falls occurred over this region during this period.



Visible Satellite Imagery Kalpana-I, 0300 UTC on 12th December 2009 - 'WARD'

TEMPERATURES AT DELHI DURING DECEMBER 2009

The maximum temperatures were nearly normal during the month except from 5-7 December when they were below normal. The minimum temperatures remained normal to above normal in the first half of the month. Light rainfall in the middle of the month led to fall in minimum temperatures and they remained normal to below normal thereafter. The mean maximum and minimum temperatures for the month of November 2009 were 23.7°C and 08.7°C, which were close to the long period averages of 23.0°C and 8.2°C respectively. The lowest minimum temperature of 5.2°C was recorded on 26 and 30 December, 2009.

EARTHQUAKE

An earthquake of magnitude, M: 4.8 occurred on 14th November, 2009 at 18:34 hrs IST in Koyna region of Maharashtra. Epicenter 17.2° N & 73.8° E, as estimated by the Real Time Seismic Monitoring Network (RTSMN) of India Meteorological Department. The event, which comes under the category of "Slight earthquake" (M:<5.0) was also reported widely felt in Satara district, Pune, Mumbai and other parts of Maharashtra. This event was followed by a number of aftershocks of smaller magnitude with the largest one having a magnitude of 3.9, which occurred just after half an hour (at 1905 Hrs) from the main shock.

IMD NEWS



Volume : 2,
No. 4
Oct - Dec 2009

QUARTERLY NEWSLETTER

INDIA METEOROLOGICAL DEPARTMENT

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GLIMPSES OF DIAMOND JUBILEE CELEBRATION OF "MAUSAM"

It was the vision of Dr. S.K. Banerji, the first Indian Director General of Observatories of independent India, who introduced publication of the quarterly peer-reviewed Scientific journal 'Indian Journal of Meteorology and Geophysics' in Jan 1950 which is now known as "MAUSAM". The journal is serving as a vehicle of research papers on Meteorology and allied subjects written by the scientists not only from south Asia but from other parts of the world too.



Lighting the Lamp

A two days Symposium was organized on 17-18 Dec. 2009 at SCOPE Convention Centre, New Delhi to commemorate Diamond Jubilee of this quarterly publication 'The Diamond Jubilee issue of MAUSAM', was released by



Releasing of Diamond Jubilee issue of MAUSAM by Hon'ble Minister of Earth Sciences Shri Prithviraj Chavan

Hon'ble Minister of Earth Sciences, Shri Prithviraj Chavan. On this occasion Dr. Ajit Tyagi, DGM, IMD said that the organization is on its way to improving the weather prediction by bringing in more technical advancements. IMD is working towards dissemination of information to end users. Dr. R.K. Kolli, representative from WMO presented the concept of Global Framework for climate services.

Speakers expressed new adaptation strategies in agriculture, water management, disaster management, energy, health, air quality and many other activities in relation to climate change. The participation of representative from WMO, DST, ICAR, AIIMS, NIMR, PHFI, SEC, CPCB, IITM, IARI, M.S. Swaminathan Foundation, NCAOR Goa, IDSA, NCMRWF, media persons and other important dignitaries made it memorable and successful event.

NEW YEAR MESSAGE FROM DGM

On the occasion of the New Year, I extend my best wishes to all the IMD staff and their families for a very happy, healthy and professionally successful 2010. I also take this opportunity to express my sincere thanks to all for their contributions in implementing various on going programmes. The year 2009 will be remembered as a landmark year during which High Power Computing System (HPCS) was installed, IMD, Foundation Day was celebrated for the first time, and Users' Conferences were held at RMCs and MCs. Installation of 250 Automatic Weather Stations, 200 Automatic Rain Gauges, 8 Airport Meteorological Systems and 10 GPS Sondes have led to improvement in quality and real-time availability of data. High Power Computing System and Synergy Forecasting System will bring improvement in our forecasting capability. The Officers and Staffs trained in ARG's, Doppler Weather Radar, Data Processing System, Weather prediction and Management information system will make a vital contribution to over all progress of this department. The recent symposium on "Weather, Climate and Sustainable Development" has been a great success and has been appreciated by Scientific community. The past is memorable but bright future is ahead with new challenges. With regards

AVM (Dr.) Ajit Tyagi

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All Officers & Staff of Editorial Office, Publication Division

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VISIT OF HON'BLE MINISTER TO PUNE



Shri Prithviraj Chavan, Hon'ble Minister, MoES releasing CD

Shri Prithviraj Chavan, Hon'ble Minister of State for S&T and Earth Sciences visited and inaugurated the National Spatial Data Infrastructure (NSDI-9) Workshop on 22nd Dec. 2009 organized jointly by IMD and DST at YASHADA, Pune. Dr. Shailesh Nayak, Secretary, MoES and AVM (Dr) Ajit Tyagi, DGM, IMD were also present on this occasion. The Hon'ble Minister visited IMD, Pune and addressed Officers and Staff of IMD. He also released a CD containing the Climatological normals for the period 1961-1990 on 23rd Dec.



Plantation of Peepal sapling by Hon' Minister

The Hon'ble Minister also visited Central Training Institute, Pashan, Pune. He planted a Peepal sapling there.

VIGILANCE AWARENESS WEEK

The Vigilance Awareness Week is celebrated in memory of Sardar Vallabh Bhai Patel who exercised a major influence in establishing the administrative structure in India. The "Vigilance Awareness Week" was observed during 3-7 November 2009 and a pledge in this respect was administered in IMD. There is an increasing concern about corruption, eroding the basic values of life. It has not only a negative effect in social dynamics but also erodes the value system established in the country.

DRAWING COMPETITION

An art competition and Quiz contest was organized on 14th Dec. 2009 at IMD (H.Q.), Mausam Bhawan, Lodi Road, New Delhi. Students from many prestigious schools of Delhi participated in the competition with great enthusiasm



DGM encouraging students

NATIONAL INTEGRATION DAY

19th Nov. 2009, the birth anniversary of late Smt. Indira Gandhi, was celebrated as National Integration Day. On this day, the officials of India Meteorological Department took pledge to work with dedication and to foster the spirit of patriotism, communal harmony and national integration.

KRISHI VIKAS 2009

An International exhibition "Krishi Vikas 2009" was held at College of Agriculture, Indore, Madhya Pradesh during 6th to 8th November 2009. The exhibition was organized by the Confederation of Indian Industry (CII), Government of Madhya Pradesh, The officials of Agrimet Pune participated in this exhibition.

KRISHI-2009



Krishi 2009" International Agricultural Trade Fair & Conference was held at Nasik, Maharashtra during 26th November to 30th November 2009 organized by Media Exhibitors, Nasik. Instrumentation Training Centre and, Agrimet Div. Pune participated along with MoES in this exhibition.

NATIONAL INNOVATIVE AWARD

Congratulations to **Master Yatharth Saxena** (S/o Shri Sanjai Saxena, an IMD member posted at Airport office, Pantnagar) recipient of first prize in the IGNITE-09 National Award for innovation among school children instituted by National Innovation Foundation, Ahmedabad. IGNITE-09 is the National competition for student's technological ideas and innovation to bring out the hidden creativity in the children and make them think beyond their text books, organized in partnership with CBSE, Navodya Vidyalaya Samiti and Society for Research and Initiatives in Sustainable Technologies and Institutions (SRISTI) and others.



(Left) Master Yatharth Saxena receiving award from Dr. A.P.J. Abdul Kalam, (Right) Model of Wheel designed

Master Saxena, who is a class Vth Student from Udham Singh Nagar, Uttarakhand, was awarded first prize for his idea about triangular wheels in luggage, which would facilitate in its movement over stairs. The prize was conferred on him by former President of India Bharat Ratna Dr. A. P. J. Abdul Kalam at a function at IIM, Ahmedabad on 30th November 2009.

WORKSHOP ON "AVIATION METEOROLOGY"

A workshop on "Aviation Meteorology" was held at CTI, Pune from 9th to 13th Nov 2009 for 23 persons (17 departmental and 2 each from Indian Navy, Indian Air Force and Indian Coast Guard offices). Shri S. K. Prasad, DDGM (Training) delivered a lecture on "Aviation Meteorology training worldwide". Dr. H. R. Hatwar, ADGM(R) also delivered a lecture in the workshop on Aviation Meteorology.

CONFERENCE ON WEATHER CLIMATE IN HARYANA AND PUNJAB



DG, IMD addressing the Conference

In view of services being rendered by India Meteorological Department a one day conference on "User's requirement to weather and climate in north west India especially in Haryana, Punjab and Chandigarh" was organized by MC, Chandigarh on 12th Nov 2009 at Dr. Ambedkar Institute of Hotel Management, Chandigarh, to create awareness among the users and educate them on its potentials and limitations. Shri Roshan Lal, Secretary and Finance Commissioner (Agriculture), Government of Haryana, were the Chief Guest. Dr. Ajit Tyagi, DGM welcomed the chief guest and addressed the conference. DGM along with Shri D. P. Singh, Joint Secretary MoES inaugurated the newly constructed building of M.C. Chandigarh.



DG, IMD & J.S., MoES inaugurating the building

PERFORMANCE OF SOUTH EAST MONSOON

A two-day brainstorming workshop was held under chairmanship of Secretary MoES, at Mausam Bhawan, Lodi Road, New Delhi, to review the performance of southeast monsoon 2009. DG, IMD and senior officers from various sub offices participated in the workshop. Senior officers from ADGM(R), Pune office have also attended this workshop.

LECTURES / SEMINARS

Dr. Russ Schnell, Dy. Director GMD, NOAA, USA visited India Meteorological Department, New Delhi and delivered lecture on "Emerging Atmospheric Trends over the Globe" on 8th Oct. 2009.

Dr. P. K. Nandankar, Director has delivered a talk on weather & climate in 'National training workshop for weather and climate study activities' on 9 to 11th Oct. 2009 at Nagpur.

Shri C. S. Patil, Met.Gr.II, MC Bangalore delivered lecture on "Weather forecast and its importance in Agriculture" at Zonal Agriculture Research Station (ZARS), Hiriyyur on 4th Nov. 2009.

Dr. R. Suresh, Director delivered lecture on 'Cyclones: Scientific tit-bits and Disaster management' at Centre for Environmental Sciences, Academic Staff College, University of Madras, Chennai on 3rd Nov. 2009. He also delivered lecture in the "Advanced refresher course" on Aviation Meteorology conducted by CTI, IMD Pune during 9-13 Nov. 2009.

Shri Anand Kumar Sharma, Director Meteorological Centre, Dehra Dun was invited to deliver a lecture on "Environmental Security" to senior civil and defense officials at Lal Bhadur Shastri National Academy of Administration Mussoorie on 18th Nov. 2009.

Dr. S. Balachandran, Director – delivered lecture on "Role of IMD in Disaster Management" to the Engineers of Tamilnadu Electricity Board at the Staff Training College, TNEB Chennai on 23rd Nov. 2009.

Miss B. Amudha, Met Gr.I - delivered lecture on "Cyclone disaster Management" for Home Guards and Civil Defense Officials at RMC Chennai on 27th November 2009.

Dr. R. Suresh, Scientist E, AMO Chennai delivered lecture on 'IMD's role in Disaster Management strategy for India'- in a refresher course on Environmental Sciences conducted by Centre for Environmental Sciences, University of Madras, Chennai.

Dr. S. R. Ramanan, Director delivered lecture on "Cyclone disaster Management" at RMC Chennai on 8th Dec in a Disaster Management Training Program.



Shri S. B. Thampi, Director, CDR Chennai delivered two invited-talks on 09th December 2009, on 'Use of Doppler Weather Radar as a primary aviation weather sensor' and 'Diagnosis of weather phenomena using radars', in the 5th SERC School on Aviation Meteorology, organized at Air Force Administrative College, Coimbatore.

Dr. S. K. Roy Bhowmik, Scientist E delivered a talk on the Status of Global Forecast System on 12 December 2009 at the Annual Review Meeting of Agrometeorology at IIT Roorkee.

Shri R. Asokan, Director, RMC Chennai delivered a lecture on "Cyclone Disaster, Mitigation and Management" on 16th December 2009 at Anna Institute of Management, Chennai.



Standing 1st L to R - Dr. Indrajit Pal, Dr. Anand Sharma

Shri Anand Kumar Sharma, Director In Charge, Meteorological Centre, Dehra Dun delivered lecture on "Atmospheric Hazards Monitoring and Prediction" to senior scientists of various research institutes at the Lal Bhadur Shastri National Academy of Administration Mussoorie on 21st Dec.

Smt. Neetha K. Gopal Met.-I delivered a lecture on "Medium Range forecast" at Basic Agromet Course held at DDGM(Agrimet.), Pune on 20 Nov 2009.

DISSEMINATION OF AGROMET ADVISORY

A two-day workshop on "Dissemination of Agromet Advisory through SMS & IVR technology" was held at Met. Centre, Ahmedabad on 30th Sep and 1st October. 12 Nodal officers from various AMFUs in Gujarat attended the workshop. Lectures were imparted by representatives from (i) Thomson Reuters India Private Limited and (ii) Handygo, New Delhi on "Mobile value added services on Weather based crop Advisory" and Training on RML services.



2009/10/01

RECENT ADVANCEMENT IN AGRO-METEOROLOGY

A state level seminar on Recent advances in AgroMeteorology and Space Technology for Sustainable Food Security in Tamilnadu was held at RMC Chennai during 8-9 October 2009. The seminar was inaugurated on 8th by AVM Dr. Ajit Tyagi, DGM, IMD. Shri Kosalaram, Commissioner of Agriculture, Government of Tamil Nadu was the 'Guest of Honour'.



Dr. N. Jayanthi, ADGM (Retd.) presenting a bouquet to the Chief Guest in the Agromet Seminar

The inaugural function was attended by nearly 150 guests and the same was received good coverage in the media. 55 number of registered delegates participated in the seminar and 21 contributory papers and 9 invited talks were presented in the seminar which was spread over five sessions.

USERS' REQUIREMENT OF WEATHER AND CLIMATE IN WESTERN HIMALAYAS



A workshop was organized by Meteorological Centre, IMD, Srinagar on 3rd Nov 2009 at SKICC, Srinagar. The workshop was inaugurated by the chief guest of the function Sh. Ghulam Hassan Mir, Hon'ble Minister for Agriculture, Govt. of J&K. He appreciated the work being done by Meteorological Centre, Srinagar.

The key note address was delivered by AVM (Dr.) Ajit Tyagi, Director General, India Meteorological Department. Apart from DGM, Dr. L. S. Rathore, Head Agrimet Shri B.L.Verma, DDGM RMC, New Delhi and officers from other MCs, members from scientific communities / media personalities, actively participated in the workshop.

WMO WORKSHOP ON CLIMATE MONITORING



Dr. D. R. Pattanaik, Met Gr-I was representative from India to participate in the "WMO Workshop on Climate Monitoring including the implementation of Climate Watch Systems in RA-II with focus on monsoon affected areas during 10-13 November 2009" held in Beijing China. During the workshop Dr. Pattanaik delivered two lectures entitled.

- i) Regional Climate Activities of IMD and
- ii) Status and priority needs of monitoring and predicting climate anomalies and extremes over India.

USERS' INTERACTIVE FOG WORKSHOP AT MET OFFICE PALAM

Users' Interactive workshop on "Fog monitoring, Forecasting and Dissemination System" was organized at Airport Met Office Palam on 4th Dec, 2009. Fifty participants from various agencies like DIAL, Airlines, IAF, Indian Railways participated in the workshop.



Airport Met Office Palam

AVM (Dr) Ajit Tyagi, DGM, IMD inaugurated the workshop and delivered the Key Note address. S/Shri B.L. Verma, DDGM and Mr Peter Nyoce, Chief Operating Officer, DIAL addressed the workshop. IMD-DIAL joint Fog Browser was also released by AVM(Dr) Ajit Tyagi and Mr Narayan Rao, Director(DIAL) on this occasion.

OTHER WORKSHOPS

Dr. R P Samui, DDGM (Agrimet) participated in the National Seminar on "Climate Change Adaption Strategies in Agriculture and Allied Sectors" held during 3-4 December 2009 at Kerala Agricultural University, Thrissur, Kerala and presented a paper.

Dr. Y. E. A. Raj, DDGM participated in the workshop on 'Information Tools and Analysis' jointly organized by MoES and M/s ELSEVIER at NIOT Chennai on 3rd December 2009.

Dr. (Mrs.) Kamaljit Ray, Director, presented a paper on "Climate Variability over Gujarat, India" at the International Workshop on "Impact of Climate Change on Agriculture" organized by S.A.C. (ISRO) Ahmedabad on 17-18 December, 2009.

Dr. H.R. Hatwar, ADGM(R) attended and chaired the Technical Session in the International Workshop on 'Impact of Climate Change on Agriculture' organized by SAC at Ahmedabad on 19th Dec.

11TH ALL INDIA IMD SPORTS MEET 2009 - CHANDIGARH

11th All India IMD Annual Sports Meet was organized by All India Sports Committee and M.C. Chandigarh. It was held at Chandigarh during 26th to 29th November, 2009. A souvenir was released by Chief Guest Prof. Ranbir Chander Sobti, Vice Chancellor, Punjab University during the inaugural ceremony. The inaugural ceremony was attended by Shri D. Chakrabarty, ADGM (ISSD & SM & Welfare Officer), Shri Rajiv Sharma, DDGM(A&S) and Shri B.L. Verma, DDGM(RMC), New Delhi.



Release of Souvenir by Chief Guest

During the 4 days sports event, officers and staff of IMD from all regions along with sports persons from DST, CSIR, SOI & IITM participated and displayed their sports skills in different sports. Approx. 500 sports person participated in this Meet.

The closing ceremony was held at M.C. Chandigarh building. Shri A.K. Bhatnagar, ADGM(EREC) & Chairman All India Co-ordination Committee was the Chief Guest of the closing ceremony.



Handing over of Sports Flag by Chairman to Secretary, All India Annual Sports Meet

REFRESHER COURSE HYDROLOGY

A senior level refresher course, Batch No. 7 under World Bank aided Hydrology Project Phase II was conducted between 7th and 11th Dec. 2009. Officers from IMD Pune offices and IITM delivered lectures and conducted practical classes for the participants of this course.

TROPHY IN BADMINTON



DG, IMD with Badminton Team

IMD women badminton team won runners - up trophy in Inter-Ministry tournament 2009-10 held during 7-16 December 2009. DGM office women and men team also won badminton championship trophy in 11th All India IMD sports meet held at Chandigarh in November, 2009. Shri H. N. Singh of DDGM(UI) was the champion in the men's single.

INSTRUMENTATION TRAINING

During the period Oct to Dec 2009, Instrument Training Centre, DDGM(UI), New Delhi, conducted Intermediate Course (Special Batch). The Batch No. 1 commenced w.e.f. 16th November for two months duration for Mechanical Assistants. Also six months Advanced Course (Instrumentation) Batch XXI is in progress.

HYDROMET OBSERVER COURSE

The basic Hydromet observer course under phase II of Hydrology project was conducted at CTI, Pune between 9th and 27th Nov. 2009. 13 persons - 3 from Kerala and 10 from Maharashtra participated in the course. Faculty members from CTI delivered lectures to trainees on various topics of Meteorology.

PUBLICATIONS

- Climate Diagnostics Bulletin of India for October 2009 brought out.
- Two Biweekly Aridity Anomaly Reports for Northeast monsoon 2009 for the period 19th November to 2nd December and 3rd December to 16th December, 2009 were prepared Quantitative crop yield forecast for Kharif rice was prepared for 26 meteorological sub-divisions for December, 2009 and issued.
- 26 Research Contributions were published in departmental journal Mausam during the period.

SPORTS MEET AT AGARTALA

M.C. Agartala organized "Annual Sports Meet - 2009" on 26th December 2009. All officers, staff members and their family members participated in this event. This Annual Sport Meet was inaugurated by Shri D. Saha, Director, M.C. Agartala and Shri Bishnu Swarup, Dy. Commandant, CSIF, Agartala Airport was the Guest of honour.



Sports Team of MC Agartala

POST TSUNAMI LIVELIHOOD PROGRAMME

As part of IFAD assisted Post Tsunami Sustainable Livelihood Programme (exposure visit) for School children of Thiruvallur District, Tamil Nadu organized by District Implementation Office, Thiruvallur, lectures and field visits by Officers/staff were arranged at RMC Chennai on 14-15, 21-22 & 28-29 October 2009. A total of 120 students visited RMC Chennai.

TRADE FAIR

The Ministry of Earth Sciences and Meteorological Centre Dehra Dun participated in the trade fair held at Dehra Dun from 6-13 October 2009. The various activities of the Ministry of Earth Sciences were disseminated to general public through the stall put up at the trade fair. Shri Anand Kumar Sharma, Director was the Guest of Honour at the closing ceremony,

AWARENESS PROGRAM

An awareness program on Climate Change has been arranged on 30th November for school children of Sathia Matric Higher Secondary School at RMC Chennai. Welcome speech was given by Dr.Y.E.A. Raj, DDGM and introductory speech by Mrs. Jessie Jeyakaran, followed by lectures.

REVIEW MEETING OF AGROMET
FIELD UNITS

Agrimet Division organized Annual Review Meeting of Agromet Field Units during 10-12 December 2009 at IIT, Roorkee. Activities and progress made at each AMFU had been reviewed and suggestions made to improve the services for the farming community.



AVM Dr. Ajit Tyagi, DGM participated and chaired the session. Many Scientists from IMD Delhi & Pune participated in Annual Review Meeting and made presentation.

PANEL OF HYDROLOGY

The first meeting of panel of Hydrology was held at Bureau of Indian Standards on 30th October 2009 at Manak Bhawan, New Delhi. The panel has decided to bring out publication on "Hand Book on Water Resource Management" in Hygrometry. Dr. P. Guhathakurta, has been invited to write a section "Precipitation Measurement including remote sensing methods

TOURS

Dr. R. Suresh, scientist E, participated as an expert member in the Preliminary Design Review (PDR) Committee meeting for the development of C- band dual Polarization Doppler Weather Radar conducted by ISRO and BEL Bangalore during 12-13 October 2009 at Bangalore.

Dr. A.B.Mazumdar, DDGM(WF) was on tour to New Delhi from 18-20 October 2009 to attend meeting between representatives of Meteo France and IMD on the subject to define the "Early warning and heat wave management in India".

Dr. H. R. Hatwar, ADGM(R), was on tour to Delhi during 3rd to 5th Nov. to attend the second India Disaster Management Congress (IDMC-2) held at Vigyan Bhawan. He delivered a talk on "Challenges in tropical Cyclone forecasting" in the same and chaired the session -IV under the thematic session "Cyclone & Severe Local Storm".

FOREIGN VISITS

Shri A. K. Das Met. II was deputed to Dhaka, Bangladesh from 4-8 October 2009 to attend SAARC Training Workshop on "Weather, Research and Forecasting".

Shri D. Jordar, Director, was deputed to participate in 15th WMO International Symposium on "Data Assimilation" at Melbourne, Australia during 5-9 October 2009.

Dr. S.K. Roy Bhowmik, Scientist "E" was on deputation to UK Met Office to attend WMO Commission for Basic Systems Expert Team Meeting on Ensemble Prediction System during 5-9 October 2009.

Shri D. Pradhan, Director, CDR Kolkata was on deputation to Jakarta (Indonesia) to attend Radar workshop organized by BMKG (Agency of Meteorology, Climatology and Geophysics, Indonesia) during 19-24 Oct, 2009. Shri Pradhan, Director delivered a series of lectures on Doppler Weather Radar, interpretation of its derived products and their utilization in Nowcasting. The scan strategy and the products parameters were also discussed and necessary modifications were suggested for their best utilization in nowcasting of severe weather events.



Shri N. K. Pangasa, Director attended WMO - ITU Seminar on Use of Radio Spectrum for Meteorology for Weather, Water, and Climate Monitoring and Prediction at Geneva, Switzerland.

Dr. M. Mohapatra, Director was deputed to Shengai, China to attend 2nd International Workshop on "Tropical Cyclone, Landfall Process" during 19-23 October 2009.

Shri A. K. Bhatnagar, ADGM was on deputation to Dhaka, Bangladesh to attend 15th Governing Board of SMRC, Dhaka from 26-27th October 2009.

Shri B. K. Bandopadhyay, DDGM(S) was on deputation to Australia from 2nd to 5th Nov. 2009 to attend the Sixth Tropical Cyclone (TC) RSMCs/TCWCs Technical Coordination Meeting (TCM-VI) in Brisbane.

Shri R. P. Sharma, A.M.-II & **Smt. B. Geetha SA**, proceeded for Synergie Administration training at Meteo France International (MFI), Toulouse in France during 29 Nov 5th Dec 2009.

Dr. Jayanta Sarkar, Director attended an Inter-Regional Workshop on "Indices and Early Warning Systems for Drought" held at Lincoln, Nebraska, USA during 8-11 December 2009 and presented a paper entitled "Drought indices in South Asia".

Dr. (Smt.) Surender Kaur, Scientist "E" was deputed to Tokyo, Japan to attend 5th Meeting of GEOSS (Asia Weather Cyclone Initiative Instruction coordination Group and Satellite data training Course and workshop from 15th to 18th December, 2009.

DGM VISITS AT PUNE

DGM has visits at Pune office during period from 21-24 Dec. He discussed about ongoing training programs, MFI related CPWD work, NAL computer, training to NAQI, Scientists at Pune and about guest faculties who are invited for next 3-4 months for the Advanced Met. Training course of batch no. 170

VISIT OF MFI DELEGATION AT PUNE

The MFI delegation team comprising Mr. Patrick Benichou, Chairman and Mt. Hubert Brunet, Senior Forecaster, visited DDGM(WF), Pune on 8th Oct 2009. A meeting was held with DDGM(WF), Pune along with Dr. Medha Khole and Sunitha Devi. The delegation was briefed about ongoing activities and day-to-day function of weather systems. In this context a sub committee report on "Thresholds of weather warning in Meteo Factory" was submitted to DGM office, New Delhi.

MODERNIZATION OF
TELECOMMUNICATION SYSTEM

Under IMD Modernization Plan, TRANSMET system (The new AMSS-Automatic Message Switching System), supplied by MFI (Meteo France International) with latest state-of-the-art technology has been installed at Regional Telecommunication Hub (RTH) New Delhi and put in operational test. The system is compliant to all the requirements of WMO. MFI Engineers imparted operational and System administration training to IMD officials on TRANSMET and SYNERGIE systems. Four officers proceeded on foreign deputation to MFI, Toulouse, France in connection with training on operation and system administration of CIPS (Central Information Processing System). IMD's Internet bandwidth from M/s Tata Communications and M/s Bharti Airtel upgraded to 20 Mbps. Installation of VPN links through M/s BSNL Chennai has been started at 38 field locations to strengthen the present Telecommunication Network of IMD. Under IMD Modernization Plan, a project for Installation of mirror RTH at Pune and two AMSS at Guwahati and Nagpur is in progress.

FACTORY ACCEPTANCE TEST (FAT)

Factory Acceptance Test (FAT) of 5 Nos of S- Band Doppler Weather Radars from M/s Metstar, Beijing, China was carried out by the team comprising of Shri S. K. Kundu, DRM, New Delhi and Shri S B Thampi, Director, CDR Station, Chennai during the period from 29th Sep. 2009 to 25th Oct 2009.

DISASTER WARNING DISSEMINATION
SYSTEM

A new pilot phase programme of DTH based Disaster Warning Dissemination System has been configured jointly by IMD and ISRO for issuing disaster warning to cyclone-prone areas from centralized location.

DIGITIZATION OF CLIMATIC DATA

Digitization of Climatic data under "Climatological data rescue Scheme" has been awarded to M/s. CMC Ltd. New Delhi by ADGM (R) Pune. M/s CMC Ltd. started the digitization work for years prior to 1965 at Met. Centre Ahmedabad.

ACCEPTANCE TESTS FOR HPC

Acceptance Tests for HPC system was done at Hyderabad and Bangalore and in this connection Dr. S. Balachandran, Director, RMC Chennai was on tour to the above stations. Products from HPC system are generated daily at Chennai, Hyderabad & Bangalore and the same is uploaded in our official web site on daily basis.

INSTALLATION



DGM addressing the media while inaugurating the HPC system at ACWC RMC Chennai

High Power Computing system was commissioned at Area Cyclone Warning Centre, RMC Chennai on 8th October by AVM (Dr.) Ajit Tyagi, DGM, IMD.

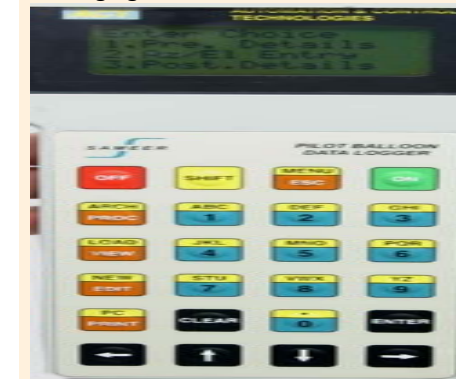
MFI Synergie system was installed at Area Cyclone Warning Centre, RMC Chennai on 6th November 2009 and 8 IMD Personnel's were given training in operation of the system during 9th to 20th November 2009.

INSTALLATION OF AWS AT HARYANA &
PUNJAB

Out of 50 Automatic Weather Stations (AWSs) 24 in Haryana, 23 in Punjab and one in Chandigarh (in the premises of Meteorological Centre, Chandigarh) have been installed till 30th September, 2009 under Modernization Plan of India Meteorological Department in addition to already installed one each at Chandigarh (SASE), Kapurthala (Pushpa Gujral Science City) and Gurgaon. One AWS at Ambala (Haryana) and one at Moga (Punjab) could not be installed due to water logging in the fields after rain.

MODERNISATION OF PILOT BALLOON
STATIONS

Under the Modernisation of IMD-Phase I, Optical theodolites used for tracking the pilot balloon at 44 stations have been replaced with new ones providing better observations. The remaining 18 stations are being provided with the replacements by March, 2010. All the 62 stations have been provided with semi-automatic computation system for Pilot balloons which enables preparation and transmission of pilot messages in WMO format using a hand held data logger, thus enabling, faster computation of upper air wind data. The unit is user-friendly, rugged and has helped in reducing the computation time and message generation time.



Hand Held computation system

The PILOT message is available instantaneously after ascent. The new hand held computation systems not only eliminate the computational errors but also improve the output data quality with the help of built-in QA/QC procedures.

REQUIREMENTS FOR HELICOPTER
OPERATIONS

Director General of Meteorology, has constituted a committee to look into the Meteorological requirements for Helicopter Operations under the chairmanship of Dr. A. B. Mazumdar DDGM(WF), Pune. The committee has representatives from DGCA, IAF & Pawan Hans Helicopter Ltd., as members and Shri M.K. Bhatnagar, DAS as member secretary. First meeting of the committee was held on 5th November 2009 at New Delhi. For reviewing the safely oversight of helicopter operations, DGCA convened a meeting on 1st October 2009 at DGCA (HQ), New Delhi. Dr. A. B. Mazumdar, DDGM(WF) and other officers from HQ New Delhi took part in the meeting.