

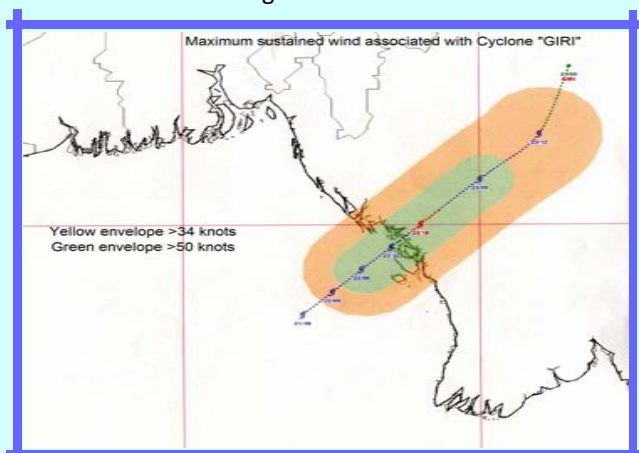


**CYCLONIC STORMS**

During Oct - Dec 2010 five disturbances developed over the Bay of Bengal. Out of five disturbances, one each intensified into a very severe cyclonic storm, severe cyclonic storm and a deep depression. Salient features of two cyclones are given below.

**VERY SEVERE CYCLONIC STORM, GIRI  
(20-23 OCTOBER, 2010)**

A low pressure area concentrated into a depression on 20<sup>th</sup> October over east central Bay of Bengal, it intensified into a deep depression at 0830 hrs (IST) of 21<sup>st</sup> October and into a cyclonic storm, GIRI at 1130 hrs (IST) of the same day. It then moved slowly northeastwards and intensified into a severe cyclonic storm at 0830 hrs (IST) of 22<sup>nd</sup> October and into a very severe cyclonic storm at 1130 hrs (IST) of the same day. It then moved and crossed Myanmar coast between Sittwe and Kyakpyu around 1930 hrs (IST) of 22<sup>nd</sup> October 2010. The forecast of maximum wind in four quadrants of the cyclone was commenced with effect from cyclone, GIRI during October 2010. In this forecast, the radius of 34, 50 and 64 knot winds are given for various forecast periods like +06, +12, +18, +24, +36, +48, +60 and +72 hrs. A typical graphical presentation of this forecast is shown in Fig.

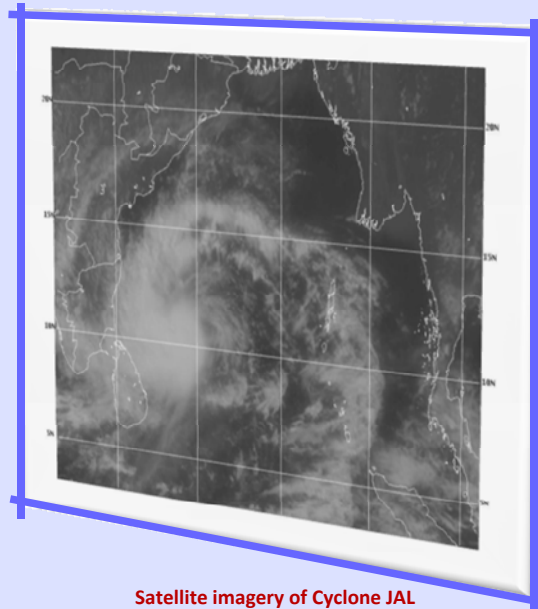


KALPANA -1 imagery dated 20 Oct 2010, 1400 UTC

**SEVERE CYCLONIC STORM, JAL  
(04-08 NOVEMBER, 2010)**

A severe cyclonic storm, JAL developed over the Bay of Bengal moving northwestwards. It intensified up to severe cyclonic storm on 6<sup>th</sup> November. It weakened gradually into a deep depression and crossed north Tamilnadu close to the north of Chennai and continued to move west-northwestwards and further weakened into a well marked low pressure area. As a low pressure area, it emerged into the east central Arabian Sea on 9th November, then moved initially northwestwards towards Saurashtra & Kutch and adjoining Pakistan coast during 9-11 Nov and became less marked on 12<sup>th</sup> Nov 2010.

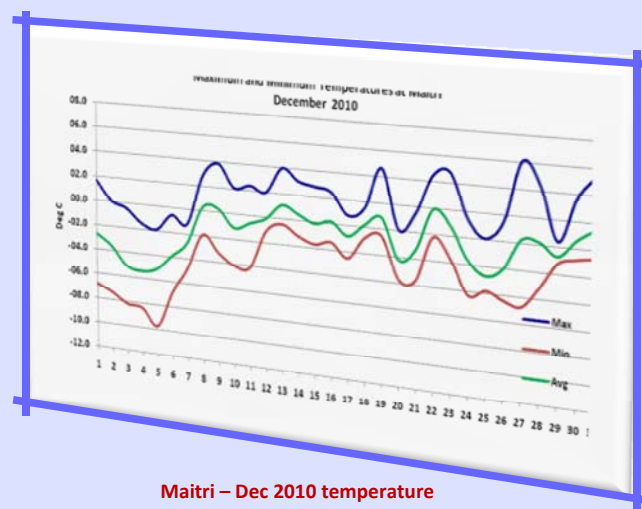
The severe cyclonic storm, JAL weakened into a deep depression over the sea before the landfall. The system caused scattered heavy to very heavy rainfall over north Tamilnadu, coastal Andhra Pradesh, Rayalseema, south interior Karnataka and coastal Karnataka.



Satellite imagery of Cyclone JAL

**WEATHER - MAITRI**

October, November and December months happened to be very pleasant and less windy followed by rising sun from horizon. November is beginning of summer season which remains till January at Antarctica. Sky remained obscured for 8 days on an average during the period. Blizzards were not reported but trace snowfall was reported. During the period highest day temperature of 6.1°C on 5<sup>th</sup> Dec. and lowest temperature of -23.2°C were recorded on 9<sup>th</sup> Oct 2010. Highest gusty gale wind of 90 kt was recorded on 17<sup>th</sup> October.



Maitri - Dec 2010 temperature

**Editorial Team**

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**Published by**

India Meteorological Department, Mausam Bhawan, Lodi Road, New Delhi - 110 003 and Printed at ADGM(R), Pune

Tel. : 24651287; Telefax : 91-11-24699216 & 91-11- 24623220

Email : newsletter\_imd@yahoo.com

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**INTERNATIONAL COLLABORATION BETWEEN IMD - NOAA**

A 12-member delegation comprising of AVM (Dr.) Ajit Tyagi, Director General of Meteorology, Shri A. K. Sharma Scientist 'F' and Shri B. Mukhopadhyay, Scientist 'F' from IMD along with other scientists of MoES visited Washington, USA during 5-10 October 2010 in connection with IMD - NOAA collaboration. For technical and scientific cooperation related to INSAT-3D satellite data applications between India Meteorological Department (IMD) and the National Oceanic and Atmospheric Administration (NOAA)/National Environmental Satellite Data and Information Service (NESDIS), an Implementing Agreement has been signed by Dr. Tyagi and Ms. Mary E. Kicza, Assistant Administrator for Satellite and Information Services, National Oceanic and Atmospheric Administration (NOAA) at Washington D.C. on 6 Oct, 2010.



MoU between IMD and NOAA, USA



Handing over CGMS Flag to IMD

**COORDINATION GROUP FOR METEOROLOGICAL SATELLITES -38**

India Meteorological Department (Satellite-Meteorology) hosted Coordination Group for Meteorological Satellites - 38 (CGMS-38) meeting at Scope Complex, Lodi Road, New Delhi-110003 during 8-12 Nov, 2010. CGMS-38 was attended by about 70 participants from NOAA/NESDIS/OSD/NASA (USA), EUMETSAT, JAXA/JMA (Japan), KMA (Korea), ROSHYDROMET (Russia), WMO, Canadian Space Agency, Canada, ESA (Europe), Indian Space Research Organisation (ISRO) and India Meteorological Department. The meeting was inaugurated by Prof. Roddam Narsimha, FRS, former Director of National Aerospace Lab, Bangalore. In all about 180 working papers were deliberated during this meeting by the participating agencies. The contribution of IMD /ISRO was praised by the Chairman and Rapporteurs of all working Groups.

**VISIT TO ICY CONTINENT- MAITRI ANTARCTICA**

Although IMD has been participating right from the first Indian Scientific Expedition to Antarctica in 1981, the present DG, IMD made history by visiting Maitri (Antarctica), the icy continent of the World, on 19 December 2010. AVM (Dr.) Ajit Tyagi, DGM, along with Dr. Satheesh C. Shenoi, Director INCOIS visited various laboratories/experiments set up by IMD, IIGM, NGRI, SASE, GSI & NPL. DGM visited IMD observatory and appreciated efforts made by IMD members in restoring surface ozone measurement and installing high speed wind recorder. During his visit real time transmission of Meteorological data to NCAOR, Goa was started. On 20<sup>th</sup> Dec 2010, DGM along with Director INCOIS, Station Commander, Maitri, Shri K. Jeeva and IMD team members visited Russian station Novolazarevskaja. He held a meeting with station commandar Mr. Andry. V. and their Meteorologists and discussed bilateral exchange of meteorological data. He also visited Meteorological Observatory & balloon launching centre of Russian station. He appreciated and encouraged the work done by the Logistic team of Maitri. He also took part in "Shramdan" done at Maitri and inspired all the Maitrians by his exemplary gesture.



DG, IMD (standing Left) with Station Commander, Maitri

**VIGILANCE AWARENESS WEEK**



**AVM Dr. Ajit Tyagi, DG, IMD administering oath to Officers & Staff of IMD**

Vigilance Awareness Week was observed from 25<sup>th</sup> October, 2010 to 1<sup>st</sup> Nov, 2010, in India Meteorological Department. Vigilance Awareness period was observed as **“Generation of Awareness and Publicity against Corruption”**. Emphasis was laid on spreading awareness against the harmful effect of corruption. DGM administered an oath on this occasion. It was emphasized that the corruption is eroding the basic values of life. It has not only a negative effect in social dynamics but also erodes the value system. It is important that each one plays a pivotal role in the development of the country and needs to be educated to fight against such unethical practices.

**AWARDS**



**Shri A. K. Sharma receiving Award from Dr. Swati Basu**

- **Shri Anand Kumar Sharma**, Scientist ‘E’, M. C., Dehradun participated in the national seminar organized by Ministry of Earth Sciences, Government of India, New Delhi and made a presentation on “Effect of weather and climate on Agriculture” on 10<sup>th</sup> December 2010 and was awarded first prize for the presentation.
- **Dr. D. P. Dubey**, Scientist ‘E’, M. C. Bhopal was awarded “Vigyan Bhushan” on 28<sup>th</sup> November 2010. The award was given by Science Centre, Gwalior (M.P.) for his contribution in popularization of Science, achievement in Science communication & contribution towards children and community for knowledge of Science.

**PROJECTS EVALUATION**

Seventy one (71) Thermal Power, ninety one (91) Industrial and twenty five (25) Coal Mine projects referred to this Department by the Ministry of Environment & Forests, New Delhi were evaluated by EMRC.

**INAUGURATION OF SEISMOLOGICAL OBSERVATORY**

A new building constructed for the Seismological Observatory at Imphal was inaugurated on 20<sup>th</sup> November, 2010 by Shri A. K. Bhatnagar, ADGM (EREC). Installation of the field equipment of the 20-station telemetry network in Northeast India has also been completed at the station.



**Inauguration ceremony at Imphal**

During the inaugural function, which was attended by the local state government authorities, school teachers and media persons, Shri Bhatnagar highlighted the various activities of MoES/ IMD, with special reference to meteorological and seismological programs in Northeast India. Shri A. K. Bhatnagar, along with Shri H. P. Shukla, Director (Seismo), New Delhi visited CSO, Shillong also on 18<sup>th</sup> and 19<sup>th</sup> November 2010 in connection with project “Archival and Digitization of Seismic Analog Charts”.

**VISIT OF SECRETARY, MoES TO SEISMOLOGICAL OBSERVATORY, RIDGE, NEW DELHI**



**Shri R. S. Dattatrayam briefing on Seismographs**

Secretary, Ministry of Earth Sciences and DG, IMD visited Seismo Observatory, Ridge on 12<sup>th</sup> November, 2010 to inspect the facilities created for archival and vector digitization of old seismic analog charts. Secretary, MoES expressed satisfaction and complimented the officers and staff of Ridge Observatory for maintaining the facilities and observatory premises in a neat and clean manner.

**VISIT OF PROF. T. N. KRISHNAMURTI**



**Prof. T. N. Krishnamurti delivering lecture**

**Prof. T. N. Krishnamurti**, Florida State University delivered a lecture on 13<sup>th</sup> December 2010. In his lecture he mainly covered two important topics of monsoon and hurricane forecasting. He also explained about the ongoing programmes of NOAA particularly for the hurricane forecasting and its usefulness for the tropical cyclone forecasting over the Bay of Bengal region like that of FDP-Cyclone programme. After the lecture, he also interacted with members of NWP group, IMD Delhi and explained about the ongoing activities of the division. DGM felicitated him by presenting a memento.

**VISIT OF Dr. J. VIVEKANANDAN, Sr. SCIENTIST**



**Dr. J. Vivekanandan delivering lecture**

**Dr. J. Vivekanandan**, Senior Scientist of both Earth Observing Laboratory and Research Applications Laboratory, National Center for Atmospheric Research, Boulder, Colorado, USA delivered a lecture on 13<sup>th</sup> December, 2010 on the topic “Weather Radars and Lidar for Observing the Atmosphere”. In his lecture he emphasized the interpretation of remote sensing instruments’ responses to clouds and precipitation using mathematical models and actual field observations. He led the development of the dual-wavelength system by adding a millimeter wave radar to NCAR’s S-band polarization radar.

**LECTURES BY IMD SCIENTISTS**

**Dr. S. C. Sahu**, Scientist ‘E’ delivered a Lecture on “Planetary effect on climate change on the eve of National Conference on 2012”: The Beginning of Sixth World” at Puri on 24<sup>th</sup> Oct, 2010.

**Shri P. R. Baidya**, Director delivered four lectures on Seismology on 25<sup>th</sup> October, 2010 for trainee Met Officers of 127 GDOC, 20 SSC(M) and 37 SSC(W) conducted by Air Force Administrative College, Coimbatore.

**Dr. M. Mohapatra**, Scientist ‘E’ delivered a lecture on Early Warning System for cyclone on 26 October 2010 at National Institute of Disaster Management (NIDM) for District Collector, Senior and middle level officers of various state/UTs.

**Shri Anand Kumar Sharma**, Scientist ‘E’, M. C. Dehra Dun delivered a lecture on “How to effectively communicate major scientific and environmental issues” to Science communicators, writers and journalists on 1<sup>st</sup> November 2010 at the workshop for empowerment of the Science communicators, writers and journalists.

**Shri B. Puttanna**, Director attended the Brainstorming Workshop on “Improvement of Water Cycle – Science, Technology and Management Options and Challenges” at KSCST Conference Hall at Bangalore on 8<sup>th</sup> November 2010.

**Dr. S. D. Attri**, Scientist ‘E’ attended International Conference on “Climate Change, Agriculture and Food Security in Indo-Gangetic Plains: Exploring Key Research Opportunities and Developing Regional Scenarios” in New Delhi, held during 8-10 Nov., 2010.

**AVM (Dr.) Ajit Tyagi**, DGM and **Dr. S.D. Attri**, Scientist ‘E’ attended “Indian Network for Climate Change Assessment (INCCA) – National Workshop on Impacts of Climate Change, A 4 x 4 Assessment” chaired by **Shri Jairam Ramesh**, Hon’ble Minister for Environment & Forest on 16<sup>th</sup> November, 2010 at New Delhi.

**Dr. R. Suresh**, Director delivered a invited talk on “Advance Statistical forecasting techniques” in the DST sponsored National workshop on Geostatistics and soft computing techniques for spatial data management at Shri V. Venkateswara University, Tirupati on 23 November 2010.

**Shri R. S. Dattatrayam**, Scientist ‘F’ attended an International workshop on “Earthquake Precursor Studies - Scenario and Future Directions” held at NGRI, Hyderabad during 25-27 November 2010 and also gave a presentation.

**Dr. R. K. Jenamani** Scientist ‘E’ A.M.O. IGI Airport New Delhi and Shri N. Nigam, Director gave their presentation on “Use of new technologies of weather monitoring and forecasting at Airports and their perspective” and “Meteorological services at airport” respectively during a conference on building capacity and efficiency in Indian airports held at Taj Hotel, New Delhi on 1<sup>st</sup> Dec 2010 organized by ASAPP media information group.



**Dr. R. K. Jenamani giving presentation**

**Dr. L. S. Rathore**, Head Agromet, Shri Rajiv Sharma, DDGM (A & S), New Delhi and Dr. Y. E. A. Raj, Scientist ‘F’, DDGM, RMC Chennai visited M.C. Bangalore on 15<sup>th</sup> Dec 2010 in connection with Interview for recruitment of Senior Research Fellows.

**Dr. Somenath Dutta**, DDGM (Trg.) delivered a talk on “Contrasting southwest monsoon and atmospheric energetics” in the ICON GSECCES 2010 held at Banaras Hindu University, Varanasi, during, 21-23<sup>rd</sup> December 2010.

## SAC - MEETING OF - FDP

The Scientific Advisory Committee meeting of the Forecast Demonstration Project (FDP) on land falling cyclones over the Bay of Bengal was held on 11<sup>th</sup> October 2010 at Mausam Bhavan, Lodi Road, New Delhi. The meeting commenced with opening address by AVM (Dr.) Ajit Tyagi, DGM. He expressed that the existing multi-institutional mechanism would be more strengthened and better observational campaign would be carried out during the FDP campaign of 2010. Dr. M. Mohapatra, Scientist 'E', IMD made a presentation on the implementation plan of FDP-2010 including the observational plan, plan for NOC and FOC meetings, data and product monitoring plan, documentation and evaluation of the performance etc. along with the roles of various institutions.

### संसदीय राजभाषा समिति द्वारा निरीक्षण

माननीय संसदीय राजभाषा समिति की दूसरी उपसमिति द्वारा दिनांक 01.10.2010 को मौसम कार्यालय, पालम तथा दिनांक 01.11.2010 को मौसम कार्यालय, सफदरजंग का निरीक्षण किया गया। महानिदेशक महोदय ए.वी.एम (डॉ.) अजित त्यागी और सुश्री रेवा शर्मा, वरिष्ठ हिन्दी अधिकारी, समिति के निरीक्षण के दौरान उपस्थित रहे। निरीक्षण के दौरान मौसम कार्यालय सफदरजंग की हिन्दी में अधिकतर कार्य करने के लिए सराहना की गई।

## BILATERAL MEETING BETWEEN EUMETSAT AND IMD



Signing of MoU between IMD and EUMETSAT

A bilateral meeting was held between EUMETSAT and IMD officers on 09<sup>th</sup> Nov, 2010 to discuss the areas of cooperation. The EUMETSAT assured IMD of EUMETcast broadcast receiving station at Delhi through which the data of all European satellites can be received at IMD and used in NWP models. EUMETSAT has also agreed to assist Satellite-Meteorology Division of IMD in making a Centre of Excellence of WMO and also in the technology transfer development of satellite products in India. The installation of EUMETcast receiving station at IMD New Delhi will be a landmark achievement.

## E-GRANTHALAYA

A library software (e-granthalaya) has been installed at HQ Library (NMSDOC) by the National Informatics Centre (NIC) New Delhi. The software has the module for book with search through WEBOPAC. A presentation on various applications of the software was given by Shri Ram Kumar, NIC on 10 Nov, 2010 in the presence of DGM and other senior officers of the department. A database of books and other publications is being created through out-sourcing.

## MEETING ON "AEROSOL AND GREENHOUSE GASES MONITORING & RESEARCH"



Secretary, MoES chairing a meeting

A Consultative meeting on "Aerosol and Greenhouse Gases Monitoring and Research" was organized by EMRC under the Chairmanship of Dr. Shailesh Nayak, Secretary, Ministry of Earth Sciences, on 6<sup>th</sup> December, 2010 in India Meteorological Department, New Delhi. It was attended by 30 experts from various Government / scientific institutions like MoES, IMD, IITM, NPL, Bose Institute, CMMACS, CRRI, ARIES, IIT (Mumbai, Kanpur), JNU, MDU for preparation of unified vision to support policy input requirements on climate change. At the outset, the DGM welcomed the participants and emphasized on the significance of monitoring environmental parameters to address the issues like climate change, global warming, black carbon, aerosol impacts etc. and stressed that the IMD programs should be on long term basis and geographically representative, which could be supplemented with intensive field campaigns with adherence to global standards.

## INDO - AUSTRALIAN COLLABORATION



Delegation from Australia

Shri N.Y. Apte, Scientist 'F' represented IMD in the Joint working Group of Water resource Management. It is a collaboration of Ministry of Water Resources (MoWR) of Govt. of India and Australian Govt. IMD is responsible for the Hydro Meteorological Component required under collaboration. In this regard, two Australian Members of Joint Working Group visited this Deptt. on 16<sup>th</sup> November 2010 to discuss various relevant issues.

## ROVING SEMINAR ON "WEATHER, CLIMATE AND FARMERS"

A one day roving seminar on "Weather, Climate and Farmers" was organized by Natural Resource Management division of Central Agricultural Research Institute (CARI), Port Blair sponsored by IMD, Ministry of Earth Sciences, New Delhi on 29 Nov, 2010 in which 90 farmers and 15 members of women self help group participated apart from officers from development department and scientists of CARI. The main focus of the seminar was awareness creation among the farming community on weather based crop, livestock management and utilization of agromet advisories. The programme was inaugurated by Dr. R. P. Samui, DDGM (Agrimet). On this occasion 5 rain gauges were handed over to farmers.



Distribution of rain gauge to farmers

## WORKSHOP ON FOG MONITORING AND FORECASTING SERVICES



DG, IMD giving inaugural address

Forecaster-Users interactive Workshop on "Fog Monitoring and Forecasting Services 2010-2011" was organized by Airport Met. Office Palam, New Delhi on 27 Dec, 2010 at the New Auditorium, New Udan Bhavan at Terminal 3. AVM (Dr.) Ajit Tyagi, DG IMD was the Chief Guest and Mr. P. S. Nayar, Chief Executive Officer of DIAL; Mr. P. K. Mishra, GM, ATC, IGI was invited as Guest for the introductory session. Dr. R. K. Jenamani, Scientist 'E', AMO Palam welcomed all the participants and presented Fog projects in the field of Fog Monitoring and Forecasting undertaken during 2005-2010. AVM (Dr.) Ajit Tyagi, DG IMD emphasized to take up further new projects in integrating all real time data and disseminating them timely to various users. DIAL chief appreciated the IMD fog services and assured all immediate support for it.

## SAARC STORM WORKSHOP AT, KOLKATA



Group of participants during Storm workshop

Under the STORM project, a training workshop was jointly organized by SAARC Meteorological Research Centre, Dhaka and, Doppler Weather Radar station, Kolkata during 09 - 13 Nov 2010 with the objectives of utilization of DWR products in Now-casting of Severe Weather Phenomena & development of Scan Strategy for Doppler Weather Radars. Twenty participants from SAARC countries participated in the workshop. Workshop was inaugurated by AVM (Dr.) Ajit Tyagi, Director General, IMD at the Conference Hall of National Library, Kolkata on 9<sup>th</sup> November 2010. Shri Jaswant Singh, DG, Geological Survey of India was "Guest of Honour" during the function.

## A WORKSHOP ON FLOOD METEOROLOGY

Two days workshop on Flood Meteorology was held during 13 - 14 December, 2010 at Hyderabad for interaction between Flood Met Officers and user agencies. In this workshop, besides Flood Met Officers and DVC unit of IMD, officers from Central Water Commission and state Govt. department of Irrigation, Agriculture, NRSC, Greater Hyderabad Municipal Corporation (GHMC) also participated and made their presentation on Flood related topics. Dr. K. M. Reddy, DG of APSRAC, Hyderabad was the Chief Guest during inaugural function of the workshop. Shri N. Y. Apte, Scientist 'F' and Shri R. D. Ram, Director attended the Workshop.

## WORKSHOP ON MONSOON REVIEW



Dr. Medha Khole giving presentation during workshop

IMD organized Brainstorming Workshop to review the performance of southwest monsoon 2010 during 9 - 10 Dec, 2010 at Mausam Bhavan, New Delhi which was inaugurated by Dr. Shailesh Nayak, Secretary, MoES. Scientists from IIT, New Delhi, CMMACS, Bangalore & IITM Pune, apart from officials of Central Water Commission, Ministry of Home Affairs and Ministry of Agriculture participated in the workshop. In total 55 distinguished scientists attended the workshop.

**HUMAN RESOURCE DEVELOPMENT**

**TRAINING NEEDS ANALYSIS**



Group of Trainee Officers along with Secretary MoES and DG, IMD

A course on "Training Needs Analysis" was conducted at Mausam Bhawan, Lodi Road, from 8-19 November 2010. The course was inaugurated by Dr. Shailesh Nayak, Secretary, MoES in presence of AVM (Dr.) Ajit Tyagi, Director General of Meteorology. Shri R.A. Singh was Course Coordinator from IMD. 16 participants from different divisions of IMD had training on needs Analysis.

**TRAINING IN AGROMETEOROLOGY**



Group of Foreign trainees

One week's Capsule Course on Agrometeorology for Foreign Trainees from Indonesia was conducted from 13-17 December, 2010. The course covered various theoretical, operational and practical aspects of agrometeorology. Twenty lectures were delivered involving faculties from IMD, ex-IMD Officers, Indian Institute of Tropical Meteorology (IITM) and Centre for Advanced Studies in Agrometeorology (CASAM).

**APPRECIATION LETTER**

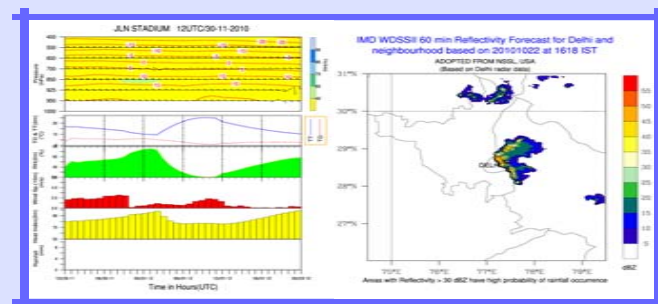
IMD received appreciation from Common Weather Games Organizing Committee to provide weather services during XIX CWG Delhi 2010, which was very useful to the Athletes, Organizing Committee Operations Centre and Management of day-to-day programme. The Governor (J&K) & Chairman Shri Amarnath Ji Shrine Board also conveyed his deep appreciation of the valuable services rendered by this department for the smooth conduct of the pilgrimage to the Holy Shrine of Shri Amarnath Ji.

**PRODUCTS DEVELOPMENT**

**DEVELOPMENT ALGORITHMS**

Under the Integrated Long Term Programme (ILTP) of Department of Science and Technology, IMD officers are engaged in the implementation of as many as six projects along with Russia and Mexico. As a part of a joint collaboration between Government of India (Department of Science & Technology) and National Council for Science and Technology of United Mexican State, Mexico, Prof. S. K. Singh and Prof. Arturo Iglesias from Instituto de Geofisica, UNAM, Mexico city visited Seismology Division and worked with Indian Scientists during the period 26-30<sup>th</sup> November, 2010 to develop algorithms for near real-time estimation of long-period magnitude, moment tensor and tsunami potential.

**NWP MODEL FOR THE CWG 2010**



NWP model for CWG 2010

In order to provide the best possible guidance and support for the CWG 2010, IMD developed the following experimental Numerical Weather Prediction (NWP) systems for the CWG 2010 Games: (i) Advance Regional Prediction System (ARPS) Model, (ii) High-Resolution Weather Research and Forecasting – Variational Data Assimilation System (WRF-VAR) down to 3 km horizontal grid-spacing, (iii) Nowcast System Delhi PP and (iv) Warning Decision Support System – Integrated Information (II generation) (WDSS-II) ( based on Delhi Radar data).

**DIGITAL SURFACE OBSERVATORY**

An indigenous state-of-the-art automatic digital surface observatory for nowcasting has been installed at M.C.Thiruvananthapuram.



Digital surface observatory

**Dr. (Mrs.) Surinder Kaur**, Scientist 'F' attended the 7<sup>th</sup> meeting of the GEOSS Asia Water Cycle Initiative (AWCI) International Coordination Group (ICG) in Tokyo, Japan from 05 to 06 October 2010.

**Shri M. K. Bhatnagar**, Scientist 'E' was deputed to Geneva to attend the 13<sup>th</sup> CBS Expert Team on AMDAR during the period from 5-7<sup>th</sup> October 2010.

**Shri A. P. Pandey**, Met. Gr. I. was deputed to Taipei, Taiwan to attend South Asia Prominent Youth Study Camp during the period 18-27 October 2010.

**Dr. R. P. Samui**, DDGM (Agrimet)/Scientist F attended the Cochran fellowship training programme on "Weather Modeling for Crop Forecasting" organized by the U.S. Department of Agriculture, Washington D.C. during 18 – 30 October, 2010.

**Shri Sanjay Bist**, Met. Gr. I, was deputed to attend the Global Atmospheric Water Training and Edu. Centre (GAW TEC) in Germany during the period 19-30 October 2010.

**Dr. L. S. Rathore**, Head, Agromet, IMD, New Delhi was deputed to Dhaka, Bangladesh to attend as a resource person in the workshop during the period 24-25 October, 2010.

**Shri A. K. Das**, Met. Gr. I, was deputed to Dhaka Bangladesh to attend a workshop during the period from 24 -25 October 2010.

**Shri S. I. M. Rizvi**, Met. I. was deputed to Indonesia to participate in the Eleventh WMO Symposium and Training ( SYMET-XI) during the period 25-29 October 2010.

**Dr. P. Guhathakurta**, Scientist 'E' was on deputation to GFDL/NOAA, Princeton, U.S.A. from 30<sup>th</sup> September to 21<sup>st</sup> November under MoES/NOAA collaborative research project on, "Seasonal Rainfall Prediction using Statistical Downscaling of GCM outputs".

**Shri I. K. Sachdeva**, Asstt. Met. was deputed to Nanjing, China to attend WMO International Training Seminar on South - South Cooperation on Weather and Climate during the period 8-12<sup>th</sup> November 2010.

**Dr. O. P. Singh**, Scientist 'F' was deputed to Moscow, Russia to participate in Joint Indo-Russian Brain Storming Workshop in the field of Earth System including Atmospheric Sciences and Sciences of Water during the period 8-13<sup>th</sup> November 2010.

**Shri L. R. Meena**, Scientist 'F', was deputed to Namibia to attend Extraordinary session of WMO Commission of Basic Systems during the period 17-24 November, 2010.

**Dr. Y. E. A. Raj**, DDGM,RMC Chennai attended 5th Technical Conference on the management of NMHSs in RA-II (Asia) held at Daegu, South Korea during 29 Nov. to 3 Dec. 2010.



Dr. Y.E.A. Raj standing extreme left with the delegates

**Shri A. K. Srivastava**, Scientist 'E' attended Sub Group Meeting of Climate Application and Services (WGCCA-CAS) in Daegu, Republic of Korea from 30<sup>th</sup> November to 2<sup>nd</sup> December 2010.

**Dr. R. Suresh**, Director-in-charge, M.O. Chennai, represented IMD in the 'Asia Pacific Wind Shear systems Acquisition Workshop' held at Bangkok, Thailand during 01-03 Dec. 2010.



Group of participants at Bangkok

**Dr. A. P. Pandey**, Met. Gr. I was deputed to Moscow, Russia to attend the Joint Indo Russian Collaboration Project on Testing of the INQVA Earthquake Environmental effects using recent Indian Earthquakes under ILTP during the period 13-21 December 2010.

**VISITORS**

**CSSTEAP trainees** (14 Nos.) of various countries who were undergoing training at SAC, Ahmedabad were on an educational visit to New Delhi on 22<sup>nd</sup> November, 2010 and were shown round the Satellite-Meteorology Division.

**Mrs. Sangeeta Kaul**, Network Manager, DELNET visited IMD and gave a presentation about services provided by DELNET on 15<sup>th</sup> December, 2010 in the presence of senior officers of the department.

**30 Students** along with 2 teachers from Oakridge International School, Hyderabad and 30 officials of Andhra Pradesh Agricultural & Research Department (APARD), Govt. of Andhra Pradesh visited M.C. Hyderabad on 10<sup>th</sup> Nov and 25 Nov 2010 respectively. They were shown RS/RW observatory and explained the activities.