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IMD NEWS

INDIA METEOROLOGICAL DEPARTMENT
(Ministry of Earth Sciences)



OCT – DEC 2020

Volume 13

Number 4

Important Events / Activities

INAUGURATION OF NEW METEOROLOGICAL CENTER AT LEH



Dr. Harsh Vardhan, Hon'ble Union Minister for Health and Family Welfare, Science & Technology, Earth Sciences, Dr. M. Rajeevan, Secretary, MoES, Dr. M. Mohapatra, DG, IMD and other officers during inauguration of Meteorological Centre at Leh

India Meteorological Department established a dedicated Meteorological Centre at Leh for the Union Territory of Ladakh on 29th December, 2020. Meteorological Centre, Leh was virtually inaugurated by **Dr. Harsh Vardhan**, Hon'ble Union Minister for Health & Family Welfare, Science & Technology, Earth Sciences in the presence of **Shri R. K. Mathur**, Hon'ble Lt. Governor (Ladakh), **Shri Jamyang Tsering Namgyal**, Hon'ble Member of Parliament from Ladakh, **Dr. M. Rajeevan**, Secretary, Ministry of Earth Sciences, **Shri Suagat Biswas**, IAS, Divisional Commissioner/Secretary Disaster Management (Ladakh), **Dr. M. Mohapatra**, DG, IMD, **Shri Anand Kumar Sharma**, Sc. 'G' and **Shri Sonam Lotus**, Sc. 'E'. The establishment of this office is a shining example of the concern of the GOI for the people of Ladakh. The Webcast Video Link is available: <http://webcast.gov.in/moes/imd/>



Meteorological Centre at Leh



Observatory at Leh

WMO's Tropical Cyclones Forecaster Training



Dr. M. Mohapatra, DG, IMD and other officers during WMO's TC Forecaster training

WMO's Tropical Cyclones Forecaster training was held during 7-17 October, 2020 through VC mode aimed at building capacity of the TC forecasters in the region by understanding the latest developments in observations, monitoring, modeling, prediction and warning services of TCs with practical examples. The training included resource persons from **IMD, NCMRWF and INCOIS and SMC Tokyo**. There were 54 participants including 19 from WMO/ESCAP Panel member countries and 35 from ACWCs, CWCs & coastal MCs & MOs, NWFC and RSMC New Delhi. **Dr. M. Mohapatra**, DG, IMD also delivered lectures including a special one on "Chasing the Cyclones: Countdown with Disaster Managers".



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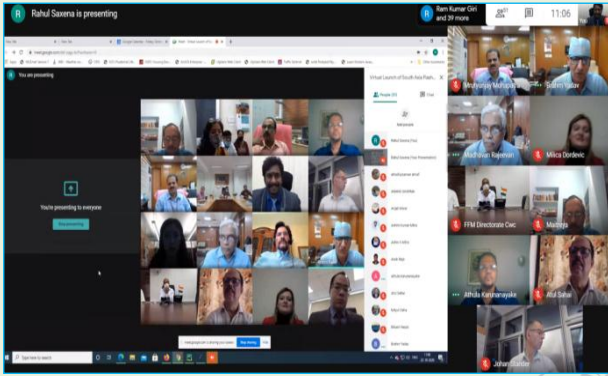
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Important Events / Activities

Dr. M. Rajeevan, Secretary, Ministry of Earth Sciences dedicated **Flash Flood Guidance Services**, first of its kind for South Asian countries namely India, Bangladesh, Bhutan, Nepal and Sri Lanka on 23rd October, 2020. The system was launched virtually in the presence of distinguished guests **Shri G. V. V. Sarma**, IAS (Member Secretary NDMA, India), **Dr. Rajendra Kumar Jain** (Chairman, Central Water Commission, India), **Dr. M. Mohapatra**, DG, IMD and DG's & PR's of all member countries, delegates from WMO, HRC, NDMA, CWC, IIT and other dignitaries from National & International institutions.



Dr. M. Rajeevan, Secretary, MoES, Dr. M. Mohapatra, DG, IMD and others during launching of FFGS

Vigilance Awareness Week was observed at IMD, HQ at New Delhi and its sub-offices spread all over India from 27 October 2020 to 2 November, 2020 and the "**Integrity Pledge**" was administered to the employees. On the occasion lectures were also delivered on the theme **सतर्क भारत, समृद्ध भारत - Satark Bharat, Samridh Bharat (Vigilant India, Prosperous India)**.

Rashtriya Ekta Diwas was observed at IMD, HQ New Delhi and its sub-offices spread all over India on 31st October, 2020 and the Pledge was administered to the employees.

Dr. M. Mohapatra, DG, IMD attended online release of NCAER Report on "**Estimating the Economic Benefits of Investments in Monsoon Mission and High-Performance Computing facilities**" by **Dr. Harsh Vardhan**, Hon'ble Minister of Science & Technology and Earth Sciences, Govt. of India on 3rd November, 2020.

Dr. M. Mohapatra, DG, IMD attended **AIML** project with IIT, Vadodara on 10th November, 2020.

"**Samvidhan Divas (Indian Constitution Day)**" pledge was administered in IMD on 26th November, 2020.

Dissemination of Agromet. advisories to the users' community through SMS and IVR technology is being continued in the country through Kisan Portal and under **PPP mode**. At present Agromet. Advisories are reaching to **36.61 million farmers** in the country through SMS directly.

Dr. M. Mohapatra, DG, IMD, **Dr. S. D. Attri**, Sc. 'G' and **Dr. R. K. Giri**, Sc. 'E' participated in "**Executive Council Meeting**" on 2nd October, 2020.

माननीय संसदीय राजभाषा समिति का राजभाषायी निरीक्षण



डॉ. मृत्युंजय महापात्र, महानिदेशक, श्री आनंद कुमार शर्मा, वैज्ञानिक 'जी', श्रीमती सरिता जोशी, सहायक निदेशक (रा.भा.) तथा अन्य माननीय संसदीय राजभाषा समिति के राजभाषायी निरीक्षण के दौरान

माननीय संसदीय राजभाषा समिति दूसरी उपसमिति द्वारा दिनांक 7 दिसंबर, को 2020 प्रादेशिक मौसम केंद्र, नई दिल्ली का राजभाषायी निरीक्षण किया गया जिसमें मुख्यालय की ओर से **डॉ. मृत्युंजय महापात्र, महानिदेशक, श्री आनंद कुमार शर्मा वैज्ञानिक 'जी'** तथा **श्रीमती सरिता जोशी, सहायक निदेशक (रा.भा.)** ने भाग लिया।

माननीय संसदीय राजभाषा समिति की दूसरी उपसमिति द्वारा दिनांक 8 दिसंबर, 2020 को भारत मौसम विज्ञान विभाग (मुख्यालय) का राजभाषायी निरीक्षण किया गया जिसमें **डॉ. मृत्युंजय महापात्र, महानिदेशक, डॉ. शिवदेव अत्री, वैज्ञानिक 'जी'** तथा **श्रीमती सरिता जोशी, सहायक निदेशक (रा.भा.)** ने भाग लिया। माननीय संसदीय राजभाषा समिति द्वारा इस अवसर पर प्रादेशिक मौसम केंद्र - गुवाहाटी की हिंदी गृह पत्रिका '**नीलाचल**' के पहले संस्करण का विमोचन किया गया।



डॉ. मृत्युंजय महापात्र, महानिदेशक, डॉ. शिवदेव अत्री, वैज्ञानिक 'जी' तथा अन्य प्रादेशिक मौसम केंद्र - गुवाहाटी की हिंदी गृह पत्रिका 'नीलाचल' के विमोचन के दौरान

मुख्यालय की राजभाषा कार्यान्वयन समिति की वर्ष 2020 की चौथी तिमाही बैठक (153^{वाँ} बैठक) दिनांक 23 दिसंबर, 2020 को

डॉ. एस. डी. अत्री, वैज्ञानिक 'जी' की अध्यक्षता में आयोजित की गई। इस बैठक में मुख्यालय के साथ-साथ विभाग के अन्य आठ उपकार्यालयों की तिमाही प्रगति रिपोर्ट की भी समीक्षा की गई। सभी उपकार्यालयों के प्रमुख / हिंदी संपर्क अधिकारी वी. सी. के माध्यम से इस समीक्षा बैठक में उपस्थित रहे।

Infrastructure Development and Installation

Revival cum new installation of **Cellcomm data logger** at **AWS Bokaro, Dhanbad, Koderma, Giridih & ARG Tundi, Birni, Markacho, Chandwara, Barkagaon and Ramgarh w.e.f.** 12-22 October, 2020 have been completed by MC Ranchi.

Installation of **HWSR** at **DWR Gopalpur** has been completed by **M.C. Bhubaneswar** on 16th October, 2020 and data available in website.

Thirty eight (38) numbers of **ARG stations** and two numbers of **AWS Stations** have been revived with replacement of spares during the quarter October to December, 2020.



AWS Stations at Jhargram

The **Site Acceptance Test (SAT)** of **Multi-Mission Meteorological Data Receiving and Processing System (MMDRPS)** was carried out in two phases, i.e., Hardware and Software components w.e.f. 10th September, 2020 and completed on 19th October, 2020. The major actions were emerged during the SAT related to RAPID, Data Supply Server and GIS Software were addressed and presented to SAT committee on 12th November, 2020. Sat committee completed the SAT on 12th November and recommended the acceptance of MMDRPS system with effect from 12th November, 2020. SAT report submitted by SAT committee was approved by the competent authority.

Agro AWS Kanke, Ranchi has been revived on 25th November, 2020 by **M.C. Ranchi**.

M. C. Ranchi has completed Revival cum new installation of **Cellcomm data logger** at **AWS Dumka, Pakur, Sahebganj and ARG Jamtara, Jama, Shikaripara, Mehrema and Poreyahat w. e. f.,** 27th November, 2020 to 7th December, 2020.

DCWIS was installed at **AMS Sambre** by **Shri S. M. Metri, Sc. 'E'** and **Shri N. Ramdoss, Met. 'B'**, on 19th December, 2020. Two **AWS** and Six **ARGS** were revived during December 2020.

New **ORG (under AIGS)** were installed at **ST Radar Pilot Array, University of Calcutta, Haringhata** on 28th December, 2020.

Human Resource Development Activities

TRAINING

Dr. (Smt.) V. K. Mini, Sc. 'E' and **Shri Arun Kumar VH, Sc. 'C'**, attended "**Govt. Official Training Programme**" in Big Data Technologies by CDAC, Noida during the period 19 October - 3 November, 2020.

Ms. Neeru Barak, S. A. attended virtual training on "**Application of Geographic Information on System in Disaster Risk Management**" from 26-30 October, 2020 organized by India Institute of Remote Sensing, Dehradun.

Dr. Kuldeep Srivastava, Sc. 'E' attended, participated and completed Five days Online Faculty Development Programme on "**Cyber Security Analytics and Cyber Forensics**" organised by the Department of Computer Applications, Saintgits College of Engineering, Kottayam from 16-20 November, 2020.

Online Training programme on "**Preparation and Dissemination of Agromet Advisories at Block level under Gramin Krishi Mausam Seva(GKMS) Scheme (18.11.2020 - 21.11.2020)**" for Subject Matter Specialists (Agromet) of OUAT DAMUs has been attended by **Shri Umasankar Das, Sc. 'C'** on 19th November, 2020.

Dr. G. K. Das, Sc. 'E' and **Dr. V.K. Mini, Sc. 'E'** attended 5 days virtual training programme on "**Role of Technology in Community level Disaster Mitigation**" organized by Lal Bahadur Shastri National Academy of Administration, Mussoorie during 23-27 November, 2020.

Shri Uma Borah, Met. 'A' attended the "**Advance Refresher course in Aviation Meteorology**" online training conducted by MTI Pune during the period 23-27 November, 2020.

Dr. G. N. Raha, Sc. 'E' attended an online training programme conducted by NDMA & SSDMA on "**Incident Response System (IRS) and Table Top Exercise for Earthquake for State and Districts of Sikkim**" held on 25th November, 2020.

In House training for forecaster held on 23rd December, 2020. **Shri Vivek Sinha, Sc. 'F'**, **Shri Anand Shankar, Sc. 'C'** and **Dr. T. N. Jha, Retd. Sc. 'E'** gave their presentation as resource person.

IMTC Training in Batch No. 9 *via* distance learning was completed at M.C. Bhubaneswar during December, 2020. **IMTC Training** in Batch No. 10 *via* distance learning started on 28th December, 2020.

WEBINAR

Dr. S. D. Attri, Sc. 'G' delivered invited talk in Webinar on **"Climate Change and Sustainable Development under current scenario"** on 7th October, 2020 organized by GJU Hisar.

Dr. M. Mohapatra, DG, IMD attended National Webinar on **"Cold Wave Risk Reduction"** organized by NDMA and delivered talk in the Technical Session - I on **"Early warning dissemination and sector specific measures"** on 14th October, 2020.

Dr. M. Mohapatra, DG, IMD attended as a Panellist for Webinar on **"V13H2;S9: Multi Hazard Vulnerability and Mitigation in the coastal areas towards Impact based Multi Hazard Warning System"** organized by INCOIS, Hyderabad on 20th October, 2020 under the objective of Vaibhav Summit.

Shri Surender Paul, Sc. 'F' attended a webinar on **"Weather Perspectives in Modern Era"** and organized by K. V. K. Jalandhar and gave talk on **"Agromet Advisories in India Currents Status and Future Plan"** on 20th October, 2020.

Dr. M. Mohapatra, DG, IMD attended meeting under Chairmanship of Secretary, DoWR, RD & GR regarding follow-up of decisions taken in meeting taken by Hon'ble Home Minister to review the **"Preparedness measures to deal with flood situation in major flood prone river basin in the country"** on 21st October, 2020.

Dr. (Smt.) K. Naga Ratna, Sc. 'E' participated in a Webinar on **"Agromet Advisories Forecast and IT Based Future Market"** organized by MANAGE, Hyderabad, on 22nd October, 2020.

Dr. Sanjib Bandyopadhyay, Sc. 'F' attended Webinar on **"Enhancing Preparedness for Response to COVID-19 & Extreme Weather Events"** held on 4th November, 2020.

Dr. Sanjib Bandyopadhyay, Sc. 'F' was invited to attend as Chief Guest in inaugural session of **"Web based seminar on Weather Resilience Agricultural Technologist for farmers of Cuttack District"** by DAMU, KVK Cuttack on 11th November, 2020.

Dr. S. Balachandran, Sc. 'F' attended webinar and delivered lecture on **"Climate Change - Issues and adaptation"** conducted by Indian Red Cross Society, Vellore District Branch, on **International Day for Risk Reduction 2020**, on 18th November, 2020.

Dr. M. Mohapatra, DG, IMD presided over Webinar on **"Winter Weather System and its Impact on Different Sectors"** organized by Indian Meteorological Society and IMD on 27th November, 2020.

Shri Raja Acharya, Met. 'A' attended a webinar on **"Co-designing the science we need for the Ocean Decade - Part 2"**, convened by the Intergovernmental Oceanographic Commission of UNESCO in partnership with the International Science Council, on 8th December, 2020.

Dr. M. Mohapatra, DG, IMD attended webinar on **"Developing a self-reliant DRM Framework"** in the series of **"Atmanirbhar Bharat in DRM"** organized by NIDM on 21st December, 2020.

LECTURES/TALK

Shri Ranjan Phukan, Sc. 'C' presented a talk on **"IMD's role in Disaster Management"** in a webinar organized by Govt. of Tripura on 5th October, 2020.

Dr. M. Mohapatra, DG, IMD delivered lecture on **"Chasing the Cyclone"** during **World Space Week** celebrated by Indian Society of Remote Sensing (ISRS), Delhi Chapter via Google Meet on 6th October, 2020.

Dr. S. D. Attri, Sc. 'G' delivered invited talk on **"Climate services for agriculture and other sectors"** in webinar on 8th October, 2020 organised by Ministry of Electronics and Information Technology, New Delhi.

Dr. S. D. Attri, Sc. 'G' delivered address in **"Symposium cum Farmers and planners Interaction"** on 9th October, 2020 organised by P. K. University, Shivpuri (MP).

Dr. M. Mohapatra, DG, IMD delivered a talk on the topic **"Climate Change & Cyclones"** in the Online Training Programme on **"Climate Change: Challenges and response"** (for Women Scientists) organized by Lal Bahadur Shastri National Academy of Administration, Mussorie, Uttarakhand on 9th October, 2020.

Shri Surender Paul, Sc. 'F' attended a meeting with Shri Sanjeev Kaushal, IAS, Additional Chief Secretary and FCR, Haryana regarding development of **"Decision Support System (DSs)"** to manage potential hazards associated severe weather events in Haryana on 14th October, 2020.

Dr. M. Mohapatra, DG, IMD delivered Annual Monsoon Talk on **"Monsoon-2020: Scientific issues and challenges"** organized by IMS, Ahmedabad Chapter on 16th October, 2020.

Dr. S. D. Attri, Sc. 'G' delivered invited talk in Webinar on **"Role of Meteorology in better Air Quality Management"** organised by Indian Association for Air Pollution Control (D) on 17th October, 2020.



Dr. S. D. Attri, Sc. 'G' and others during the webinar

Shri Virendra Singh, Sc. 'F', delivered lecture on **"Overview of Satellite Meteorology in RSMC Cyclone"** Training Programme on dated 20th October, 2020.

Dr. S. D. Attri, Sc. 'G' delivered address as Chief Guest in **"Valedictory function of Refresher Course in Environmental Science/ Education"** on 21st October, 2020 by JMI, New Delhi.



Dr. N. Puviarasan, Sc. 'E' attended a selection committee meeting as a nominated member for the selection of one "**Agromet Observer**" on contract basis through online interview on 27th October, 2020 under GKMS Scheme.

Dr. S. D. Attri, Sc. 'G' participated in CBI National Conference on "**Vigilance and Anti-Corruption**" during 27-29 October, 2020, inaugurated by Hon'ble Prime Minister of India.

Dr. S. D. Attri, Sc. 'G', Sc. 'G' participated in Meeting on "**Preparation/Updation of Hazard Zonation Maps/Atlas**" organised by MNCFC, New Delhi on 28th October, 2020.

Shri Surender Paul, Sc. 'F' delivered invited talk for the training session titled "**Training of Community Volunteers of District Moga in Disaster Response (Aapda Mitra)**" 9th November to 4th December, 2020 organized by Mahatma Gandhi State Institute of Public Administration (MGSIPA).

Dr. S. D. Attri, Sc. 'G' participated in Brainstorming session on "**Development of NextGen Agro-Advisory Services**" on 19th November, 2020 organised by ICRISAT, Hyderabad.

Dr. S. Balachandran, Sc. 'F' gave a lecture on "**Climate Change - IMD Early Warning System - An Overview**" in the AICTE sponsored programme on "**Disaster Mitigation: Shift from Disaster Management towards preparedness**" organized by Department of Civil Engineering, School of Infrastructure, Crescent Institute of Science and Technology, on 19th November, 2020.

Dr. Geeta Agnihotri, Sc. 'E' attended a Lecture by **Shri T. P. Sharma**, Officer on Special Duty, CVC on 19th November, 2020 by video conference.

Dr. S. D. Attri, Sc. 'G' delivered talk on "**Block Level Agro Meteorological Services in India**" in webinar on "**Implementation of block level Agromet Advisories under GKMS**" held under the chairmanship of Secretary and Commissioner, Telangana on 23rd November, 2020 which was participated by officers of State Agriculture Department, M. C. Hyderabad, SMS of DAMUS and TOS of AMFUs.

Dr. H. R. Biswas, Sc. 'E', delivered lecture on the subject "**TAF writing using recently developed NWP Products for Aviation Application**" through online mode in Advanced Refresher Course on Aviation Meteorology conducted by MTI, Pune on dated 24th November, 2020.

Dr. Ashok Kr. Das, Sc. 'E' participated and delivered an online lecture on "**Hydromet Services**" in the India International Science Festival - 2020 on 28th November, 2020.

Dr. S. D. Attri, Sc. 'G' delivered talk on "**Role of Climate Advisory for food security**" in Building Self-reliant Farmers in the arena of **Climate Change for Food Security: The Indian Perspective, Climate Dialogues special side events -UNFCCC**, November on 30th November, 2020.



Dr. S. D. Attri, Sc. 'G' delivering talk

Shri B. P. Yadav, Sc. 'F', delivered lecture on "**Real time Meteorological data for Flood Forecasting**" on 2nd December, 2020 in an International Workshop organized by RMSI.

Dr. M. Mohapatra, DG, IMD delivered invited talk in **INGARSS 2020** organized by Space Applications Centre, ISRO, Ahmedabad on 4th December, 2020.

Shri Shivinder Singh, Sc. 'C' delivered online lecture to the "**Students of B.Sc (Hons.) Agriculture**" of Rayat Bahra University" on 4th December, 2020.

Dr. S. D. Attri, Sc. 'G' participated in Stakeholders' Workshop on "**India-Drought Monitor**" on 10th December, 2020 organised by CRIDA Hyderabad.

Dr. M. Mohapatra, DG, IMD, delivered a plenary talk on "**Impact based forecasting**" in Virtual Symposium on "**Tropical Meteorology (TROPMET-2020)**" under the theme "**Weather and Climate Services over Mountainous Regions**" organized by Indian Meteorological Society (IMS) in collaboration with North Eastern Space Applications Centre (NESAC), Shillong during 14 - 17 December, 2020.

Dr. B. Geetha, Met.'A' delivered lectures on "**Northeast monsoon**" to the AMTC-batch 181 trainees during 16-18 December, 2020 conducted by MTI, IMD Pune.

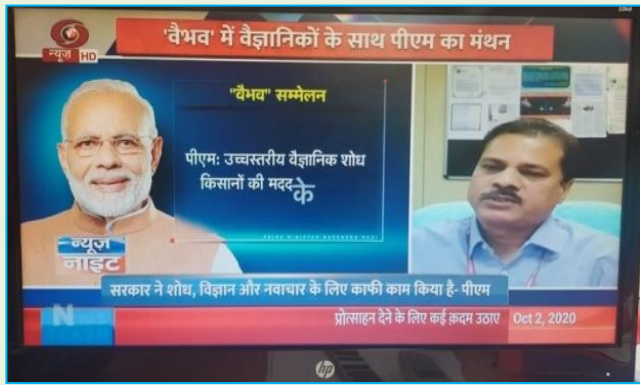
Dr. B. Geetha, Met. 'A' delivered lecture on "**Cyclone Disaster Management**" to the visiting trainees (state govt officials) of Anna Institute of Management in the training programme on "**Coastal Hazard Management**" on 22nd December, 2020.

Dr. K. K. Singh, Sc. 'G' delivered a talk as Chief Guest on 25th December, 2020 on the occasion of valedictory function of training on "**Crop weather modelling: Tool for climate smart agriculture**" to agriculture scientists organised during 2-25 December, 2020 under NAHEP by CAAST-CSAWIM, Mahatma PhuleKrishiVidyapeeth, Rahuri.

WORKSHOP

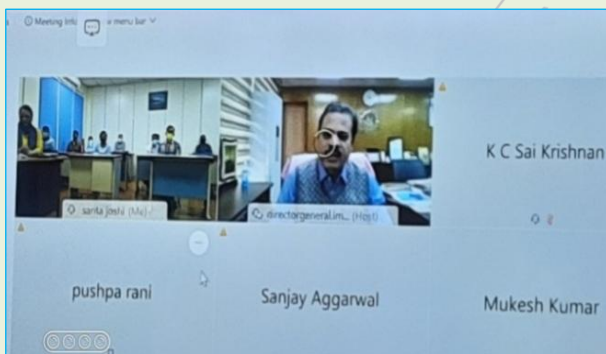
Dr. M. Mohapatra, DG, IMD attended **Vaibhav Summit** on 2nd October, 2020 and gave Interview at AIR, New Delhi.





Dr. M. Mohapatra, DG, IMD during Vaibhav Summit

मुख्यालय द्वारा दिनांक 11 नवंबर, 2020 को ई-हिंदी कार्यशाला का आयोजन किया गया। जिसका शुभारंभ डॉ. मृत्युंजय महापात्र, महानिदेशक महोदय द्वारा किया गया। महानिदेशक महोदय ने सभी प्रतिभागियों को हिंदी कार्यशाला में प्रतिभागिता के लाभ के बारे में बताया। श्रीमती सरिता जोशी, सहायक निदेशक (रा.भा.), श्रीमती कल्पना श्रीवास्तव, वरिष्ठ अनुवाद अधिकारी तथा श्री बीरेन्द्र कुमार, वरिष्ठ अनुवाद अधिकारी ने इस कार्यशाला में व्याख्यान दिए।



डॉ. मृत्युंजय महापात्र, महानिदेशक तथा अन्य ई-हिंदी कार्यशाला के दौरान

Shri B. P. Yadav, Sc. 'F', Shri Rahul Saxena, Sc. 'F' and Dr. Ashok Kumar Das, Sc. 'E' attended the online Session of "Regional cooperation workshop for enhancing forecasting, monitoring and preparedness for Floods and Droughts in South Asia" during 8-10 December, 2020 organised by RIMES .

Shri Abhishek Anand, Sc. 'B' and Shri Ravi Raushan, S. A. attended the workshop on 18th December, 2020 organized by Birsa Agriculture University, Kanke (Ranchi) on the topic "Sensitization of DAMUs in Jharkhand".

MEETINGS / CONFERENCES

Dr. H. R. Biswas, Sc. 'E' attended the Crop Weather Watch Group Committee Meeting through Video Conferencing under the Chairmanship of Agriculture Production Commissioner, Odisha on 5th October, 19th October, 2nd November and 7th December, 2020.

India Meteorological Department (IMD) organized the on-line pre-cyclone exercise meeting on 6th October, 2020 under the chairmanship of Dr. Mrutyunjay Mohapatra, DG, IMD to review the preparedness, take stock of requirements, plan for the cyclone season October-December, 2020 and share new initiatives by IMD with stake holders. The meeting was participated by experts from IMD, National Centre for Medium Range Weather Forecasting (NCMRWF), Indian Air Force (IAF), Indian Navy (IN), Central Water Commission (CWC), India Institute of Technology (IIT) Delhi, Indian National Centre for Ocean Information Services (INCOIS), National Disaster Management Agency (NDMA), National Disaster Response Force (NDRF), Deptt. of Fisheries, Punctuality Cell, Indian Railways and Central Water Commission (CWC).

Shri B. P. Yadav, Sc. 'F' and Dr. A. K. Das, Sc. 'E' attended "Project Monitoring & Advisory Committee (PMAC)" on 9th October, 2020 regarding Upgradation of Hydro-meteorological Services. Dr. A. K. Das, Sc. 'E' made the presentation for the project.

Dr. Sanjib Bandyopadhyay, Sc. 'F' held a meeting on 9th October, 2020 to initiate campaign on "Jan Andolan Campaign" and administrated the pledge to the employees of RMC Kolkata on this occasion social distancing and wearing of Mask was observed.

Dr. M. Mohapatra, DG, IMD attended 2nd Steering Committee meeting on "Common Alert Protocol" organized by NDMA on 13th October, 2020.

Dr. S. D. Attri, Sc. 'G' attended Video Conferencing on 14th October, 2020 regarding "Automation of Agromet Advisory Services" and a link with this model template has been sent to all DAMU, AMFU and State Agricultural Authorities. Shri Surender Paul, Sc. 'F' also attended this meeting.

Dr. H. R. Biswas, Sc. 'E' attended the Meeting through Video Conferencing on Setting up new AWS and ARG stations in Odisha state on 15th October, 2020.

Dr. M. Mohapatra, DG, IMD along with Dr. Sankar Nath, Sc. 'E' attended E-Meeting with Google organized by NDMA for "Dissemination of Common Alert Protocol Alerts" on 16th October, 2020.

Dr. K. Naga Ratna, Sc. 'E' participated in a web Conference organized by Telangana State Centre of the Institution of Engineers (India) on "Unprecedented Floods in GHMC Area" on 16th October, 2020.

The Work Progress Review Meeting of UK MET. OFFICE (UKMO)-MoES (IMD, NCMRWF, IITM, IMD) Weather and Climate Science for Service Partnership India Executive Committee - WCSSP India was held virtually on 19th October, 2020. Dr. R. K. Jenamani, Sc. 'F' as the coordinator of the WP3 (IBF) Sub-project for IMD presented the present status and progress in the VC.

Dr. R. K. Giri, Sc. 'E' and **Dr. A. K. Mitra**, Sc. 'E', participated in the **GSICS Data Working Group (GDWG)** organized by **CGMS** on a virtual mode on dated 20th October, 2020.

Shri Virendra Singh, Sc. 'F' and **Dr. A. K. Mitra**, Sc. 'E' participated in "**4th DB-Net Coordination Group**" meeting organised by **WMO** on virtual mode during 20-22 October, 2020.

Dr. Geeta Agnihotri, Sc. 'E' and **Shri C. S. Patil**, Sc. 'D', M. C. Bengaluru participated a meeting convened by **DG, IMD** on "**Impact based forecast**" through video conferencing on 2nd & 20th November, 2020.

Dr. M. Mohapatra, **DG, IMD** attended Conference on "**Moving from Risks to Resilience for a water secure future**" organized by **Confederation of Indian Industry (CII)** on 3rd November, 2020.

Dr. M. Mohapatra, **DG, IMD** attended meeting of the "**National Coordination Committee for Polar Science**" via Google Meet/Webex organized by **NCPOR, Goa** on 4th November, 2020.

Dr. S. D. Attri, Sc. 'G' participated in Meeting on "**Vigilance Mechanism**" organised by **MoES** on 5th November, 2020.

Dr. S. D. Attri, Sc. 'G' and **Smt. Priyanka Singh**, 'Sc'. B, participated in meeting on "**Automation of Agromet Advisory Services**" organised by **IMD** and **WoTR** on 5th November, 2020.

Shri S. Mishra, Met. 'B' and **Shri P. K. Nath**, Met. 'A' attended the "**Table Top Exercise Meeting**" (Preparatory Meeting for Full Scale Emergency Exercise - 2020) at **B.P.I. Airport, Bhubaneswar** on 5th November, 2020.

Dr. H. R. Biswas, Sc. 'E', attended the Meeting of State Level Steering Committee (SLSC) for "**Implementation of World Bank Assisted National Hydrology Project**" through Video Conferencing on 9th November, 2020.

Dr. S. D. Attri, Sc. 'G' participated in Task Force Meeting on "**Climate change and Vector Borne Diseases**" organised by **ICMR** on 12th November, 2020

Shri Umasankar Das, Sc. 'C' attended the "**Crop Weather Watch Group Committee Meeting**" through Video Conferencing under the Chairmanship of **Agriculture Production Commissioner, Odisha** on 16th November, 2020 and 21st December, 2020.

Dr. S. D. Attri, Sc. 'G' and **Shri Raja Acharya**, Met. 'A' participated in virtual "**WMO Data Conference**" held under the chairmanship of **SG, WMO** during 16-19 November, 2020.

Dr. M. Mohapatra, **DG, IMD** participated in the Panel discussion on the topic "**Severe Weather Preparedness Amid the Pandemic**" organized by **Open Gov TV** on 17th November, 2020.

Dr. M. Mohapatra, **DGM** attended virtual meeting of the National Crisis Management Committee on 22nd and 23rd November, 2020 in connection with cyclone "**NIVAR**". **Dr. K. K.**

Singh, Sc. 'G' attended the stakeholders meet on "**Implementation of block level Agromet Advisories for Telangana state**" under **GKMS** under chairmanship of **Pr. Secretary & Commissioner (Agriculture)** organized by **M. C. , Hyderabad** on 23rd November, 2020.

Dr. M. Mohapatra, **DG, IMD**, **Mrs. Sunitha Devi**, Sc. 'E' and **Mrs. Monica Sharma**, Met. 'A' participated through Video Conference in **WMO/ESCAP Panel on Tropical Cyclones (PTC-47) Meeting** during 23-26 November, 2020. **Mrs. Sunitha Devi** presented the "**Annual Report on Cyclonic Disturbances over north Indian Ocean during 2019, Country Report of India and Tropical Cyclone Operational Plan (TCP-21)**" during the meeting.

Dr. S. D. Attri, Sc. 'G' addressed the delegates as "**Guest of Honour**" in Inaugural function of International Conference on "**Building Resilient and Sustainable Societies: Emerging Social and Economic Challenges**" organised by **Jamia Milia Islamia** during 25-26 November, 2020

Dr. Kuldeep Srivastava, Sc. 'E' and **Shri Sankar Nath**, Sc. 'E' attended a meeting on "**Organisational Resilience 2.0: Managing Multiple Threats Proactively, efficiently and effectively**" on 25th November, 2020 organised by **Open Gov C10 Network Pvt. Ltd.**

Shri Shivinder Singh, Sc. 'C' attended meeting of "**Official Language Implementation**" through online platform **Microsoft Teams Platform** on 25th November, 2020.

Dr. M. Mohapatra, **DG, IMD** attended Inaugural Function of the Conference on "**Climate Change, Disasters & Sustainable Livelihood**" as **Guest of Honour**, organized by **Department of Geography, University of Allahabad, Prayagraj** on 26th November, 2020.

Dr. K. K. Singh, Sc. 'G' attended 5th National Conference on "**Review of implementation of Pradhan Mantri Fasal Bima Yojana/ Restructured Weather Based Crop Insurance Scheme (PMFBY/ RWBCIS)**" on 27-28 November, 2020 organized by **DAC&FW**.

Dr. M. Mohapatra, **DG, IMD** attended "**Cabinet Secretariat National Crisis Management Committee Meeting**" on 1st December, 2020 for discussion on cyclonic storm "**Burevi**".

Dr. Sanjib Bandyopadhyay, Sc. 'F', attended a meeting with Chairman of **WBHIDCO** for **Installation of Automatic Rain Gauge in New Town, Kolkata** on 7th December, 2020.

A meeting was attended by **Shri Virendra Singh**, Sc. 'F' and **Dr. A. K. Mitra**, Sc. 'E' on dated 16th December, 2020 with **ISRO(HQ), NSIL** and **NRC** regarding up gradation of **NOAA/Metop ground receiving & processing system** under the chairmanship of **Dr. Gopal Iyengar**, Advisor, **MoES**.

Smt. Deepa R. V., **S. A.** and **Shri Pankaj Kumar**, **S. A.** attended Review meeting on "**Ongoing works of Geospatial Group**"



through Video Conferencing with H.Q., New Delhi on 19 & 26 December, 2020.

Dr. M. Mohapatra, DG, IMD and **Dr. Naresh Kumar**, Sc. 'E' attended meeting under Chairmanship of Member, NDMA regarding "Hazard analysis by including night temperature and wind direction" on 21st December, 2020 and delivered an invited talk on "Self-resilient early warning services".

Shri P.S. Kannan, Sc. 'E' attended the meeting on "Review of Quarterly Progress Reports" held by HQ, Rajbhasha cell through video conference on 23rd December, 2020. **Smt. O. M. Malathi Nandakumar**, Hindi Co-ord. Officer and **Smt. Beulah Abel**, steno, Rajbhasha cell attended.

Dr. M. Mohapatra, DG, IMD attended as Guest of Honour, the valedictory function of **Students Engineering Model Competition 2020** organized by **CSIR - Central Electronics Engineering Research Institute**, Pilani, Rajasthan on 24th December, 2020.

PRESENTATION

Dr. D. S. Pai, Sc. 'G' and **Dr. O. P. Sreejith**, Sc. 'E' gave presentation in "South Asian Webinar on Monsoon 2020" vs "SASCOF forecast" on 11th November, 2020 and attended SASCOF-18 on 23rd November, 2020.

Shri Abhishek Anand, Sc. 'B' from M. C. Ranchi gave an oral presentation in "TROPMET 2020 (Online)" on "Inter-Spatial vulnerability assessment of heat hazard in summer-2018 over Madhya Pradesh using wind chill and Discomfort (Thermal Indices)" on dated 17th December, 2020.

OUTREACH PROGRAMME

Dr. M. Mohapatra, DG, IMD along with **Dr. K. K. Singh**, Sc. 'G' and Head, Agromet Division attended 4th India Agricultural Outlook Forum 2020 organized by Department of Agriculture, Cooperation & Farmers Welfare on 15-16 October, 2020.

Dr. M. Mohapatra, DG, IMD attended the online fireside chart organized by Google with Principal Scientific Advisor to Prime Minister on 30th October, 2020 on "Utility of Artificial Intelligence and Machine Learning (AI & ML)" in India.

K. S. Hosalikar, Sc. 'G' participated in the first virtual session of the "World Meteorological Organisation (WMO) Infrastructure Commission (INFCOM) Part II" from 9 to 13 November, 2020.

Dr. M. Mohapatra, DG, IMD attended "38th Prof. R. Ananthakrishnan colloquium" by **Dr. Nils P. Wedi**, Head Earth System Modelling, ECMWF on 11th November, 2020.

INDIA INTERNATIONAL SCIENCE FESTIVAL-2020

Dr. M. Mohapatra, DG, IMD attended virtual Curtain Raiser Ceremony of the IISF-2020 by **Dr. Harsh Vardhan**, Hon'ble Minister of Science & Technology and Earth Sciences organised

by Indian Institute of Tropical Meteorology (IITM) on 18th December, 2020. **Dr. Mohapatra** attended Inauguration of the IISF 2020 Mega Science EXPO by **Dr. Harsh Vardhan**, Hon'ble Minister for Health & Family Welfare, Science & Technology and Earth Sciences, Govt. of India on 22nd December, 2020.

Shri Raja Acharya, Met. 'A' participated in a Virtual Conference on "India International Science Festival (IISF) 2020" and participated in "Clean Air event" of MoES held during 23-24 December, 2020.

ONLINE INTERVIEW

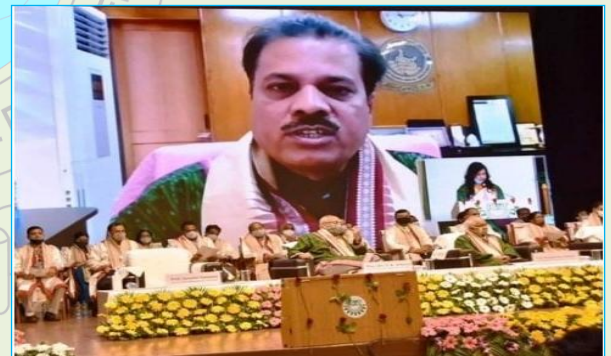
Team from IMAK News and Entertainment interviewed **Dr. M. Mohapatra**, DG, IMD on 6th November, 2020 on the theme "Cyclone Mitigation in Odisha" to be released under the programme "Atmanirbhar Bharat with Science".

Dr. V. K. Mini, Sc. 'E' represented IMD for conducting an interview by online for selection of **SMS (Agromet) for District Agromet Unit**, KVK Alappuzha on 22nd December, 2020.

AWARDS & RECOGNITION/APPECIATION

Chief Secretary, Telangana appreciated the services rendered by **Meteorological Centre, Hyderabad** during monsoon season and Hyderabad Floods during October, 2020.

Dr. Mrutyunjay Mohapatra, DG, IMD was conferred the "Doctor of Science (D.Sc.) Honoris Causa" by **Kalinga Institute of Industrial Technology (KIIT)**, Bhubaneswar through virtual platform on 21st November, 2020 during the 16th Annual Convocation.



Dr. Mrutyunjay Mohapatra, DG, IMD during convocation

Dr. S. D. Attri, Sc. 'G' has been nominated as Member, Expert Team on Agromet. Risk Management of Standing Committee on Services for Agriculture of SERCOM, WMO

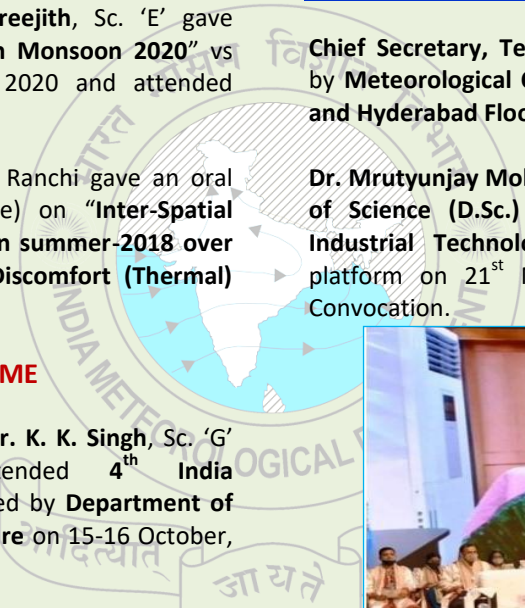
Research & Publication

Seventeen (17) research papers were published in **MAUSAM Vol. 71 No. 4 (October, 2020)** issue.

D. S. Pai, **Arti Bandgar**, **Sunitha Devi**, **Madhuri Musale**, **M. R. Badwaik**, **A. P. Kundale**, **Sulochana Gadgil**, **M. Mohapatra** and **M. Rajeevan**, "Normal dates of onset/progress and withdrawal of southwest monsoon over India", *Mausam*, 71, 4 (October 2020), 553-570.



सत्यमेव जयते



R. R. Kelkar and O. P. Sreejith, "Meteorological sub-divisions of India and their geopolitical evolution from 1875 to 2020", *Mausam*, 71, 4 (October 2020), 571-584.

Ashwini Kulkarni, Pulak Guhathakurta, Savita Patwardhan and Sulochana Gadgil, "Meteorological sub-divisions of India : Assessment of coherence, homogeneity and recommended redelineation", *Mausam*, 71, 4 (October 2020), 585-604.

Mukhtar Ahmed, Sonam Lotus, Rajalakshmi D., Shivinder Singh and Subha Rao, A. V. M., "Analysis of rainfall and drought climatology for crop planning in subtropical plains of Chatha, Jammu", *Mausam*, 71, 4 (October 2020), 749-756.

Khaiwal Ravindra, Tanbir Singh, Vinayak Sinha, Baerbel Sinha, Surender Paul, S D Attri and Suman Mor, 2020, "Appraisal of regional haze event and its relationship with PM 2.5 concentration, crop residue burning and meteorology in Chandigarh, India", *Chemosphere*, DOI: 10.1016/j.chemosphere.2020.128562 (IF: 5.778)

Abstract submitted on "A study on extremely heavy rainfall over some districts of Madhya Pradesh during 28-30 August 2020" by M. L. Sahu, R. S. Akre and Sulekha Sonal and "Widespread rainfall activity with isolated heavy spells of rain over Himachal Pradesh and Uttarakhand during 15-20 July 2014" by R. S. Akre, Brij Mohan and M. L. Sahu, were published in the proceedings of symposium TROPMET 2020 held during 14-17 December, 2020 at Shilong.

"Design Storm Studies for Projects 2019" uploaded on IMD Website on 4th November, 2020.

M. C. Ranchi prepared "Monthly weather report for September -2020 (Jharkhand)", *Monsoon Report, 2020* by Dr. S. D. Kotal, Sc. 'F', Shri Abhishek Anand, Sc. 'B' and Shri S. C. Mandal, Met. 'A' (MC Ranchi/Tech/Rep/September/2020/T9).

M. C. Ranchi has prepared *Monsoon Report 2020* (M.C. Ranchi/Tech/ REP/2019/ T2) during the October month.

Monsoon report of Jharkhand-2020 has been prepared by Dr. S. D. Kotal, Sc. 'F', Shri Abhishek Anand, Sc. 'B' and Shri S. C. Mandal, Met. 'A' (MCRanchi/Tech/Rep/2020/T3).

India Meteorological Department released annual lightning report on 31st December, 2020.

An article written by Shri Anand Shankar, Sc. 'C' on the title "वज्रपात-जानकारी ही बचाव" published in the Bihar State Disaster Management Authority, Government of Bihar News Letter "पुनर्नवा" in the अप्रैल-जून 2020 issue which is widely circulated among the officials of Govt. of Bihar.

A paper titled "Analysis of Rainfall Trends in Damodar Valley Area" by Shri Suman Chattapadhyay, Met. 'B', Shri Raja

Acharya, Met. 'A' & Shri A. K. Sen, Retd. Sc. 'F' has been published in the journal *Vayumandal*.

Media Interaction



Joint Press Briefing by IMD and NDRF

Joint Press Briefing was done by Dr. M. Mohapatra, DG, IMD and Shri S. N. Pradhan, DG, NDRF on Cyclone "Nivar" on 24th November, 2020.

Shri. C. S. Patil, Sc. 'D', M. C. Bengaluru, gave a talk on cyclone "Nivar" in All India Radio, Bengaluru on 24th November, 2020.

Dr. Geeta Agnihotri, Sc. 'E' & Head, M. C. Bangalore gave a live talk in Hindi to All India Radio Kalaburgi on "Weather Forecast" due to deep depression that crossed NAP coast and caused heavy rainfall over Karnataka.

Shri. C. S. Patil, Sc. 'D' and Dr. Rajveel Manickam, Sc. 'D', M. C. Bangalore gave a live talk in Hindi to All India Radio Kalaburga on "Weather forecast due to deep depression" that crossed North Andhra Pradesh coast and caused heavy rainfall over Karnataka.

VISITORS

Hon'ble Speaker of Legislative Assembly Shri Vishweshwar Hegde Kageri, Govt of Karnataka visited M.C. Bangalore on 2nd November, 2020.

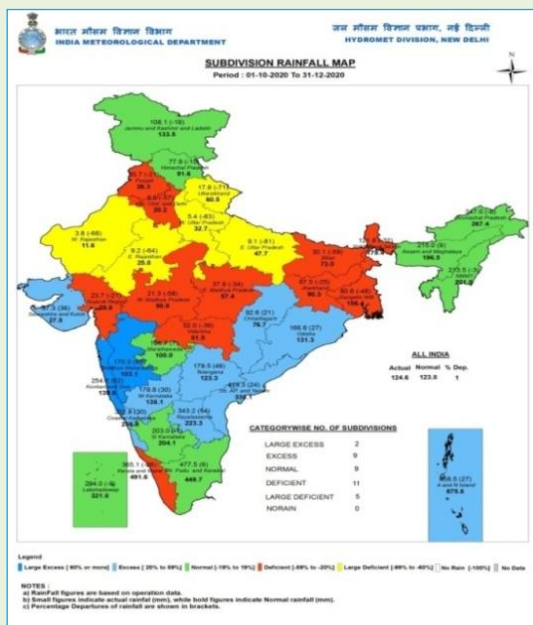
Six newly joined SMS (Subject Matter Specialist) of KVK DAMU accompanying with Joint Director Extension (DE&M) and I/C OUAT DAMUs, Directorate of Extension Education, OUAT Bhubaneswar visited IMD Bhubaneswar on dated 27th November, 2020 to get familiarized with different Observation Instruments, Operational Activities and Operational Forecasting Methods. Dr. H. R. Biswas, Sc. 'E' and Head, M. C. Bhubaneswar briefed them on the importance and role of DAMU in GKMS Project and Agromet Services in Odisha.

10 Nos. of farmers from Krishi Vigyan Kendra, Darang Assam visited RMC Guwahati on 21st December, 2020 for familiarization to functioning of Met. Observatory.

WEATHER SUMMARY

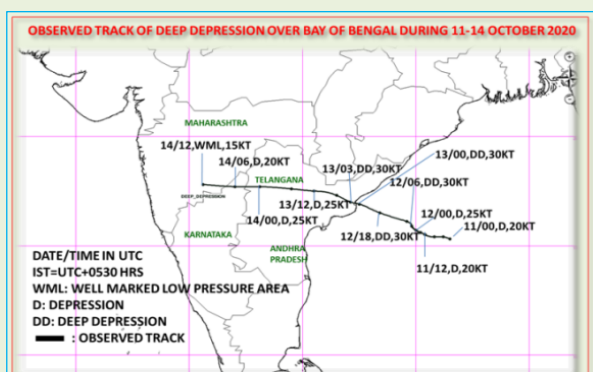
Real time Rainfall statistics for the Post Monsoon Season (October to December) - 2020

The rainfall for the country as a whole, for the Post Monsoon Season - 2020 (October to December) has been recorded as 124.6 mm which is 101% of its Long Period Average (LPA) of 123.8 mm. In all, category wise, 02 Met sub-divisions remained in the LARGE EXCESS, 09 Met sub-divisions in EXCESS, 09 Met sub-divisions in NORMAL, 11 in DEFICIENT, 05 in LARGE DEFICIENT and none of Met sub-divisions remained was replaced in "NO RAIN" category of rainfall respectively.



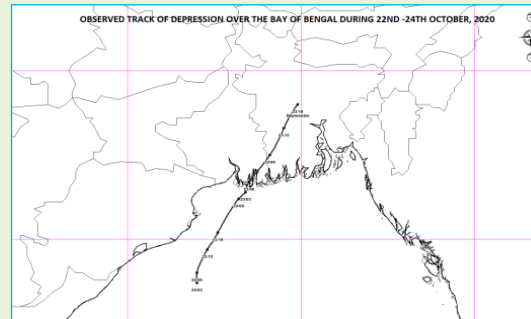
Deep Depression over west-central Bay of Bengal (11-14 October, 2020)

It originated from a low pressure area which developed over north Andaman Sea & neighbourhood in the early morning (0530 hrs IST) of 9th October 2020. It lay as a well-marked low pressure area over east-central Bay of Bengal (BoB) and adjoining north Andaman Sea in the early morning of 10th October. It concentrated into a Depression over west-central BoB in the early morning of 11th October. The observed track of the system is presented in Fig. given below:



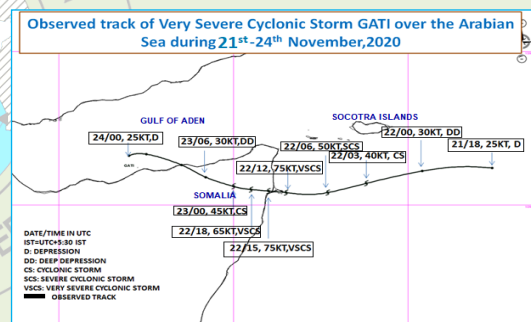
Depression over northwest & adjoining west-central Bay of Bengal (22-24 October, 2020)

Under the influence of a cyclonic circulation over central parts of Bay of Bengal (BoB), a low pressure area formed over the same region in the early morning (0530 hrs IST) of 20th October, 2020. It lay as a well-marked low pressure area over west-central BoB in the morning (0830 hrs IST) of 21st October. The observed track of the system is presented in Fig. given below:



Very Severe Cyclonic Storm "GATI" over the Arabian Sea (21 - 24 November, 2020)

A low pressure area formed over central parts of south Arabian Sea (AS) in the morning (0300 UTC) 19th November. It lay as a well marked low pressure area over southwest AS & neighbourhood in the early morning (0000 UTC) 21st. It concentrated into a depression over the same region in the midnight (1800 UTC) of 21st. The observed track of the system during 21st to 24th November is as follows:



Very Severe Cyclonic Storm 'NIVAR' in Bay of Bengal (21st to 27th November, 2020)

A Low Pressure Area (LPA) formed over Equatorial Indian Ocean (EIO) and adjoining central parts of south Bay of Bengal (BoB) on 21st November. It lay as a Well-Marked Low-Pressure Area (WML) over southwest & adjoining southeast Bay of Bengal on 22nd November. The observed track of the system during 22nd to 27th November is as follows:

