QUARTERLY

PMD NEWS BULLETIN

Volume XV, Issue-:IV OCTOBER TO DECEMBER 2016

PAKISTAN METEOROLOGICAL DEPARTMENT

QUATERLY WEATHER SUMMARY FOR THE PERIOD FROM (OCTOBER TODCEMBER 2016).

Actual rainfall with departure from normal at Met. Office, Lahore Airport for the period from October 2016 to December 2016 is as under :-

MONTH	ACTUAL RAIN	DEPARTURE
OCTOBER 2016	Trace	- 11
NOVEMBER 2016	Trace	- 05
DECEMBER 2016	Nil	- 12

Maximum wind of 59 km /hr was recorded at Met. Office, Lahore Airport on 05-10-2016.

Lowest minimum temperature –2.0 was recorded by meteorological observatory Rawalakot dated 25/12/2016.

(Contributed by M.O. AIIAP Lahore)

QUATERLY WEATHER SUMMARY FOR THE PERIOD FROM OCTOMBER TO DECEMBER 2016:

OCTOBER-2016

Three westerly low pressure waves passed across northern parts of the country on 3rd, 5th to 10th and 21st to 22nd. Local instability also caused some rainfall in Malakand and Mirpurkhas on 5th and 26th of the month.

NOVEMBER-2016

Two westerly low pressure waves passed across northern parts of the country on 4th to 5th & 12th to 13th. Local instability also caused some rainfall in Malakand on 22nd & 26th of the month.

DECEMBER-2016

A westerly low pressure wave passed across northern parts of the country on 11th to 12th. Loacal instability also caused some rainfall in Gilgit-Baltistan, Kashmir, Rawalpindi on 1st and in Quetta on 10th of the month.

(Contributed by Director F&C/M.A.C. Karachi)

EARTH QUAKES:

A total numbers of 1152 earth quakes were recorded by Seismological Network of Pakistan Meteorological Department, Regional Meteorological Center Peshawar during the quarter (1st OCT to 31st DEC 2016).

(Contributed by R.M.C. Peshawar)

W.M.O. Monitoring were successfully completed during the period from 01-10-2016 to 15-10-2016.

(Contributed by N.M.C.C. Karachi)

NATIONAL SEISMIC MONITORING & TSUNAMI EARLY WARNING CENTER, (OCTOBER TO DECEMBER 2016 KARACHI.

National Seismic Monitoring & Tsunami Early Warning Centre, Karachi successfully participated in the six monthly communication Test on 14th December, 2016. The test was scheduled by Indian Ocean Tsunami Warning System (IOTWS). All the countries situated at the rim of the Indian Ocean participated in the test. Bulletins issued by Regional Tsunami Service Providers (RTSPs) were received through GTS, email and mobile phone.

The objectives of the test were to:

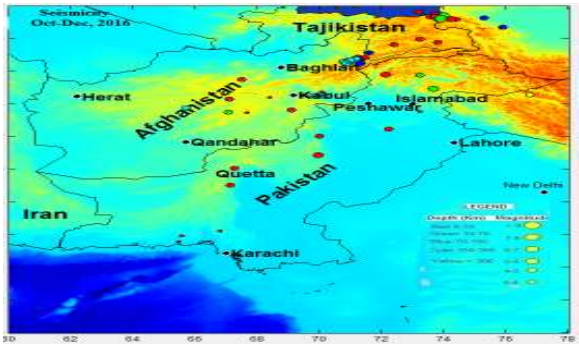
1. Validate the RTSPs dissemination process for tsunami bulletin notification messages to National Tsunami Warning Centres NTWCs.
2. Validate the reception of the notification messages by NTWCs.
3. Validate the access by NTWCs to RTSPs password-protected websites containing bulletins.
4. Validate the reporting by NTWCs of national warning status information back to RTSPs, via a web-based warning status report form.

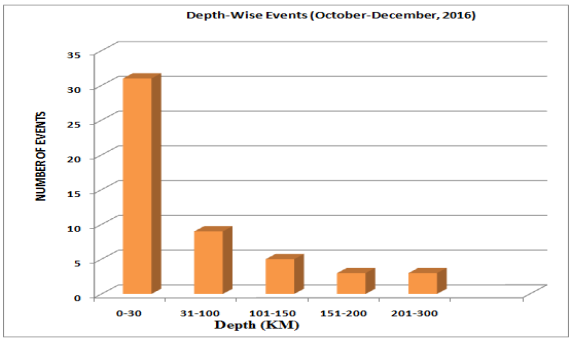
Test logs were prepared during the test which was then sent to IOTWMS secretariat for evaluation.

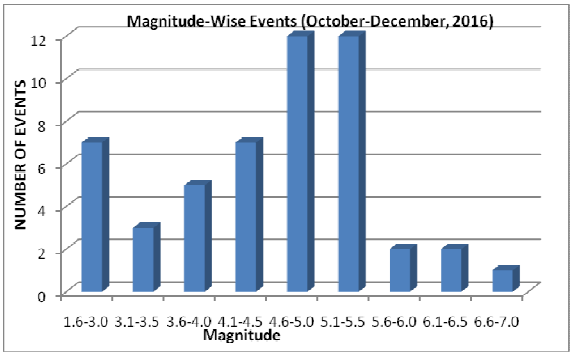
Prepared by : SHUJAAT ALI KHAN (Lab. Attendant)

EARTH QUAKES:

TOTAL NUMBER OF EARTHQUAKES RECORDED DURING THE QUARTER (October to December 2016)	384
NUMBER OF EARTHQUAKES LOCATED IN PAKISTAN / NEIGHBORING REGIONS (AS SHOWN IN THE PICTURE BLOW)	51







TSUNAMI:

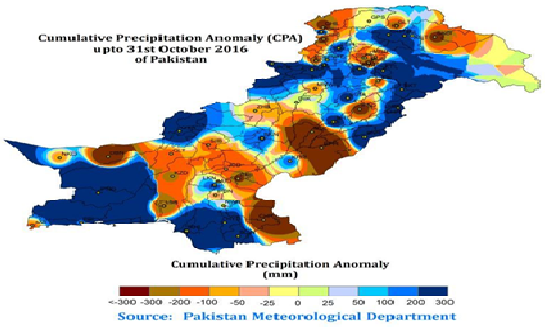
No earthquake having potential to generate the tsunami was recorded the quarter.

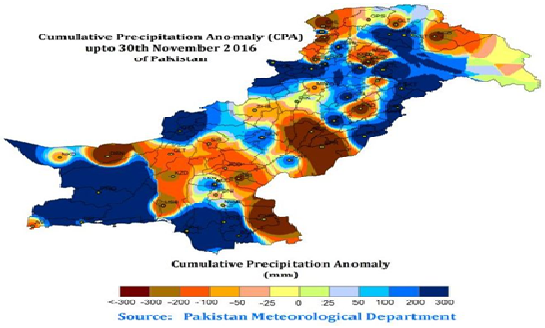
(Contributed by N.S.M.C Karachi)

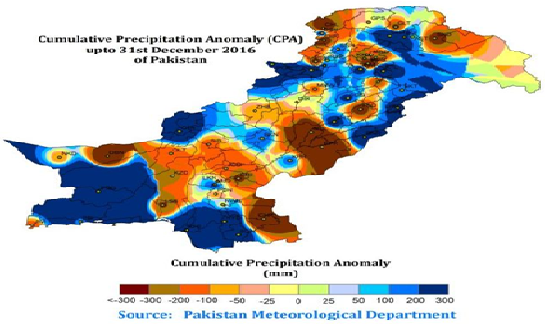
DROUGHT MONITORING:

New drought monitoring tools/techniques used by NDMC during this period whose maps are available on http://www.ndmc.pmd.gov.pk/ are

- Cumulative Precipitation Anomaly (CPA).
- Percent of Actual to Normal Rainfall
- Percentage Departure of Rainfall on 1,2,3,6&12 Months Basis
- Soil Moisture Anomaly
- Normalized Difference Vegetation Index.
- Land Surface Temperature
- Temperature Vegetation Dryness Index (TVDI)
- Weekly Precipitation Outlook







Prepared by : SHUJAAT ALI KHAN (Lab. Attendant)

(Contributed by N.D.M.C Islamabad)

OZONE LAYER:

Ozone layer monitoring observation continued regularly at ozone layer monitoring station Quetta. No significant change has been observed over Pakistan during the quarter under review.

(Contributed by G.C.QUETTA)

TRAININGS / VISITS ABROA:

- Dr. Ghulam Rasul Director General attended the National Science and Research Organizations Summit forum on the Belt and Road Initiative from 7-8 November, 2016 at Beijing, China.
- Dr. Ghulam Rasul Director General attended the RA-II Management Group Meeting for the preparation of RA II-16 from 7-8 December, 2016 at Abu Dhabi UAE.
- Mr. Muhammad Riaz Chief Meteorologist FFD-Lahore omit attended the 10th Regional Steering Committee Meeting of the HKH-HYCOS from 09-11 November at Kathmandu, Nepal.
- Dr. Muhammad Hanif Director N.W.F.C. attended the Thirteenth Plenary Session of the Group on Earth Observation (GEO-XIII) from 09-11 November, 2016 at St. Petersburg Russian Federation.
- Mr. Muhammad Zahid Rafi Director N.M.S.C attended the Workshop on Lessons Learnt from Community Exercise of the Indian Ocean Tsunami Waves Exercise 2016 followed by Intersessional Meeting of the Intergovernmental Coordination Group (ICG) for the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS) Working Group 1 on Tsunami Risk, Community Awareness and Preparedness from 5 -8 December, 2016 at Bandung Indonesia.
- Syed Ali Baqadar shah, Deputy Director I.M.G. Karachi attended the International Training Course on Tropical Cyclones from 21st November to 2nd December, 2016 at Nanjing China.
- Mr. Ijaz Ahmed Senior Meteorologist Lahore attended the Training Course on Weather Forecasting in Mid-Latitudes Regions from 28th November to 9th December, 2016 at Toulouse France.
- Dr. Syed Faisal Saeed Deputy Director I.M.G. Karachi visited the International Meteorological Institute (IMI) at the Department of Meteorology from 30th November to 8th December, 2016 at Stockholm University, Sweden.
- Mr. Mazahir Hussain Sr. Electronic Engineer WSR Islamabad attended the Seventh Asia-Oceania Meteorological Satellite Users Conference (AOMSUC-7) and related Regional Association II (RA II) Satellite Events from 21-28 October, 2016 of Republic of Korea.
- Syed Adeel Abbas Meteorologist M. O. Lahore attended the International Training Course on Radar Meteorology from 14-25 November, 2016 at Nanjing, China.
- Mr. Umer Khayyam Electronic Engineer R.M.C Peshawar attended the International Training Course on Radar Meteorology from 14-25 November, 2016 at Nanjing, China.
- Mr. Mir. Tanveer Ali Agha , Meteorologist Karachi attended the International Training Course on Tropical Cyclones from 21st November to 2nd December, 2016 at Nanjing China.
- Dr. Jahangir Ashraf Awan Programmer R&D Islamabad attended the Training on Climate System Model (CSM 1.1) from 21-25 November, 2016 at Beijing, China.
- Dr. Dildar Hussain Kazmi Meteorologist NAMC Islamabad attended the Training on Climate System Model (CSM 1.1) from 21-25 November, 2016 at Beijing, China.
- Mr. Qamar Munir Programmer R&D Islamabad attended the Training on Climate System Model (CSM 1.1) from 21-25 November, 2016 at

Beijing, China.

- Mr. Burhan Ahmed Meteorologist R&D Islamabad attended the APN Proposal Development Training Workshop (PDTW) from 12-16 December 2016 at Bhutan.

- Mr. Naeem Manzoor Assistant Met. NDMC Islamabad attended the Regional Training on Climate Data Analysis for Drought Monitoring in South Asia rom 21st November to 2nd December, 2016 at Kathmandu Nepal.

- Mr. Azhar Ali Assistant Programmer attended the 1st Training Course on Earthquake Observation for Lancang-Mekong Cooperation (LMC) Countries from 22ndNovem ber to 20th December, 2016 at Beijing, China.

- Ms. Sobia Ambreen Assistant Met. RMC Lahore attended the 1st Training Course on Earthquake Observation for Lancang-Mekong Cooperation (LMC) Countries from 22ndNovember to 20th December, 2016 at Beijing, China.

- Mr. Ishtiaq Ahma Assistant Met. attended the 1st Training Course on Earthquake Observation for Lancang-Mekong Cooperation (LMC) Countries from 22ndNovember to 20th December, 2016 at Beijing, China.

- Mr. Shahid Mahmood Assistant Meteorologist has attended the International Training Course on Aeronautical Meteorology Services from 24th October to 4th November, 2016 at Beijing, China.

- Mr. Abdul Rehman Assistant Meteorologist M. O. Karachi Has attended the International Training Course on Aeronautical Meteorology Services from 24th October to 4th November, 2016 at Beijing, China.

- Mr. Muhammad Javaid Assistant Meteorologist M.O. Lahore attended the TCC Training Semi nar on Primary Modes of Global Climate Variability and Regional Climate from 14-18 November, 2016 at Tokyo, Japan.

(Contributed by Met.(C.O) Islamabad)

- **ACTIVITIES OF MR. MUHAMMAD RAIZ CHIEF METEOROLOGIST (FFD, LAHORE).**

- Attended a Seminar regarding "Punjab ADB Strategic Dialogue on Water "organized by Asian Development Bank on 24th October, 2016 at Avari Hotel Lahore.

- Participated as a member of interview committee of F.P.S.C for the recruitment of Administrative officer in Pakistan Meteorological Department, held on 03-11-2016 at F.P.S.C Islamabad.

- Attended a meeting with the Secretary, Punjab Irrigation Department regarding Installation of Food Forecasting & Warning System for local nullahs of Districts Sialkot and Narowal through JICA Grant-IN-AID on 15-11-2016 and again on 13-12-2016 at Lahore.

- Attended post flood meeting of Federal Flood Commission held on 24th November, 2016 in office of the Chief Engineering Advisor / Chairman, FFC Islamabad.

- Attended Army post Flood Coordination Conference held on 6th December 2016 in General Headquarters, Engineer Directorate, Rawalpindi.

- **ACTIVITIES OF MR. MUHAMMAD AKRAM ANJUM CHIEF METEOROLOGIST (R&D) ISLAMABAD.**

- Two Projects funded by Pakistan Science Foundation (PSF) in collaboration with National Science Foundation of China (NSFC) were approved. The projects are listed as;

i) "Interaction of Westerly and Summer Monsoon in Upper Indus Basin (UIB) and its Impact on Water Resources", Institute of Tibetan Plateau, Chinese Academy of Sciences, Beijing China.

ii) "Projection and Attribution of Stream Flow Composition at Mountain Rivers in China and Pakistan", China Meteorological Administra tion, Beijing China.

Prepared by : SHUJAAT ALI KHAN (Lab. Attendant)

- Mr. Muhammad Akram Anjum (Chief Meteorologist) attended "National Conference on Water and Environment for Sustainable Development in Changing Climate", from 17th to 19th October, 2016 at Islamabad.

- Mr. Muhammad Akram Anjum (Chief Meteorologist), R.M.D. Islamabad Dr. Muhammad Afzaal (Director), Mr. Burhan Ahmad (Meteorologist) and Mr. Ahsan Ali Bokhari (Electronic Engineer) attended a training workshop on "Trade Off Analysis for Multi-dimensional Impact Assessment (TOA-MD), from 20th to 22nd December, 2016 at University of Agriculture, Faisalabad, Pakistan.

Research Publications/ Books of R&D Division:

- **M. A. Haroon**, J.Zhang and F.Yao, (2016): Drought monitoring and performance evaluation of MODIS-based drought severity index (DSI) over Pakistan", Natural Hazards, Springer DOI: 10.1007/s11069-016-2490-y.

- **Burhan A**., A. S. Rana, K. Abuzar, R. Kiran, R. Mansoor, S. Kubra (2016). Diagnostic Study of Heavy Downpour in 2015 Flash Floods over Chitral Area, Northern Pakistan. Pakistan Journal of Meteorology, Vol 12 issue 24, 79-93.

- **Ikram, F**., M. Afzaal, S. A. A. Bukhari, A. Burhan (2016). Past and Future Trends in Frequency of Heavy Rainfall Events over Pakistan. Pakistan Journal of MeteorologyVol 12 issue 24, 57-78.

- **Yasmeen, Z**., A. Zaidi, M. Afzaal (2016):Rainfall-Runoff Modeling using Geospatial Techniques in Tarbela Sub-catchment. Pakistan Journal of Meteorology, Vol. 12, Issue, 24.

- **Sohail Cheema** and Muhammad Hanif (2016): Variability of Rainfall in Punjab and its impact on Wheat Crop, LAP LAMBERT Academic Publishing, ISBN: 978-3-659-96435-0.

- **ACTIVITIES OF MR. ABDUL RASHID CHIEF METEOROLOGIST (NSMC, KARACHI.**

- Attended one day training session for Govt. Public Information Officers in Karachi on November 15, 2016 at Hotel Mehran, Karachi. The session was arranged by the Journalist Safety Hub Karachi Press Club & International Media Support and IRADA.

- Meeting regarding Karachi Heat Wave Management Plan held at Commissioner Karachi Division Office on 17th November, 2017.

- Meeting at Commissioner Karachi Division Office on 29th November, 2017.

MISCELLANEOUS POINTS / MATTERS:

- Director R.M.C. Lahore **Mr. Shahibzad Khan** visited meteorological office Multan to attend meeting with civil aviation for radar installation dated 18/12/2016. He also visited meteorological office Muzaffarabad to resolve the land matter at Muzaffarabad from dated 27/10/2016 to 29/10/2016.

- Mr. Muhammad Ajmal Shad Director FFD Lahore Attended "Follow-up Meeting of Review Watershed Management Issues in order to Chalk out Possible Measures & Exploring Availability of Funds for Implementation of Proposed Intervention" held on 10th November 2016 in office of the Chief Engineering Advisor/Chairman, FFC, Islamabad.

- Mr. Muhammad Ajmal Shad, Director, FFD, Lahore attended "4th Meeting of FFC to Review Progress Regarding Direction of Honourable Supreme Court of Pakistan" held on 20th December 2016 in office of Chief Engineering Advisor / Chairman, FFC Islamabad.

- Mr. Ikram-ud-din, Director and Dr. Muhammad Tahir Khan Deputy Director attended the technical meeting on PPTA Implementation of Balochistan Water Resources Development Project (BWRDR) managed by Government Balochistan and Asian Development Bank at serena quetta during 24-26th Oct 2016.

- Mr. Shahid Abbas, Director, RMC, Karachi attended a co-ordination meeting-control of NAVAIDS/Meteorological updates during war on 14-102016 at Naval Headquarters, Karachi.

- Mr. Shahid Abbas, Director, RMC, Karachi proceeded on tour to Met. Units, Hyderabad on 19-10-2016 for external audit of ISO Certification by SGS for Aeromet, Hyderabad.

- Mr. Syed Mushtaq Ali Shah, Director R.M.C. Peshawar and Mr. Muhammad Fahim, Deputy Director briefed a representative from National Institute of Management Peshawar who visited this office to get training of Met. Instruments and Forecasting on 17-10-2016.

- R.M.C. Peshawar participated and displayed a stall in two days Disaster Management Exhibition (DME-2016) which was held on 07-12-2016 to 08-12-2016 at University of Peshawar.

- Mr. Ijaz Ahmad (Senior Meteorologist) has at teneded the "Safety Management System Course" in CAA, IMS resource Centre at AIIAP, Lahore from 7th to 8th October,2016.

- Mr. Muhammad Fahim, Deputy Director, attended a meeting on IHD Post Flood 2016 on 02-12-2016 at HQ. Engineers 11Corps Peshawar.

- Mr. Muhammad Zaman (Meteorologist) attended the " **Basics Search and Training Course No.06** " from 24 to 29 October, 2016 at CAA, IMS, Allama Iqbal International Airport, Lahore.

- A number of students of different schools and collages visited FFD, Lahore they were briefed about functioning of different units of FFD, Lahore.

PROGRESS OF IMG DURING OCTOBER, 2016 TO DECEMBER, 2016:

- Mr. Habib Jamal, Meteorologist (BPS-17) joined training on "Flood Disaster Risk Reeducation", Japan from 2nd October, 2016 to 16th September, 2017.

- Students of Mahran Engineering and Technology, Jamshoro and Pakistan Navy personnel's visited this office on 11th and 16th November, 2016.

- Students from Public Schools and Government Organizations visited the Institute in the quarter. They were briefed about the functions and objectives of Pakistan Meteorological Department (PMD) and shown various units of P.M.D. at Met. Complex Karachi.

(Contributed by IMG Karachi).

RESIGN:

The following officers / officials resign from Government Services during the quarter.

- Muhammad Gulistan khan Met. Assistant (BPS-14) resigned w.e.f 01-09-2016.
- Atif Waheed Met. Assistant (BPS-14) resigned w.e.f 17-10-2016.
- Muhammad Arshad Met. Assistant (BPS-14) resigned w.e.f 03-10-2016.
- Syed Riaz ul Hassan Sub-Engineer (BPS-13) resigned w.e.f 30-04-2016.
- Shakeel Ahmed Senior Observer (BPS-09) resigned w.e.f 30-11-2016.

RECRUITMENTS :

The following recruitments were made during the quarters.

- Programmer (BPS-17) = 01.
- Librarian (BPS-17) = 01.
- Electronic Engineer (BPS-17) = 07
- Assistant Meteorologist (BPS-16) = 11
- Assistant Electronic Engineer (BPS-16) = 02
-

LPR/ENCASHMENT:

The following officers / officials proceeding on **LPR** as per details mention against their name.

- Muhammad Saleem Qazi CDEO (BPS-12) Has been allowed encashment w.e.f. 27-12-2016 to 26-12-2017.

Prepared by : SHUJAAT ALI KHAN (Lab. Attendant)

RETIREMENT:

The following retirement were made during the quarters.

- Mr. Liaqat Ali Meteorological assistant retired from Government Services on 2/11/2016.
- Mr. Ahmed Hussain, Ballon Maker, has been retired from Government Service w.e.f 7th NOV 2016.
- Mohi-ud-Din Saddiqui Sr. Meteorologist (BPS-18) RMC Lahore w.e.f. 12-10-2016.
- Nasir Ahmed, Meteorologist (BPS-17) RMC, Lahore w.e.f. 06-12-2016.
- Munir Khan E.E. (BPS-17) D.I. Khan w.e.f. 01-10-2016.
- Muhammad Iqbal, APS (BPS-16) Met. Complex, Karachi w.e.f. 03-12-2016.
- Methab Ali, Cooli CMS Karachi w.e.f. 15-12-2016.

DEATH:

- Mr. Abdul Qayyum Baloch Balloon Maker (BPS-02) expired on 10-10-2016.
- Mr. Asiq Hussain Senior Observer (BPS-09) expired on 09-11-2016.

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Prepared by : SHUJAAT ALI KHAN (Lab. Attendant)