



Seasonal climatology of Post-Monsoon in Bangladesh:

In this season the surface wind is very light and variable. Rainfall decreases considerably in October and November and the dry period starts to set over the country. About 8% rainfall occurs in the Post-Monsoon season yearly. The mean temperature falls from 28-29°C in September to 25-26°C in October and to 23-25°C in November. The highest average maximum temperature hardly exceeds 29.0°C and the lowest average temperature does not fall below 10.0°C all over the country. Tropical cyclones form over the Bay of Bengal in this season and move initially towards West and then North-westwards and at times towards North-east affecting Bangladesh coast. Some of these storms in this season may attain hurricane intensity.

Seasonal weather condition:

In October 2013, normal rainfall & above normal rainfall occurred over Dhaka division and other divisions of the country respectively. As a whole, 46.1 % above normal rainfall occurred over the country. In this month two lows were formed over Bay of Bengal. The first one was formed over North Andaman Sea and adjoining area on 07th October 2013 and it was intensified into a cyclonic storm 'PHAILIN' over East Central Bay and adjoining area. Then it strengthened into a severe cyclone and crossed Orissa coast of India near Gopalpur at 06 pm on 12th October 2013. The observed track of 'PHAILIN' is shown in figure-1. Under its influence, moderate to very heavy rainfall occurred over Rajshahi and Rangpur divisions associated with gusty wind.

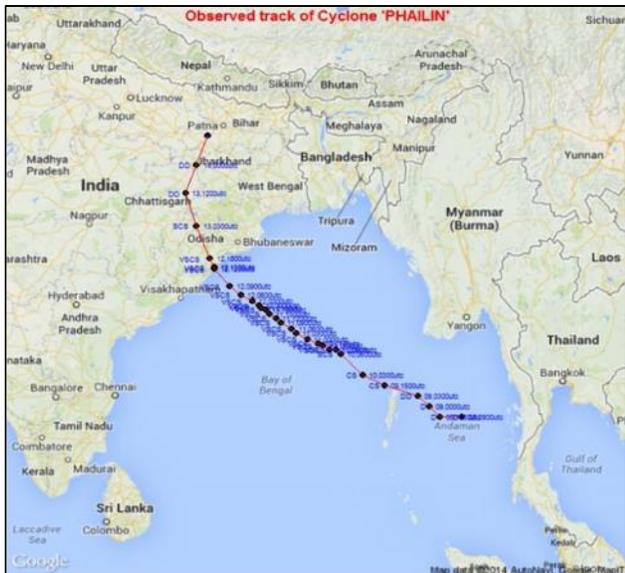
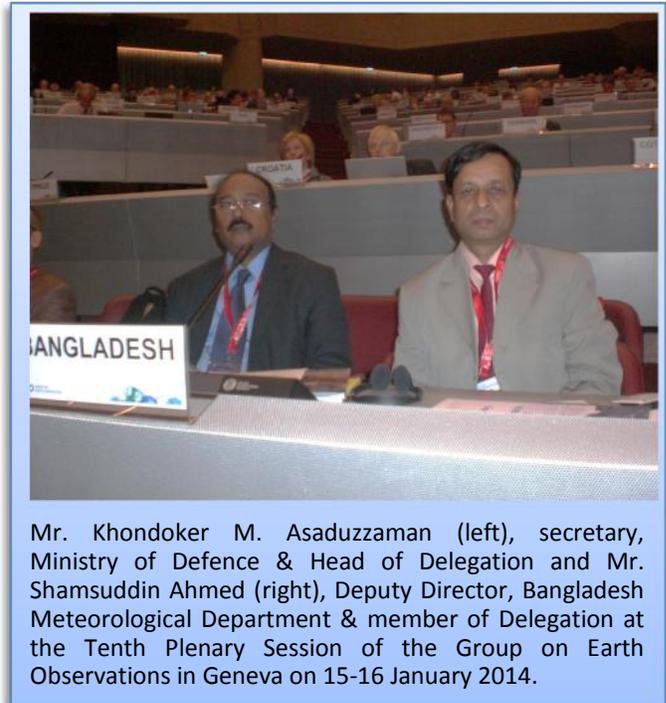


Fig. 1: The observed track of cyclone 'PHAILIN'.
(Credit: Md. Bazlur Rashid, BMD)



Mr. Khondoker M. Asaduzzaman (left), secretary, Ministry of Defence & Head of Delegation and Mr. Shamsuddin Ahmed (right), Deputy Director, Bangladesh Meteorological Department & member of Delegation at the Tenth Plenary Session of the Group on Earth Observations in Geneva on 15-16 January 2014.

The second low was formed over south west Bay of Bengal and adjoining area on 21st October 2013. But the trough of low was extended over South-Western parts of Bangladesh. Under its influence, moderate to heavy rainfall associated with gusty wind occurred at places over the country.

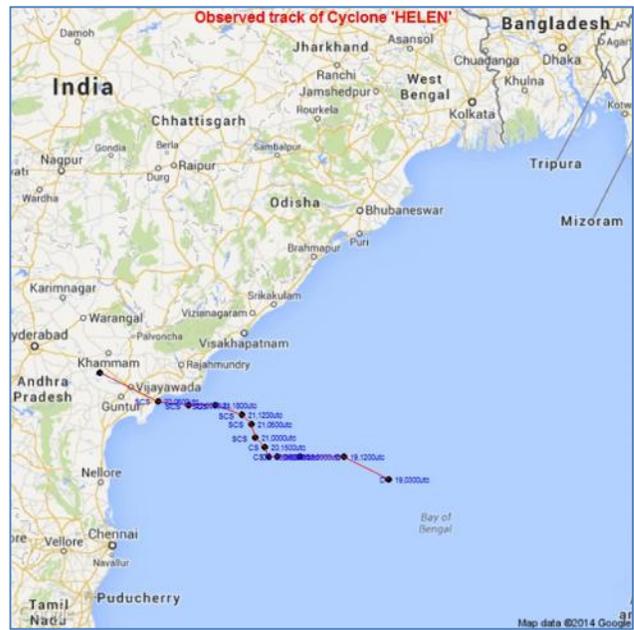


Fig. 2: The observed track of cyclone 'HELEN'.
(Credit: Md. Bazlur Rashid, BMD)



Mr. Simon Manson, Professor, International Research Institute (IRI) of climate change and participants of BMD at Training Workshop on the Climate Predictability Tools held in Dhaka, BMD on 09–13 December 2014.

In November 2013, no reportable rainfall occurred over the country. In this month three lows were formed over Bay of Bengal. The second low was formed over Southeast of Bay of Bengal and adjoining area on 18th November 2013. Then the low concentrated & at last it intensified into a severe cyclone 'HELEN' and crossed Andhra coast of India near Machilipatnam on 22th November 2013. The observed track of 'HELEN' was shown in figure-2. The Third low pressure area formed over Andaman Sea and adjoining area and then intensified into a severe cyclone 'LEHAR' on 24th November 2013 and lay over west central Bay of Bengal and adjoining area, weakened into a depression and crossed Andhra coast of India near Machilipatnam. The observed track of 'LEHAR' was shown in figure-3.

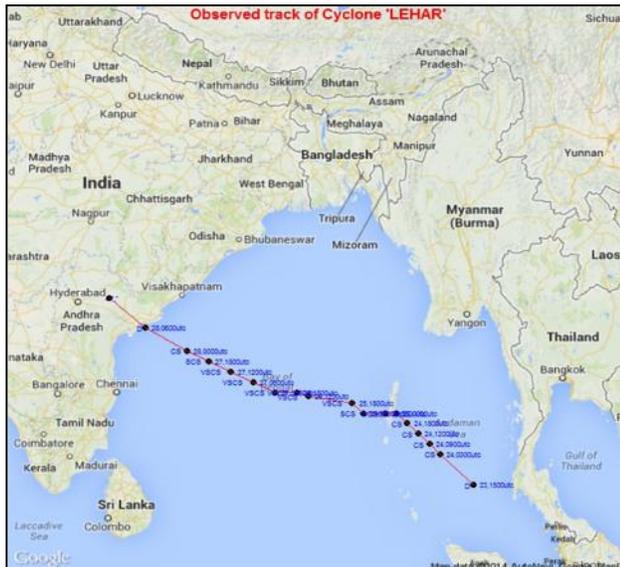


Fig. 3: The observed track of cyclone 'LEHAR'.
(Credit: Md. Bazlur Rashid, BMD)

Rainfall:

Rainfall was above normal over Dhaka, Chittagong, Sylhet, Rajshahi, Rangpur, Khulna & Barisal divisions in the month of October. During October rainfall over the country as a whole was 64% above normal (fig-4). Bangladesh was almost dry during November except for Sitakunda where only 1mm rainfall was recorded. During post-monsoon season

Sylhet, Rajshahi, Rangpur & Khulna divisions received above normal rainfall by 33%, 36%, 111% & 49% respectively. Chittagong & Barisal divisions received normal rainfall but Dhaka division received below normal rainfall by 6%. In post-monsoon season country as a whole received 16% above normal rainfall (fig-5).

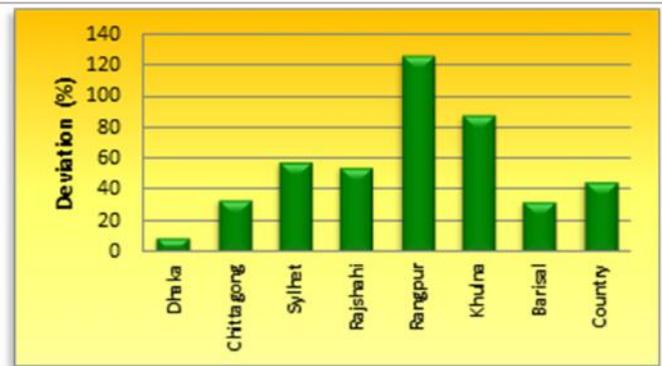


Fig 4: Deviation (%) of rainfall from normal during October 2013

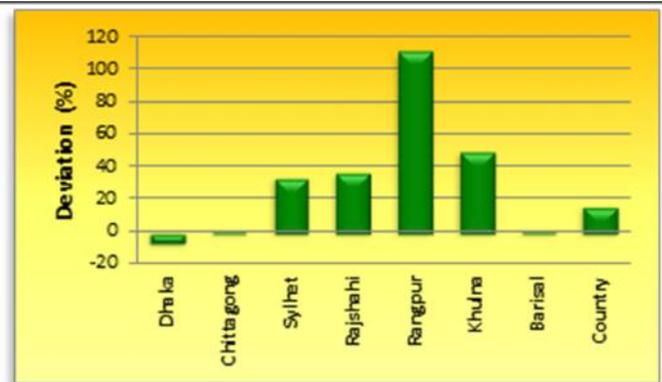


Fig 5: Deviation (%) of rainfall from normal during Post-monsoon 2013



Dr. Kathryn Sullivan (third from the right), acting under-secretary of Commerce for Oceans and Atmosphere & NOAA Administrator, Department of Commerce, USA at the Tenth Plenary Session of the Group on Earth Observations in Geneva on 15-16 January 2014.

Temperature:

In October 2013 country average maximum temperature was below normal by 0.4°C and country average minimum temperature was above normal by 0.3°C but in November country average maximum temperature was above normal by 0.5°C and country average minimum temperature was above normal by 1.5°C.

During November 2013 maximum temperature was above normal over the country except for

Chittagong, Satkhira and Chuadanga regions where it was below normal (fig-8) whereas minimum temperature was below normal over the country in November 2013 (fig-9). It is shown from the spatial distribution of deviation of maximum temperature from normal in October 2013 (fig-6) that the maximum temperature was below normal all over the country except for Sylhet region where it was above normal. On the other hand, it is observed from spatial distribution of deviation of minimum temperature from normal in October 2013 (fig-7) that the minimum temperature

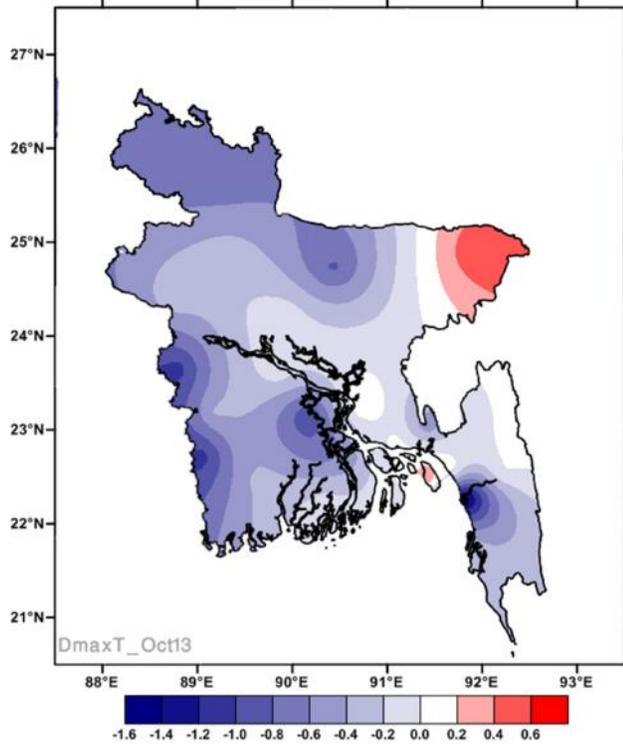


Fig 6: Deviation of Maximum Temperature from Normal in October 2013

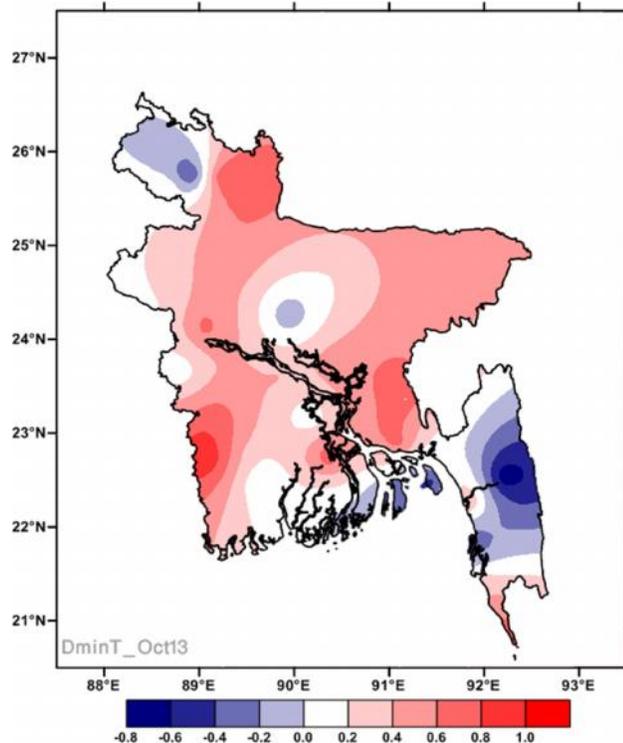


Fig 7: Deviation of Minimum Temperature from Normal in October 2013



Mr. Shah Alam, Director, BMD and Met.no & participants at the Training on Institutional Support and Capacity Building for Mitigation of Weather & Climate Hazards in Bangladesh on 7–12 November 2013.

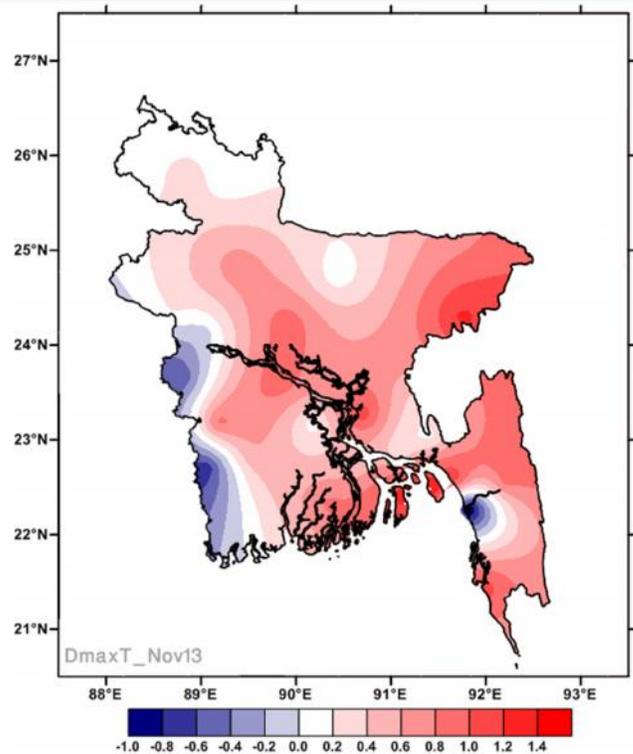


Fig 8: Deviation of Maximum Temperature from Normal in November 2013



Mr. Denis Stuber, Meteo France International (MFI) and Participants at Dhaka on Advanced Training on Climate Data Management System held on 27 October – 7 November 2014.

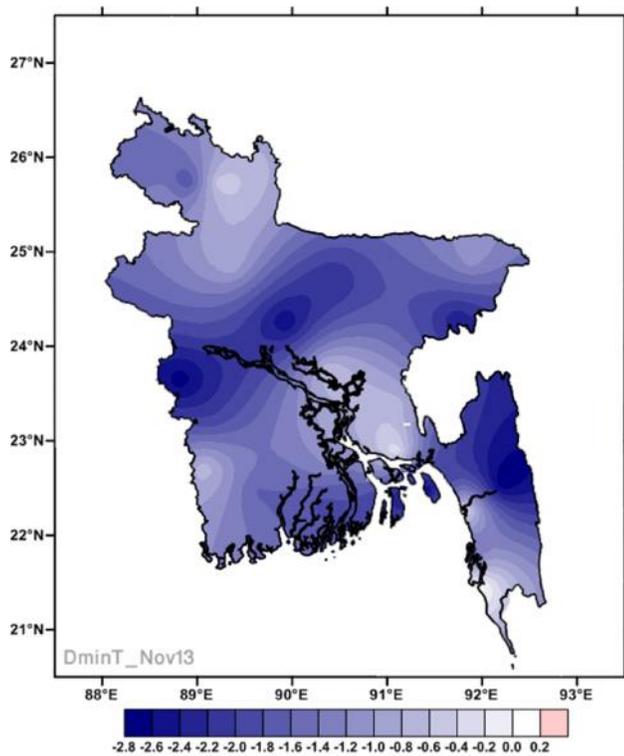


Fig 9: Deviation of Minimum Temperature from Normal in November 2013

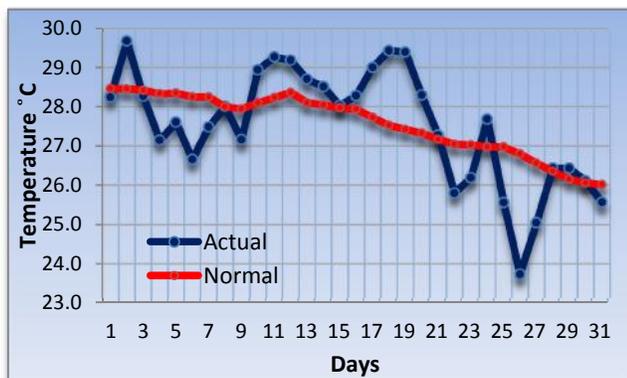


Fig 10: Comparison of daily actual and normal mean temperature in October 2013

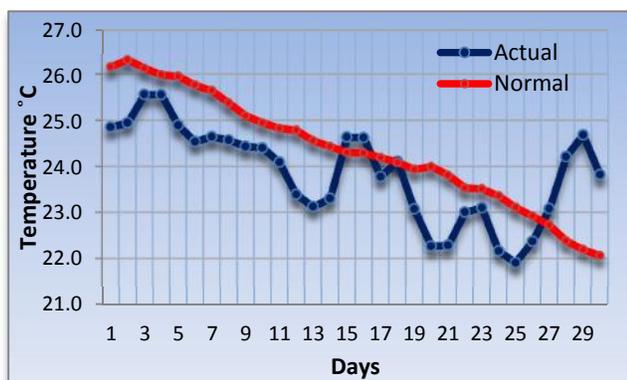


Fig 11: Comparison of daily actual and normal mean temperature in November 2013

was above normal at the most part of the country except for parts of Chittagong division and northern tip of Bangladesh where it was below normal.

In October 2013, initially mean temperature was above normal. During first 10 days mean temperature was below normal but it was above normal for next 10 days

and during last 10 days mean temperature was mostly below normal. Mean temperature was below normal throughout the month of November 2013 except for mid of November and at the end of the month when it was above normal.

Outgoing Longwave Radiation (OLR)

OLR anomaly (W/m^2) in the month of October and November 2013 are shown in the figure-12. Negative OLR anomaly exceeding $10-20 W/m^2$ was observed over Bangladesh and maximum negative anomaly ($20 W/m^2$) was found over southeastern part of Bangladesh. In November positive OLR anomaly exceeding $5-10 W/m^2$ was observed over Bangladesh.

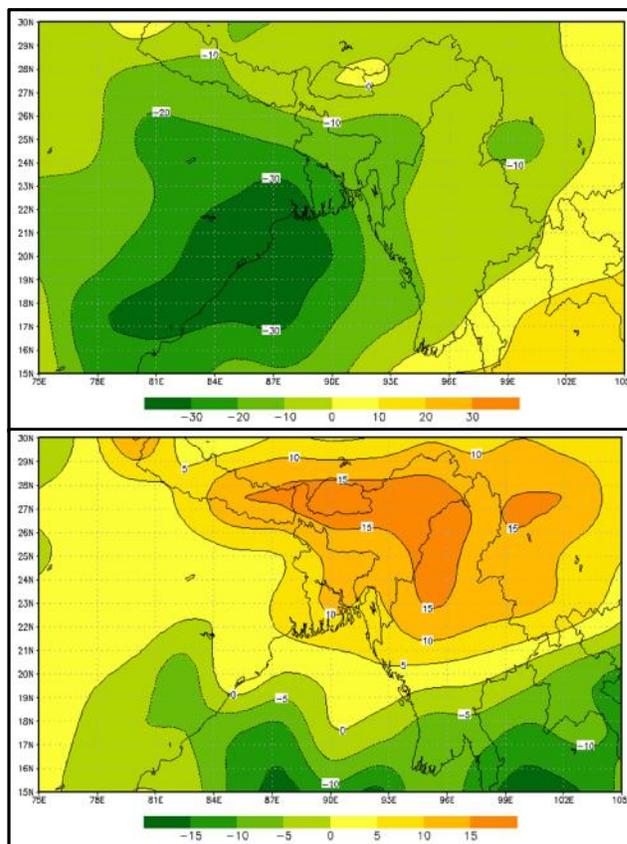


Fig 12: OLR anomaly (W/m^2) for the month of October 2013 (upper) and November 2013 (lower) (Source: CDC/NOAA, USA)

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Address for correspondence:

Editor Meteorological Newsletter Publication and Editorial Committee

Bangladesh Meteorological Department (BMD)
 Meteorological Complex, Agargaon, Dhaka-1207
 Phone : +88-02-9135742
 Fax : +88-02-8118230
 Email : info@bmd.gov.bd
 swc@bmd.gov.bd
 Web : www.bmd.gov.bd