



Monthly and Seasonal Outlook of Rainfall for Chattogram and Cox's Bazar Region, Bangladesh

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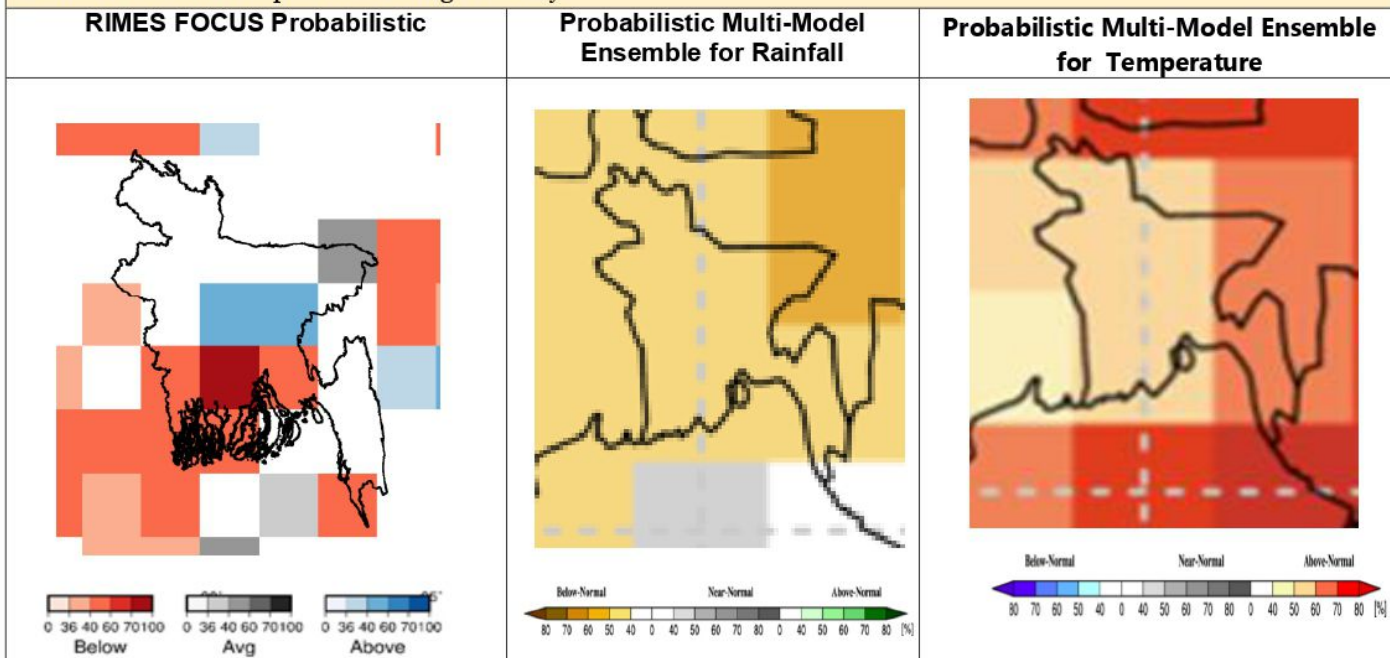
For the Month February and February-March-April

Observed Climate in January 2021

The cumulative rainfall for the month of January in Cox's Bazar was 0 mm and in Teknaf was 0 mm which indicates Below below normal rainfall in Cox's Bazar (-100%) and (-100%) in Teknaf during January. For reference, based on the climatology (1980 - 2018) the normal cumulative rainfall for the month of January is 5 mm in Cox's Bazar and 6 mm in Teknaf. The overall rainfall scenario was Below Normal for the Chattogram and Cox's Bazar region. Due to the winter season there was observed 1-2 cold wave events in the month of January.

Outlook for February 2021

Considering World Meteorological Organization (WMO) designated global center model outputs, RIMES FOCUS probabilistic outlook, it is highly likely that the month of February would bring Below Normal rainfall for the Chattogram-Cox's Bazar region. For reference, based on the climatology (1980 - 2018) the normal cumulative rainfall for the month of February in Cox's Bazar is 18 mm and Teknaf is 12 mm. Also analyzing the climatology of temperature, normal minimum temperature of Cox's bazar is 17.69°C and Teknaf is 18.42°C in February. And there is more than 60% chance of Below Normal rainfall and 65% chance of Above Normal minimum temperature during the month of February in Cox's Bazar region. Overall the whole Chattogram and Cox's Bazar region may experience below normal rainfall and above normal minimum temperature during February.

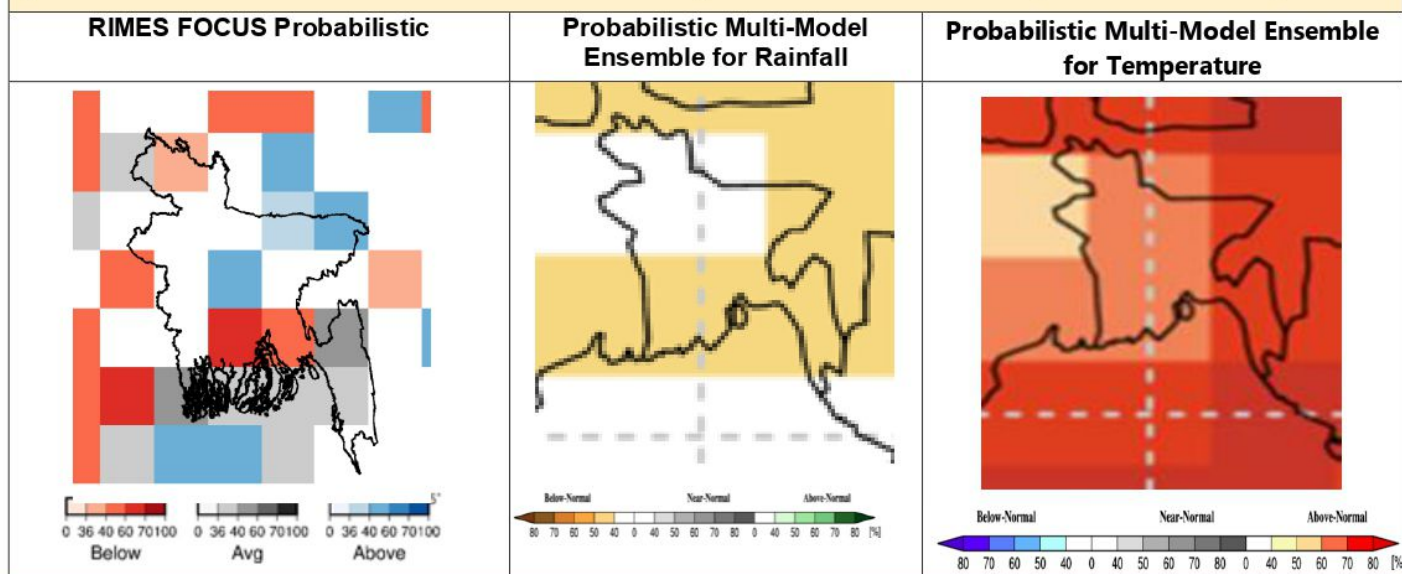


1-2 thunderstorm and hailstorm event may occur at the end of February, 2021. However, no conclusion can be made on a monthly scale on possibilities of any extreme event. And day night temperature may gradually increase but average temperature may remain normal.

The bulletin is prepared under the 'Disaster Risk Management in Cox's Bazar' project of UNDP supported by Swiss Agency for Development and Cooperation (SDC) and European Union Civil Protection and Humanitarian Aid (ECHO) and from the People of Japan with technical support from Regional Integrated Multi-Hazard Early Warning System in collaboration with Bangladesh Meteorological Department

Outlook for February-March-April, 2021

Considering WMO designated global center model outputs, RIMES FOCUS probabilistic outlook and, it is highly likely that the months of February-March-April would bring Below normal rainfall for the Chattogram-Cox's Bazar region. Based on the climatology (1980 - 2018) the normal cumulative rainfall for the three months February-March-April in Cox's Bazar is 51 mm and in Teknaf is 30 mm. Overall, analyzing different models there is more than 40% probability that during February-March-April, Normal to Below Normal rainfall may occur over the Chattogram-Cox's Bazar region. The whole country may receive Below normal rainfall except western part during these three months' period. Also analyzing the climatology, normal minimum temperature of Cox's Bazar is 21.11°C and Teknaf is 21.16°C for these three month's period and there is a chance of above normal minimum temperature for the whole Chattogram-Cox's Bazar region.



Overview

The climate outlooks provide a broader perspective of the possible climate for the coming month and season. This outlook is generated by analyzing various global models and the Bangladesh Meteorological Department analysis for the month of February and for the next three months of pre-monsoon season (February-March-April). The outlooks generated by the RIMES FOCUS tool is also included (which shall be tested experimentally for this season).

Interpretation of climate outlooks

In general, the climate outlooks are presented in two different way. But first we need to explain **Normal**. Normal in climate terms is the Long Period Average (LPA) of the rainfall over a location using 30 years or more of rainfall data (measured at a station). The average is considered as the "Normal" rainfall for the region. And seasonal climate outlook is to estimate if the season will have more than Normal, less than Normal rainfall or equivalent to normal rainfall.

Forecast methods:

- 1. Deterministic:** Deterministic forecast explains the percentage (%) departure from the Normal. If we expect 20% or less than Normal rainfall, we call it be **Below Normal**, if we expect 20% or more, we can it **Above Normal** and anything within the $\pm 20\%$ is called the **Near Normal** rainfall for the season.
- 2. Probabilistic:** The probabilistic approach explains the possibility (chance) of a certain amount of rainfall happening. For example, what is the chance of the season to be Below normal, or Normal or above Normal. If we say 45% Below

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normal, 30 % Normal and 25 % Above Normal. There is highly likely chance for the season to be Normal to Below Normal with a combined (75%) chance.

Important Note

Below Normal rainfall does not indicate there will be no or less extreme rainfall events. There can be high intensity rainfall within short period of time followed by extended dry spells which may still sum up as Below Normal for the month. Users are advised to follow short and medium range forecast of BMD to keep track of extreme weather events. This outlook will be updated at the end of February 2021.