



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

Issued on October 05, 2021

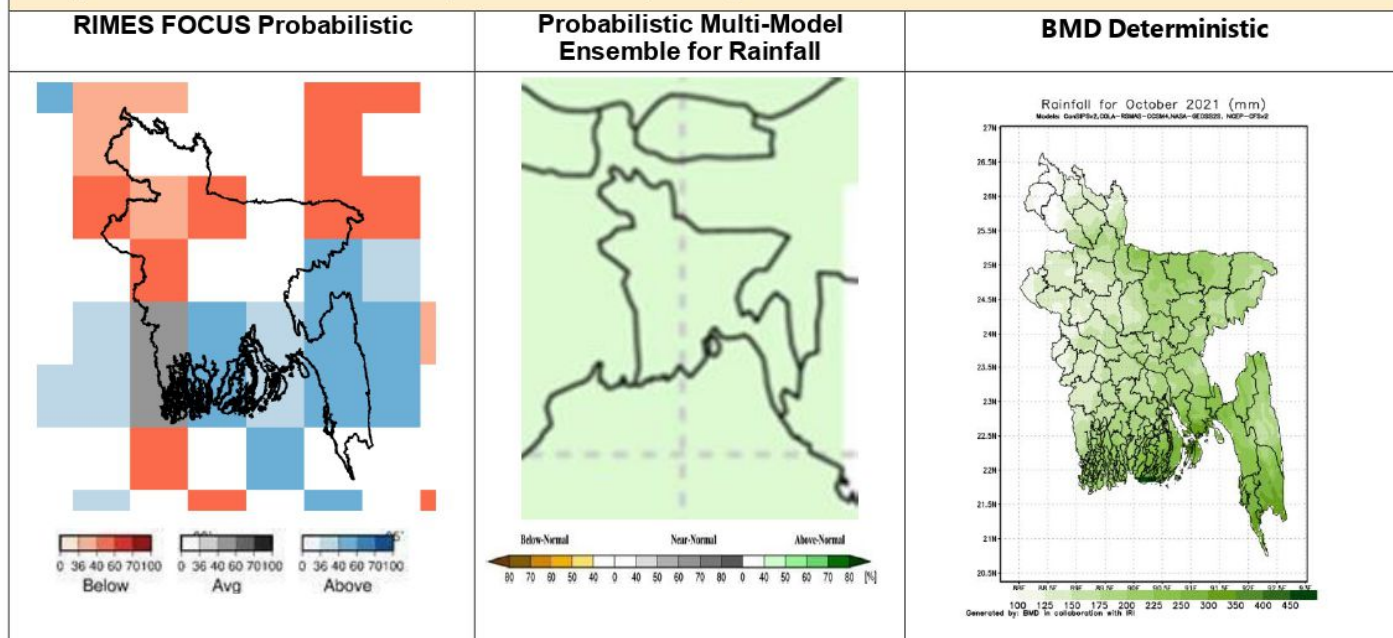
For the Month October and October-November-December

Observed Climate in September, 2021

The cumulative rainfall for the month of September in Cox's Bazar was 185 mm and in Teknaf was 159 mm which indicates below normal rainfall in Cox's Bazar (-54%) and Teknaf (-64.80%) during September. For reference, based on the climatology (1980 - 2018) the normal cumulative rainfall for the month of September is 400 mm in Cox's Bazar and 452mm in Teknaf. The overall rainfall scenario was below normal rainfall for the Cox's Bazar and for Teknaf region. Due to active monsoon phase there were 5 low pressures in the Bay of Bengal. Overall, the whole country received below normal (-29.5%) in the month of September.

Outlook for October, 2021

Considering World Meteorological Organization (WMO) designated global center model outputs, RIMES FOCUS probabilistic outlook and BMD's deterministic forecast, it is highly likely that the month of October would bring normal to above normal rainfall for the Chattogram and Cox's Bazar region. For reference, based on the climatology (1980 - 2018) the normal cumulative rainfall for the month of October in Cox's Bazar is 231 mm and Teknaf is 261 mm. Considering the available model output there is 37% chance of normal rainfall and 35% chance of above normal rainfall to above normal rainfall in Cox's Bazar region during the month of September. Overall, analyzing different models there is 72% chance of normal to above normal rainfall during October. The whole country may receive above normal rainfall except the North and North Western part of the country during October, 2021.

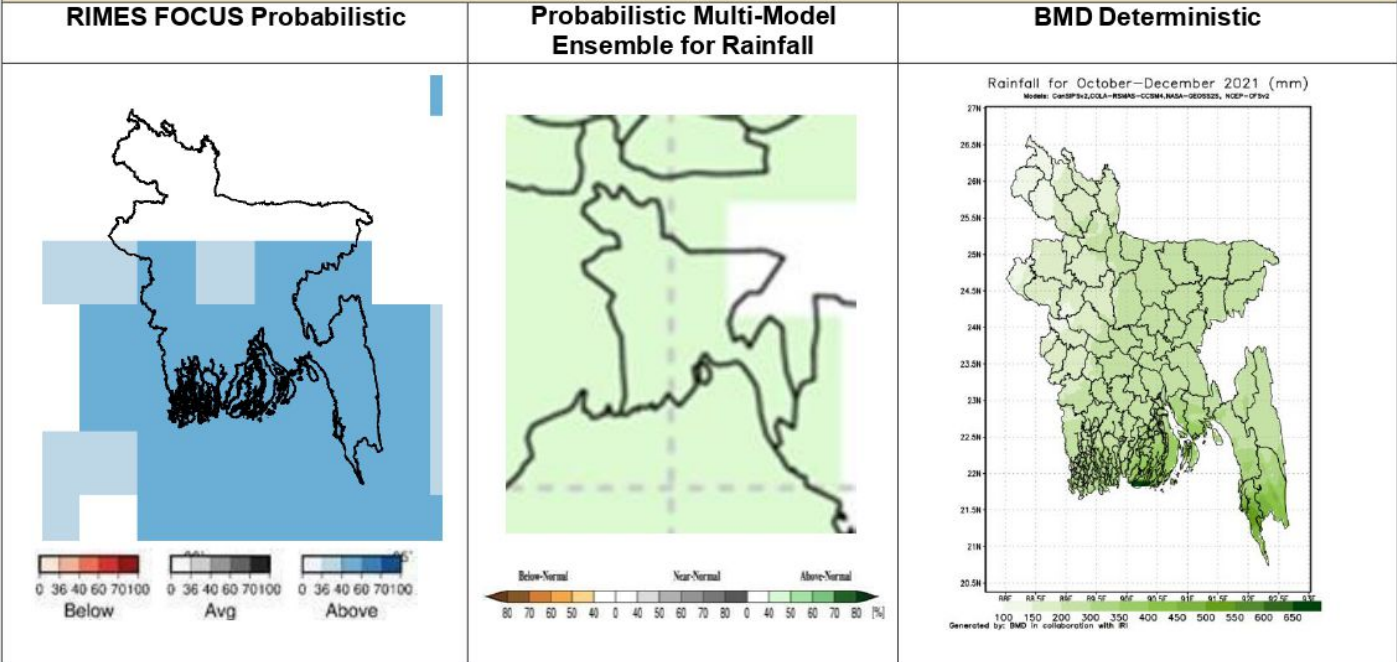


The bulletin is prepared by the Regional Integrated Multi-Hazard Early Warning System for Asia and Africa (RIMES) in collaboration with the Bangladesh Meteorological Department (BMD).

There may occur 2-3 low pressures due to active monsoon which may turn depression during October, 2021. However, no conclusion can be made on a monthly scale on possibilities of any extreme event.

Outlook for October-November-December, 2021

Considering WMO designated global center model outputs, RIMES FOCUS probabilistic outlook and BMD’s deterministic forecast, it is highly likely that the month of October-November-December would bring normal to above normal rainfall for the Chattogram and Cox’s Bazar region. Based on the climatology (1980 - 2018) the normal cumulative rainfall for October-November-December in Cox’s Bazar is 319 mm and in Teknaf is 340 mm. Considering the available model output there is 48% chance of normal rainfall and 35% chance of above normal rainfall. Overall, analyzing different models there is 83% chance of normal to above normal rainfall during October-November-December in the Cox’s Bazar and Teknaf region. The whole country also may receive above normal rainfall except the northern part during these three months’ period.



Overview

The climate outlook provides a broader perspective of the possible climate for the coming month and season. This monthly and seasonal outlook (October & October-November-December) is generated by analyzing various global models and the monthly forecast of the Bangladesh Meteorological Department. In this outlook, forecast generated by the RIMES FOCUS tool is also included (which shall be tested experimentally for Bangladesh).

Interpretation of climate outlooks

In general, the climate outlooks are presented in two different ways. 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 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 first week of November, 2021.