



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

Issued on January 09, 2022

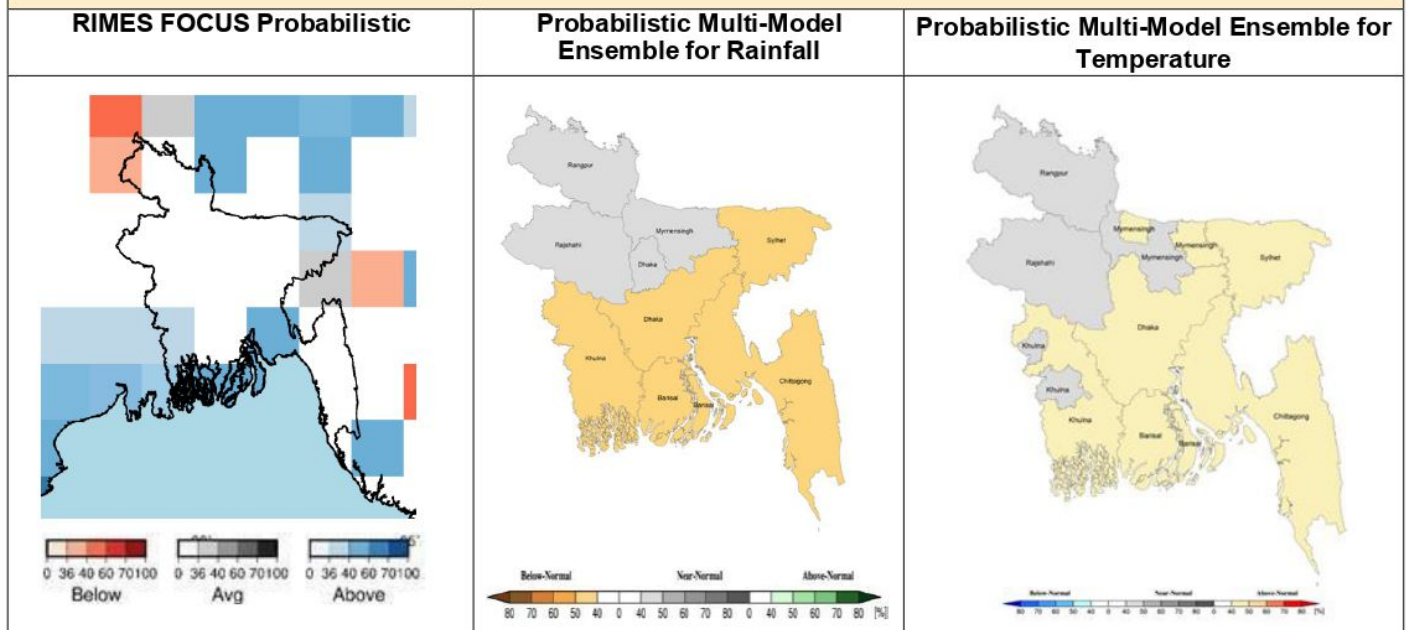
For the Month January and January-February-March

Observed Climate in December, 2021

The cumulative rainfall for the month of December in Cox’s Bazar was 39 mm and in Teknaf was 21 mm which indicates above normal rainfall in Cox’s Bazar (179%) and Teknaf (62%) during December. For reference, based on the climatology (1980-2018) the normal cumulative rainfall for the month of December is 14 mm in Cox’s Bazar and 13 mm in Teknaf. The overall rainfall scenario was above normal for the Cox’s Bazar and Teknaf region. As there was a cyclone “JAWAD” in the Bay of Bengal, the whole country received above normal (501%) rainfall in the month of December.

Outlook for January, 2022

Considering World Meteorological Organization (WMO) designated global center model outputs, RIMES FOCUS probabilistic outlook, it is highly likely that the month of January would bring below 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 January in Cox’s Bazar is 5 mm and Teknaf is 6 mm. Considering the available model output there is 40% to 50% chance of below normal rainfall in Cox’s Bazar region during the month of January. Also analyzing the climatology of temperature, it is expected to be above normal for Cox’s Bazar and Teknaf region during January. For reference, based on the climatology (1980-2018) the normal average temperature of January in Cox’s Bazar is 21.23(°C) and in Teknaf is 22.18(°C).

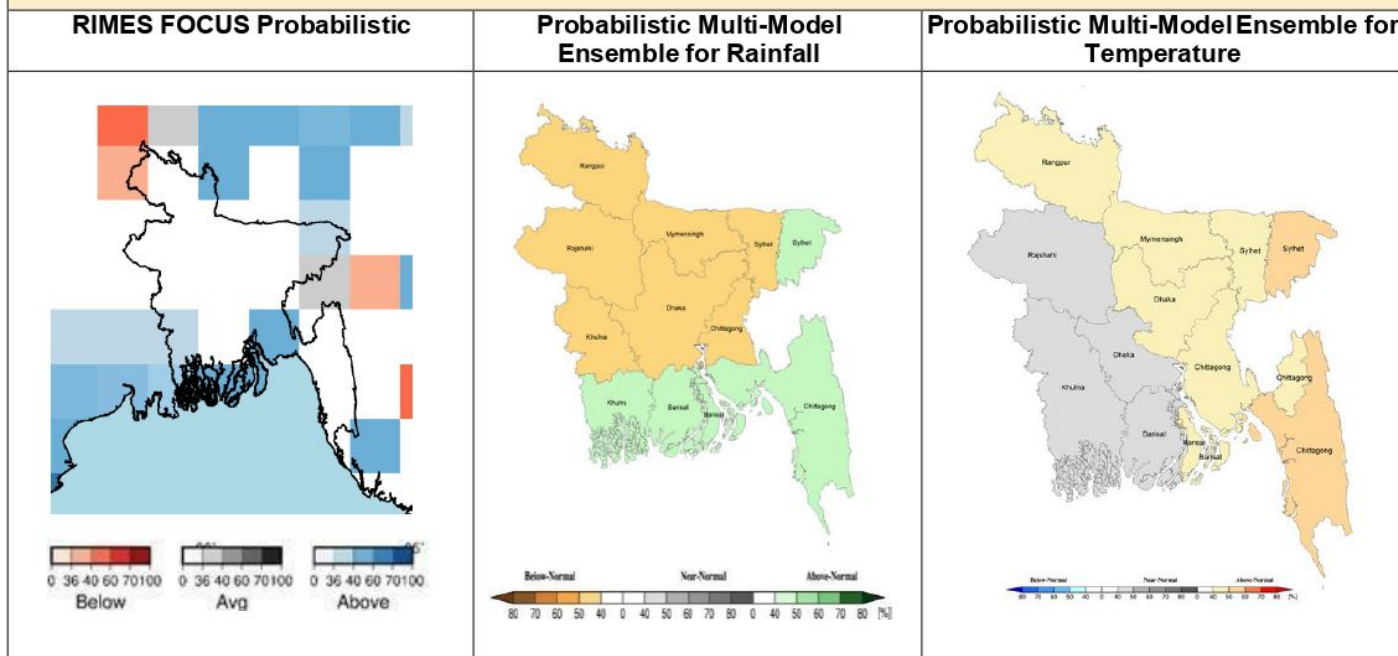


The bulletin is prepared by the Regional Integrated Multi-Hazard Early Warning System for Asia and Africa (RIMES) in collaboration with the Bangladesh Meteorological Department (BMD).

Overall, the whole country may receive below normal rainfall and near normal to above normal temperature during January, 2021. There may occur 1-2 low pressures during January, 2022. However, no conclusion can be made on a monthly scale on possibilities of any extreme event.

Outlook for January-February-March, 2022

Considering World Meteorological Organization (WMO) designated global center model outputs, RIMES FOCUS probabilistic outlook, it is highly likely that the month of January-February-March would bring near normal rainfall for the Chattogram and Cox's Bazar region. Based on the climatology (1980-2018) the normal cumulative rainfall for January-February-March in Cox's Bazar is 59 mm and in Teknaf is 34 mm. Considering the available model output there is 40-50% chance of near normal rainfall in Chattogram region. Also analyzing the global model outputs of temperature, it is expected to be above normal for Cox's Bazar and Teknaf region. Based on the climatology (1980-2018) the normal average temperature of January-February-March in Cox's Bazar is 23.7(°C) and in Teknaf is 24(°C). Overall, the whole country may receive below normal rainfall and above normal temperature during these three month's period.



Overview

The climate outlook provides a broader perspective of the possible climate for the coming month and season. This monthly and seasonal outlook (January & January-February-March) 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 February, 2022.