



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

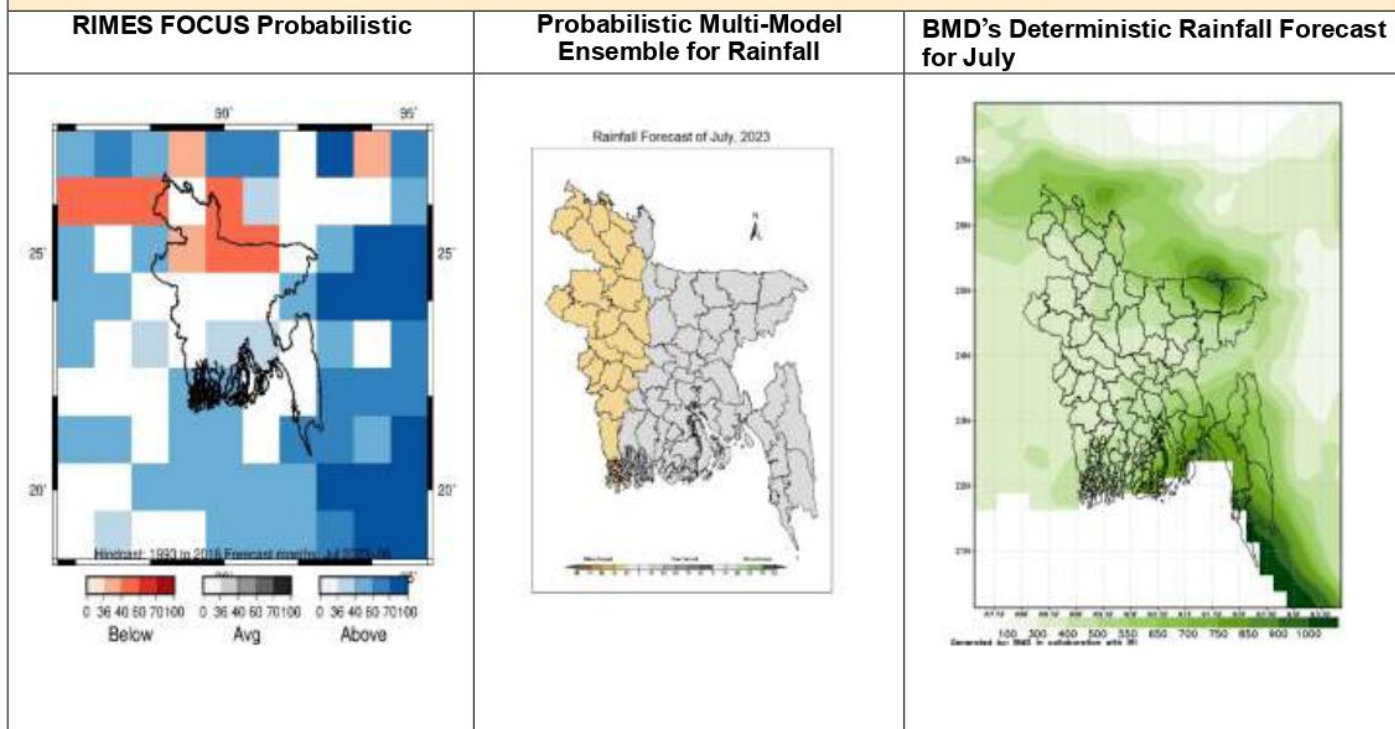
Issued on July 05, 2023  
For the Month July and Jul-Aug-Sep

### Observed Climate in June 2023

The cumulative rainfall for the month of June in Cox's Bazar was 337 mm and in Teknaf was 252 mm which indicates below-normal rainfall in Cox's Bazar (-61%) and Teknaf (-75%) during June. For reference, based on the climatology (1980-2018) the normal cumulative rainfall for the month of June is 854 mm in Cox's Bazar and 1001 mm in Teknaf. The overall rainfall scenario was below normal (-29%) for Chattogram in the month of June.

### Outlook for July 2023

Considering World Meteorological Organization (WMO) designated global center model outputs, RIMES FOCUS probabilistic outlook, and BMD's deterministic forecast, there is a 50-60% chance of normal rainfall in Cox's Bazar region during the month of July. For reference, based on the climatology (1980-2018) the normal cumulative rainfall for the month of July in Cox's Bazar is 968 mm and Teknaf is 1145 mm. Overall, analyzing the available model output, it is likely to be below normal to normal rainfall for the whole country during the month of July.

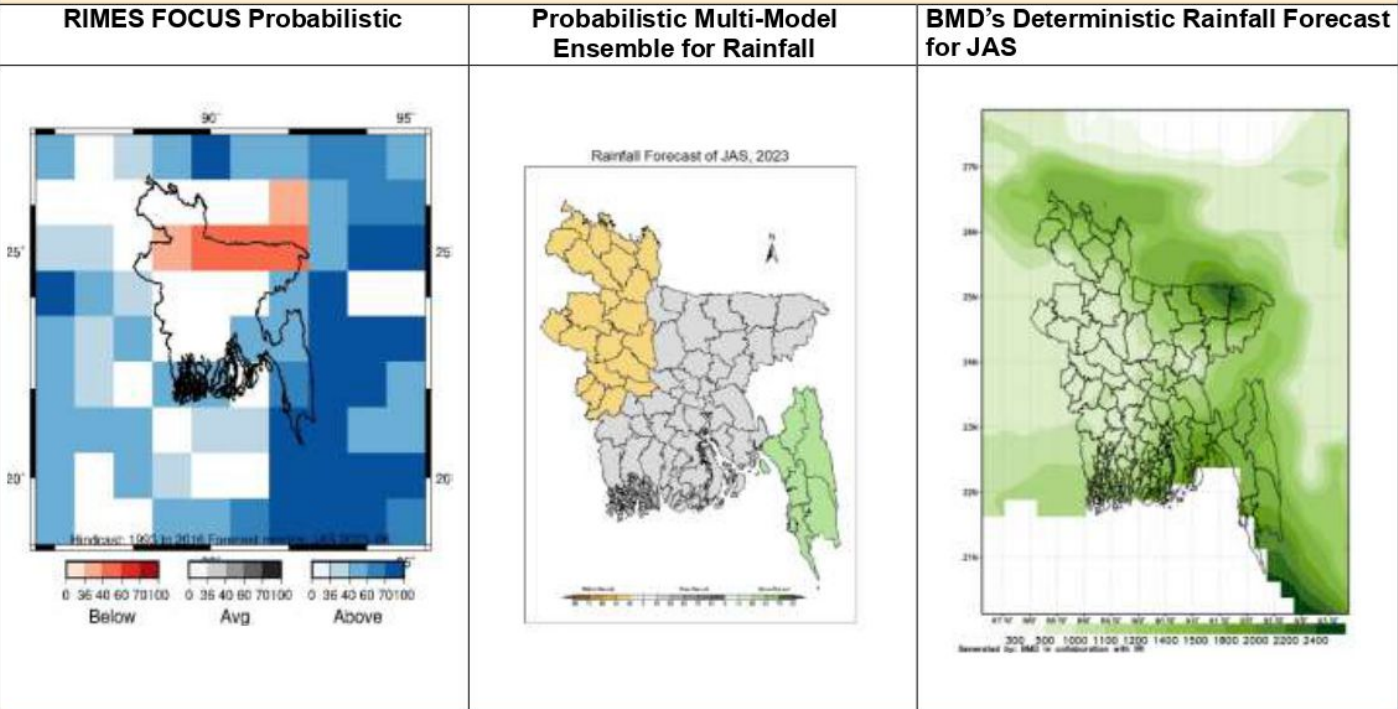


The bulletin is prepared by the Regional Integrated Multi-Hazard Early Warning System for Asia and Africa (RIMES) in collaboration with the Bangladesh Meteorological Department (BMD).

There may occur 1-2 low pressures and monsoon depression during July 2023. However, no conclusion can be made on a monthly scale on the possibilities of any extreme event.

Outlook for Jul-Aug-Sep 2023

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 July-August-September would bring above-normal rainfall for the Chattogram and Cox’s Bazar region. Based on the climatology (1980-2018) the normal cumulative rainfall for July-August-September in Cox’s Bazar is 641 mm and in Teknaf is 777 mm. Considering the available model output there is a 50% chance of above-normal rainfall in the Cox’s Bazar region. Overall, the whole country may receive near-normal rainfall during this three-month period.



Overview

The climate outlook provides a broader perspective of the possible climate for the coming month and season. This monthly and seasonal outlook (July & July-August-September) 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 to be **Below Normal**, if we expect 20% or more, we call it **Above Normal** and anything within the  $\pm 20\%$  is called **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 a 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 a 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 forecasts of BMD to keep track of extreme weather events. This outlook will be updated in the first week of August 2023.