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Maldives Monthly Climate Outlook for August 2025

Summary

In summary, climate indicators suggest that both ENSO and IOD conditions will remain neutral through August 2025, while the MJO is expected to remain active and influence weather patterns across the region. Considering the latest climate model outputs, prevailing large-scale climate drivers, and integration of national climate data, Maldives is likely to experience above-normal rainfall in the central and southern atolls, with normal to slightly above-normal rainfall in the north. Average temperatures are expected to remain slightly above average across the country.

1. Introduction

The Maldives Monthly Climate Outlook for August 2025 has been developed by integrating national climate data with guidance from both global and regional models. These include the Probabilistic Multi-Model Ensemble forecast from the WMO Lead Centre, the North American Multi-Model Ensemble (NMME), and the Regional Integrated Multi-Hazard Early Warning System (RIMES). In addition, monthly outlooks from the Copernicus Climate Change Service (C3S) and the APEC Climate Center (APCC) have been incorporated.

The forecast also considers key climate drivers such as the El Niño–Southern Oscillation (ENSO), the Indian Ocean Dipole (IOD), and the Madden–Julian Oscillation (MJO). These factors significantly influence temperature, rainfall, and atmospheric circulation in the region. Their inclusion enhances the accuracy and reliability of the climate outlook for the Maldives.

2. Current status and expected conditions of major climate drivers.

As of 29 July 2025, the El Niño–Southern Oscillation (ENSO) remains in a neutral phase, with the latest Niño3.4 index value recorded at −0.26 °C. Current outlooks indicate ENSO conditions are likely to remain neutral until at least December 2025. Similarly, the Indian Ocean Dipole (IOD) is also in a neutral state, with an IOD index value of −0.44 °C for the week ending 27 July 2025. This neutral IOD pattern is expected to persist until at least August, dipping into the negative IOD range for September and October before returning to neutral IOD values again in November (Bureau of Meteorology, 2025). The Madden–Julian Oscillation (MJO) is currently in phase 7 with an amplitude greater than 1 (India Meteorological Department [IMD], 2025). Model guidance suggests that the MJO will remain active, with its convectively enhanced phase propagating eastward from the Western Hemisphere into the Indian Ocean during August.

3. Precipitation Outlook from Global and Regional Climate Models for August 2025

- The Probabilistic Multi-Model Ensemble Forecast from the WMO Lead Centre suggests above-normal rainfall over the central and southern parts of Maldives. For the northern atolls, the model signal is weak, indicating low forecast confidence.

- The probabilistic forecast from RIMES, shows above normal rainfall over most parts of central and southern atolls while the model signal is weak for northern-most and southern-most atolls.

- The North American Multi-Model Ensemble (NMME) indicates below-normal rainfall over the northern-most parts and above normal rainfall over rest of the country.

- The monthly forecast from the APEC Climate Center (APCC) indicates above-normal rainfall over southern and some parts of central atolls. For the rest of the country, the model signal is weak.

- The probabilistic forecast from the Copernicus Climate Change Service (C3S: ECMWF contribution) suggests above-normal rainfall over the southern parts of Maldives. The model signal is weak for central and northern atolls.

4. Rainfall and Temperature Climatology over the Maldives during August

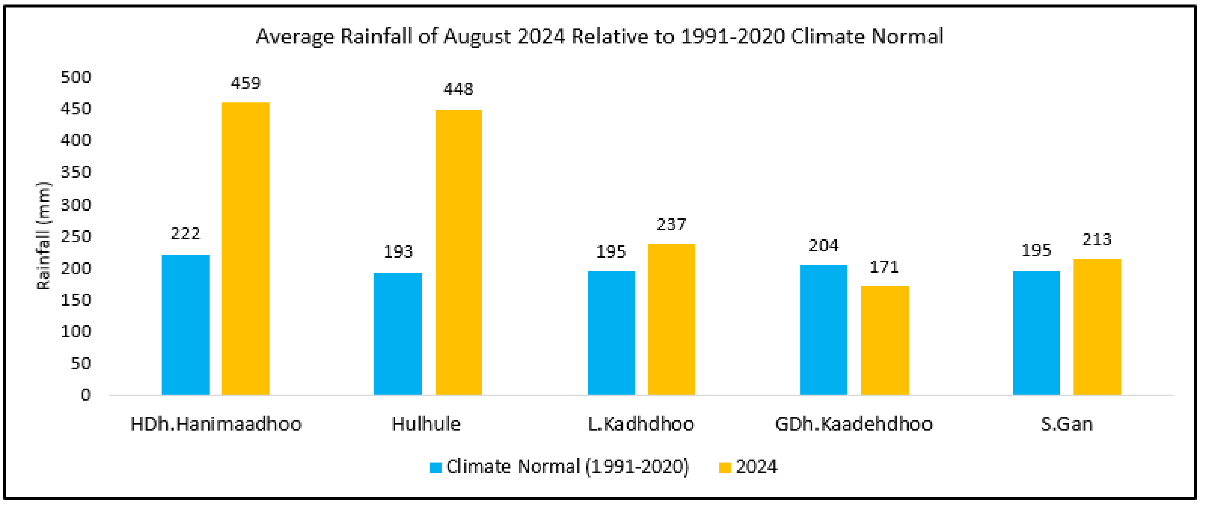

Figure 1: Significantly above-normal rainfall was recorded at Hanimaadhoo and Hulhule, with totals nearly double the climatological average. Kadhdhoo also received above-normal rainfall, while Kaadehdhoo recorded below-normal rainfall, and Gan experienced normal rainfall in August 2024, based on the 1991–2020 climatological average.

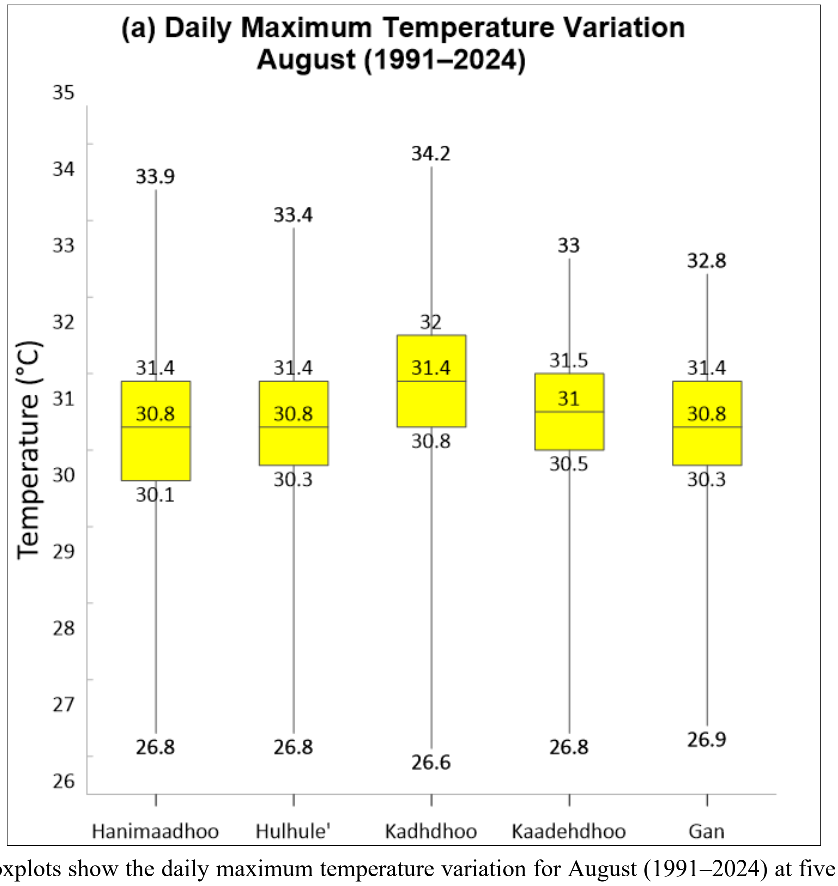

Figure 2: The boxplots show the daily maximum temperature variation for August (1991–2024) at five Meteorological stations in the Maldives. Kadhdhoo recorded both the highest daily maximum temperature of 34.2°C and the lowest daily minimum temperature of 26.6°C, while median values across the stations range from 30.8°C to 31.4°C.

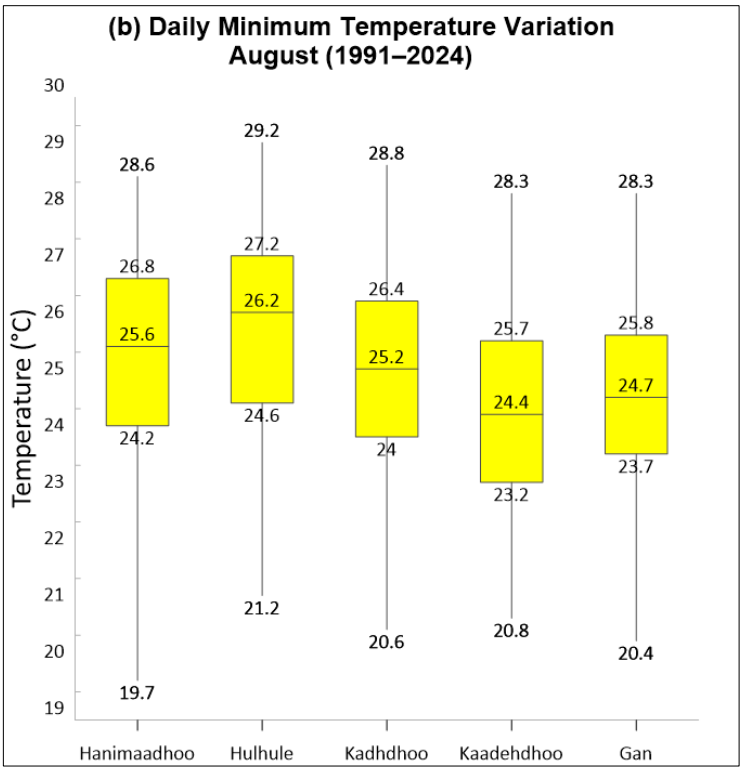

Figure 3: The boxplots show the daily minimum temperature variation for August (1991–2024) at five Meteorological stations in the Maldives. Hulhule recorded the highest daily minimum temperature of 29.2°C, while Hanimaadhoo had the lowest daily minimum temperature of 19.7°C. Median minimum temperatures across the stations range from 24.4°C to 26.2°C.

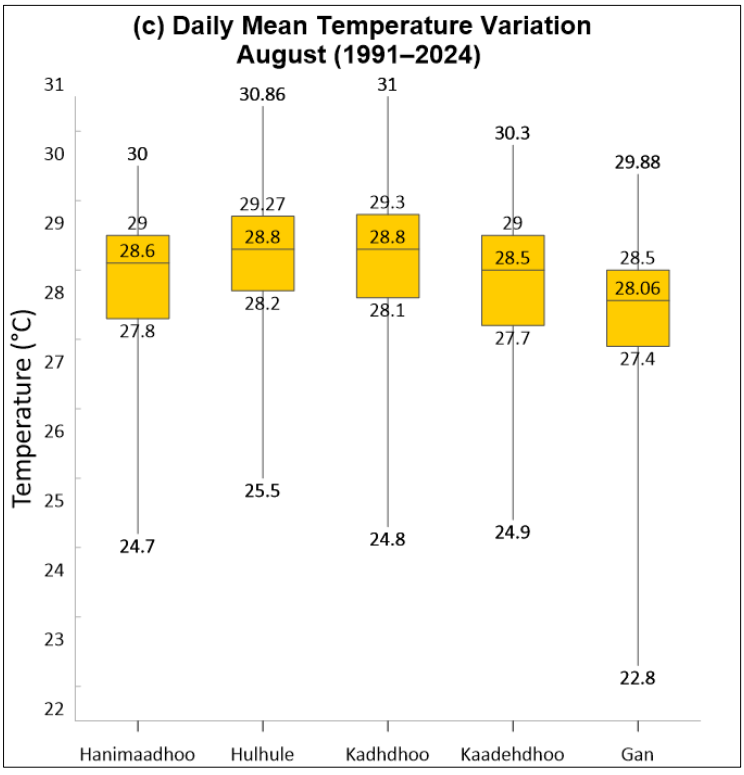

Figure 4: The boxplots show the daily mean temperature variation for August (1991–2024) at five meteorological stations in the Maldives. Kadhdhoo recorded the highest daily mean temperature of 31.0°C, while Gan had the lowest daily mean temperature of 22.8°C. Median mean temperatures across the stations range from 28.0°C to 28.8°C.

5. Rainfall and Temperature Outlook for the Maldives - August 2025

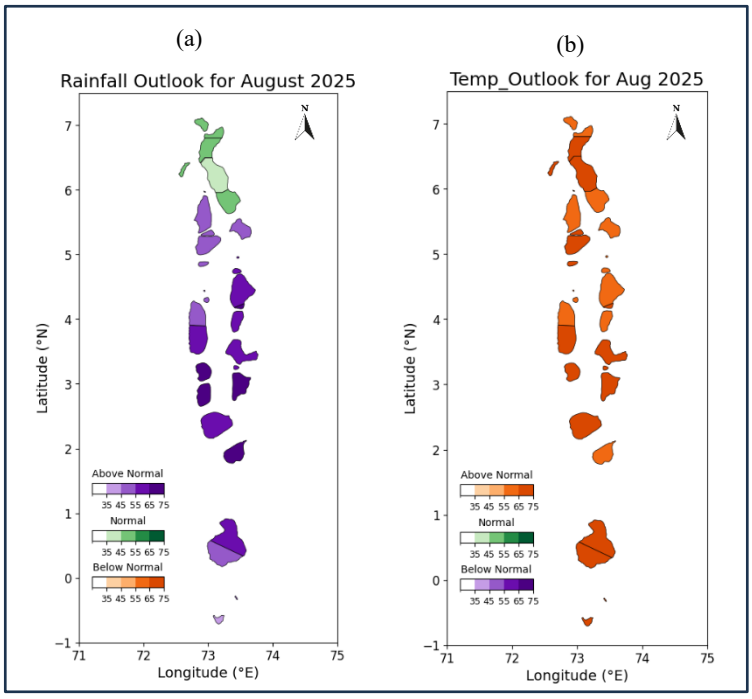

Figure 5: The maps show the probabilistic outlook for (a) rainfall and (b) average temperature across the Maldives for August 2025. Each map indicates the likelihood of conditions falling into above normal, normal, or below normal categories. Color shading represents the forecast probability (%) for the most likely category in each region. Based on expert interpretation of climate model guidance and national data, the maps show a high likelihood of above-normal rainfall in the central and southern atolls, with normal to slightly above-normal rainfall in the northern atolls. For temperature, there is a high probability of slightly above-average temperatures across most parts of the country. These maps are manually derived and are not direct outputs from climate models.

6. Conclusion

In summary, climate indicators suggest that both ENSO and IOD conditions will remain neutral through August 2025, while the MJO is expected to remain active and influence weather patterns across the region. Considering the latest climate model outputs, prevailing large-scale climate drivers, and integration of national climate data, Maldives is likely to experience above-normal rainfall in the central and southern atolls, with normal to slightly above-normal rainfall in the north. Average temperatures are expected to remain slightly above average across the country.

Note: Rainfall categories used in the Maldives:

- Normal: 90% to 110% of the long-term average
- Above Normal: More than 110% of the long-term average
- Below Normal: Less than 90% of the long-term average