No: 93 -PWS/FC/2025/09 Date: 30 June 2025

Maldives Monthly Climate Outlook - July 2025

Summary

Considering the latest climate model guidance and prevailing large-scale climate drivers, along with the integration of national climate data, the Maldives is expected to experience below-normal rainfall over the northern atolls, and slightly above-normal rainfall across the central and southern atolls in July 2025. Additionally, both maximum and minimum temperatures are expected to be slightly above average during this period.

1. Introduction

The Maldives Monthly Climate Outlook for July 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 22 June 2025, the El Niño–Southern Oscillation (ENSO) remains in a neutral phase, with the latest Niño3.4 index value recorded at −0.06 °C. Current outlooks indicate ENSO conditions are likely to remain neutral through July 2025. Similarly, the Indian Ocean Dipole (IOD) is also in a neutral state, with an index value of −0.12 °C for the week ending 22 June. This neutral IOD pattern is expected to persist until at least August 2025 (Bureau of Meteorology, 2025). The Madden–Julian Oscillation (MJO) is currently weak, and models do not indicate a strong signal at this time. However, some models suggest a weak MJO signal may develop over the Indian Ocean and parts of the Maritime Continent during July 2025.

3. Precipitation Outlook from Global and Regional Climate Models

- The Probabilistic Multi-Model Ensemble Forecast from the WMO Lead Centre suggests below-normal rainfall over the northern Maldives, with near-normal rainfall expected in the southern regions. For the central atolls, the model signal is weak, indicating low forecast confidence.

- The North American Multi-Model Ensemble (NMME) indicates below-normal rainfall in the north, with weak signals across the rest of the country for July 2025.

- The probabilistic forecast from RIMES, shows below-normal rainfall in the northern atolls, while above-normal rainfall is expected across the rest of the Maldives during the same period.

- The monthly forecast from the APEC Climate Center (APCC) indicates below-normal rainfall across the Maldives for July 2025.

- The probabilistic forecast from the Copernicus Climate Change Service (C3S) suggests below-normal rainfall in the northern Maldives, while the model signal is weak over the rest of the country during July 2025.

4. Rainfall and Temperature Climatology over the Maldives during July

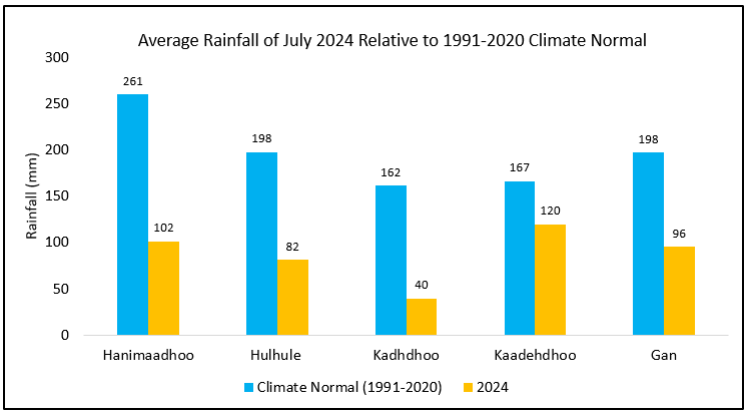
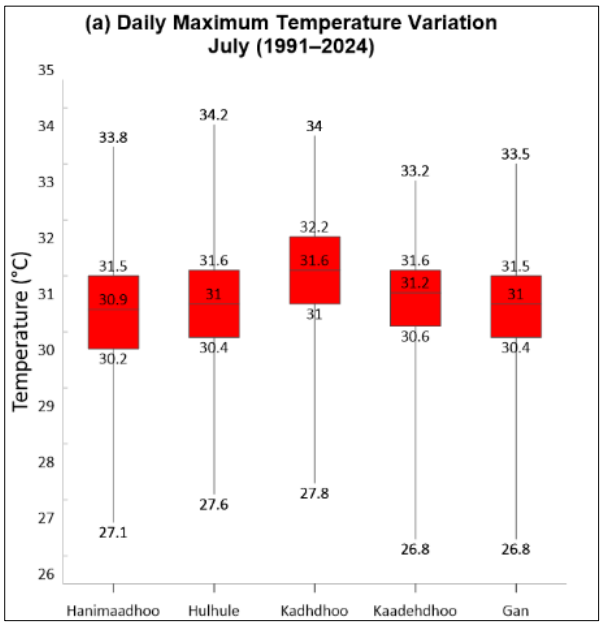
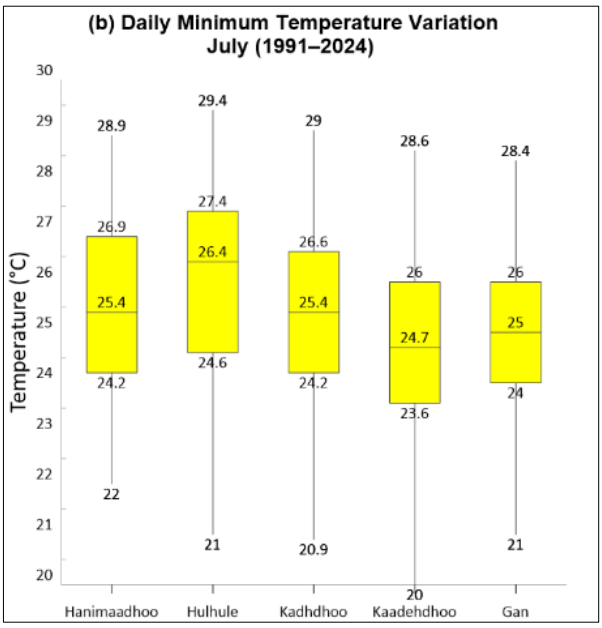


Figure 1: Average Rainfall in July 2024 Compared to the Climatological Normal (1991–2020) at Five Meteorological Stations in the Maldives. The bar graph shows observed rainfall in July 2024 (yellow) and the climatological normal (blue). A significant rainfall deficit is observed at all stations in July 2024 compared to the 1991–2020 climatological average.





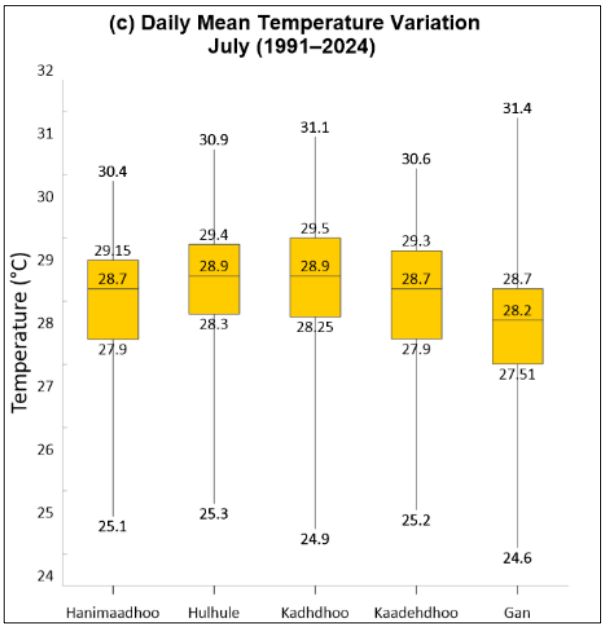


Figure 2: Multi-Panel Visualization of Daily Temperature Variation Across the Maldives in July (1991–2024). This composite figure illustrates the distribution of (a) daily Maximum, (b) daily Minimum, and (c) daily Mean temperatures recorded during July from 1991 to 2024 across five Meteorological stations in the Maldives. The highest daily maximum temperature of 34.2°C was recorded at Hulhule'. The lowest daily minimum temperature of 21.0°C was observed at both Hulhule' and Gan. The highest daily mean temperature of 31.4°C occurred at Gan. These variations highlight how temperature patterns vary across different parts of the Maldives in July.

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

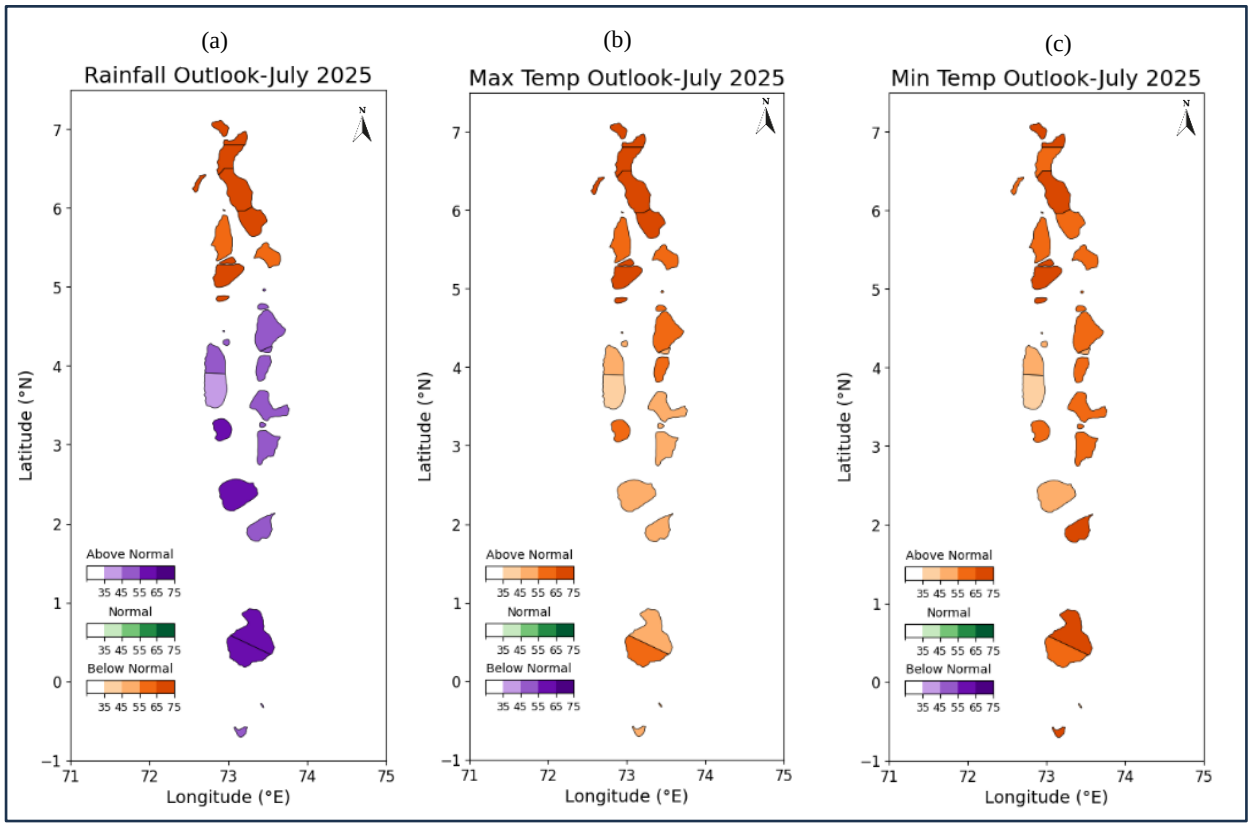


Figure 3: Rainfall and temperature outlook for July 2025. The maps show the probabilistic outlook for (a) Rainfall, (b) Maximum temperature, and (c) Minimum temperature. Each map indicates the likelihood of conditions falling into Above Normal, Normal, or Below Normal categories. Color shading represents the forecast probability (%) for the most likely category in each region.

6. Conclusion

Considering the latest climate model guidance and prevailing large-scale climate drivers, along with the integration of national climate data, the Maldives is expected to experience below-normal rainfall over the northern atolls, and slightly above-normal rainfall across the central and southern atolls in July 2025. Additionally, both maximum and minimum temperatures are expected to be slightly above average during this period.

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