



Rainfall and Temperature Outlook over Maldives

For December 2024

Summary

Rainfall is expected to be normal over northern atolls, below-normal over central and southern atolls. The average temperature is expected to be slightly higher than usual.

Introduction

This consensus outlook on rainfall and temperature for the Maldives has been prepared through assessments including prevailing regional and global climate conditions and prediction of various climate models, seasonal forecast of WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME), North American Multi-Model Ensemble (NMME) Forecasts of Monthly Climate Anomalies, climate driver update of Bureau of Meteorology (BoM) and monthly forecasts of European Centre for Medium-Range Weather Forecasts (ECMWF).

Current status and expected condition of major climate drivers.

El Niño Southern Oscillation (ENSO) neutral conditions are prensent with near average equatorial sea surface temperatures (SSTs) in the central and eastern Pacific Ocean. Global models indicate onset of La Niña conditions during October-November and to persist through January to January-March 2025.

The Indian Ocean Dipole (IOD). Most models forecast neutral condiction of IOD.

Madden-Julian Oscillation (MJO) index is currently located over Maritime Continent with high emplitude. Most models suggest that the amplitude will gradually weaken in early December. The extended range forecast indicates that the MJO propagate eastwards and persist over the Western Pacific for the remainder of the month.

Calibration of climate models

The Climate Predictability Tool (CPT) was used to downscale global model outputs to a local scale. These results indicate slightly above-normal rainfall over the country.

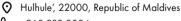
Global Producing Centres and WMO Lead Centre Forecasts

The Probabilistic Multi-Model Ensemble of WMO LC-LRFMME suggests normal rainfall over northern atolls and below-normal over rest of the country. Temperatures are predicted to be above-normal across the country.



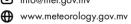
















Condition of Rainfall and Temperature over the Maldives during December

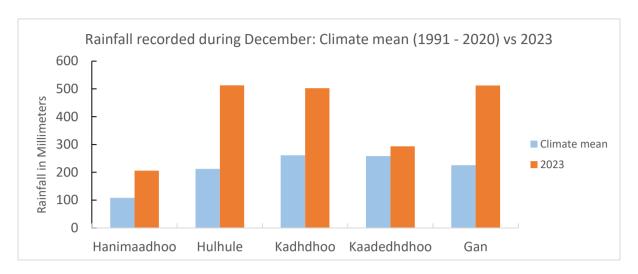


Figure 1- The rainfall in December 2023 was above average in all stations.

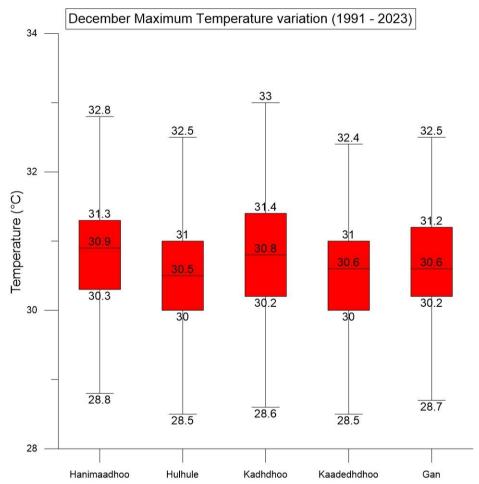
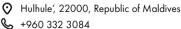


Figure 2: Daily maximum temperature range at Meteorological stations during December for the period 1991-2023, showing the highest maximum temperature of 33.0°C recorded at Meteorological Office Kadhdhoo.









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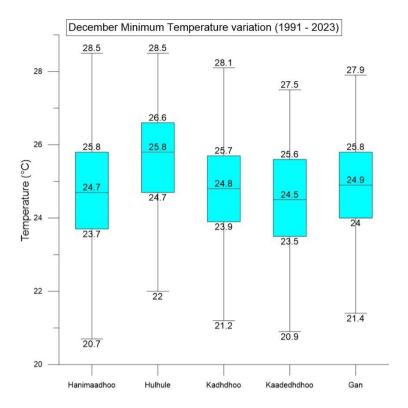


Figure 3: Daily minimum temperature range at the Meteorological stations during December for the period 1991-2023, showing the lowest minimum temperature of 21.7°C at the Meteorological Offices, Hanimaadhoo

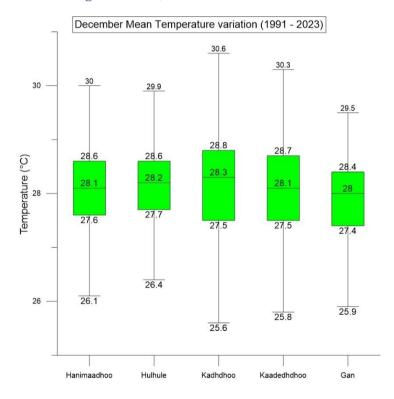
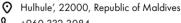


Figure 4: Daily mean temperature range at Meteorological stations during December for the period 1991-2023, showing most (50%) of the time, the daily average temperature lies between 27.6–28.6°C in Hanimaadhoo, 27.7 – 28.6°C in Hulhule, 27.5 – 28.8°C in Kadhdhoo, 27.5 – 28.7 °C in Kaadedhdhoo and 27.4 – 28.4 °C in Gan.









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Conclusion

Considering the suppressed phase of MJO, Multi-Model Ensemble of WMO Lead Centre, NMME, climate data of the Maldives, rainfall is expected to be normal over northern atolls, below-normal over central and southern atolls. The average temperature is expected to be slightly higher than usual.

Note:

Normal: Amount of rainfall between 90% - 110% of the average for the period. Above normal: Amount of rainfall more than 110% of the average for the period. Below Normal: Amount of rainfall less than 90% of the average for the period







