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## Maldives Meteorological Service

### Rainfall and Temperature Outlook over the Maldives

For June 2023

#### Summary

Rainfall is expected to be below normal over the southern-most atolls and slightly above normal over the rest of the country.

Temperature is likely to be slightly above normal across the country.

#### Introduction

This consensus outlook on rainfall and temperature for Maldives has been prepared through assessments including prevailing regional and global climate condition 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 of major climate drivers.

**El Niño Southern Oscillation (ENSO):** El Niño conditions are observed with above-average equatorial Sea Surface Temperatures in the eastern Pacific Ocean, expanding westwards to the east-central Pacific.

**Indian Ocean Dipole (IOD):** IOD condition is suggested to be neutral and is expected to develop a positive condition during the coming months.

**Madden-Julian Oscillation (MJO):** Enhanced MJO lies over Western Hemisphere at the beginning of the month and is expected to propagate eastwards to the Indian Ocean with weakening amplitude. It is likely over Maritime Continent during the 2<sup>nd</sup> week with enhancing amplitude for a few days and becoming weak thereafter. The signal is expected over the Indian Ocean towards the end of the month.

#### Calibration of climate models

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 for June 2023.



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## Global Producing Centres and WMO Lead Centre Forecasts

The Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates below-normal rainfall over most parts of the country with climatological probability over some areas in the central and above-normal over the northern-most for June 2023. Temperatures are above normal across the country during the month.

### Climatic conditions over Maldives

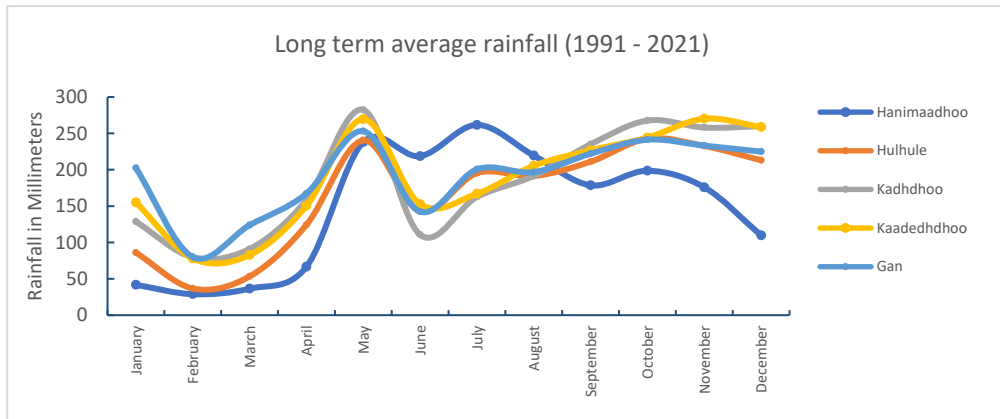


Figure 1- Mean monthly rainfall for the period 1991-2021 shows variation of rainfall in different part of the country, where southern and central atolls have high rainfall peaks during May, beginning of southwest monsoon and towards end of the monsoon period, while northern atolls have peak rainfall during July, mid of the season.

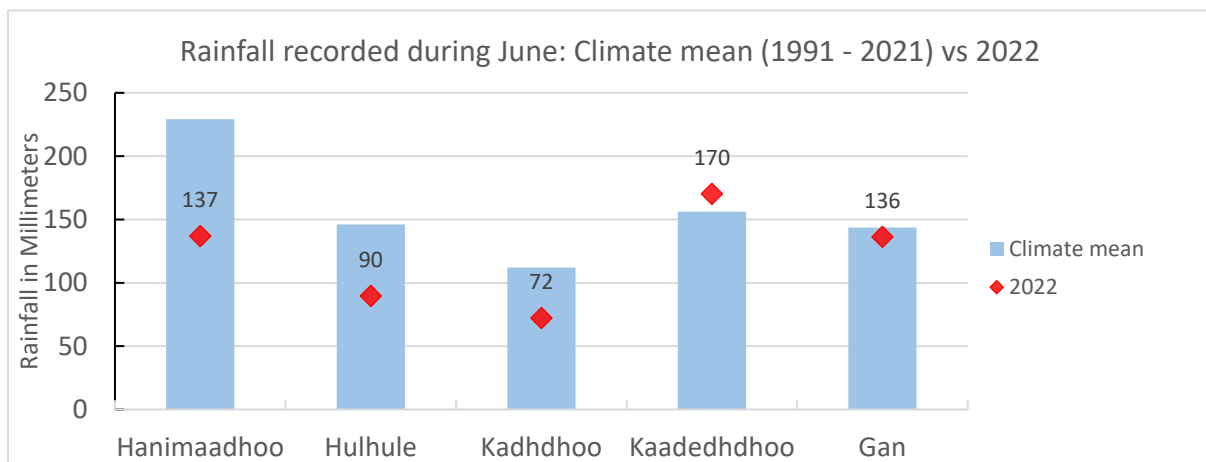


Figure 2- In June 2022, Gan and Kaadedhdhoo stations received normal rainfall while the other 3 stations received below-normal rainfall for the month.

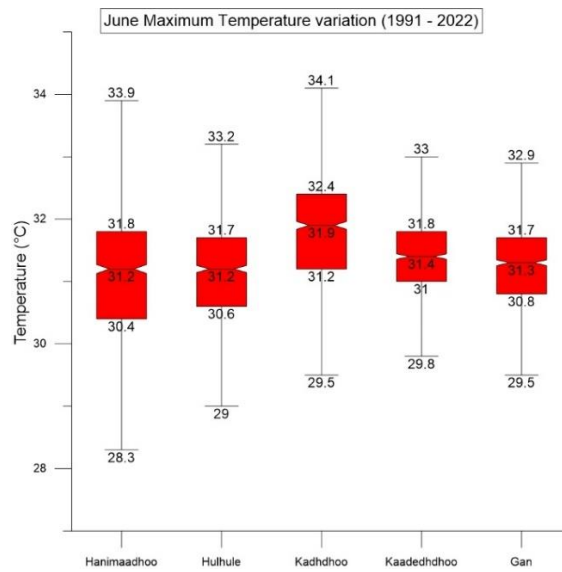


Figure 3: Daily Maximum Temperature range at Meteorological stations during June for the period 1991-2022 showing highest maximum Temperature of 34.1°C recorded at Meteorological Office Kadhdhoo.

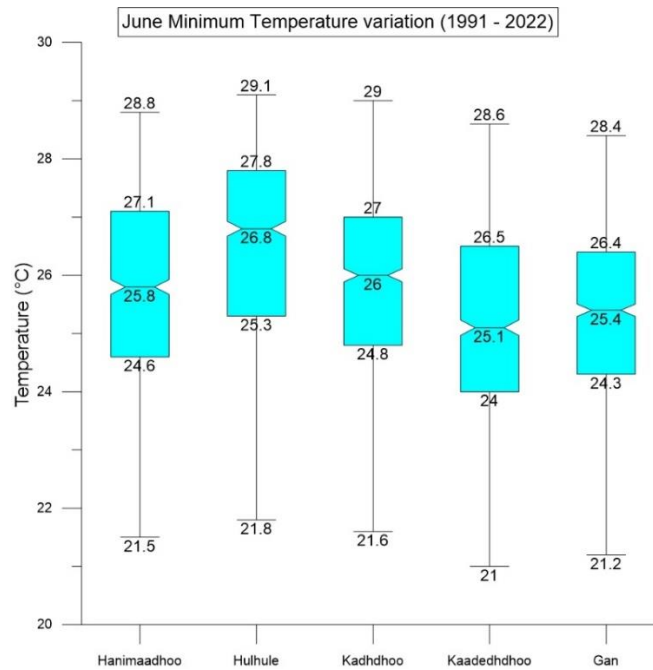


Figure 4: Daily Minimum Temperature range at Meteorological stations during June for the period 1991-2022, showing lowest minimum Temperature of 21.0°C at Meteorological Offices, Kaadeddhoo.

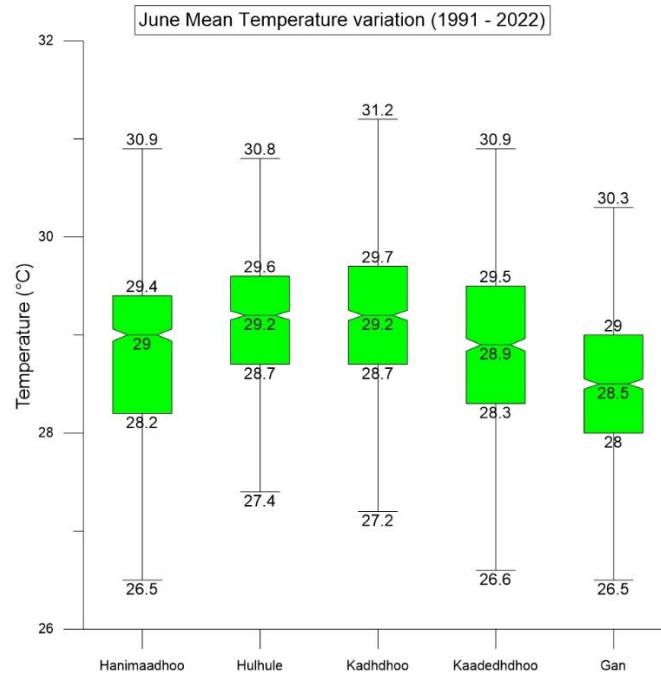


Figure 5: Daily Mean Temperature range at Meteorological stations during June for the period 1991-2022 shows most (50%) of the times daily average temperature lies between 29.4– 28.2°C in Hanimaadhoo, 29.6 – 28.7 °C in Hulhule, 29.7 – 28.7 °C in Kadhdhoo, 29.5– 28.3 °C in Kaadeddhoo and 29.0 - 28.0 °C in Gan.

## Conclusion

By considering the El Niño and neutral IOD condition, weak MJO over the Indian Ocean for towards the end of the month, Multi-Model Ensemble of WMO Lead Centre forecasts, NMME forecasts, CPT analysis and climate data of Maldives, rainfall is expected to be below normal over the southern-most atolls and slightly above normal over the rest of the country.

Temperature is likely to be slightly above normal across the country.

## 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*