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Maldives Meteorological Service

Rainfall and Temperature Outlook over Maldives

For April 2023

Summary

Rainfall is expected to be below-normal over most parts of the country.

Temperature is likely to be normal over most parts of 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): ENSO neutral condition is expected with near average equatorial Sea Surface Temperatures across most of the Pacific Ocean.

Indian Ocean Dipole (IOD): IOD is currently neutral with generally average Sea Surface Temperatures across most of the Indian Ocean.

Madden-Julian Oscillation (MJO): Weak MJO over Maritime Continent likely to propagate eastwards to Western Pacific and become enhanced over the area by end of the first week. It is likely to remain over the same condition during the second week and become thereafter.

Calibration of climate models

Climate Predictability Tool (CPT) was used to downscale global model outputs to local scale. These results indicate slightly above-normal rainfall over the country for April 2023.

Global Producing Centres and WMO Lead Centre Forecasts

Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates below-normal rainfall over most part of the country with climatological probability over northern-most area for April



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2023. Temperatures are normal over part of southern atolls and above-normal rest of the country during the month.

Climatic condition over Maldives

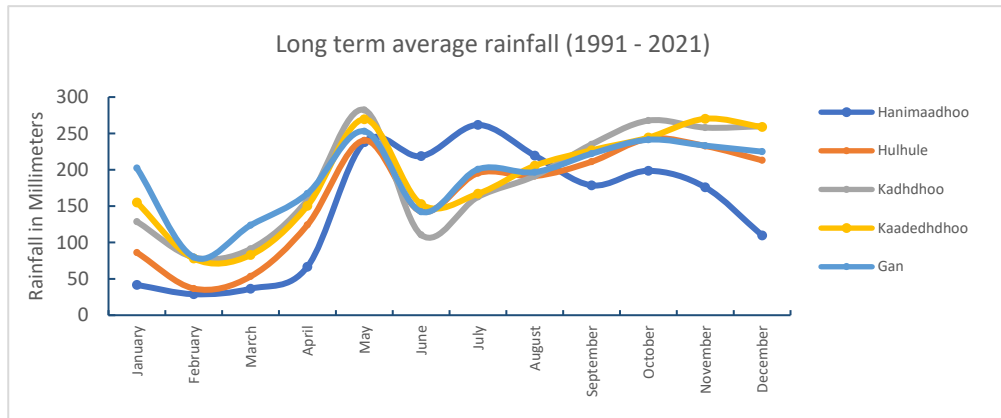


Figure 1- Mean monthly rainfall for the period 1991-2021 shows variation of rainfall in different part of the country, where southern and central atolls have high rainfall peaks during May, beginning of southwest monsoon and towards end of the monsoon period, while northern atolls have peak rainfall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

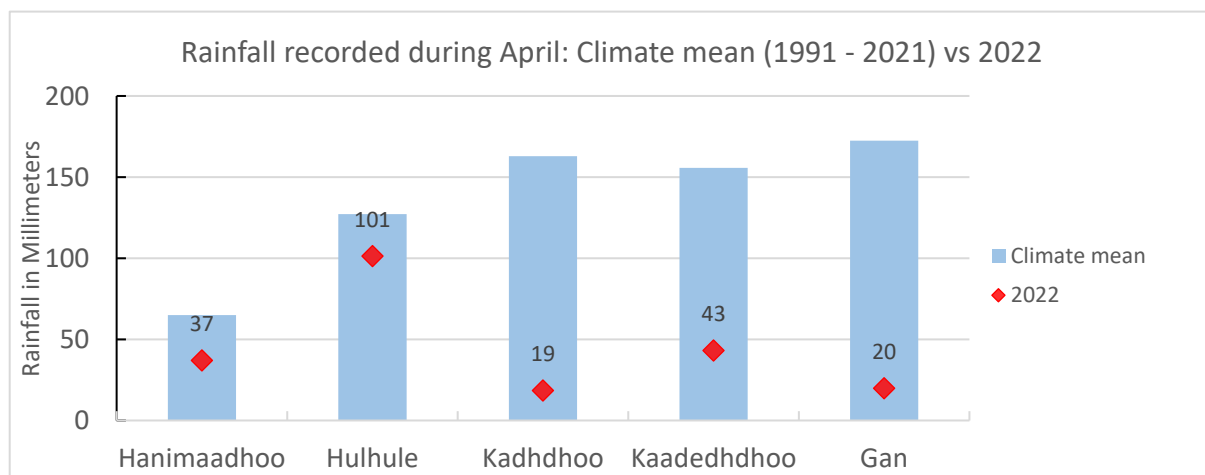


Figure 2- In April 2022, all areas received below-normal rainfall for the month.

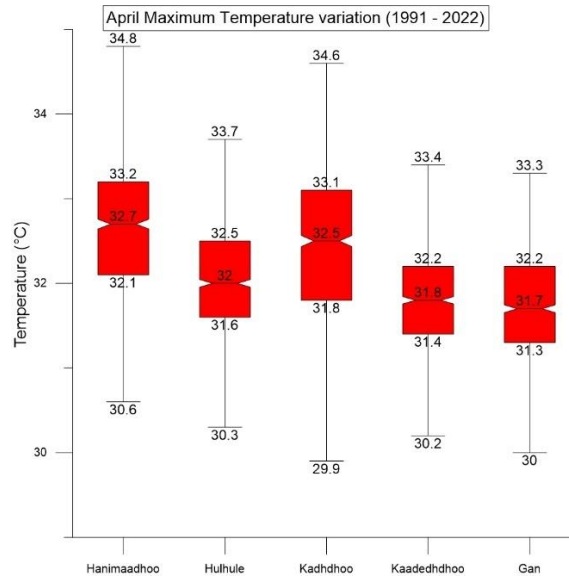


Figure 3: Daily Maximum Temperature range at Meteorological stations during April for the period 1991-2022 showing highest maximum Temperature of 34.8°C recorded at Meteorological Office Hanimaadhoo.

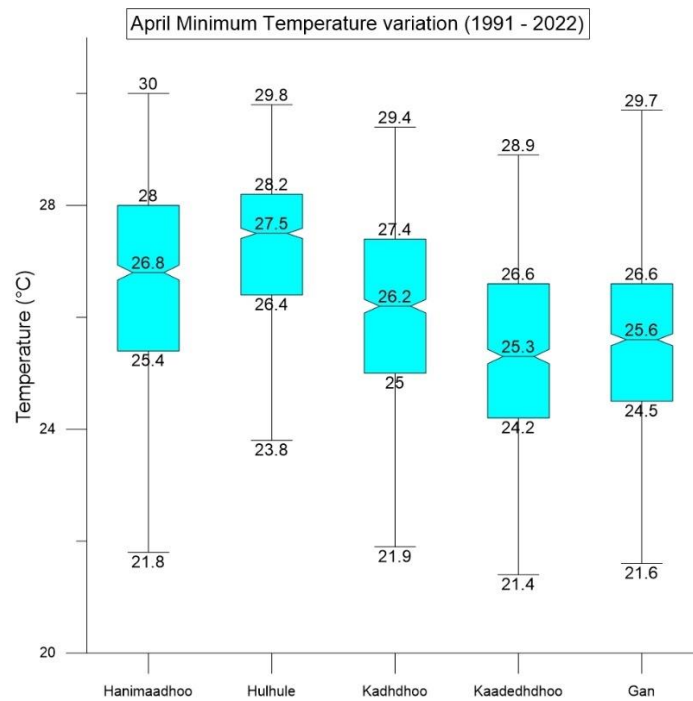


Figure 4: Daily Minimum Temperature range at Meteorological stations during April for the period 1991-2022, showing lowest minimum Temperature of 21.4°C at Meteorological Offices, Kaadedhdhoo.

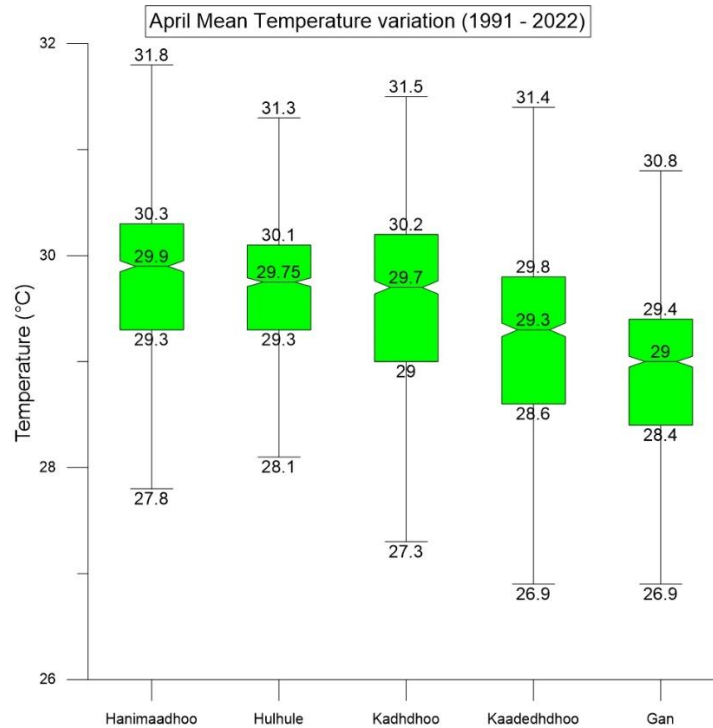


Figure 5: Daily Mean Temperature range at Meteorological stations during April for the period 1991-2022 shows most (50%) of the times daily average temperature lies between 30.3– 29.3°C in Hanimaadhoo, 30.1 – 29.3 °C in Hulhule, 30.2 – 29.0 °C in Kadhdhoo, 29.8– 28.6 °C in Kaadedhdhoo and 29.4 - 28.4 °C in Gan.

Conclusion

By considering the ENSO-neutral and neutral IOD condition, suppressed convective phase of MJO over Indian Ocean for most of the period, 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 most parts of the country.

Temperature is likely to be normal over most parts of 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