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# Maldives Meteorological Service

## Rainfall and Temperature Outlook over Maldives

For April 2022

### Summary

Rainfall is likely to be normal over northern atolls and part of central atolls, below normal over rest of the country.

Temperature is expected to be slightly above normal in all areas during the month.

### 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, Multi-model Ensemble Based Seasonal Climate Prediction of Forecast Customization System (FOCUS), 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):** La Niña conditions are present with below average equatorial sea surface temperatures across east-central and eastern Pacific Ocean. Global models indicate La Niña condition has passed its peak.

**Indian Ocean Dipole (IOD):** Global models indicate neutral IOD value and likely to remain in same condition throughout April 2022. Thus, it creates an area of high pressure over western half of the Indian Ocean and enhances convection over Indonesian region with westerly winds along the equator.

**Madden-Julian Oscillation (MJO):** MJO is weak and global models indicate the signal to remain weak in the first half of the month. It is likely over Indian ocean during the 3<sup>rd</sup> week.





## Calibration of climate models

Climate Predictability Tool ( CPT ) was used to downscale global model outputs to local scale. These results indicate below normal rainfall in southern-most atolls and slightly above normal rainfall over rest of the country.

## Global Producing Centres and WMO Lead Centre Forecasts

Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates above normal rainfall over northern atolls and part of central atolls, climatological probability over rest of the country during April 2022. Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates above-normal Temperature across the country for April 2022.

## Climatic condition during the month of April

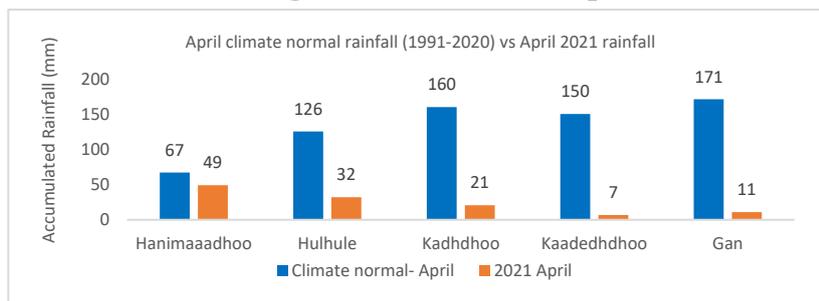


Figure 1- In April 2021, all stations received relatively low amount of rainfall than climate normal rainfall for the month.

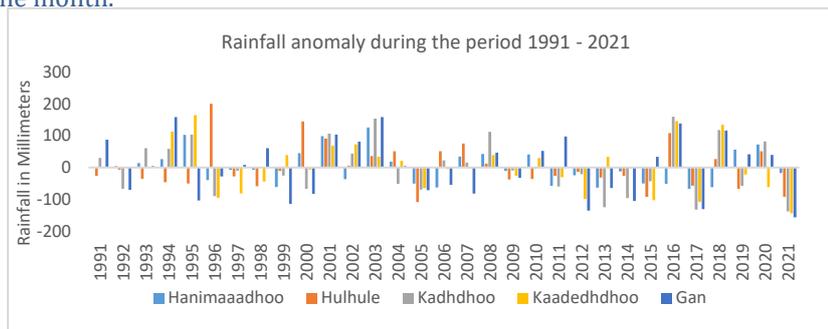


Figure 2: Rainfall anomaly during April for the period 1991-2021 shows southern part of the country received lowest amount of rain in 2021. Rainfall of 156, 144 and 138 millimeters were deviated in Gan, Kaadeddhoo and Kadhdhoo respectively.

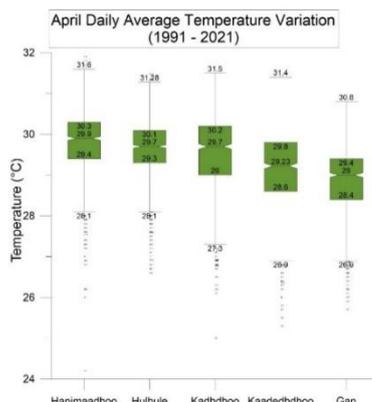


Figure 3: Daily Mean Temperature range at Meteorological stations during April for the period 1991-2021. It shows most (50%) of the times daily average temperature lies between 29.4 - 30.3°C in Hanimaadhoo, 29.3-30.1 °C in Hulhule, 29.0-30.2 °C in Kadhdhoo, 28.6-29.8 °C in Kaadeddhoo and 28.4-29.4 °C in Gan.

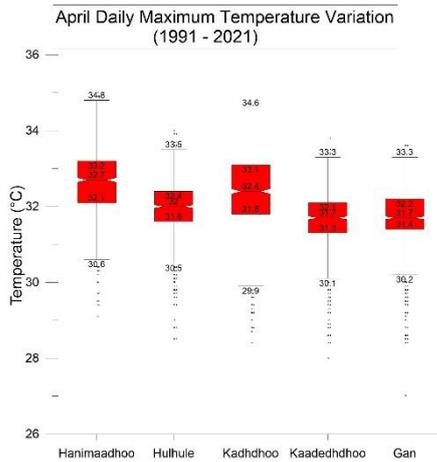


Figure 2: Daily Maximum Temperature range at Meteorological stations during April for the period 1991-2021. Highest maximum Temperature of 34.8 °C recorded at the Hanimaadhoo Meteorological Office.

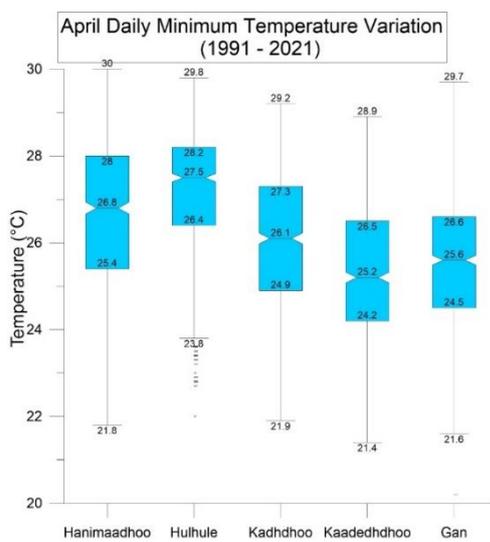


Figure 3: Daily Minimum Temperature range at Meteorological stations during April for the period 1991-2021, showing lowest minimum Temperature of 21.4 °C at the Kadhdhoo Meteorological Office.

## Conclusion

By considering the La Niña condition, neutral IOD, weak MJO signal through the month, Multi-Model Ensemble of WMO Lead Centres, NMME Forecasts, FOCUS forecasts and climate data of Maldives, rainfall is likely to be normal over northern atolls and part of central atolls, below normal over rest of the country.

Temperature is expected to be slightly above normal in all areas during the month.

### 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*