Rainfall and Temperature Outlook over Maldives

For November 2022

Summary

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

Temperature is likley to be below-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): La Niña remains dominant, with below average equatorial Sea Surface Temperatures across most of the Pacific Ocean. Global models indicate a high probability for La Niña condition to continue during November 2022.

Indian Ocean Dipole (IOD): Negative IOD event continues with cool Sea Surface Temperature anomalies in the northwest of the Indian Ocean and warm Sea Surface Temperature in the east of the Indian Ocean. Models indicate the IOD condition to persist throughout the month.

Madden-Julian Oscillation (MJO): Enhanced MJO remains over West Pacific. Models indicate eastward propagation during the first week and return back to same region during the 2nd 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 over the country for November 2022.

Global Producing Centres and WMO Lead Centre Forecasts

Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates below-normal rainfall and below-normal Temperature across the country for November 2022.

Climatic condition during the month of November

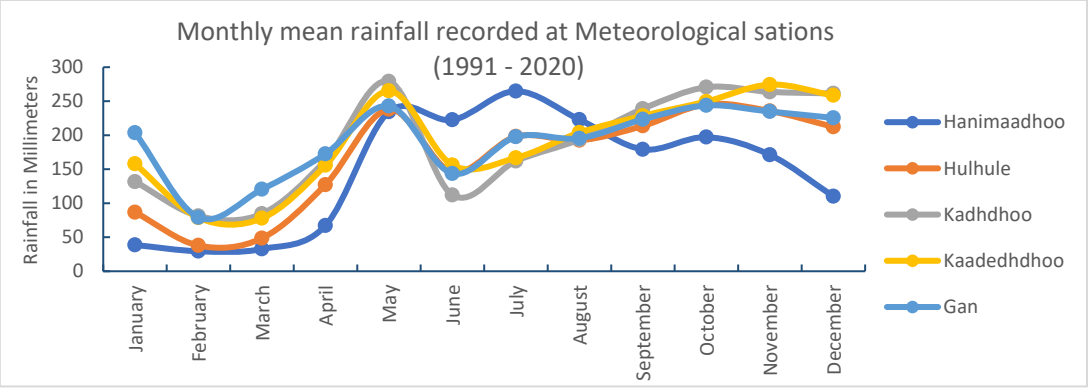

Figure 1- During the period 1991 - 2020, monthly mean rainfall of November were 171, 236, 264, 274 and 235 millimeters in Hdh.Hanimaadhoo, Hulhule, L.Kadhdhoo, Gdh.Kaadedhdhoo and S.Gan, respectively.

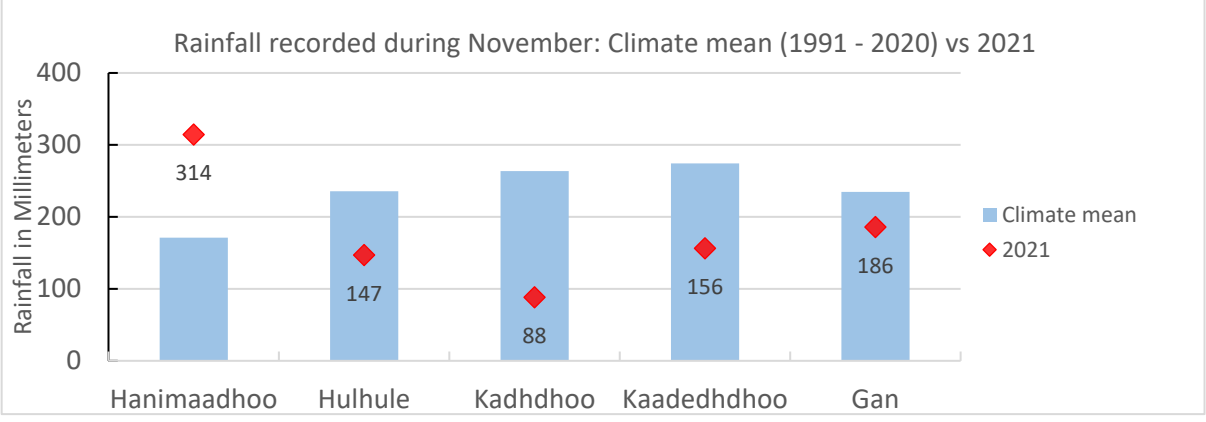

Figure 2- In November 2021, Haimaadhoo received above-normal rainfall and other stations received below normal rainfall than climate mean for the month. Hanimaadhoo recorded 184% of the climate normal while other stations recorded less than 90% of climate normal for the month.

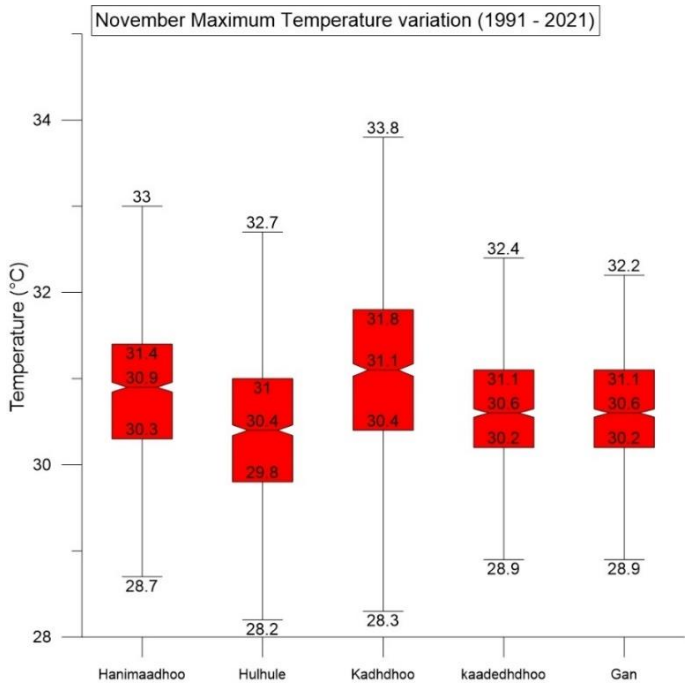

Figure 3: Daily Maximum Temperature range at Meteorological stations during November for the period 1991-2021. Highest maximum Temperature of 33.8°C recorded at Kadhdhoo Meteorological Office.

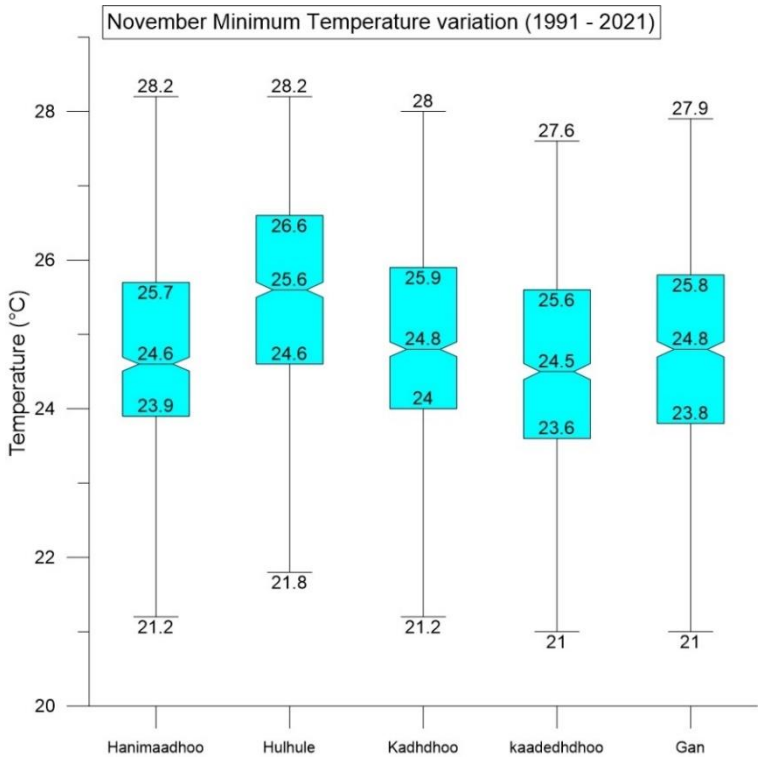

Figure 4: Daily Minimum Temperature range at Meteorological stations during November for the period 1991-2021, showing lowest minimum Temperature of 21.0°C at Gan Meteorological Office and Kaadedhdhoo Meteorological Office.

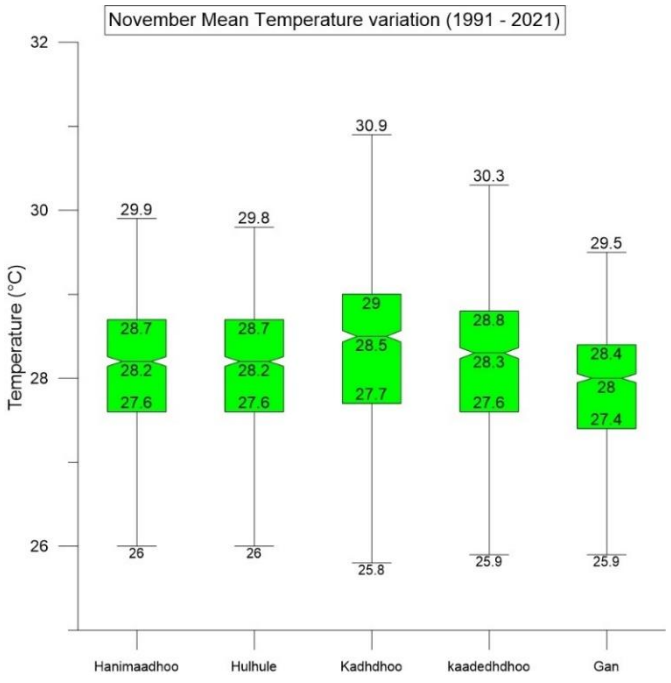

Figure 5: Daily Mean Temperature range at Meteorological stations during November for the period 1991-2021. It shows most (50%) of the times daily average temperature lies between 28.7– 27.6°C in Hanimaadhoo, 28.7 – 27.6 °C in Hulhule, 29.0 – 27.7 °C in Kadhdhoo, 28.8 – 27.6 °C in Kaadedhdhoo and 28.4 - 27.4

Conclusion

By considering the active La Niña and negative IOD condition, suppressed phase of MJO, Multi-Model Ensemble of WMO Lead Centre forecasts, NMME forecasts and climate data of Maldives, rainfall is expected to be below-normal over the country.

Temperature is likley to be below-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