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Maldives Meteorological Service

Rainfall and Temperature Outlook over Maldives

For May 2022

Summary

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

Temperature is expected to be normal over northern atolls and slightly above-normal over other areas.

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 condition is present with below average equatorial sea surface temperatures across most of the Pacific Ocean. Global models indicate La Niña condition to be continued during May 2022.

Indian Ocean Dipole (IOD): Global models indicate currently neutral IOD value. It is suggested possibility of negative IOD during May 2022. Thus, westerly winds will strengthen along the equator.

Madden-Julian Oscillation (MJO): MJO is likely over Africa and Indian Ocean during the 1st week and propagate eastwards across Maritime Continent and western Pacific during the 2nd week. The signal is expected over Western Hemisphere towards end of the month. Enhanced MJO is expected over Indian Ocean for few days in the 1st week.



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Calibration of climate models

Climate Predictability Tool (CPT) was used to downscale global model outputs to local scale. These results indicate above normal rainfall over northern-most atolls, normal rainfall over part of central atolls and below-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-most atolls, below-normal over southern atolls and part of central atolls, climatological probability over rest of the country during May 2022. Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates above-normal Temperature across the country for May 2022.

Climatic condition during the month of May

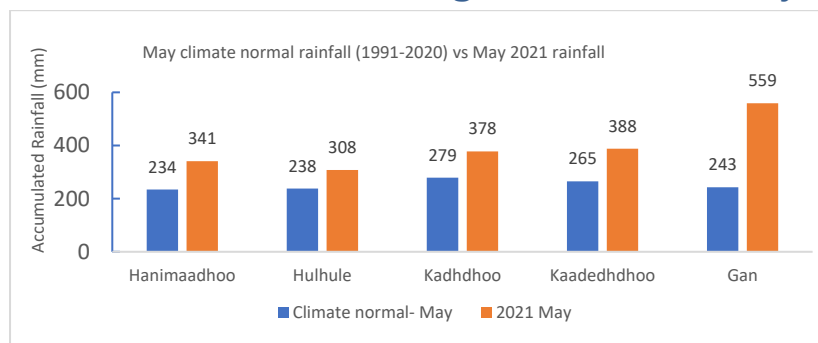


Figure 1- In May 2021, all stations received relatively high amount of rainfall than climate normal rainfall for the month.

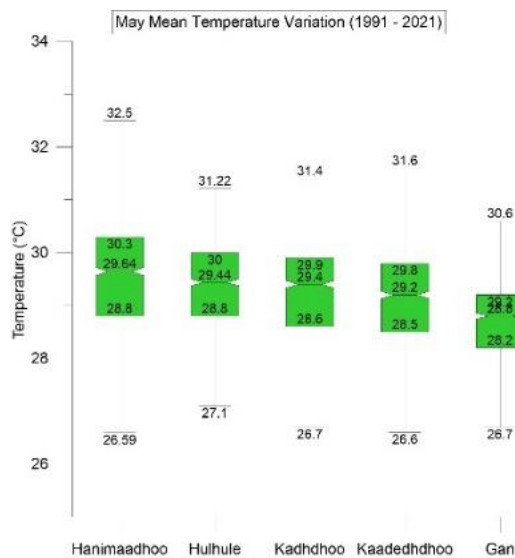


Figure 2: Daily Mean Temperature range at Meteorological stations during May for the period 1991-2021. It shows most (50%) of the times daily average temperature lies between 28.8 - 30.3°C in Hanimaadhoo, 28.8 - 30.0°C in Hulhule, 28.6 - 29.9°C in Kadhdhoo, 28.5 - 29.8°C in Kaadedhdhoo and 28.2 - 29.2°C in Gan.

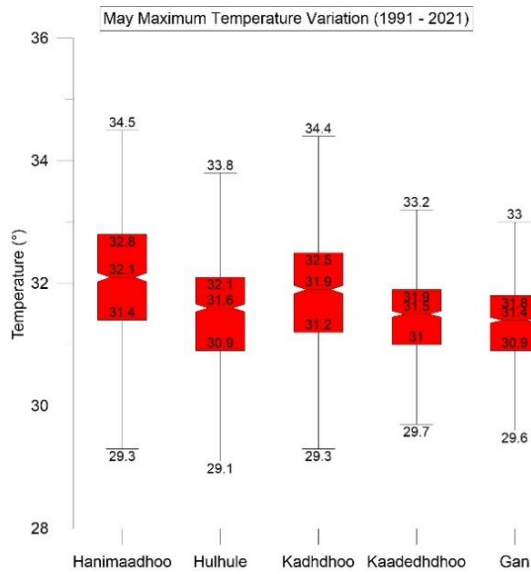


Figure 3: Daily Maximum Temperature range at Meteorological stations during May for the period 1991-2021. Highest maximum Temperature of 34.5 °C recorded at the Hanimaadhoo Meteorological Office.

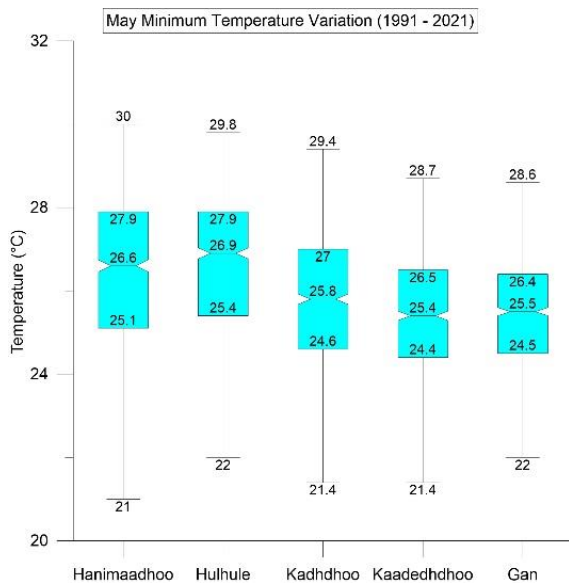


Figure 4: Daily Minimum Temperature range at Meteorological stations during April for the period 1991-2021, showing lowest minimum Temperature of 21.0 °C at the Hanimaadhoo Meteorological Office

Conclusion

By considering the La Niña condition, negative IOD, weak MJO most of the period, Multi-Model Ensemble of WMO Lead Centre forecasts, NMME forecasts, FOCUS forecasts and climate data of Maldives, rainfall is likely to be above-normal over northern-most atolls, normal over part of central atolls and below normal over rest of the country.

Temperature is expected to be normal over northern atolls and slightly above-normal over other areas.

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