





Maldives Meteorological Service

Rainfall and Temperature Outlook over Maldives

For March 2022

Summary

Rainfall is likely to be above 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 peaked and its influence to continue during March-May 2022.

Indian Ocean Dipole (IOD): Current global models indicate neutral IOD value and likely to remain in same condition throughout March 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): Strong pulse of MJO over eastern Indian Ocean has become weak and emerged into Maritime Continent. Most global models favour a weaker signal to







approach Western Hemishphere towards end of March. However, there is high uncertainity of MJO evolution. As the convective envelop moves eastwards, Maldives weather may not have much influence of MJO during this month.

Calibration of climate models

Climate Predictability Tool (CPT) was used to downscale global model outputs to local scale. These results indicate above normal rainfall in northern atolls and part of central atolls, while rest of the country is expected to experience below normal rainfall.

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, below normal rainfall over southern-most atolls and climatological probability over rest of the country during March 2022. Probabilistic Multi-Model Ensemble of WMO LC-LRFMME indicates above-normal Temperature across the country for March 2022.

Climatic condition during the month of March

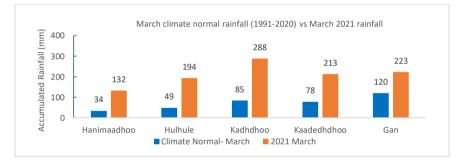


Figure 1- In March 2021, all stations received relatively high amount of rainfall than climate normal rainfall for the month.

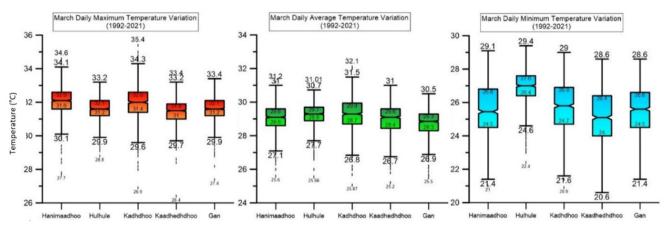


Figure 2(a), (b) & (c) are daily Maximum, Average and Minimum Temperature recorded at Meteorological stations during March for the period 1992-2021, showing Kadhdhoo station with highest maximum and mean Temperatures, while Hulhule station recorded highest minimum Temperature.



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 above 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