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Maldives Meteorological Service



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Rainfall and Temperature Outlook over Maldives

For September 2021

Summary

Rainfall is likely to be above normal in northern atolls, normal in central atolls and below normal in southern atolls during September 2021. Temperature is expected to be slightly above normal during the month.

Introduction

This consensus outlook for Maldives has been developed through assessments including prevailing regional and global climate condition and prediction of various models, seasonal forecast of WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME), NMME Forecasts of Monthly Climate Anomalies and monthly forecasts of European Centre for Medium-Range Weather Forecasts (ECMWF).

El Niño -Southern Oscillation (ENSO): ENSO-neutral condition presents with near-to-below average Equatorial Sea Surface Temperatures across most of the Pacific Ocean. Global models indicate ENSO-neutral condition to prevail during September.

Indian Ocean Dipole (IOD): IOD index is negative and models indicate same condition during the month.

Madden-Julian Oscillation (MJO): MJO index is over Indian Ocean (phase 2) at the beginning of September. Some models indicate eastward propagation with increasing amplitude towards 2nd week and enter into Maritime continent. It is likely over the same region and become weak towards end of the month.

Calibration of climate models

Most models indicate above normal rainfall over the country.

Global Producing Centres and Lead Centre



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Probabilistic Multi-Model Ensemble of WMO Lead Centre for Long Range Forecast Multi-Model Ensemble indicates above normal rainfall over northern-most atolls and climatological probability over rest of the country.

Probabilistic Multi-Model Ensemble of WMO Lead Centre for Long Range Forecast Multi-Model Ensemble indicates above normal Temperature across the country for September 2021.

Climate condition

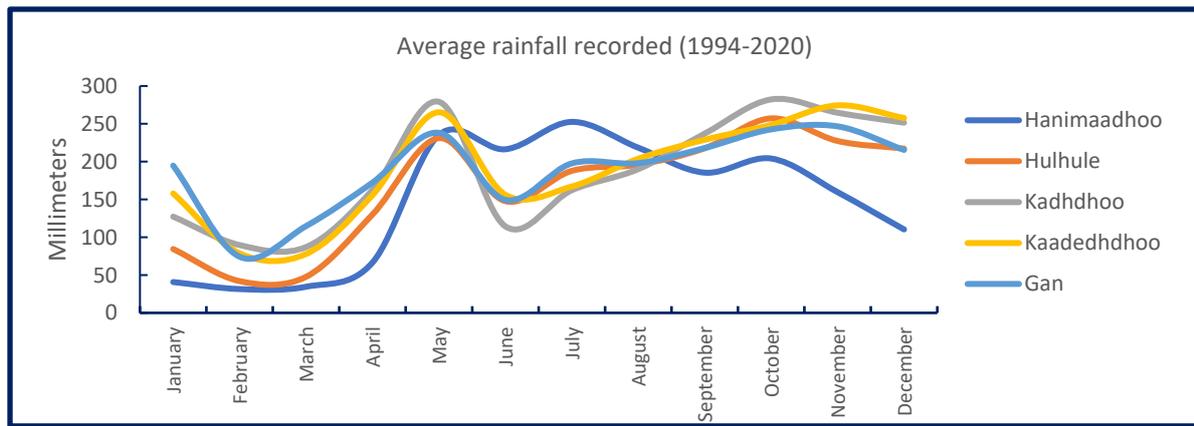


Figure 1- Rainfall has a decreasing trend in northern atolls and increasing trend in centra and southern atolls during September

Long term average rainfall is high southern atolls during Spetember. In 2020 Spetember, southern atolls received relatively less rain than central and northern atolls.

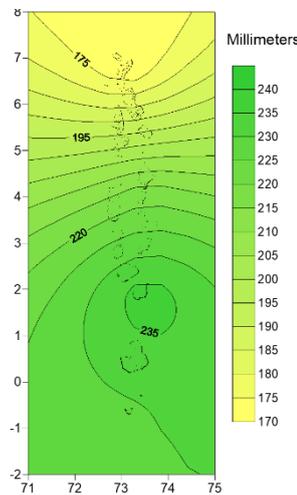


Figure 2- Spatial distribution of rainfall during September (Average 1991-2019)

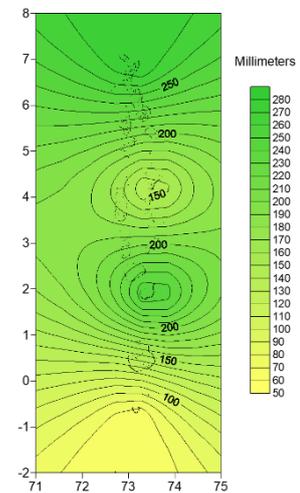


Figure 3- Spatial distribution of rainfall during September (2020).

In September 2020, northern atolls received higher rainfall than rest of the country.



Conclusion

By considering the neutral condition of ENSO and negative IOD, MJO signal over phase 2, Multi-Model Ensemble of WMO Lead Centres, NMME Forecasts and climate data, rainfall is likely to be above normal in northern atolls, normal in central atolls and below normal in southern atolls.

Temperature is likely to be slightly above normal across the country 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.

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