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## Maldives Meteorological Service

### Rainfall Outlook over Maldives

For July 2019

#### Summary

Lower than average rainfall is likely over most parts of the country with chances of above normal in southern-most region during July 2019.

#### Introduction

This consensus rainfall outlook for Maldives has been developed through an expert assessment of the prevailing regional and global climate conditions, seasonal forecast products of WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME) and calibrating climate models.

**El Niño -Southern Oscillation (ENSO):** Weak El Niño is currently prevailing with above average Equatorial sea surface temperatures (SSTs) through most of the Pacific Ocean along with anomalous convection and wind pattern over relevant areas. Some climate models predict a return to ENSO-neutral condition during July.

**Indian Ocean Dipole (IOD):** IOD is currently positive and models indicate continuing in the same condition throughout July.

Observed rainfall over Maldives show that, with positive IOD during July, higher than average rainfall occurs in part of southern atolls while rest of the country receives lower than average rainfall. If IOD is neutral during July, northern atolls and part of southern atolls receive higher than average rainfall while rest of the country receives lower than average rainfall.

**Madden-Julian Oscillation (MJO):** MJO is strengthened over Western Hemisphere (phase 1). Models indicate eastward propagating and emerging over Indian Ocean (phase 2) with high amplitude. However, it is expected to weaken towards latter half of July.

#### Calibration of climate models

Comparing retrospective rainfall forecast from GPCs show lower than average rainfall in northern, central and part of southern atolls.



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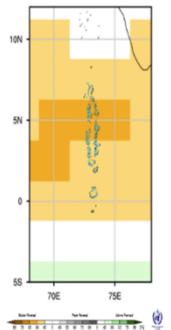
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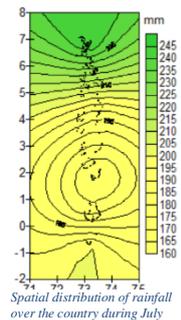


Probabilistic Multi-model  
Ensemble Forecast of  
precipitation for July 2019

Most of the global models indicate below normal rainfall during July over the country with few chances for above normal in southern-most atolls. Additionally, Probabilistic Multi-Model Ensemble of WMO lead centres for long-range climate indicates below-normal rainfall throughout the country during this month.

## Climate condition

During July, rainfall on average accounts for 14%, 09% and 08% of annual rainfall in northern, central and southern atolls respectively. During July, Hdh.Hanimaadhoo area receives relatively higher rainfall than rest of the country.



## Conclusion

By considering the prevailing weak El Niño status, positive IOD condition and expected eastward propagation of MJO over Indian Ocean as well as the dynamical prediction of climate models and calibration of rainfall normal to above normal rainfall likely to receive in southern atolls while rest of the country most likely to receive below normal rainfall during July 2019.

## References

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