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Maldives Meteorological Service

Rainfall Outlook over Maldives

For December 2019

Summary

Above normal rainfall is likely across Maldives during December 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): Across much of the Pacific Ocean, Equatorial Sea Surface Temperatures (SSTs) are near-to-above average with convection and wind pattern signifying ENSO-neutral condition.

Indian Ocean Dipole (IOD): IOD remains positive with lower index value compared to November. Positive IOD likely to prevail throughout December.

Madden-Julian Oscillation (MJO): MJO signal over Western Indian Ocean remain relatively weak during week 1 and increased amplitude during week 2. It is expected slight eastward propagation and move into Maritime Continent with decrease in amplitude by 3rd week.

Calibration of climate models

Calibration of GCM output with station observed rain data suggests above normal rainfall in southern atolls and below normal rainfall in central and northern atolls during December 2019.

Global Producing Centres and Lead Centre

Probabilistic Multi-Model Ensemble of WMO lead centre for long-range climate indicates above normal rainfall throughout Maldives during the month. Most of the individual models suggest above normal rainfall during December 2019.



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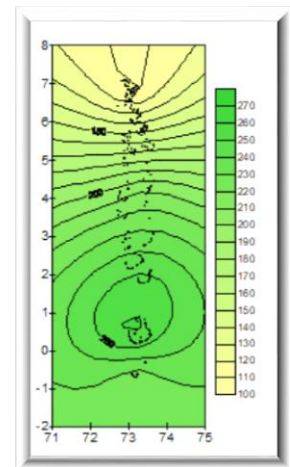
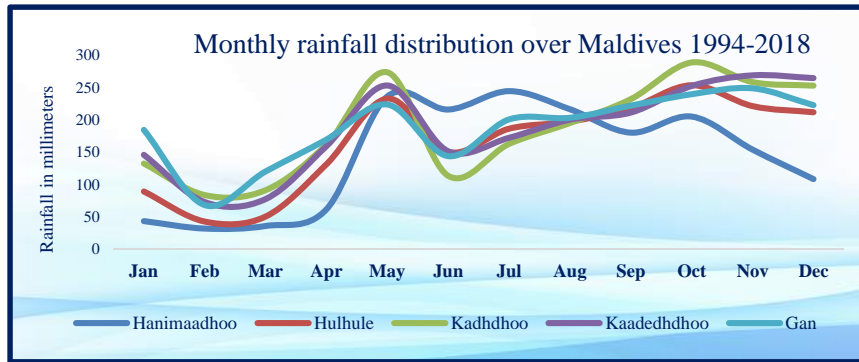


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Climate condition

December is the first month of Northeast monsoon (*Iruvai moosun*). Thus, rainfall amount normally decreases over the country. During December, southern atolls receive relatively higher rainfall than central and northern atolls.



Spatial distribution of rainfall over the country during December

Conclusion

By considering ENSO neutral condition, prevailing positive IOD condition and expected MJO signal over Indian Ocean as well as Multi-Model Ensemble of WMO Lead Centre with individual models, rainfall likely to be above normal over the country during December 2019.

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.

References

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- Climate Prediction Center / NCEP. (2019, December 9). *ENSO: Recent evolution, current status and predictions*. Retrieved from https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf
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