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## Maldives Meteorological Service

### Rainfall Outlook over Maldives For January 2020

#### Summary:

Above normal rainfall is likely in southern and central atolls and Normal rainfall is likely over northern part of the country during January 2020.

#### 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):

Currently ENSO-neutral conditions are present across the Pacific. Equatorial sea surface temperatures (SSTs) are near-to-above average over most of the equatorial Pacific Ocean. The pattern of anomalous convection is generally consistent with ENSO-neutral condition. El Niño–Southern Oscillation (ENSO) is expected to remain neutral during January 2020.

#### Indian Ocean Dipole (IOD):

The persisting positive Indian Ocean Dipole (IOD) continues to weaken, and most of the international climate models indicate the positive IOD will dissipate in January 2020. The rate of current weakening would suggest a return to neutral condition by early January 2020.

#### Madden-Julian Oscillation (MJO):

The MJO index is weak, which is consistent with the generally weak wind and OLR fields. There is evidence of some eastward propagation of MJO with a weak signal. but forecasts suggest it may develop over the tropical western Pacific Ocean in the coming week. However, forecasts indicate the MJO pulse is not expected to become strong and is likely to weaken shortly after it redevelops. This would suggest the MJO may not have a significant influence on tropical rainfall patterns in the coming weeks.



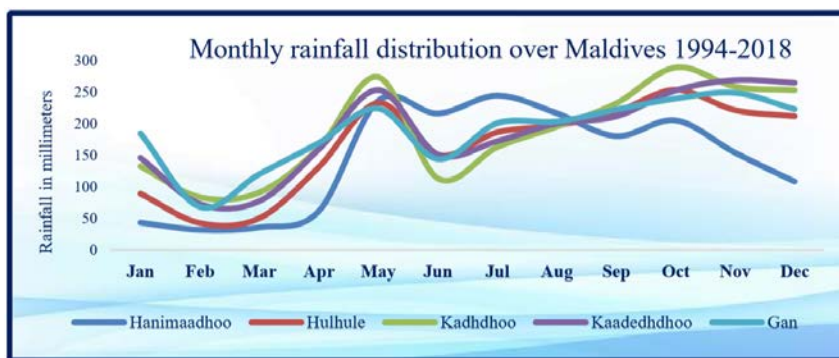


## Global Producing Centers and Lead Centre:

Probabilistic Multi-Model Ensemble of WMO lead centre for long-range climate models indicate Above normal rainfall is most likely in southern and central atolls and Normal rainfall is expected in northern part of the country during January 2020. Majority of the individual models suggest Above Normal Rainfall over southern and central Maldives and Normal to Below normal rainfall in Northern atolls during January 2020.

## Climate condition:

January is the 2<sup>nd</sup> month of Northeast monsoon (Iruvai moosun). Thus, rainfall amount normally decreases over the country. During January, southern atolls receive relatively higher rainfall than central and northern atolls.



## Conclusion:

By considering ENSO neutral condition, prevailing positive IOD condition is expected to be weakened and return to neutral condition by early January 2020. MJO index is weak and most of the models indicate eastward propagation and remain in the western Pacific for coming weeks. This would suggest the MJO may not have a significant influence on tropical rainfall patterns over the Indian Ocean in the coming weeks. Multi-Model Ensemble of WMO Lead Centre with individual models, rainfall is likely to be above normal in southern and central atolls and normal rainfall is likely in the northern part of the country during January 2020.

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:

Bureau of Meteorology, Australia. (2019, December 10). ENSO Wrap-Up current state of the Pacific and Indian Oceans. Retrieved from <http://www.bom.gov.au/climate/enso/#tabs=Indian-Ocean> 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](https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf) Climate Prediction Center / NCEP. (2019, December 9).

Madden-Julian Oscillation: Recent evolution, current status and predictions. Retrieved from [https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/ACHIVE/PDF/mjo\\_evol-status-fcsts-20191209.p](https://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/ACHIVE/PDF/mjo_evol-status-fcsts-20191209.p)

