

Climate Monitoring and Prediction for the Maldives – January 2024

Prepared by Staff at Foundation for Environment, Climate and Technology, Maldives and Sri Lanka and Columbia University

Nipuni Alahakoon, Dilrukshi Kulasooriya, Lareef Zubair, A. Afaaf and Michael Bell

January 29, 2024

PACIFIC SEAS STATE January 19, 2024

As of mid-Jan 2024, El Niño conditions in the central-eastern equatorial Pacific remain strong with key oceanic and atmospheric variables consistent with an ongoing El Niño event. However, the traditional Southern Oscillation Index is in ENSO-neutral range. A CPC El Niño advisory remains in place for January 2024. Almost all the models in the IRI ENSO prediction plume forecast a continuation of the El Niño event during the rest of the boreal winter and spring of 2024, which rapidly weakens thereafter. ENSO-neutral conditions become the most likely category in Apr-Jun, and May-Jul of 2024. For Jun-Aug 2024, no single category stands out as dominant, with ENSO-neutral and La Niña being almost equally likely. By Jul-Sep 2024, La Niña becomes the most probable category, with a likelihood of 58%. (Text Courtesy IRI)

INDIAN OCEAN STATE 2 – 8 Jan, 2024

0.5°C above average SST was observed around the Maldives.

Highlights

Monitored:

In December, central and southern islands received up to 20 mm of rainfall, while remaining islands received less. North-easterly winds prevailed during the month of December over the northern islands of MV.

Predictions:

Continuation of the El Niño condition can be expected until March 2024 and shall weaken to ENSO-neutral thereafter. Seasonal climate predictions predict a near-normal tendency for the entire Maldives from February to April 2024.

Summary

CLIMATOLOGY

Monthly Climatology:

In February, northern islands receive average rainfall less than 50 mm while central islands receive up to 50 mm rain and southern islands receive up to 100 mm of rain. Usually in March, northern and central islands receive rainfall up to 50 mm while southern islands receive up to 100 mm of rain. In April, Southern islands usually receive about 150 mm of rainfall. The wind direction in southern and central islands is westerly and in northern islands, it's northwesterly.

MONITORING

Fortnightly Rainfall Monitoring:

Date	Rainfall		
	Northern Islands	Central Islands	Southern Islands
13 th January	5 mm	10 mm	5 mm
14 th January	-	-	TR
15 th January	TR	-	-
16 th January	5 mm	-	-
17 th January	-	-	-
18 th January	-	-	5 mm
19 th January	TR	-	-
20 th January	-	-	-
21 st January	-	-	-
22 nd January	-	-	TR
23 rd January	TR	-	-
24 th January	-	-	-
25 th January	-	-	-
26 th January	-	-	-
27 th January	-	-	-

TR - Trace Value

Monthly and Seasonal Rainfall Monitoring: In December, central and southern islands received up to 20 mm of rainfall, while northern islands received up to 10 mm.

Monthly Temperature Monitoring:

	Northern Islands	Central Islands	Southern Islands
T Max	32.4°C	32.1°C	32.0°C
T Min	23.0°C	23.5°C	22.0°C

Dekadal Rainfall Estimates

1-10 Jan, Dekadal rainfall estimated as; Northern Islands: 100 mm rainfall
Central Islands: 70 mm rainfall
Southern Islands: 70 mm rainfall

11-20 Jan, Dekadal rainfall estimated as; Northern Islands: 70 mm rainfall
Central Islands: 100 mm rainfall
Southern Islands: 50 mm rainfall

PREDICTIONS

Daily Rainfall Forecast:

Date	Rainfall		
	Northern Islands	Central Islands	Southern Islands
30th January	TR	TR	TR
31st January	TR	40 mm	10 mm
1st February	TR	20 mm	-
2nd February	-	20 mm	TR
3rd February	-	TR	-
4th February	-	10 mm	TR
5th February	TR	10 mm	TR

Biweekly Rainfall Forecast:

NOAA/NCEP GFS model predicts higher probability of below-normal tercile by 50% for the northern and central islands; and 40% for the southern islands between 3rd - 16th February.

Seasonal Rainfall and Temperature Forecast:

Near-normal tercile is probable in the entire Maldives from February-March-April 2024 and seasonal rainfall forecast is higher likelihood of normal range for the Maldives.

MJO Index:

The MJO is predicted by NOAA CPC to be in phases 6 and 7 in the next two weeks (29 Jan – 11 Feb 2024). MJO in phases 6 & 7 is usually suppress the rainfall over the Maldives.

Figures in Annexure

Inside this Issue

- **Rainfall Monitoring**
 - Daily Satellite derived Rainfall Estimates
 - Monthly Rainfall derived from Satellite Rainfall Estimate
 - Monthly and Seasonal Monitoring
- **Ocean Surface Monitoring**
- **Rainfall Predictions**
 - Weekly Predictions from NOAA/NCEP
 - Seasonal Predictions from IRI¹

