

Climate Monitoring and Prediction for the Maldives – April 2023

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PACIFIC SEAS STATE

April 19, 2023

In mid-April 2023, the previous negative SST anomalies in the central-eastern equatorial Pacific weakened further, and the basin is now in an ENSO-neutral state. Key oceanic and atmospheric variables are now consistent with ENSO-neutral conditions. CPC issued an El Niño watch in April 2023, signaling the start of the warm phase of the ENSO. Most models in the IRI ENSO prediction plume forecast SSTs in the El Niño starting from May-Jul, 2023, while the likelihood of the ENSO-neutral state remains low. Going forward the El Niño becomes the dominant category during the entire forecast period with probabilities in the 78-87%. ENSO-neutral is the next most-likely category, with probabilities remaining in the range of 13-20%. (Text Courtesy IRI)

INDIAN OCEAN STATE

April 3, 2023

0.5°C below average SST was observed around the northern Islands & near-neutral around the central and southern islands.

Highlights

Monitored:

During March, the central islands received up to 10 mm of rainfall, while other islands received less. The average cumulative rainfall for the central and southern islands exceeded climatology by 27% and was near-normal for the northern islands.

Predictions:

ENSO-neutral conditions are expected to continue through the Northern Hemisphere spring, followed by a 62% chance of El Niño developing during May-July 2023. Seasonal climate predictions predict a dry and warmer tendency from May to July 2023 for the Maldives.

Summary

CLIMATOLOGY

Monthly Climatology:

In May, average rainfall is about 200 mm in the entire country. The wind direction is westerly and the speed is higher than in April. The rainfall in northern islands usually increases up to 250 mm in June, while it decreases to 150 mm in southern islands. Wind direction in June is usually easterly but with low speeds. In July, the entire country receives up to 200 mm rainfall and the wind speed and direction does not change.

MONITORING

Fortnightly Rainfall Monitoring:

Date	Rainfall		
	Northern Islands	Central Islands	Southern Islands
8 th April	TR	TR	TR
9 th April	TR	TR	-
10 th April	TR	5 mm	TR
11 th April	TR	5 mm	TR
12 th April	TR	5 mm	TR
13 th April	TR	5 mm	10 mm
14 th April	TR	10 mm	5 mm
15 th April	TR	10 mm	TR
16 th April	TR	TR	-
17 th April	TR	TR	-
18 th April	TR	5 mm	-
19 th April	TR	5 mm	10 mm
20 th April	-	10 mm	5 mm
21 st April	TR	TR	TR
22 nd April	TR	TR	TR

TR - Trace Value

Monthly and Seasonal Rainfall Monitoring: In March, the central islands received up to 10 mm of rainfall, while other islands received less than 5 mm.

Monthly Temperature Monitoring:

	Northern Islands	Central Islands	Southern Islands
T Max	30.8°C	31.6°C	30.8°C
T Min	26°C	26.7°C	25.1°C

Dekadal Rainfall Estimates:

1-10 April, Dekadal rainfall estimated as; Northern Islands: 10 mm rainfall
 Central Islands: 10 mm rainfall
 Southern Islands: 10 mm rainfall

11-20 April, Dekadal rainfall estimated as; Northern Islands: 5 mm rainfall
 Central Islands: 20 mm rainfall
 Southern Islands: 20 mm rainfall

PREDICTIONS

Daily Rainfall Forecast:

Date	Rainfall		
	Northern Islands	Central Islands	Southern Islands
25th April	-	20 mm	20 mm
26th April	TR	20 mm	40 mm
27th April	TR	40 mm	20 mm
28th April	10 mm	20 mm	20 mm
29th April	20 mm	10 mm	10 mm
30th April	10 mm	TR	TR
1st May	TR	TR	TR

Biweekly Rainfall Forecast:

NOAA/NCEP GFS model predicts higher probability of above-normal tercile by 50-60% in the southern islands; below-normal tercile by 40% in the northern islands and near-neutral tercile in the central islands between 29th April - 13th May.

Seasonal Rainfall and Temperature Forecast:

Below-normal precipitation tercile is 45% probable in the southern islands; 60% probable in the central islands and 50% is probable in the northern islands from May-June-July 2023 and seasonal rainfall forecast is higher likelihood of near-neutral range.

MJO Index:

The MJO is predicted by NOAA CPC to be in phases 1,2,3,4 & 5 respectively in the next two weeks (25 April – 7 May 2023). MJO in phase 4 & 5 usually suppress the rainfall over the Maldives.

Figures in Annexure

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 - 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

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