Federation for Environment, Climate and Technology

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EXPERIMENTAL CLIMATE MONITORING AND PREDICTION

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HIGHLIGHTS

Rainfall Forecast

- *The NOAA weekly rainfall forecast predicts up to 75 mm in Badulla and Nuwara Eliya districts during 8 - 13 June.*

Monitored Rainfalls

- *Between 30th June - 6th July: up to 30 mm of rainfall was recoreded in Kalutara district on 6th July.*

Monitored Wind

- *From 2 - 9 June: up to 15 km/h, southwesterly winds were experienced by the entire island.*

Monitored Sea Surface

- *1 ^{0}C above average sea surface temperature was observed in the seas around Sri Lanka.*

Monitoring

Rainfall

Weekly Monitoring

Date	Rainfall
30th June	Up to 15 mm in Galle, Matara and Hambantota districts; up to 10 mm in Kalutara, Ratnapura, Monaragala, Batticaloa, Polonnaruwa and Trincomalee districts; and up to 5 mm in Colombo, Ampara, Matale, Anuradhapura and Kilinochchi districts.
1st July	Up to 10 mm in Hambantota district.
2nd July	Up to 15 mm in Vavuniya, Mannar, Anuradhapura, Mullaitivu and Trincomalee districts; up to 10 mm in Puttalam, Kilinochchi, Jaffna, Polonnaruwa, Kalutara, Ratnapura, Galle, Matara and Batticaloa districts; and up to 5 mm in Kurunegala, Kandy, Nuwara Eliya, Badulla, Matale, Colombo, Kegalle, Gampaha and Hambantota districts.
3rd July	Up to 20 mm in Kalutara, Galle, Ampara, and Batticaloa districts; up to 15 mm in Puttalam, Kurunegala, Anuradhapura, Vavuniya, Trincomalee, Polonnaruwa, Kandy, Kegalle, Gampaha, Colombo, Ratnapura, Monaragala, Badulla, Matale, Mannar and

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Date	Rainfall
	Matara districts; and up to 10 mm in Kilinochchi, Mullaitivu, Jaffna, Nuwara Eliya and Hambantota districts.
4th July	Up to 20 mm in Trincoalee, Anuradhapura, Vavuniya and Puttalam districts; up to 15 mm in Kurunegala, Polonnaruwa, Batticaloa and Mullaitivu districts; up to 10 mm in Mannar, Kilinochchi, Jaffna, Gampaha, Matale, Ampara, Monaragala, Kandy, Nuwara Eliya, Badulla and Kegalle districts; and up to 5 mm in Colombo, Kalutara and Ratnapura districts.
5th July	Up to 5 mm in Vavuniya district.
6th July	Up to 30 mm in Kalutara district; up to 10 mm in Colombo, Ratnapura, Galle, Matara, Hambantota, Monaragala and Ampara districts; and up to 5 mm in Mullaitivu, Trincomalee, Vavuniya, Anuradhapura, Batticaloa, Badulla and Nuwara Eliya districts.

Total Rainfall for the Past Week

The RFE 2.0 tool shows total up to 10 – 25 mm in Colombo, Kalutara, Mullaitivu and Vavuniya districts; and up to 5 – 10 mm in Galle, Matara, Hambantota, Ampara, Monaragala, Anuradhapura, Trincomalee and Gampaha districts.

Below rainfall average up to 25-50 mm in Gampaha, Colombo, Kalutara, Galle, Kegalle, Ratnapura and Kandy districts; and up to 10 – 25 mm in Puttalam, Kurunegala, Matale, Kandy, Ampara, Batticaloa, Badulla, Monaragala and Hambantota districts.

Monthly Monitoring

During June – Above average rainfall conditions up to 6 mm were experienced by Vavuniya and Anuradhapura districts; up to 4 mm in Mannar, Kurunegala, Polonnaruwa, Trincomalee, Kegalle, Kandy, Badulla, Ampara, Batticaloa, Monaragala and Hambantota districts and below average rainfall conditions upto 2 mm were experienced by Galle, Matara and Ratnapura districts.

Ocean State *(Text Courtesy IRI)*

Pacific sea state: June 24, 2020

SSTs in the east-central Pacific decreased to near the La Niña threshold in early June, and the atmospheric variables were either ENSO-neutral or indicative of weak La Niña conditions. The average of the forecasts of many models just short of the borderline of weak La Niña SST conditions through fall, becoming slightly weaker beginning in early winter. The official CPC/IRI outlook is somewhat similar to these model forecasts, calling for a likely continuation of ENSO-neutral in summer, with approximately equal chances of ENSO-neutral or La Niña for fall and winter.

Indian Ocean State

1 ^{0}C above average sea surface temperature was observed in the seas around Sri Lanka.

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Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 8nd July – 15th July: Total rainfall up to 35 mm in Colombo, Kegalle and Ratnapura districts; up to 25 mm in Gampaha, Puttalam, Matale, Kurunegala, Kandy, Nuwara Eliya, Badulla, Ampara and Polonnaruwa districts; and up to 15 mm in Anuradhapura, Monaragala, Batticaloa, Matara and Trincomalee districts.

From 16th July – 22nd July: Total rainfall up to 55 mm in Matara, Ratnpura, Hambantota, Nuwara Eliya, Kegalle and Colombo districts; up to 45 mm in Gampaha, Hambantota, Badulla, Kandy, Monaragala and Ampara districts; up to 35 mm in Kandy, Matale, Kurunegala, Batticaloa, Polonnaruwa and Puttalam districts; and up to 25 mm in Vavuniya, Mullaitivu, Trincomalee, Anuradhapura and Jaffna districts.

NOAA Model Forecast:

From 8th July – 13th July: Total rainfall up to 75 mm in Badulla and Nuwara Eliya districts; up to 50 mm in Galle, Colombo, Kalutara, Gampaha, Puttalam, Kurunegala, Kegalle, Ratnapura, Kandy, Matale, Monaragala, Ampara, Batticaloa, Trincomalee, Polonnaruwa, Anuradhapura, Vavuniya, Mullaitivu, Kilinochchi and Jaffna districts.

MJO based OLR predictions

For the next 15 days:

MJO shall significantly enhance rainfall during 9 - 18 July and shall slightly enhance rainfall during 19 - 23 July.

[1] International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

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Weekly Hydro- Meteorological Report for Sri Lanka

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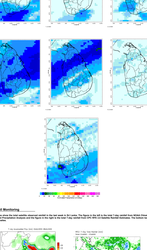
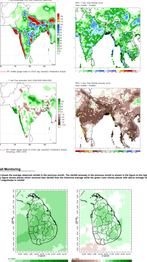
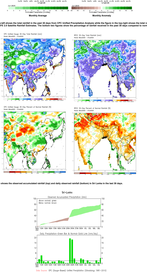
Observations

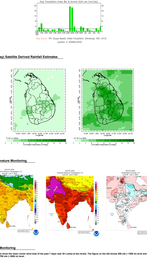
Daily Rainfall Monitoring

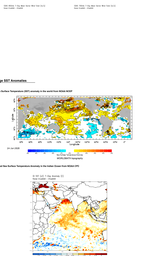
The following figures show the rainfall observed rainfall in the last 7 days in Sri Lanka.





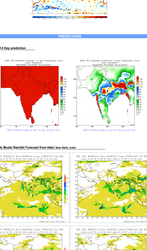


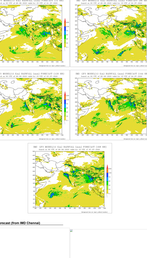




Weekly Rainfall Monitoring

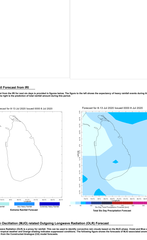
The following figures show the rainfall observed rainfall in the previous week. The rainfall covering in the previous month is shown in the figure to the right. The boxes show the districts having above normal rainfall. Rainfall in the last week (Sunday to Saturday) and the last month (from the last Wednesday to last Tuesday) from the Tropical Rainfall Monitoring (TRMM) satellite. The Global Sea Surface Temperature Anomaly (GSTA) is also shown.

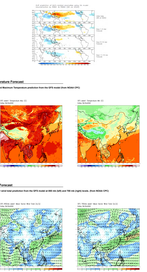




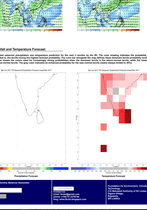
Monthly Rainfall Monitoring

The figure in the top-left shows the rainfall observed in the last month (28 Jan to 27 Feb) Certified Precipitation Analysis, while the figure to the top-right shows the trend rainfall for the last month (Feb) in comparison to the climatology (1961-1990). The figure in the bottom-left shows the rainfall observed in the last month (Feb) in comparison to the climatology (1961-1990). The figure in the bottom-right shows the trend rainfall for the last month (Feb) in comparison to the climatology (1961-1990).





The following figure shows the observed accumulated rainfall (sum) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Detailed (10 Day) Satellite Derived Rainfall Estimates

Weekly Temperature Monitoring

Weekly Wind Monitoring

The following figure shows the wind observed in the last week of the year 1 days over Sri Lanka and sea levels. The figure on the left shows 850 mb (~1500 m) level and the figure on the right shows 200 mb (~12000 m).

Weekly Average SST Anomalies

Weekly average Sea Surface Temperature (SST) anomaly for the Indian Ocean (NOAA OPD)

Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA OPD

Forecasts

NCEP GFS 1 - 14 Day prediction

IMD GFS (T574) Model Rainfall Forecast from IMAH, New Delhi, India

NRF Model Forecast (from IMD Channel)

Weekly Rainfall Forecast from IRI

Total rainfall forecast from the IRI for each six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during three six days periods. The figure to the right shows the probability of rainfall amount exceeding 50 mm.

Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

The Tropical Intraseasonal Oscillation (TISO) is a force by nature. This force acts upon the atmospheric circulation and moves around in the tropical zones. Some cases this shifting of the TISO is known to have a remote and strong influence on the Indian monsoon circulation. The following figure shows the forecasted TISO for the next two weeks and the TISO of the last two weeks.

Weekly Temperature Forecast

Weekly Minimum and Maximum Temperature forecast from NRF model (from IMD Channel) GFS.

Weekly Wind Forecast

Weekly mean zonal wind and pressure from the GFS model at 850 mb (left) and 200 mb (right) levels. (from IMD GFS)

Seasonal Rainfall and Temperature Forecast

Following is the Tropical seasonal precipitation and temperature predictions for the next 3 months by the IRI. The color shading indicates the probability of the most probable tercile. The tercile with the highest probability is the most likely outcome. The probabilities are based on the hindcast skill of the model. Hindcast skill is generally low in the tropics. Regions with low skill are shaded white and should be treated with caution. The tercile with the highest probability is the most likely outcome. The probabilities are based on the hindcast skill of the model. Hindcast skill is generally low in the tropics. Regions with low skill are shaded white and should be treated with caution.

Contact Us for Weekly Forecasts

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