

## Experimental Climate Monitoring and Prediction

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### Highlights

- The IRI weekly rainfall forecast predicts total rainfall up to 200 mm in Badulla and Nuwara Eliya districts during 17 - 22 Oct.
- Between 10 - 16 Oct: up to 100 mm of rainfall was recorded in Anuradhapura district on the 16<sup>th</sup>.
- From 7 - 13 Oct: minimum temperature of 15 °C was recorded from Nuwara Eliya district while most parts of the island recorded a maximum temperature between 30-35 °C.
- From 9 - 15 Oct: up to 18 km/h, westerly winds were experienced by the entire island.

### Monitoring

#### Rainfall

**Weekly Monitoring:** On October 10<sup>th</sup>, Kalutara district received up to 20 mm of rainfall; and Galle district up to 10 mm. On the 11<sup>th</sup>, Mannar and north-western regions of Anuradhapura district received up to 10 mm of rainfall. On the 12<sup>th</sup>, Vavuniya, Anuradhapura and Kandy districts received up to up to 60 mm rainfall; Matara districts up to 20 mm; and most parts of the island up to 10 mm. On the 13<sup>th</sup>, Jaffna, Mullaitivu, Vavuniya and Galle districts received up to 50 mm of rainfall; Anuradhapura, Trincomalee, Ratnapura, Matara and Hambantota districts up to 30 mm; Kilinochchi, Mannar, Puttalam, Polonnaruwa, Matale, Ampara and Monaragala districts up to 20 mm; and most parts of the island up to 10 mm. On the 14<sup>th</sup>, Batticaloa district received up to 50 mm of rainfall; and Trincomalee, Anuradhapura, Polonnaruwa, Matale, Kandy, Badulla, Monaragala and Ampara districts up to 10 mm. On the 15<sup>th</sup>, Jaffna, Kilinochchi, Mullaitivu, Ratnapura and Monaragala districts received up to 20 mm of rainfall; and Anuradhapura, Matara and Hambantota districts up to 10 mm. On the 16<sup>th</sup>, Anuradhapura district received up to 100 mm of rainfall; Puttalam and Kurunegala districts up to 80 mm; Mannar and Vavuniya districts up to 60 mm; Mullaitivu district up to 50 mm; Jaffna, Kilinochchi and Trincomalee districts up to 30 mm; Ampara, Kandy, Nuwara Eliya, Badulla and Monaragala districts up to 20 mm; and most parts of the island up to 10 mm.

**Total Rainfall for the Past Week:** The RFE 2.0 tool shows total rainfall 100-150 mm of total rainfall in Anuradhapura and Vavuniya districts; up to 70-100 mm in Mannar and Kurunegala districts; up to 50-75 mm in Puttalam district; and up to 50 mm in most parts of the island. Above average rainfall up to 50-100 mm is shown for north-western regions of the Anuradhapura district; and up to 25-50 mm in Mannar, Vavuniya, Jaffna, Kilinochchi districts and northern regions of Puttalam, Kurunegala, districts. Below average rainfall up to 50-100 mm is shown for Gampaha, Kegalle, Matale and Badulla districts; up to 25-50 mm for Trincomalee, Batticaloa, Ampara, Monaragala, Kandy, Nuwara Eliya, Ratnapura, Colombo, Kalutaara, Galle, Matara districts and eastern regions of the Anuradhapura district.

**Monthly Monitoring:** During September - above average rainfall conditions up to 210 mm were experienced by Ratnapura, Monaragala, Badulla, Kandy, Anuradhapura districts and north eastern regions of Kurunegala district; and up to 60 mm in Mannar, Vavuniya, Puttalam, Matale, Polonnaruwa, Kalutara, Galle and several regions of Matara and Ampara districts. Mullaitivu, Trincomalee, Batticaloa, Gampaha, Colombo and south western regions of Kurunegala district experienced below average rainfall up to 90 mm. The CPC Unified Precipitation Analysis tool shows up to 300 mm of total rainfall in Ratnapura, Kalutara and Galle districts; and up to 200 mm in Anuradhapura, Kurunegala, Kandy, Nuwara Eliya, Kegalle, Colombo, Matara, Badulla and Monaragala districts.

#### Ocean State (Text Courtesy IRI)

##### **Pacific sea state: October 11, 2018**

While ENSO-neutral conditions prevailed in September, signs of El Niño increased in early October 2018, as east-central tropical Pacific SSTs warmed to slightly above-average levels. A key atmospheric variable, the low level wind anomaly, also showed westerly anomalies in the last two weeks. The subsurface water temperature was above-average, and increased further recently. The official CPC/IRI outlook calls for a 70-75% chance of El Niño development during October/November, continuing through winter 2018-19. An El Niño watch is in effect. The latest forecasts of statistical and dynamical models collectively favor El Niño development during fall, most likely maintaining weak strength through winter; forecasters agree with this scenario.

## **Indian Ocean State**

0.5 °C above average sea surface temperature was observed in the seas around Sri Lanka.

## **Predictions**

### **Rainfall**

#### **14-day prediction:**

##### **NOAA NCEP models:**

From 17<sup>th</sup> – 23<sup>rd</sup> Oct: Total rainfall more than 75 mm in Gampaha, Kegalle, Ratnapura and Galle districts; up to 65-75 mm in Puttalam, Kurunegala, Anuradhapura, Colombo, Kalutara, Matara and Nuwara Eliya districts; up to 45-55 mm in Mannar, Vavuniya, Polonnaruwa, Matale, Kandy and Badulla districts; and up to 35-45 mm in Jaffna, Kilinochchi, Trincomalee, Monaragala and Hambantota districts.

From 24<sup>th</sup> – 30<sup>th</sup> Oct: Total rainfall between 115 mm in Gampaha and Kegalle districts; up to 95-105 mm in Puttalam, Kurunegala, Anuradhapura, Matale, Kandy, Ratnapura and Galle districts; up to 85-95 mm in Mannar, Vavuniya, Kilinochchi, Mullaitivu, Trincomalee, Polonnaruwa, Nuwara Eliya, Badulla and Matara; and up to 75-85 mm in Jaffna, Batticaloa and Monaragala districts.

##### **IMD NCMWRF Forecast:**

19<sup>th</sup> Oct: Up to 160 mm of rainfall in Ampara, Monaragala, Hambantota and Mannar districts; and up to 80 mm in Puttalam, Badulla and Galle districts; and up to 40 mm in Mullaitivu and Matale districts.

20<sup>th</sup> Oct: Up to 160 mm in Matale, Kandy, Puttalam and Ratnapura districts; up to 80 mm in Kegalle, Kurunegala, Nuwara Eliya and Badulla districts; and up to 40 mm in Monaragala and Ampara districts.

##### **IRI Model Forecast:**

From 17 – 22 Oct: Total rainfall up to 200 mm in Badulla and Nuwara Eliya districts; up to 150 mm in Kandy, Monaragala, Polonnaruwa, Matale, Ampara and Ratnapura districts; up to 100 mm in Trincomalee, Batticaloa, Kurunegala, Kegalle, and Hambantota districts; up to 75 mm in Mullaitivu, Vavuniya, Anuradhapura, Gampaha, Colombo, Kalutara, Galle and Matara districts; and up to 50 mm in rest of the island.

### **MJO based OLR predictions**

#### **For the next 15 days:**

MJO shall enhance the rainfall in Sri Lanka in the next 5 days and shall not have an impact in the following 10 days.

<sup>1</sup> 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.

### **FECT BLOG**

Past reports available at <http://fectsl.blogspot.com/> and <http://fectsl.wordpress.com/>

### **FECT WEBSITES**

<http://www.climate.lk> and <http://www.tropicalclimate.org/>



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