FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

Experimental Climate Monitoring and Prediction

(Prepared for the Water Management Secretariat of the Mahaweli Authority)

by: Sewwandhi Chandrasekara, Madhura Weerasekera, , Sanjaya Ratnayake, Zeenas Yahiya, Lareef Zubair and Michael Bell (FECT and IRI[1])

21 June 2012

FECT BLOG

Past reports available at http://fectsl.blogspot.com/

and

http://fectsl.wordpress.com/

FECT WEBSITE

http://www.climate.lk

and

http://www.tropicalclimate.org/

ENSO Update

7 June 2012

Slightly more than half of the ENSO prediction models predict El Nino conditions developing around the July-September season, continuing though the rest of 2012. However 40-45% of the models indicate persistence of ENSO neutral conditions. Currently, no models indicate a re-emergence of La Nina conditions.

(IRI)

Summary[2]

Monitoring

***Weekly Monitoring*:** During last week (13th - 18th June) rainfall ranged between 5 mm - 50 mm. On the 13th & 14th rainfall observed for the Southwestern and Western regions of Sri Lanka. On 17th & 18th entire country received rainfall. However compared to 13th, 14th, 17th & 18th there was no considerable rainfall on 15th & 16th.

***Monthly Monitoring*:** During the month of May some part of Galle, Matara, Ratnapura and Hambantota districts experienced above average rainfall but the surplus is below 30 mm. Below average rainfall was experienced in the rest of the country.

Predictions

***7 Day Prediction*:** For the coming week, an accumulated rainfall of 5 mm - 55 mm is predicted for the Southwestern regions of the island.

IMD WRF Model Forecast & IRI forecast: WRF Model Predicts 1 mm - 65 mm rainfall particularly for the Kalutara district on the 22nd of June. For the same day coastal region between Puttalam to Matara districts shall receive less than 36 mm of rainfall and it shall spread in a reducing pattern for the western coastal belt of the Sri Lanka. On 23rd June, Model Predicts 1 mm - 65 mm rainfall for the same regions with an increased rainfall for the south western parts. However no rainfall is predicted for the rest of the island. IRI models forecast predicts up to 20 mm of rainfall for the entire island.

1 Month Prediction: *Overall* a rapid increase of rainfall shall be observed during the period of 21st-23rd of June. Then it shall decrease gradually till the 7th July with minor fluctuation during 30th June - 6th July. There onwards it shall increase gradually. *Western slopes*- Nearly the same pattern shall be expected with and Increased rainfall. During 21st-23rd rainfall shall drastically increase and it shall decrease gradually till 7th July with minor fluctuations during 25th-27th June & 30th June - 3rd July. Thereafter it shall increase gradually. *Eastern slopes*- During 21st June - 5th July rainfall shall gradually decrease with fluctuations. Thereafter rainfall shall increase drastically. *Northern region*- Rainfall shall increase during 21st-22nd June. Rainfall shall decrease with a same rate as previous till 27th June and further, rainfall shall decrease gradually till 3rd July. Thereafter rainfall shall increase gradually with the low rate of increasing.

***Seasonal Prediction*:** As per IRI Multi Model Probability Forecast for June 2012 to August 2012, issued in May 2012, there is a 45%-50% probability for temperature to be above normal for the country. There is 40% probability for rainfall to be climatological.

Inside this Issue

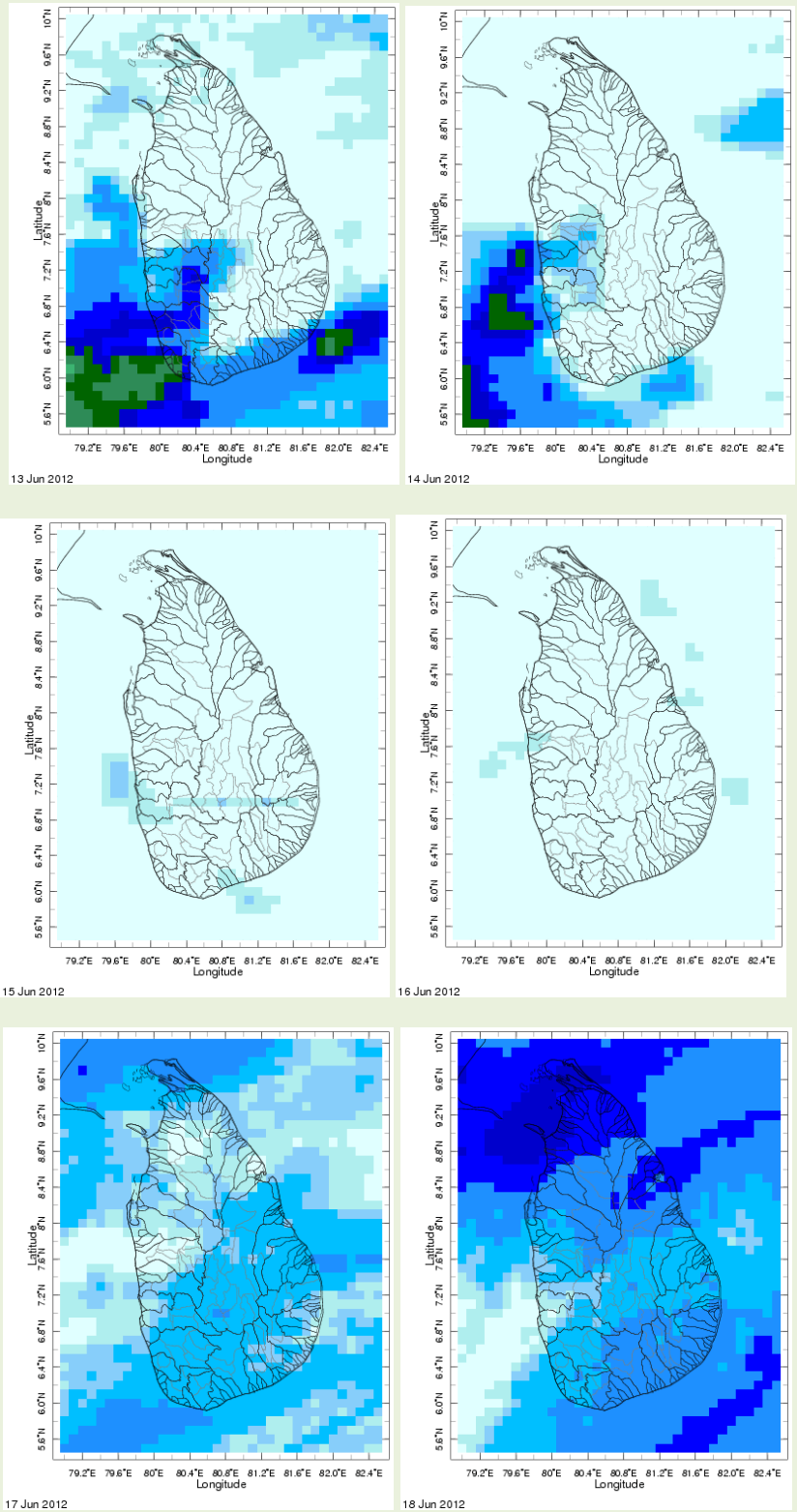
[1] International Research Institute for Climate and Society.

[2] These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL. Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority,
Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

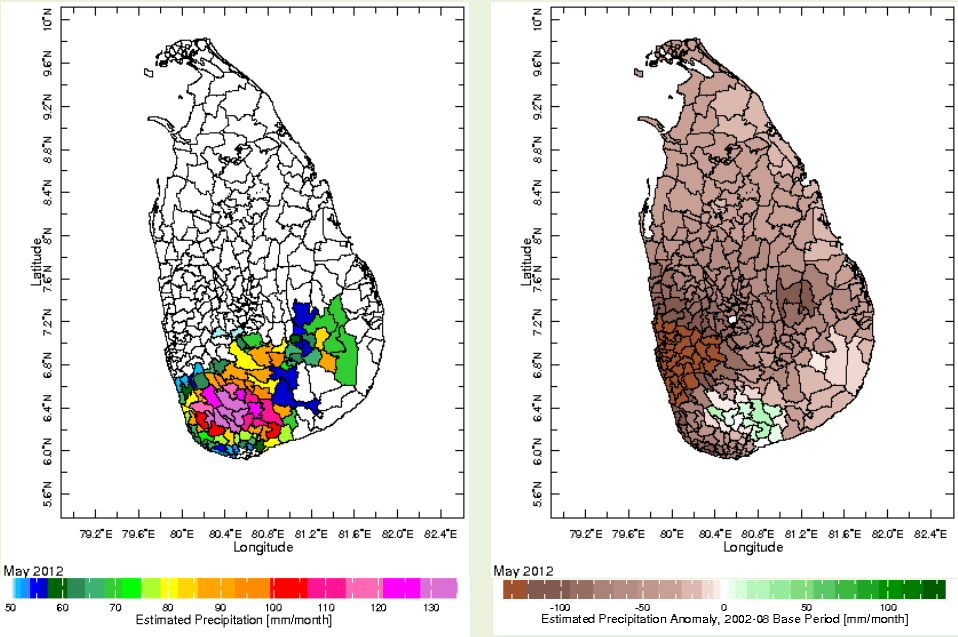
1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: *13th–18th June, 2012 (Left-Right, Top-Bottom)*

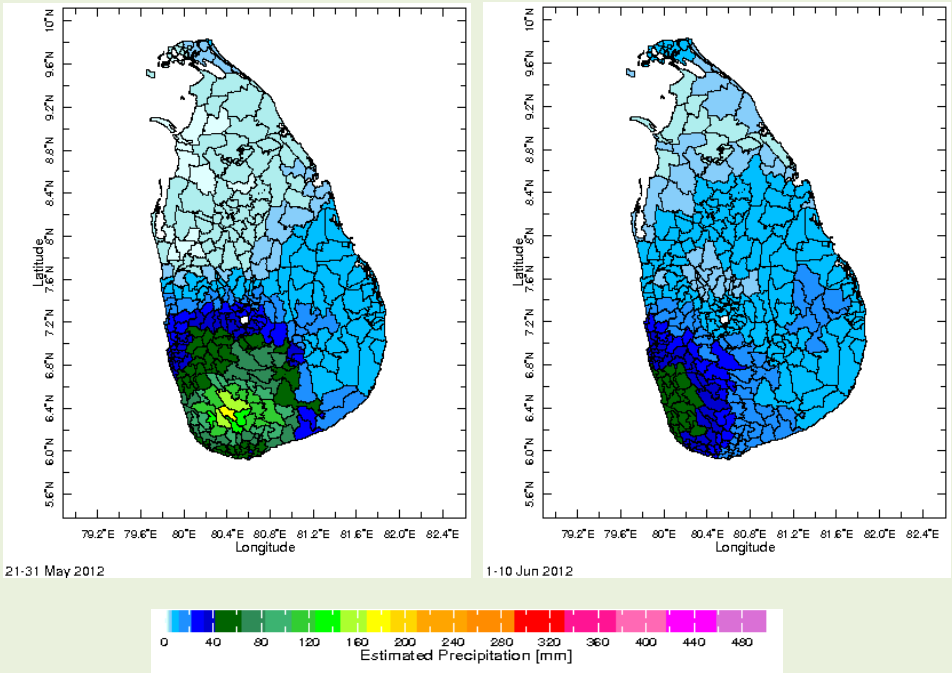


FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

b) Monthly Satellite Derived Rain fall Estimates for May 2012 (Total – Left and Anomaly -Right)

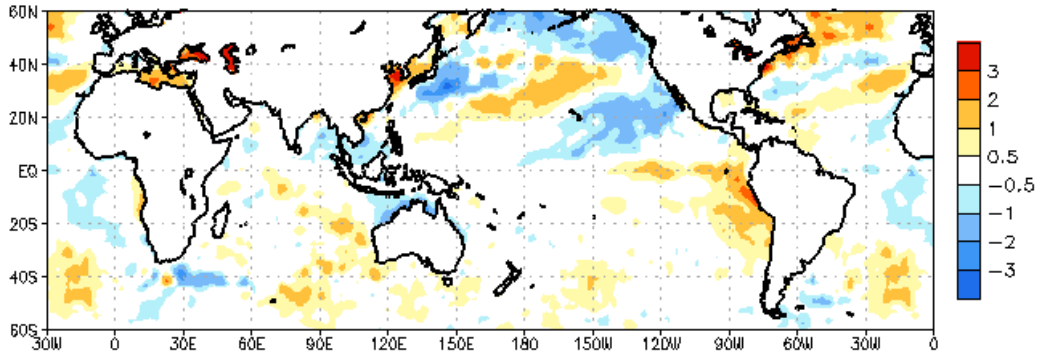


c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (21-31 May & 01-10 June, 2012)



FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

d) Weekly Average SST Anomalies

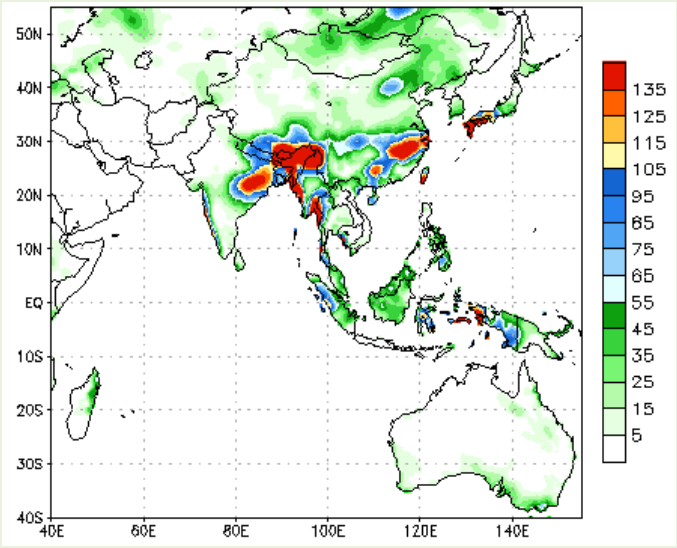


Weekly Average SST Anomalies (^{0}C), 13th June, 2012

Data Source: NCEP Global Sea Surface Temperature Analysis (Climatology 1981-2010)

2. Predictions

a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



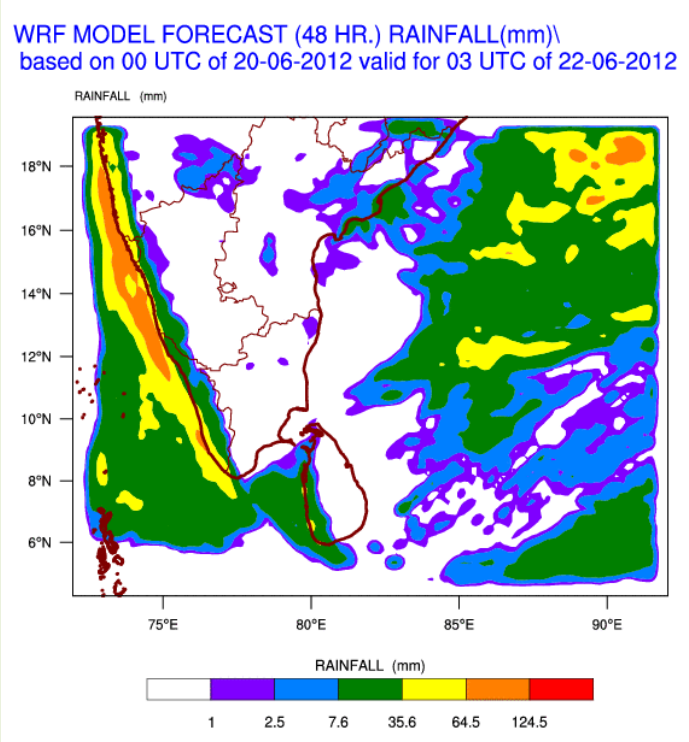
During next week, an accumulated rainfall of 5 mm - 55 mm is predicted for the southwestern regions of the island.

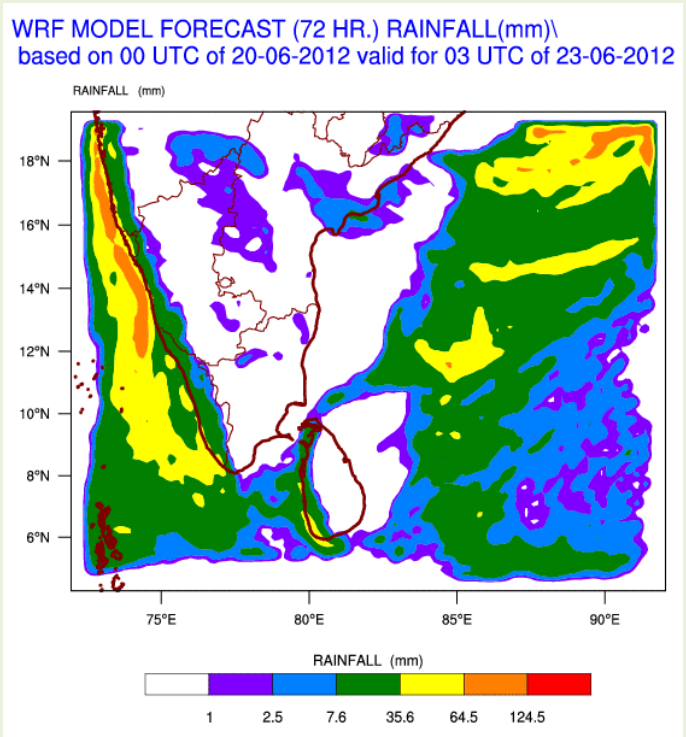
Source – NOAA Climate Prediction Center

Map: Predicted accumulation of rainfall. (20th– 26th June, 2012 week)

FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

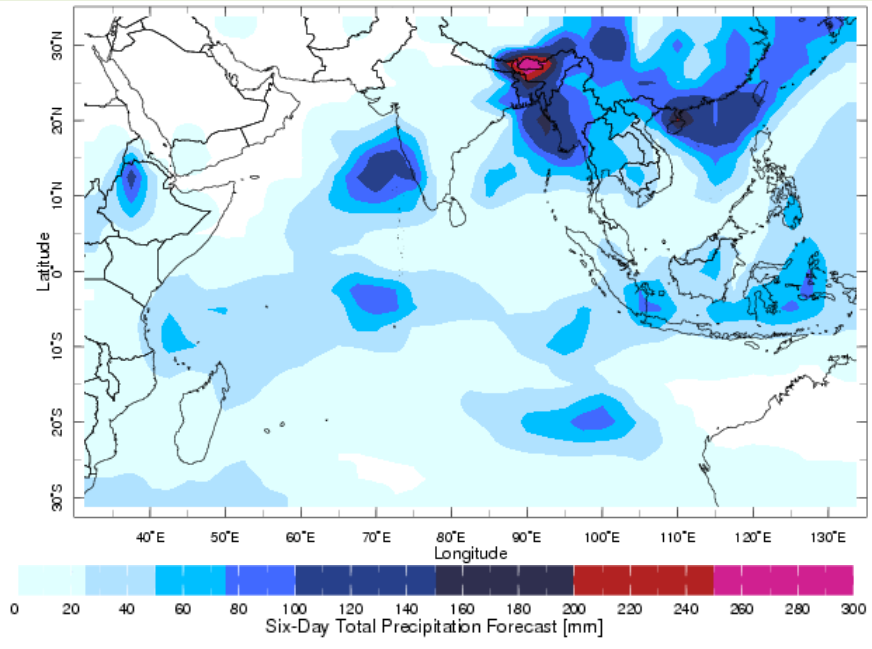
b) WRF Model Forecast **(Regional Meteorological Center, Chennai, Indian Meteorological Department)**





FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

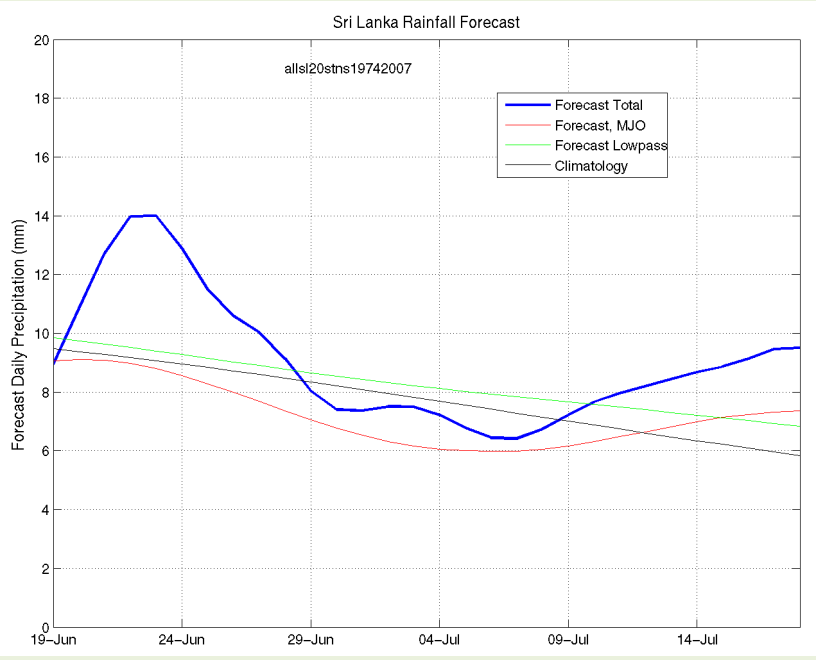
c) Weekly Precipitation Forecast for 19 -24 June 2012 (Precipitation Forecast in Context Map Tool, IRI)



d) 1 month experimental predictions by Paul Roundy and L. Zubair

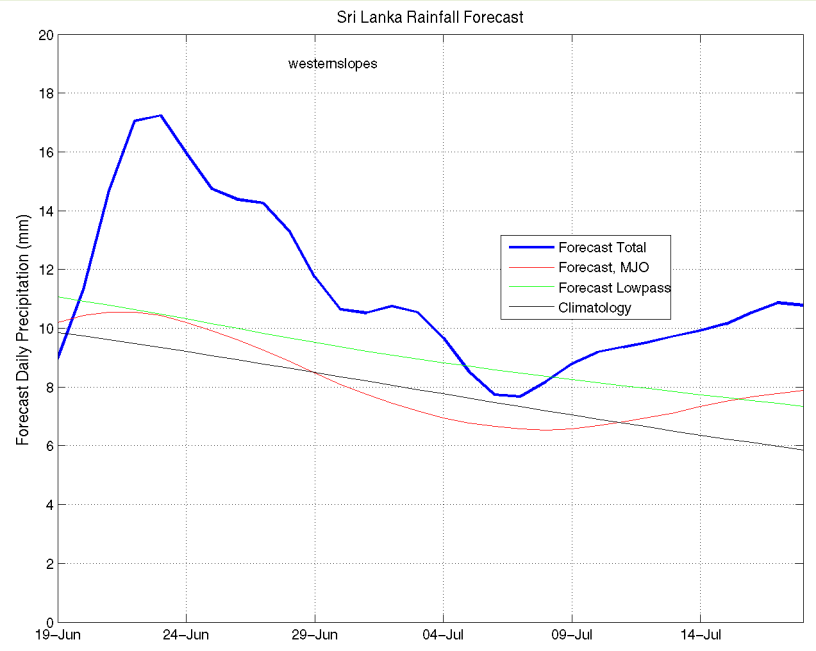
Predictions based on observed cloud cover and atmospheric waves. Issued 21st June, 2012

All Sri Lanka (Rainfall Scale from 0-20 mm/day)

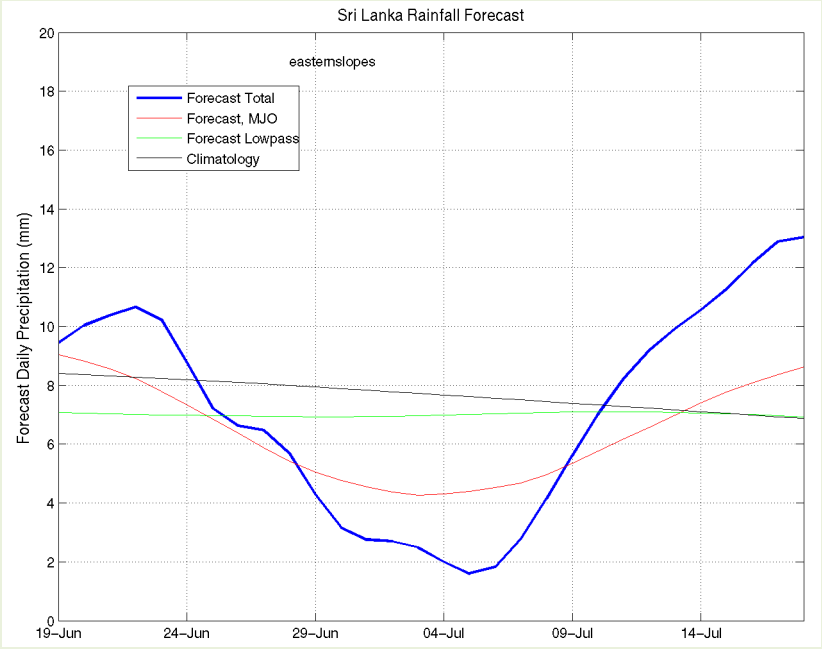


FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

Western Slopes (Rainfall Scale from 0-20 mm/day)

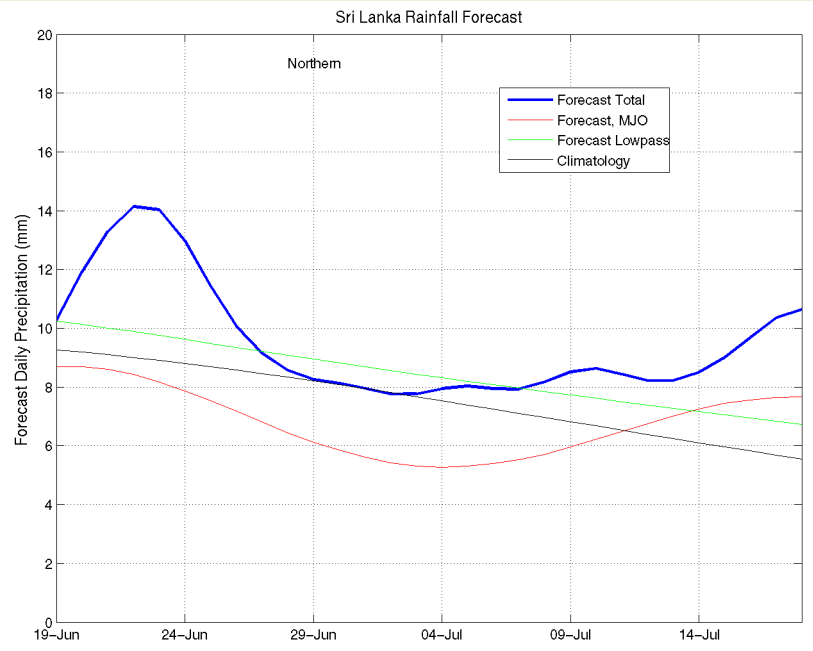


Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority,
Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

Northern Region (Rainfall Scale- from 0-20 mm/day)



FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority,
Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

e) Seasonal Rainfall and Temperature Predictions from IRI