Week of
4 - 11 March
2022

CLIMATE MONITORING AND PREDICTION FOR SRI LANKA

HIGHLIGHTS

Rainfall Prediction

- *Above 100mm Heavy rainfall is predicted for Northern, Eastern and North Central provinces from 3rd – 9th Mar.*

Monitored Rainfalls

- *Heavy rainfall was experienced in the North Central province with a max of 142.6 mm in Polonnaruwa on 23rd Feb while the other provinces received less.*

Monitored Wind

- *From 23th Feb - 1nd Mar, up to 8m/s Northeasterlies were experienced over the island.*

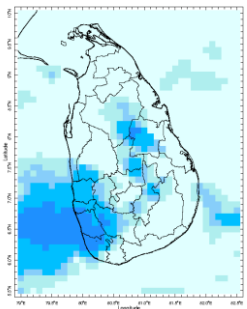
Monitored Sea Surface

- *Sea surface temperatures were 0.5^{0}C above normal to the Southern and Eastern while neutral around the rest of the island.*

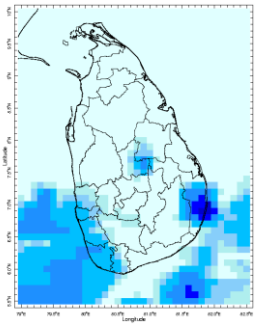
Monitoring

Rainfall

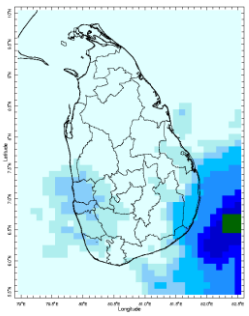
Daily Estimates for Rainfall from 23rd February – 2nd March 2022



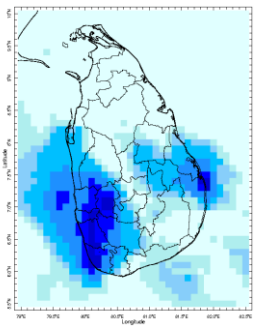
23 February



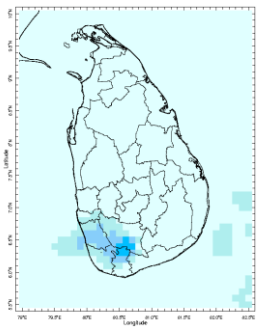
24 February



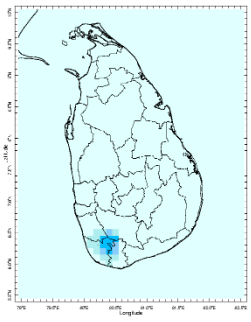
25 February



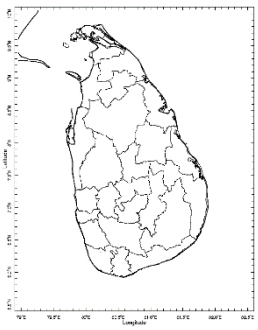
26 February



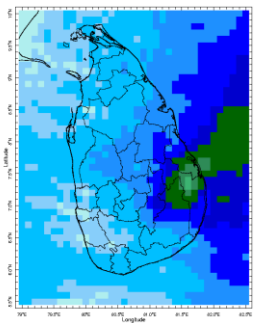
27 February



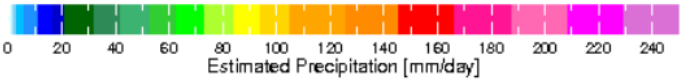
28 February



1 March



2 March



Federation for Environment, Climate & Technology

Federation for Environment, Climate and Technology

c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, (+94) 81-2300415
Web Site: www.fect.lk E mail: info@fect.lk LI: www.linkedin.com/in/fectlk
FB: www.facebook.com/fectlk TW: www.twitter.com/fectlk

Ocean State *(Text Courtesy IRI)*

Pacific sea state: February 23, 2022

Equatorial sea surface temperatures (SSTs) are below average across the East Central and Eastern Pacific Ocean in late-February. A large majority of the models indicate La Niña to prevail (with Negative Indian Ocean Dipole) through Northern Hemisphere spring 2022. A transition to ENSO-neutral is expected in May-July 2022.

Indian Ocean State

Sea surface temperatures were 0.5^0C above normal to the Southern and Eastern while neutral around the rest of the island.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 3rd – 9th March:

Total rainfall by Provinces:

Rainfall	Provinces
125 mm	Northern
115 mm	Eastern
105 mm	North Central
95 mm	Central
85 mm	North Western
65 mm	Uva
45 mm	Western, Sabaragamuwa
25 mm	Southern

From 10th – 16th March:

Total rainfall by Provinces:

Rainfall	Provinces
95 mm	Central
85 mm	North Western
65 mm	Eastern, North Central
55 mm	Uva, Sabaragamuwa
45 mm	Western, Southern
35 mm	Northern

MJO based OLR predictions

For the next 15 days:

MJO shall be active from 3rd – 17th March, giving slightly enhanced rainfall from 3rd – 12th March; and neutral during 13th – 17th March for the entire island.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been heavy rainfall over the following province: North Central.

Wind: Northeasterly winds prevailed in the sea area surrounding the island last week.

Temperatures: The temperature anomalies were near-neutral for the rest of the country, driven by the warm SST's.

Predictions

Rainfall: During the next week (3rd – 9th March) fairly heavy rainfall is predicted for Eastern, Northern and North Central provinces.

Temperatures: The temperature remains slightly above normal in the North Western and Uva province during 5th – 13th March.

Teleconnections:

La Nina - The SST forecast indicates that La Niña is prevailing (with Negative Indian Ocean Dipole) through the Northern Hemisphere spring.

MJO shall be active from 3rd – 17th March, giving slightly enhanced rainfall from 3rd – 12th March; and neutral during 13th – 17th March for the entire island.

Seasonal Precipitation:

The precipitation forecast for the March-April-May season shows above-normal precipitation for the Northern and neutral the rest of the Island.

Terminology for Rainfall Ranges

	Rainfall (During 24 hours of period)
Light Showers	Less than 12.5 mm
Light to Moderate	Between 12.5 mm and 25 mm
Moderate	Between 25 mm and 50 mm
Fairly Heavy	Between 50 mm and 100 mm
Heavy	Between 100 mm and 150 mm
Very Heavy	More than 150 mm

Tropical Climate Guarantee, Federation of Environment, Climate and Technology, Columbia University Water Center, [1] International Research Institute for Climate and Society, , Earth Institute at Columbia University, New York.

Federation for Environment, Climate & Technology

FEDERATION FOR ENVIRONMENT, CLIMATE AND TECHNOLOGY

www.fect.lk www.climate.lk

Weekly Climate Bulletin for Sri Lanka

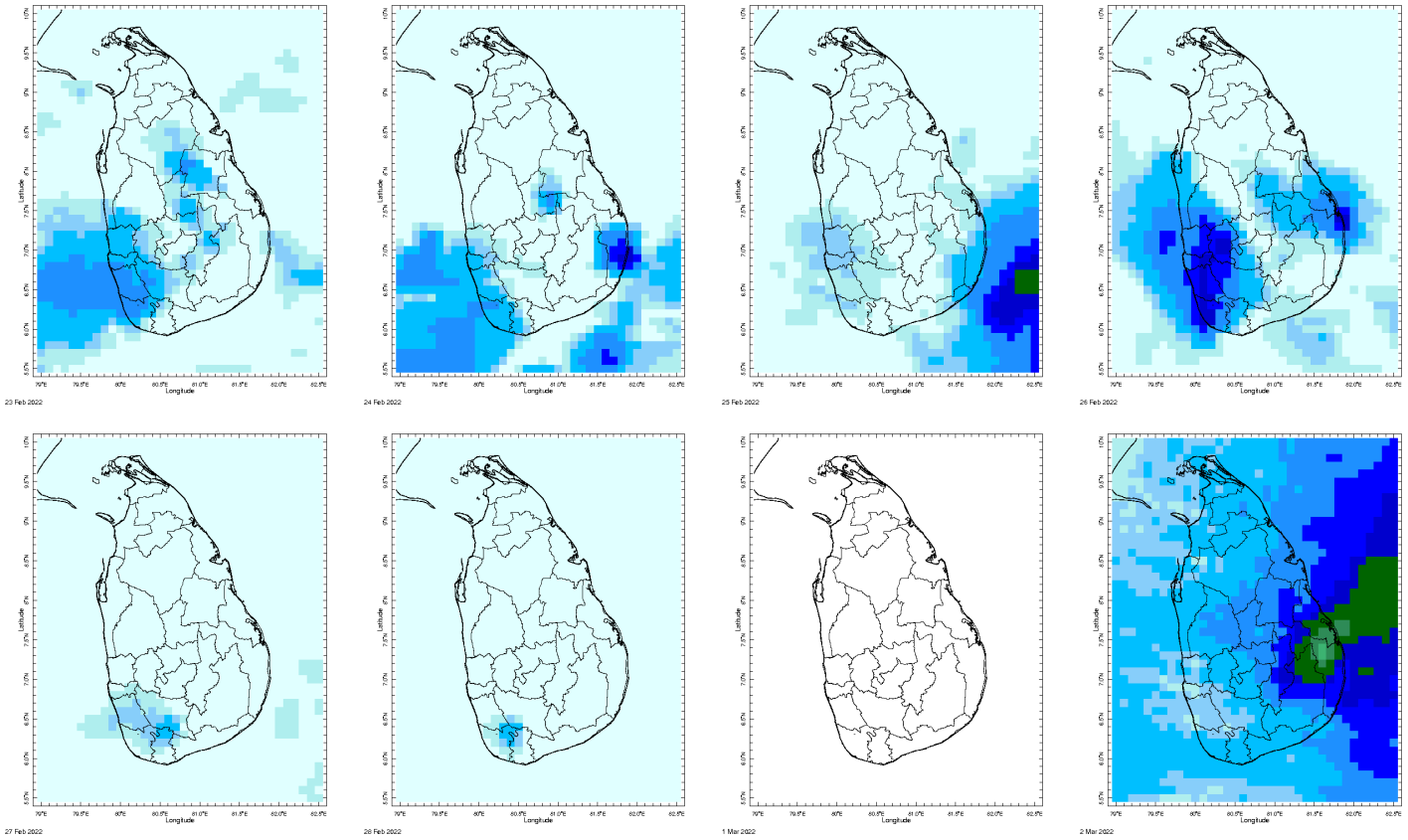
Inside This Issue

Download

MONITORING

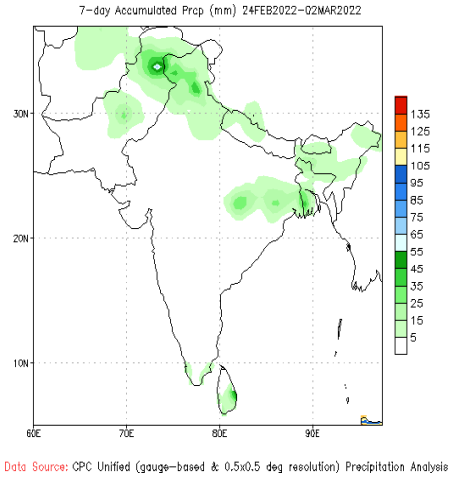
Daily Rainfall Monitoring

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

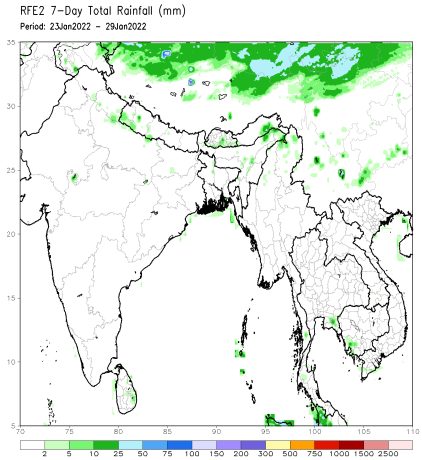


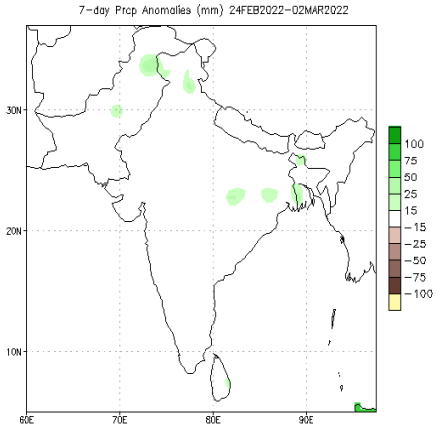
Weekly Rainfall Monitoring

The following figures show the total satellite observed rainfall in the last week in Sri Lanka. The figure in the left is the total 7-day rainfall from NOAA Climate Prediction Center (CPC) Unified Precipitation Analysis and the figure in the right is the total 7-day rainfall from CPC RFE 2.0 Satellite Rainfall Estimates. The bottom two figures are the respective anomalies.

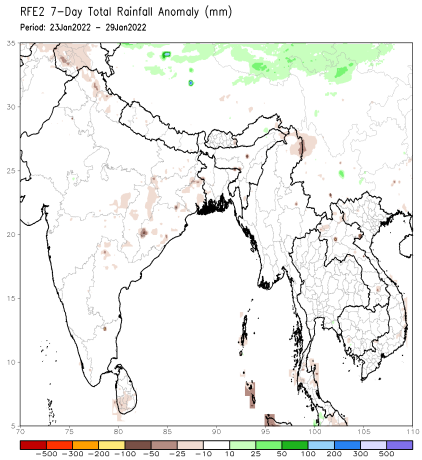


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis



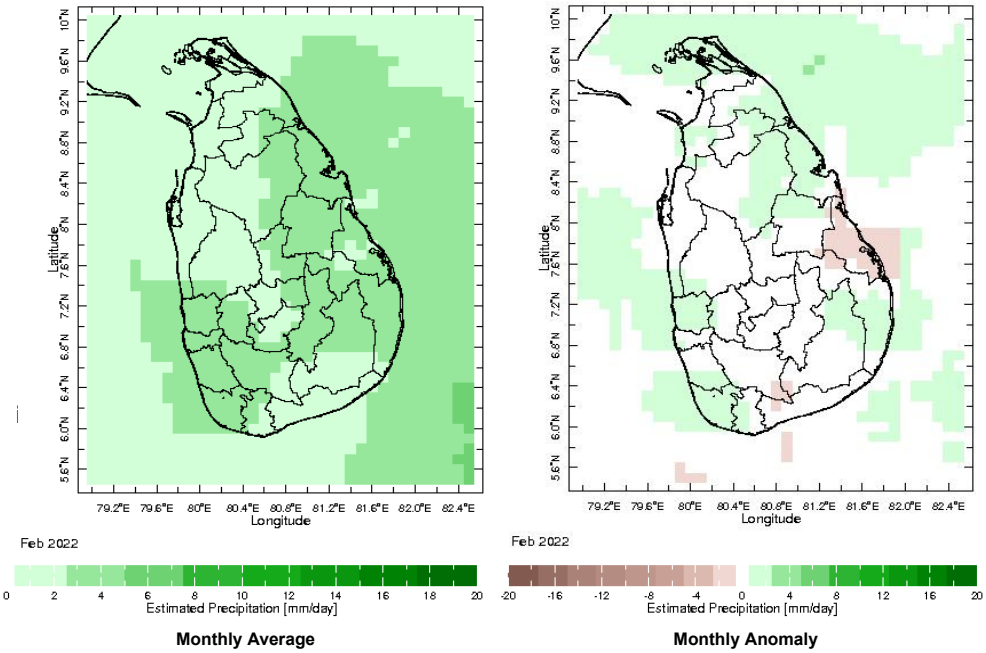


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis
Climatology (1991-2020)



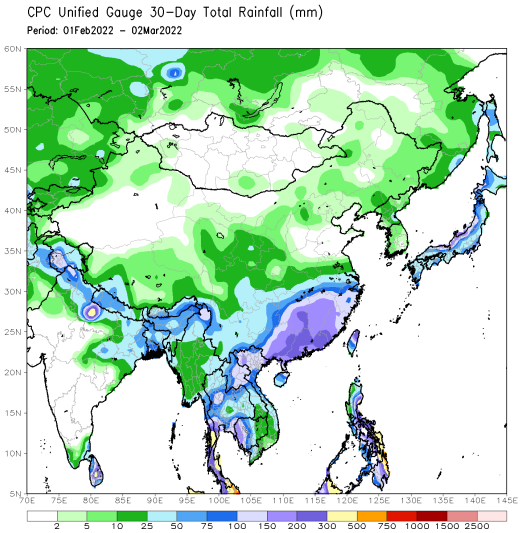
Monthly Rainfall Monitoring

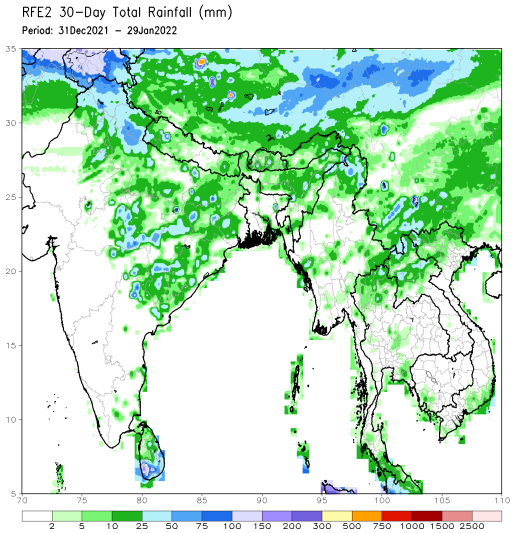
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places with above average rainfall. Darker shades show higher magnitudes in rainfall

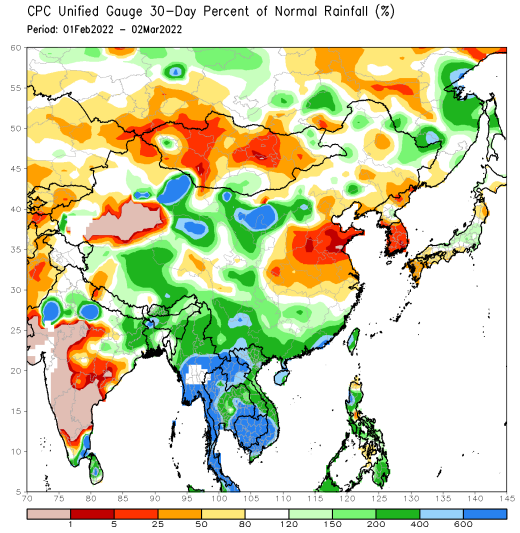


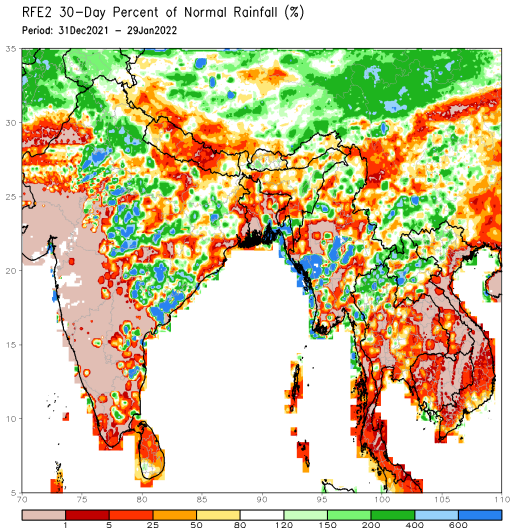
Monthly Average **Monthly Anomaly**

The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in the past 30 days compared to normal rainfall in this period.

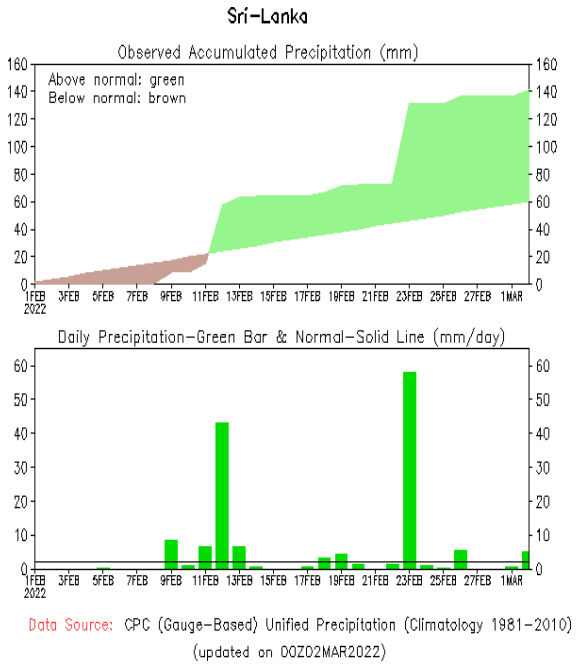




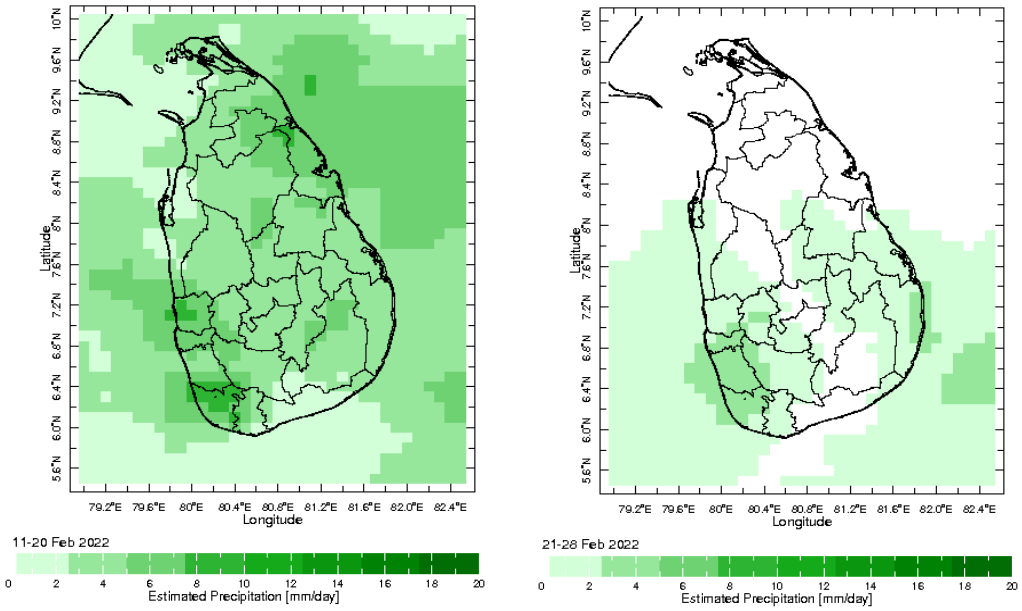




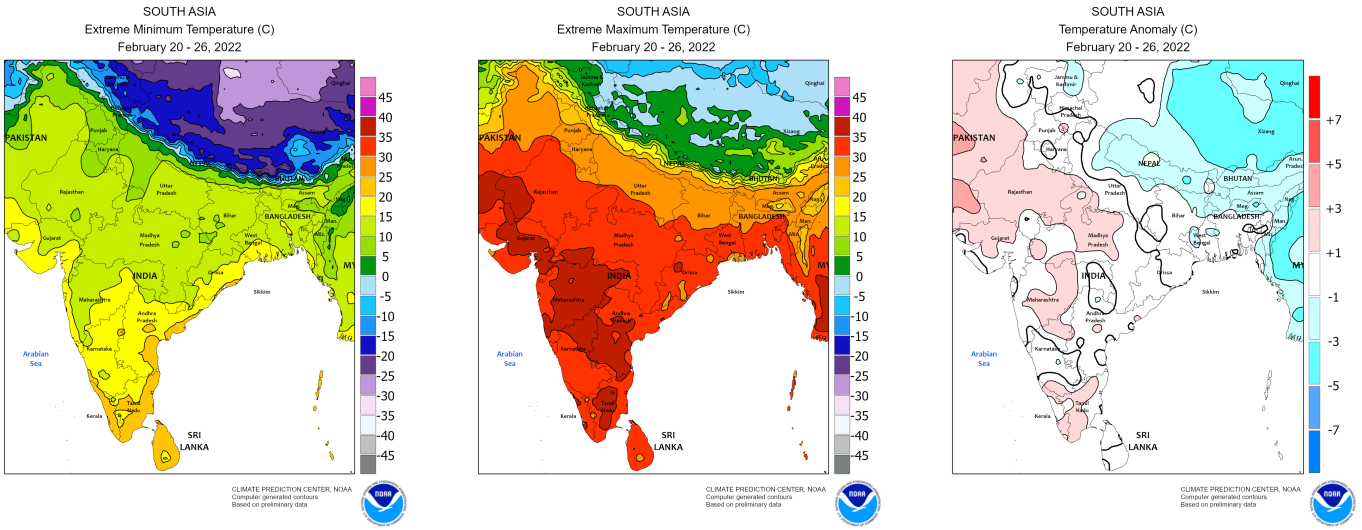
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

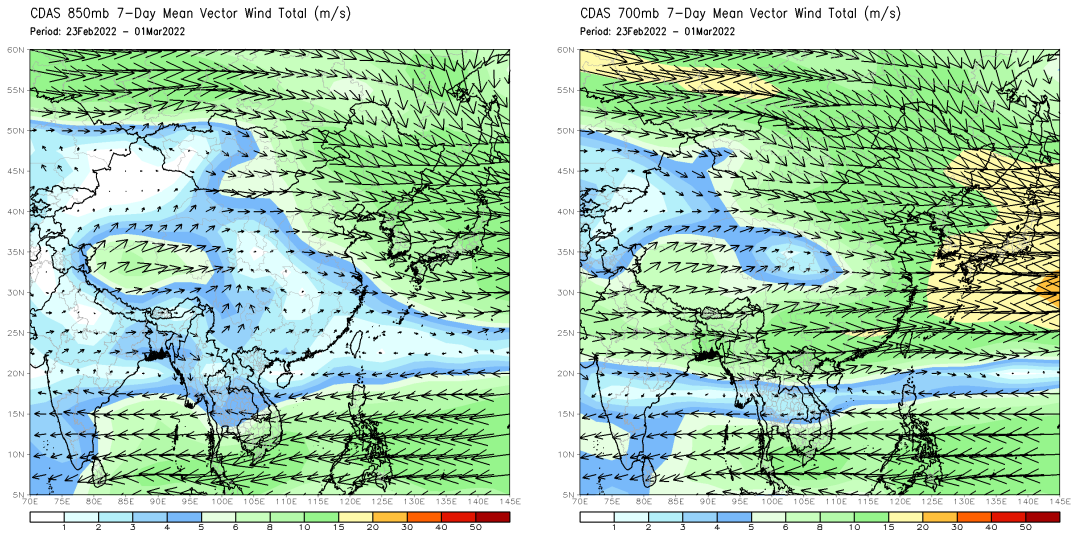


Weekly Temperature Monitoring



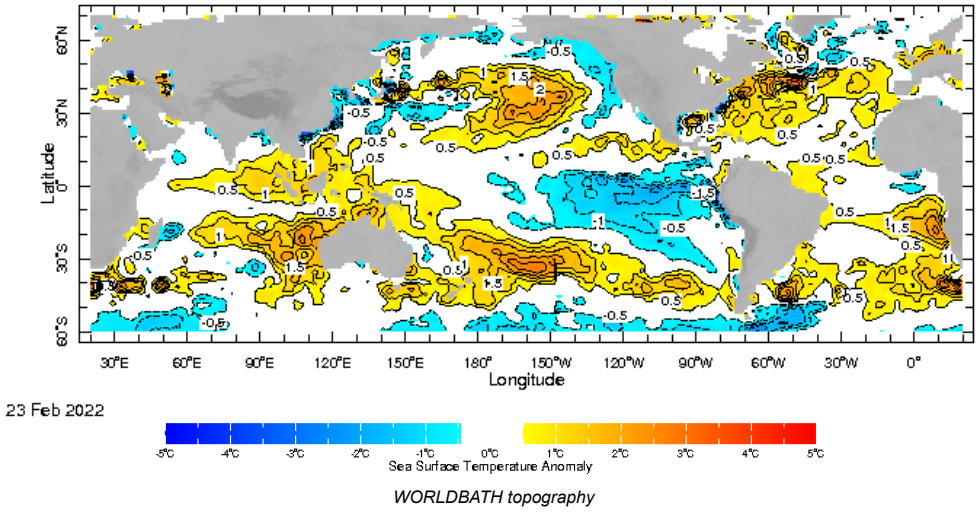
Weekly Wind Monitoring

The following figures show the mean vector wind total of the past 7 days near Sri Lanka at two levels. The figure on the left shows 850 mb (~1500 m) level and the figure on the right shows 700 mb (~3000 m) level.

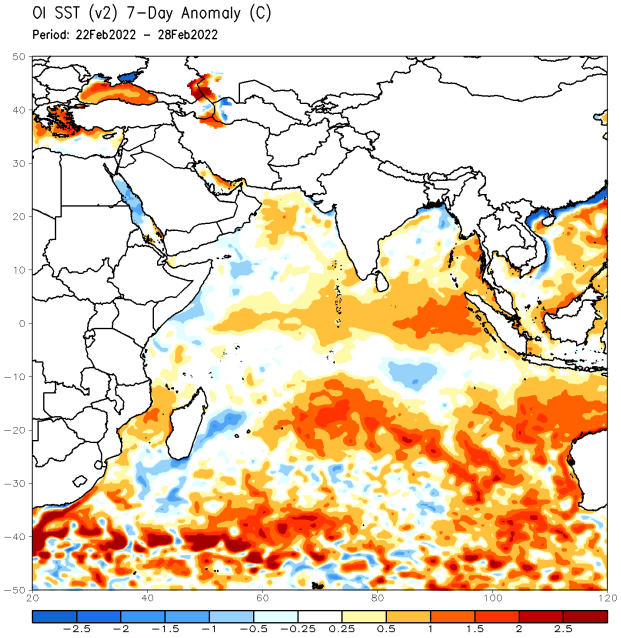


Weekly Average SST Anomalies

Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP

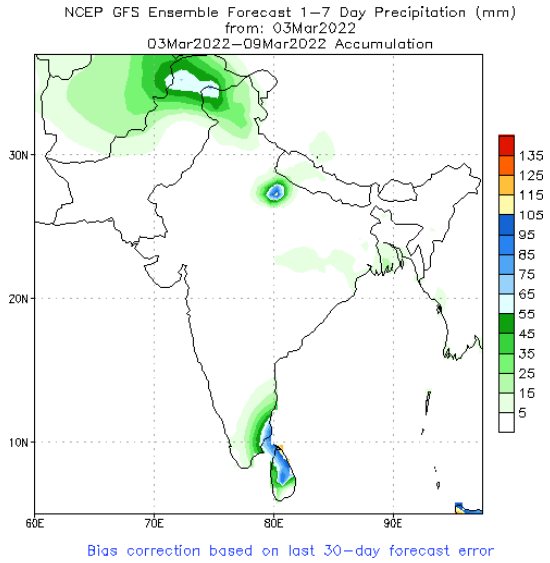


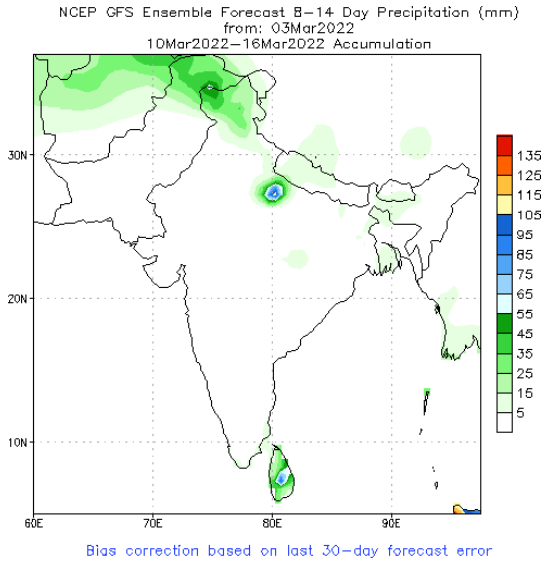
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



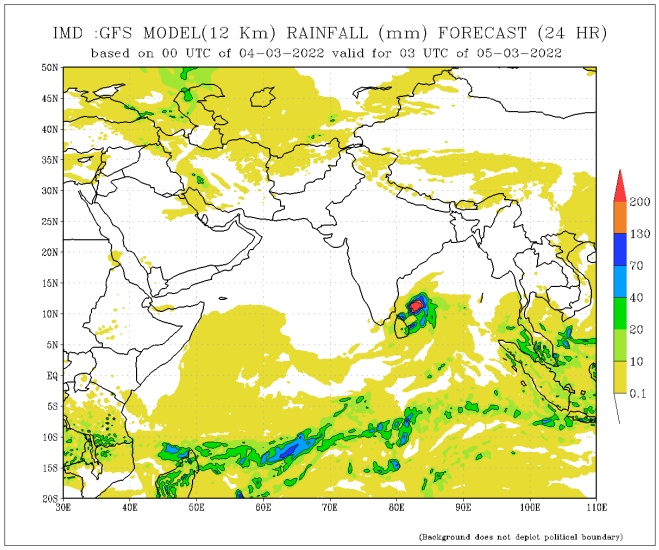
PREDICTIONS

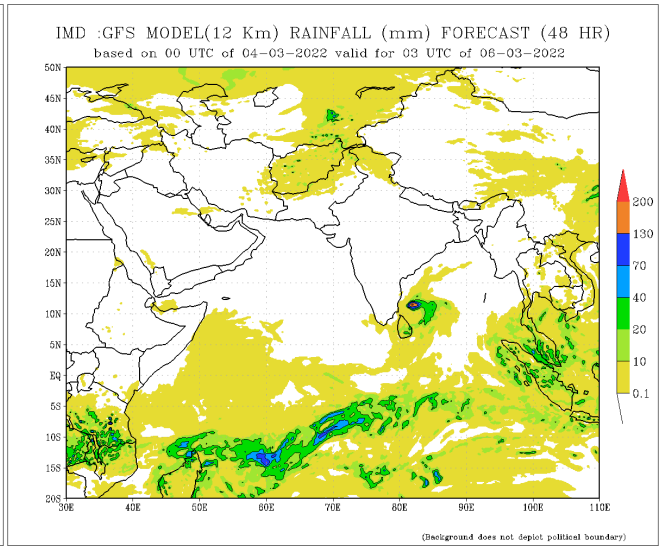
NCEP GFS 1- 14 Day prediction

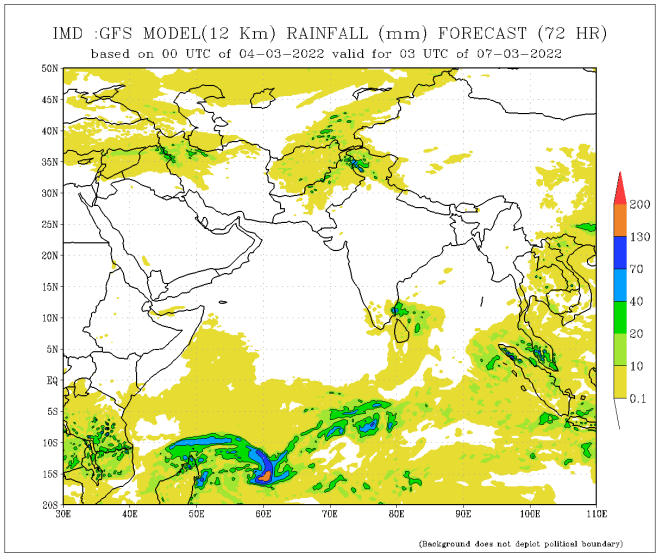


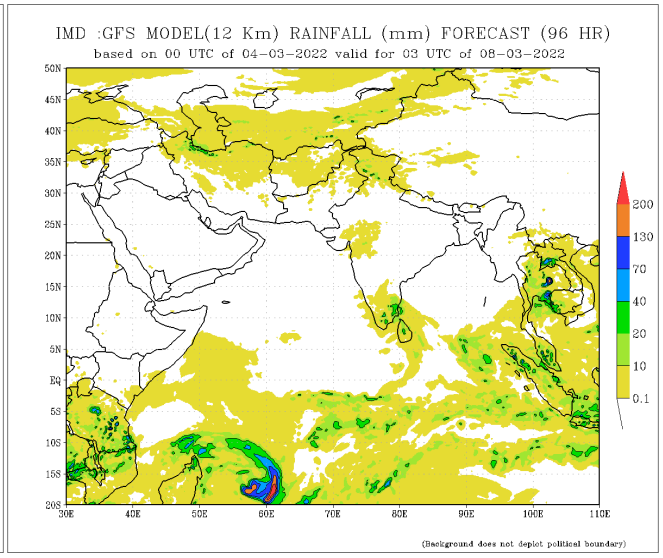


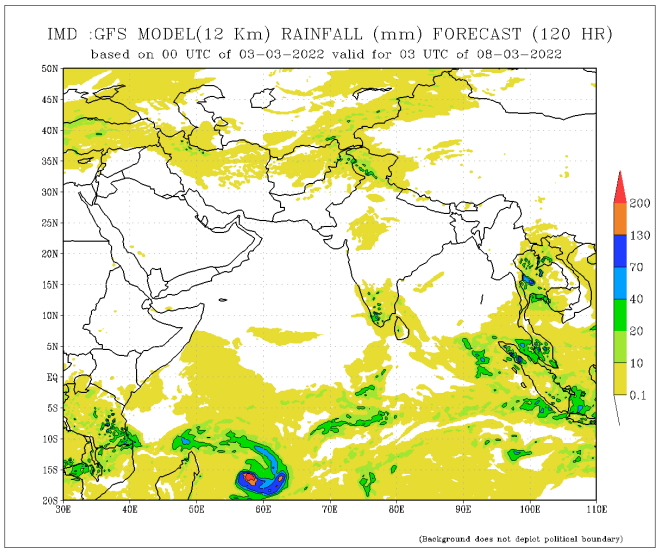
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India

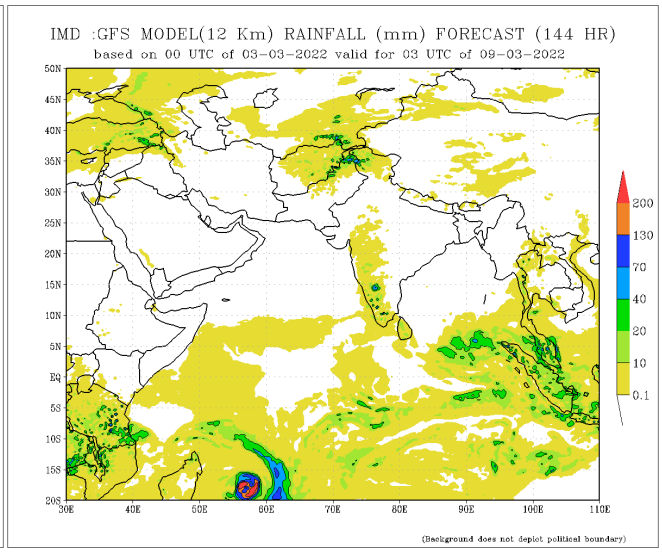


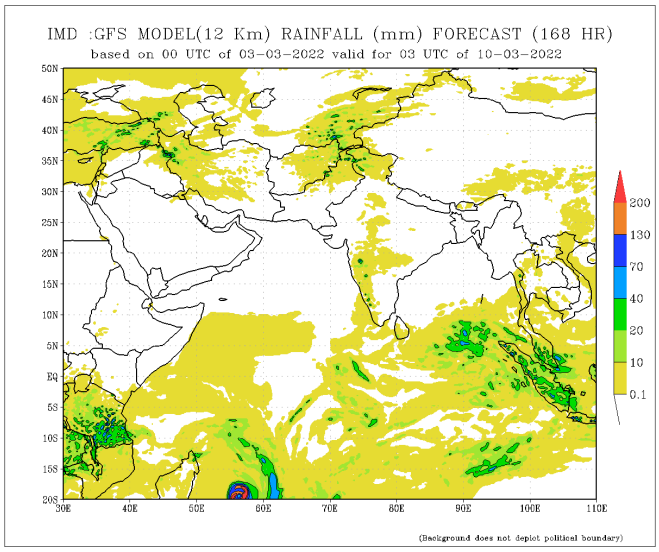






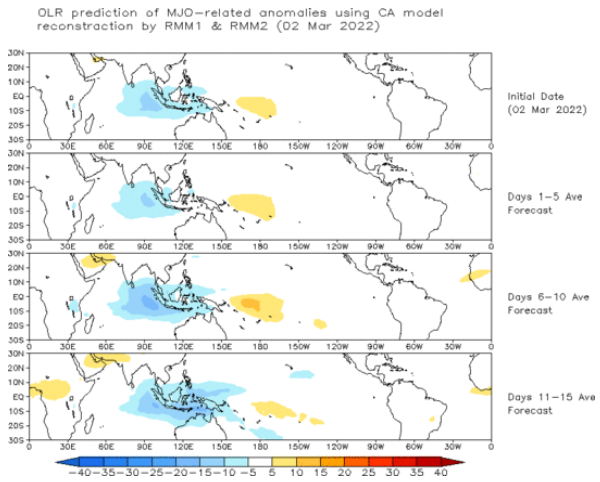






Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

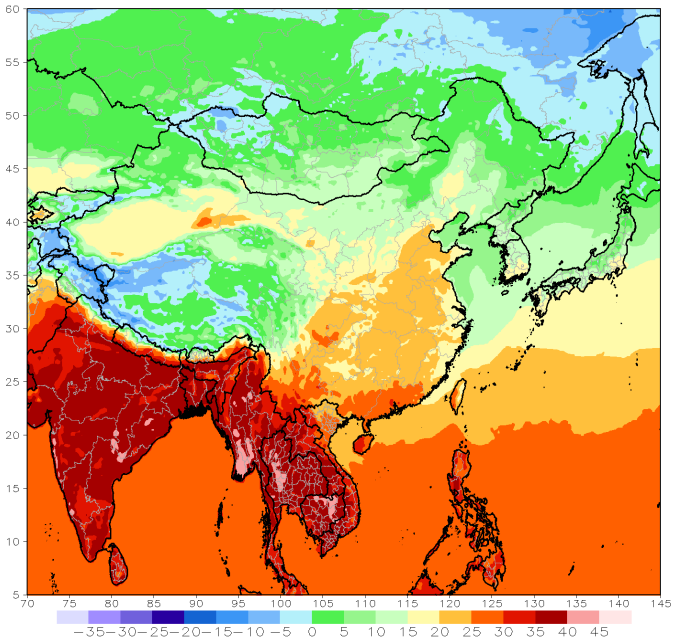
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated anomolous OLR for the next 15 days from the Constructed Analogue (CA) model forecasts.



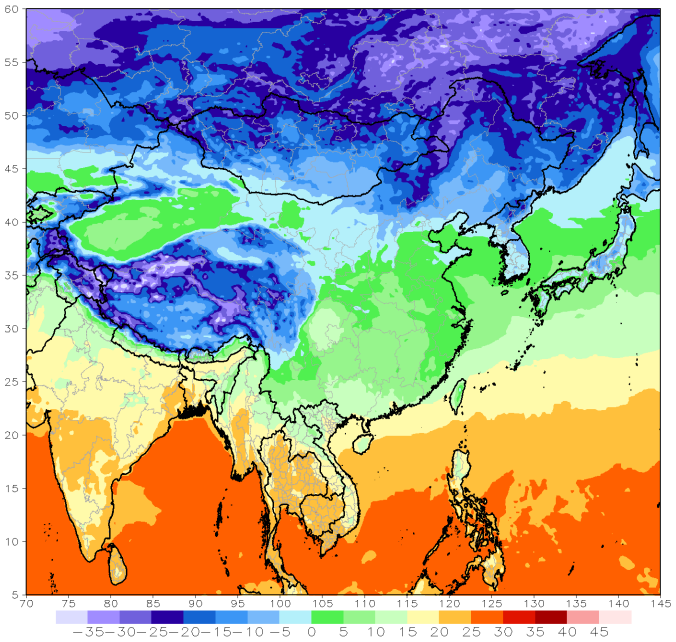
Weekly Temperature Forecast

Weekly Minimum and Maximum Temperature prediction from the GFS model (from NOAA CPC)

GFS week1 Temperature Max (C)
Period: 18z04Mar2022 – 18z10Mar2022



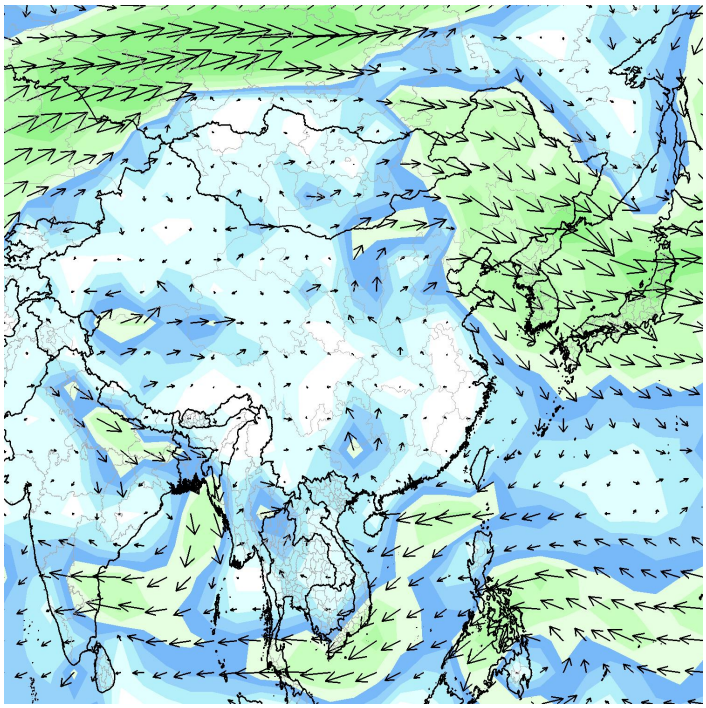
GFS week1 Temperature Min (C)
Period: 18z04Mar2022 – 18z10Mar2022



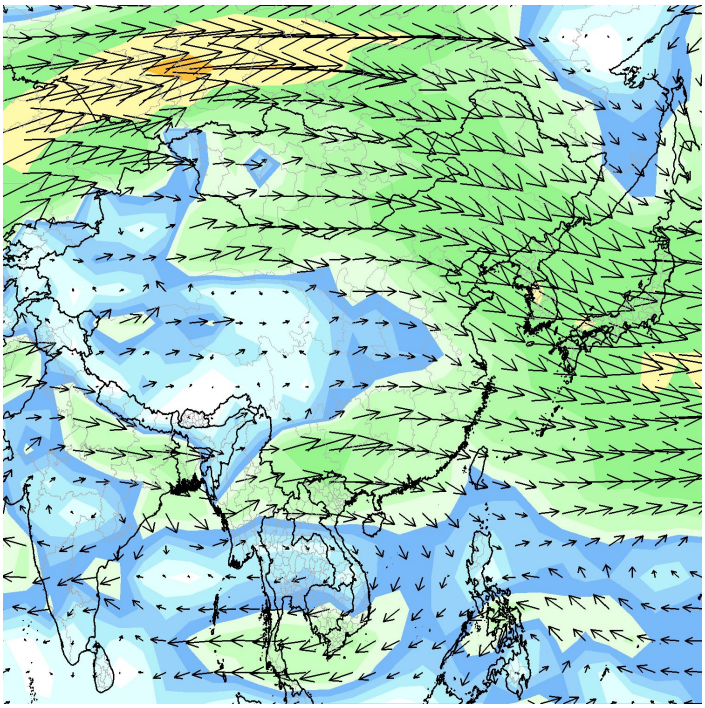
Weekly Wind Forecast

Weekly mean vector wind total prediction from the GFS model at 850 mb (left) and 700 mb (right) levels. (from NOAA CPC)

GFS 850mb week1 Mean Vector Wind Total (m/s)
Period: 18z04Mar2022 – 18z10Mar2022

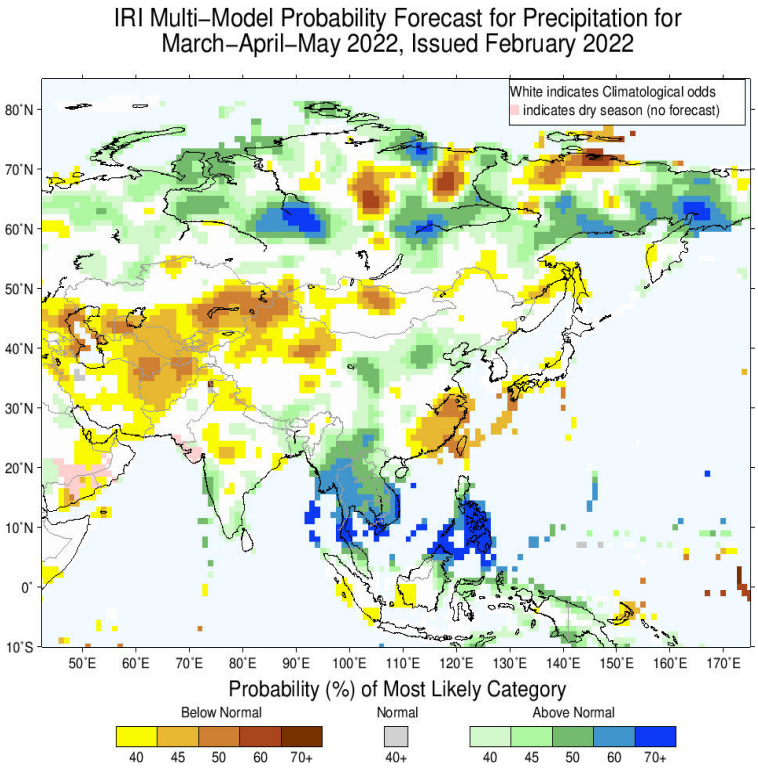


GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 18z04Mar2022 – 18z10Mar2022

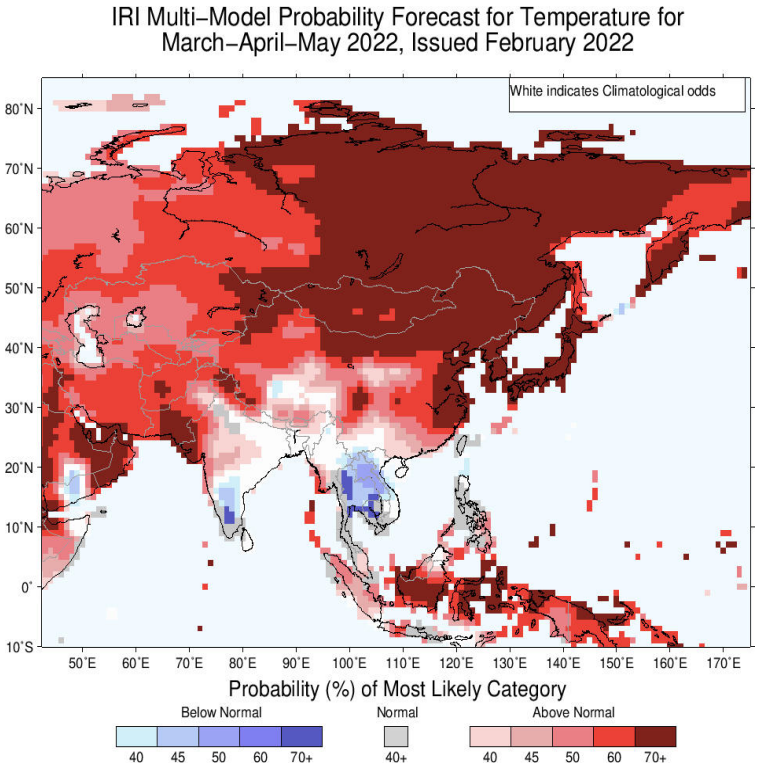


Seasonal Rainfall and Temperature Forecast

Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant tercile probability levels. The upper side of the color bar shows the colors used for increasingly strong probabilities when the dominant tercile is the above-normal tercile, while the lower side shows likewise for the below-normal tercile. The gray color indicates an enhanced probability for the near-normal tercile (nearly always limited to 40%).



Precipitation Forecast



Temperature Forecast

About us

FECT is a federation of 7 organizations registered in four countries which works in countries across the Indian Ocean Islands and its littoral. Over the last 20 years, we have had operations in Africa, South Asia, South-East Asia but now it is mostly in the Indian Ocean Islands.

Contact us

Federation for Environment, Climate & Technology
Digana Village,
Rajawella,
KY20180,
SRI LANKA.

email: info@fect.lk
phone: (+94) 81 2376746

Follow us on

Subscribe to our monthly newsletters