

HIGHLIGHTS

Rainfall Prediction



- Fairly heavy rainfall is predicted for Sabaragamuwa, Southern and Western provinces during 10th - 14th September.

Monitored Rainfalls



- Fairly heavy rains were experienced in the Central, Sabaragamuwa & Southern provinces with max of 94.5 mm in Matara district on 4th September.

Monitored Wind



- From 31st Aug- 6th Sept: up to 15 km/h from Southwesterly were experienced over the island.

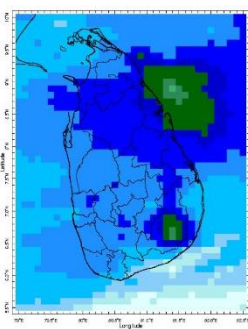
Monitored Sea Surface



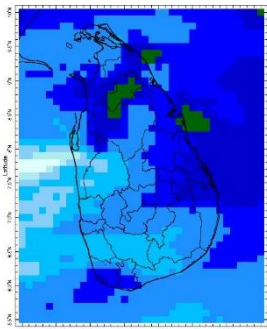
- Sea surface temperature was observed above 0.5 °C to the West of Sri Lanka and neutral to the East.

Monitoring Rainfall

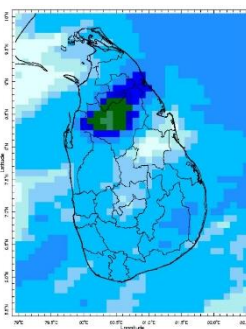
Daily Estimates for Rainfall from 1st – 7th September



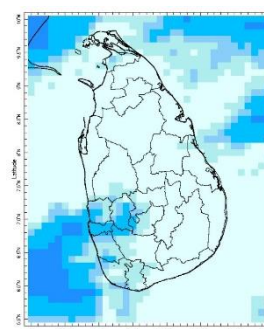
1 September



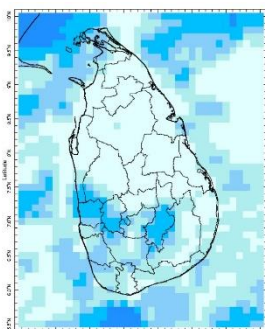
2 September



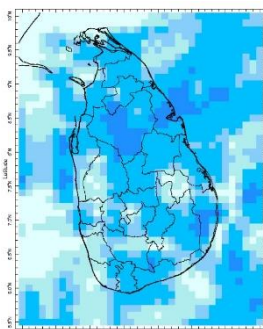
3 September



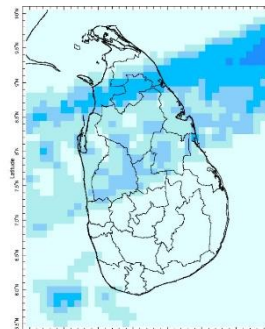
4 September



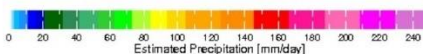
5 September



6 September



7 September



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Ocean State *(Text Courtesy IRI)*

Pacific sea state: September 1, 2021

Equatorial SSTs were below average in parts of the eastern Pacific Ocean and near average across the rest of the Pacific Ocean in early-September and most key atmospheric variables were ENSO – Neutral condition. A large majority of the model forecasts predict ENSO-neutral likely to continue through the Northern Hemisphere summer.

Indian Ocean State

Sea surface temperature was observed above 0.5°C to the West of Sri Lanka and neutral to the East.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 8th – 14th September:

Total rainfall by Provinces:

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

From 15th – 21st September:

Total rainfall by Provinces:

Rainfall	Provinces
75 mm	Sabaragamuwa
65 mm	Central, Western
55 mm	Southern
45 mm	Uva
25 mm	Eastern, North Western
15 mm	Northern, North Central

MJO based OLR predictions

For the next 15 days:

MJO shall be active, thus giving slightly enhanced rainfall during 10th – 22nd September.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been fairly heavy rainfall over the following Provinces: Central, Sabaragamuwa and Southern.

Wind: South westerly winds prevailed in the sea area and around the island during last week.

Temperatures: The temperature anomalies were normal for the whole country last week – driven by the warm SST's.

Predictions

Rainfall: During the next week (10th – 14th September) fairly heavy rainfall is predicted for Sabaragamuwa, Southern and Western provinces.

Temperatures: The temperature remains slightly normal for August. During 10th – 18th September, the temperature remains high especially in the Eastern and Uva provinces.

Teleconnections:

La Nina -The SST forecast indicates that the La Niña event has transitioned to ENSO-neutral and will likely remain so through the boreal summer.

MJO shall be active, thus giving slightly enhanced rainfall during 10th – 22nd September.

Understanding the Forecast

	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.



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Weekly Climate Bulletin for Sri Lanka

Inside This Issue

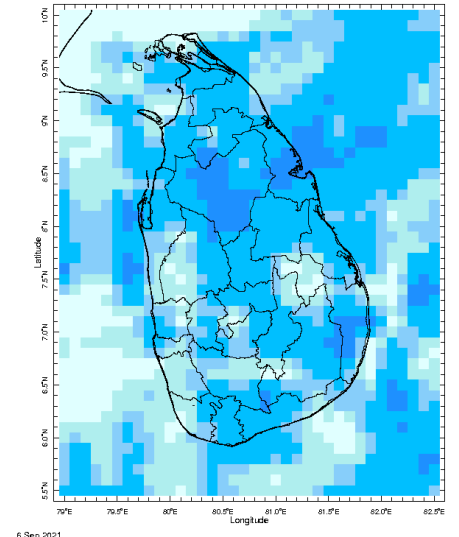
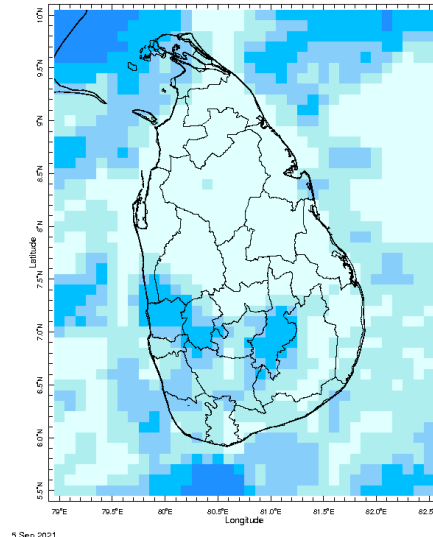
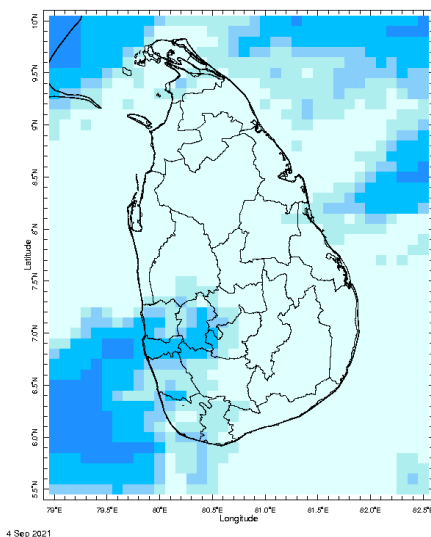
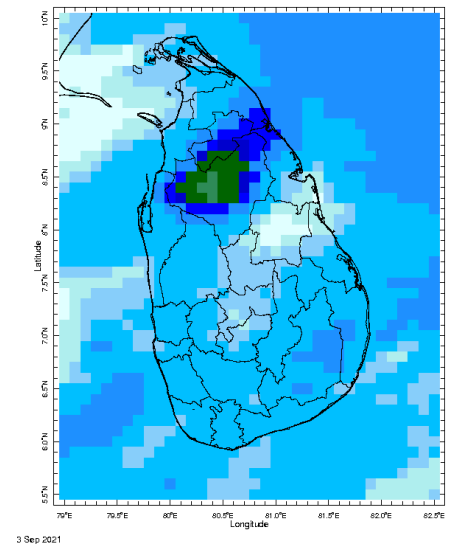
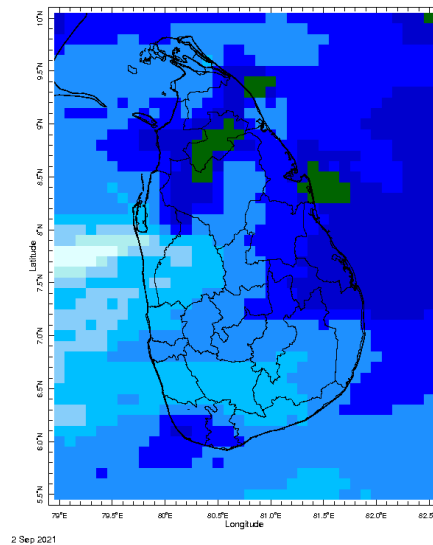
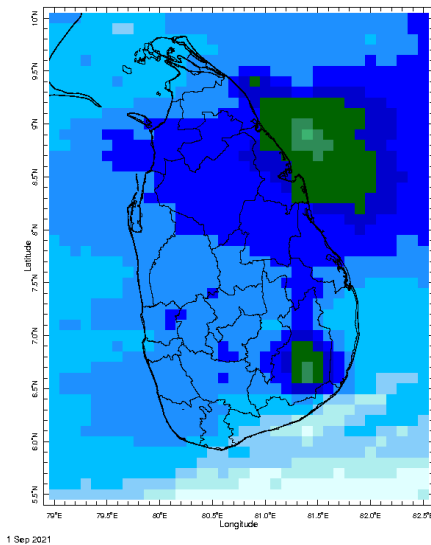
1. **Monitoring**
 - a. Daily Rainfall Monitoring
 - b. Weekly Rainfall Monitoring
 - c. Monthly Rainfall Monitoring
 - d. Dekadal (10 Day) Satellite Derived Rainfall Estimates
 - e. Weekly Temperature Monitoring
 - f. Weekly Wind Monitoring
 - g. Weekly Average SST Anomalies
2. **Predictions**
 - a. NCEP GFS Ensemble 1-14 day Rainfall Predictions
 - b. GFS (T574) Model Rainfall Forecast from RMSC New Delhi
 - c. MJO Related OLR Forecast
 - d. Weekly Temperature Forecast
 - e. Weekly Wind Forecast
 - f. Seasonal Predictions from IRI

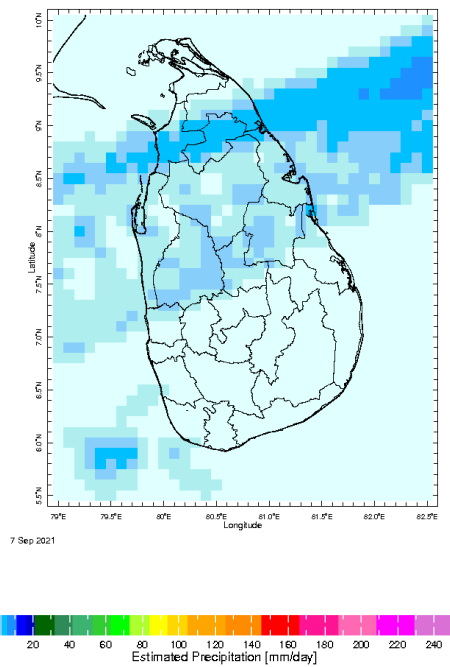


MONITORING

Daily Rainfall Monitoring

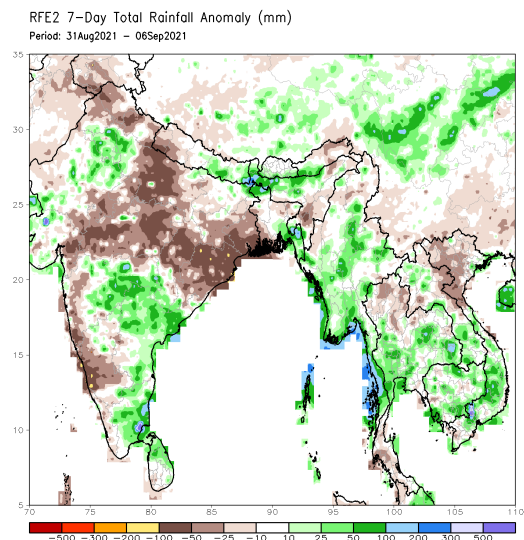
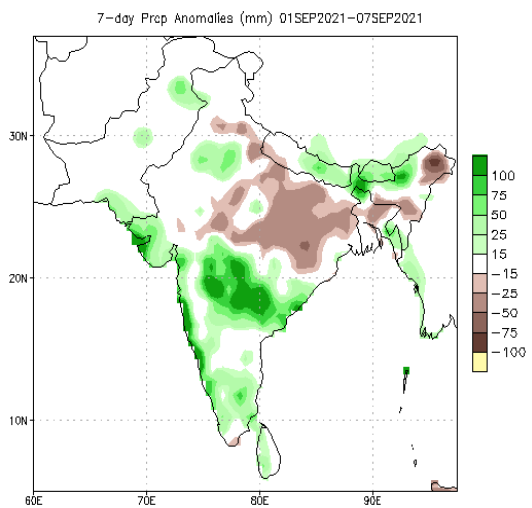
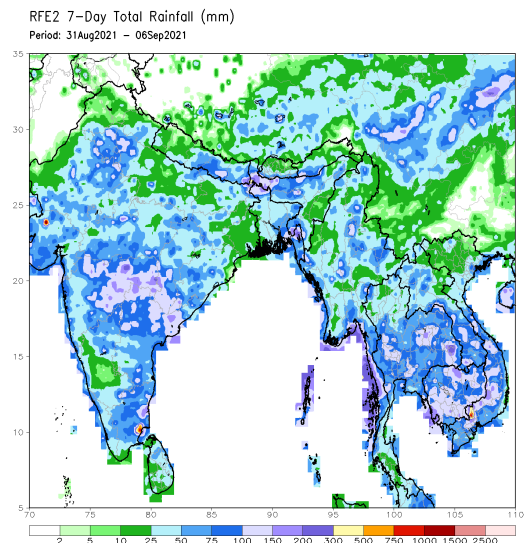
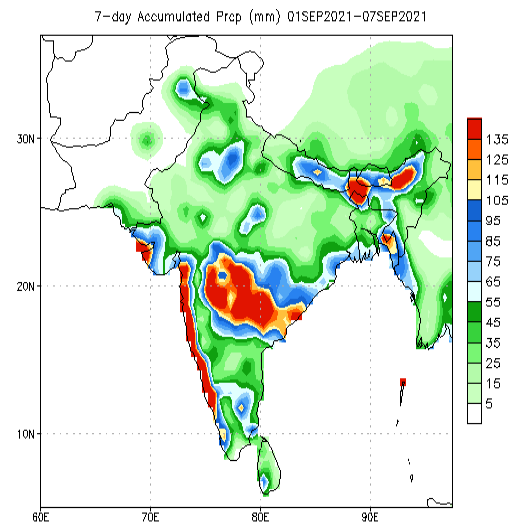
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.





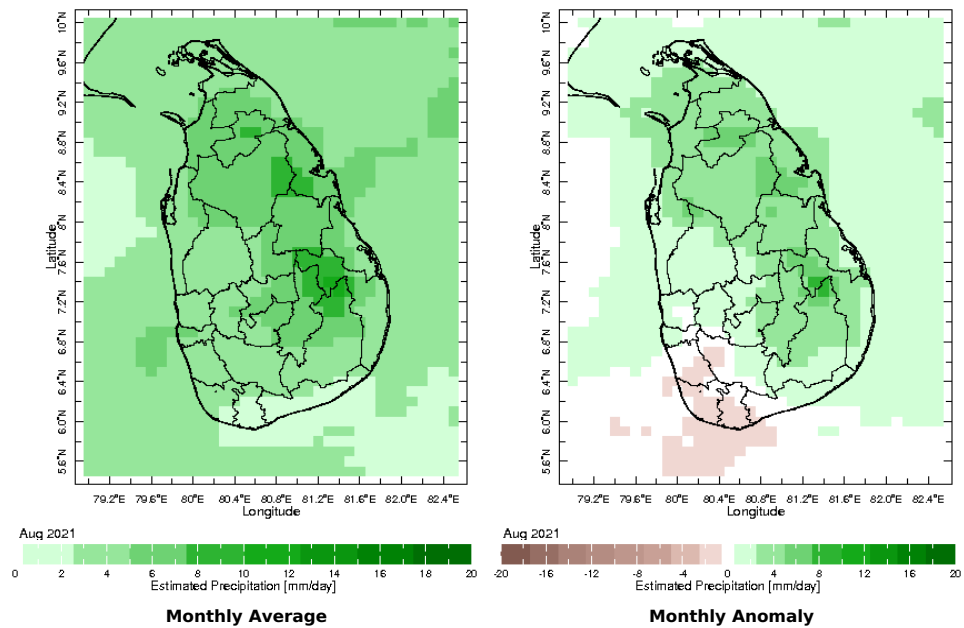
Weekly Rainfall Monitoring

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.

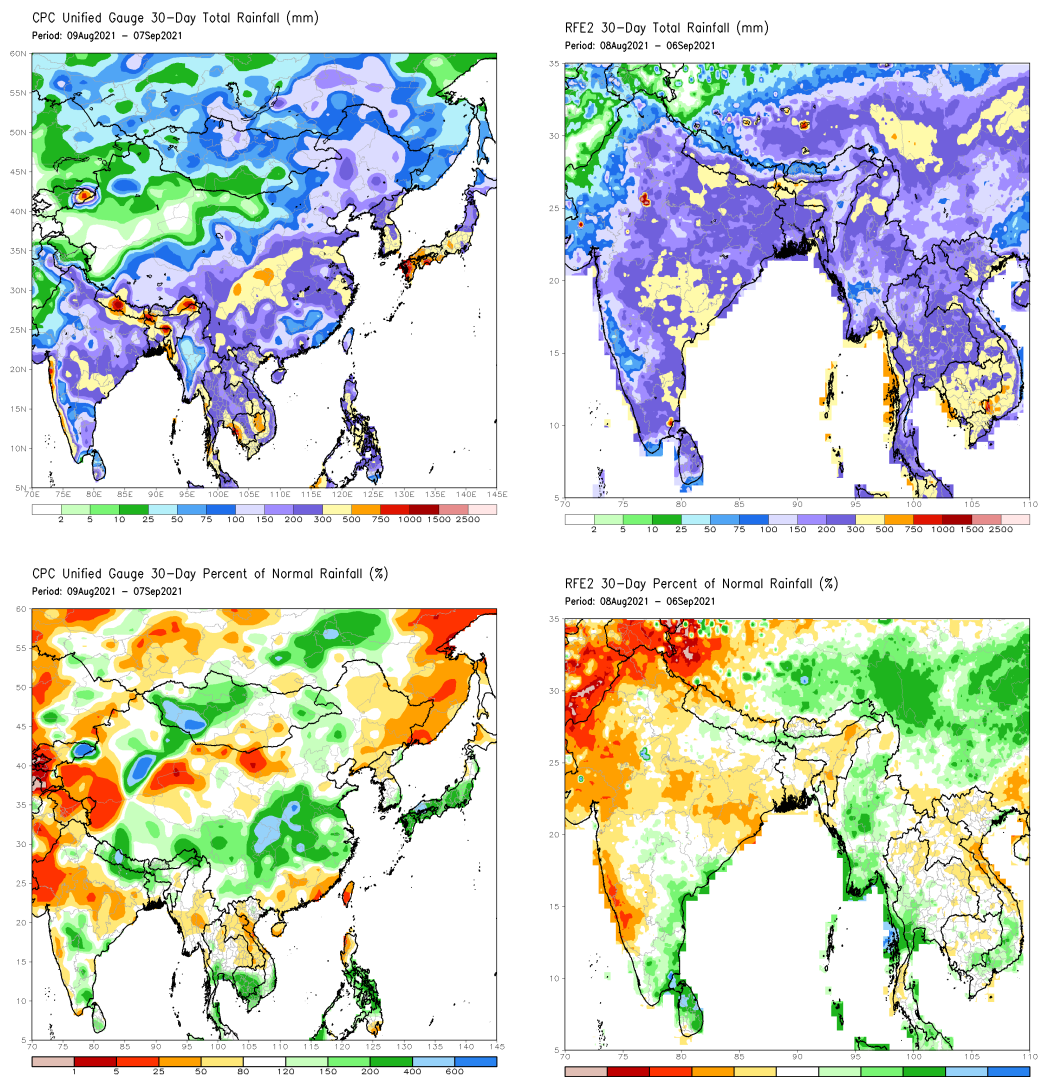


Monthly Rainfall Monitoring

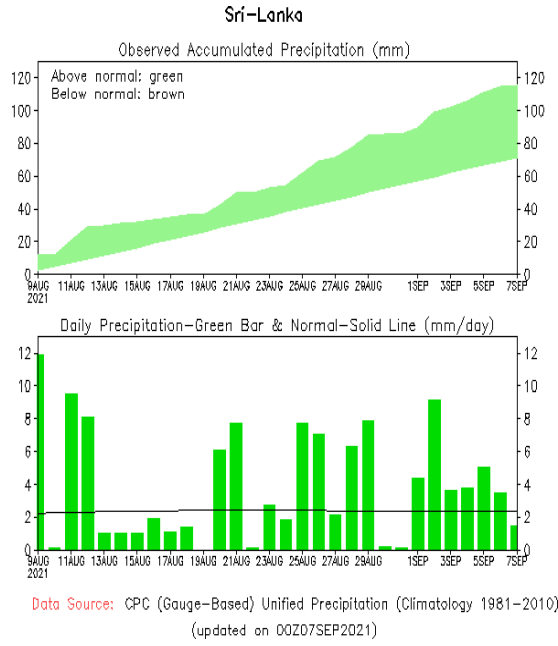
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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



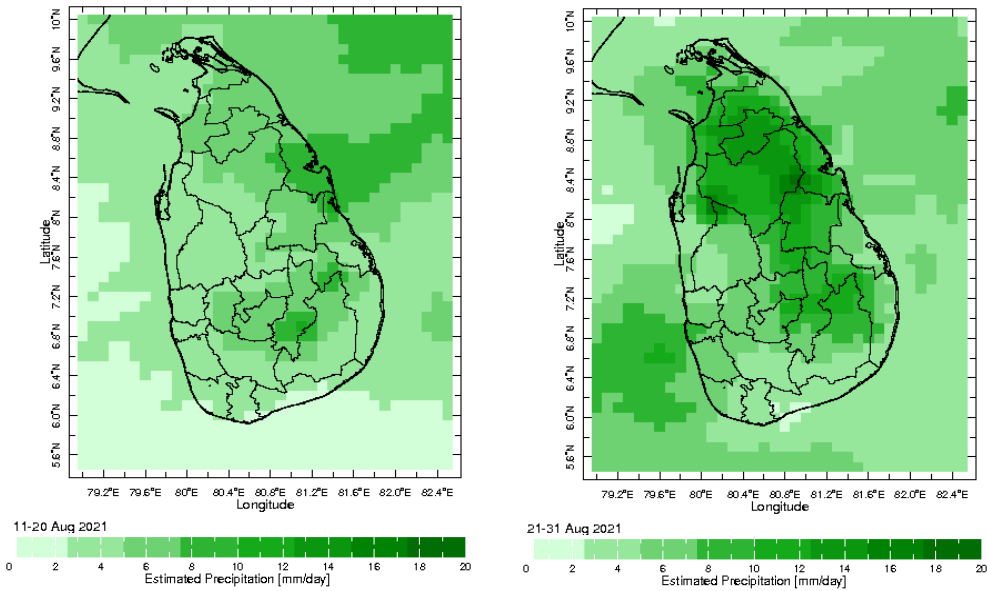
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



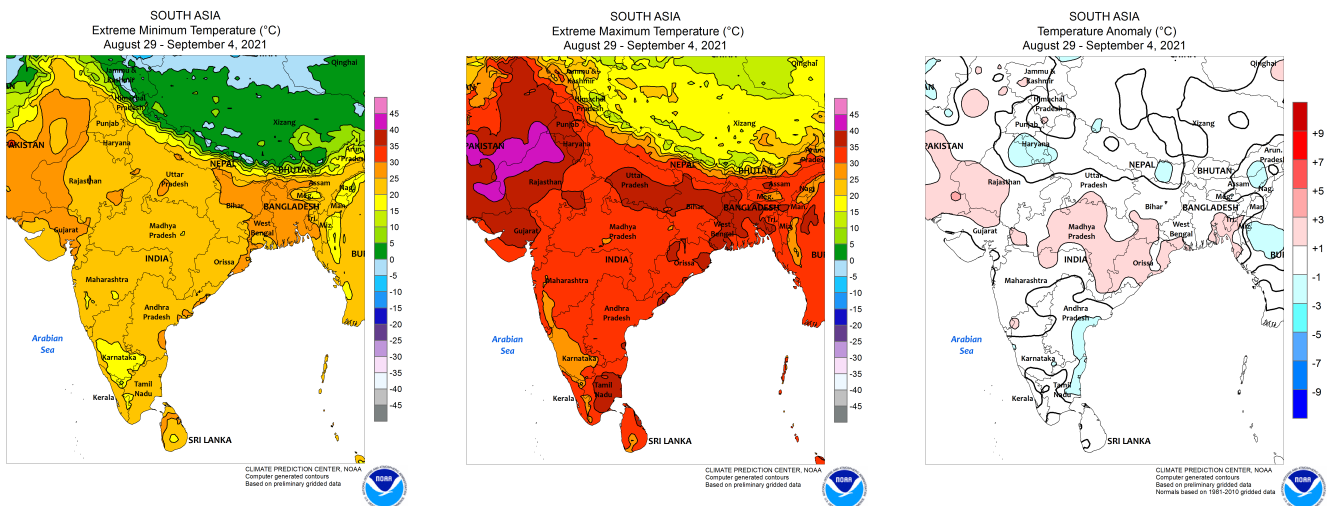
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

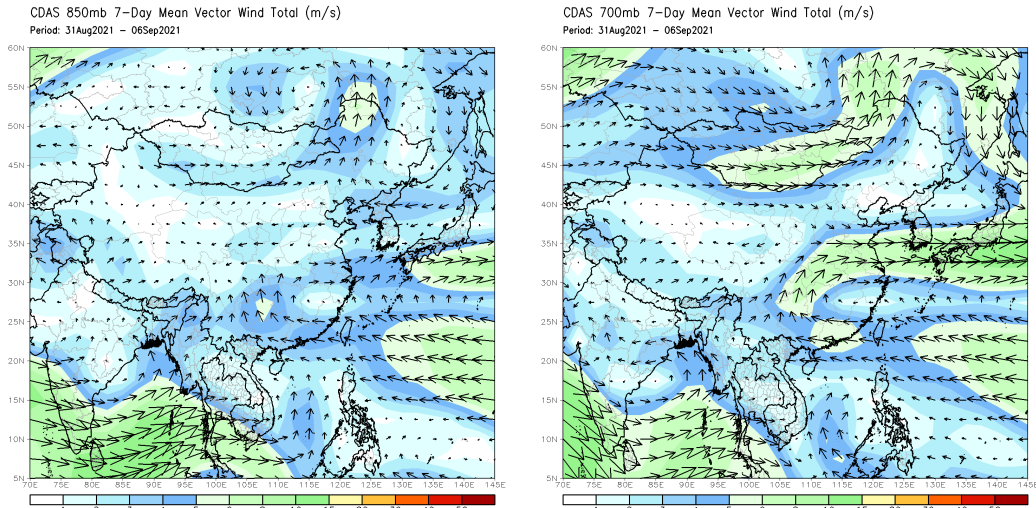


Weekly Temperature Monitoring



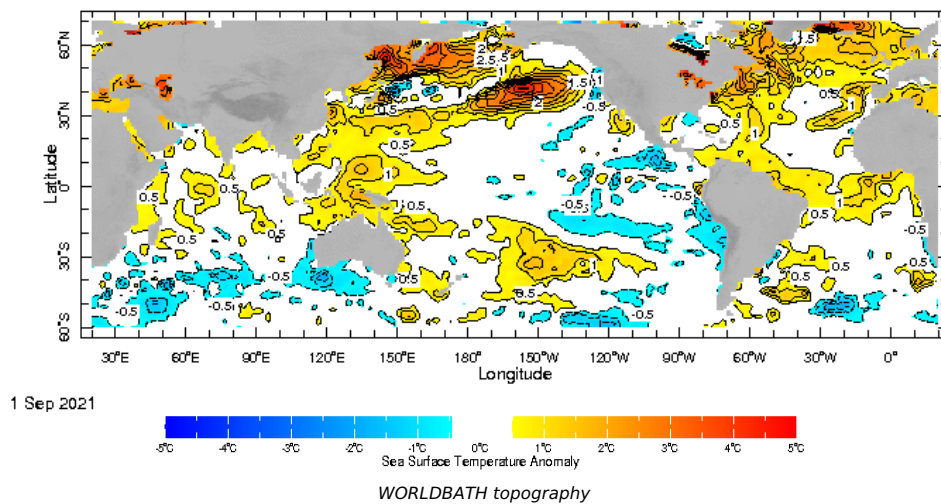
Weekly Wind Monitoring

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.

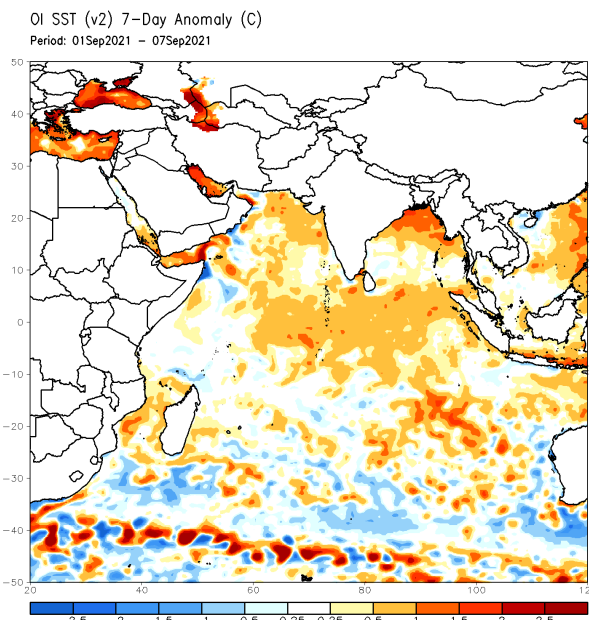


Weekly Average SST Anomalies

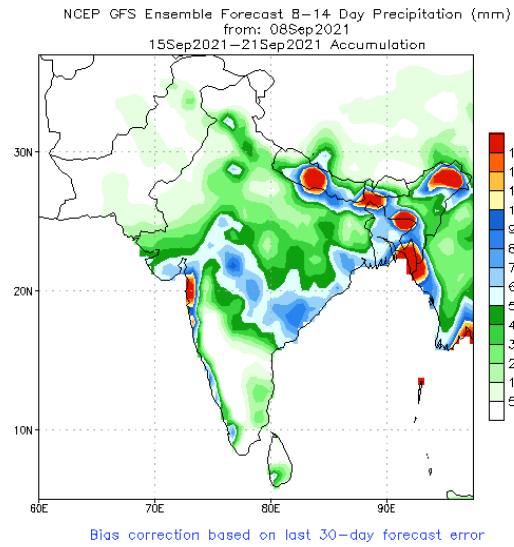
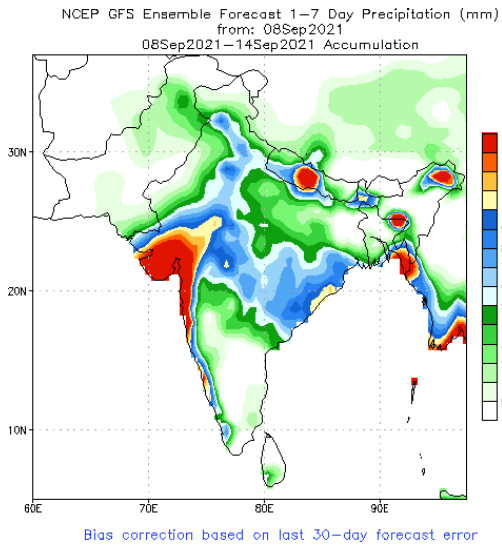
Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



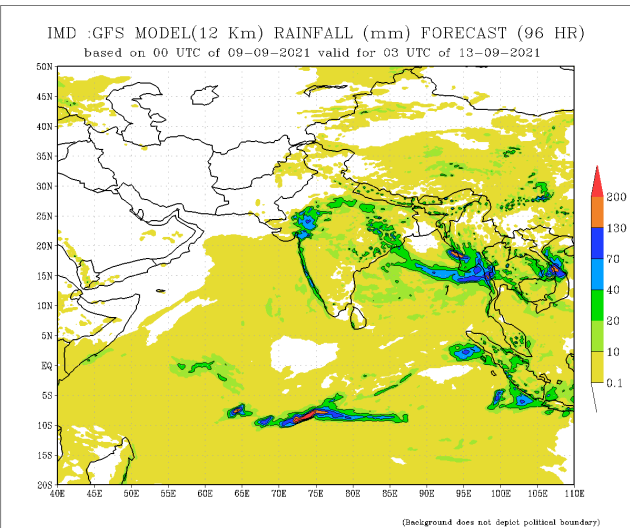
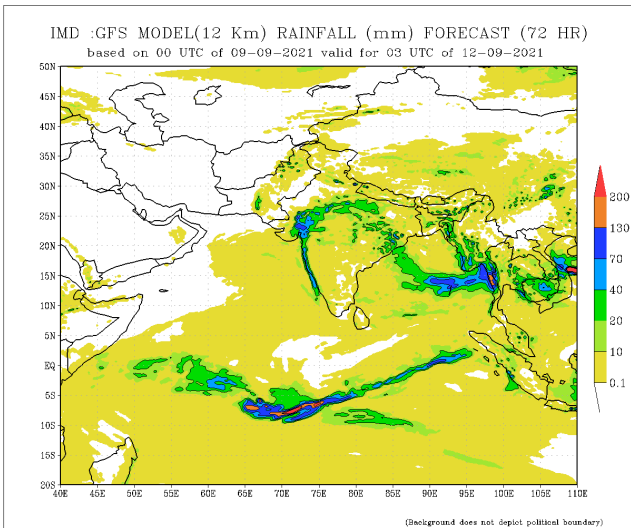
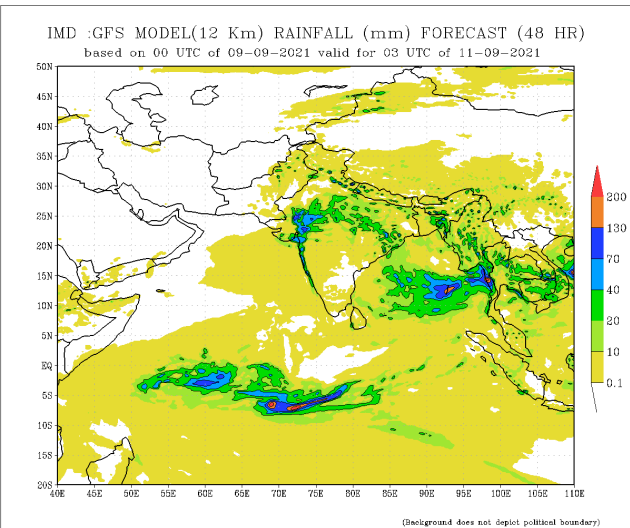
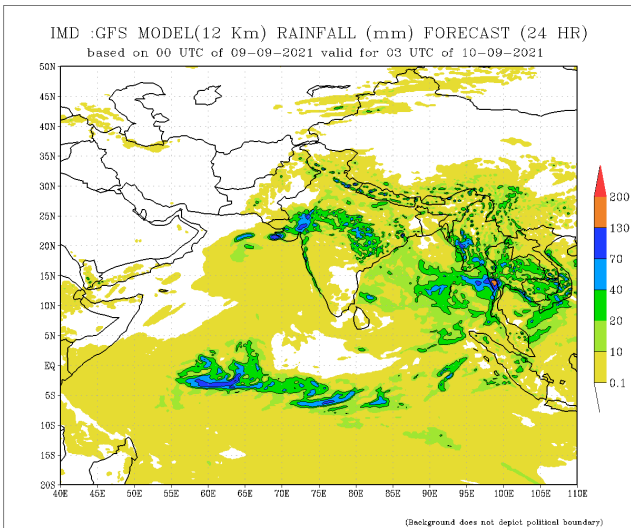
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC

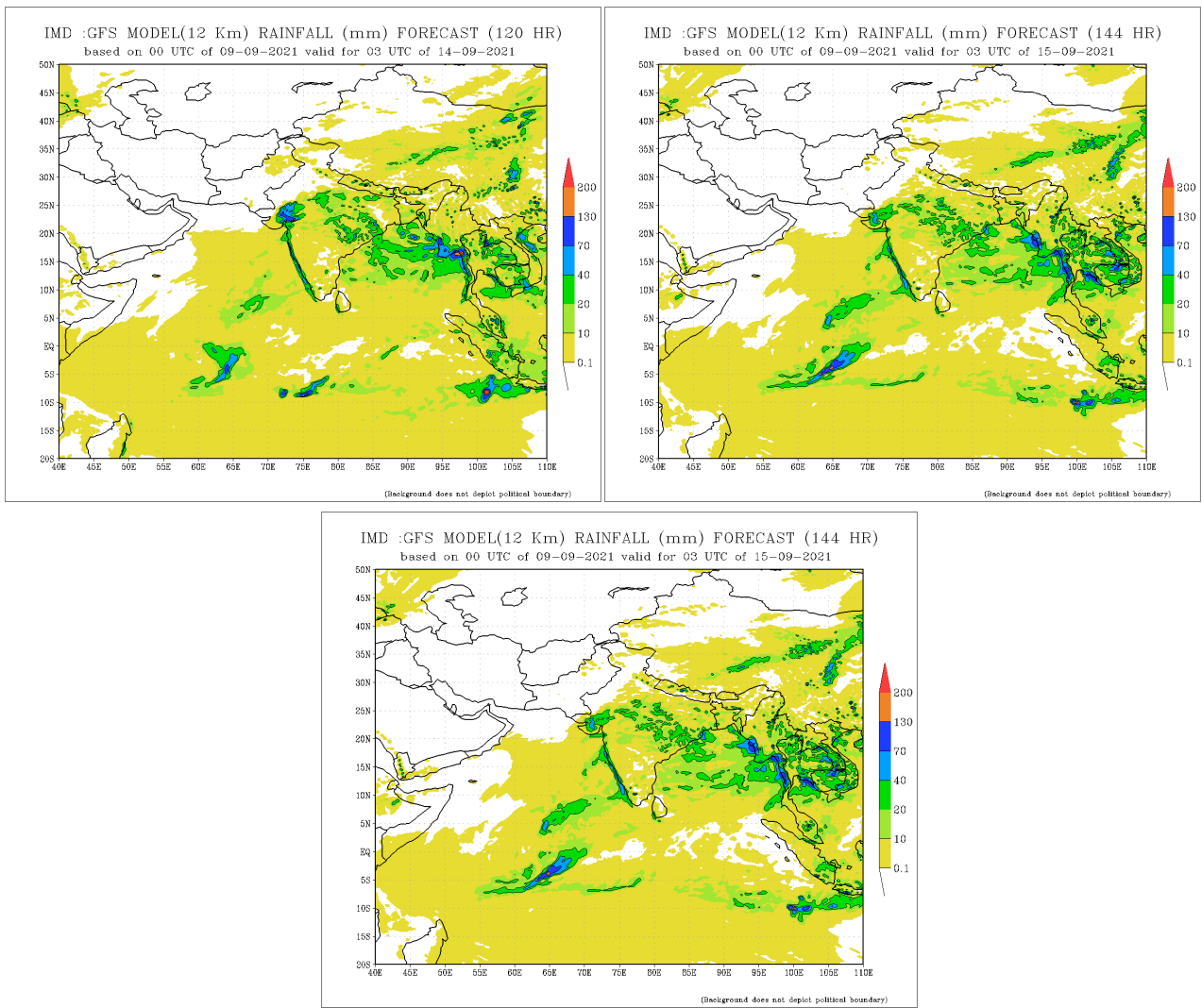


NCEP GFS 1- 14 Day prediction



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

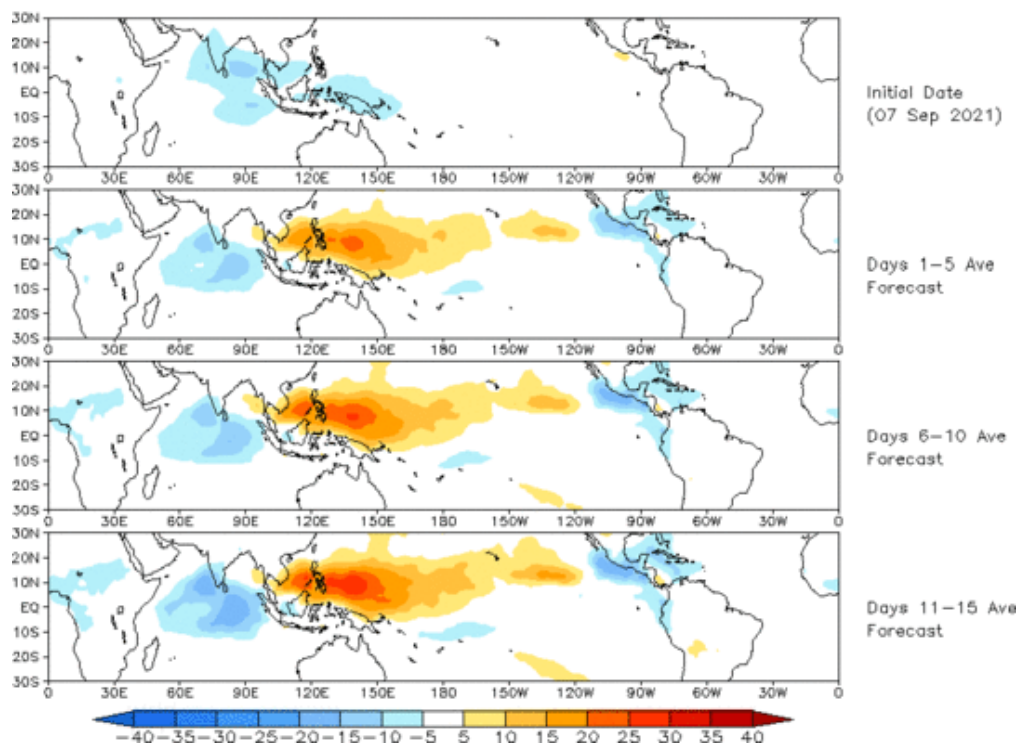




Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

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 anomalous OLR for the next 15 days from the Constructed Analogue (CA) model forecasts.

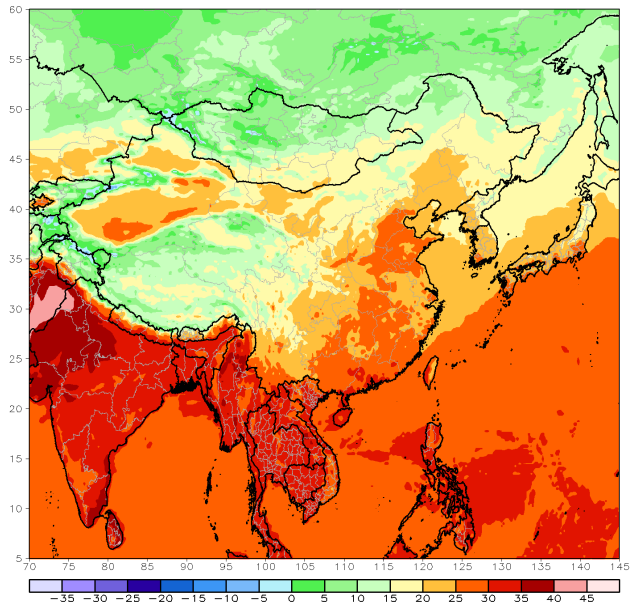
OLR prediction of MJO-related anomalies using CA model reconstruction by RMM1 & RMM2 (07 Sep 2021)



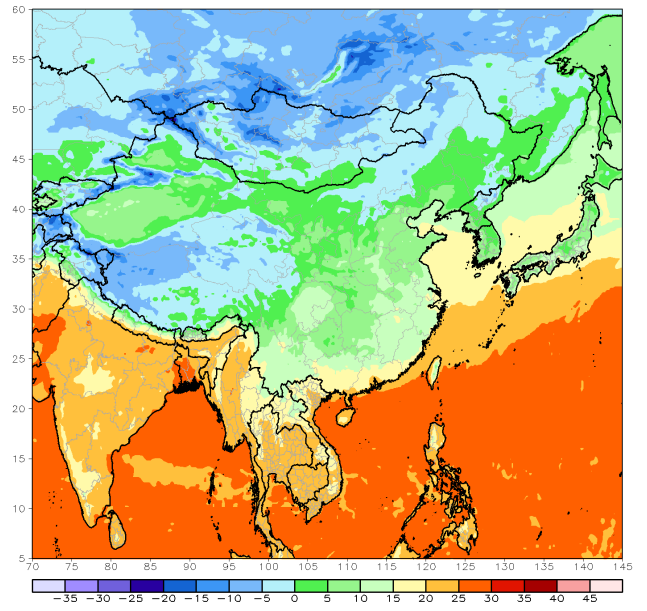
Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)
Ending: 18z15Sep2021



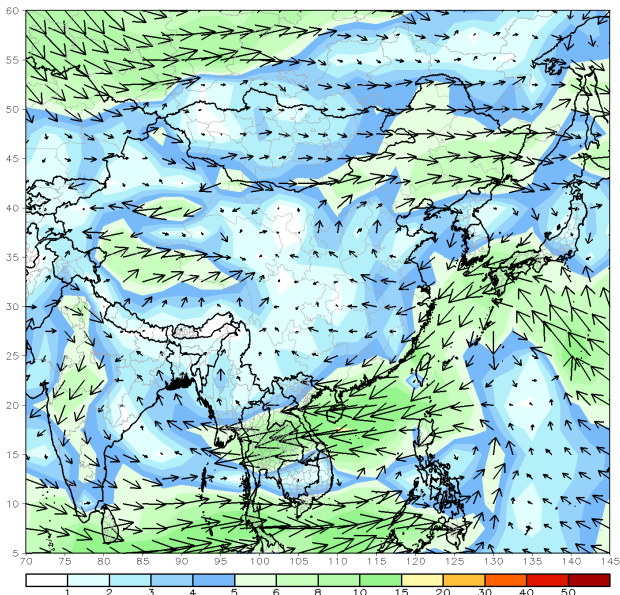
GFS week1 Temperature Min (C)
Ending: 18z15Sep2021



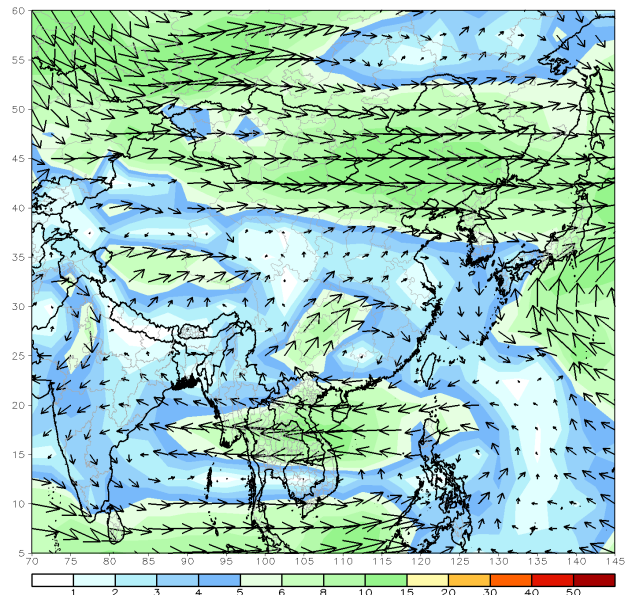
Weekly Wind Forecast

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)
Ending: 18z15Sep2021



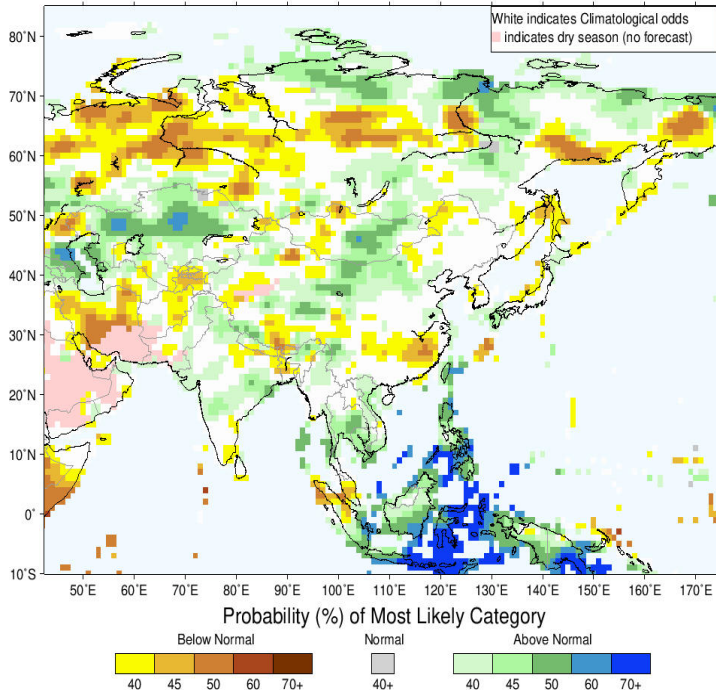
GFS 700mb week1 Mean Vector Wind Total (m/s)
Ending: 18z15Sep2021



Seasonal Rainfall and Temperature Forecast

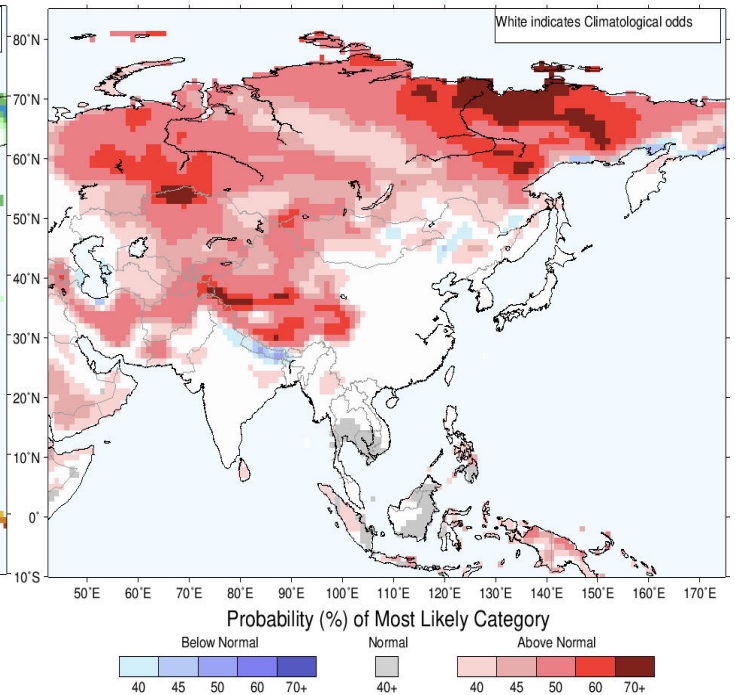
Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant 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%).

IRI Multi-Model Probability Forecast for Precipitation for September–October–November 2021, Issued August 2021



Precipitation Forecast

IRI Multi-Model Probability Forecast for Temperature for September–October–November 2021, Issued August 2021



Temperature Forecast

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