Week of
18 - 25 Feb
2022

CLIMATE MONITORING AND PREDICTION FOR SRI LANKA

HIGHLIGHTS

Rainfall Prediction

- *Moderate rainfall is predicted for Eastern, Northern,North Central, Southern and Sabaragamuwa provinces from 18th Feb – 22nd Feb .*

Monitored Rainfalls

- *Very heavy rainfall was experienced in the Eastern,Sabaragamuwa and Western province with max of 186.3 mm in Trincomalee on 12th Feb.*

Monitored Wind

- *From 1st Feb - 7th Feb, up to 4 m/s Northeasterlies were experienced over the island.*

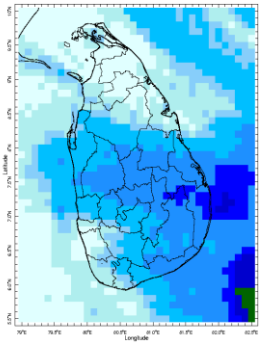
Monitored Sea Surface

- Sea surface temperatures were 0.5^{0}C above normal around the island, except for the Northwest.

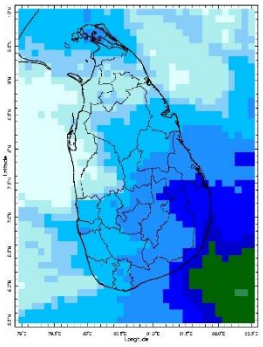
Monitoring

Rainfall

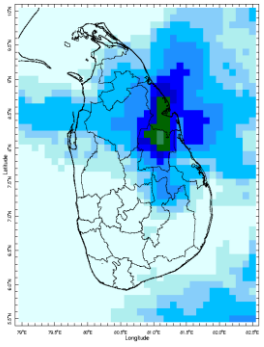
Daily Estimates for Rainfall from 7th – 14th February 2022



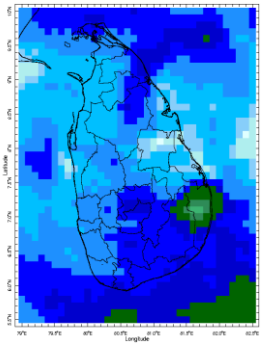
7 February



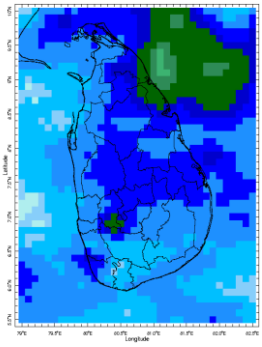
8 February



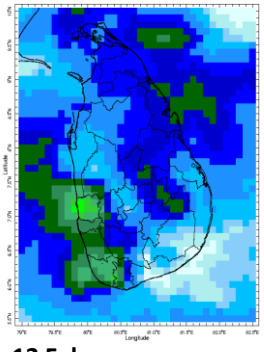
9 February



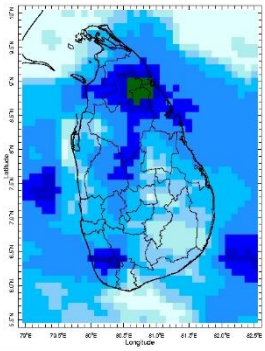
10 February



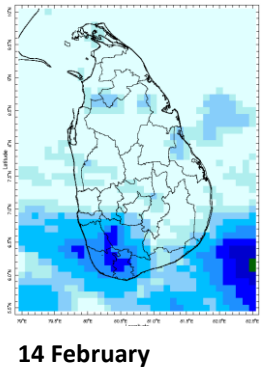
11 February



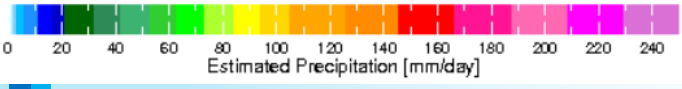
12 February



13 February



14 February



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Ocean State *(Text Courtesy IRI)*

Pacific sea state: February 9, 2022

Equatorial sea surface temperatures (SSTs) are below average across the East Central and Eastern Pacific Ocean in early-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 around the island, except for the Northwest.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 16th – 22nd February:

Total rainfall by Provinces:

Rainfall	Provinces
35 mm	Northern, Eastern
25 mm	North Central, Sabaragamuwa, Southern
15 mm	Central, Western

From 23rd February – 1st March:

Total rainfall by Provinces:

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

MJO based OLR predictions

For the next 15 days:

MJO shall be active from 16th February – 2nd March, giving significantly enhanced rainfall from 16th – 25th February and slightly enhanced the rainfall during 26th February – 2nd March for the entire island.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been very heavy rainfall over the following provinces: Eastern, Sabaragamuwa and Western.

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

Temperatures: The temperature anomalies were neutral for the entire island last week, driven by the warm SST's.

Predictions

Rainfall: During the next week (18th – 22nd February) moderate rainfall is predicted for Northern, Eastern, North Central, Sabaragamuwa and Southern provinces.

Temperatures: The temperature remains slightly above normal in the Western, North Western, Sabaragamuwa, Uva and Southern province during 18th – 26th February.

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 16th February – 2nd March, giving significantly enhanced rainfall from 16th – 25th February and slightly enhanced the rainfall during 26th February – 2nd 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.

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

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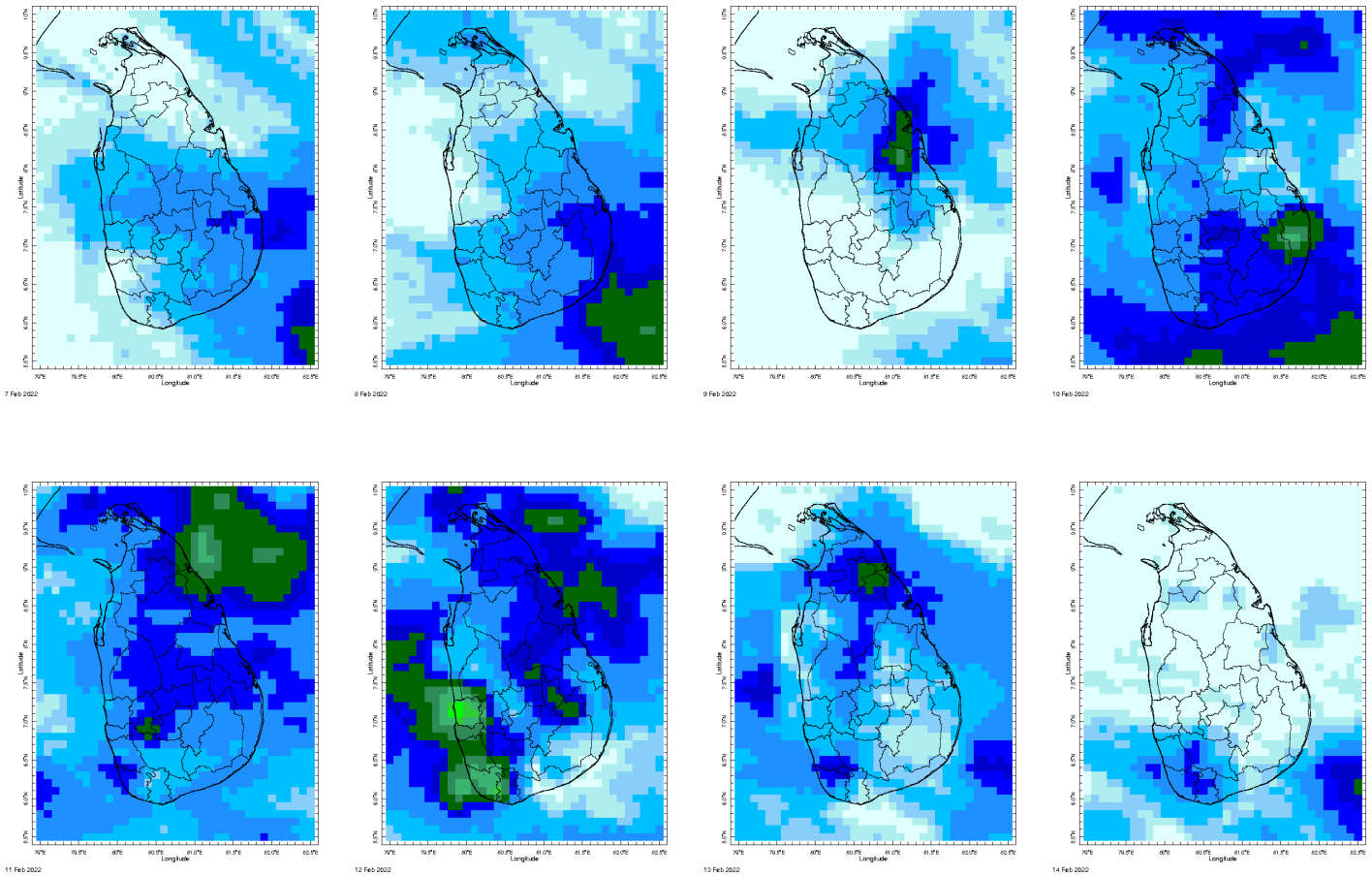
MONITORING

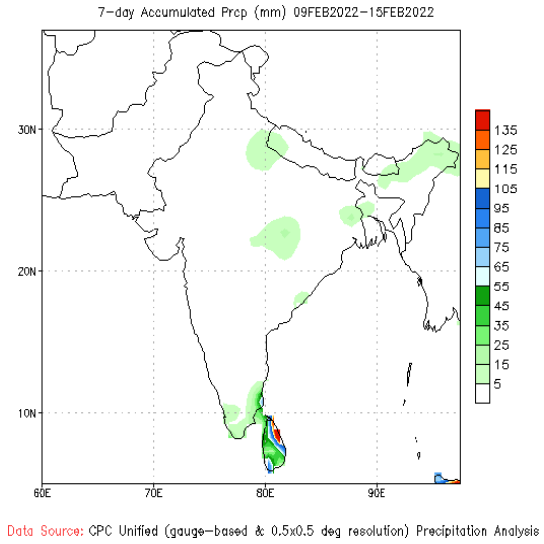
Daily Rainfall Monitoring

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

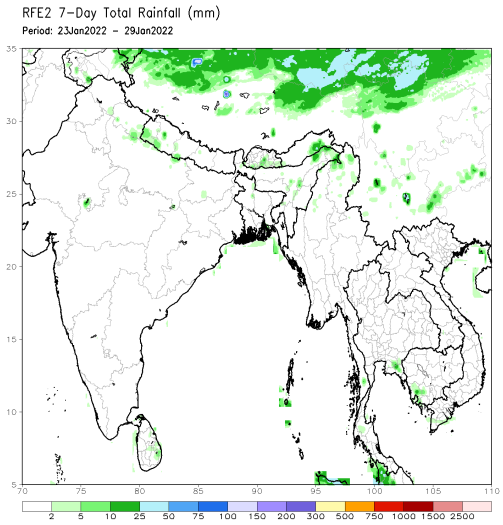


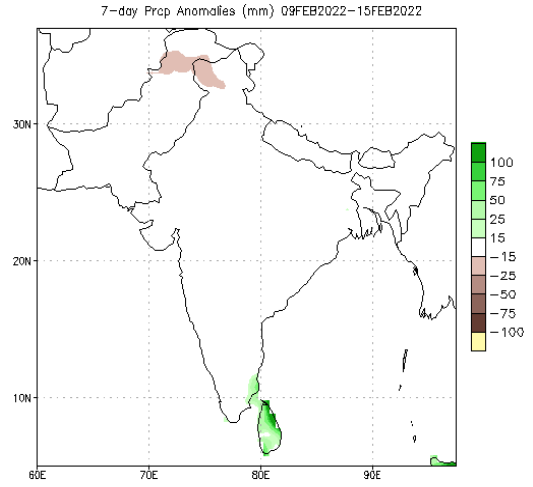
Weekly Rainfall Monitoring

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.

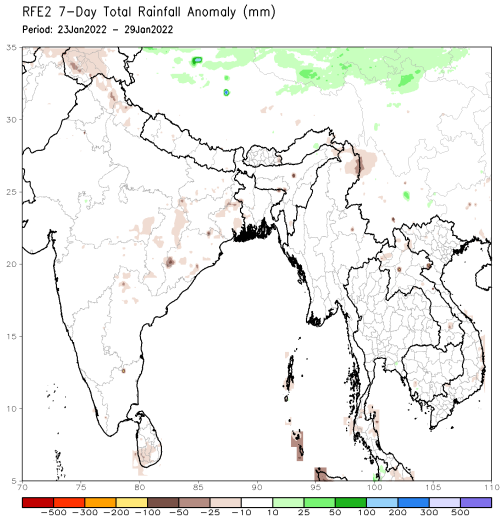


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis



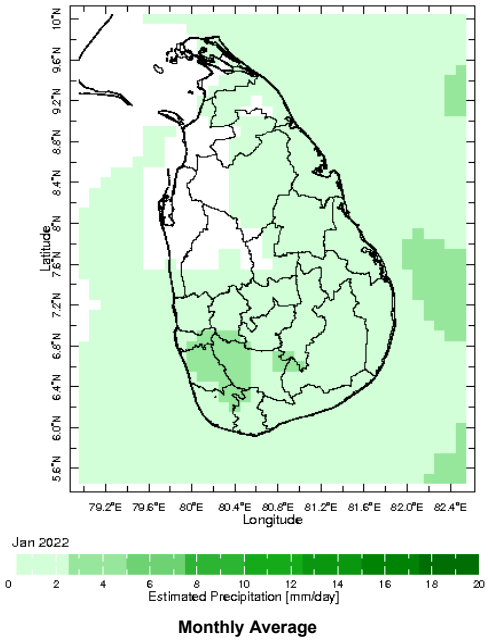


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis
Climatology (1991-2020)

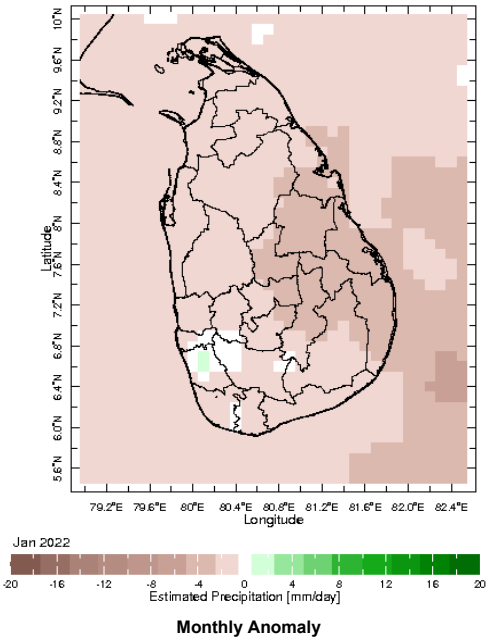


Monthly Rainfall Monitoring

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

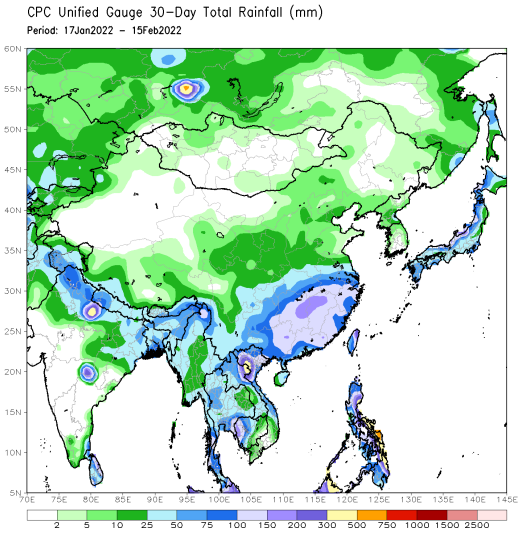


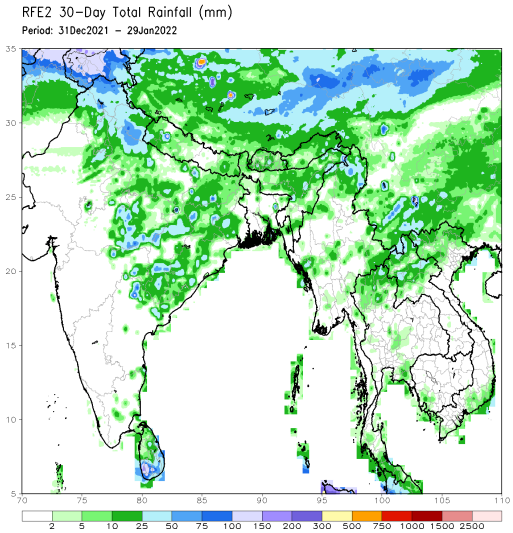
Monthly Average

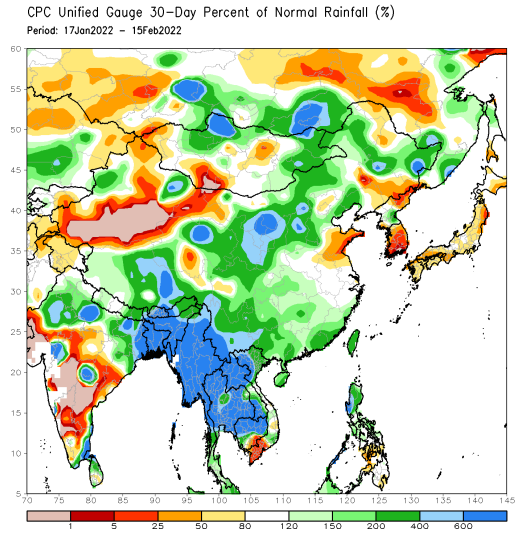


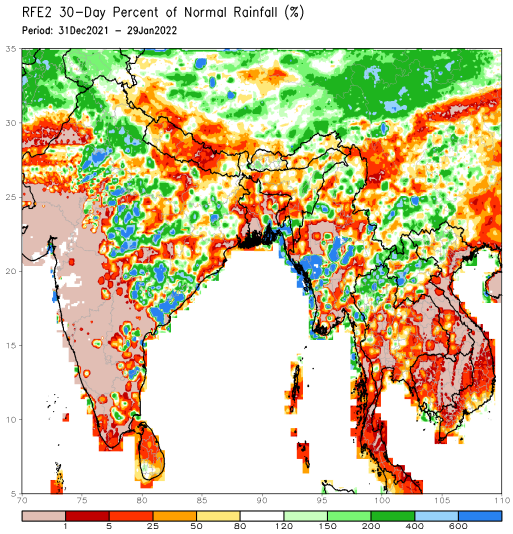
Monthly Anomaly

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.

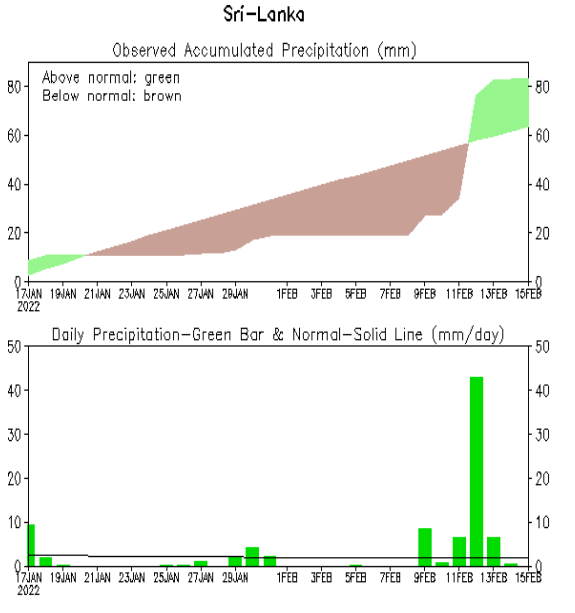




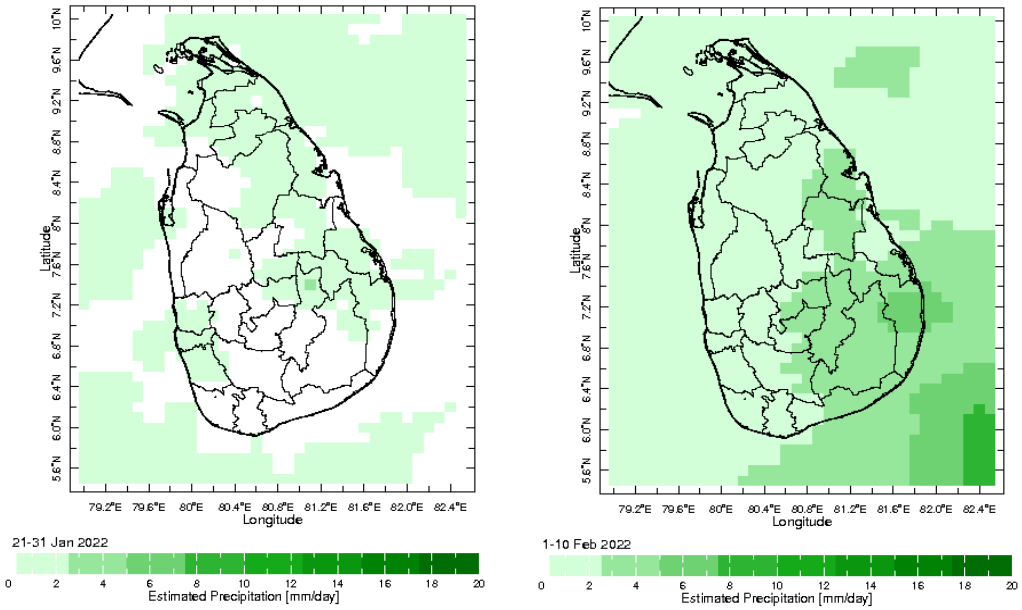




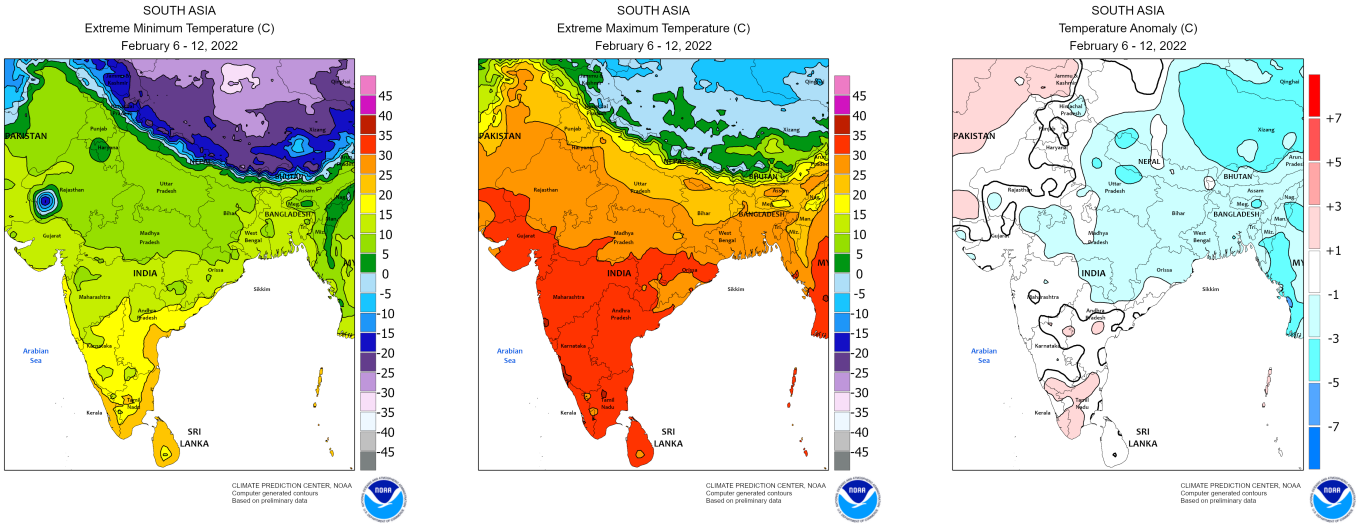
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

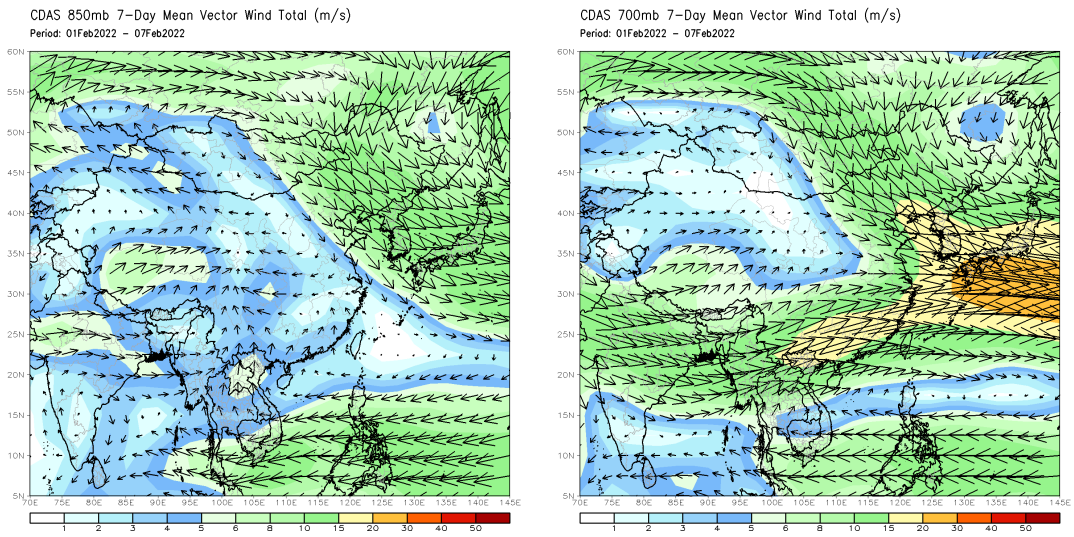


Weekly Temperature Monitoring



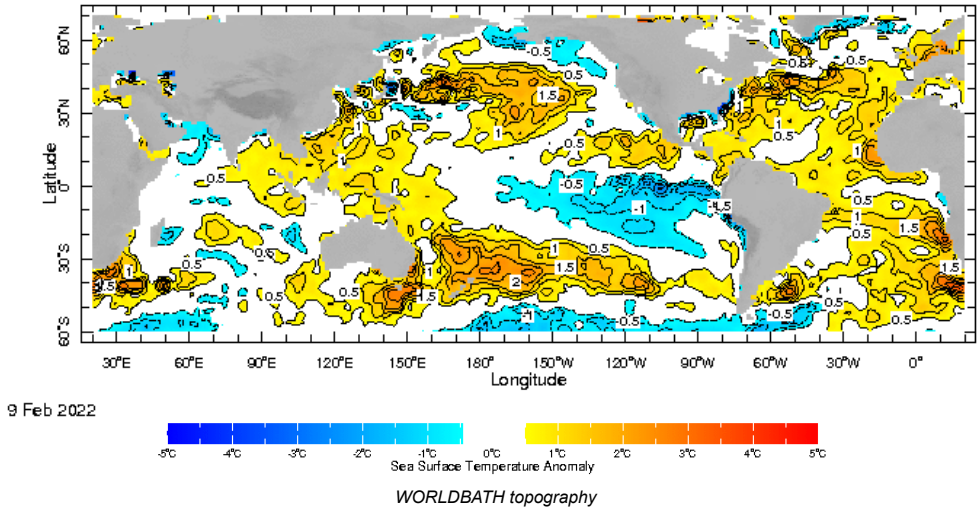
Weekly Wind Monitoring

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.

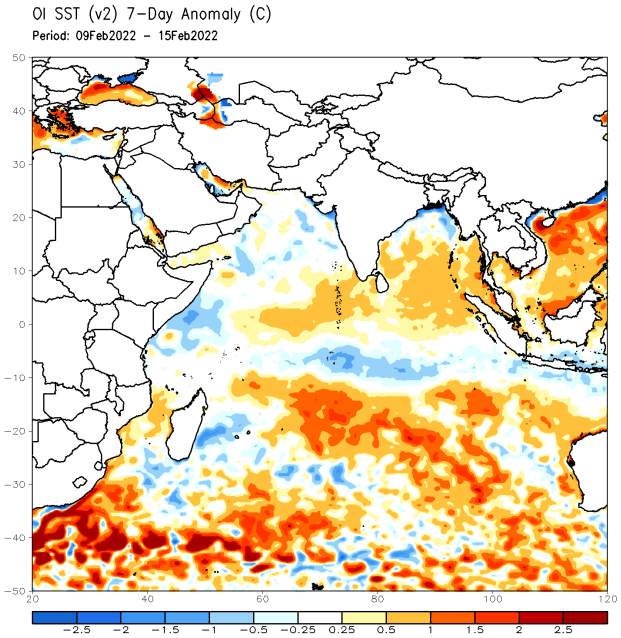


Weekly Average SST Anomalies

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

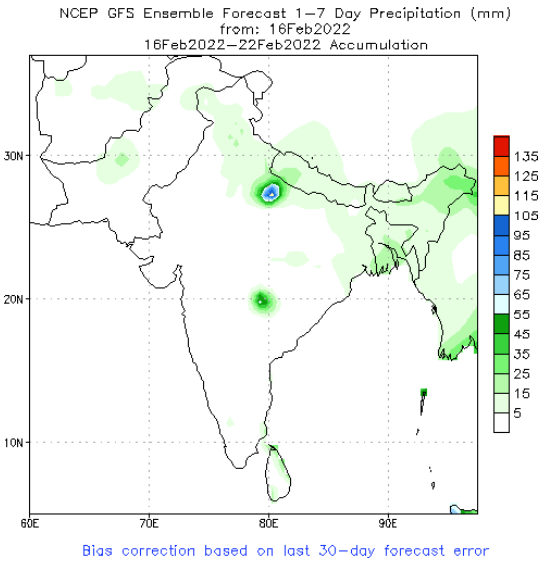


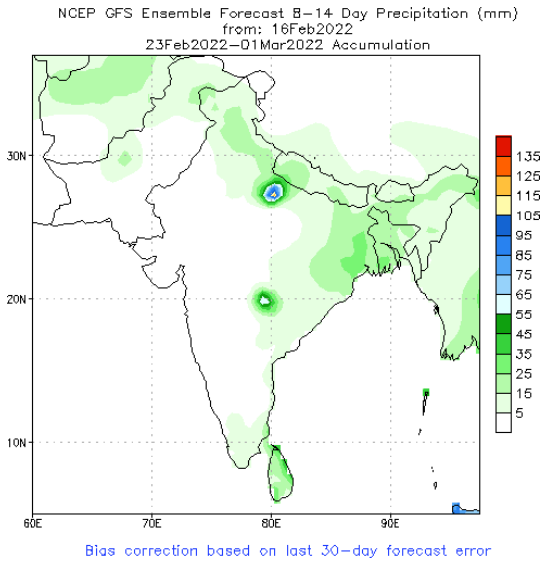
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



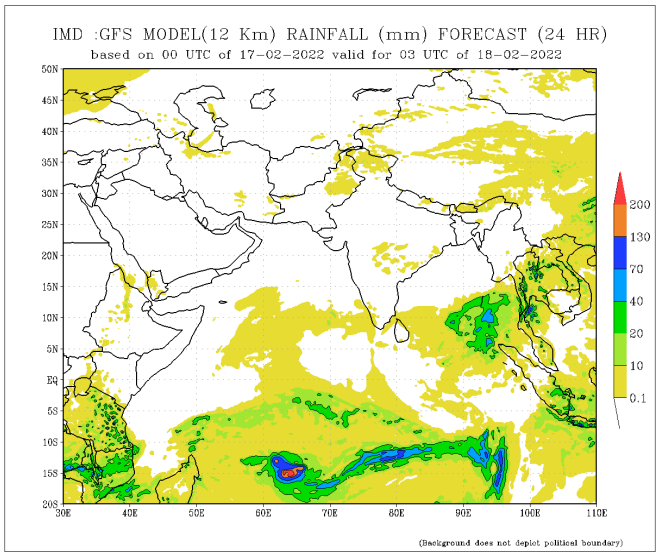
PREDICTIONS

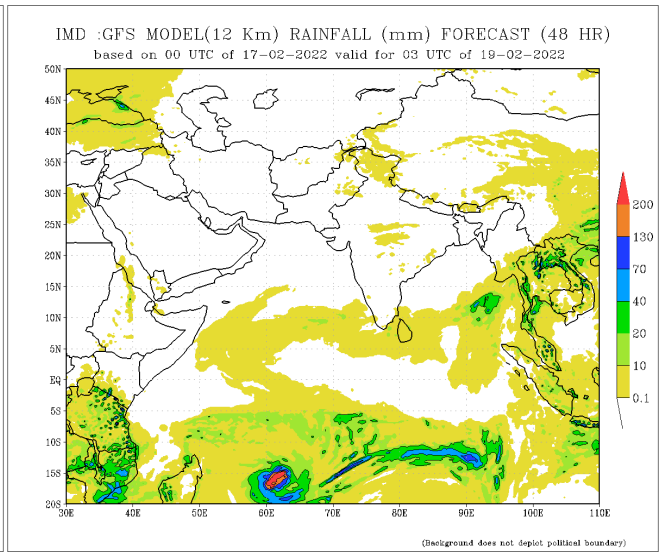
NCEP GFS 1- 14 Day prediction

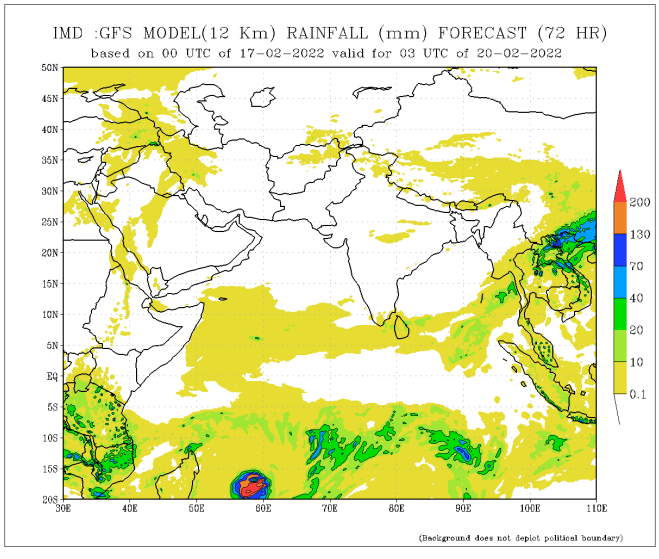


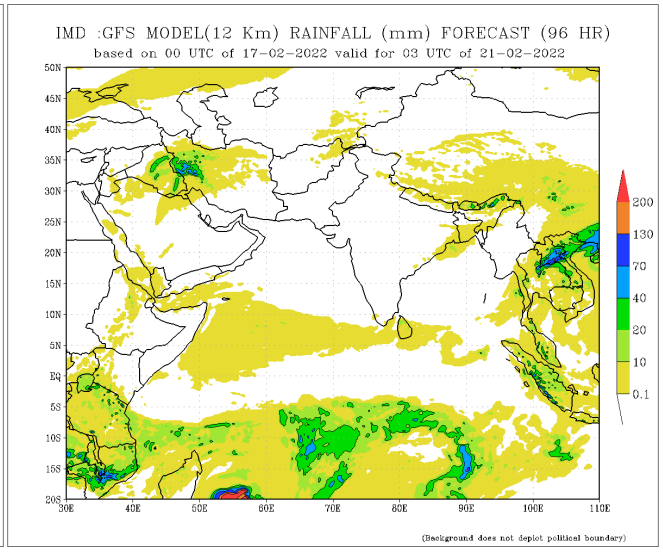


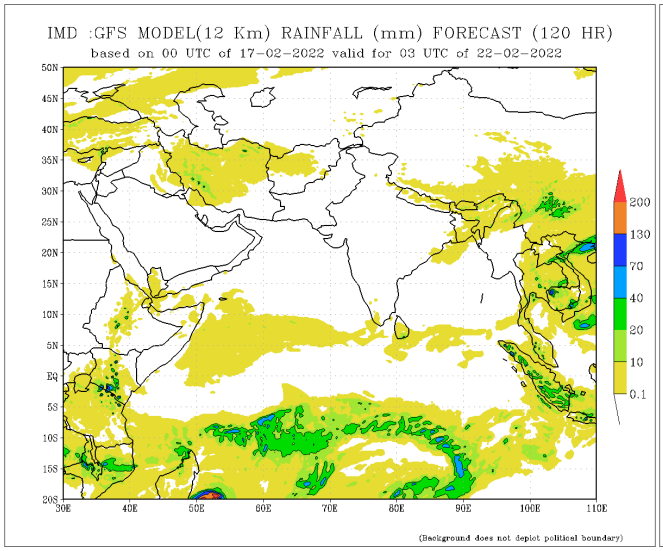
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India

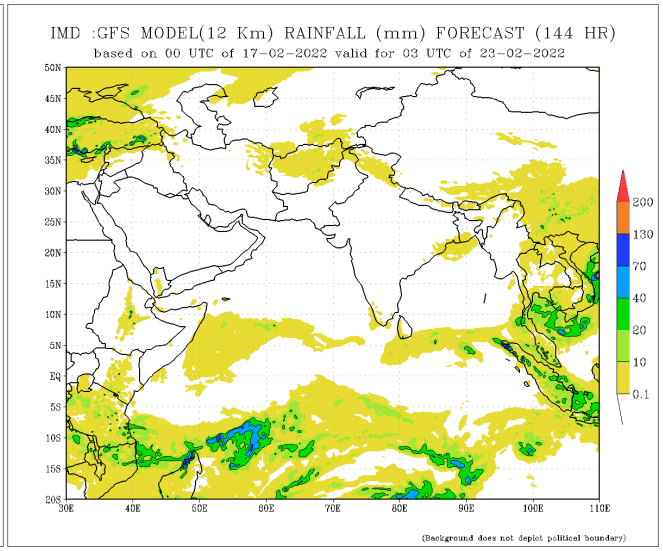


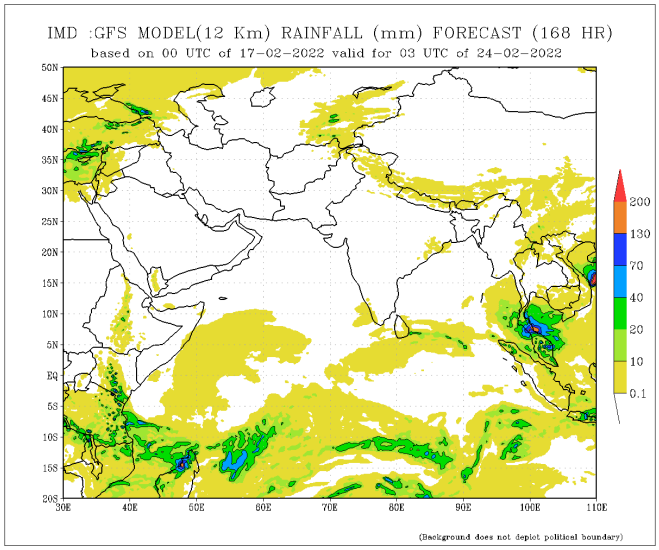






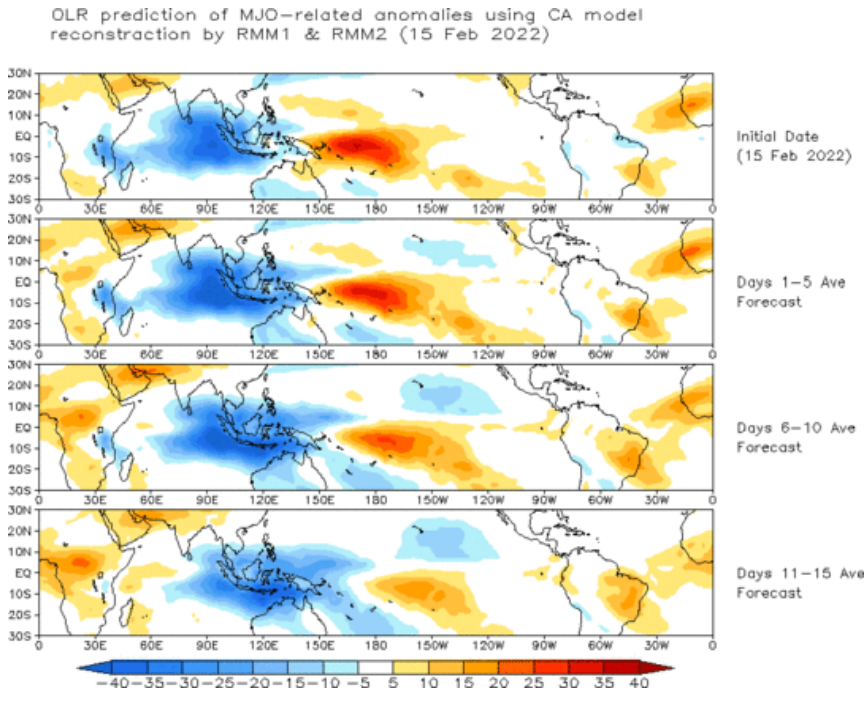






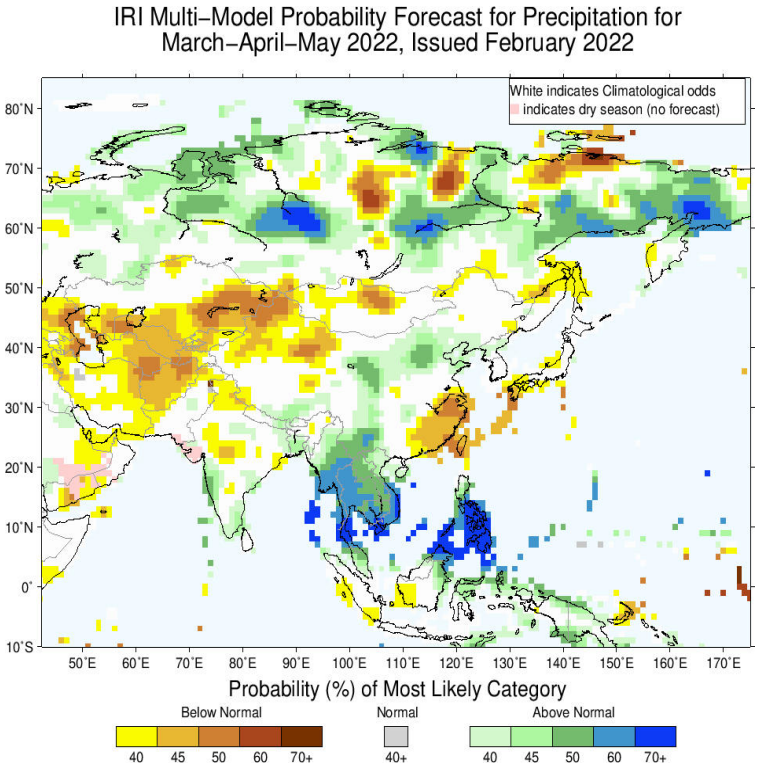
Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

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.

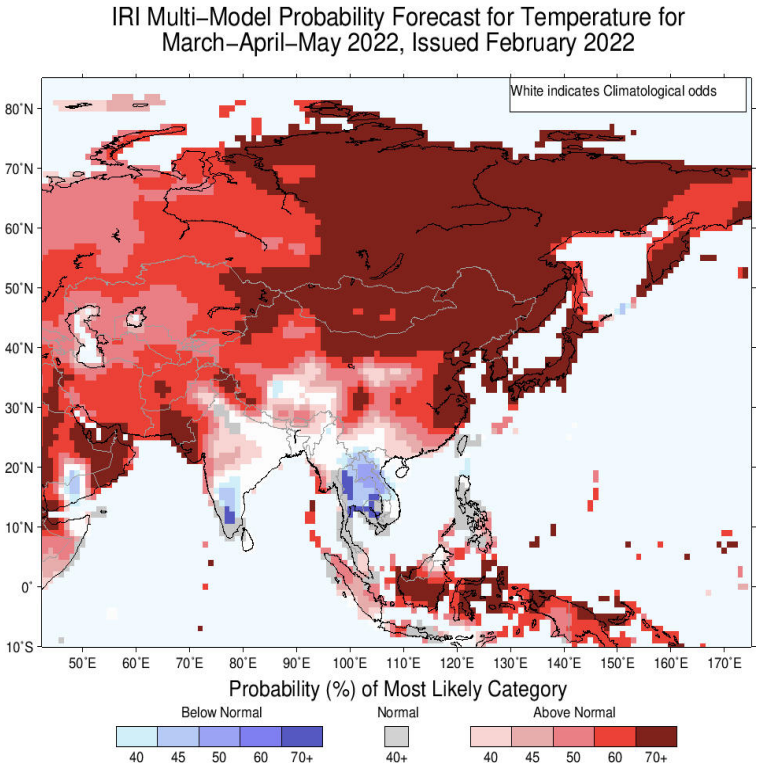


Seasonal Rainfall and Temperature Forecast

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.

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