

HIGHLIGHTS

Rainfall Prediction



- High likelihood of fairly heavy rainfall (50 - 100 mm) is predicted for the Western, Southern, Sabaragamuwa, North Western, Central, North Central, Uva provinces and moderate rainfall (25 - 50 mm)) is predicted for the rest during 24 - 30 May.

Monitored Rainfalls



- While on average 160 mm was received in SL, rainfall was concentrated on the western hills and slopes. .
- Depression 99B reached cyclonic status as "Remal" and shall reach the Bangala/West Bengal border regions on the 26/27th.

Monitored & Predicted Wind



- Winds at 850mb (1.5 km) were north westerly from 16 - 22 May reaching up to 15 m/s.
- Strong winds at 850mb (1.5 km) are predicted north westerly from 25 - 31 May reaching up to 20 m/s due to cyclonic storm.

Monitored Sea & Land Temp

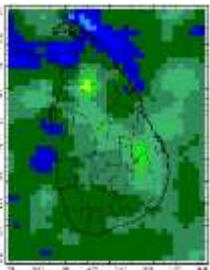


- Average land surface temperature was 30.5°C in the last week with cooler anomalies of (-)1-3°C.
- Sea surface temperature around Sri Lanka was 0.5 - 2.0°C above normal.
- The temperature has dropped slightly.

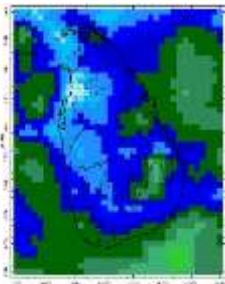
Monitoring

Rainfall

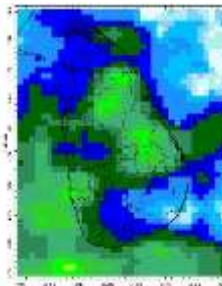
Daily Estimates for Rainfall from 16th May - 23rd May 2024



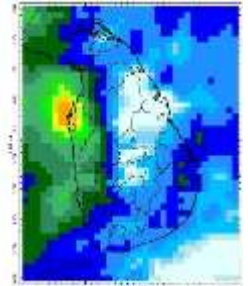
16 May



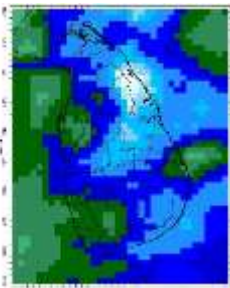
17 May



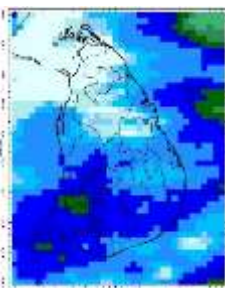
18 May



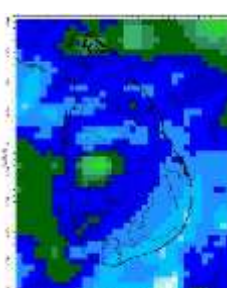
19 May



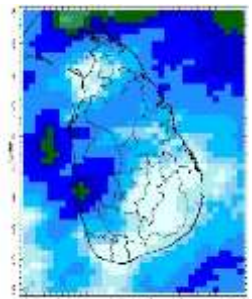
20 May



21 May



22 May



23 May



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Pacific sea state: May 20, 2024

El Niño is transitioning toward ENSO-neutral. Equatorial sea surface temperatures (SSTs) are above average in the western and central Pacific Ocean, and below-average SSTs are emerging in east central and eastern Pacific Ocean. La Niña may develop in June-August 2024 (49% chance) or July-September (69% chance).

Indian Ocean State

Sea surface temperature around Sri Lanka was 1.5°C above normal for the country in 30th April - 6th May 2024.

Cyclone 'Remal'

IMD predicts that the cyclonic storm in Bay of Bengal (BoB) shall intensify into a cyclone by the 25th and as typically for this season shall steer away from SL. However, if the cyclone stalls there could continue to be severe winds and heavy rainfall in the western slopes of the mountains in SL.

Predictions

Rainfall

14 - Day prediction: NCEP GFS models

From 24th May - 30th May:

Total rainfall by Provinces:

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

From 31st May - 6th June:

Total rainfall by Provinces:

Rainfall (mm)	Provinces
85	North Western
75	Western, Sabaragamuwa, Southern
65	Central
55	North Central, Northern
45	Uva, Eastern

MJO based OLR predictions

For the next 15 days:

MJO shall moderately enhance the rainfall during 24th - 28th May, and slightly enhance the rainfall during 29th May - 7th June for Sri Lanka.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been very heavy rainfall over the following area: Kesbewa.

Daily Average Rainfall in the Met stations for previous week of (17th May - 24th May) = 17.3 mm
Maximum Daily Rainfall: 214.5 mm & Minimum Daily Rainfall: 0.0 mm.

Region	Average rainfall for last 8 days (mm)	Average temperature for last 8 days (°C)	
		Maximum	Minimum
Northern plains	19.0	31.4	25.8
Eastern hills	2.1	27.6	20.9
Eastern plains	6.2	32.7	25.9
Western hills	19.8	26.2	20.6
Western plains	35.0	30.3	25.1
Southern plains	3.0	31.4	25.6

Region	Average rainfall for last 8 days (mm)	Daily maximum rainfall for last 8 days (mm)	Daily minimum rainfall for last 8 days (mm)
Hydro catchment	23.1	88.0	0.0

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

Temperatures: The temperature anomalies were below normal for the some parts of the Northern and Eastern provinces driven by the warm SST's.

Predictions

Rainfall: During the next week (24th May - 30th May), fairly heavy rainfall (50 - 100 mm) is predicted for the Western, Southern, Sabaragamuwa, North Western, Central, North Central, and Uva provinces and moderate rainfall (25 - 50 mm) is predicted for the rest.

Temperatures: The temperature will remain above normal for some parts of the Eastern, Northern, and Uva provinces during 25th - 31st May.

Teleconnections: MJO shall moderately enhance the rainfall during 24th - 28th May, and slightly enhance the rainfall during 29th May - 7th June for Sri Lanka

Seasonal Precipitation: The precipitation forecast for the June-July-August, 2024 season shows a 50% or more tendency toward above normal precipitation for the country.

Terminology for Rainfall Ranges

	Rainfall
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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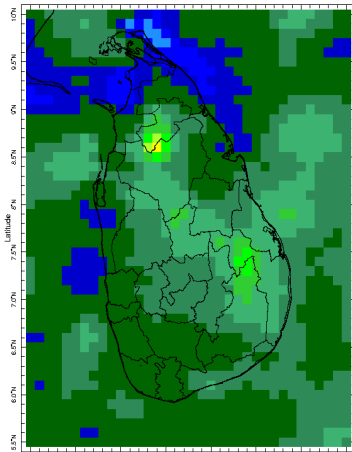
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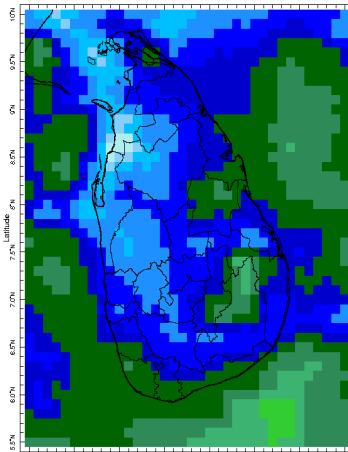
MONITORING

Daily Rainfall Monitoring

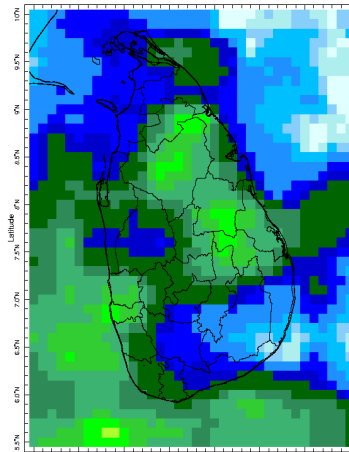
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



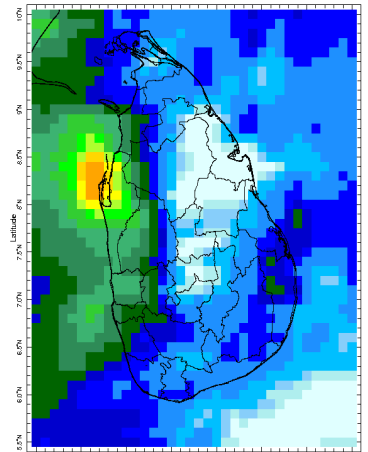
16 May 2024



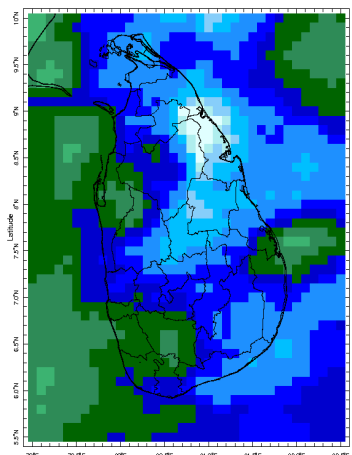
17 May 2024



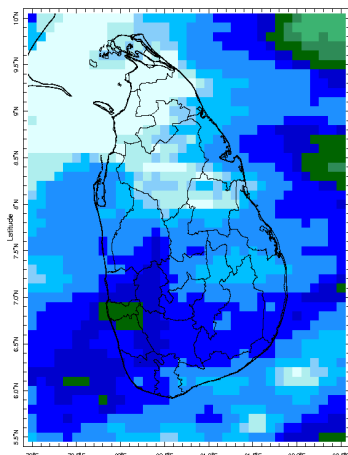
18 May 2024



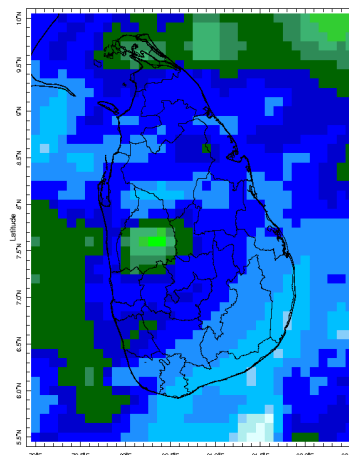
19 May 2024



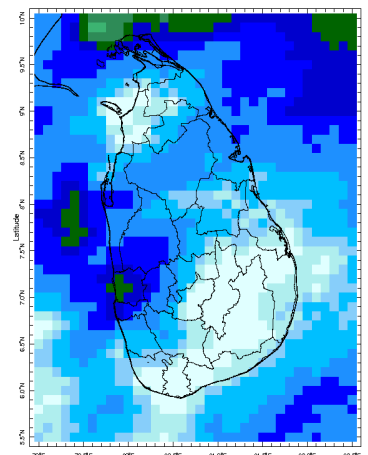
20 May 2024



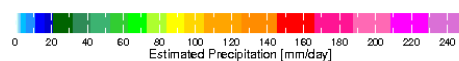
21 May 2024



22 May 2024

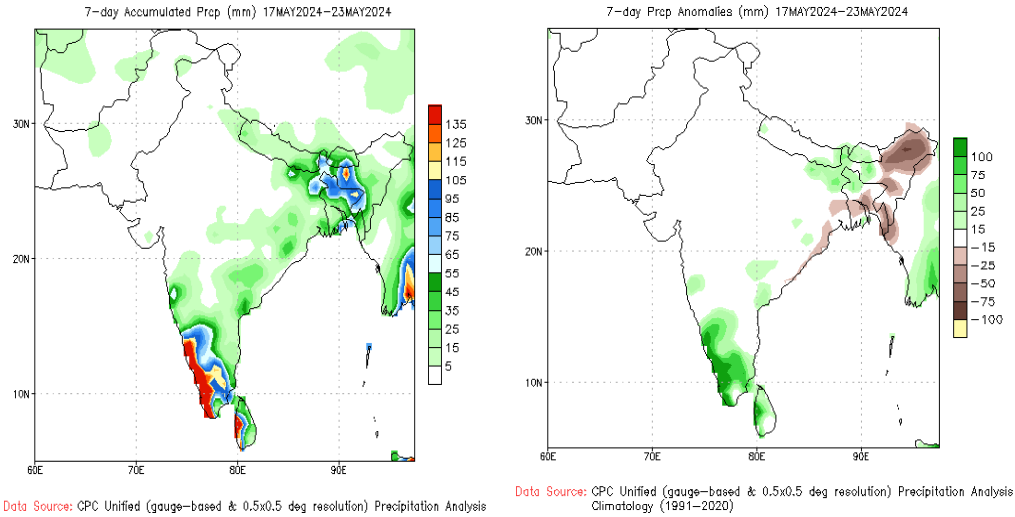


23 May 2024



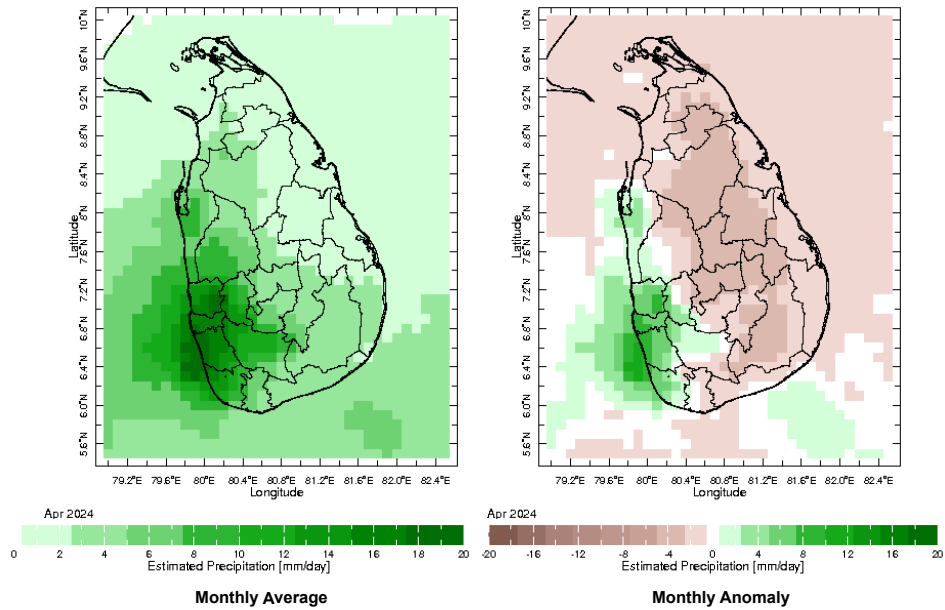
Weekly Rainfall Monitoring

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.

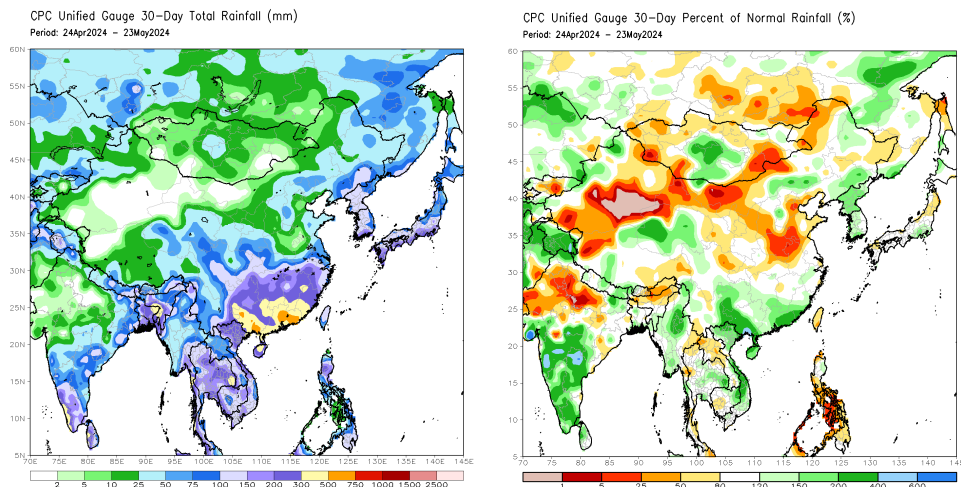


Monthly Rainfall Monitoring

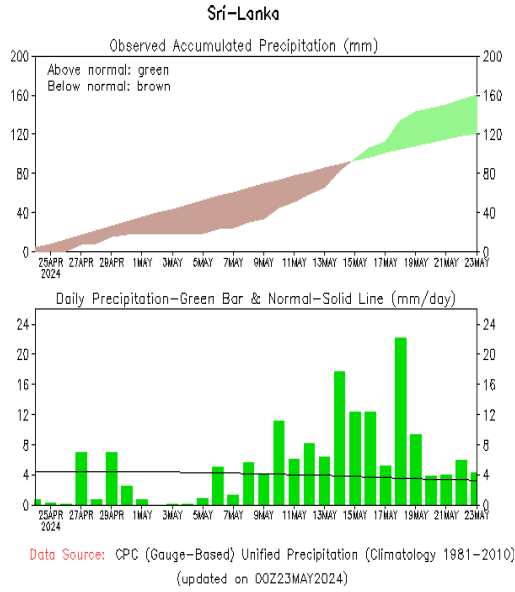
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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



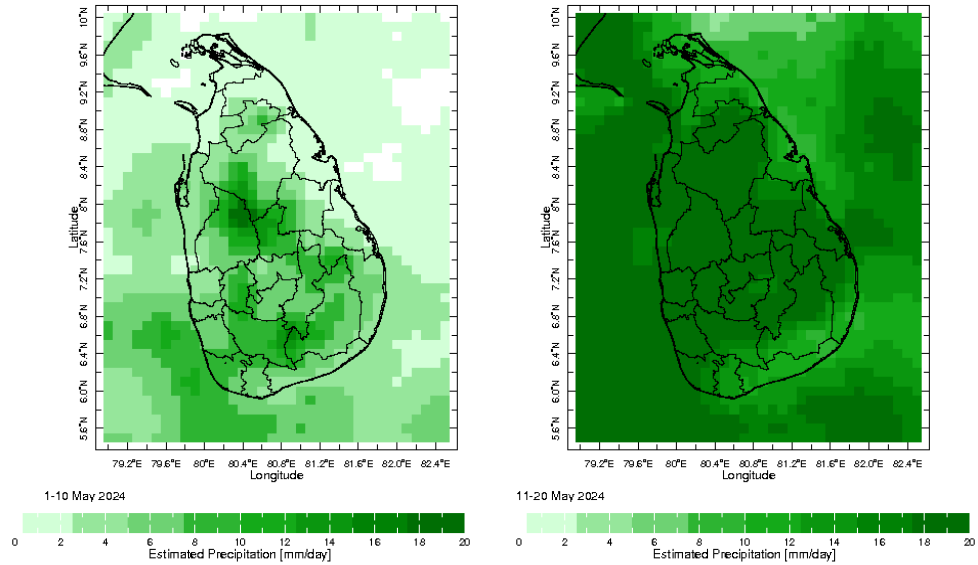
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



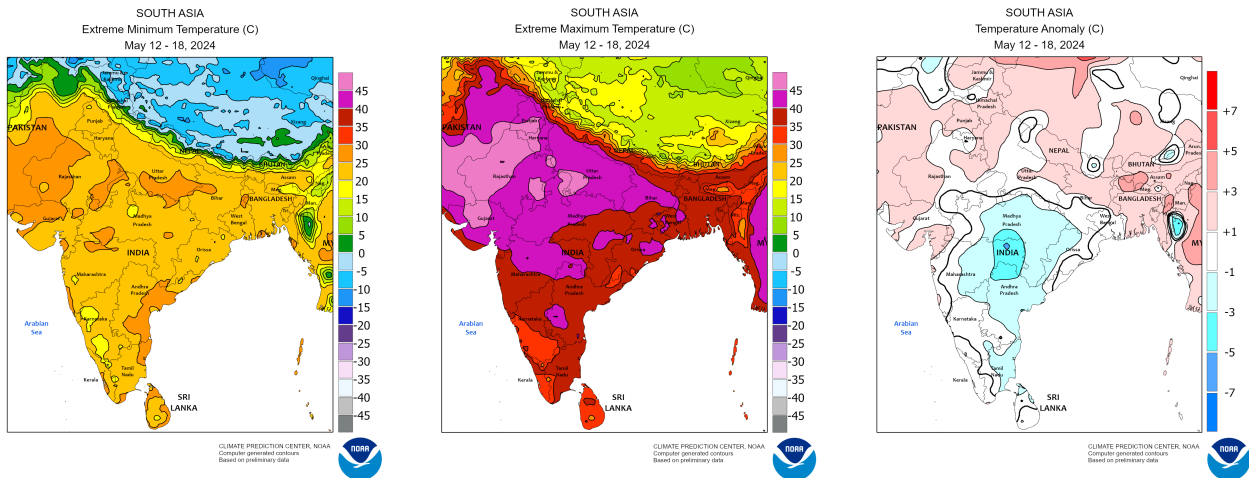
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

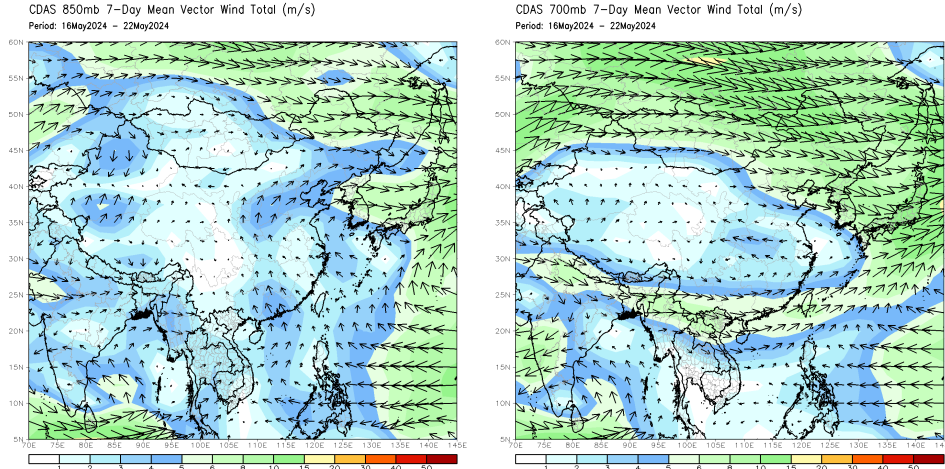


Weekly Temperature Monitoring



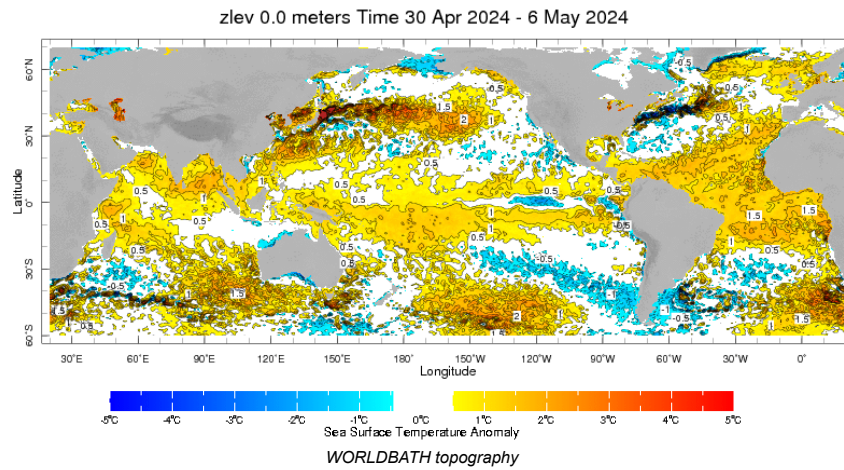
Weekly Wind Monitoring

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.

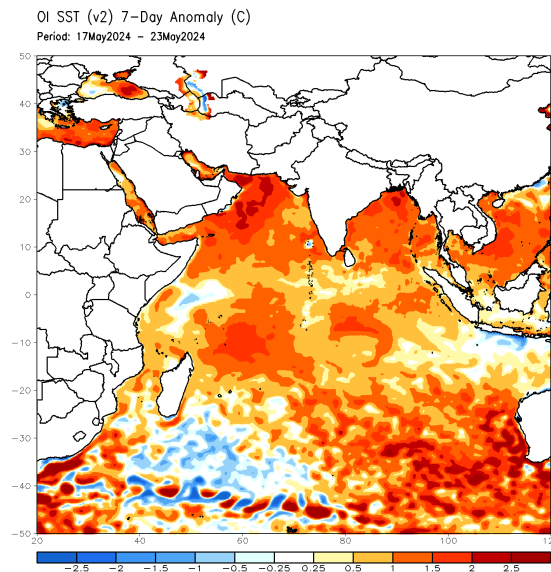


Weekly Average SST Anomalies

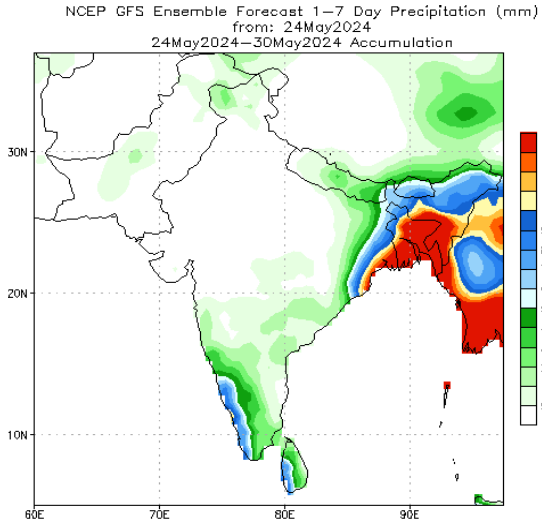
Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



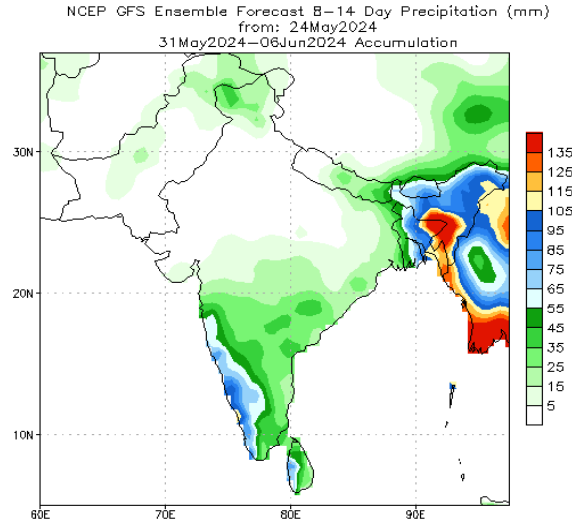
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



NCEP GFS 1- 14 Day prediction

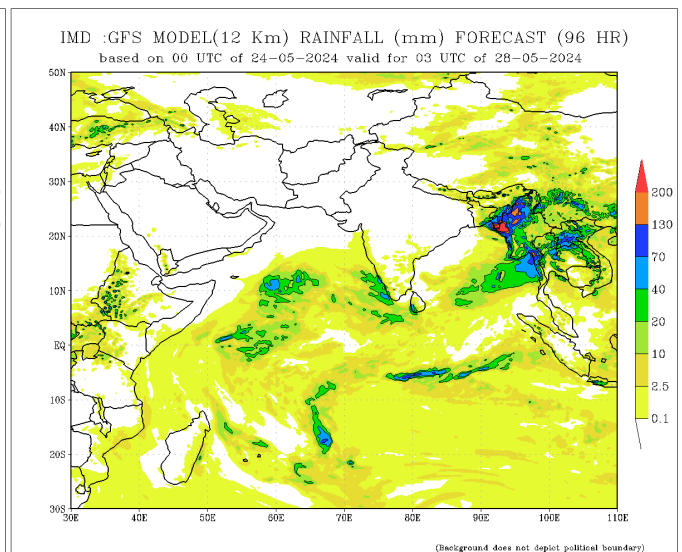
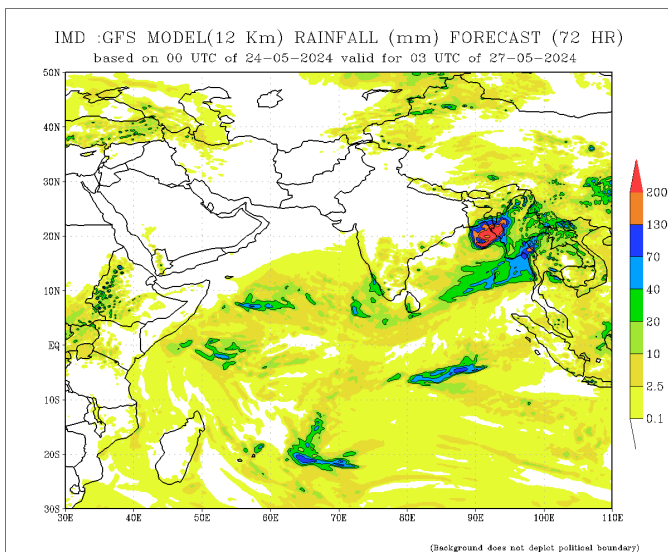
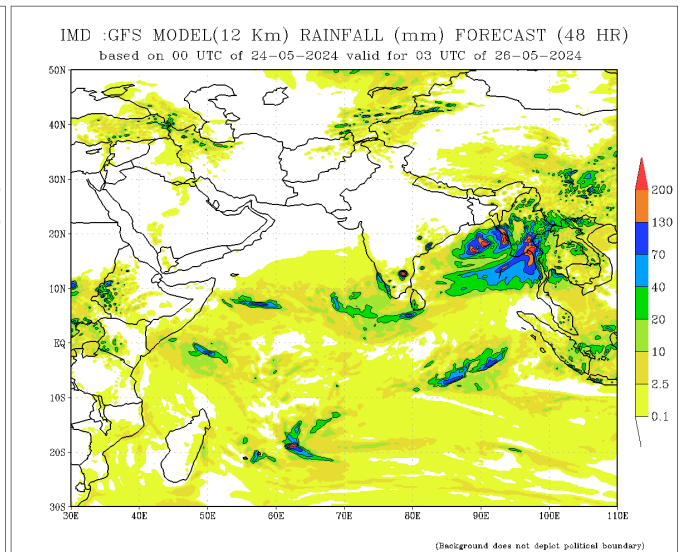
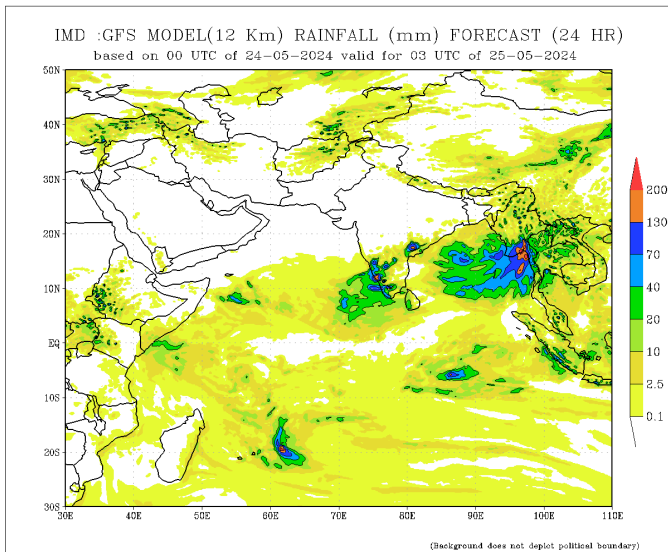


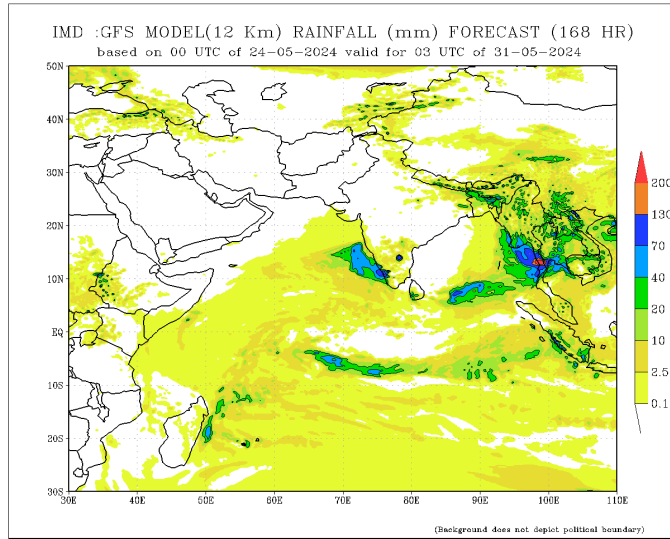
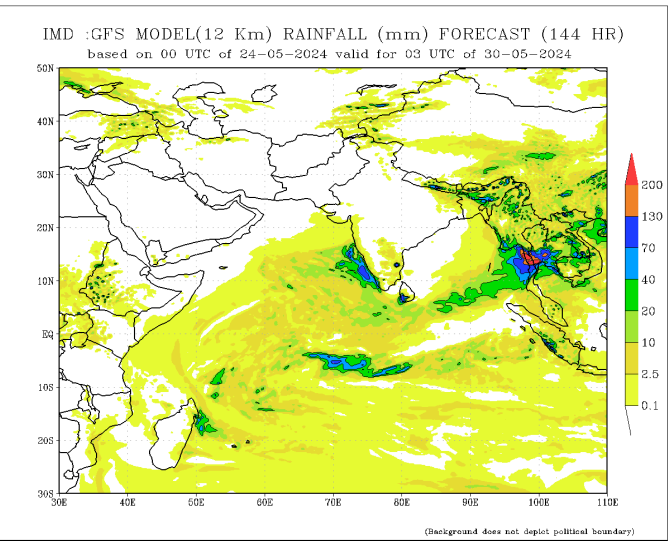
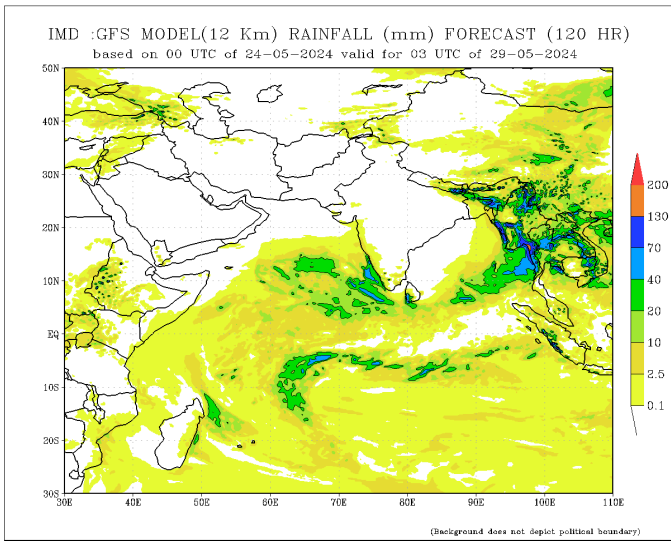
Bias correction based on last 30-day forecast error



Bias correction based on last 30-day forecast error

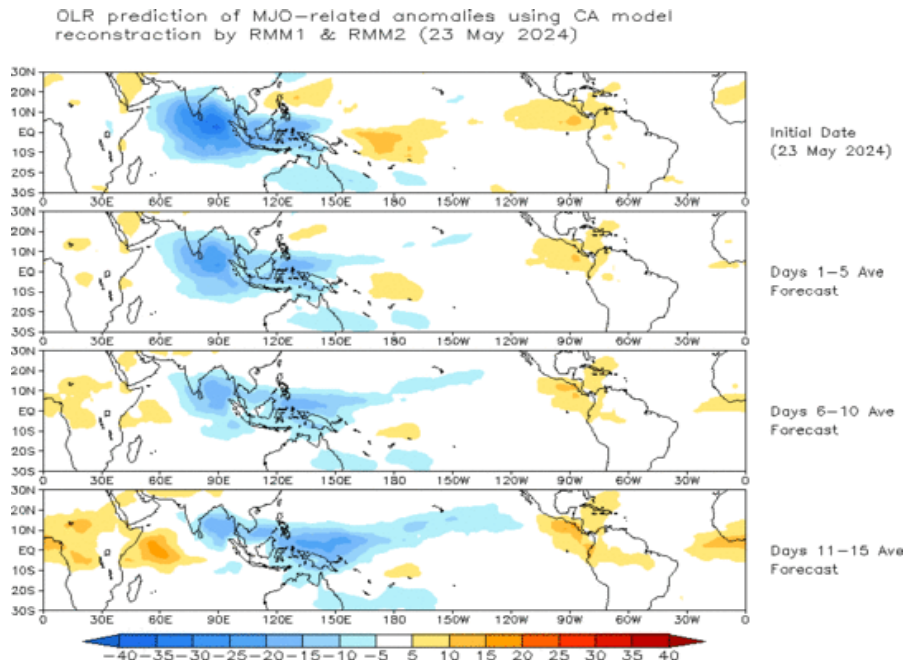
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India





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

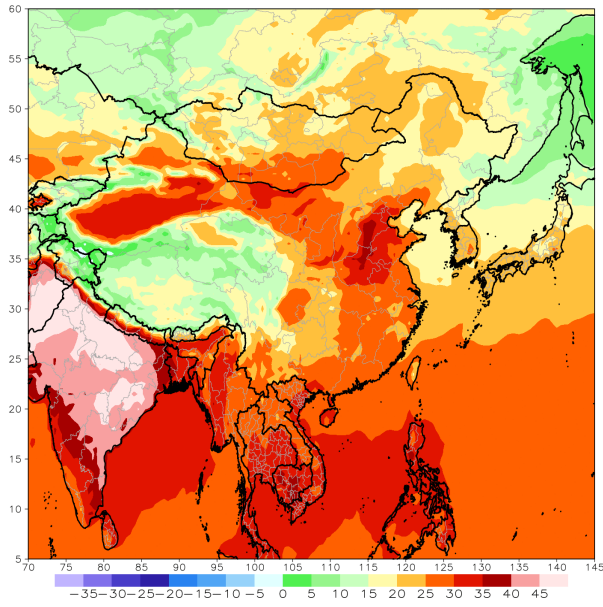
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated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



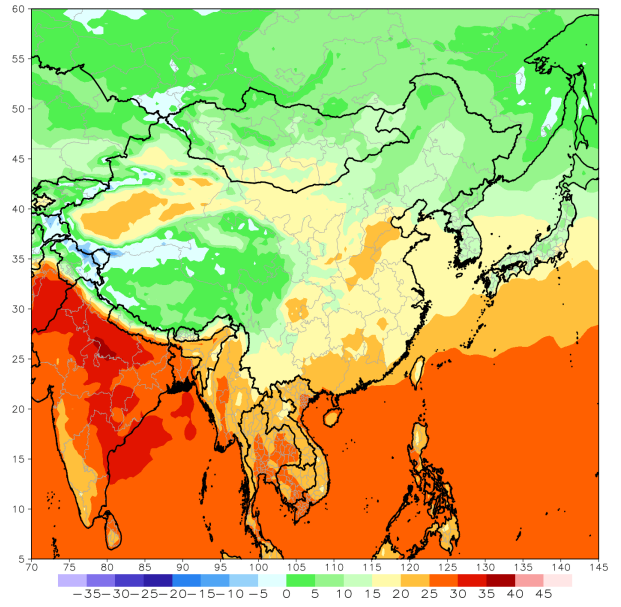
Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)
Period: 18z25May2024 - 18z31May2024



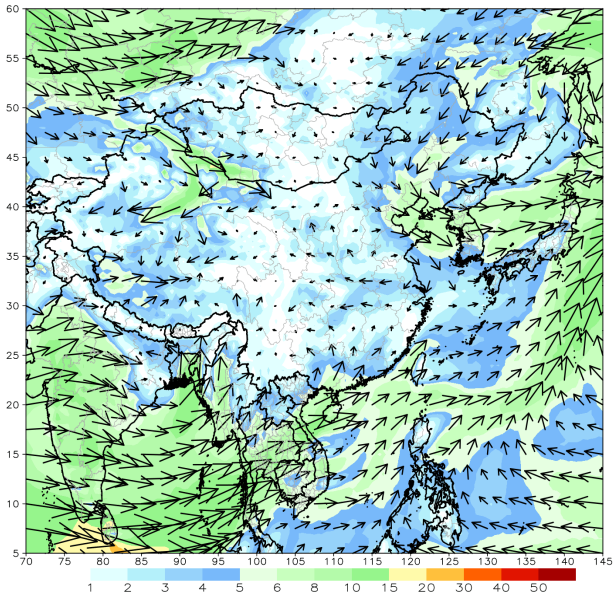
GFS week1 Temperature Min (C)
Period: 18z25May2024 - 18z31May2024



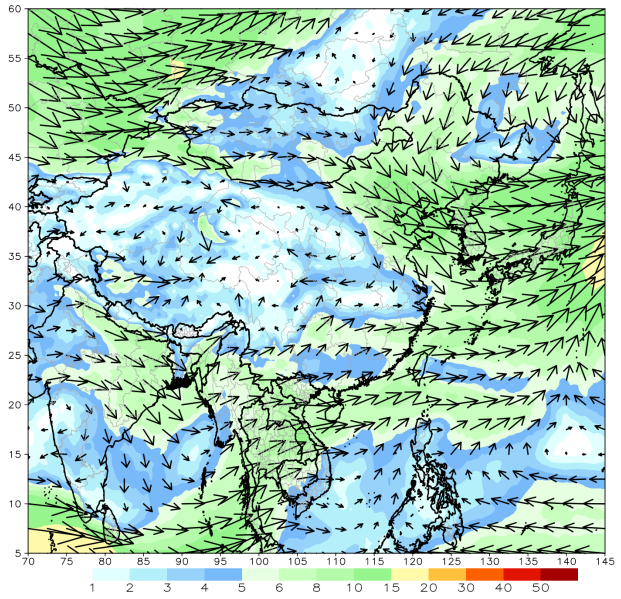
Weekly Wind Forecast

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: 18z25May2024 - 18z31May2024



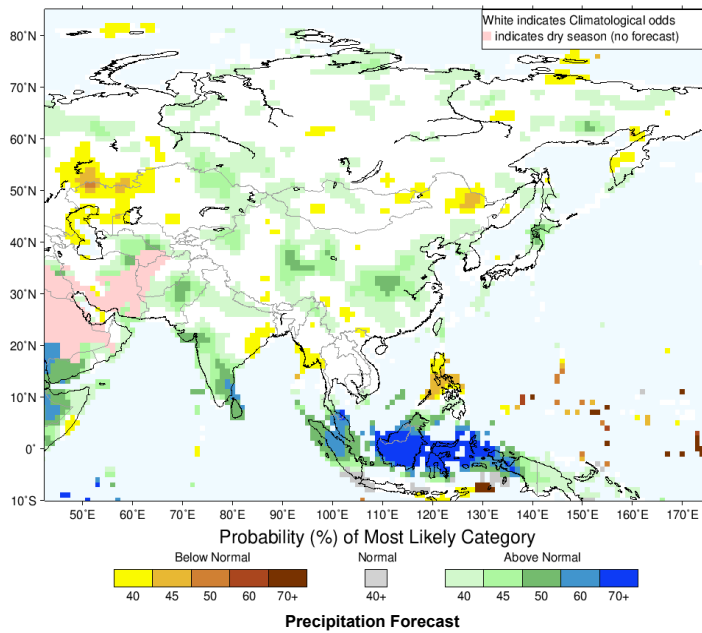
GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 18z25May2024 - 18z31May2024



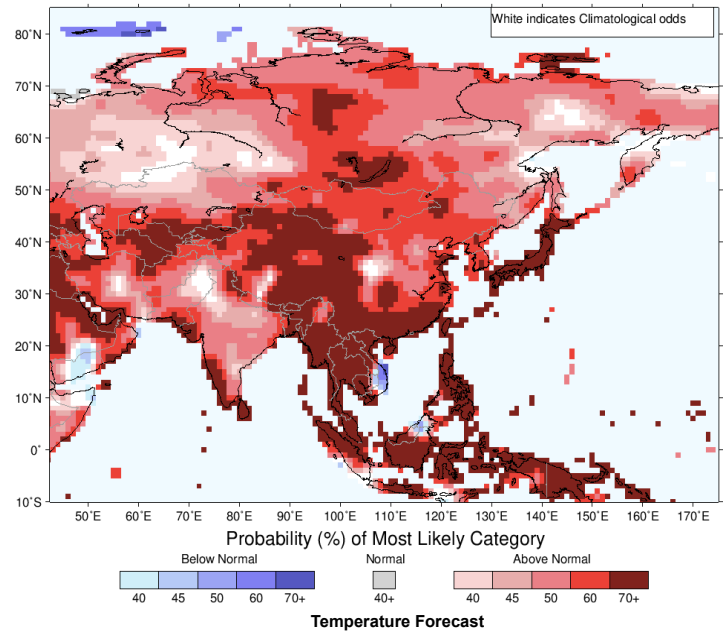
Seasonal Rainfall and Temperature Forecast

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 June-July-August 2024, Issued May 2024



IRI Multi-Model Probability Forecast for Temperature for June-July-August 2024, Issued May 2024



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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