HIGHLIGHTS

Rainfall Prediction

- *Moderately heavy rainfall is predicted for the Northern, Eastern, and North Central provinces during 16th Feb - 22nd Feb.*
- *The seasonal forecast shows a higher tendency for above-normal precipitation for southern half of the country from March - May, 2023.*

Monitored Rainfalls

- *During the last week, maximum daily rainfall over Sri Lanka was 49.9 mm in Rathnapura and hydro catchment areas received 0.0 mm.*
- *Highest average rainfall 1.3 mm/day received to western plains of the country.*

Monitored Wind

- *From 7th - 13th Feb, up to 6 m/s of north easterly winds were experienced at 850 mb level over the island.*
- *During 17th - 23rd Feb, north easterly winds are expected for the country.*
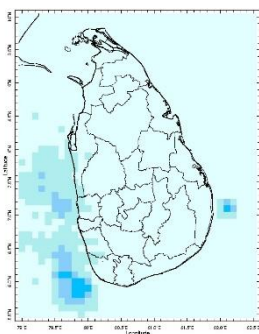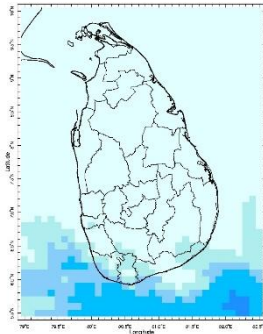
Monitored Sea & Land Temp

- *Sea surface temperature around Sri Lanka was below normal for northern half of the island.*
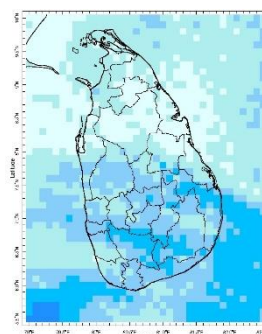- *Land surface temperature remained near normal.*

Monitoring
Rainfall
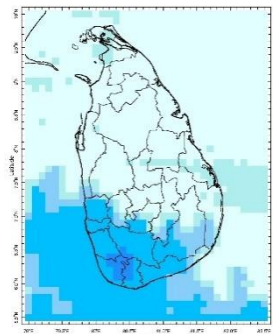
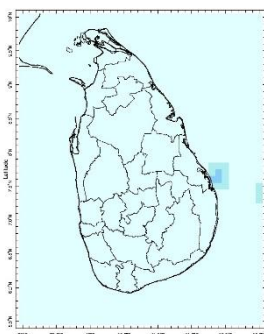*Daily Estimates for Rainfall from 8th February – 15th February 2023*

8 February

9 February

10 February

11 February

12 February
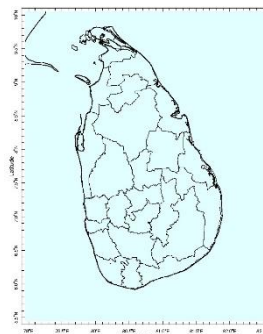
13 February
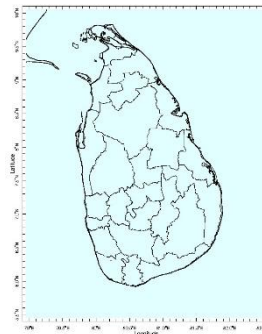
14 February

15 February

Estimated Precipitation [mm/day]
0   20   40   60   80   100   120   140   160   180   200   220   240
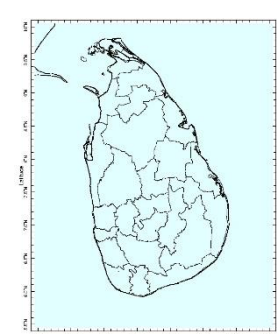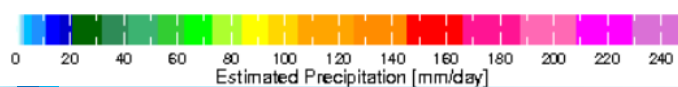
Federation for Environment, Climate and Technology

c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.

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Ocean State *(Text Courtesy IRI)*

Pacific sea state: February 13, 2023

Equatorial sea surface temperatures (SSTs) are below average across most of the Pacific Ocean mid - February. The tropical Pacific atmosphere is consistent with La Niña. A large majority of the models indicate ENSO-neutral conditions will begin within the next couple of months, and persist through the Northern Hemisphere spring and early summer.

Indian Ocean State

Sea surface temperature around Sri Lanka was below - 0.5℃ to the northern half of the country in 1st February, 2023. Across the Indian Ocean, a classical negative Indian Ocean Dipole prevails as is typical during a La Niña.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 16th February – 22nd February:

Total rainfall by Provinces:

Rainfall	Provinces
35 mm	Northern, Eastern, North Central
15 mm	North Western, Uva, Central
≤ 5 mm	Western, Southern, Sabaragamuwa

From 23rd February – 1st March:

Total rainfall by Provinces:

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

MJO based OLR predictions

For the next 15 days:

MJO shall moderately suppress the rainfall during 16th – 20th February, and slightly suppress the rainfall during 21st February – 2nd March for Sri Lanka.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been fairly heavy rainfall over the following area: Matara

Daily Average Rainfall in the Met stations for previous week of (8th February – 15th February) = 0.4 mm

Rmax: 49.9 mm & Rmin: 0.0 mm.

Region	Average rainfall for the Last 8 days
Northern Plains	0.0 mm
Eastern	0.0 mm
Western	1.3 mm
Southern Plains	0.0 mm

The Hydro Catchment Areas recorded 0.0 mm of average rainfall for the last week

Rmax: 0.0 mm & Rmin: 0.0 mm.

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

Temperatures: The temperature anomalies were below normal for the North Central province and some parts of the Eastern, North Western, Central, and Northern provinces, and above normal for some parts of the Sabaragamuwa province, driven by the warm SST's.

Predictions

Rainfall: During the next week (16th February – 22nd February), moderately heavy rainfall (≥ 35 mm) is predicted for the Northern, Eastern, and North Central provinces, and less rainfall is expected for rest of the country.

Temperatures: The temperature will remain above normal for some parts of the Western and Uva provinces during 17th – 23rd February.

Teleconnections: ENSO-neutral conditions will begin within the next couple of months, and persist through the Northern Hemisphere spring and early summer.

MJO shall moderately suppress the rainfall during 16th – 20th February, and slightly suppress the rainfall during 21st February – 2nd March for Sri Lanka.

Seasonal Precipitation: The precipitation forecast for the March-April-May 2023 season shows a higher tendency of above-normal precipitation for southern half of the country.

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

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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

[Download]

MONITORING

Daily Rainfall Monitoring

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


Estimated Precipitation [mm/day]
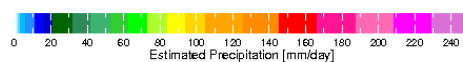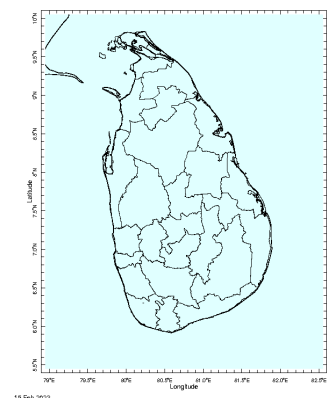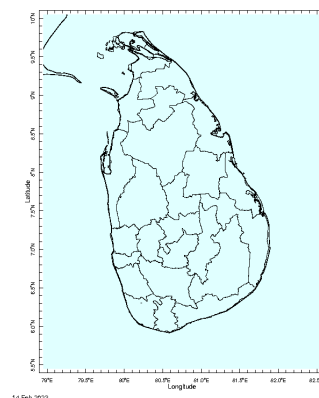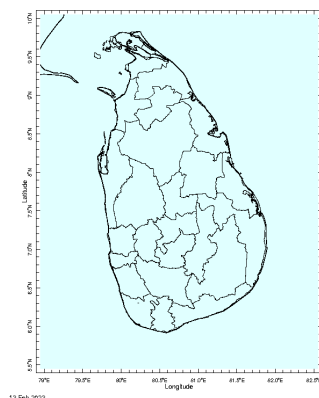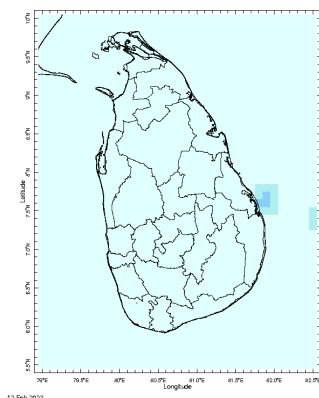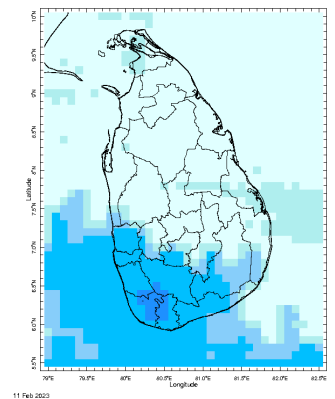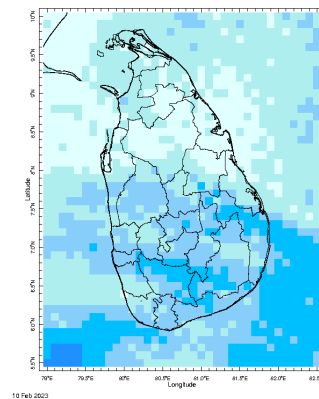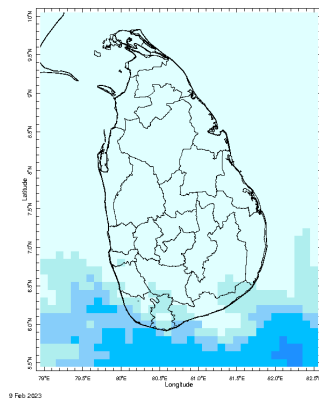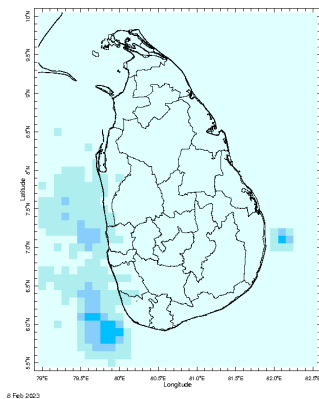
Weekly Rainfall Monitoring

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.
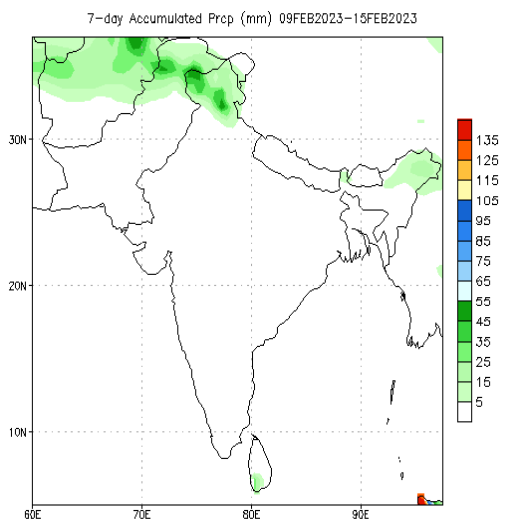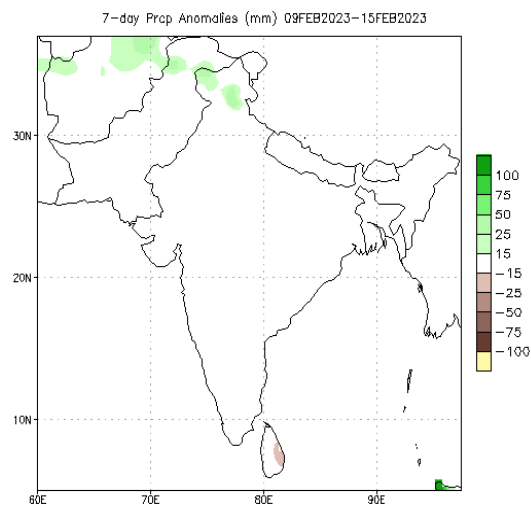

Monthly Rainfall Monitoring

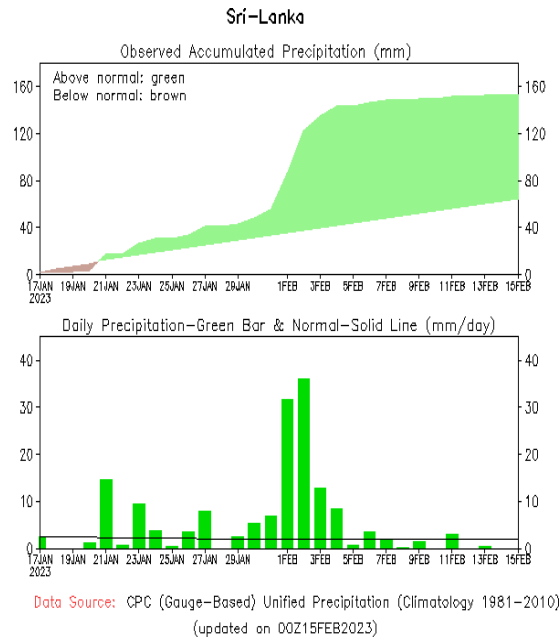The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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

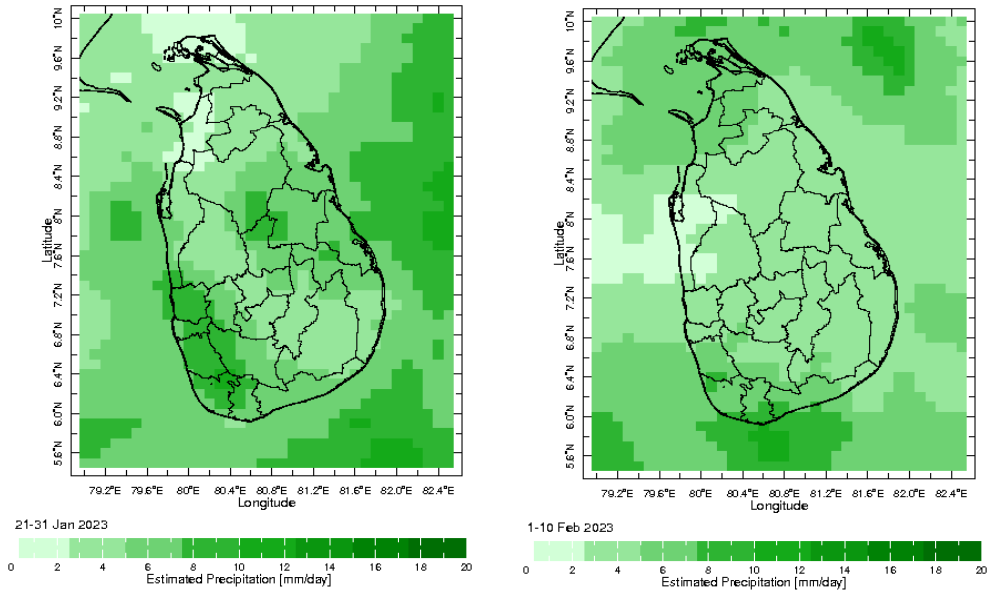**Monthly Average**   **Monthly Anomaly**
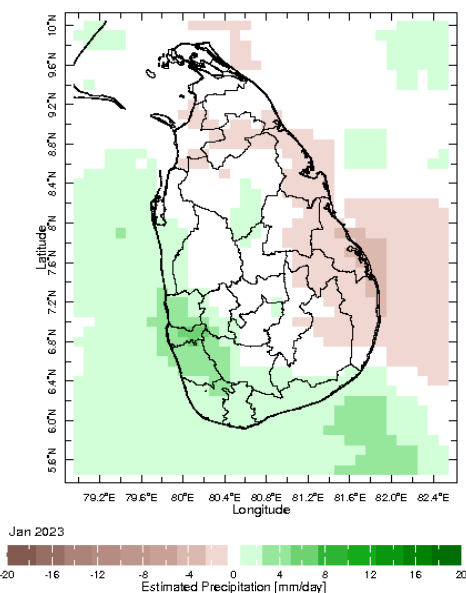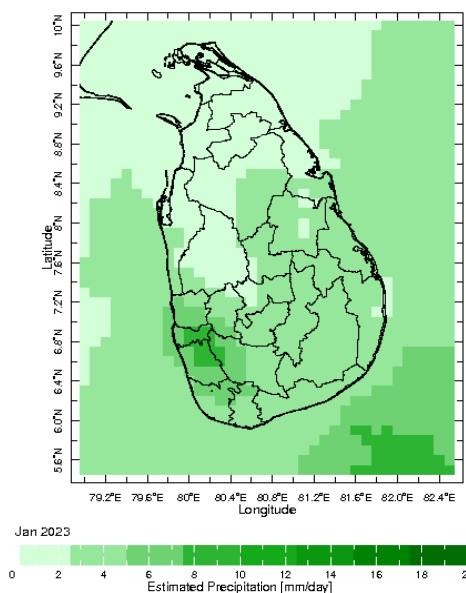
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in the past 30 days compared to normal rainfall in this period.
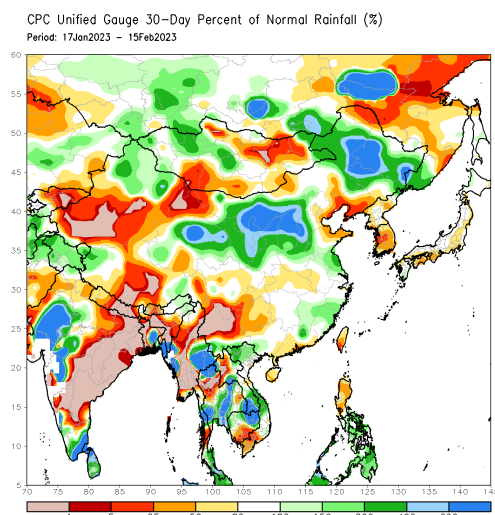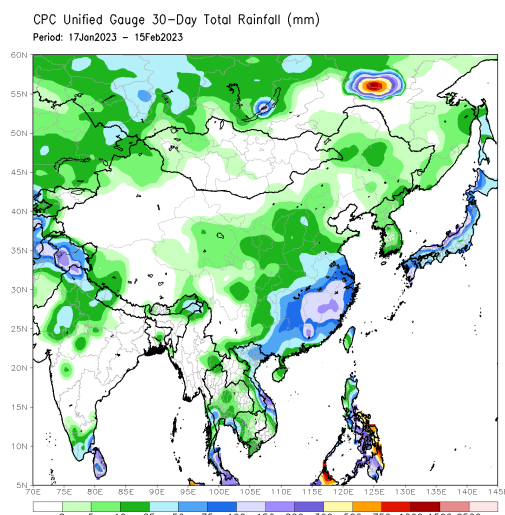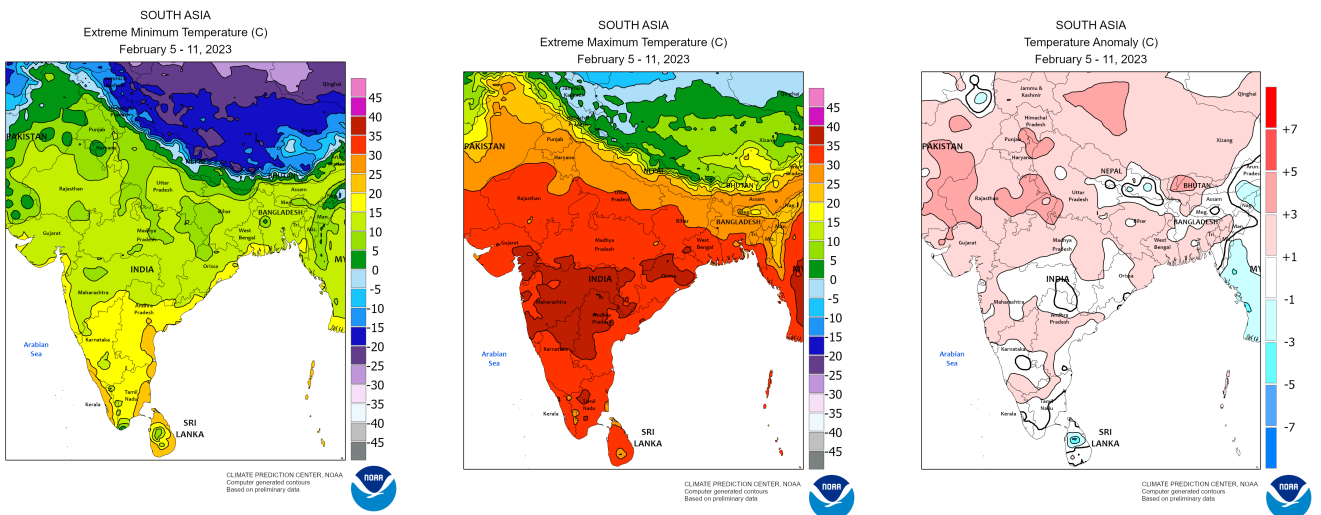
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.

Sri-Lanka

Observed Accumulated Precipitation (mm)

Above normal: green
Below normal: brown

Daily Precipitation—Green Bar & Normal—Solid Line (mm/day)

Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981-2010)
(updated on 00Z15FEB2023)

Dekadal (10 Day) Satellite Derived Rainfall Estimates

21-31 Jan 2023

Estimated Precipitation [mm/day]

1-10 Feb 2023

Estimated Precipitation [mm/day]

Weekly Temperature Monitoring

SOUTH ASIA
Extreme Minimum Temperature (C)
February 5 - 11, 2023

SOUTH ASIA
Extreme Maximum Temperature (C)
February 5 - 11, 2023

SOUTH ASIA
Temperature Anomaly (C)
February 5 - 11, 2023

CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data
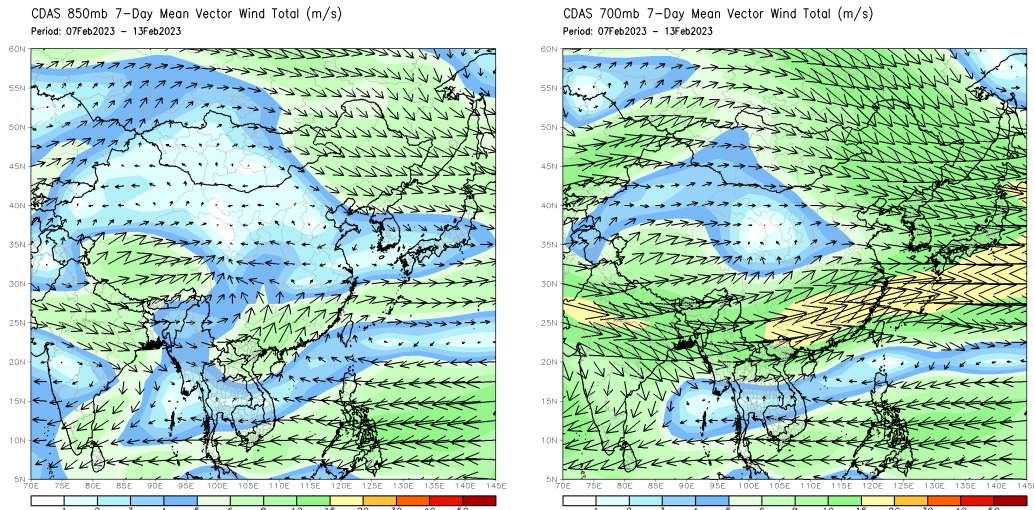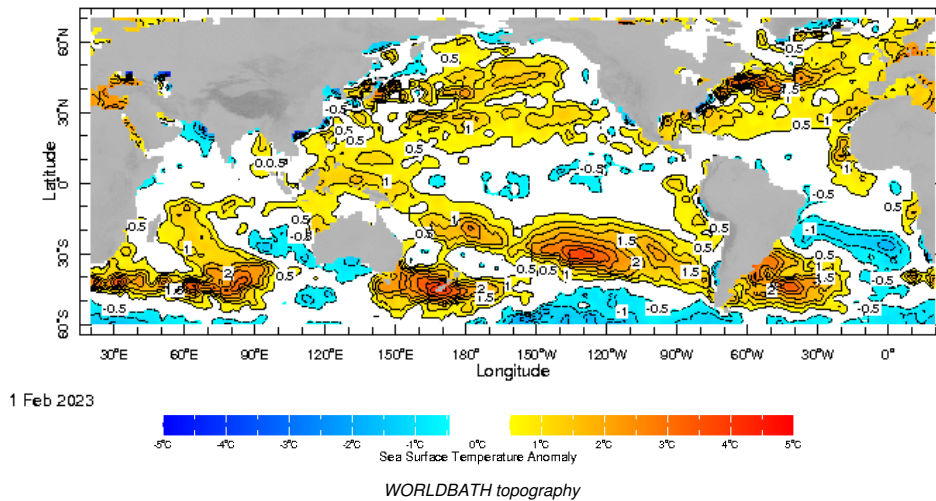
Weekly Wind Monitoring

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.
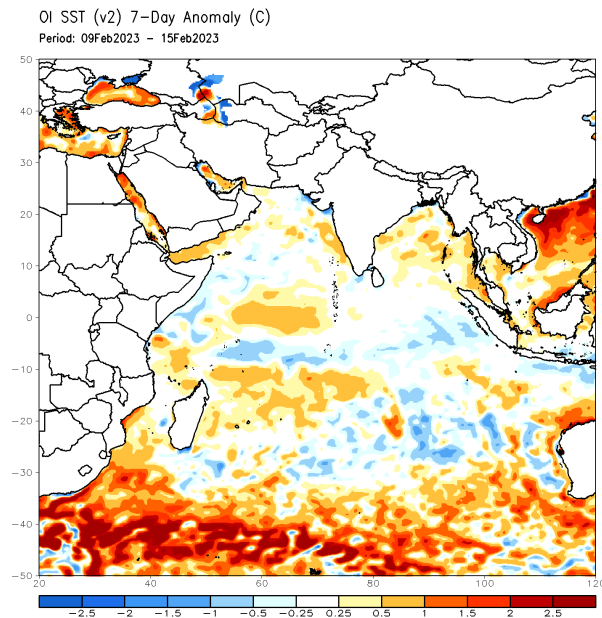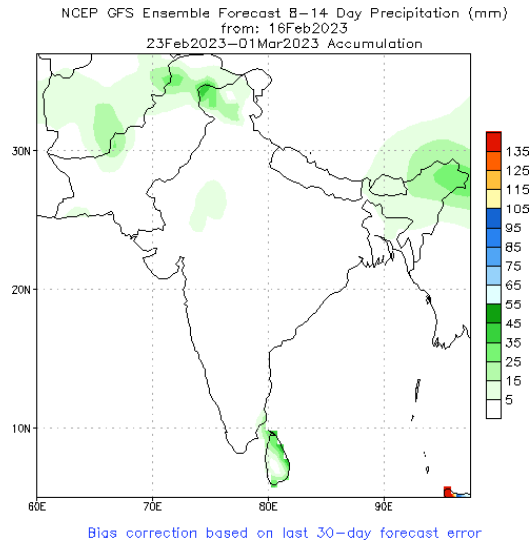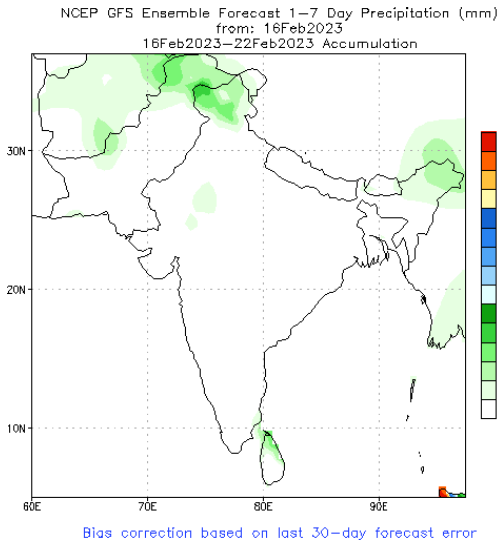

Weekly Average SST Anomalies

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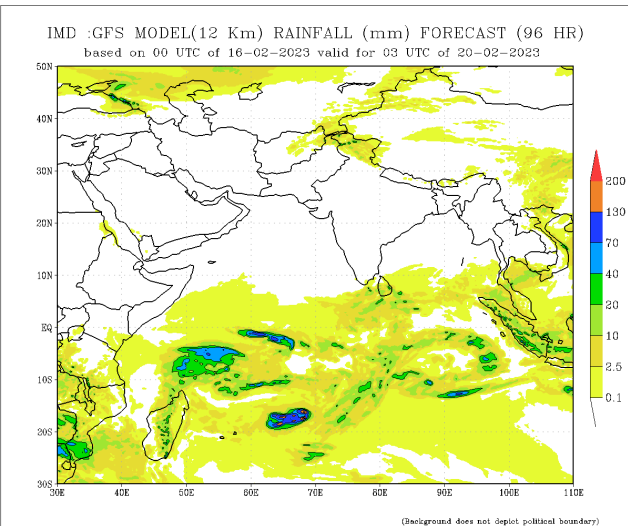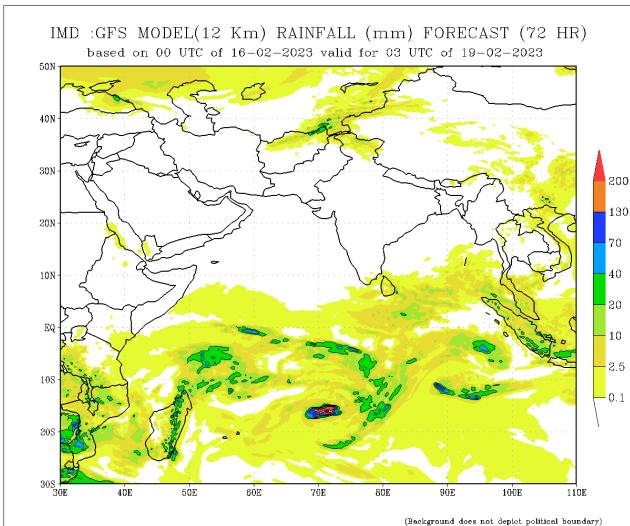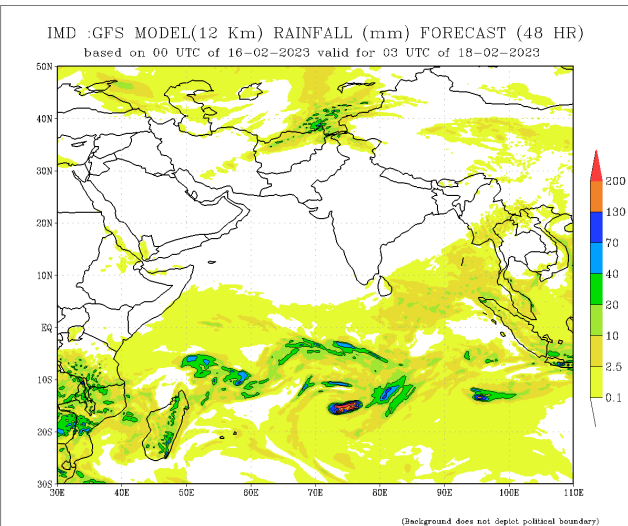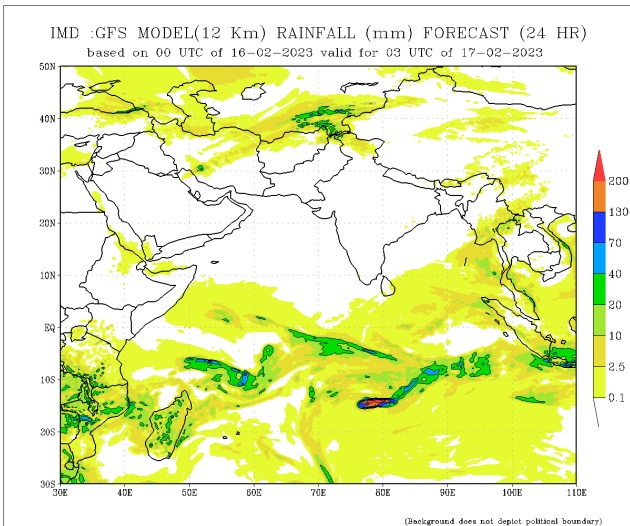

1 Feb 2023

WORLDBATH topography

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

NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1–7 Day Precipitation (mm)
from: 16Feb2023
16Feb2023–22Feb2023 Accumulation

NCEP GFS Ensemble Forecast 8–14 Day Precipitation (mm)
from: 16Feb2023
23Feb2023–01Mar2023 Accumulation

Bias correction based on last 30-day forecast error

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

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (24 HR)
based on 00 UTC of 16-02-2023 valid for 03 UTC of 17-02-2023

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (48 HR)
based on 00 UTC of 16-02-2023 valid for 03 UTC of 18-02-2023

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (72 HR)
based on 00 UTC of 16-02-2023 valid for 03 UTC of 19-02-2023

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (96 HR)
based on 00 UTC of 16-02-2023 valid for 03 UTC of 20-02-2023

(Background does not depict political boundary)

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.
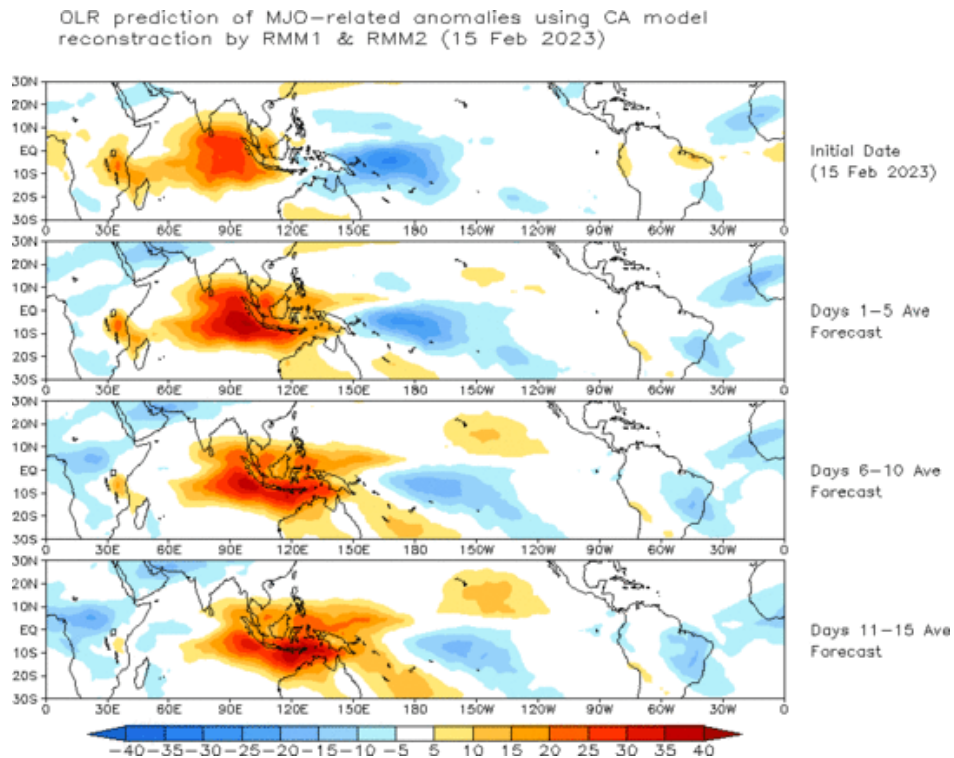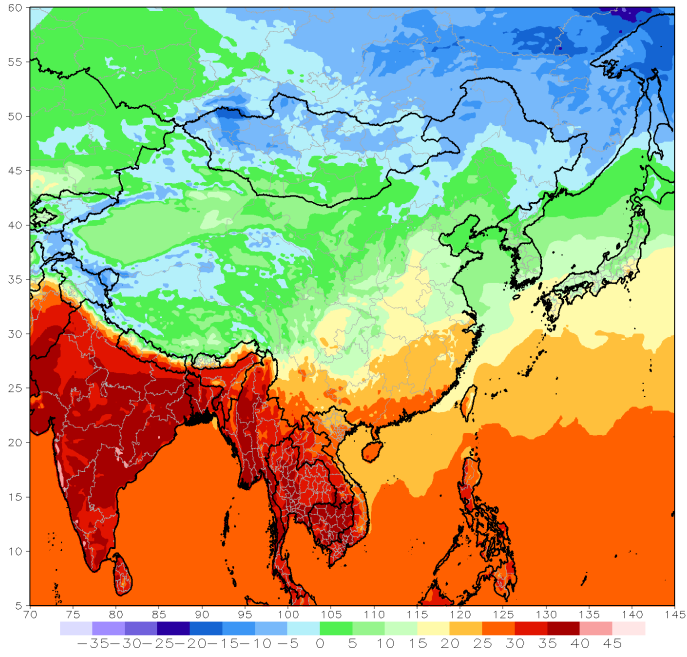
Weekly Temperature Forecast

Weekly Minimum and Maximum Temperature prediction from the GFS model (from NOAA CPC)
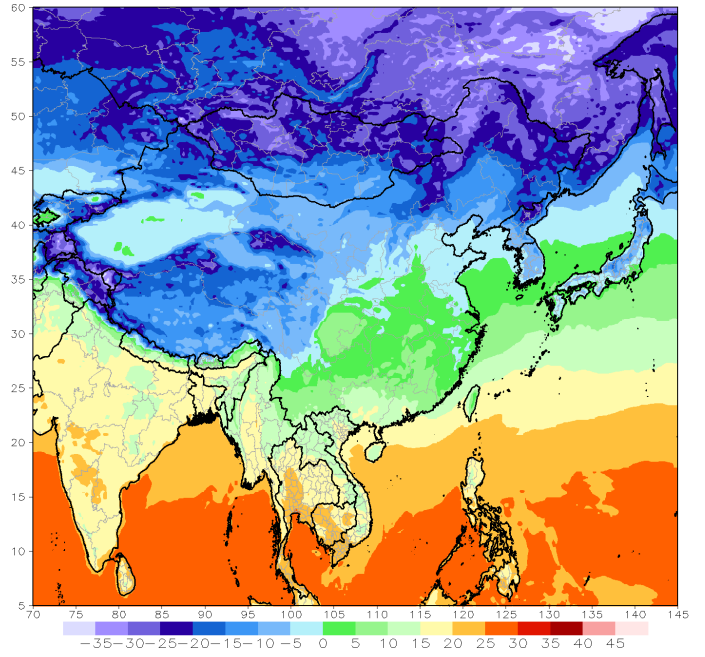
GFS week1 Temperature Max (C)
Period: 18z17Feb2023 – 18z23Feb2023

GFS week1 Temperature Min (C)
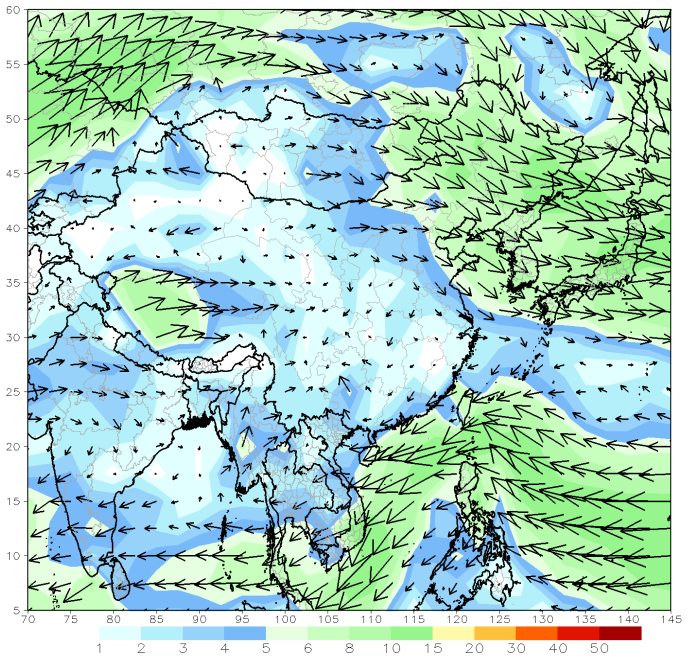Period: 18z17Feb2023 – 18z23Feb2023

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)
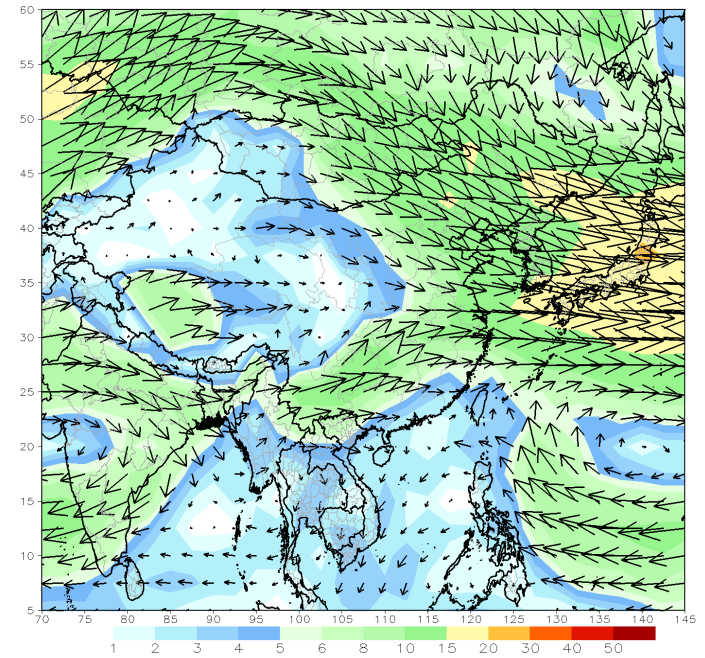
GFS 850mb week1 Mean Vector Wind Total (m/s)
Period: 18z17Feb2023 – 18z23Feb2023
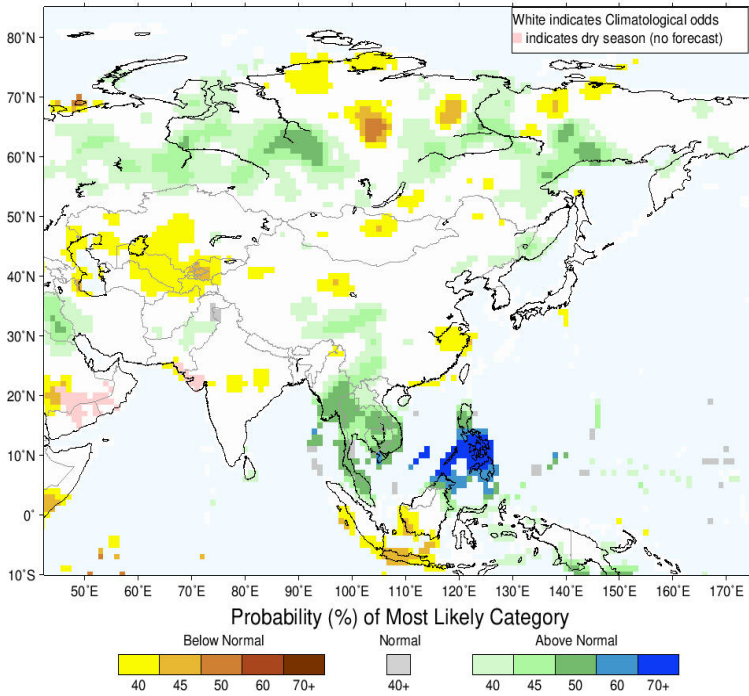
GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 18z17Feb2023 – 18z23Feb2023
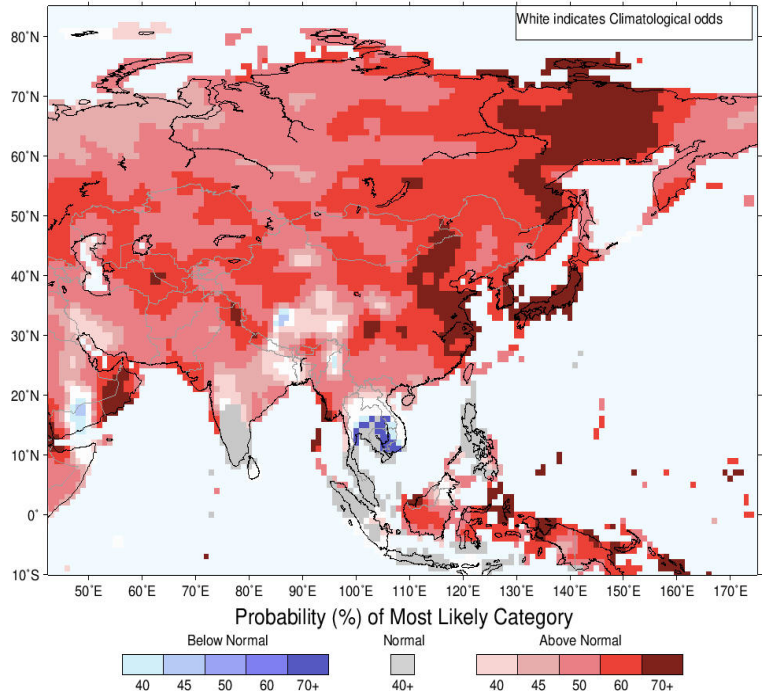
Seasonal Rainfall and Temperature Forecast

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 March–April–May 2023, Issued February 2023

White indicates Climatological odds
indicates dry season (no forecast)

Probability (%) of Most Likely Category

Below Normal
40 45 50 60 70+

Normal
40+

Above Normal
40 45 50 60 70+

Precipitation Forecast

IRI Multi–Model Probability Forecast for Temperature for March–April–May 2023, Issued February 2023

White indicates Climatological odds

Probability (%) of Most Likely Category

Below Normal
40 45 50 60 70+

Normal
40+

Above Normal
40 45 50 60 70+

Temperature Forecast