

Asia: Monthly Climate Outlook

April to January

Issued: July 2024

[Overview](#)

[Current Status](#)

[Outlooks](#)

[Annex 1 – Supplemental Information](#)

Overview

[Asia Current Status and Outlook – Temperature](#)

[Asia Current Status and Outlook – Rainfall](#)

[Global Outlook – Temperature](#)

[Global Outlook – Rainfall](#)

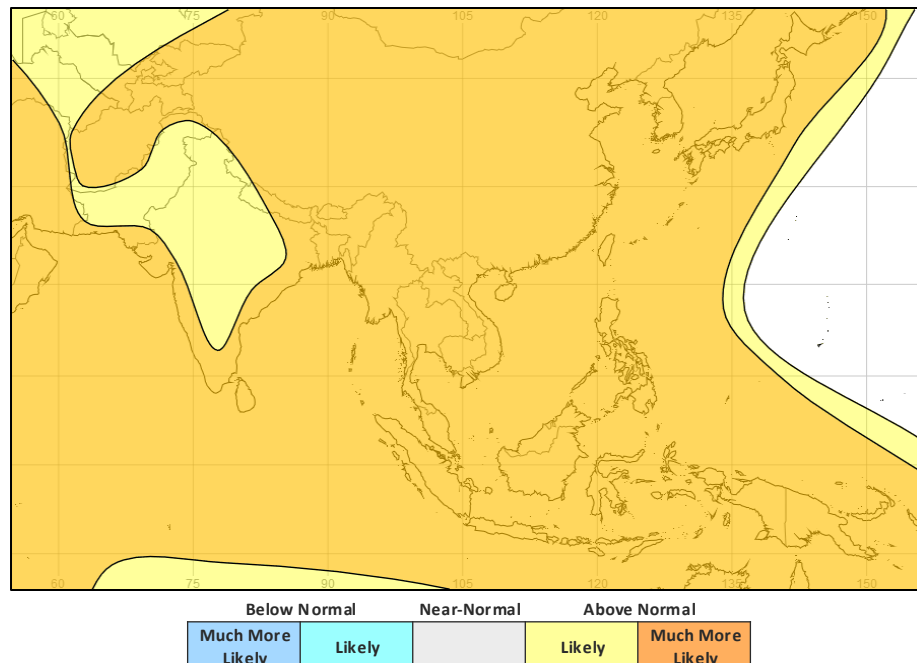
Asia Current Status and Outlook - Temperature

Current Status: Over the past three months, East and Southeast Asia has been widely hotter than normal except for eastern parts of both Vietnam and China where hot conditions in April gave way to normal or cool conditions by June.

After a normal to cool start, hot conditions developed across Central Asia in May and June.

Outlook: Over the next three months, it is much more likely to be warmer than normal across most of Asia.

3-Month Outlook August to October - Temperature



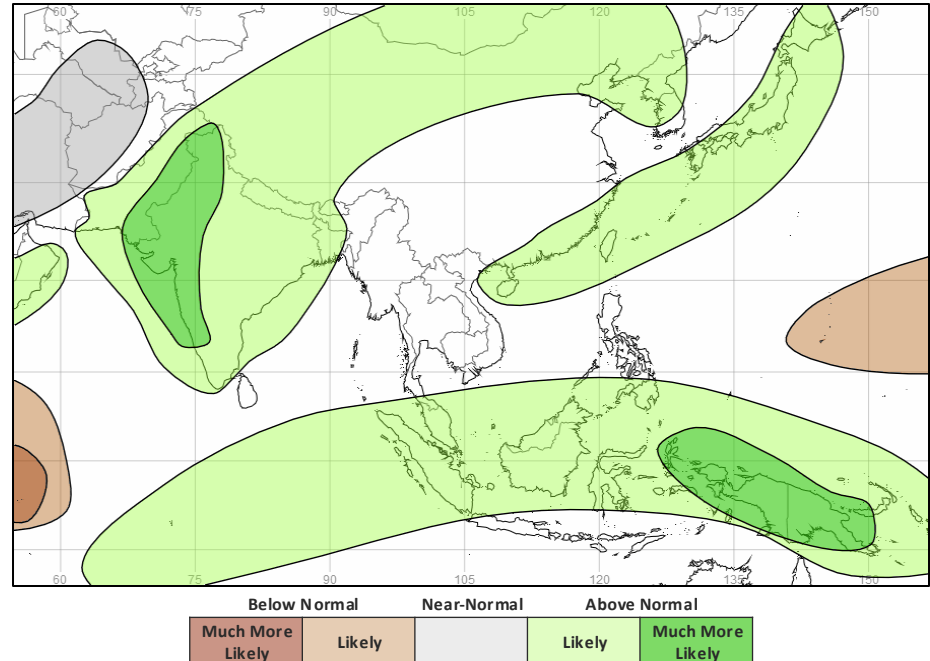
Asia Current Status and Outlook - Rainfall

Current Status: Ahead of the Southwest Monsoon starting in May, many parts of South and Southeast Asia were much drier than normal. This is likely the result of the recent El Nino event. The monsoon season has since been normal to wet. For instance, Nepal, Bangladesh and western Myanmar were very wet in June.

On the whole, China and Central Asia have been wetter than normal over the last three months, more so in April.

Outlook: Nowhere in Asia is likely to experience drier than normal conditions for the next three months. For many parts that experience a monsoon during this period, including the Maritime Continent, the Indian subcontinent and East Asia, wetter than normal conditions are likely. This may exacerbate impacts already experienced from heavy seasonal rainfall. For eastern Pakistan and western India, wetter conditions are much more likely.

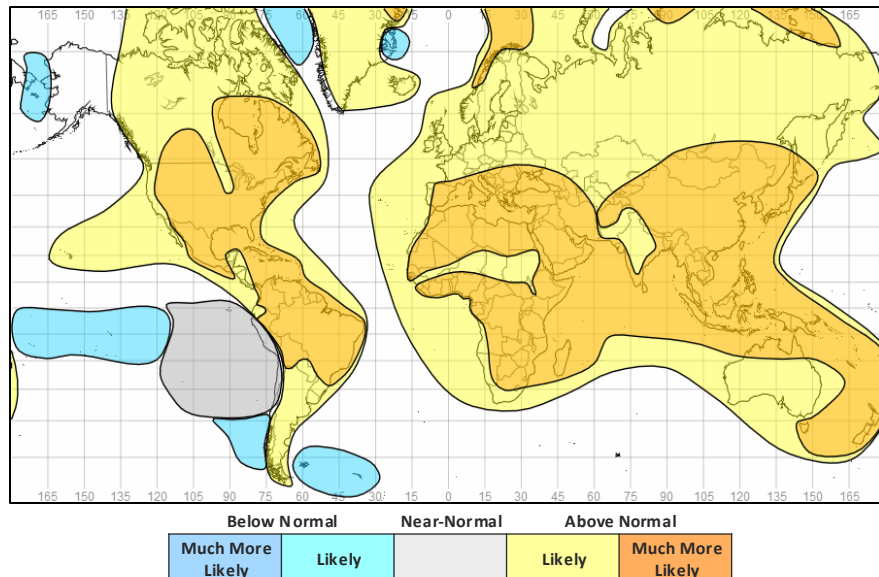
3-Month Outlook August to October - Rainfall



Global Outlook - Temperature

Outlook: Consistent with a warming climate, warmer than normal conditions are very likely across large parts of the globe. There are limited exceptions, most notably western parts of South America and the central Pacific where near normal or colder than normal conditions are more likely. This linked to cooler sea surface temperatures in the Pacific.

3-Month Outlook August to October - Temperature



Global Outlook - Rainfall

Outlook: Outlook:

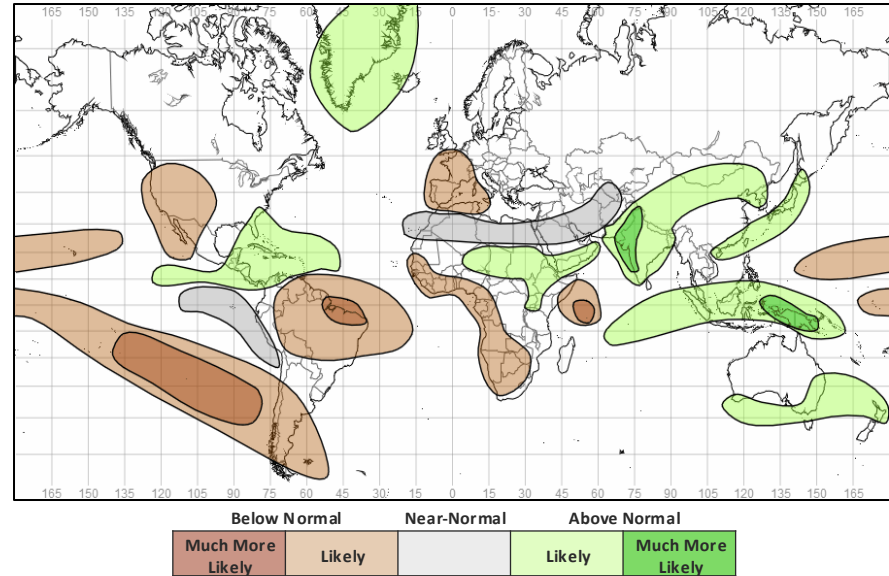
El Niño-Southern Oscillation (ENSO) – Both oceanic and atmospheric indicators are consistent with ENSO-neutral conditions. ENSO-neutral is expected to prevail over the next couple of months. There is an increasing chance of La Niña developing during August-October 2024

According to NOAA’s Climate Prediction Center (CPC), La Niña is likely (70% probability) to develop in the period August-October, persisting into the Northern Hemisphere winter 2024-25, this probability increases (79% probability) for November-January. However, other forecasts have differing probabilities suggesting there is uncertainty amongst the predictions. As such, predictability of weather patterns across many parts of the globe is likely to be lower than this time last year when an El Niño event was underway.

Indian Ocean Dipole (IOD) – The Indian Ocean Dipole (IOD) is currently neutral. Most long-range forecast models are predicting the IOD to remain neutral over the coming months.

It is worth noting that global sea surface temperatures (SSTs) have been the warmest on record for each month for over a year now. The global pattern of warmth is likely affecting the typical historical global pattern of sea surface temperatures associated with ENSO and IOD. As the current global ocean conditions have not been observed before, historical comparisons based on past ENSO or IOD events may not be reliable.

3-Month Outlook August to October - Rainfall



Current Status

[Current Status maps](#)

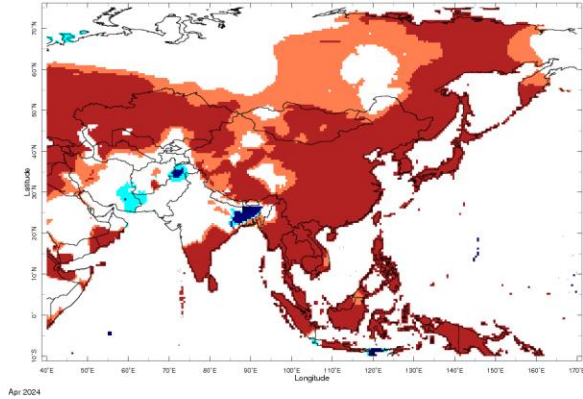
[Central Asia](#)

[Southern Asia](#)

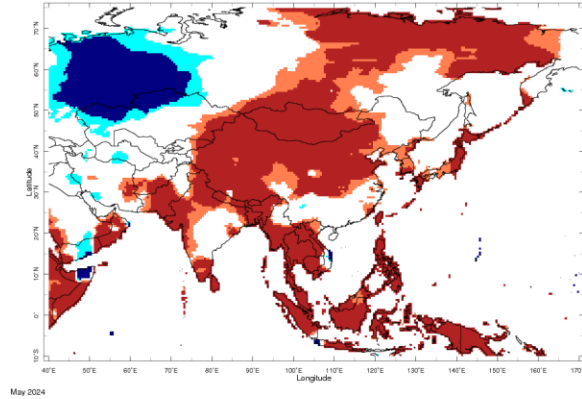
[Southeast Asian Peninsula](#)

[Southeastern Asia / Indonesia](#)

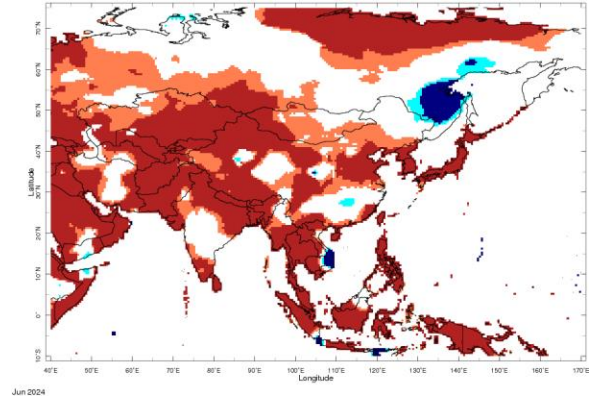
Current Status – Temperature percentiles



April



May

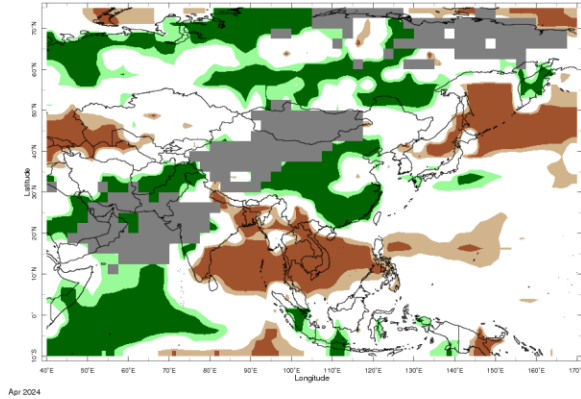


June

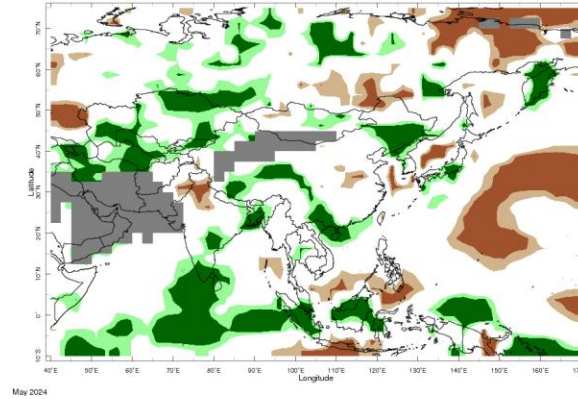


Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions shaded in light and dark blue indicate values below the 20th (Cool) and 10th (Cold) percentile, with respect to the 1981-2010 climatology. The data used in this map are from the NOAA Climate Prediction Center.

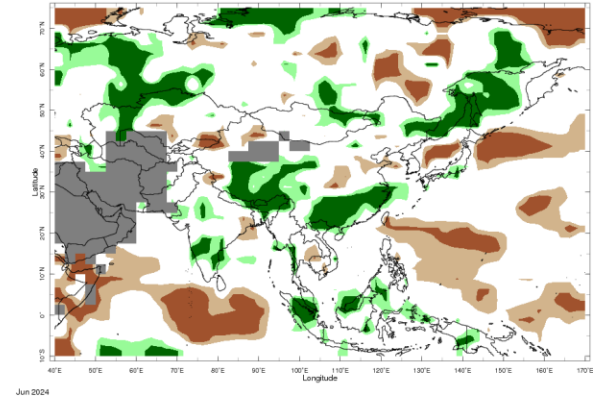
Current Status – Precipitation percentiles



April



May



June



Notes: The percentiles shown in the map indicate a ranking of rainfall, with the 0th percentile being the driest and the 100th percentile being the wettest in the 1981-2010 climatology. Green and dark green shading represent values above the 80th (Wet) and 90th (Very Wet) percentile, respectively; regions shaded in light and dark brown indicate rainfall below the 20th (Dry) and 10th (Very Dry) percentile, with respect to the 1981-2010 climatology. Grey areas on the map mask out regions that receive less than 10mm/month of rainfall on normal in the 1981-2010 climatology for the month. The data used in this map are from the NOAA Climate Prediction Center.

Current Status – Central Asia

Current Status: Temperature

	April	May	June
Afghanistan	Normal	Normal (1)	Hot
Tajikistan	Normal	Normal	Hot
Kyrgyzstan	Normal	Normal	Hot

Current Status: Rainfall

April	May	June
Very Wet	Normal	Normal*
Normal	Normal	Normal
Normal	Normal	Dry

Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

* Region usually experiences less than 10mm/month rainfall during the month (dry season).

Additional Information:

(1) Note: Hot in the southeast

Current Status – Southern Asia

Current Status: Temperature

	April	May	June
Pakistan	Normal (2)	Normal (3)	Hot
India	Normal (1)	Normal (4)	Hot (6)
Nepal	Normal	Hot	Hot
Bangladesh	Cold	Hot	Hot
Sri Lanka	Hot	Hot	Hot

Current Status: Rainfall

April	May	June
Very Wet	Normal	Normal
Normal (5)	Normal (5)	Normal (7)
Dry	Wet	Wet
Very Dry	Very Wet	Wet
Dry	Very Wet	Normal

Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

* Region usually experiences less than 10mm/month rainfall during the month (dry season).

Additional Information:

- (1) **Note:** Hot in the south
- (2) **Note:** Cold in the north
- (3) **Note:** Hot in the south
- (4) **Note:** Hot in the northwest
- (5) **Note:** Very dry (April) and very wet (May) in the south and east
- (6) **Note:** Normal in central regions.
- (7) **Note:** Wet or very wet in some western and southern regions and the northeast.

Current Status – Southeast Asian Peninsula

Current Status: Temperature

	April	May	June
China	Mixed (1)	Mixed (2)	Mixed (2)
Myanmar	Hot	Warm	Hot
Vietnam	Hot	Normal	Mixed (4)

Current Status: Rainfall

	April	May	June
China	Very Wet	Mixed (3)	Mixed (3)
Myanmar	Dry	Normal	Mixed (5)
Vietnam	Very Dry	Normal	Normal (6)

Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

* Region usually experiences less than 10mm/month rainfall during the month (dry season).

Additional Information:

- (1) Note:** Hot in the east, normal in the west
- (2) Note:** Hot in the north and west, normal in the south and east
- (3) Note:** Very wet in the south and northeast, normal elsewhere
- (4) Note:** Cold in the south, normal or hot elsewhere
- (5) Note:** Very wet in the south and far north, normal elsewhere
- (6) Note:** Very wet in the north

Current Status – Southeastern Asia / Indonesia

	Current Status: Temperature			Current Status: Rainfall		
	April	May	June	April	May	June
Indonesia	Hot	Hot	Hot	Wet	Mixed (2)	Mixed (2)
Papua New Guinea	Hot	Hot	Hot	Mixed (1)	Mixed (1)	Normal

Notes:

The table gives an assessment of whether temperature and rainfall across each country have been above normal, normal or below normal over the past three months, using data from the NOAA Climate Prediction Center and the IRI Map Room:

<http://iridl.ldeo.columbia.edu/maproom/>.

* Region usually experiences less than 10mm/month rainfall during the month (dry season).

Additional Information:

(1) Note: Very dry in the east

(2) Note: Very wet in Sumatra and Borneo, very dry across Java in April and May, normal elsewhere

Outlooks

[Outlooks – Notes for use](#)

[Central Asia](#)

[Southern Asia](#)

[Southeast Asian Peninsula](#)

[Southeastern Asia / Indonesia](#)

Outlooks: Notes for use

Outlooks for months 4 to 6:

As forecast uncertainty generally increases with longer range **the 4-6-month outlook is less reliable than the 1-3 month outlook**. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range.

Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Climatological odds:

A forecast is only provided in the outlooks where there is information in the model data about likely outcomes. Therefore, where the likelihoods for above-, near- and below- normal conditions are evenly balanced the phrase 'climatological odds' will be used. This means the outcome could fall anywhere within the possible climatological range. Near-normal conditions should not necessarily be assumed, and users should update with shorter-term forecasts when available.

Outlook: August to January – Central Asia

		Forecast summary		
		August	August to October	November to January
Afghanistan	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Climatological odds	Likely to be drier than normal
Tajikistan	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Likely to be drier than normal
Kyrgyzstan	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be near-normal	Climatological odds	Likely to be drier than normal

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Outlook: August to January – Southern Asia (1)

		Forecast summary		
		August	August to October	November to January
Pakistan	Temperature	Likely to be warmer than normal	Likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Much more likely to be wetter than normal in the southeast; Likely to be wetter than normal than normal elsewhere	Likely to be drier than normal in the northeast; Likely to be near-normal elsewhere
India	Temperature	Climatological odds in the north; Much more likely to be warmer than normal in the south	Likely to be warmer than normal in central and northern parts; Much more likely to be warmer than normal elsewhere.	Likely to be near-normal
	Rainfall	Much more likely to be wetter than normal in the northwest; Climatological odds elsewhere	Much more likely to be wetter than normal in the northwest; Likely to be wetter than normal elsewhere	Likely to be drier than normal in the far north; Climatological odds elsewhere
Nepal	Temperature	Climatological odds	Much more likely to be warmer than normal	Likely to be near-normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be drier than normal

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Outlook: August to January – Southern Asia (2)

		Forecast summary		
		August	August to October	November to January
Bangladesh	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be near-normal
Sri Lanka	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Outlook: August to January – SE Asian Peninsula

		Forecast summary		
		August	August to October	November to January
China	Temperature	Likely to be warmer than normal in the northeast; Much more likely to be warmer than normal elsewhere	Much more likely to be warmer than normal	Likely to be near-normal in the southeast; Likely to be warmer than normal elsewhere
	Rainfall	Likely to be wetter than normal in the far north and the far south; Climatological odds elsewhere	Likely to be wetter than normal in the far north and the far south; Climatological odds elsewhere	Likely to be drier than normal in the far northeast and the southeast; Climatological odds elsewhere
Myanmar	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal in the north; Likely to be warmer than normal elsewhere
	Rainfall	Likely to be drier than normal	Climatological odds	Likely to be near-normal
Vietnam	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Climatological odds
	Rainfall	Likely to be drier than normal	Climatological odds	Likely to be wetter than normal

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Outlook: August to January – SE Asia / Indonesia

		Forecast summary		
		August	August to October	November to January
Indonesia	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be near-normal in the southwest; Likely to be wetter than normal elsewhere	Much more likely to be wetter than normal in the southeast; Likely to be near-normal in the southwest; Likely to be wetter than normal elsewhere	Likely to be wetter than normal
Papua New Guinea	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Much more likely to be wetter than normal	Likely to be wetter than normal

Outlooks for months 4 to 6: As forecast uncertainty generally increases with longer range the 4-6-month outlook is less reliable than the 1-3 month outlook. Outlook information will only be provided when the model data signals likely outcomes. Additionally, the longer range outlook utilises fewer models because not all seasonal models are available for the extended range. Information provided in this presentation should be used to raise early awareness of potential hazards only and should be updated with the 3-month outlook when available.

Annex 1 – Supplemental Information

For further information

WMO Lead Centre for Long-Range Forecast Multi-Model Ensemble (LC-LRFMME)

https://www.wmolc.org/seasonPmmeUI/plot_PMME

International Research Institute for Climate and Society (IRI)

<http://iridl.ldeo.columbia.edu/maproom/>

NOAA El Niño technical info

<https://www.ncei.noaa.gov/access/monitoring/enso/>

Met Office

<https://www.metoffice.gov.uk/services/government/international-development>

The South Asian Climate Outlook Forum (SASCOF) [Microsoft PowerPoint - SDMC Dr Pai-SASCOF.pptx \(saarc-sdmc.org\)](#)

Latest Output (April 2024) - [SASCOF 2024.pdf \(tropmet.res.in\)](#)

Technical notes

The [WMO lead centre for long-range forecast multi-model ensemble \(LC-LRFMME\)](#) produce a probabilistic multi-model mean forecast product in which the multi-model mean is based on uncalibrated model output with a model weighting system that accounts for errors in both the forecast probability and ensemble mean. The method used by LC-LRFMME separately computes a probabilistic forecast and calculates tercile probabilities with respect to climatology for each individual model, before creating the weighted multi-model mean. In seasonal prediction, shifts in the tercile probabilities are always closely associated with the shifts in the probability of extremes, and we can use the probability of terciles to provide information on the likelihood of a above- or below- normal conditions. The thresholds used in the forecast summaries are defined below.

Seasonal forecasts rely on the aspects of the global weather and climate system that are more predictable, such as tropical sea-surface temperatures or the El Niño–Southern Oscillation (ENSO). However, whilst such forecasts may be able to show what is more or less likely to occur, they acknowledge that other outcomes are possible.

In addition, forecast uncertainty generally increases with longer range so the 6-month outlook is less reliable. It is also based on less information, because not all models are available to this range. Therefore the information presented here should be used to raise early awareness of potential hazards, and should be updated with the 3-month outlook when available.

In the report and tables precipitation is referred to as rainfall but in fact encompasses any form of water, liquid or solid, falling from the sky. Temperatures are the (2 metre) near-surface temperature.

Description	Definition
Much more likely to be below normal	When probability of lower tercile > 70%
More likely to be below normal	When probability of lower tercile is 40-70%
Likely to be near-normal	When probability of middle tercile is 40-70%
Much more likely to be near-normal	When probability of middle tercile > 70%
Likely to be above normal	When probability of upper tercile is 40-70%
Much more likely to be above normal	When probability of upper tercile > 70%
Climatological odds	When probabilities for all categories are roughly 33%

Global Producing Centres (GPC) forecasts used by WMO LC-LRFMME:

- GPC CPTC (INPE),
- GPC ECMWF,
- GPC Exeter (Met Office),
- GPC Melbourne (BOM),
- GPC Montreal (CMC),
- GPC Moscow (Hydromet Centre of Russia),
- GPC Offenbach (DWD),
- GPC Pretoria (SAWS),
- GPC Seoul (KMA),
- GPC Tokyo (JMA),
- GPC Toulouse (Meteo France),
- GPC Washington (NCEP)

Enquiries

Email: internationaldevelopment@metoffice.gov.uk

Web: <https://www.metoffice.gov.uk/services/government/international-development>