

Asia: Monthly Climate Outlook December to September

Issued: March 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

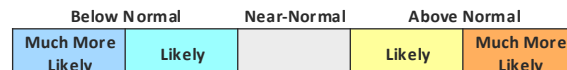
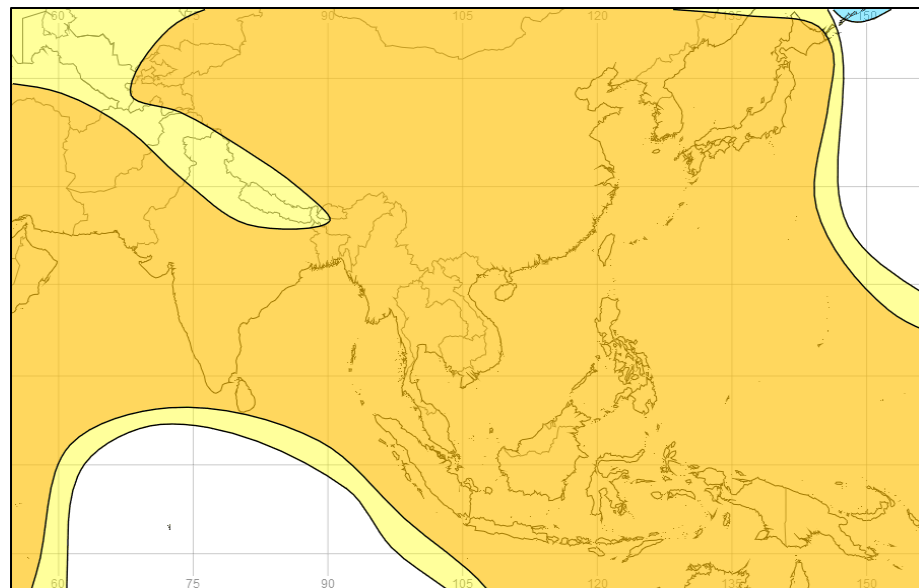
Current Status:

Through December and January, most of the region was warm or hot. Exceptions to this included northeast China which was near-normal in January. During February, although many southern areas remained hot, temperatures were more mixed elsewhere. The majority of India and Pakistan were cool or cold. Afghanistan, Tajikistan and Kyrgyzstan were warm. China was normal but cold in some northern and western areas.

Outlook:

With the backdrop of a warming climate and the current El Niño event, most land areas are likely or much more likely to be warmer than normal over the next three months. Warmer conditions increase the risk of heatwaves and related impacts for many parts.

3-Month Outlook April to June - Temperature



Asia Current Status and Outlook - Rainfall

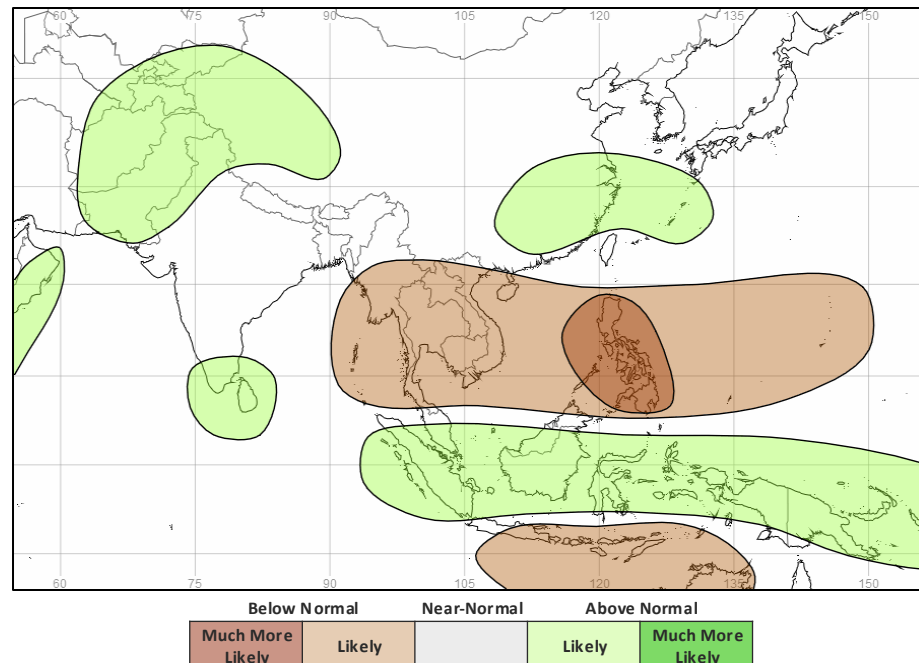
Current Status:

In Central Asia rainfall has been near-normal over the last three months except for parts of Afghanistan and Tajikistan which were dry in December but wet in January. Parts of South Asia were wet at times over the last three months, mainly through December. Over southeast Asia, Indonesia and Papua New Guinea conditions have been more mixed with many areas drier than average in December and February but wetter in January.

Outlook:

Over the next three months, it is likely to be wetter than normal across much of Indonesia and Papua New Guinea and parts of China and western Asia. Some southern parts of Indonesia, Myanmar and Vietnam are likely to be drier than normal with the Philippines much more likely to be drier than normal.

3-Month Outlook April to June - Rainfall

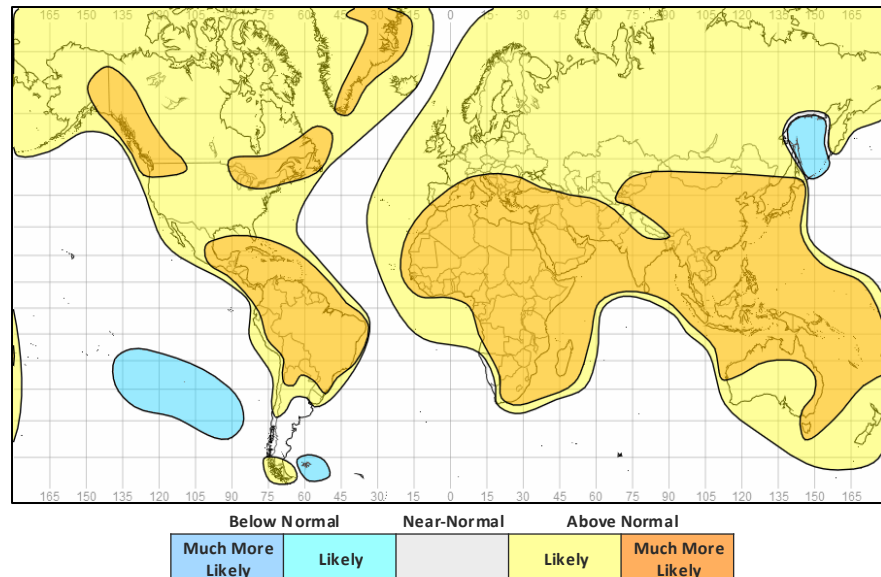


Global Outlook - Temperature

Outlook:

With the backdrop of a warming climate and the current ongoing (though weakening) El Niño event, the vast majority of land areas are likely or much more likely to be warmer than normal during April, May and June. The main exception to this being the southeast Pacific region and far southwest Atlantic, where colder conditions are likely. This is result of colder than normal sea surface temperatures in this area due to El Niño.

3-Month Outlook April to June - Temperature



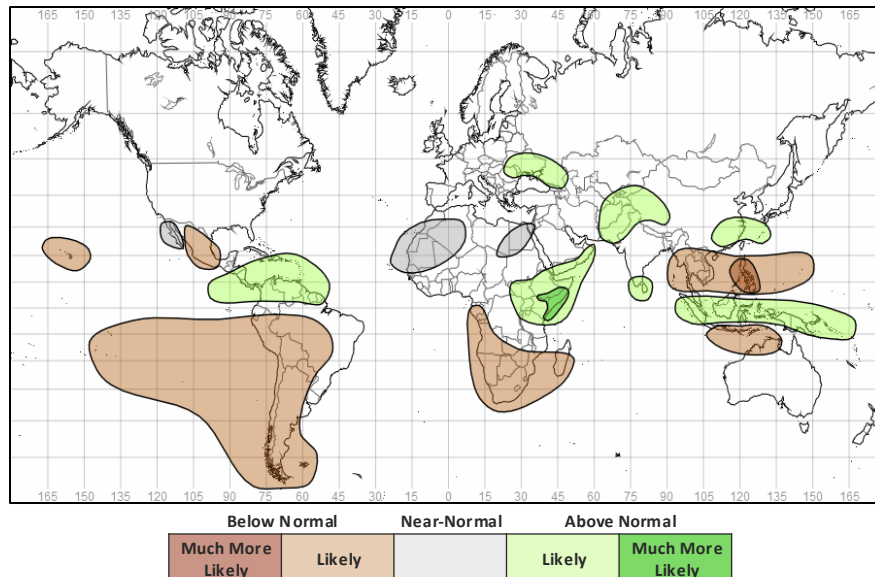
Global Outlook - Rainfall

Outlook:

El Niño-Southern Oscillation (ENSO) – Although now declining, sea surface temperatures (SSTs) across the equatorial Pacific remain indicative on an ongoing El Niño event. Now past its peak, the current El Niño event is likely to weaken further with a transition to ENSO-neutral very likely (83%) April-June. There is an increasing chance (62%) of a transition to La Niña in June-August.

El Niño impacts regional weather patterns around the world, leading to some regions experiencing wetter than normal conditions and other regions drier than normal conditions. Its influence tends to be most dominant across the tropics and although weakening and perhaps becoming less of a driver in mid-latitudes, El Niño will continue to impact weather patterns over the next few months, especially across the tropics.

3-Month Outlook April to June - Rainfall



Current Status

[Current Status maps](#)

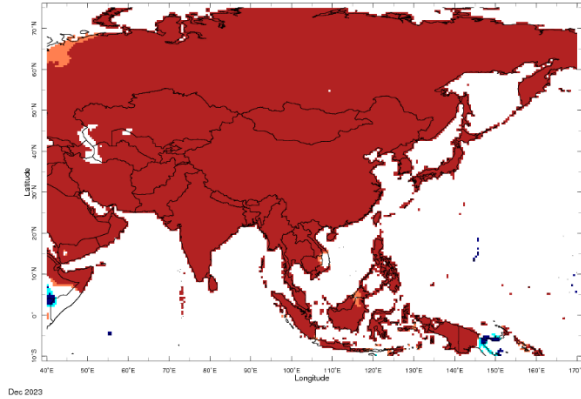
[Central Asia](#)

[Southern Asia](#)

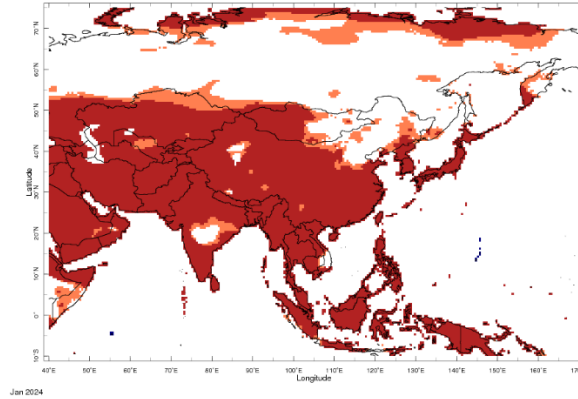
[Southeast Asian Peninsula](#)

[Southeastern Asia / Indonesia](#)

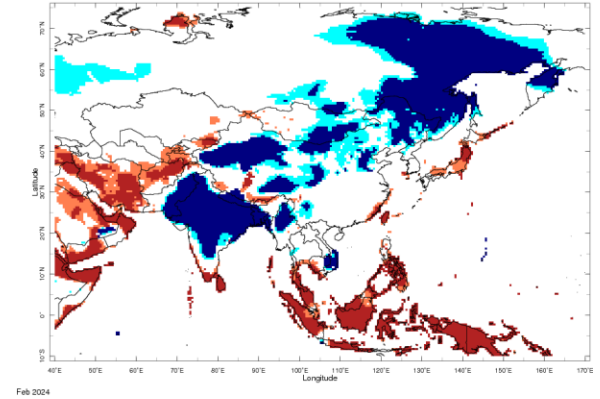
Current Status – Temperature percentiles



December



January



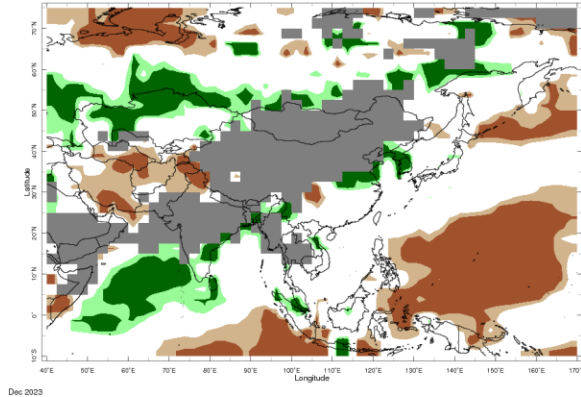
February

Temperature Percentiles (BLUE below 20th and RED above 80th)

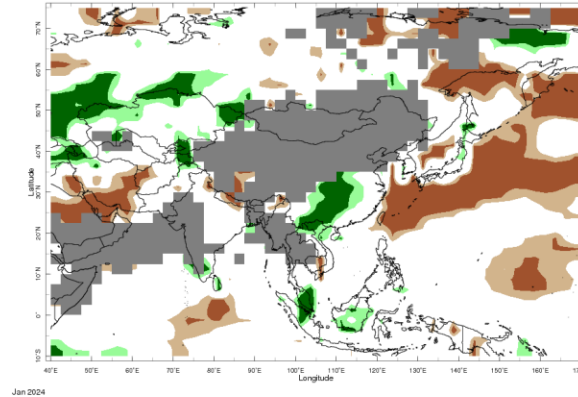


Notes: The percentiles shown in the map indicate a ranking of temperature, with the 0th percentile being the coolest and the 100th percentile being the warmest in the 1981-2010 climatology. Orange and red shading represent values above the 80th (Warm) and 90th (Hot) percentile, respectively; regions 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.

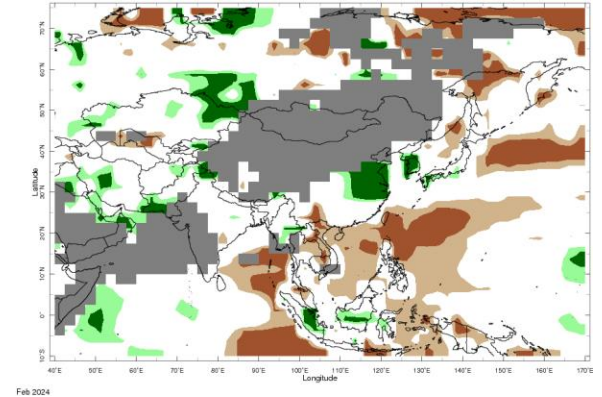
Current Status – Precipitation percentiles



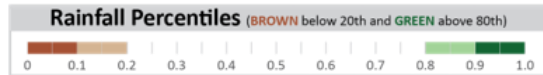
December



January



February



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

	December	January	February
Afghanistan	Hot	Hot	Warm
Tajikistan	Hot	Hot	Warm
Kyrgyzstan	Hot	Hot	Warm

Current Status: Rainfall

	December	January	February
	Dry	Normal (1)	Normal
	Dry	Very Wet	Normal
	Normal	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: Very dry in the west and wet in the far northeast

Current Status – Southern Asia

Current Status: Temperature

	December	January	February
Pakistan	Hot	Hot	Cold
India	Hot	Hot (2)	Cold (3)
Nepal	Hot	Hot	Cold
Bangladesh	Hot	Hot	Cold
Sri Lanka	Hot	Hot	Hot

Current Status: Rainfall

	December	January	February
	Dry	Normal	Normal (4)
	Mixed (1)	Normal	Normal
	Normal*	Dry	Normal
	Wet	Normal	Normal
	Very Wet	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:** Wet in parts of the south and east, dry in the far northwest
- (2) **Note:** Normal in some central parts
- (3) **Note:** Hot in the far south
- (4) **Note:** Wet or very wet in the south

Current Status – Southeast Asian Peninsula

Current Status: Temperature

	December	January	February
China	Hot	Hot (2)	Normal (6)
Myanmar	Hot	Hot	Normal (6)
Vietnam	Hot	Hot (3)	Normal (7)

Current Status: Rainfall

	December	January	February
China	Normal (1)	Normal (4)	Normal (4)
Myanmar	Normal*	Normal*	Normal
Vietnam	Normal	Normal (5)	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:** Wet or very wet in parts of the east
- (2) Note:** Normal in the far northeast
- (3) Note:** Normal in some central parts
- (4) Note:** Wet or very wet in parts of the east and southeast
- (5) Note:** Very wet in the north
- (6) Note:** Cold in some northern and western areas
- (7) Note:** Cold in the south

Current Status – Southeastern Asia / Indonesia

	Current Status: Temperature			Current Status: Rainfall		
	December	January	February	December	January	February
Indonesia	Hot	Hot	Hot	Mixed (2)	Mixed (3)	Mixed (3)
Papua New Guinea	Mixed (1)	Hot	Hot	Dry	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 west, normal/cold in the east
- (2) Note:** Dry/very dry in many regions, normal in Borneo, wet or very wet in northern Sumatra, as well as East Java in December
- (3) Note:** Normal in many regions, wet in parts of Sumatra and Borneo, dry in the east in February

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: April to September – Central Asia

		Forecast summary		
		April	April to June	July to September
Afghanistan	Temperature	Likely to be warmer than normal	Likely to be warmer than normal in the north-east; Much more likely to be warmer than normal elsewhere	Much more likely to be warmer than normal
	Rainfall	Climatological odds	Likely to be wetter than normal	Climatological odds
Tajikistan	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	Climatological odds	Likely to be wetter than normal	Likely to be near-normal
Kyrgyzstan	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	Climatological odds	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: April to September – Southern Asia (1)

		Forecast summary		
		April	April to June	July to September
Pakistan	Temperature	Likely to be warmer than normal	Much more likely to be warmer than normal in the south; Likely to be warmer than normal in the north	Much more likely to be warmer than normal in the south, Likely to be warmer than normal in the north
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be wetter than normal
India	Temperature	Much more likely to be warmer than normal in the south; Likely to be warmer than normal in the north	Likely to be warmer than normal in the north; Much more likely to be warmer than normal elsewhere	Much more likely to be warmer than normal in the west and south; Climatological odds elsewhere
	Rainfall	Likely to be wetter than normal in the far north and far south; Climatological odds elsewhere	Likely to be wetter than normal in the far north and far south; Climatological odds elsewhere	Much more likely to be wetter than normal in the far north-west and far south; Likely to be wetter than normal elsewhere
Nepal	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 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: April to September – Southern Asia (2)

		Forecast summary		
		April	April to June	July to September
Bangladesh	Temperature	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	Likely to be wetter than normal
Sri Lanka	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 drier than normal	Likely to be wetter than normal	Much more 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: April to September – SE Asian Peninsula

		Forecast summary		
		April	April to June	July to September
China	Temperature	Likely to be warmer than normal in the far south-west; Likely to be near-normal in the north-east; Much more likely to be warmer than normal elsewhere	Likely to be warmer than normal in the far south-west and north-east; Much more likely to be warmer than normal elsewhere	Much more likely to be warmer than normal
	Rainfall	Likely to be wetter than normal in the far west and south-east; Climatological odds elsewhere	Likely to be wetter than normal in the far west and south-east; Likely to be drier than normal in parts of the south; Climatological odds elsewhere	Likely to be wetter than normal in the east and the far south-west; 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
	Rainfall	Climatological odds in the north; Likely to be drier than normal elsewhere	Climatological odds in the north; Likely to be drier than normal elsewhere	Climatological odds
Vietnam	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 drier than normal	Likely to be drier than normal	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: April to September – SE Asia / Indonesia

		Forecast summary		
		April	April to June	July to September
Indonesia	Temperature	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal in Sumatra; Much more likely to be warmer than normal elsewhere
	Rainfall	Likely to be drier than normal for south Java and the Lesser Sunda Islands; Likely to be wetter than normal elsewhere	Likely to be drier than normal for south Java and the Lesser Sunda Islands; Likely to be wetter than normal elsewhere	Much more likely to be wetter than normal in the north-east (Kalimantan, Sulawesi, Papua); Climatological odds in the south and west (Sumatra, Java and Lesser Sunda Islands)
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 in the north; Climatological odds in the south	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/>

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) http://www.imdpune.gov.in/Clim_RCC_LRF/Index.html

Latest Output (September 2023) - <https://rcc.imdpune.gov.in/sascof.php>

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>