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Asia: Monthly Climate Outlook February to November

Issued: May 2025

Overview

Asia Current Status and Outlook – Temperature

Asia Current Status and Outlook – Rainfall

Global Outlook – Temperature

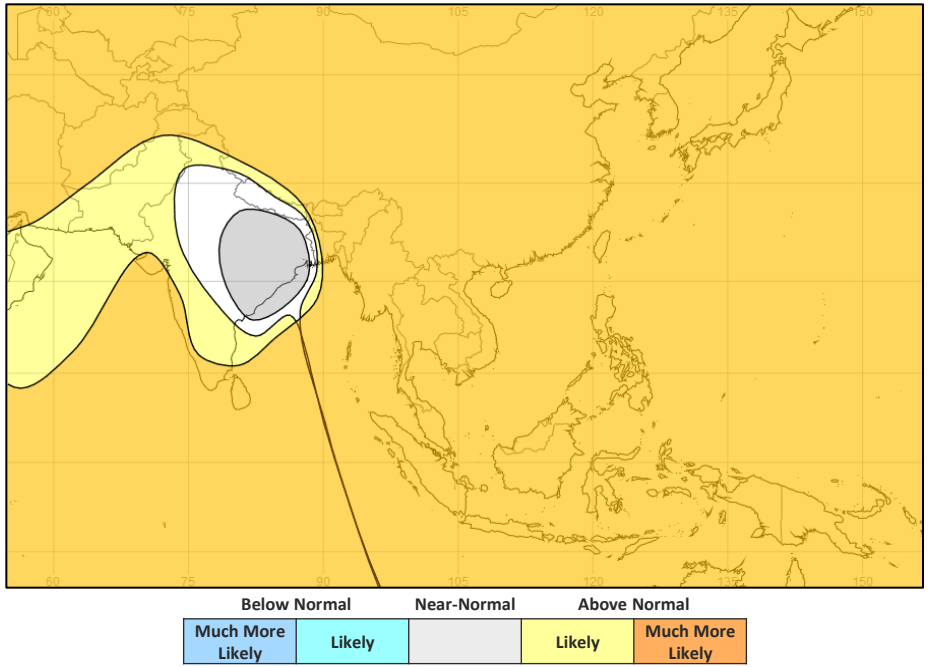
Global Outlook – Rainfall

Asia Current Status and Outlook - Temperature

Current Status: Parts of Vietnam experienced below normal temperatures over the last three months. Temperatures were also below normal across parts of Indonesia during February. Otherwise, above normal temperatures were experienced for most other areas.

Outlook: Warmer than normal conditions are likely or very likely across most areas increasing the risk of heatwaves and heat-related impacts. The main exception over parts of India, where below normal is likely due to the forecast for the monsoon to be wetter than normal.

3-Month Outlook June to August - Temperature



Asia Current Status and Outlook - Rainfall

Current Status: Many parts of maritime Southeast Asia were wet or very wet between February and April, while conditions were more mixed over the rest of South and East Asia.

Central Asia climatologically has a peak in precipitation during March. Here conditions were mixed, with northern Afghanistan wet or very wet during February, but much of the country was very dry during April.

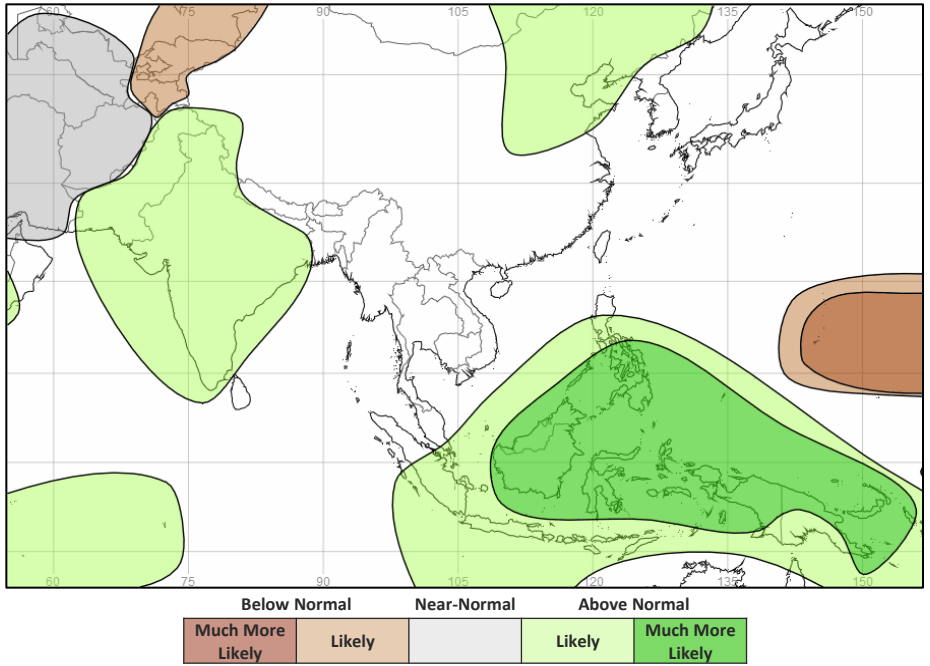
Outlook:
The onset of the 2025 Southwest Monsoon was officially declared on 13th May, a few days earlier than the normal onset. The monsoon will progress a little ahead of normal and will be the main driver for rainfall across southern Asia through this period. Wetter than normal conditions are likely across India, and Pakistan as well as parts of China. Wetter than normal conditions are also likely for much of Indonesia and the Philippines. Below normal rainfall likely over parts of Central Asia though this period sees the climatological transition to the dry season.

Tropical cyclones

North Indian Ocean: Activity tends to peak during May and June before another increase in activity later in the year – associated with the advance and retreat of the South Asian monsoon.

Northwest Pacific: Tropical cyclones can form throughout the year in this basin though activity tends to peak between July and October. Latest forecasts suggest near normal activity over the coming months.

3-Month Outlook June to August - Rainfall



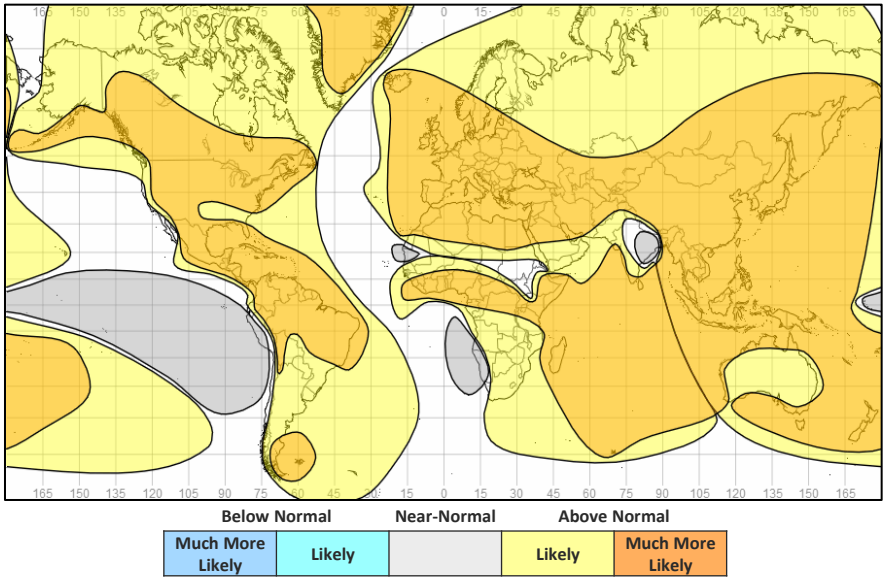
Global Outlook - Temperature

Outlook:
ENSO is now neutral and will have minimal influence on global temperature forecasts through this period.

Consistent with a warming climate, nearly all land areas are likely or very likely to experience warmer than normal conditions through the next three months.

The main exceptions over parts of Africa and southern Asia, mainly India, owing to likely active monsoon seasons.

3-Month Outlook June to August - Temperature



Global Outlook - Rainfall

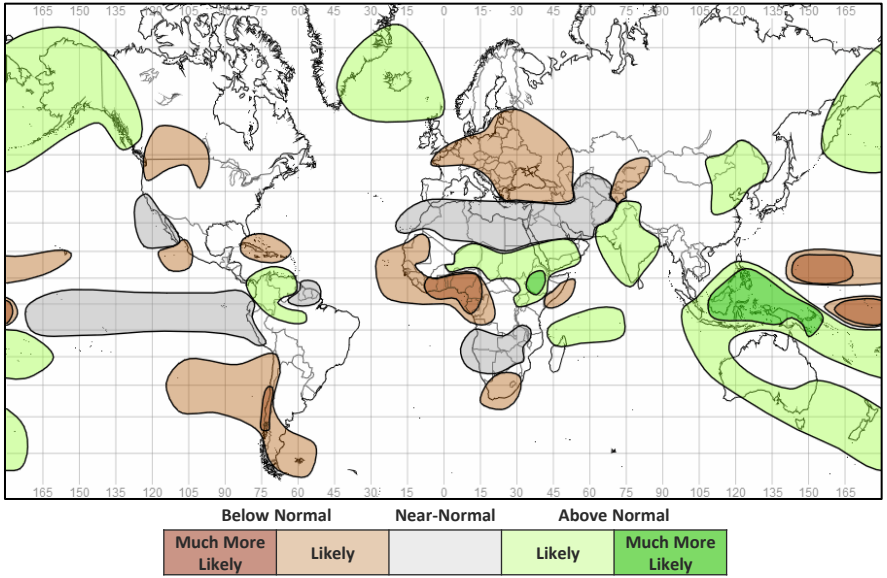
Outlook:

El Niño-Southern Oscillation (ENSO) – Following the recent La Niña, sea surface temperatures in the tropical Pacific have returned to around normal with ENSO now in a neutral state. There are some mixed signals from various modelling centres regarding the evolution of ENSO later this year. However, ENSO is most likely to remain neutral through the next three months.

More information on typical impacts can be found here: https://www.metoffice.gov.uk/research/climate/seasonal-to-decadal/gpc-outlooks/el-nino-la-nina/enso-impacts

Indian Ocean Diploe (IOD) – The IOD is currently neutral. However, sea surface temperatures are currently widely above normal over the Indian Ocean, this probably a factor driving the increased likelihood of a wetter than normal South Asian monsoon.

3-Month Outlook June to August - Rainfall



Current Status

Current Status maps

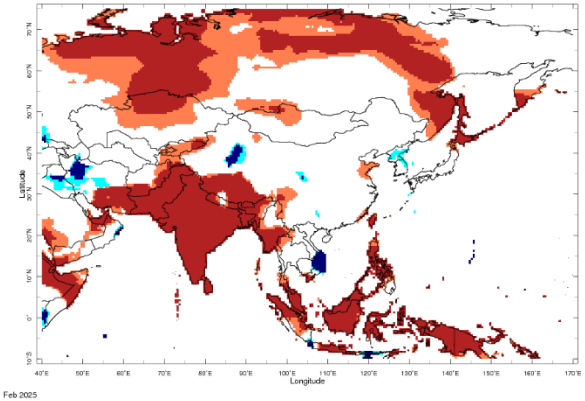
Central Asia

Southern Asia

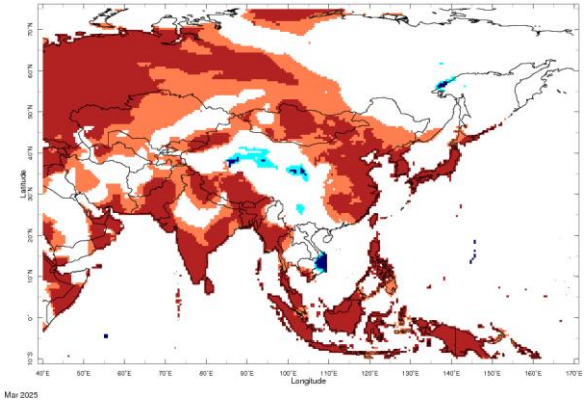
Southeast Asian Peninsula

Southeastern Asia / Indonesia

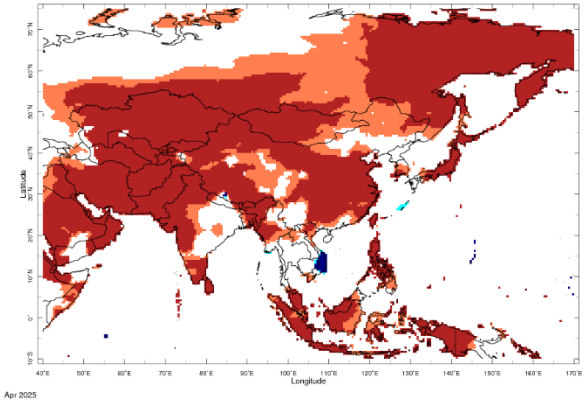
Current Status – Temperature percentiles



February



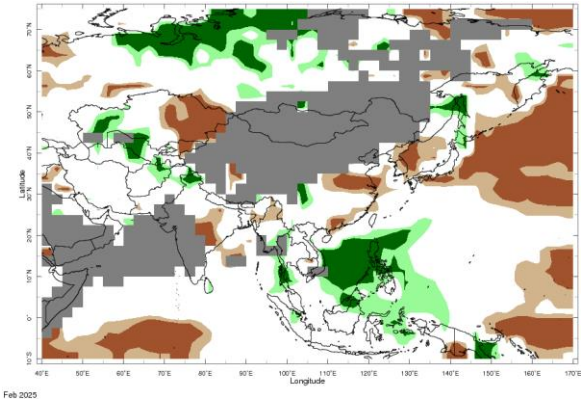
March



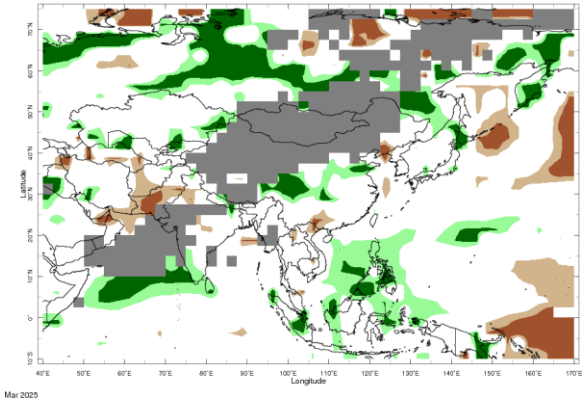
April

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.

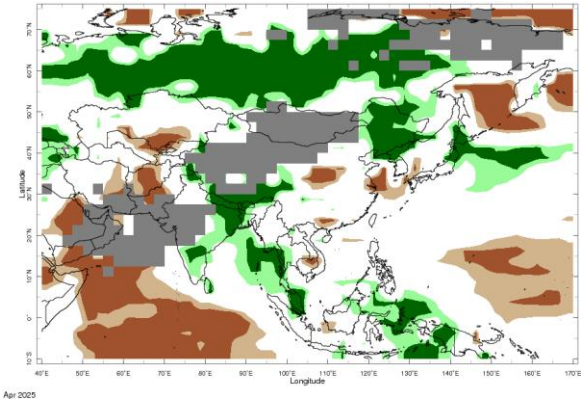
Current Status – Precipitation percentiles



February



March



April

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 10 mm/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			Current Status: Rainfall		
	February	March	April	February	March	April
Afghanistan	Normal (1)	Normal (1)	Hot	Mixed (3)	Normal	Dry
Tajikistan	Warm	Warm	Hot	Normal	Normal	Mixed (5)
Kyrgyzstan	Warm	Warm (2)	Hot	Dry	Mixed (4)	Mixed (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 southeast
(2) Note: Hot in the east
(3) Note: Wet in the northeast, else normal
(4) Note: Very wet in the northwest, else normal
(5) Note: Wet in the west, else normal
(6) Note: Very dry in the west, else normal

Current Status – Southern Asia

	Current Status: Temperature			Current Status: Rainfall		
	February	March	April	February	March	April
Pakistan	Hot	Hot	Hot	Normal	Dry	Normal
India	Hot	Hot (5)	Mixed (1)	Normal (2)	Mixed (3)	Mixed (4)
Nepal	Hot	Hot (5)	Normal	Normal	Wet	Very Wet
Bangladesh	Hot	Hot	Hot	Normal	Normal	Normal
Sri Lanka	Hot	Hot	Hot	Wet	Wet	Wet

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, south and in the far northeast, else normal
(2) Note: Dry or very dry in parts of the east
(3) Note: Wet in parts of the south, dry in parts of the northwest, else normal
(4) Note: Dry or very dry in some central parts, wet or very wet in the east, else normal
(5) Note: Nearer normal in central parts

Current Status – Southeast Asian Peninsula

	Current Status: Temperature			Current Status: Rainfall		
	February	March	April	February	March	April
China	Normal	Mixed (7)	Mixed (6)	Mixed (2)	Mixed	Mixed
Myanmar	Hot	Hot	Mixed (6)	Mixed (4)	Normal	Mixed (3)
Vietnam	Mixed (1)	Mixed (1)	Mixed (1)	Mixed (5)	Normal	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: Cold or very cold in the south, normal elsewhere
(2) Note: Normal, but very dry in the southeast
(3) Note: Dry in the north, wet in the south, else normal
(4) Note: Wet or very wet in parts of the south, else normal
(5) Note: Wet or very wet in coastal parts in the south, else normal
(6) Note: Mixed, but mainly warm or hot
(7) Note: Normal or cold in central areas, else warm or very warm

Current Status – Southeastern Asia / Indonesia

	Current Status: Temperature			Current Status: Rainfall		
	February	March	April	February	March	April
Indonesia	Mixed (1)	Hot	Hot	Mixed (5)	Mixed (5)	Mixed (5)
Papua New Guinea	Hot	Hot	Mixed (4)	Mixed (3)	Wet	Normal
Timor-Leste	Hot	Hot	Hot	Normal	Normal	Wet

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: Large variations; many areas hot
(2) Note: Hot in the west, normal in the east
(3) Note: Normal or dry in the west, very wet in the east
(4) Note: Hot in the west, normal or warm in the east
(5) Note: Mixed, but mainly wet or very wet

Outlooks

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: June to November – Central Asia

		Forecast summary		
		June	June to August	September to November
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 near-normal	Likely to be near-normal	Much more likely to be drier than normal
Tajikistan	*Temperature*	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier than normal	Much more likely to be drier than normal
Kyrgyzstan	*Temperature*	Much more likely to be warmer than normal	Much more likely to be warmer than normal	Likely to be warmer than normal
	Rainfall	Likely to be drier than normal	Likely to be drier 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: June to November – Southern Asia (1)

		Forecast summary		
		June	June to August	September to November
Pakistan	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Climatological odds
India	*Temperature*	Climatological odds, but Likely to be warmer than normal in the northwest and northeast, and **Much more likely to be warmer than normal** in coastal parts of the west	Likely to be warmer than normal in the west, **Much more likely to be warmer than normal** in the far northeast, else Likely to be near-normal	Much more likely to be warmer than normal in the far northeast, else Likely to be near-normal
	Rainfall	Likely to be wetter than normal	Likely to be wetter than normal	Likely to be wetter than normal
Nepal	*Temperature*	Climatological odds	Climatological odds	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: June to November – Southern Asia (2)

		Forecast summary		
		June	June to August	September to November
Bangladesh	*Temperature*	Likely to be warmer than normal	Likely to be warmer than normal	Much more likely to be warmer than normal
	Rainfall	Climatological odds	Climatological odds	Climatological odds
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	Climatological odds	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: June to November – SE Asian Peninsula

		Forecast summary		
		June	June to August	September to November
China	*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	Generally Climatological odds, but **Likely to be drier than normal** in the far northwest and southeast, and **Likely to be wetter than normal** in some central parts	Climatological odds in many places, but **Likely to be drier than normal** in the far northwest and **Likely to be wetter than normal** in the northeast	Generally Climatological odds, but Likely to be drier than normal in the far northwest and southeast, and Likely to be wetter than normal in some central parts
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	Climatological odds	Climatological odds
Vietnam	*Temperature*	**Much more likely to be warmer than normal**	**Much more likely to be warmer than normal**	Likely to be warmer than normal
	Rainfall	Generally Climatological odds, but **Likely to be drier than normal** in the south	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: June to November – SE Asia / Indonesia

		Forecast summary		
		June	June to August	September to November
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	**Much more likely to be wetter than normal**	**Much more likely to be wetter than normal**	Much more 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	**Much more likely to be wetter than normal**	**Much more likely to be wetter than normal**	Likely to be wetter than normal
Timor-Leste	*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**	**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

Climate Outlook Fora (WMO Factsheet), including:

The South Asian Climate Outlook Forum (SASCOF) http://www.imdpune.gov.in/Clim_RCC_LRF/Index.html
Latest Output (September 2022) - http://sahfhydromet.rimes.int/wp-content/uploads/2022/10/Enhanced-SCOS-SASCOF-23-JJAS.pdf

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 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 CPTEC (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)

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