

# Weekly Wet Season Situation Report in the Lower Mekong River Basin

29 July - 04 August 2025

Prepared by
The Regional Flood and Drought Management Centre
05 August 2025



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**Documentation and Learning Centre** 

184 Fa Ngoum Road, Unit 18, Ban Sithane Neua, Sikhottabong District, Vientiane 01000, Lao PDR

Telephone: +856-21 263 263 | E-mail: mrcs@mrcmekong.org | www.mrcmekong.org

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# **Key Messages**

Key messages for this weekly report are presented below.

#### Rainfall monitoring and forecast

- In the period of 29 July 04 August 2025, thunderstorms and heavy are expected over the upper and central part of the LMB including the upper and central part of Lao PDR, the northern and northeastern part of Thailand near Lao PDR's border, and the 3S basin of Sesan, Sekong, Srepok. The remaining areas are likely to occur light to moderate rainfall.
- From 05 11 August, isolated heavy rainfall is likely to occur in the upper of the northern part of Lao PDR and the northern part of Thailand near Lao PDR border, the remaining areas are expected to occur light rainfall.

#### Water level monitoring and forecast

- At 22 key monitoring stations along the Mekong mainstream from 29 July 04 August 2025, water levels at Vientiane, Nongkhai, Nakhon Phanom, Thakhek, Mukdahan, Khong Chiam and Pakse have reached Alarm Level, and the flow threshold (PMFM 6C) are under normal conditions. It is also the same condition for Tan Chau and Chau Doc monitoring stations, which are significantly influenced by sea tidal fluctuation.
- In the period of 05 09 August 2025, the water level all stations are not expected to reach alarm and flood levels. At Tan Chau and Chau Doc stations, the water levels are predicted to be also fluctuated, resulting from the influence of sea tidal patterns.

#### **Drought condition and forecast**

- During 29 July 04 August, some areas in the upper and central part of the LMB were facing normal to wet conditions including the upper part and central part of Lao PDR, and the northeastern part of Thailand. However, some areas in the lower part of the LMB including Cambodia, the 3S Basin and Mekong delta were facing moderate to severe drought.
- The next three-month from August to October 2025, the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 25 mm, except for some areas in the lowland areas of Cambodia, and the Mekong Delta. Overall, in the next 3 months, rainfall will be mainly concentrated in the central part of the LMB and higher than the LTA from 10 25 mm.
- The forecast indicates that no drought conditions are expected in over the LMB from August to October 2025 using the Combined Drought Indicator (CDI).

#### 1 Introduction

This Weekly Wet Season Situation Report presents a preliminary analysis of the weekly hydrological situation in the Lower Mekong River Basin (LMB) for **29 July – 04 August 2025**. The trend and outlook for water levels are also presented.

This analysis is based on the daily hydro-meteorological data provided by the Mekong River Commission (MRC) Member Countries – Cambodia, Lao PDR, Thailand, and Viet Nam – and on satellite data. The water level indicated in this report refers to an above zero gauge of each station.

The report covers the following topics that are updated weekly:

- General weather patterns, including rainfall patterns over the LMB.
- Water levels in the LMB, including in the Tonle Sap Lake.
- Flash flood and drought situation in the LMB.
- Weather, water level and flash flood forecast, and
- Possible implications.

Mekong River water levels are updated daily and can be accessed from: <a href="http://ffw.mrcmekong.org/bulletin.php">http://ffw.mrcmekong.org/bulletin.php</a>.

Drought monitoring and forecasting information is available at: <a href="http://droughtforecast.mrcmekong.org">http://droughtforecast.mrcmekong.org</a>

Flash flood information is accessible at: <a href="http://ffw.mrcmekong.org/ffg.php">http://ffw.mrcmekong.org/ffg.php</a>

#### **2** General Weather Patterns

Curenlty, the low-pressure cell covers upper part of the LMB while the weak southwest monsoon prevails over the lower part of the LMB.

From 05 – 11 August, the heavy rainfall is expected to occur in the northern part of Lao PDR (including: Phongsali, Luangnamtha, Bokeo, Oudomxay, Luangprabang); and the northern part of Thailand (Chiang Rai). The remaining areas are likely to occur light to moderate rainfall.

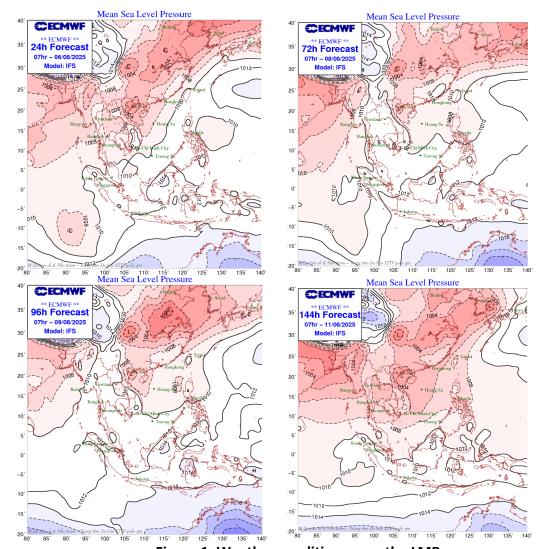


Figure 1 presents mean sea level pressure over the region

Figure 1: Weather conditions over the LMB

According to the ASEAN Specialised Meteorological Centre (ASMC, <a href="http://asmc.asean.org/home/">http://asmc.asean.org/home/</a>), the sub seasonal weather outlook (04 – 14 August 2025) indicates that the Lower Mekong Basin (LMB) is likely in wetter condition in from lower to central part. However, it is also expected to experience warmer condition for the entire basin. **Figure 2** shows the outlook of weather condition from 04 to 17 August 2025 in Southeast Asia based on results from the NCEP model (National Centres for Environmental Prediction).

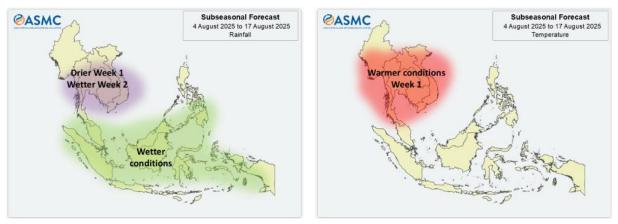


Figure 2: Outlook of wet and dry conditions over the Asian countries by ASMC.

Based on the tropical storm risk (TS) (<a href="https://www.jma.go.jp/bosai/weather-map/#lang=en">https://www.jma.go.jp/bosai/weather-map/#lang=en</a>), there is no active Tropical Storm (TS) at NW pacific system as of 04 August 2025 (Figure 3).

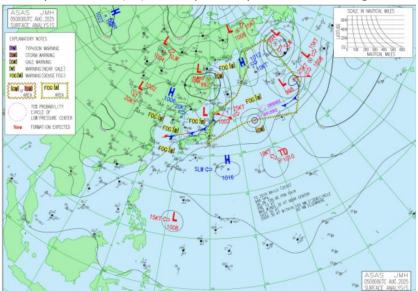


Figure 3: Tropical storm risk observed on 04 August 2025

# 3. Rainfall and Water Level Monitoring

#### 3.1. Rainfall monitoring

The weekly accumulated rainfall based on the observed data provided by the MRC Member Countries – Cambodia, Lao PDR, Thailand, and Viet Nam – from 29 July - 04 August 2025 (**Figure 4**). The heavy to very heavy rainfall has been observed over the LMB in the upper and central parts of Lao PDR, the northeastern part of Thailand, and the 3S basin.

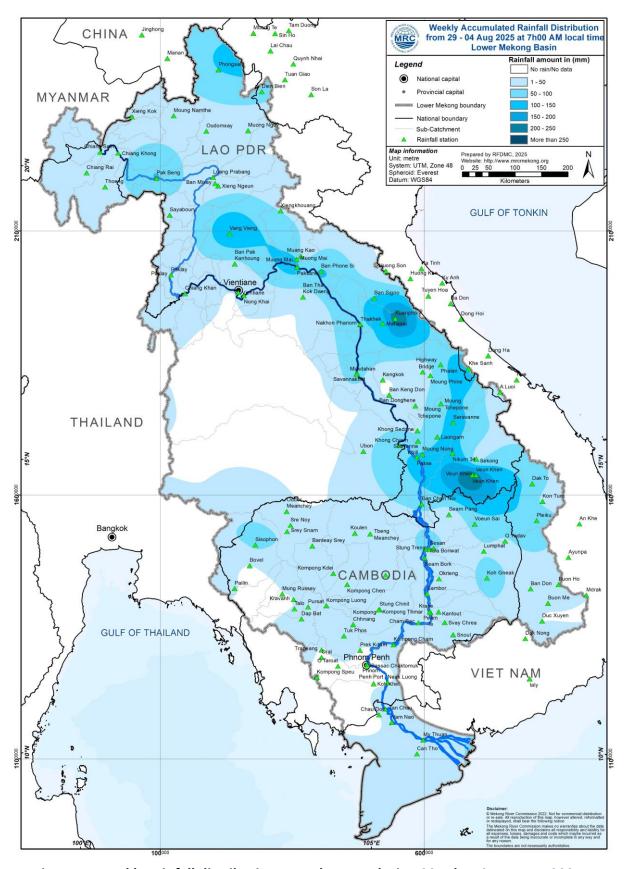


Figure 4: Weekly rainfall distribution over the LMB during 29 July – 04 August 2025

## 3.2. Water level monitoring

The hydrological regimes of the Mekong mainstream are illustrated by recorded water levels and flows at key mainstream stations: at Chiang Saen to capture mainstream flows entering from the Upper Mekong Basin (UMB); at Vientiane to present flows generated by climate conditions in the upper part of the LMB; at Pakse to investigate flows influenced by inflows from the larger Mekong tributaries; at Kratie in Cambodia to capture overall flows of the Mekong Basin; and at Viet Nam's Tan Chau and Chau Doc to monitor flows to the Delta.

The key stations along the LMB and their respective model application for River Flood Forecasting during the wet season from June to October and River Monitoring during the dry season from November to May are presented in **Figure 5**. The hydrograph for each key station is available from the MRC's River Flood Forecasting: <a href="http://ffw.mrcmekong.org/overview.php">http://ffw.mrcmekong.org/overview.php</a>.

During 29 July – 04 August 2025, the observed water level (WL) at Jinghong hydrological station<sup>1</sup>, was almost constant and ranges between 536.88 and 537.11 m, which are corresponding to the outflow between 2,050.00 m³/s to 2,250.00 m³/s (recorded on 7:00 am), respectively (**Figure 6**). The water level in Chiang Saen Station also indicated a slight fluctuation ranging from 5.51 m to 5.11 m. At the same period, the water level in Luang Prabang Station also decreased with an approximate value of -1.30 m from 16.12 m to 14.82 m as compared to the previous week. In addition, at Chiang khan, the water level also decreased from 13.46 m to 12.31 m.

The water levels at Vientiane, Nongkhai, Paksane, Nakhon Phanom, Thakhek, Mukdahan, Savannakhet, Khong Chiam and Pakse have increased from 10.32 m to 10.91 m, 10.32 m to 10.96 m, 11.90 m to 12.09 m, 11.01 m to 11.56 m, 12.24 m to 12.75 m, 10.87 m to 11.81 m, 9.37 m to 10.22 m, 12.80 m to 13.60 m, and 10.62 m to 11.22 m, respectively.

In addition, the water levels at Stung Treng, Kratie, Kompong Cham, Phnom Penh (Bassac), Phnom Penh Port, Koh Khel, Neak Luong and Prek Kdam also have increased from 9.20 m to 9.65 m, 18.79 m to 20.51 m, 11.24 m to 13.12 m, 6.78 m to 8.14 m, 5.59 m to 6.86 m, 6.13 m to 7.24 m, 4.54 m to 5.64 m, and 5.56 m to 6.66 m, respectively.

Similar to the previous week, the water levels from 29 July to 04 August 2025 at Viet Nam's Tan Chau and Chau Doc fluctuated between their LTA values due to daily tidal effects from the sea. At the Tan Chau station, the water levels varied between 1.66 m and 2.48 m, while at the Chau Doc station, they ranged from 1.32 m and 1.97 m.

<sup>&</sup>lt;sup>1</sup> Near-real time data of hydro-meteorological monitoring at the Jinghong hydrological station is available at <a href="https://portal.mrcmekong.org/monitoring/river-monitoring-telemetry">https://portal.mrcmekong.org/monitoring/river-monitoring-telemetry</a>.

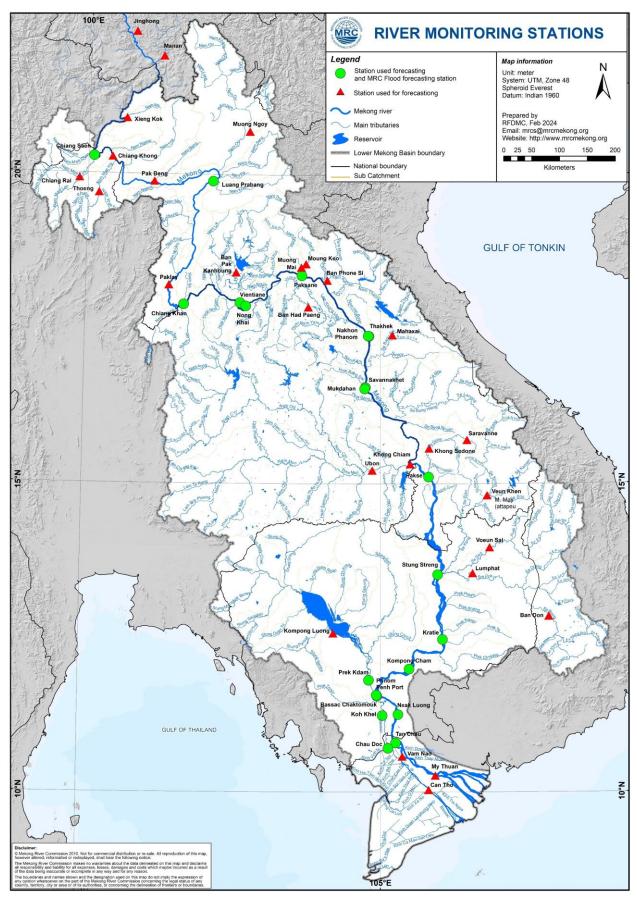


Figure 5: The key stations along LMB for river flood forecasting

The water levels in key monitoring stations on 04 August 2025 are in normal conditions except for Nakhon Phanom, Khong Chiam and Pakse stations, which reached alarm level. Moreover, all stations with available PMFM thresholds are in normal conditions. The graphics of water level monitoring in all key stations are presented in **Annex A** and the weekly water levels and rainfall at each key station are summarised in **Annex B**.

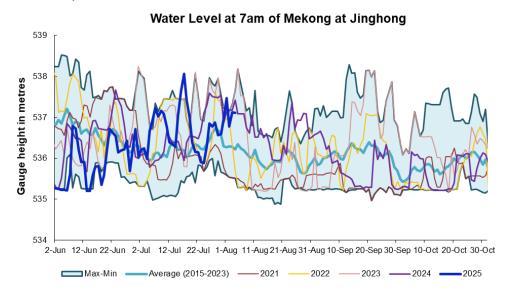


Figure 6. Water level at the Jinghong hydrological station up to 04 August 2025.

At the end of the wet season, when water levels along the Mekong River subside, the outflow of the Tonle Sap Lake (TSL) returns to the Mekong River and then to the Delta. This phenomenon normally takes place between September and October. Based on flow observation at Prek Kdam monitoring station, the inflow (reverse flow) of the Tonle Sap Lake took place since 29 May 2025.

The inflow flow is calculated based on a formula of rating-curves using by difference of water levels at Kompong Luong and Phnom Penh Port stations for slop and Prek Kdam as cross-section of the Lake. The formula of flow is as follows:

$$Flow = WL_{Prek\ Kdam}^{1.2} \times \sqrt{|WL_{Phnom\ Penh\ Port} - WL_{Kampong\ Luong}|}$$

Where, WL is water level in m (msl).

The seasonal changes of the inflow/reverse flow and the outflow of the TSL at Prek Kdam in comparison with the flows of 2020, 2021 and 2022, 2023 and their LTA level (1997-2024) are illustrated in **Figure 7**. Up to 04 August 2025, it was observed that the inflow to Tonle Sap Lake is relatively higher than its LTA due to significant high inflows from upstream **(Figure 7)**.

The seasonal changes in monthly flow volumes up to 04 August 2025 for the TSL compared with that in 2020, 2021, 2022, 2023, 2024 and their LTAs, and the fluctuation levels (1997–2024) are presented in **Table 8**. The mean monthly water volume of the Tonle Sap Lake in July

2025 is higher than its LTA (about 115.38 %) and all recent years except for 2019 during the same period (Figure 8 and Table 1).

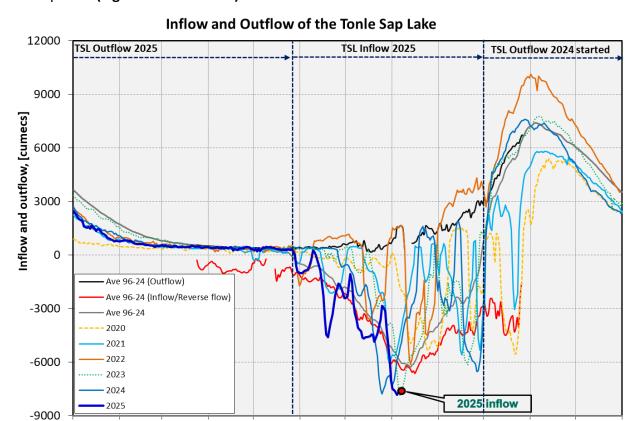


Figure 7: Seasonal change of inflows and outflows of Tonle Sap Lake.

Jul

Aug

Sep

Oct

Nov

Dec

Jun

Jan

Feb

Mar

Apr

May

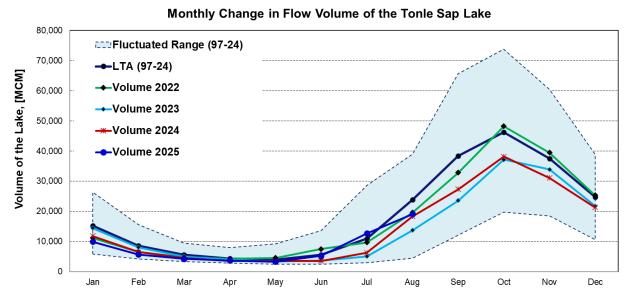


Figure 8. The seasonal change in monthly flow volume of Tonle Sap Lake.

Table 1. The monthly change in the flow volume of Tonle Sap Lake.

Month	LTA (97-24) [MCM]	Max Volume [MCM]	Min Volume [MCM]	Volume 2019 [MCM]	Volume 2020 [MCM]	Volume 2021 [MCM]	Volume 2022 [MCM]	Volume 2023 [MCM]	Volume 2024 [MCM]	Volume 2025 [MCM]	Volume in 2025 [%], compared with its LTA
Jan	15197.93	26357.53	5906.80	13080.39	10285.31	5906.80	9923.80	11214.32	14422.11	10341.91	68.05
Feb	8644.19	15596.22	4198.60	7302.32	6019.30	4264.19	5832.97	6558.79	8069.29	5690.52	65.83
Mar	5564.35	9438.24	3347.07	4852.74	4354.62	3553.99	4264.88	4736.52	5080.64	4256.33	76.49
Apr	4300.28	8009.14	2866.91	4282.78	3667.47	2992.61	3556.68	4288.31	3884.16	3697.92	85.99
May	4009.61	9176.93	2417.81	4356.44	3266.43	2594.92	3240.78	4556.83	3438.66	3322.45	82.86
Jun	5624.02	13635.01	2468.70	8465.20	3517.06	2641.88	3798.29	7489.04	3689.97	5278.20	93.85
Jul	11012.31	28599.56	2925.86	14964.58	4001.99	2925.86	5346.73	9703.79	5062.21	12706.40	115.38
Aug	23865.05	39015.12	4433.46	23407.37	7622.71	5941.07	10547.80	19554.70	13694.57	19108.16	80.07
Sep	38377.57	65632.35	12105.31	39654.01	24194.19	12105.31	16382.34	32860.34	23550.60		
Oct	46261.30	73757.23	19705.50	41847.54	30358.38	20799.13	27318.21	48199.12	37141.40		
Nov	37500.63	60367.33	18534.61	33663.58	19112.65	27546.80	28982.93	39452.53	33929.52		
Dec	24795.31	38888.95	10563.49	23079.82	10577.29	18251.65	20170.76	25346.65	21757.70		
	Critical situa	ation: lower t	than long-te	rm minimum	values (LTN	MIN)					
	Normal con	dition: withir	the range o	of long-term	average (LT	(A) and max	(LTMAX) va	alues			
	Low volume	situation: lo	ower than lo	ng-term ave	rage (LTA)						
Unit: Millior	Cubic Mete	er (1 MCM=	0.001 Km <sup>3</sup> )								

Remarks: the volume of Tonle Sap Lake in 2025 is updated untill 04 August 2025.

## 4. Flash Flood in the Lower Mekong Basin

During the weekly monitoring period from 29 July – 04 August, the LMB received light to heavy rain and thunderstorms in some areas.

According to the Southeast Asian Flash Flood Guidance System (SEAFFGS) and analysis, flash flood guidance was detected at low to high level in the next 1, 3 and 6 hours in some areas of Lao PDR and Cambodia during the reporting period as shown in <u>Figure 14</u> & <u>Table 2</u>.

Table 2. Detected flash flood in the LMB on 29 July

	FLASH FLOOD GUIDANCE IN CAMBODIA								
	In the next 1h	nrs		In the next 3hrs		In the next 6hrs			
Provinces Districts Level			Provinces	Districts	Level	Provinces	Districts	Level	
Ratana Kiri	Ratana Kiri Andoung Meas Moderate		Ratana Kiri	Andoung Meas	Moderate	Ratana Kiri	Andoung Meas	Moderate	
Ratana Kiri	Ratana Kiri Koun Mom Moderate		Ratana Kiri	Koun Mom	Moderate	Ratana Kiri	Koun Mom	Moderate	
Ratana Kiri Ou Chum Moderate		Ratana Kiri Ta Veaeng High		Ratana Kiri	Ratana Kiri Ta Veaeng High				
Ratana Kiri Ta Veaeng High									

FLASH FLOOD RISK IN CAMBODIA											
	In the next 12hrs In the next 24hrs										
Provinces	Districts	Level	Provinces	Districts	Level						
Ratana Kiri	Andoung Meas	Moderate	Kong Pailin	Khad Pailin	Moderate						
Ratana Kiri	Koun Mom	Moderate	Kratie	Sambour	Moderate						
Ratana Kiri	Lumphat	Moderate	Mondul Kiri	Kaev Seima	Moderate						
Ratana Kiri	Ou Chum	Moderate	Mondul Kiri	Ou Reang	Moderate						
Ratana Kiri	Ou Ya Dav	Moderate	Mondul Kiri	Pechr Chenda	Moderate						
Ratana Kiri	Ta Veaeng	Moderate	Mondul Kiri	Mondul Kiri Saen Monourom							
Stung Treng	Siem Pang	Moderate	Otdar Meanchey	Anlong Veaeng	Moderate						
			Preah Vihear	Choam Khsant	Moderate						
			Ratana Kiri	Andoung Meas	High						
			Ratana Kiri	Koun Mom	Moderate						
			Ratana Kiri	Lumphat	High						
			Ratana Kiri	Ou Chum	Moderate						
			Ratana Kiri	Ou Ya Dav	High						
			Ratana Kiri	Ta Veaeng	Moderate						
			Ratana Kiri	Veun Sai	Moderate						
			Stung Treng	Siem Pang	Moderate						

	FLASH FLOOD GUIDANCE IN CAMBODIA							
	In the nex	t 1hrs	In the	next 3hrs	In the next 6hrs			
Provinces	Districts	Level	Provinces	Districts	Level	Provinces	Districts	Level
Khammuane	Thakhek	Moderate	Khammuane	Thakhek	Moderate	Khammuane	Thakhek	Moderate
Saravane	Samuoi	Xiengkhuang	Morkmay	Moderate	Xiengkhuang	Morkmay	Moderate	
Savannakhet	Xaybuly	Moderate						
Xaysomboun	Longxan	Moderate						
Xiengkhuang	Morkmay	Moderate						
Xiengkhuang	Pek	Moderate						

FLASH FLOOD RISK IN CAMBODIA										
In	the next 12hrs	In the next 24hrs								
Provinces	Districts	Level	Provinces	Districts	Level					
Attapeu	Sanamxay	Moderate	Attapeu	Phouvong	Moderate					
Attapeu	Sanxay	High	Attapeu	Sanamxay	Moderate					
Champasak	Paksong	Moderate	Attapeu	Sanxay	High					
Saravane	Ta oi	Moderate	Bolikhamxay	Khamkheut	Moderate					
Vientiane	Vangvieng	Moderate	Bolikhamxay	Pakkading	Moderate					

	FLA	ASH FLOOD RISK	( IN CAMBODIA						
	In the next 12hrs			In the next 24hrs					
Provinces	Districts	Level	Provinces	Districts	Level				
Xaysomboun	nboun Phoun Moderate		Bolikhamxay	Moderate					
Xaysomboun	Thathom	Moderate	Bolikhamxay	Thaphabat	Moderate				
	·		Bolikhamxay	Viengthon	Moderate				
			Champasak	Bachiangc	Moderate				
			Champasak	Champasac	Moderate				
			Champasak	Paksong	High				
			Champasak	Pathoomph	Moderate				
			Khammuane	Bualapha	Moderate				
			Khammuane	Hinboon	Moderate				
			Khammuane	Nakai	Moderate				
			Khammuane	Nhommalat	Moderate				
			Khammuane	Thakhek	Moderate				
			Luangprabang	Nan	Moderate				
			Saravane	Lakhoneph	Moderate				
			Saravane	Saravane	Moderate				
			Saravane	Ta oi	High				
			Saravane	Toomlarn	Moderate				
			Saravane	Vapy	Moderate				
			Savannakhet	Nong	Moderate				
			Savannakhet	Phine	Moderate				
			Savannakhet	Sepone	Moderate				
			Savannakhet	Thapangth	Moderate				
			Savannakhet	Vilabuly	Moderate				
			Vientiane	Kasy	Moderate				
			Vientiane	Vangvieng	Moderate				
			Xaysomboun	Hom	Moderate				
			Xaysomboun	Longxan	Moderate				
			Xaysomboun	Phoun	Moderate				
			Xaysomboun	Thathom	Moderate				
			Xaysomboun	Xaysombou	Moderate				
			Xiengkhuang	Khoune	Moderate				
			Xiengkhuang	Morkmay	Moderate				
			Xiengkhuang	Pek	Moderate				
			Xiengkhuang	Souy	Moderate				

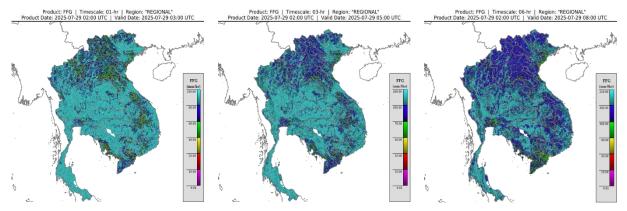


Figure 9. Flash Flood Guidance for the next 1-hr, 3-hr and 6-hr on 29 July

## 5. Drought Monitoring in the Lower Mekong Basin

### 5.2. Weekly drought monitoring from 29 July – 04 August 2025

Drought monitoring data for 2025 are available from Monday to Sunday every week; thus, the reporting period is normally delayed by one day compared to Flood and Flash Flood reports. We adopt the Index of Soil Water Fraction (ISWF) data obtained from FFGS to represent soil moisture of agricultural indicator for both dry and wet seasons.

#### Weekly Standardised Precipitation Index (SPI1)

Meteorological indicator shows that from 29 July - 04 August, as shown in Figure 9, some areas in the upper and central part of the LMB were facing normal to wet conditions including the uppert part and central part of Lao PDR, and the northeastern part of Thailand. However, some areas in the lower part of the LMB including Cambodia, the 3S Basin and Mekong delta were facing moderate to severe drought.

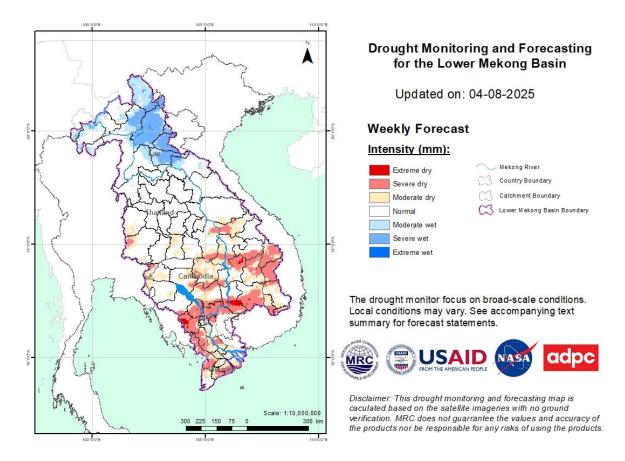


Figure 10: Weekly standardized precipitation index from 29 July - 04 August

#### • Weekly Index of Soil Water Fraction (ISWF)

No drought over the LMB by the Index of Soil Water Fraction, as displayed in **Figure 10**, during the monitoring week from 29 July - 04 August. The LMB was facing normal to severely conditions in some areas in the lower part including Cambodia, the 3S basin and Mekong delta.

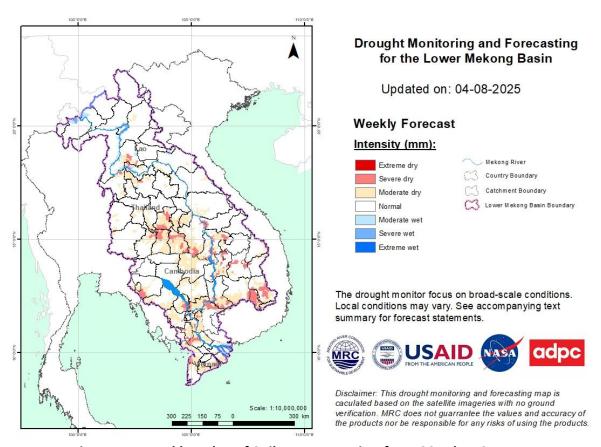


Figure 11: Weekly Index of Soil Water Fraction from 29 July – 04 August.

• Weekly Combined Drought Index (CDI)

The combined drought indicator, **Figure 11**, that some areas experienced moderate drought in Cambodia (Kampong Thom, Preah Vihear, Siem Reap).

The impacted areas are listed below:

Viet Nam have no dat	3
Severe	
Exceptional	
Vie	Severe

Note: S: short-term drought, less than 1 months; L: long-term drought, more than 1 month

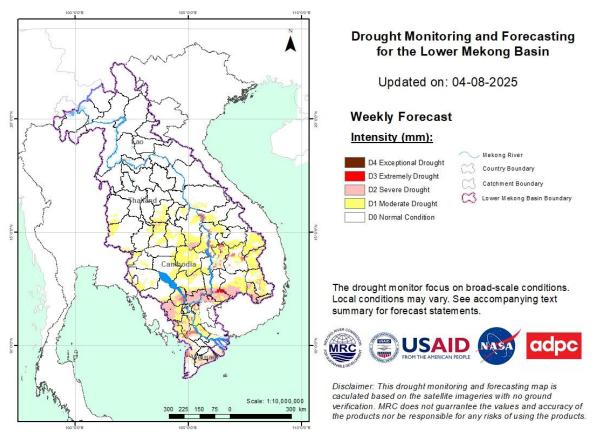


Figure 12: Weekly Combined Drought Index from 29 July - 04 August

More information on Drought Forecasting and Early Warning (DFEW) as well as the explanation is available here: <a href="http://droughtforecast.mrcmekong.org/templates/view/our-product">http://droughtforecast.mrcmekong.org/templates/view/our-product</a>. DFEW provides not only weekly monitoring and forecasting information but also a three-month forecast of drought indicators with seasonal outlook which are updated every month based on international weather forecast models. Details on drought forecast are described in section 6.4 of this report.

#### 6 Weather and Water Level Forecast and Flash Flood information

#### 6.1 Rainfall forecast

During 05 - 09 August 2025, the accumulated rainfall over the entire Lower Mekong Basin is distributed with light to heavy rain based on CHIRPS-GFS (**Figure 12**). Heavy rain is expected to occur in some areas in the LMB including the northern and central part of Lao PDR, the northern and northeastern part of Thailand near Lao PDR's border. The remaining areas are expected to occur light to moderate rain.

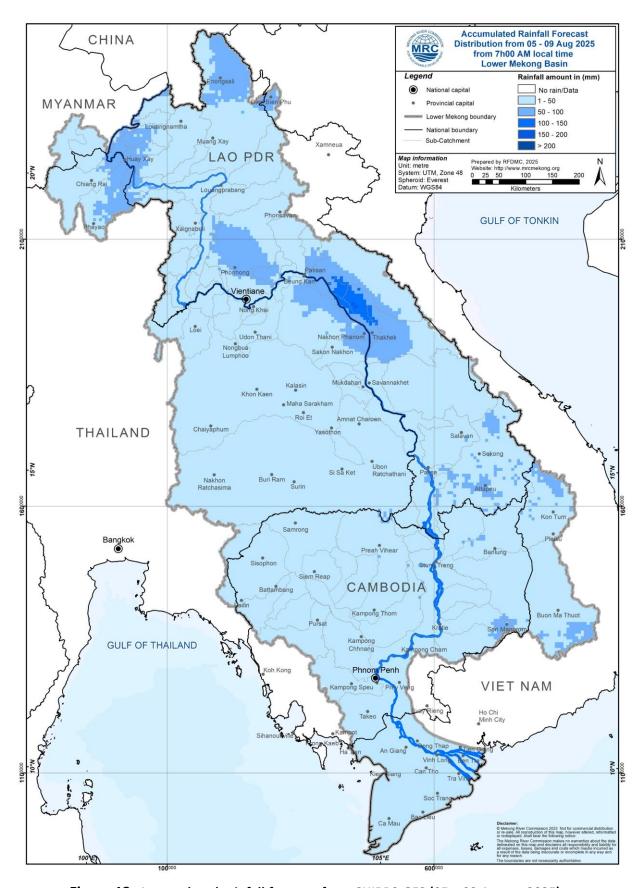


Figure 13: Accumulated rainfall forecast from CHIRPS-GFS (05 – 09 August 2025)

#### **6.2** Water level forecast

During the wet season, from June 1st to October 31st each year, daily riverine flood forecasts are conducted for 22 stations along the Mekong mainstream, with a forecast lead time of five days. This report will describe the forecast water level for a period of 05 – 09 August 2025. The water levels at all stations along the Mekong mainstream are not expected to to reach alarm and flood levels within the next 5 days.

In Chiang Saen monitoring station, the water level is expected to be fluctuated over the forecasting period of 05 - 09 August 2025. However, it will be expected to slightly decrease from 5.11 m to 5.53 m. The water level in Luang Prabang stations affected by backwater is likely slightly decreasing within a range from 14.82 m to 14.59 m.

The water levels at Chaing Khan, Vientiane, Nongkhai, Nakhon Phanom, Thakhek, Mukdahan, Savannakhet, Khong Chiam and Pakse stations are expected to slightly decrease in the next 5 days with approximately value of -0.81 m, -0.67 m, -0.70 m, -1.19 m, -0.94 m, -0.92 m, -1.08 m, -1.05 m, and -0.65 m, respectively.

At the floodplain in Cambodia from Stung Treng station downstream, the water levels are expected to increase. At Stung Treng, Kratie, Kompong Cham, Phnom Penh (Bassac), Phnom Penh Port, Koh Khel, Neak Luong, and Prek Kdam, the water levels are expected to decrease approximately -0.60 m, -0.88 m, -0.54 m, -0.19 m, -0.08 m, -0.02 m, and -0.05 m, respectively.

For the Tan Chau station on the Mekong River and Chau Doc station on the Bassac River, water levels will be fluctuating approximately ranging between 2.48 bm and 2.12 m and 1.97 m and 1.62 m, respectively, following daily tidal effects from the sea.

The weekly River Monitoring Bulletin and forecasting issued on 04 August 2025 can be found in **Table 2.** Results of the weekly river monitoring and forecasting bulletin are also available at <a href="http://ffw.mrcmekong.org/bulletin.php">http://ffw.mrcmekong.org/bulletin.php</a>

Table 3. River Monitoring and Forecasting Bulletin.

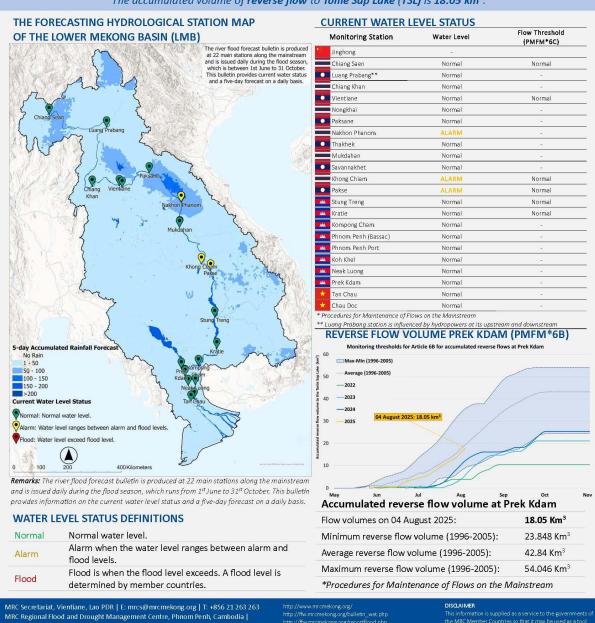


#### MEKONG RIVER MONITORING AND FORECASTING BULLETIN

#### Monitoring on 04 August 2025, 7:00 (UTC+7)

Highlights: The water level at Nakhon Phanom, Mukdahan, Khong Chiam and Pakse stations are still at ALARM LEVELS.

The accumulated volume of reverse flow to Tonle Sap Lake (TSL) is 18.05 km<sup>3</sup>.





## **MEKONG RIVER MONITORING AND FORECASTING BULLETIN**

#### Forecasting from 05 to 09 August 2025

**Highlights:** Heavy to very heavy rainfall is expected to occur in the northern part of Lao PDR. Water levels at all stations are expected to be in normal conditions. However, they are expected to drop except for Chaing Saen station.

Forecasting Station	24 h Observed Rainfall (mm)	Zero gauge above M.S.L (m)	Level a	ved Water gaint zero ige (m)				er Level		Alarm Level (m)	Flood Level (m)	Forecasted Water Levels Change in 5 days (m)	Max. Water levels change within next 5	Min. distance to alarm level within next 5	Min. distance to flood level within next 5
	03-Aug		03-Aug	04-Aug	05-Aug	06-Au	, 07-Au	g 08-Aug	09-Aug				days (m)	days (m)	days (m)
Jinghong	0.0		537.12	<b>→</b> 537.11	340	*		CHE		4	=			-	2
Chiang Saen	7.0	357.110	5.58	<b>→</b> 5.11	<b>↓</b> 4.82	<b>→</b> 4.86	↑ 5.11	↑ 5.29	<b>↑</b> 5.53	11.50	12.80	↑ 0.42	0.42	5.97	7.27
Luang Prabang	0.0	267.195	14.60	↑ 14.82	<b>↑</b> 15.37	↓ 14.9	4 ↓ 14.3	2 14.43	↑ 14.59	17.50	18.00	<b>→</b> -0.23	0.55	2.13	2.63
Chiang Khan	0.0	194.118	13.14	<b>↓</b> 12.31	<b>↓</b> 11.93	↓ 11.4	2 ♦ 11.2	1 → 11.25	↑ 11.50	14.50	16.00	<b>↓</b> -0.81	-1.10	2.57	4.07
Vientiane Vientiane	0.0	158.040	11.06	↓ 10.91	<b>↓</b> 10.67	↓ 10.4	2 ↓ 10.1	3 → 10.10	↑ 10.24	11.50	12.50	<b>→</b> -0.67	-0.82	0.83	1.83
Nongkhai Nongkhai	0.0	153.648	11.03	<b>↓</b> 10.96	<b>↓</b> 10.67	♦ 10.4	→ 10.1	6 → 10.08	↑ 10.26	11.40	12.20	<b>↓</b> -0.70	-0.88	0.73	1.53
Paksane Paksane	0.0	142.125	12.16	<b>↓</b> 12.09	<b>↓</b> 11.92	<b>↓</b> 11.5	7 ♦ 11.2	7 ↓ 11.01	↓ 10.90	13.50	14.50	<b>→</b> -1.19	-1.19	1.58	2.58
Nakhon Phanom	0.0	130.961	11.68	<b>↓</b> 11.56	<b>↓</b> 11.41	<b>↓</b> 11.1	6 ↓ 10.9	3 ₺ 10.70	→ 10.62	11.50	12.00	<b>↓</b> -0.94	-0.94	0.09	0.59
Thakhek	0.0	129.629	12.87	<b>↓</b> 12.75	<b>↓</b> 12.60	<b>↓</b> 12.3	5 ↓ 12.1	0 ↓ 11.90	→ 11.83	13.00	14.00	<b>↓</b> -0.92	-0.92	0.40	1.40
Mukdahan	12.0	124.219	12.01	<b>↓</b> 11.81	<b>↓</b> 11.62	<b>↓</b> 11.3	5 ↓ 11.1	2 ↓ 10.89	<b>↓</b> 10.73	12.00	12.50	<b>↓</b> -1.08	-1.08	0.38	0.88
Savannakhet	0.0	124.219	10.41	<b>↓</b> 10.22	<b>↓</b> 10.01	<b>↓</b> 9.78	<b>↓</b> 9.60	<b>↓</b> 9.30	<b>↓</b> 9.15	12.00	13.00	<b>↓</b> -1.07	-1.07	1.99	2.99
Khong Chiam	2.7	89.030	13.88	<b>↓</b> 13.60	<b>↓</b> 13.18	<b>↓</b> 12.9	3 ↓ 12.8	5 ↓ 12.68	↓ 12.55	13.50	14.50	<b>↓</b> -1.05	-1.05	0.32	1.32
Pakse Pakse	0.0	86.490	11.42	<b>↓</b> 11.22	<b>↓</b> 10.99	<b>↓</b> 10.8	7 ↓ 10.7	6 ↓ 10.65	↓ 10.57	11.00	12.00	<b>→</b> -0.65	-0.65	0.01	1.01
Stung Treng	0.0	36.790	9.90	<b>→</b> 9.65	<b>↓</b> 9.38	<b>↓</b> 9.20	↓ 9.11	→ 9.06	→ 9.05	10.70	12.00	<b>↓</b> -0.60	-0.60	1.32	2.62
Kratie	0.0	-1.080	20.70	<b>↓</b> 20.51	<b>↓</b> 20.23	<b>↓</b> 19.9	6 ♦ 19.7	7 ↓ 19.68	↓ 19.63	22.00	23.00	<b>↓</b> -0.88	-0.88	1.77	2.77
Kompong Cham	0.0	-0.930	13.14	<b>↓</b> 13.12	<b>↓</b> 13.04	<b>↓</b> 12.9	) ↓ 12.7	5 ↓ 12.64	<b>↓</b> 12.58	15.20	16.20	<b>↓</b> -0.54	-0.54	2.16	3.16
Phnom Penh (Bassac)	0.0	-1.020	8.15	<b>↓</b> 8.14	<b>→</b> 8.12	₩ 8.07	↓ 8.01	<b>↓</b> 7.97	→ 7.95	10.50	12.00	<b>↓</b> -0.19	-0.19	2.38	3.88
Phnom Penh Port	nr	0.070	6.87	<b>↓</b> 6.86	→ 6.84	<b>↓</b> 6.79	<b>↓</b> 6.73	↓ 6.69	→ 6.67	9.50	11.00	<b>↓</b> -0.19	-0.19	2.66	4.16
Koh Khel	0.0	-1.000	7.16	↑ 7.24	<b>→</b> 7.23	<b>→</b> 7.23	<b>→</b> 7.20	<b>→</b> 7.18	→ 7.16	7.90	8.40	<b>J</b> -0.08	-0.08	0.67	1.17
Meak Luong	0.0	-0.330	5.62	→ 5.64	<b>→</b> 5.66	→ 5.67	<b>→</b> 5.67	→ 5.65	<b>↓</b> 5.62	7.50	8.00	<b>→</b> -0.02	-0.02	1.83	2.33
Prek Kdam	0.0	0.080	6.64	→ 6.66	→ 6.67	→ 6.66	→ 6.64	→ 6.62	→ 6.61	9.50	10.00	<b>↓</b> -0.05	-0.05	2.83	3.33
Tan Chau	0.0	0.000	2.39	↑ 2.48	<b>→</b> 2.48	↓ 2.42	↓ 2.35	<b>↓</b> 2.23	<b>↓</b> 2.12	3.50	4.50	<b>↓</b> -0.36	-0.36	1.02	2.02
Chau Doc	nr	0.000	1.88	↑ 1.97	<b>→</b> 1.98	<b>↓</b> 1.92	↓ 1.85	↓ 1.73	<b>↓</b> 1.62	3.00	4.00	<b>↓</b> -0.35	-0.35	1.02	2.02

#### WATER LEVEL FORECASTING DEFINITIONS

1	Rising water level.
<b>→</b>	Stable water level: stable water level is defined as a daily change of less than 10cm from Chaing Saen to Savannakhet; less than 5cm at Pakse and Stung Treng; and no more than 3cm from Kratie downstream.
1	Falling water level.
Х	No data available.
Alarm stage	Alarm stage is when the water level ranges between alarm and flood levels.
Flood stage	Flood stage is when the flood level exceeds. A flood level is determined by member countries.

#### NOTES

- On 04 August, water levels at Nakhon Phanom, Khong Chiam and Pakse stations are still at ALARM LEVELS. As of now, the total accumulated reverse flow volume into the TSL is 18.05 km<sup>3</sup>.
- In the next 5 days, during 06 07 August, the heavy to very heavy rainfall is expected to occur in the northern part of Lao PDR. The remaining areas are likely to occur light to moderate rainfall.
- For 05 09 August, water levels at all stations are expected to be in normal conditions. However, they are expected to drop except for Chaing Saen station.

MRC Secretariat, Vientiane, Lao PDR | E: mrcs@mrcmekong.org | T: +856 21 263 263 MRC Regional Flood and Drought Management Centre, Phnom Penh, Cambodia | E: floodforecast@mrcmekong.org | T: +855 23 425 353

http://www.mrcmekong.org/ http://ffw.mrcmekong.org/bulletin\_wet.ph http://ffw.mrcmekong.org/reportflood.php https://pmfm.mrcmekong.org/ DISCAIMER

This in formation is supplied as a service to the governments of the MRC Member Countries so that it may be used as a tool within existing national disaster forecast and warning systems.

#### 6.3 Flash Flood Information

With heavy to very heavy rainfall for next week in 05 - 11 August, flash floods might be detected in some areas in the LMB inclcuding in the northern part of Lao PDR, the northern part of Thailand. And local heavy rain in a short period of time is possible with unpredictable short flash floods. Further detailed information on Flash Flood Guidance Information, as well as on its explanation, is available for download <a href="here">here</a>.

#### 6.4 Drought forecast

From August to October 2025 (**Figure 13**), the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 - 25 mm, except for some areas in the lowland areas of Cambodia, and the Mekong Delta. Overall, in the next 3 months, rainfall will be mainly concentrated in the central part of the LMB and higher than the LTA from 10 - 25mm.

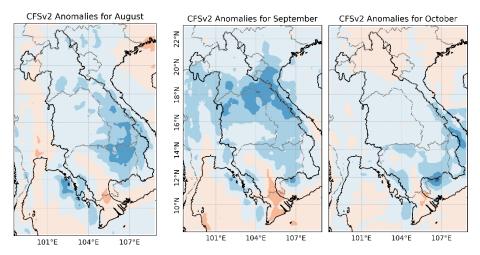


Figure 13 Seasonal forecast of rainfall anomalies for August to October 2025 based on CFSv2 (NCEP-NOAA)

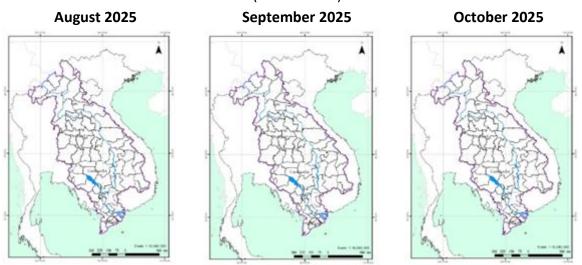


Figure 14. Monthly forecasts of combined drought indicators for August, September and October 2025

**Figure 14** indicates that the monthly drought forecast for the upcoming three months (August, September, and October 2025) use the Combined Drought Indicator (CDI). The forecast shows that no drought conditions are expected in over the LMB from August to October 2025.

## 7 Summary and Possible Implications

#### 7.1. Rainfall and its forecast

In the period of 29 July - 04 August 2025, thunderstorms and heavy are expected over the upper and central part of the LMB including the upper and central part of Lao PDR, the northern and northeastern part of Thailand near Lao PDR's border, and the 3S basin of Sesan, Sekong, Srepok. The remaining areas are likely to occur light to moderate rainfall.

From 05 – 11 August 2025, isolated heavy rainfall is likely to occur in the upper of the northern part of Lao PDR and the northern part of Thailand near Lao PDR border, the remaining areas are expected to occur light rainfall.

#### 7.2. Water level and its forecast

At 22 key monitoring stations along the Mekong mainstream from 29 July – 04 August 2025, water levels at Vientiane, Nongkhai, Nakhon Phanom, Thakhek, Mukdahan, Khong Chiam and Pakse have reached Alarm Level, and the flow threshold (PMFM 6C) are under normal conditions. It is also the same condition for Tan Chau and Chau Doc monitoring stations, which are significantly influenced by sea tidal fluctuation.

In the period of 05 - 09 August 2025, the water level all stations are not expected to reach alarm and flood levels. At Tan Chau and Chau Doc stations, the water levels are predicted to be also fluctuated, resulting from the influence of sea tidal patterns.

#### 7.3. Flash flood and its trends

With the predicted of rainfall for the coming week as mentioned earlier in part 2, the flash flood guidance from low to high level will likely be detected in some areas of the LMB, including the northern and central part of Lao PDR, and the northern part of Thailand.

#### 7.4. Drought condition and its forecast

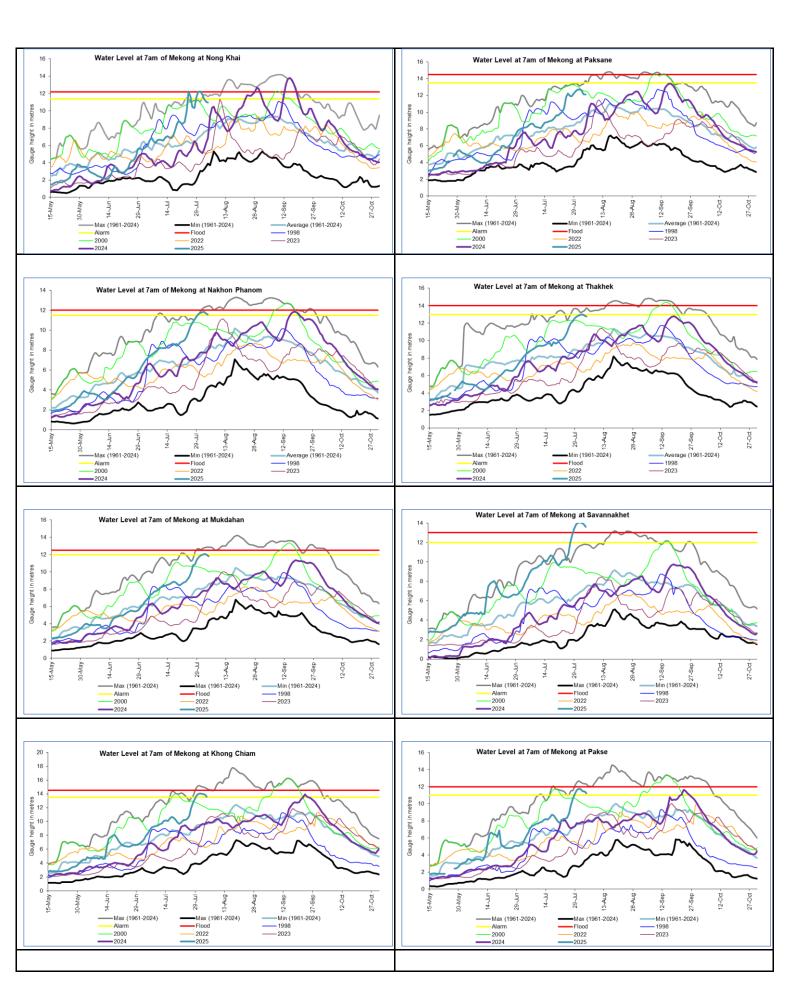
During 29 July - 04 August, some areas in the upper and central part of the LMB were facing normal to wet conditions including the uppert part and central part of Lao PDR, and the northeastern part of Thailand. However, some areas in the lower part of the LMB including Cambodia, the 3S Basin and Mekong delta were facing moderate to severe drought.

The next three-month from August - October 2025, the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 - 25 mm, except for some areas in the lowland areas of Cambodia, and the Mekong Delta. Overall, in the next 3 months, rainfall will be mainly concentrated in the central part of the LMB and higher than the LTA from 10 - 25mm.

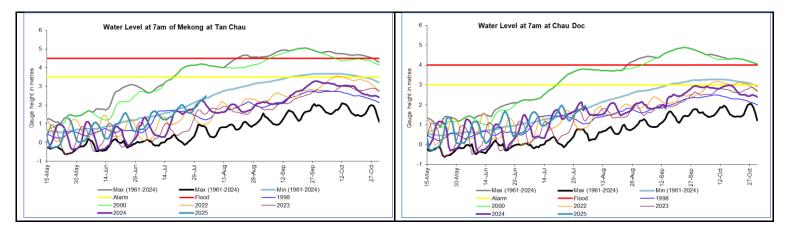
The forecast indicates that no drought conditions are expected in over the LMB from August - October 2025 using the Combined Drought Indicator (CDI)

# Annex A: Weekly water level monitoring at 22 key stations









# Annex B: Tables for weekly updated water levels and rainfall at the Key Stations

Table A1: Weekly observed water levels

2025	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
29-07-2025	536.56	6.65	16.5	14.3	11.5	11.6	12.24	11.33	12.56	11.4	9.81	13.37	11.2	9.76	19.69	11.94	7.18	5.95	6.35	4.9	5.96	1.83	1.46
30-07-2025	536.59	6.98	16.24	14.5	12.2	12.2	12.53	11.56	12.77	11.7	10.1	13.85	11.6	9.94	20.22	12.42	7.55	6.39	6.73	5.18	6.14	2.02	1.59
31-07-2025	536.95	6.32	15.64	14.1	12	12.2	12.69	11.71	12.9	11.9	10.3	14.04	11.8	10.1	20.45	12.7	7.78	6.61	6.8	5.34	6.34	2.12	1.66
01-08-2025	537.47	5.69	14.98	13.5	11.9	11.9	12.74	11.79	12.97	12	10.4	14.06	11.7	10.2	20.74	12.88	7.9	6.7	7	5.44	6.42	2.22	1.73
02-08-2025	536.77	5.33	15.64	12.9	11.8	11.4	12.6	11.85	13.02	12.1	10.5	14	11.5	10.1	20.8	13	8.05	6.78	7.1	5.52	6.52	2.3	1.8
03-08-2025	537.12	5.58	14.6	13.1	11.6	11	12.16	11.68	12.87	12	10.4	13.88	11.4	9.9	20.7	13.14	8.15	6.87	7.16	5.62	6.64	2.39	1.88
04-08-2025	537.11	5.11	14.82	12.3	11.4	11	12.09	11.56	12.75	11.8	10.2	13.6	11.2	9.65	20.51	13.12	8.14	6.86	7.24	5.64	6.66	2.48	1.97
Flood level		12.80	18.00	16.00	12.50	12.00	14.50	12.50	14.00	12.50	13.00	14.50	12.00	12.00	23.00	16.20	12.00	11.00	7.90	8.00	10.00	4.50	4.00

Table A2: Weekly observed rainfall

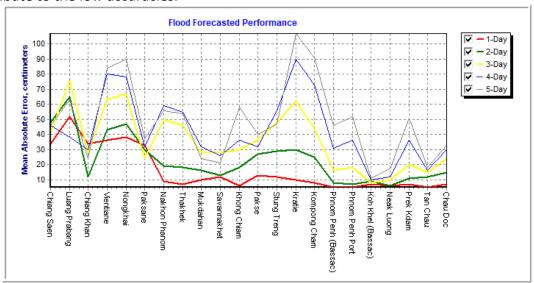
2025	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
29-07-2025	1	5.2	0.8	1.2	0	4.6	41.9	54.5	59.2	15.8	11.8	11.5	19	19.5	0.8	0	0	0	0	0	0	0	0.3
30-07-2025	0	1	0	11.8	3.7	1.2	49	32.3	23.6	37.8	41	55.2	72	33	0	4	0.5	0	0	0	0	10.7	0.5
31-07-2025	0	0	0	0	0	0	0	0	5.5	0	0	17.7	13.6	3.5	13.2	0	0	0	0	0	0	1.6	0
01-08-2025	8.5	3	0.2	0	0	0	2	0	0.2	0.4	0	0	0	0	3.6	4	0	0	0	0	0	0	0
02-08-2025	0	2	0.2	2.3	0	5.5	0.6	0.1	0	7.5	0.6	0	0	0	0	0	0	0	0	0	0	0	0
03-08-2025	2.5	3	4.6	0	0	0	14.7	2	2	5.8	6.4	0	0	0	0	0	0	0	0	0	0	0	0
04-08-2025	0	7	0	0	0	0	0	0	0	12	0	2.7	0	0	0	0	0	0	0	0	0	0	0
Sum	12.0	80.8	20.6	20.0	3.7	11.3	108.2	88.9	90.5	79.3	59.8	87.1	104.6	56.0	17.6	8.0	0.5	0.0	0.0	0.0	0.0	12.3	8.0

## Annex C: Performance of the weekly flood forecasting

"Accuracy" here refers to the state where data recorded in the MRC's Mekong River Flood Forecasting System are cleaned and verified.

The adjustment of flood forecasting outcomes from the flood forecasting system requires flood forecasters to have extensive knowledge in hydrology and statistical modelling for estimating the relationships between stations upstream and downstream in the Mekong River Basin. Flood forecasting performance presented in the graph below shows the average flood forecasting accuracy at each key station along the Mekong mainstream from 29 July to 04 August 2025.

The forecasting values from 29 July to 04 August 2025 show that the overall accuracy is fair for a four-day to five-day forecast in lead time (less than 250 cm) for all of the stations from the upper to the lower parts of the Mekong River with combine information of rainfall and reservoirs' operation in this area during the report period. However, at Luang Prabang station, the accuracy is unacceptable due to the significant increase in water level, which was caused by tropical storm namely Wipha. Moreover, the sudden release from hydropower also contribute to the low accuracies.



<u>Note:</u> The higher percentage of flood forecasting accuracy is due to several key factors as follows:

- Chiang Saen station is influencing by hydropower upstream operation from China.
- Luang Prabang to Chiang Khan and Paksane to Stung Treng to Kratie have been influenced by hydropower operations upstream, tributaries inflows.
- The influence of heavy rainfall caused by storms and hydropower operations from upstream, tributaries inflows and the lower part of the Mekong floodplain, including the 3S (Stung Treng and Kratie).
- Fluctuations of the water levels at Tan Chau and Chau Doc stations were due to daily tidal effects of the sea in the Mekong Delta.
- Satellite rainfall data were not representative of the actual rainfall at ground stations in some areas of the Mekong region.



# Mekong River Commission Secretariat