

Weekly Wet Season Situation Report in the Lower Mekong River Basin

01 - 07 July 2025

Prepared by
The Regional Flood and Drought Management Centre
08 July 2025



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Key Messages

Key messages for this weekly report are presented below.

Rainfall monitoring and forecast

- In the period of 01 07 July 2025, there has heavy rainfall has been observed over the LMB in the upper and central parts of Lao PDR, the northern and northeatern part of Thailand, the 3S basin, and the southwestern part of Cambodia.
- During 08 14 July 2025, isolated thunderstorms and heavy rain are expected over the LMB including the upper and central part of Lao PDR, the northeastern part of Thailand near the Lao PDR border. The remaining areas are expected to occur no rain to light rain.

Water level monitoring and forecast

- At 22 key monitoring stations along the Mekong mainstream from 01 07 July 2025, water levels have neither reached alarm nor flood levels, 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 08 12 July 2025, the water levels at all stations along the Mekong mainstream are forecasted to be increasing. However, the water levels are not expected to reach alarm and flood level thresholds. 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 01 07 July 2025, the LMB is experiencing normal to wet conditions, except some areas in the lower part of Cambodia. The monitored drought is caused primarily by meteorological indicator.
- 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 01 - 07 July 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: http://ffw.mrcmekong.org/bulletin.php.

Drought monitoring and forecasting information is available at: http://droughtforecast.mrcmekong.org

Flash flood information is accessible at: http://ffw.mrcmekong.org/ffg.php

2 General Weather Patterns

Currently, due to the influence of the Intertropical Tropical Convergence Zone (ITCZ) at 15-18 degrees North latitude, some areas in the northern and central part of Laos; and the north and northeastern part of Thailand (near the border of Lao PDR) has had moderate to heavy rain.

Figure 1 presents mean sea level pressure over the region. It is forecasted that the ITCZ will be influenced to the upper part of Lower Mekong Basin while the moderate southwest moon soon will be cover over the lower part. Therefore, heavy rain is expected over the LMB including the upper and central part of Lao PDR, the northeastern part of Thailand near the Lao PDR border. The remaining areas are expected to occur no rain to light rain.

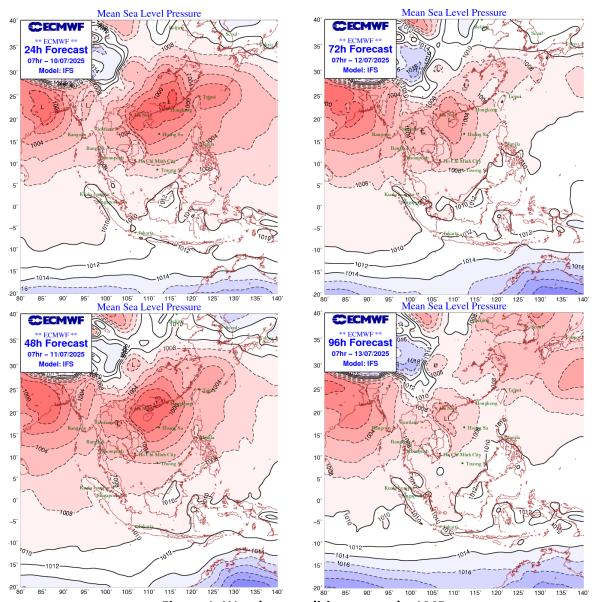


Figure 1: Weather conditions over the LMB

According to the ASEAN Specialised Meteorological Centre (ASMC, http://asmc.asean.org/home/), the sub seasonal weather outlook (23 June – 06 July 2025) indicates that the Lower

Mekong Basin (LMB) is likely in drier and warmer conditions at the lower part. **Figure 2** shows the outlook of weather condition from 23 June to 06 July 2025 in Southeast Asia based on results from the NCEP model (National Centres for Environmental Prediction).

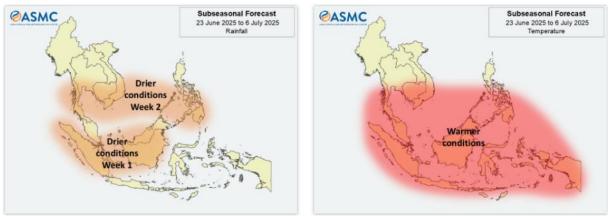


Figure 2: Outlook of wet and dry conditions over the Asian countries by ASMC.

Based on the tropical storm risk (TS) (https://www.jma.go.jp/bosai/weather-map/#lang=en), there is no active Tropical Depression (TD) at NW pacific system as of 07 July 2025 as displayed in **Figure 3.**

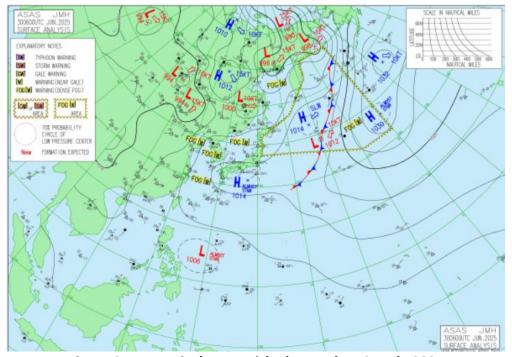


Figure 3: No tropical storm risk observed on 07 July 2025

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 01 - 07 July 2025 (**Figure 4**). The heavy to very heavy rainfall has been observed over the LMB in the central parts of Lao PDR, the 3S basin, and the northeastern and northwestern part of Cambodia.

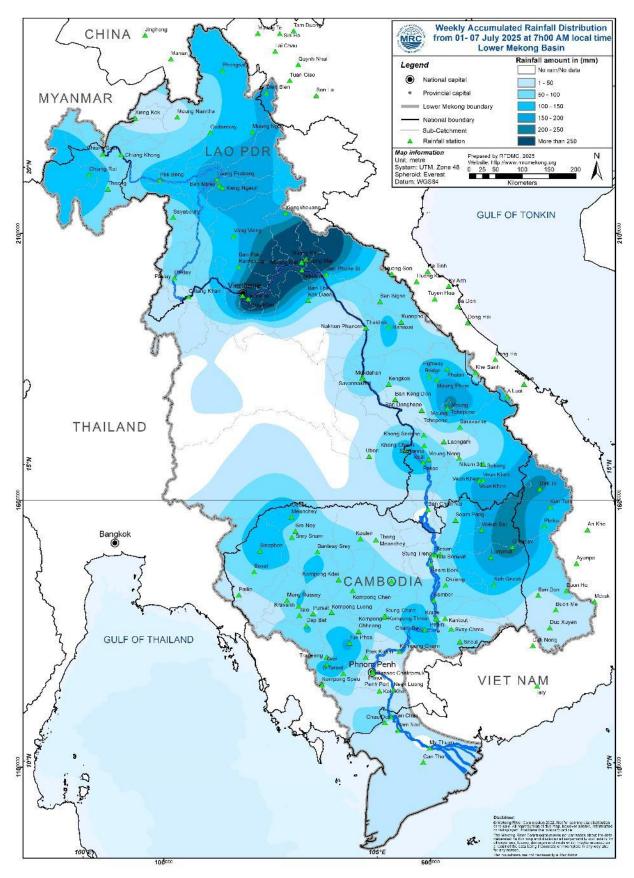


Figure 4: Weekly rainfall distribution over the LMB during 01 – 07 July 2025

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: http://ffw.mrcmekong.org/overview.php.

During 01 – 07 July 2025, the observed water level (WL) at Jinghong hydrological station¹, was almost constant and ranges between 536.71 m and 537.22 m, which are corresponding to the outflow between 1,350.00 m³/s to 2,340.00 m³/s (recorded on 7:00 am), respectively (**Figure 6**). The water level in Chiang Saen Station also indicated a slight fluctuation ranging from4.28 m to 4.56 m. At the same period, the water level in Luang Prabang Station also slightly increased with an approximate value of 0.88 m from 10.98 m to 11.86 m as compared to the previous week.

The water levels at Vientiane, Nongkhai, Paksane, Nakhon Phanom, Thakhek, Mukdahan, Savannakhet, Khong Chiam, and Pakse, have increased from 8.08 m to 8.72 m, 6.88 m to 7.75 m, 5.72 m to 6.53 m, 7.75 m to 8.63 m, 6.06 m to 7.69 m, 7.37 m to 8.96 m, 5.91 m to 7.71 m, 4.32 m to 6.08 m, 6.64 m to 9.15 m, and 5.06 m to 7.42 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 5.82 m to 7.12 m, 13.93 m to 15.54 m, 7.70 m to 8.80 m, 4.38 m to 5.00 m, 3.39 m to 3.99 m, 4.19 m to 4.22 m, 2.95 m to 3.34 m, and 3.42 m to 3.96 m, respectively.

Similar to the previous week, the water levels from 01 to 07 July 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 0.64 m to 1.54 m, while at the Chau Doc station, they ranged from 0.52 m to 1.48 m.

¹ Near-real time data of hydro-meteorological monitoring at the Jinghong hydrological station is available at https://portal.mrcmekong.org/monitoring/river-monitoring-telemetry.

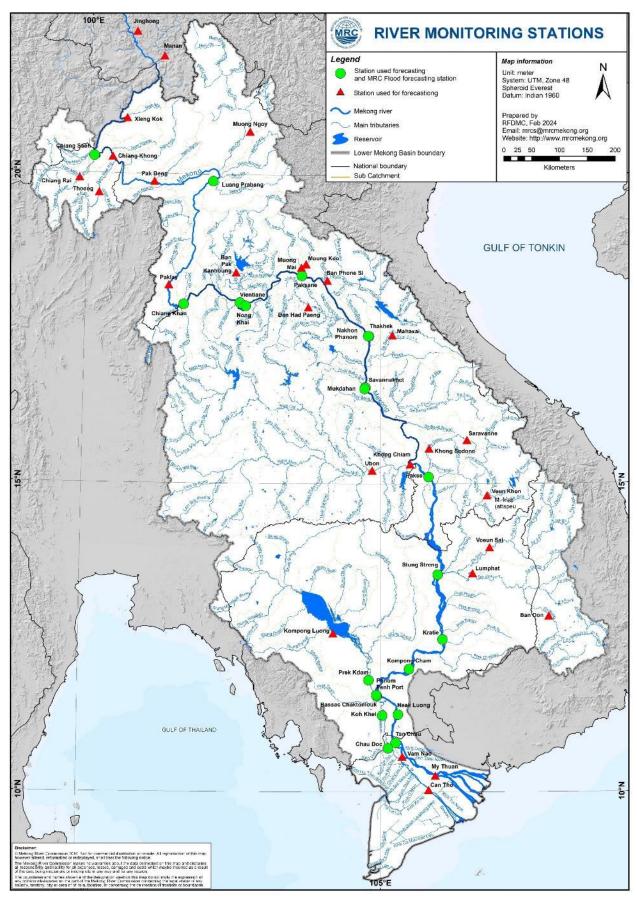


Figure 5: The key stations along LMB for river flood forecasting

The water levels in key monitoring stations on 07 July 2025 are in normal conditions, in which they do not reach alarm and flood levels at all stations. 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**.

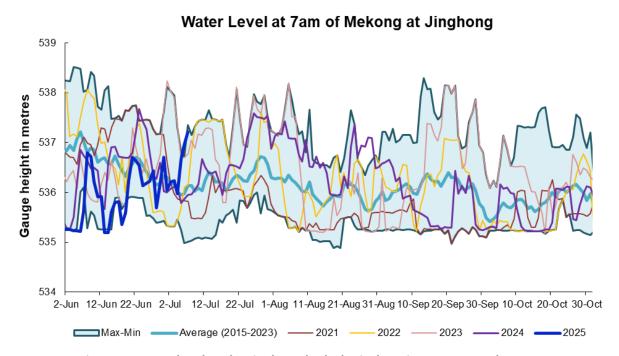


Figure 6. Water level at the Jinghong hydrological station up to 07 July 2025.

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 07 July 2025, it was observed that the inflow to Tonle Sap Lake is relatively higher than its LTA due to significant high inflows from upstream, contributing from the tropical storm namely WUTIP (**Figure 7**).

The seasonal changes in monthly flow volumes up to 07 July 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 May 2025 is lower than its LTA (about 93.85 %), 2019, and 2023 but higher than that in 2020, 2021, 2022 and 2024 during the same period **(Figure 8 and Table 1)**.

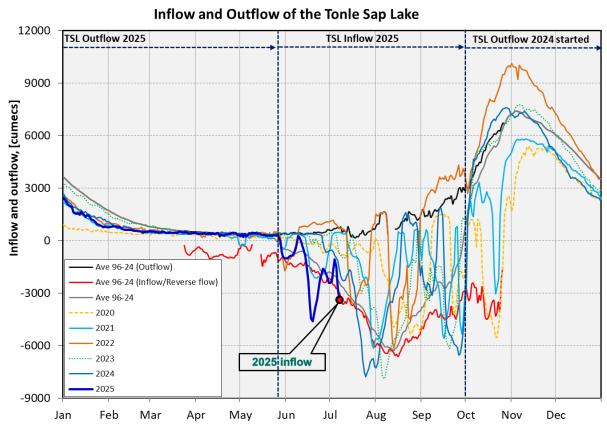


Figure 7: Seasonal change of inflows and outflows of Tonle Sap Lake.

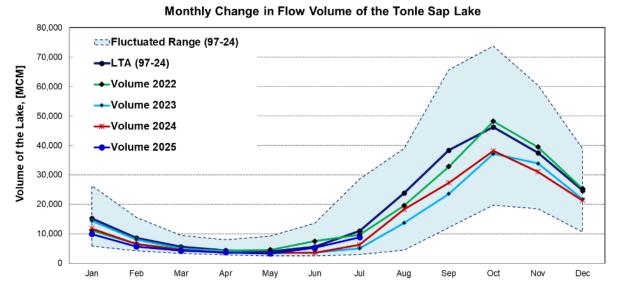


Figure 8. The seasonal change in monthly flow volume of Tonle Sap Lake.

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	288.31 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	8854.08	80.40
Aug	23865.05	39015.12	4433.46	23407.37	7622.71	5941.07	10547.80	19554.70	13694.57		
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 situation: lower than long-term minimum values (LTMIN)										
	Normal condition: within the range of long-term min (LTMIN) and max (LTMAX) values										
	Low volume situation: lower than long-term average (LTA)										
Unit: Millior	Cubic Mete	er (1 MCM=	0.001 Km ³)								

Remarks: the volume of Tonle Sap Lake in 2025 is updated untill 07 July 2025.

4. Flash Flood in the Lower Mekong Basin

During the weekly monitoring period from 01 - 07 July, 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 in 04 July

	FLASH FLOOD GUIDANCE IN CAMBODIA										
lı	n the next 1hi	rs		In the next	3hrs	In the next 6hrs					
Provinces	Districts	Level	Provinces	Districts	Level	Provinces	Districts	Level			
Kampong Cham	Stueng Trang	Moderate	Mondul Kiri	Pechr Chenda	Moderate	Mondul Kiri	Pechr Chenda	Moderate			
Kratie	Preaek Prasab	Moderate	Ratana Kiri	Koun Mom	Moderate	Ratana Kiri	Koun Mom	Moderate			
Mondul Kiri	Pechr Chenda	Moderate	Ratana Kiri	Ta Veaeng	High	Ratana Kiri	Ta Veaeng	High			
Ratana Kiri	Andoung Meas	Moderate									
Ratana Kiri	Koun Mom	Moderate									
Ratana Kiri	Ta Veaeng	High									

FLASH FLOOD RISK IN CAMBODIA											
	In the next 12h	nrs		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	Mondul Kiri	Kaev Seima	Moderate						
Ratana Kiri	Lumphat	Moderate	Ratana Kiri	Andoung Meas	High						
Ratana Kiri	Ou Chum	Moderate	Ratana Kiri	Ban Lung	Moderate						
Ratana Kiri	Ou Ya Dav	Moderate	Ratana Kiri	Bar Kaev	Moderate						
Ratana Kiri	Ta Veaeng	High	Ratana Kiri	Koun Mom	High						
Ratana Kiri	Veun Sai	Moderate	Ratana Kiri	Lumphat	Moderate						
Stung Treng	Siem Pang	High	Ratana Kiri	Ou Chum	Moderate						
			Ratana Kiri	Ou Ya Dav	Moderate						
			Ratana Kiri	Ta Veaeng	High						
			Ratana Kiri	Veun Sai	High						
			Stung Treng	Siem Pang	High						

FLASH FLOOD GUIDANCE IN LAO PDR										
lı	n the next	1hrs	In	the next 3h	nrs	In the next 6hrs				
Provinces	Districts	Level	Provinces	Districts	Level	Provinces	Districts	Level		
Khammuane	Xaybouath	Moderate	Khammuane	Xaybouath	Moderate	Khammuane	Xaybouath	Moderate		
Xaysomboun	Longxan	Moderate	Xaysomboun	Longxan	Moderate	Xaysomboun	Longxan	Moderate		
Xiengkhuang	Morkmay	Moderate	Xiengkhuang	Morkmay	Moderate	Xiengkhuang	Morkmay	Moderate		

FLASH FLOOD RISK IN LAO PDR									
	In the next 12hrs		In the next 24hrs						
Provinces	Districts	Level	Provinces	Districts	Level				
Attapeu	Sanamxay	Moderate	Attapeu	Phouvong	Moderate				
Bolikhamxay	Khamkheut	Moderate	Attapeu	Sanamxay	Moderate				
Bolikhamxay	Thaphabat	Moderate	Attapeu	Sanxay	Moderate				
Champasak	Paksong	Moderate	Attapeu	Xaysetha	Moderate				
Khammuane	Nakai	Moderate	Bolikhamxay	Bolikhanh	Moderate				
Khammuane	Xaybouath	Moderate	Bolikhamxay	Khamkheut	Moderate				
Oudomxay	La	Moderate	Bolikhamxay	Pakkading	Moderate				
Phongsaly	Samphanh	Moderate	Bolikhamxay	Thaphabat	High				
Savannakhet	Xaybuly	Moderate	Bolikhamxay	Viengthon	Moderate				

	FLASH F	LOOD RISK IN I	AO PDR			
	In the next 12hrs			In the next	24hrs	
Provinces	Districts	Level	Provinces	Districts	Level	
/ientiane	Vangvieng	Moderate	Champasak	Paksong	Moderate	
ayaboury	Xayabury	Moderate	Khammuane	Bualapha	Moderate	
aysomboun	Hom	Moderate	Khammuane	Hinboon	Moderate	
aysomboun	Thathom	Moderate	Khammuane	Nakai	High	
aysomboun	Xaysombou	Moderate	Khammuane	Nhommalat	Moderate	
engkhuang	Morkmay	Moderate	Khammuane	Nongbok	Moderate	
			Khammuane	Xaybouath	Moderate	
			Oudomxay	La	Moderate	
			Phongsaly	May	Moderate	
			Phongsaly	Samphanh	Moderate	
			Saravane	Ta oi	Moderate	
			Savannakhet	Nong	Moderate	
			Savannakhet	Phine	Moderate	
			Savannakhet	Sepone	Moderate	
			Savannakhet	Vilabuly	Moderate	
			Savannakhet	Xaybuly	Moderate	
			Sekong	Dakcheung	Moderate	
			Vientiane	Kasy	Moderate	
			Vientiane	Phonhong	Moderate	
			Vientiane	Vangvieng	Moderate	
			Xayaboury	Xayabury	Moderate	
			Xaysomboun	Hom	Moderate	
			Xaysomboun	Phoun	Moderate	
			Xaysomboun	Thathom	Moderate	
			Xaysomboun	Xaysombou	Moderate	
			Xiengkhuang	Kham	Moderate	
			Xiengkhuang	Khoune	Moderate	
			Xiengkhuang	Morkmay	High	
			Xiengkhuang	Pek	Moderate	
			Xiengkhuang	Phookood	Moderate	
			Xiengkhuang	Souy	Moderate	

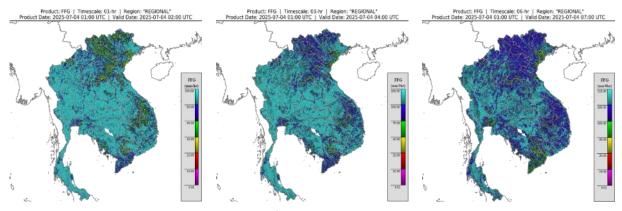


Figure 9. Flash Flood Guidance for the next 1-hr, 3-hr and 6-hr on 04 July

5. Drought Monitoring in the Lower Mekong Basin

5.2. Weekly drought monitoring from 01 – 07 July 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 01 - 07 July 2024, as shown in Figure 9, the LMB was facing normal to wet conditions, except some areas in the lower part of Cambodia.

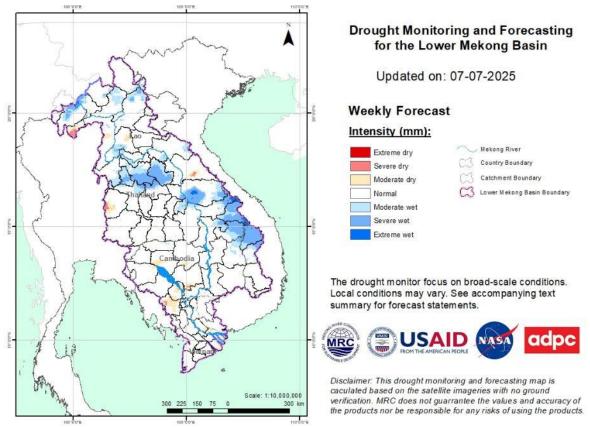


Figure 10: Weekly standardized precipitation index from 01 – 07 July

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 01 - 07 July. The LMB was facing normal to wet conditions, except some areas in the northeastern part of Thailand.

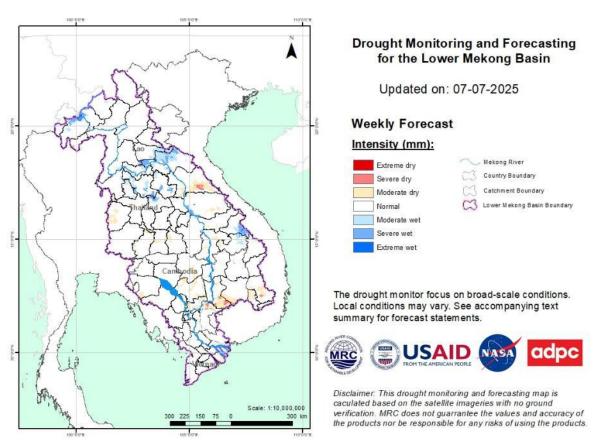


Figure 11: Weekly Index of Soil Water Fraction from 01 – 07 July.

• Weekly Combined Drought Index (CDI)

The combined drought indicator, **Figure 11**, that some areas experienced moderate drought in Cambodia (Kampong Cham, Kampong Chhnang, Kampong Thom, Kandal, Kratie, Preah Vihear, Prey Veng, Tboung Khmum); in Lao PDR (Champasak, Savannakhet); in Thailand (Buri Ram, Chaiyaphum, Maha Sarakham, Surin).

The impacted areas are listed below:

Number	Country	Province	Moderate	Severe	Extreme	Exceptional	Number	Country	Province	Moderate	Severe	Extreme	Exceptional
1	Cambodia	Kampong Cham					9	Cambodia	Tboung Khmum				
2	Cambodia	Kampong Chhnang					10	Lao PDR	Khammouan				
3	Cambodia	Kampong Thom					11	Lao PDR	Savannakhet				
4	Cambodia	Kandal					12	Thailand	Buri Ram				
5	Cambodia	Kratie					13	Thailand	Chaiyaphum				
6	Cambodia	Mondulkiri					14	Thailand	Maha Sarakham				
7	Cambodia	Preah Vihear					15	Thailand	Surin				
8	Cambodia	Prey Veng					16	Viet Nam	Dak lak				
							Other pro	vinces of th	ne Mekong Delta of Vie	et Nam have	no data		
								Moderate		Severe			
								Extreme		Exceptional			

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

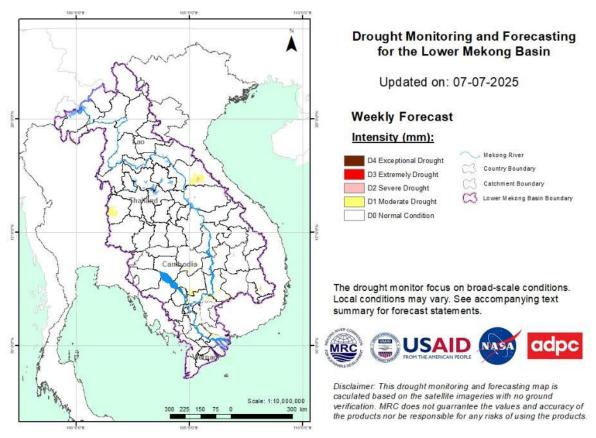


Figure 12: Weekly Combined Drought Index from 01 - 07 July.

More information on Drought Forecasting and Early Warning (DFEW) as well as the explanation is available here: http://droughtforecast.mrcmekong.org/templates/view/our-product. 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 09 – 13 July 2025, the accumulated rainfall over the entire Lower Mekong Basin is distributed with light to heavy rain based on CHIRPS-GFS (**Figure 12**). Isolated 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, the 3S basin, and southwestern part of Cambodia. The remaining areas are expected to occur no rain to light rain.

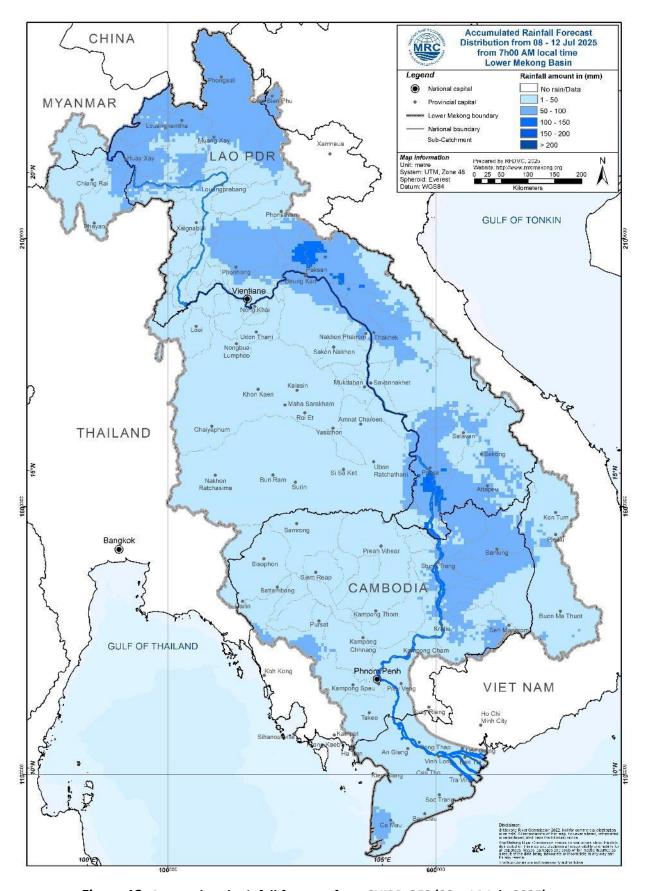


Figure 13: Accumulated rainfall forecast from CHIRP-GFS (08 – 14 July 2025)

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 07 – July 2025. Water levels at all stations are forecasted to be in normal conditions without exceeding the alarm and flood levels thresholds.

In Chiang Saen monitoring station, the water level is expected to be fluctuated over the 7forecasting period of 07 - 12 July 2025. However, it will be expected to slightly increase from 4.56 m to 4.76 m. The water level in Luang Prabang stations affected by backwater is likely slightly increasing within a range from 11.86 m and 12.08 m.

Along the Mekong mainstream from Chiang Khan to Pakse stations, the water levels are expected to increase. At Chiang Khan, Vientiane, Nong Khai, Paksane, Nakhon Phanom, Thakhek, Mukdahan, Savannakhet, Khong Chiam, and Pakse, water levels are expected to decrease approximately 1.13 m, 0.78 m, 0.77 m, 0.94 m, 0.63 m, 0.65 m, 0.42 m, 0.44 m, 0.53 m, and 0.52 m, respectively.

At the floodplain in Cambodia from Stung Treng station downstream, the water levels are also expected to increase. At Stung Treng, Kratie, Kompong Cham, Phnom Penh (Bassac), Phnom Penh Port, and Koh Khel, the water levels are expected to increase approximately 1.05 m, 2.08 m, 1.87 m, 0.98 m, 0.98 m, 0.46 m, 0.64 m, and 0.84 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 from 1.54 m to 2.11 m, and 1.48 m to 1.98 m,, respectively, following daily tidal effects from the sea.

The weekly River Monitoring Bulletin and forecasting issued on 07 July 2025 can be found in **Table 2.** Results of the weekly river monitoring and forecasting bulletin are also available at http://ffw.mrcmekong.org/bulletin.php

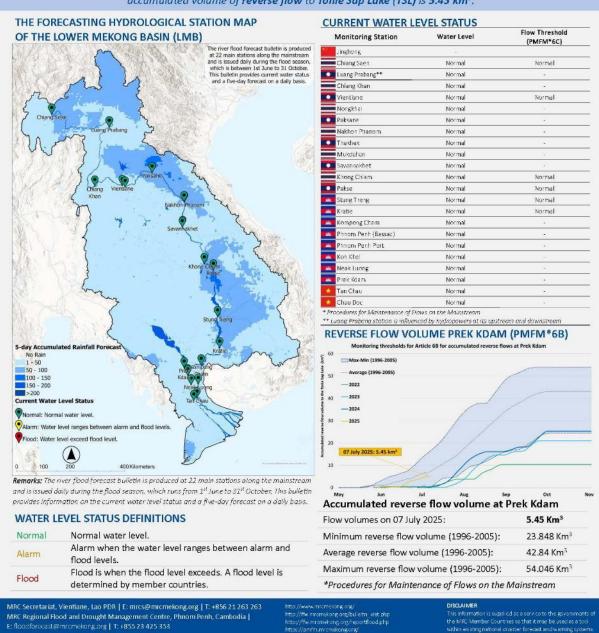
Table 3. River Monitoring and Forecasting Bulletin.



MEKONG RIVER MONITORING AND FORECASTING BULLETIN

Monitoring on 07 July 2025, 7:00 (UTC+7)

Highlights: Water levels at all stations are in normal conditions, for which they have not reached alarm or flood levels. The accumulated volume of **reverse flow** to **Tonle Sap Lake (TSL)** is **5.45** km³.





MEKONG RIVER MONITORING AND FORECASTING BULLETIN

Forecasting from 08 to 12 July 2025

Highlights: Heavy rainfall are forecast in parts of the LMB. The water levels at all stations along the Mekong mainstream of LMB are expected to rise.

Forecasting Station	24 h Observed Rainfall (mm)	Zero gauge above M.S.L (m)	Level a	ved Water gaint zero ge (m)		precaste				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
	06-Jul		06-Jul	07-Jul	08-Ju	09-Jul	10-Jul	11-Ju	12-Jul				days (m)	days (m)	days (m)
Jinghong	0.0	-%	536.95	↑ 537.22) E.	(4)	- 36	*	+	14	-2	*:	*	9	-
Chiang Saen	46.0	357.110	4.27	↑ 4.56	↑ 4.68	↓ 4.35	44.22	↑ 4.41	↑ 4.76	11.50	12.80	↑ 0.20	-0.34	6.74	8.04
Luang Prabang	17.6	267.195	11.39	↑ 11.86	↑ 12.07	↑ 12.37	∃12.4 5	↓ 12.19	↓ 12.08	17.50	18.00	↑ 0.22	0.59	5.05	5.55
Chiang Khan	1.0	194.118	8.94	↓ 8.72	→ 8.75	↑ 9.32	19.53	↑ 9.90	→ 9.85	14.50	16.00	↑ 1.13	1.18	4.60	6.10
O Vientiane	19.4	158.040	8.15	↓ 7.75	→ 7.72	↑ 7.87	18.18	↑ 8.32	↑ 8,53	11.50	12.50	↑ 0.78	0.78	2.98	3.98
Nongkhai	35.8	153.648	6.86	↓ 6.53	↓ 6.35	→ 6.26	16.70	↑ 6.93	↑ 7.30	11.40	12.20	↑ 0.77	0.77	4.10	4.90
Paksane Paksane	54.8	142.125	8.46	↑ 8.63	→ 8.70	→ 8.61	18.81	↑ 9.27	↑ 9.57	13.50	14.50	↑ 0.94	0.94	3.93	4.93
Nakhon Phanom	13.0	130.961	7.53	↑ 7.69	↑ 7.84	→ 7.80	47.79	↑ 8.01	↑ 8.32	11.50	12.00	↑ 0.63	0.63	3.18	3.68
Thakhek	11.6	129.629	8.83	↑ 8.96	↑ 9.11	→ 9.09	49.09	↑ 9.30	↑ 9.61	13.00	14.00	↑ 0.65	0.65	3.39	4.39
Mukdahan .	2.2	124.219	7.53	↑ 7.71	↑ 7.88	→ 7.85	∃7.76	→ 7.84	↑ 8.13	12.00	12.50	↑ 0.42	0.42	3.87	4.37
Savannakhet	0.0	124.219	5.93	↑ 6.08	↑ 6.22	→ 6.21	46.14	↑ 6,25	↑ 6,52	12.00	13.00	↑ 0.44	0.44	5.48	6.48
Khong Chiam	20.5	89.030	8.80	↑ 9.15	↑ 9.39	↑ 9.57	49.60	→ 9.57	↑ 9.68	13.50	14.50	↑ 0.53	0.53	3,82	4.82
Pakse	0.0	86.490	7.16	↑ 7.42	↑ 7.76	↑ 7.93	∃7.96	↓ 7.89	→ 7.94	11.00	12.00	↑ 0,52	0.54	3.04	4.04
Stung Treng	0.0	36.790	6.68	↑ 7.12	↑ 7.37	↑ 7.70	18.01	↑ 8.14	→ 8.17	10.70	12.00	↑ 1.05	1.05	2.53	3.83
Kratie	0.0	-0.101	15.39	↑ 15.54	↑ 16.09	↑ 16.45	116.90	↑ 17.39	↑ 17.62	22.00	23.00	↑ 2.08	2.08	4.38	5,38
Kompong Cham	0.0	-0.930	8.64	↑ 8.80	↑ 9.20	↑ 9.59	19.99	↑ 10.37	↑ 10.67	15.20	16.20	↑ 1.87	1.87	4.53	5.53
Phnom Penh (Bassac)	0.3	-1.020	4.74	↑ 5.00	↑ 5.16	↑ 5.37	15.57	↑ 5.76	↑ 5.98	10.50	12.00	↑ 0.98	0.98	4.52	6.02
Phnom Penh Port	nr	0.070	3.73	↑ 3.99	↑ 4.15	↑ 4.36	14.56	↑ 4.75	↑ 4.97	9.50	11.00	↑ 0.98	0.98	4.53	6.03
Koh Khel	4.6	1.000	4.10	↑ 4.22	↑ 4.29	↑ 4.42	14.56	↑ 4.71	↑ 4.86	7.90	8.40	↑ 0.64	0.64	3.04	3.54
Neak Luong	0.0	-0.330	3.20	↑ 3.34	↑ 3.43	↑ 3.56	13.70	↑ 3.84	↑ 3.98	7.50	8.00	↑ 0.64	0.64	3.52	4.02
Prek Kdam	5.4	0.080	3.72	↑ 3.96	↑ 4.07	↑ 4.28	14.43	↑ 4.61	↑ 4.80	9.50	10.00	↑ 0,84	0.84	4.70	5.20
Tan Chau	0.0	0.000	1.26	↑ 1.54	↑ 1.62	↑ 1.74	11.87	↑ 1.99	↑ 2.11	3.50	4.50	↑ 0.57	0.57	1.39	2.39
Chau Doc	1.0	0.000	1.15	↑ 1.48	↑ 1.54	↑ 1.65	11.75	↑ 1.87	↑ 1.98	3.00	4.00	↑ 0.50	0.50	1.02	2.02

WATER LEVEL FORECASTING DEFINITIONS

1	Rising water level.
→	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.
Ţ	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 07 July, the water levels at all monitoring stations remain within normal ranges, with no alarm or flood thresholds exceeded. As of now, the total accumulated reverse flow volume into the TSL is 5.45 km³.
- In the next 5 days, heavy rainfall is expected over the LMB including the upper and central part of Lao PDR, the northeastern part of Thailand near the Lao PDR border, and the southwestern part of Cambodia.
- For 08–12 July, the water levels at all stations along the Mekong mainstream of LMB are expected to continue rising.

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DISCLAIMER

This information 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 diseator forecast, and warning systems.

6.3 Flash Flood Information

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.

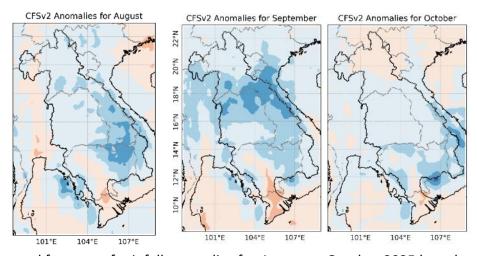


Figure 13 Seasonal forecast of rainfall anomalies for August to October 2025 based on CFSv2 (NCEP-NOAA)

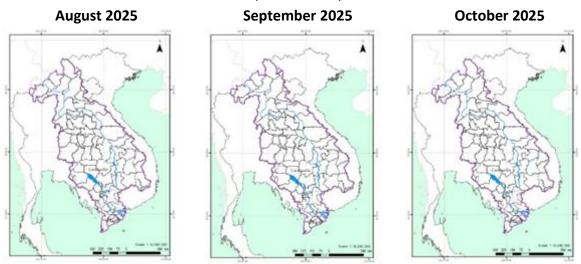


Figure 14. Monthly forecasts of combined drought indicators for August, September and October 2025

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 01 - 07 July 2025, there has heavy rainfall has been observed over the LMB in the upper and central parts of Lao PDR, the northern and northeastern part of Thailand, the 3S basin, and the southwestern part of Cambodia.

During 08 - 12 July 2025, isolated thunderstorms and heavy rain are expected over the LMB including the upper and central part of Lao PDR, the northern and northeastern part of Thailand near the Lao PDR border. The remaining areas are expected to occur no rain to light rain.

7.2. Water level and its forecast

At 22 key monitoring stations along the Mekong mainstream from 01 - 07 July 2025, water levels have neither reached alarm nor flood levels, 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 08 - 12 July 2025, the water levels at all stations along the Mekong mainstream are forecasted to be increasing. However, the water levels are not expected to reach alarm and flood level thresholds. 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.

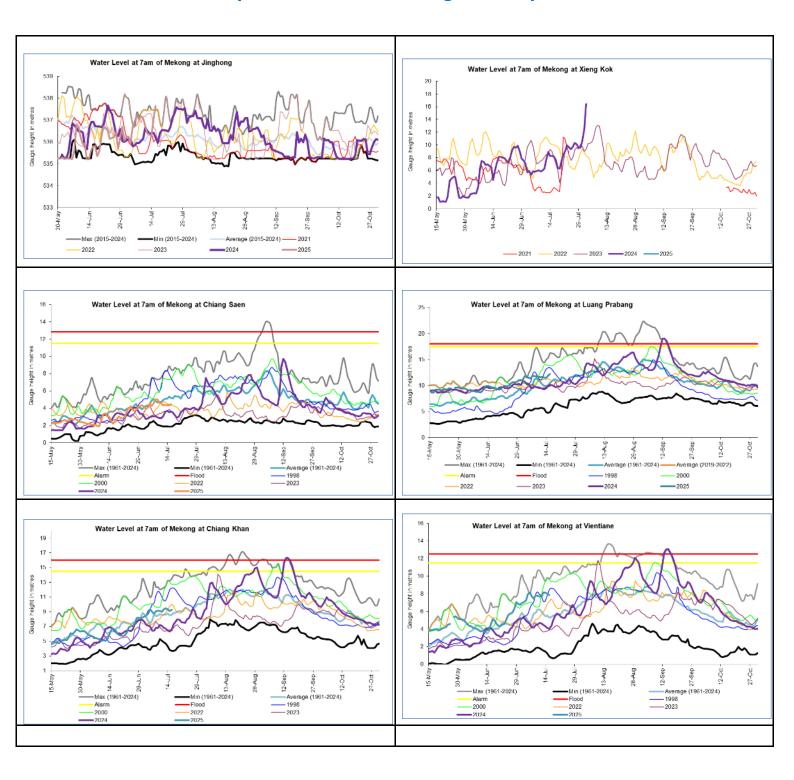
7.4. Drought condition and its forecast

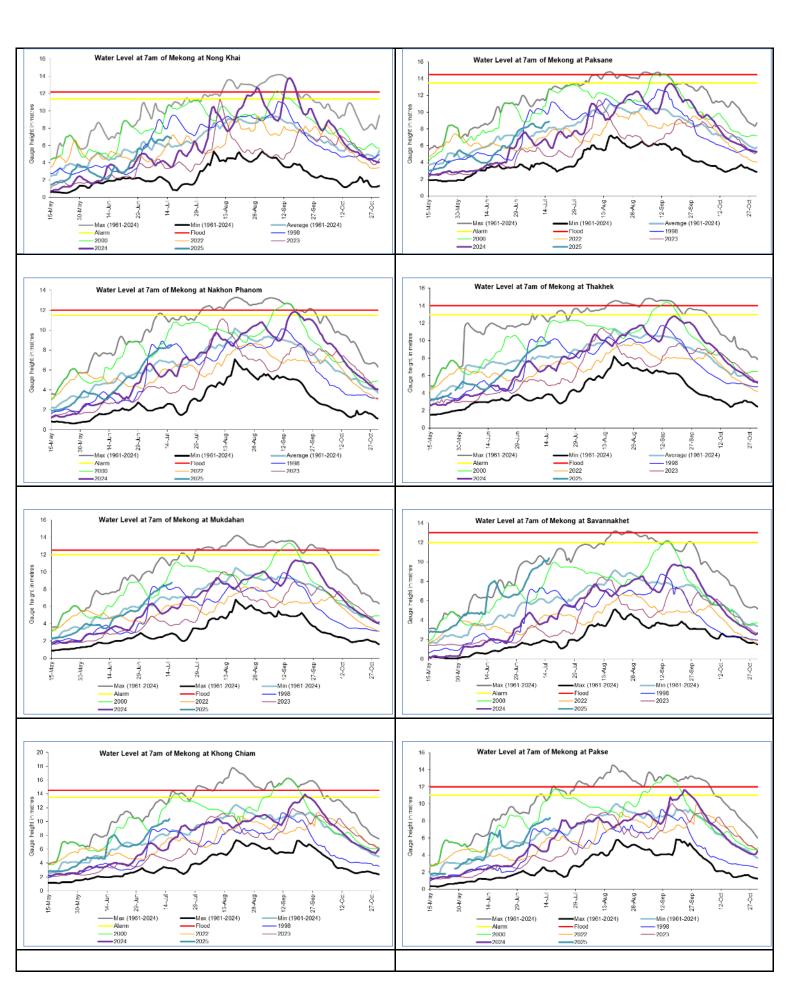
During 01 - 7 July 2025, the LMB is experiencing normal to wet conditions, except some areas in the lower part of Cambodia. The monitored drought is caused primarily by meteorological indicator.

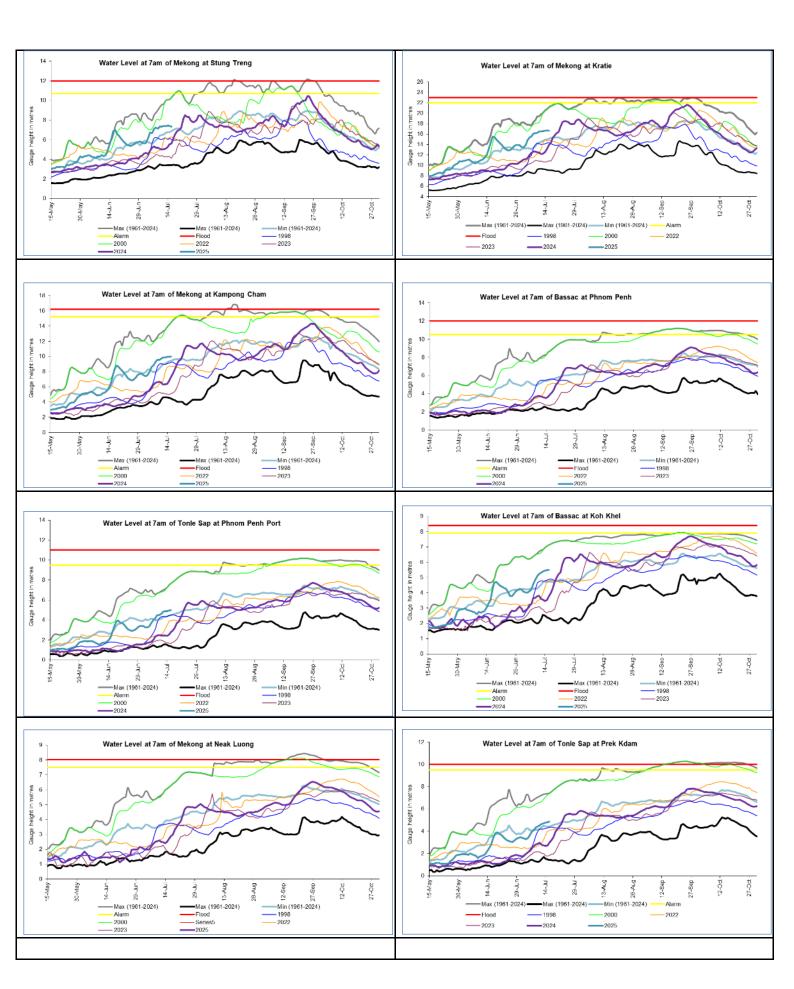
The next three-month from August - October 2025, the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 - 25 mm, except for some areas in the lowland areas of Cambodia, and the Mekong Delta. Overall, in the next 3 months, rainfall will be mainly concentrated in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

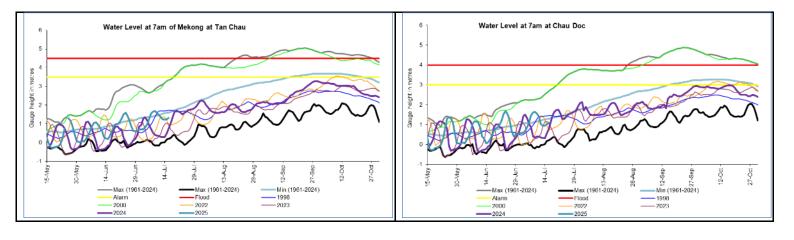
The forecast indicates that no drought conditions are expected in over the LMB from August - October 2025 using the Combined Drought Indicator (CDI)

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
01-07-2025	536.05	4.34	10.98	8.25	6.76	5.46	7.94	6.41	7.67	6.15	4.55	6.89	5.2	5.67	13.81	7.7	4.4	3.4	4.25	2.98	3.47	0.69	0.56
02-07-2025	536.21	4.19	11.13	8.35	6.96	5.65	8.03	6.73	7.97	6.5	4.89	7.1	5.25	5.6	13.49	7.52	4.38	3.39	4.2	2.94	3.42	0.71	0.58
03-07-2025	536.24	3.92	11.78	8.5	7.05	5.82	8.12	6.99	8.26	6.77	5.18	7.45	5.74	5.72	13.44	7.37	4.25	3.25	4.08	2.88	3.34	0.7	0.59
04-07-2025	535.98	4.05	11.76	9.12	7.24	5.95	8.17	7.23	8.53	7.04	5.4	7.96	6.24	6.19	13.91	7.51	4.25	3.25	4.02	2.85	3.28	0.8	0.68
05-07-2025	536.67	4.53	11.44	9.36	7.91	6.58	8.26	7.41	8.62	7.31	5.69	8.32	6.64	6.72	14.8	7.96	4.4	3.39	4	2.96	3.42	0.97	0.87
06-07-2025	536.95	4.27	11.39	8.94	8.15	6.86	8.46	7.53	8.83	7.53	5.93	8.8	7.16	6.68	15.39	8.64	4.74	3.73	4.1	3.2	3.72	1.26	1.15
07-07-2025	537.22	4.56	11.86	8.72	7.75	6.53	8.63	7.69	8.96	7.71	6.08	9.15	7.42	7.12	15.54	8.8	5	3.99	4.22	3.34	3.96	1.54	1.48
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

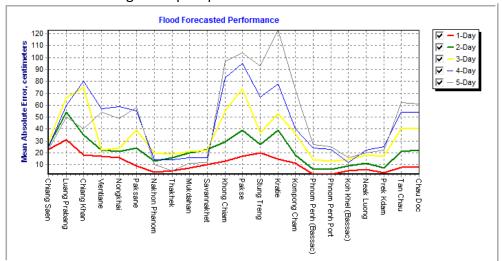
2025	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
01-07-2025	0	8.3	0.8	0	13	61	109.9	10.4	8.4	0	0	0	0	1.5	0	5	0	0	0	0	27.3	0.2	0
02-07-2025	0	2.5	17.2	2.1	38	184	40.4	1.7	1.5	6.7	5.8	15.5	0	0	0.8	5	0.3	0	0	0	0	4.2	0
03-07-2025	3.5	10	65.2	32	5	6.4	2.6	0.1	0	22.7	21.2	8.7	33	13	12.9	0	0	0	18	3.2	0	46	46
04-07-2025	33.5	9	7	1	16.5	76.2	78.4	12.1	14.7	0	0	14.7	30.4	1	6.9	0	2.5	0	0	0.8	7.2	0.6	14
05-07-2025	1	0	0	0	25	97	15.9	11.5	8.9	35.5	0	39.5	15.6	37.5	39.5	10	0.2	0	0	0	17.3	0	0
06-07-2025	2.5	8.9	83.2	0	15.2	97	28.4	6.7	6.9	36.5	64.8	31	40	1.5	3	0	0	0	0	0	0	4.8	0
07-07-2025	0	46	17.6	1	19.4	35.8	54.8	13	11.6	2.2	0	20.5	0	0	0	0	0.3	0	4.6	0	5.4	0	1
Sum	40.5	80.8	20.6	20.0	132.1	556.9	330.4	55.5	52.0	103.6	91.8	129.9	119.0	54.5	63.1	20.0	3.3	0.0	22.6	4.0	57.2	55.8	61.0

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 01 to 07 July 2025.

The forecasting values from 01 to 07 July 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.



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

- Missing rainfall in Cambodia (DOM) data and data input are not sufficient to be used for inputting into the flood forecasting model system.
- 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