Mekong River Commission

Weekly Wet Season Situation Report in the Lower Mekong River Basin

17 – 23 June 2025

Prepared by
The Regional Flood and Drought Management Centre
24 June 2025

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Key Messages

Key messages for this weekly report are presented below.

Rainfall monitoring and forecast

- In the period of 17 - 23 June 2025, there has heavy rainfall has been observed over the LMB in the central parts of Lao PDR, the 3S basin, and the southwestern part of Cambodia.
- During 24 – 28 June 2025, isolated thunderstorms and heavy rain are expected over the central part of the LMB including the central part of Lao PDR, the northeastern part of Thailand, the 3S basin; and the southwestern part of Cambodia. 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 17 – 23 June 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 24 – 28 June 2025, Water levels are forecasted to be increasing at stations from Chiang Saen to Pakse and decreasing from Stung Treng station downstream. 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 17 – 23 June 2025, the LMB is experiencing normal to wet conditions, except some areas in the northern part of Lao PDR, the northeastern part of Thailand, and the lower part of Cambodia. The monitored drought is caused primarily by meteorological indicator.
- The next three-month from June to August 2025, the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 - 20 mm, except for some areas in the northeastern part of Thailand, 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 – 20 mm.
- The forecast indicates that no drought conditions are expected in over the LMB from June to August 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 **17** – **23 June 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

On 24 June, the low-pressure area at 16 degrees North latitude; 116.2 East longitude degrees strengthened into a Tropical Depression (TD), and moving to the Northwest at a speed of about 15 km/h. In the next 48–72 hours - the TD is likely to move Northwest at a speed of 15-20km/h, gradually weakening in intensity. This TD will not have a direct impact causing heavy rain to the LMB.

Figure 1 presents mean sea level pressure over the region. It is forecasted that the moderate southwest monsoon will be influenced to the Lower Mekong Basin from 24 – 30 June. Therefore, heavy rain is expected to occur in the central and lower part of the LMB including the central part of Lao PDR, the northeastern part of Thailand, the 3S basin; and the southwestern part of Cambodia. The remaining areas are expected to occur no rain to light rain

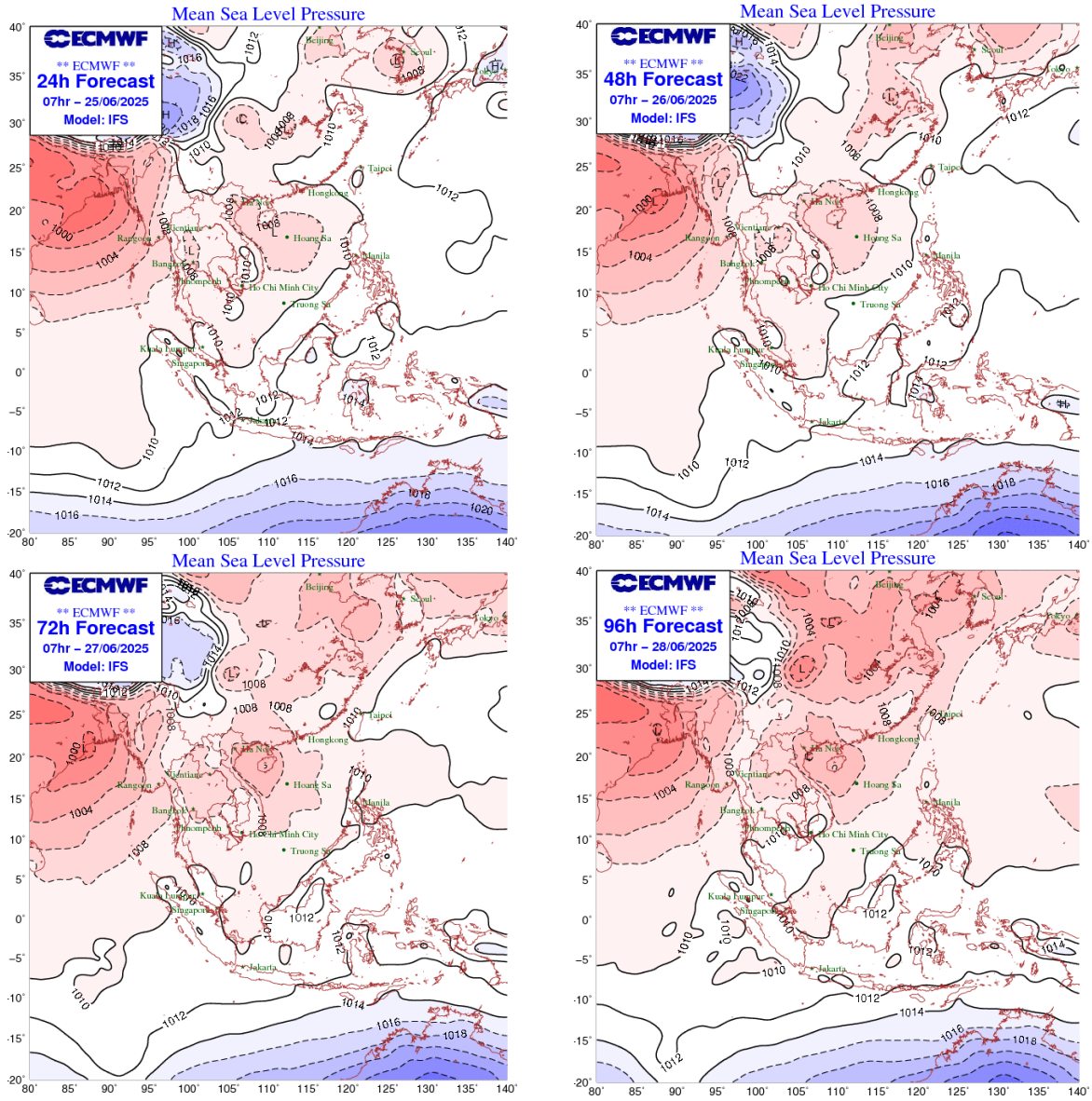


Figure 1: Weather conditions over the LMB

According to the ASEAN Specialised Meteorological Centre (ASMC, http://asmc.asean.org/home/), the subseasonal 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).

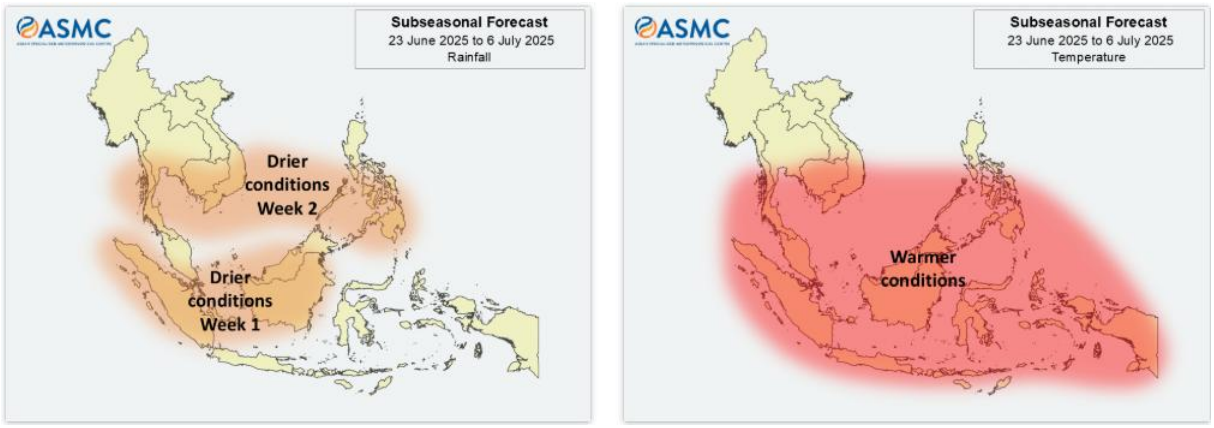


Figure 2: Outlook of wet and dry conditions over the Asian countries by ASMC.

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 23 June 2025 as displayed in **Figure 3.**

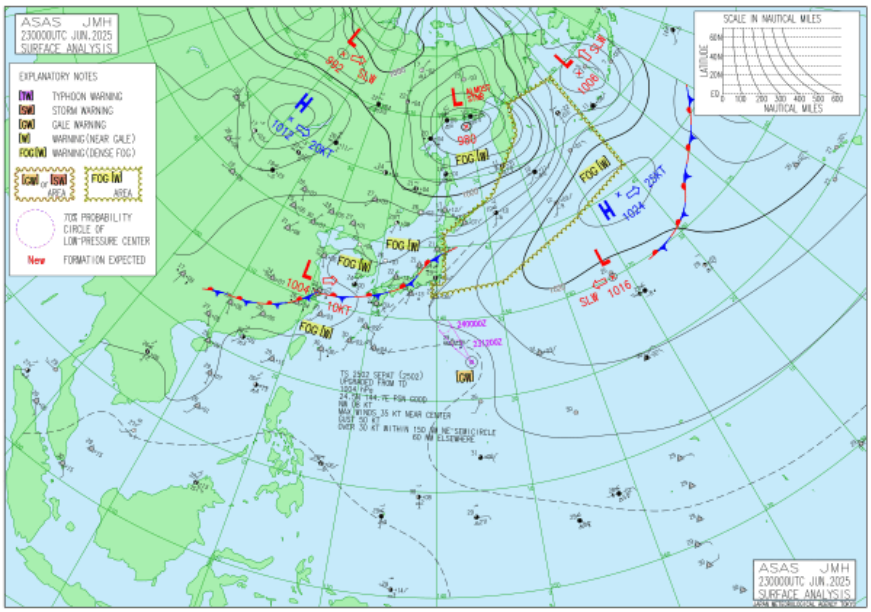


Figure 3: One tropical storm risk observed on 23 June 2025

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 10 - 16 June 2024 (**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 of Cambodia.

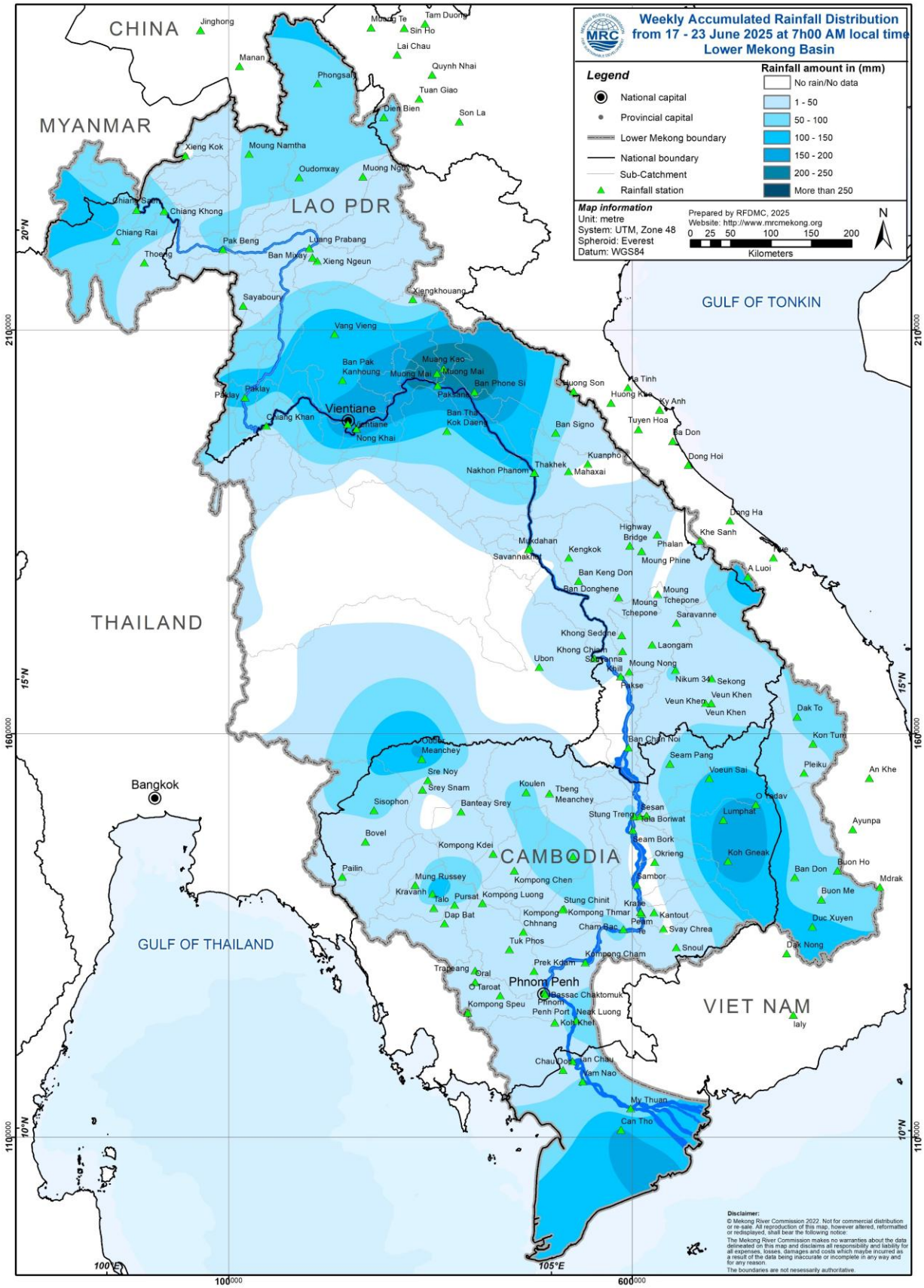


Figure 4: Weekly rainfall distribution over the LMB during 17 – 23 June 2025

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 17 – 23 June 2025, the observed water level (WL) at Jinghong hydrological station[1], was almost constant and ranges between 535.80 m and 536.54 m, which are corresponding to the outflow between 1,220.00 m^3/s to 1,780.00 m^3/s (recorded on 7:00 am), respectively (**Figure 6**). The water level in Chiang Saen Station also indicated a slight fluctuation ranging from 2.21 m to 3.56 m. At the same period, the water level in Luang Prabang Station also slightly increased with an approximate value of 0.29 m from 9.63 m to 9.92 m as compared to the previous week.

During the same period, the water level observed at upper parts of the basin at Chiang Khan have decreased from 6.68 m to 6.25 m, at Vientiane, and Nongkhai, the water levels have been stable from the previous week. At Paksane, Nakhon Phanom, Thakhek, Mukdahan, and Savannakhet, the water levels have increased from 4.29 m to 5.97 m, 3.79 m to 5.24 m, 5.16 m to 6.59 m, 4.64 m to 5.32 m, and 3.09 m to 3.72 m, respectively.

At Khong Chiam, Pakse, Stung Treng, and Kratie, the water levels have decreased significantly from 7.79 m to 6.44 m, 6.64 m to 4.86 m, 6.87 m to 5.50 m, and 14.40 m to 13.28 m, respectively. However, at Kompong Cham, Phnom Penh (Bassac), Phnom Penh Port, Koh Khel, Neak Luong, and Prek Kdam, the water levels have slightly increased from 7.30 m to 7.42 m, 3.83 m to 4.28 m, 2.75 m to 3.28 m, 3.49 m to 4.32 m, 2.54 m to 3.18 m, and 2.86 m to 3.35 m, respectively.

Similar to the previous week, the water levels from 17 to 23 June 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 0.33 and 1.51 m, while at the Chau Doc station, they ranged from 0.25 m and 1.55 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.

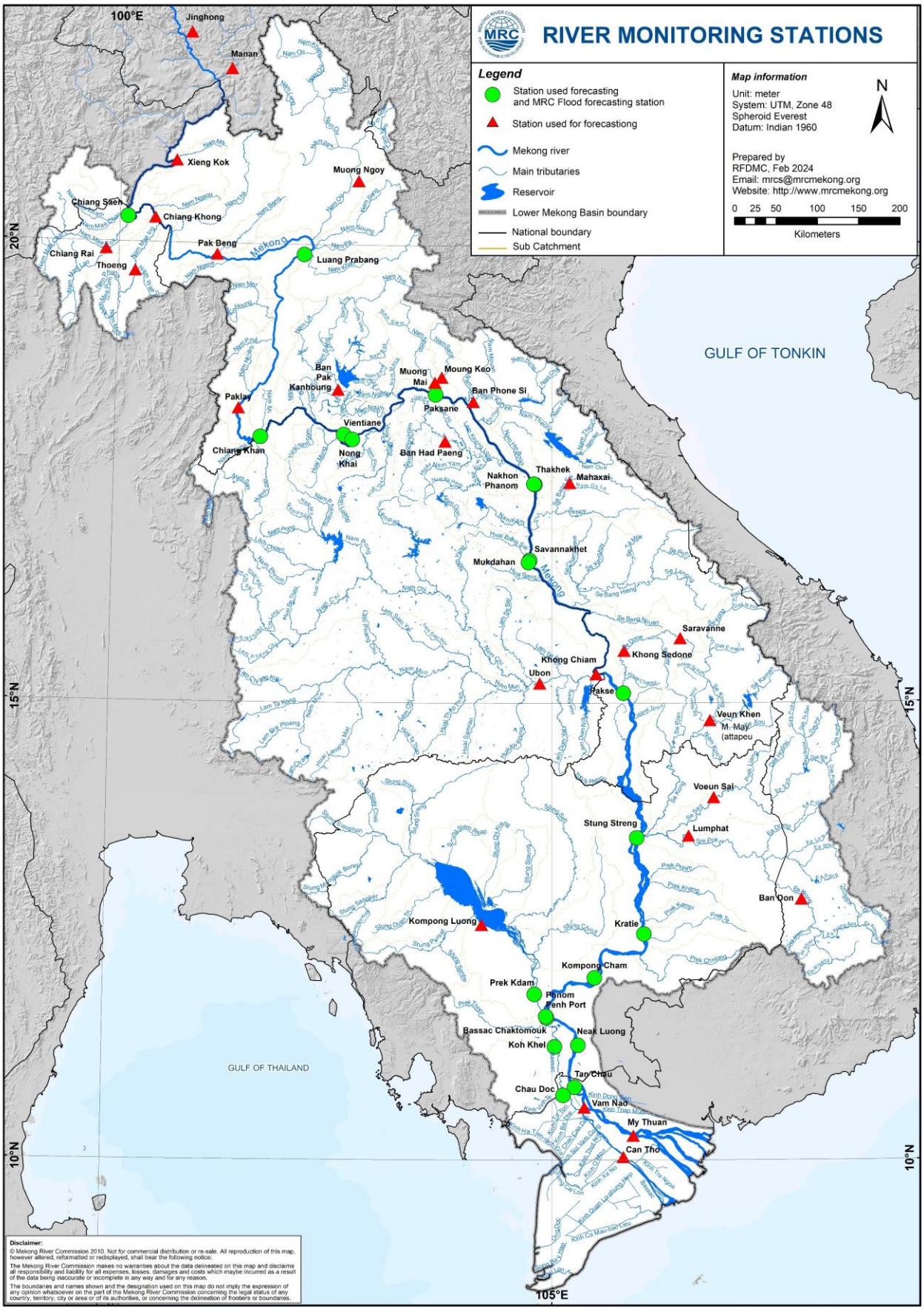


Figure 5: The key stations along LMB for river flood forecasting

The water levels in key monitoring stations on 23 June 2024 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**.

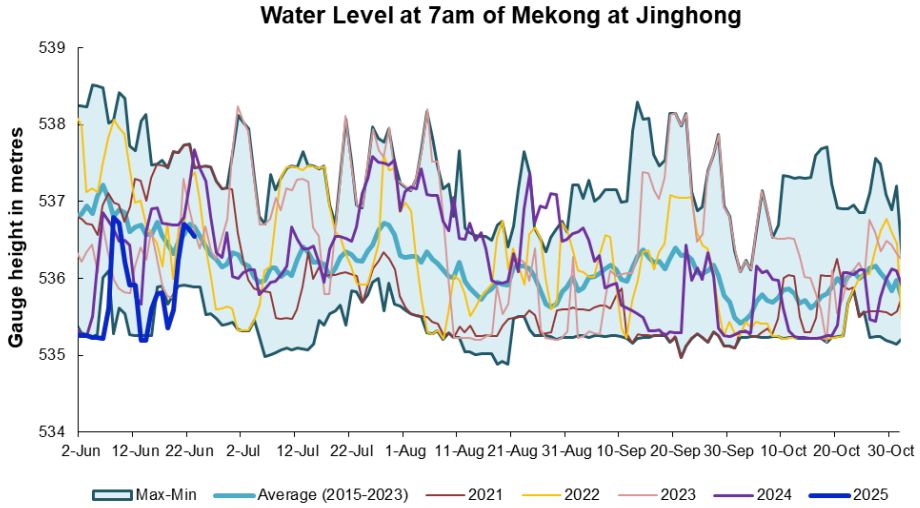


Figure 6. Water level at the Jinghong hydrological station up to 23 June 2025.

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:

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

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 23 June 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 16 June 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 82.86 %), 2019, 2022, 2023 and 2024 but higher than that in 2020 and 2021 during the same period **(Figure 8 and Table 1)**.

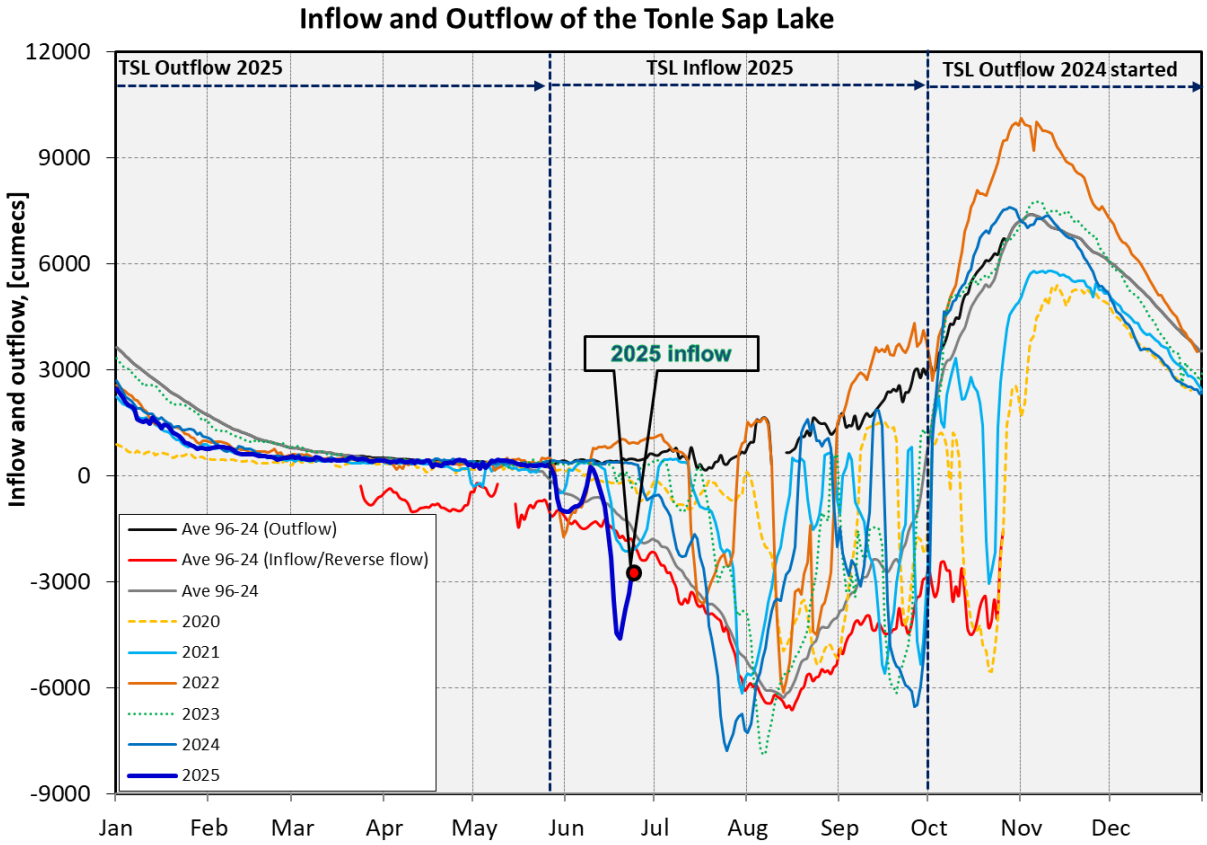


Figure 7: Seasonal change of inflows and outflows of Tonle Sap Lake.

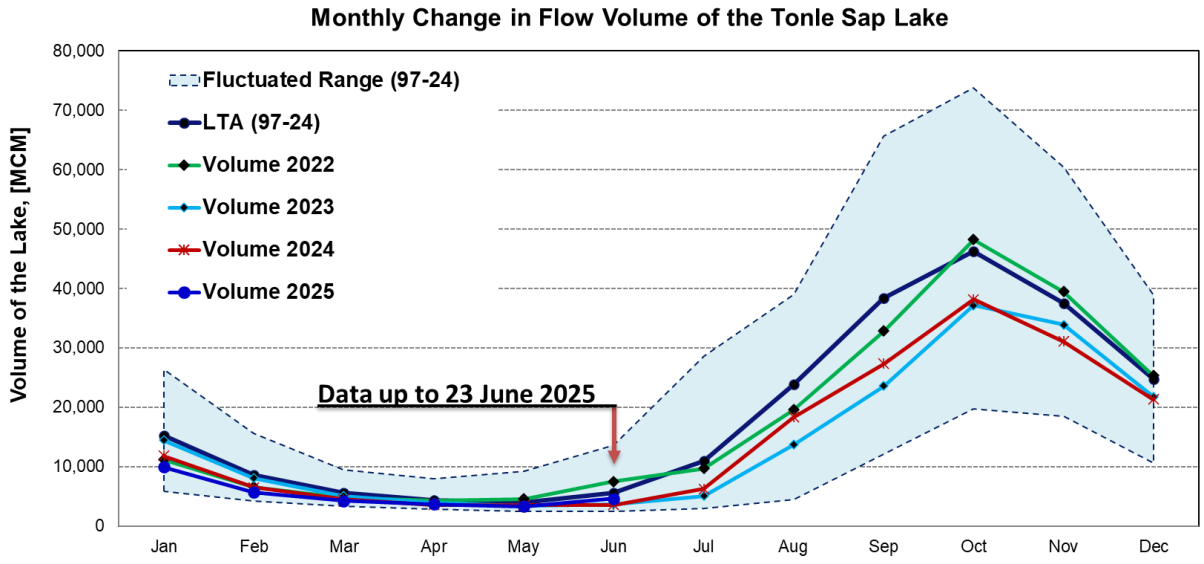


Figure 8. The seasonal change in monthly flow volume of Tonle Sap Lake.

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	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	4659.62	82.85
Jul	11012.31	28599.56	2925.86	14964.58	4001.99	2925.86	5346.73	9703.79	5062.21		
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: Million Cubic Meter (1 MCM= 0.001 Km^3)											

Remarks: the volume of Tonle Sap Lake in 2025 is updated untill 23 June 2025.

4. Flash Flood in the Lower Mekong Basin

During the weekly monitoring period from 17 - 23 June, 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 Figure 14 & Table 2.

Table 2. Detected flash flood in the LMB

FLASH FLOOD GUIDANCE IN CAMBODIA								
In the next 1hrs			In the next 3hrs			In the next 6hrs		
Provinces	Districts	Level	Provinces	Districts	Level	Provinces	Districts	Level
Mondul Kiri	Kaoh Nheaek	Moderate	Mondul Kiri	Ou Reang	Moderate	Mondul Kiri	Ou Reang	Moderate
Mondul Kiri	Ou Reang	Moderate	Mondul Kiri	Pechr Chenda	High	Mondul Kiri	Pechr Chenda	High
Mondul Kiri	Pechr Chenda	High	Ratana Kiri	Koun Mom	Moderate	Ratana Kiri	Koun Mom	Moderate
Ratana Kiri	Andoung Meas	Moderate	Ratana Kiri	Ta Veaeng	Moderate	Ratana Kiri	Ta Veaeng	High
Ratana Kiri	Koun Mom	High	Stung Treng	Siem Pang	Moderate	Stung Treng	Siem Pang	Moderate
Ratana Kiri	Ou Chum	Moderate						
Ratana Kiri	Ta Veaeng	High						

Ratana Kiri	Veun Sai	Moderate		
Stung Treng	Siem Pang	Moderate		

FLASH FLOOD RISK IN CAMBODIA					
In the next 12hrs			In the next 24hrs		
Provinces	Districts	Level	Provinces	Districts	Level
Ratana Kiri	Ta Veaeng	Moderate	Banteay Meanchey	Malai	Moderate
			Battambang	Samlout	Moderate
			Kong Pailin	Khad Pailin	Moderate
			Mondul Kiri	Kaev Seima	Moderate
			Ratana Kiri	Koun Mom	Moderate
			Ratana Kiri	Ta Veaeng	Moderate
			Stung Treng	Siem Pang	Moderate

FLASH FLOOD GUIDANCE IN LAO PDR								
In the next 1hrs			In the next 3hrs			In the next 6hrs		
Provinces	Districts	Level	Provinces	Districts	Level	Provinces	Districts	Level
Xaysomboun	Hom	Moderate	Xaysomboun	Longxan	Moderate	Xaysomboun	Longxan	Moderate
Xaysomboun	Longxan	Moderate						

FLASH FLOOD RISK IN LAO PDR					
In the next 12hrs			In the next 24hrs		
Provinces	Districts	Level	Provinces	Districts	Level
Bolikhamxay	Bolikhanh	Moderate	Bolikhamxay	Bolikhanh	High
Bolikhamxay	Pakkading	Moderate	Bolikhamxay	Pakkading	High
Sekong	Kaleum	Moderate	Bolikhamxay	Viengthon	Moderate
Xayaboury	Botene	Moderate	Luangprabang	Viengkham	Moderate
Xayaboury	Phieng	Moderate	Luangprabang	Xieng nge	Moderate
Xaysomboun	Hom	High	Oudomxay	Beng	Moderate
Xaysomboun	Longxan	Moderate	Oudomxay	Hoon	Moderate
Xaysomboun	Thathom	Moderate	Oudomxay	Nga	Moderate
			Oudomxay	Xay	Moderate
			Phongsaly	Nhot ou	Moderate
			Phongsaly	Phongsaly	Moderate
			Saravane	Samuoi	Moderate
			Saravane	Ta oi	Moderate
			Sekong	Kaleum	Moderate

	Sekong	Thateng	Moderate
	Vientiane	Feuang	Moderate
	Vientiane	Keo oudom	Moderate
	Vientiane	Met	Moderate
	Vientiane	Phonhong	Moderate
	Vientiane	Vangvieng	Moderate
	Vientiane	Xanakham	Moderate
	Vientiane Municipality	Sangthong	Moderate
	Xayaboury	Botene	Moderate
	Xayaboury	Paklai	Moderate
	Xayaboury	Phieng	Moderate
	Xayaboury	Xayabury	Moderate
	Xaysomboun	Hom	High
	Xaysomboun	Longxan	Moderate
	Xaysomboun	Phoun	Moderate
	Xaysomboun	Thathom	Moderate
	Xaysomboun	Xaysombou	Moderate
	Xiengkhuang	Souy	Moderate

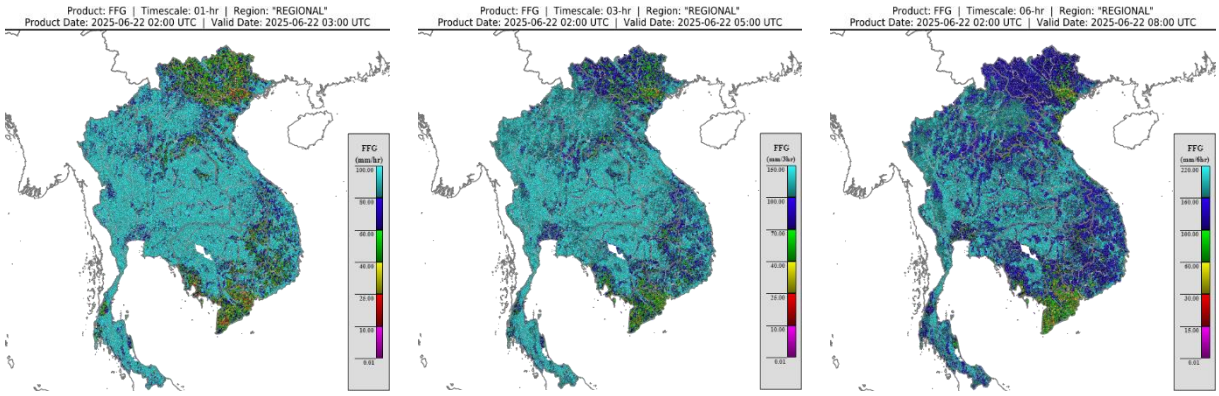


Figure 9. Flash Flood Guidance for the next 1-hr, 3-hr and 6-hr on 21 June

5. Drought Monitoring in the Lower Mekong Basin

5.2. Weekly drought monitoring from 17 to 23 June 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 17 - 23 June 2024, as shown in Figure 9, the LMB was facing normal to wet conditions, except some areas in the northern part of Lao PDR; the northeastern part of Thailand, and the lower part of Cambodia.

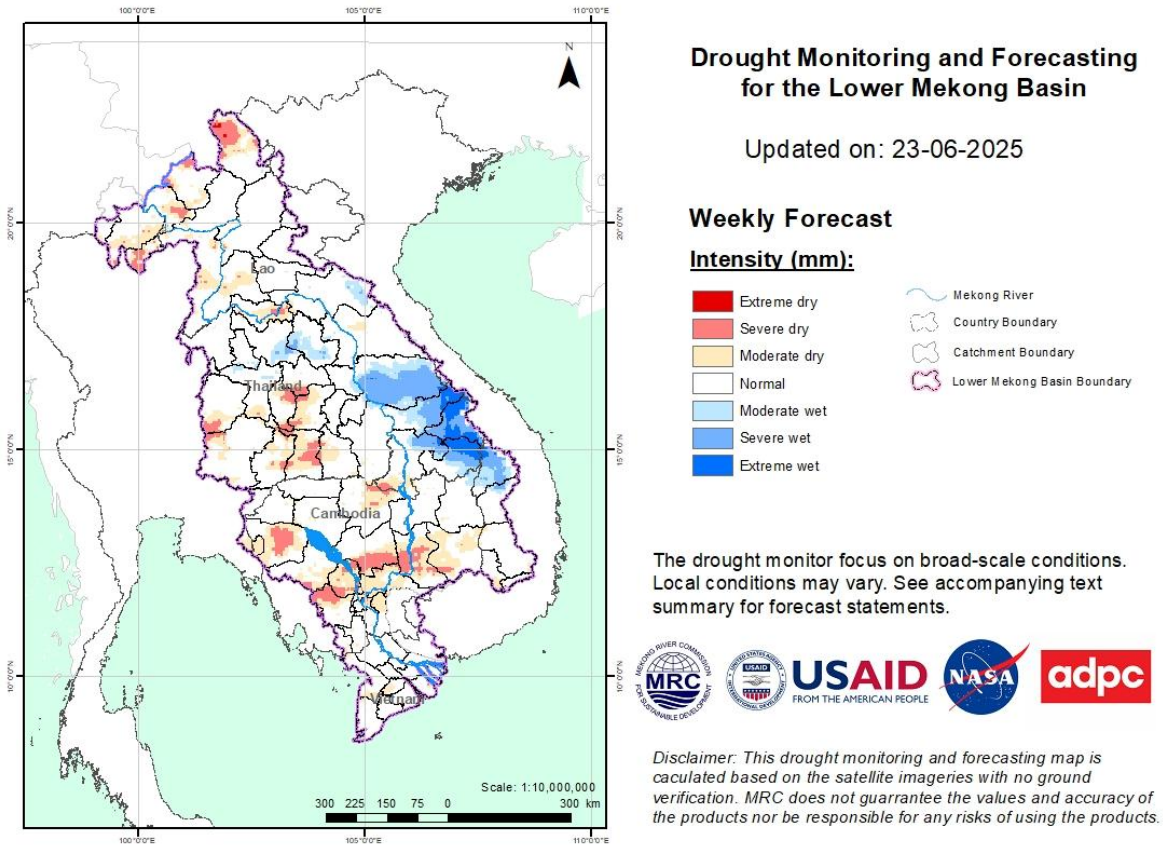


Figure 10: Weekly standardized precipitation index from 17 – 23 June.

- **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 17 - 23 June. The LMB was facing normal to wet conditions.

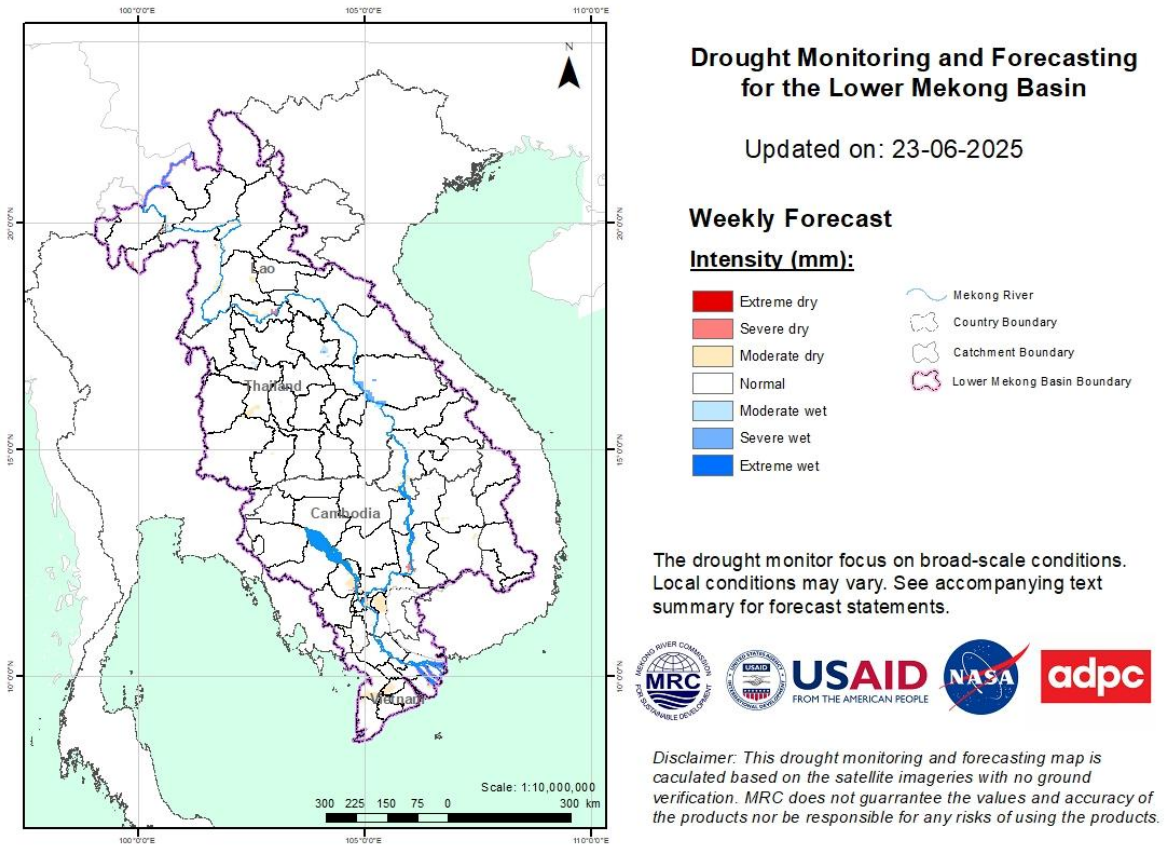


Figure 11: Weekly Index of Soil Water Fraction from 17 – 23 June.

- **Weekly Combined Drought Index (CDI)**

The combined drought indicator, **Figure 11**, shows that no drought over the LMB during the monitoring week.
The impacted areas are listed below:

Number	Country	Province	Mderate	Severe	Extreme	Exceptional	Number	Country	Province	Mderate	Severe	Extreme	Exceptional	Number	Country	Province	Mderate	Severe	Extreme	Exceptional
1	Cambodia	Banteay Meanchey					24	Lao PDR	Savannakhet					47	Viet Nam	Gia Lai				
2	Cambodia	Battambang					25	Lao PDR	Vientiane					48	Viet Nam	Kon Tum				
3	Cambodia	Kampong Cham					26	Lao PDR	Vientiane Capital					49						
4	Cambodia	Kampong Chhnang					27	Lao PDR	Xaignabouli					50						
5	Cambodia	Kampong Speu					28	Lao PDR	Xaisomboun					51						
6	Cambodia	Kampong Thom					29	Lao PDR	Xekong					52	Other provinces of the Mekong Delta of Viet Nam have no data					
7	Cambodia	Kratie					30	Lao PDR	Xiangkhouang					53		Moderate		Severe		
8	Cambodia	Mondulkiri					31	Thailand	Bueng Kan					54		Extreme		Exceptional		
9	Cambodia	Otdar Meanchey					32	Thailand	Chiang Mai					55						
10	Cambodia	Preah Vihear					33	Thailand	Chiang Rai					56						
11	Cambodia	Pursat					34	Thailand	Kalasin					57						
12	Cambodia	Ratanakiri					35	Thailand	Khon Kaen					58						
13	Cambodia	Siem Reap					36	Thailand	Loei					59						
14	Cambodia	Stung Treng					37	Thailand	Mukdahan					60						
15	Lao PDR	Attapu					38	Thailand	Nakhon Phanom					61						
16	Lao PDR	Bokeo					39	Thailand	Nong Khai					62						
17	Lao PDR	Bolikhamxai					40	Thailand	Phayao					63						
18	Lao PDR	Champasak					41	Thailand	Sakon Nakhon					64						
19	Lao PDR	Houaphan					42	Thailand	Si Sa Ket					65						
20	Lao PDR	Khammouan					43	Thailand	Surin					66						
21	Lao PDR	Louangnamtha					44	Thailand	Ubon Ratchathani					67						
22	Lao PDR	Louangphabang					45	Thailand	Udon Thani					68						
23	Lao PDR	Oudomxai					46	Viet Nam	Dak lak					69						

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

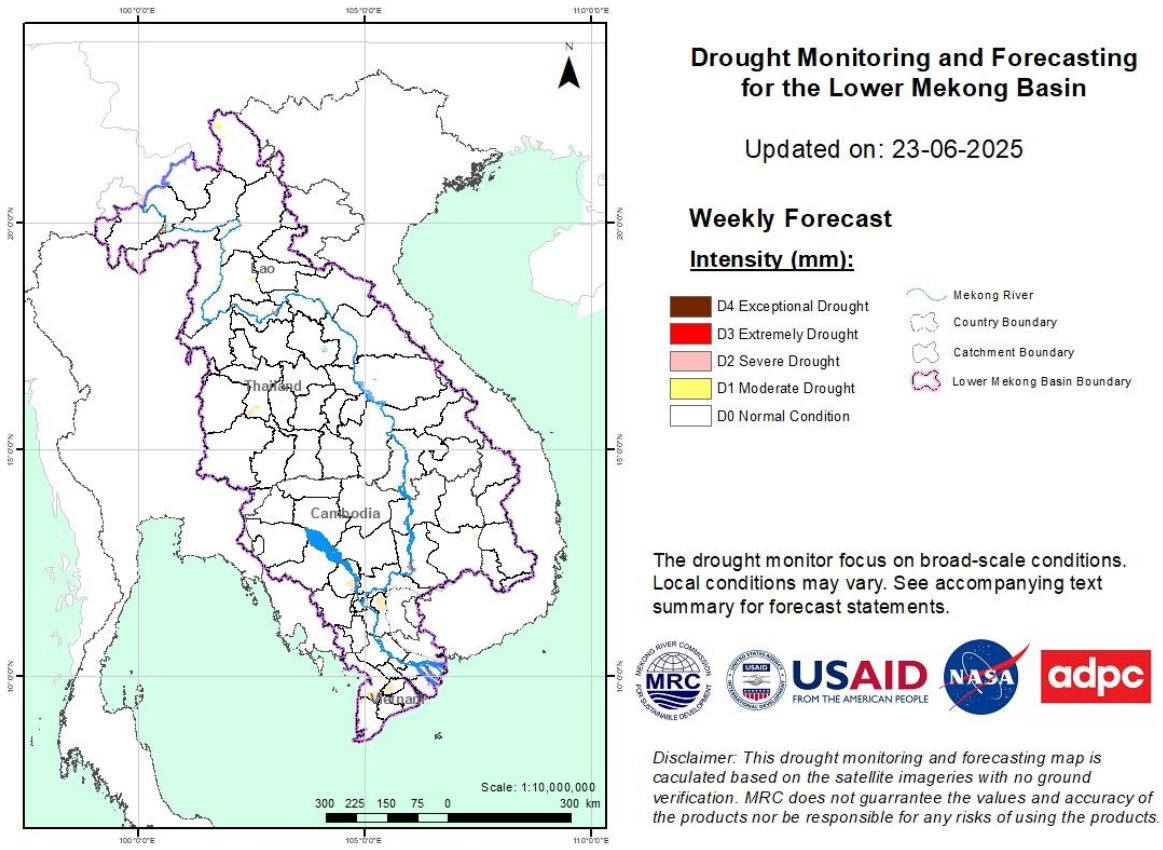


Figure 12: Weekly Combined Drought Index from 17 – 23 June.

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 24 – 28 June 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 northeastern part of Thailand, the 3S basin, and southwestern part of Cambodia. The remaining areas are expected to occur no rain to light rain.

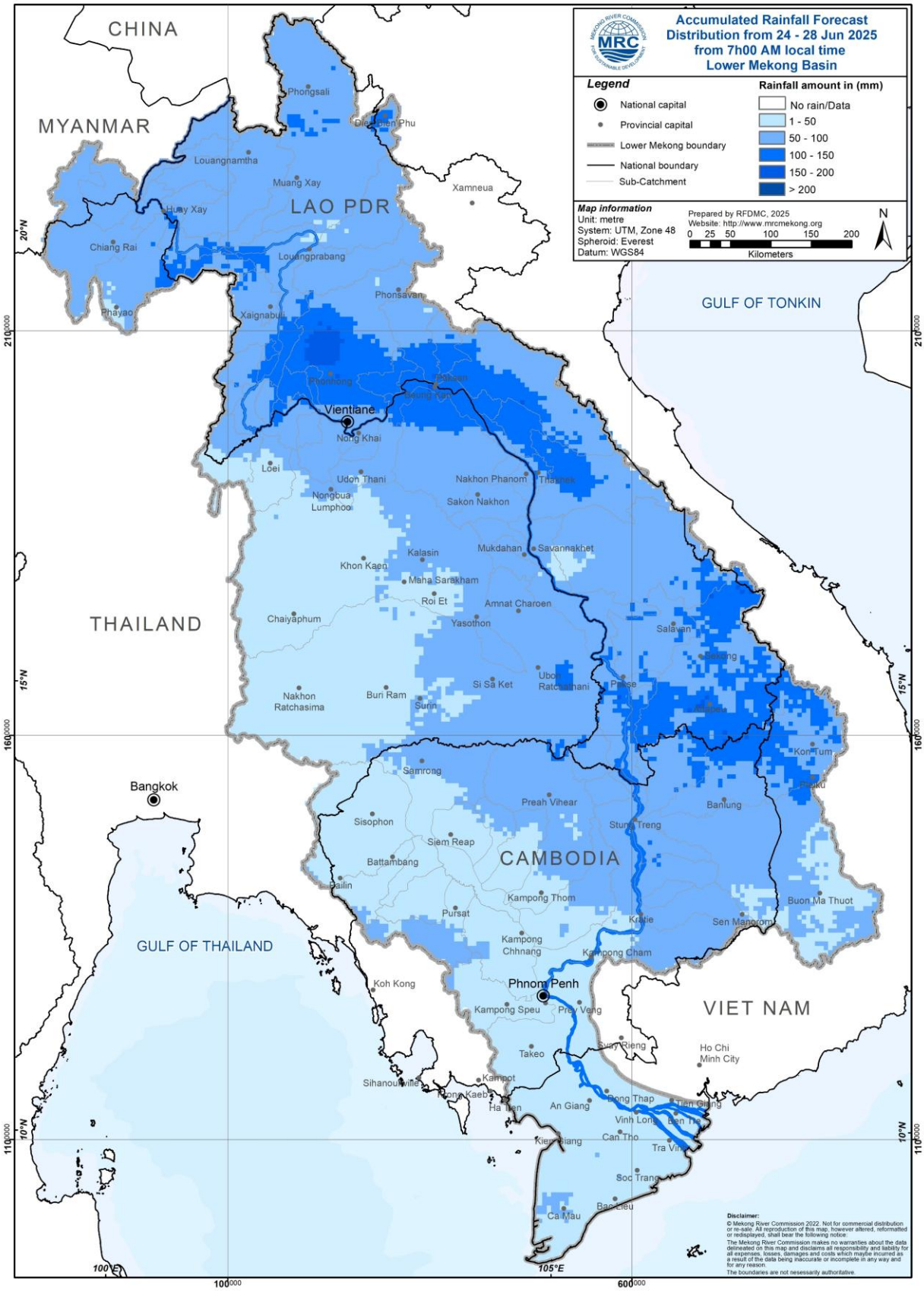


Figure 13: Accumulated rainfall forecast from CHIRP-GFS (24 – 28 June 2025)

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 24 –28 June 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 forecasting period of 24 – 28 June 2025. However, it will be expected to slightly increase from 3.56 m to 3.78 m. The water level in Luang Prabang stations affected by backwater is likely slightly stable within a range from 9.92 m and 10.01 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 1.0 m, 1.29 m, 1.37 m, 0.84 m, 1.28 m, 1.30 m, 1.04 m, 1.03 m, 0.12 m and 0.26 m, respectively.

At the floodplain in Cambodia from Stung Treng station downstream, the water levels are expected to decrease. 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 increase approximately -0.16 m, -0.94 m, -1.15 m, -0.67 m, -0.66 m, -0.31 m, -0.41 m, and -0.59 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 1.51 m and 0.89 m and from 1.55 m and 0.94 m, respectively, following daily tidal effects from the sea.

The weekly River Monitoring Bulletin and forecasting issued on 23 June 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

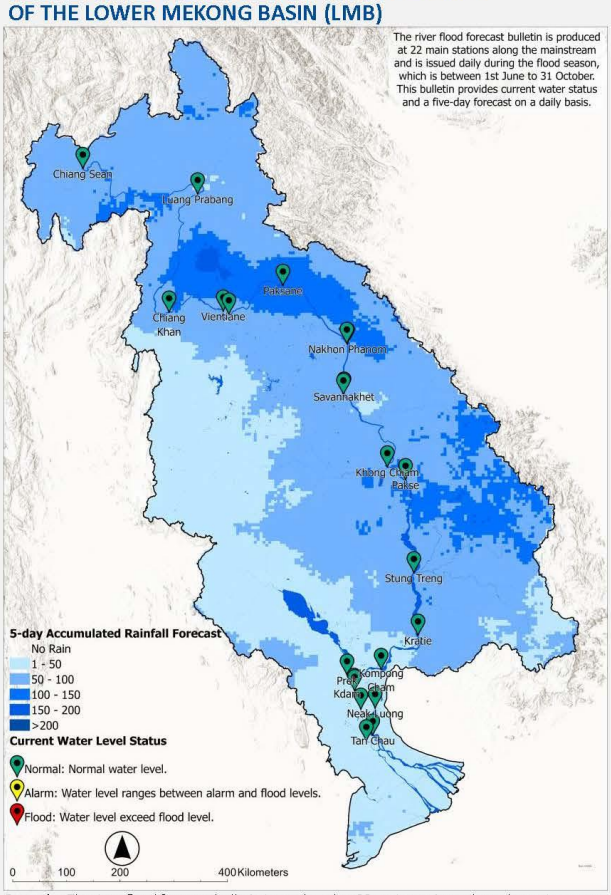
Table 3. River Monitoring and Forecasting Bulletin.

MEKONG RIVER MONITORING AND FORECASTING BULLETIN

Monitoring on 23 June 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 **3.11 km³**.*

THE FORECASTING HYDROLOGICAL STATION MAP OF THE LOWER MEKONG BASIN (LMB)



Remarks: *The river flood forecast bulletin is produced at 22 main stations along the mainstream and is issued daily during the flood season, which runs from 1st June to 31st October. This bulletin provides information on the current water level status and a five-day forecast on a daily basis.*

WATER LEVEL STATUS DEFINITIONS

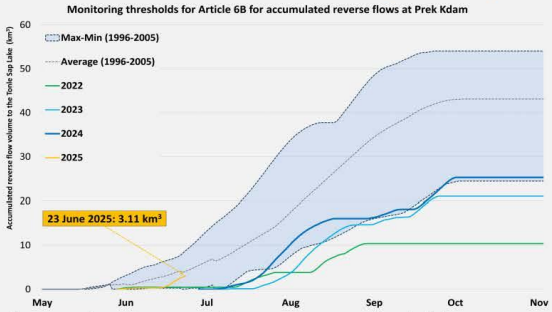
Normal	Normal water level.
Alarm	Alarm when the water level ranges between alarm and flood levels.
Flood	Flood is when the flood level exceeds. A flood level is determined by member countries.

CURRENT WATER LEVEL STATUS

Monitoring Station	Water Level	Flow Threshold (PMFM*6C)
Jinghong	-	
Chiang Saen	Normal	Normal
Luang Prabang**	Normal	-
Chiang Khan	Normal	-
Vientiane	Normal	Normal
Nongkhai	Normal	-
Paksane	Normal	-
Nakhon Phanom	Normal	-
Thakhek	Normal	-
Mukdahan	Normal	-
Savannakhet	Normal	-
Khong Chiam	Normal	Normal
Pakse	Normal	Normal
Stung Treng	Normal	Normal
Kratie	Normal	Normal
Kompong Cham	Normal	-
Phnom Penh (Bassac)	Normal	-
Phnom Penh Port	Normal	-
Koh Khel	Normal	-
Neak Luong	Normal	-
Prek Kdam	Normal	-
Tan Chau	Normal	-
Chau Doc	Normal	-

** Procedures for Maintenance of Flows on the Mainstream*
*** Luang Prabang station is influenced by hydropowers at its upstream and downstream*

REVERSE FLOW VOLUME PREK KDAM (PMFM*6B)



Accumulated reverse flow volume at Prek Kdam

Flow volumes on 23 June 2025:	**3.11 Km³**
Minimum reverse flow volume (1996-2005):	23.848 Km³
Average reverse flow volume (1996-2005):	42.84 Km³
Maximum reverse flow volume (1996-2005):	54.046 Km³

**Procedures for Maintenance of Flows on the Mainstream*

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E: floodforecast@mrcmekong.org | T: +855 23 425 353

http://www.mrcmekong.org/
http://ffw.mrcmekong.org/bulletin_wet.php
http://ffw.mrcmekong.org/reportflood.php
https://pmfm.mrcmekong.org/

MEKONG RIVER MONITORING AND FORECASTING BULLETIN

Forecasting from 24 to 28 June 2025

Highlights: ***Isolated heavy rainfall*** *are forecast in parts of the LMB. The water levels at upper stations from upper part to central LMB are expected to rise, while from Stung Treng stations downstream are expected to drop.*

Forecasting Station	24 h Observed Rainfall (mm)	Zero gauge above M.S.L (m)	Observed Water Level againt zero gauge (m)		Forecasted Water Level (m)					Alarm Level (m)	Flood Level (m)	Forecasted Water Levels Change in 5 days (m)	Max. Water levels change within next 5 days (m)	Min. distance to alarm level within next 5 days (m)	Min. distance to flood level within next 5 days (m)
	22-Jun		22-Jun	23-Jun	24-Jun	25-Jun	26-Jun	27-Jun	28-Jun						
Jinghong	20.5	-	536.63	↓ 536.54	-	-	-	-	-	-	-	-	-	-	-
Chiang Saen	29.0	357.110	2.98	↑ 3.56	↑ 3.89	↓ 3.37	↓3.08	↑ 3.46	↑ 3.78	11.50	12.80	↑ 0.22	0.33	7.61	8.91
Luang Prabang	0.6	267.195	9.86	→ 9.92	↑ 10.09	↑ 10.52	↑10.66	↓ 10.27	↓ 10.01	17.50	18.00	→ 0.09	0.74	6.84	7.34
Chiang Khan	22.4	194.118	5.82	↑ 6.25	↑ 6.57	→ 6.67	↑6.95	↑ 7.29	→ 7.25	14.50	16.00	↑ 1.00	1.04	7.21	8.71
Vientiane	26.5	158.040	4.50	→ 4.59	↑ 4.82	↑ 5.07	↑5.32	↑ 5.63	↑ 5.88	11.50	12.50	↑ 1.29	1.29	5.62	6.62
Nongkhai	4.3	153.648	2.92	↑ 3.16	↑ 3.42	↑ 3.78	↑4.08	↑ 4.30	↑ 4.53	11.40	12.20	↑ 1.37	1.37	6.87	7.67
Paksane	8.2	142.125	5.97	→ 5.97	→ 6.02	↑ 6.23	↑6.48	↑ 6.62	↑ 6.81	13.50	14.50	↑ 0.84	0.84	6.69	7.69
Nakhon Phanom	7.3	130.961	4.96	↑ 5.24	↑ 5.41	↑ 5.63	↑6.01	↑ 6.38	↑ 6.52	11.50	12.00	↑ 1.28	1.28	4.98	5.48
Thakhek	4.5	129.629	6.33	↑ 6.59	↑ 6.91	↑ 7.09	↑7.40	↑ 7.70	↑ 7.89	13.00	14.00	↑ 1.30	1.30	5.11	6.11
Mukdahan	0.0	124.219	5.16	↑ 5.32	↑ 5.43	↑ 5.56	↑5.67	↑ 5.94	↑ 6.36	12.00	12.50	↑ 1.04	1.04	5.64	6.14
Savannakhet	1.4	124.219	3.56	↑ 3.72	↑ 3.84	↑ 3.95	↑4.18	↑ 4.43	↑ 4.75	12.00	13.00	↑ 1.03	1.03	7.25	8.25
Khong Chiam	0.0	89.030	6.56	↓ 6.44	→ 6.40	↓ 6.20	↓6.05	↑ 6.23	↑ 6.56	13.50	14.50	↑ 0.12	-0.39	6.94	7.94
Pakse	0.0	86.490	5.00	↓ 4.86	→ 4.84	↓ 4.71	↓4.58	↑ 4.75	↑ 5.12	11.00	12.00	↑ 0.26	-0.28	5.88	6.88
Stung Treng	0.0	36.790	5.68	↓ 5.50	↓ 5.39	→ 5.37	→5.34	→ 5.29	→ 5.34	10.70	12.00	↓ -0.16	-0.21	5.31	6.61
Kratie	0.0	-0.101	13.81	↓ 13.28	↓ 12.91	↓ 12.59	↓12.50	↓ 12.39	↓ 12.34	22.00	23.00	↓ -0.94	-0.94	9.09	10.09
Kompong Cham	0.0	-0.930	7.78	↓ 7.42	↓ 7.01	↓ 6.59	↓6.36	↓ 6.31	↓ 6.27	15.20	16.20	↓ -1.15	-1.15	8.19	9.19
Phnom Penh (Bassac)	0.0	-1.020	4.50	↓ 4.28	↓ 4.03	↓ 3.78	↓3.67	↓ 3.63	→ 3.61	10.50	12.00	↓ -0.67	-0.67	6.47	7.97
Phnom Penh Port	nr	0.070	3.53	↓ 3.28	↓ 3.04	↓ 2.79	↓2.68	↓ 2.64	→ 2.62	9.50	11.00	↓ -0.66	-0.66	6.46	7.96
Koh Khel	0.0	-1.000	4.39	↓ 4.32	↓ 4.25	↓ 4.18	↓4.11	↓ 4.04	↓ 4.01	7.90	8.40	↓ -0.31	-0.31	3.65	4.15
Neak Luong	0.0	-0.330	3.20	↓ 3.18	↓ 3.08	↓ 3.01	↓2.88	↓ 2.80	→ 2.77	7.50	8.00	↓ -0.41	-0.41	4.42	4.92
Prek Kdam	0.0	0.080	3.55	↓ 3.35	↓ 3.15	↓ 2.94	↓2.82	↓ 2.78	→ 2.76	9.50	10.00	↓ -0.59	-0.59	6.35	6.85
Tan Chau	0.3	0.000	1.27	↑ 1.51	↑ 1.68	↑ 1.71	↓1.56	↓ 1.25	↓ 0.89	3.50	4.50	↓ -0.62	-0.62	1.79	2.79
Chau Doc	1.2	0.000	1.24	↑ 1.55	↑ 1.73	↑ 1.76	↓1.61	↓ 1.30	↓ 0.94	3.00	4.00	↓ -0.61	0.18	1.24	2.24

WATER LEVEL FORECASTING DEFINITIONS

↑	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.
↓	Falling water level.
X	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 **23 June**, 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 **3.11 km³**.
- In the **next 5 days**, isolated thunderstorms and heavy rainfall are expected to occur over the central and southern part of Lao PDR, the northern and northeastern in Thailand, the 3S basin, and the southwestern part of Cambodia.
- For **24 - 28 June**, the water levels at upper stations from upper part to central LMB (Chiang Saen to Pakse station) are expected to rise, while from Stung Treng stations downstream are expected to drop.

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http://www.mrcmekong.org/
http://ffw.mrcmekong.org/bulletin_wet.php
http://ffw.mrcmekong.org/reportflood.php
https://pmfm.mrcmekong.org/

6.3 Flash Flood Information

With light to heavy rainfall for next week, flash floods might be detected in some areas in the LMB. 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 here.

6.4 Drought forecast

From June to August 2025 (**Figure 13**), the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 - 20 mm, except for some areas in the northeastern part of Thailand, 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 - 20mm.

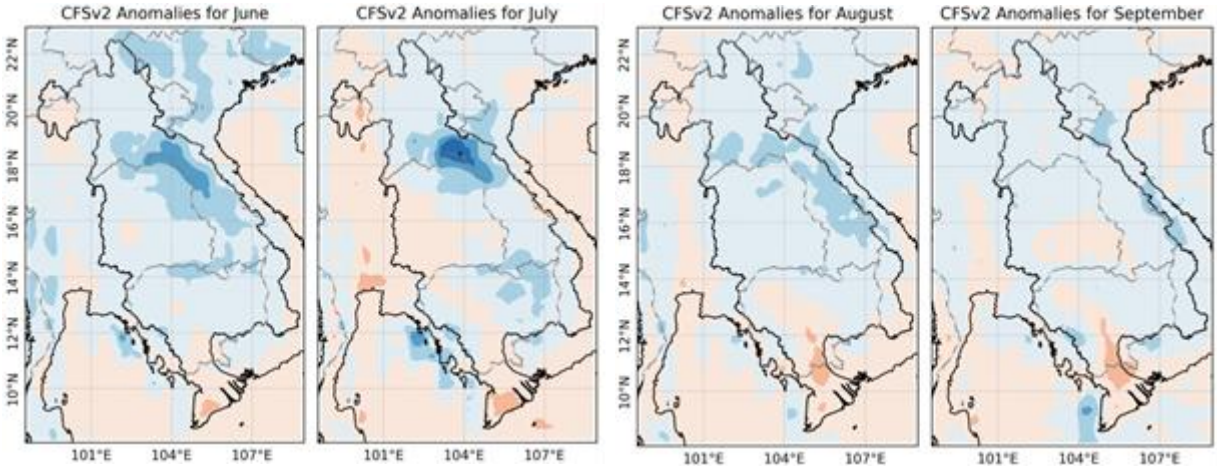


Figure 13 Seasonal forecast of rainfall anomalies for June to Augst 2025 based on CFSv2 (NCEP-NOAA)

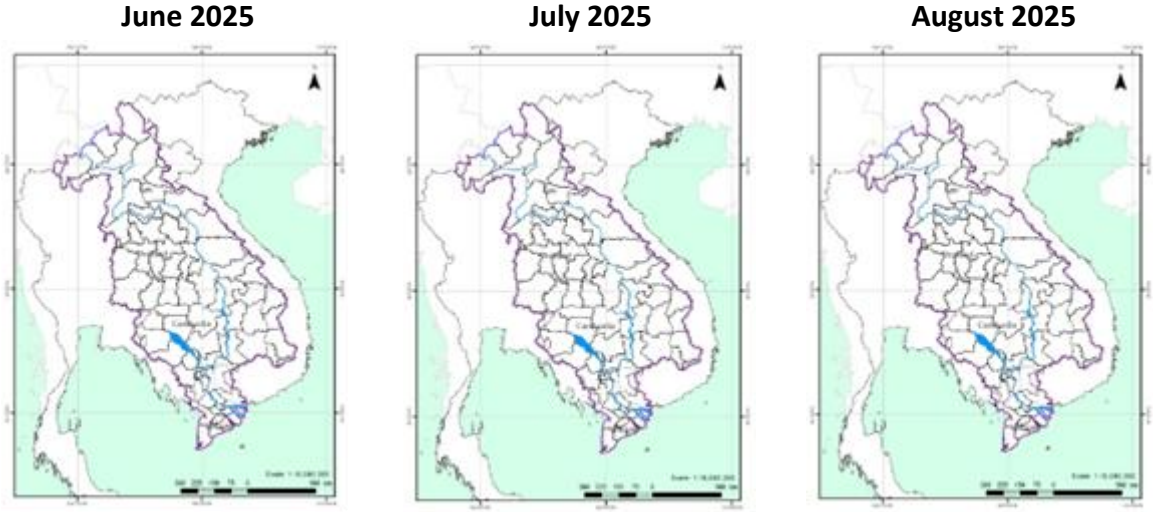


Figure 14. Monthly forecasts of combined drought indicators for June, July and Augst 2025

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

7 Summary and Possible Implications

7.1. Rainfall and its forecast

In the period of 17 - 23 June 2025, there has heavy rainfall has been observed over the LMB in the central parts of Lao PDR, the 3S basin, and the southwestern part of Cambodia.

During 24 – 30 June 2025, isolated thunderstorms and heavy rain are expected over the central part of the LMB including the central part of Lao PDR, the northeastern part of Thailand, the 3S basin; and the southwestern part of Cambodia. 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 17 – 23 June 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 24 – 28 June 2025, Water levels are forecasted to be increasing at stations from Chiang Saen to Pakse and decreasing from Stung Treng station downstream. 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 moderate level will likely be detected in some areas of the LMB.

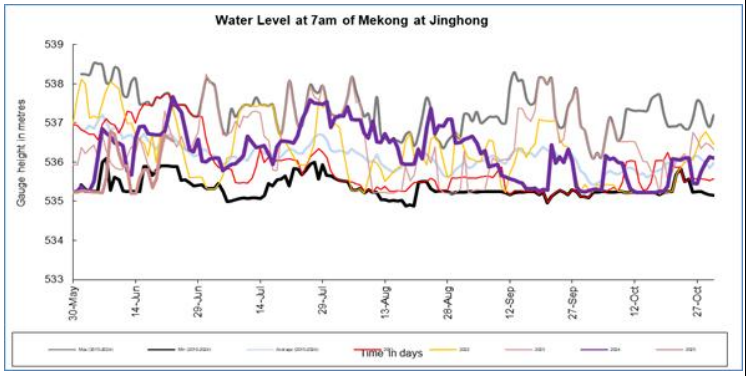
7.4. Drought condition and its forecast

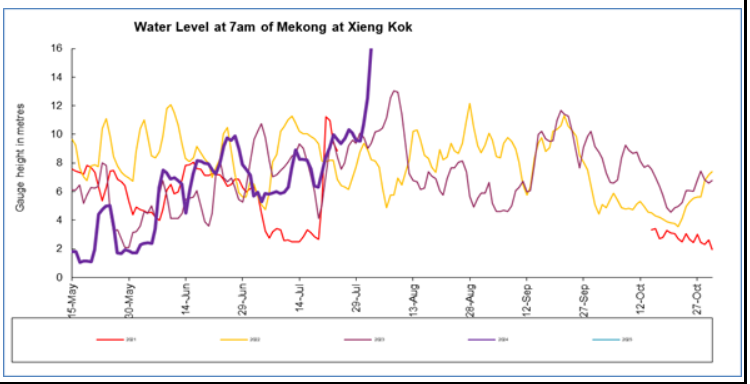
During 17 – 23 June 2025, the LMB was facing normal to wet conditions, except some areas in the northern part of Lao PDR; the northeastern part of Thailand, and the lower part of Cambodia. The monitored drought is caused primarily by meteorological indicator.

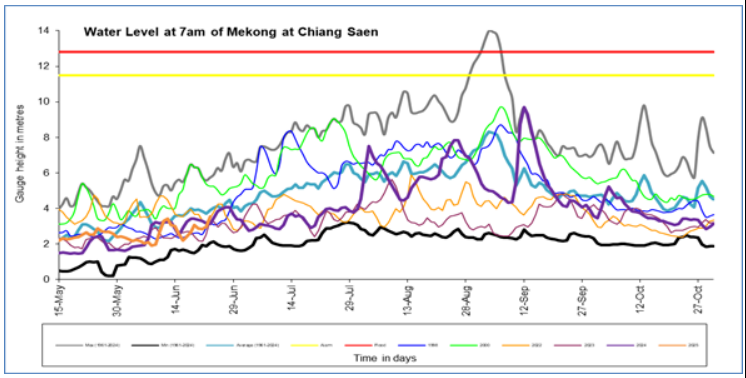
The next three-month from June to August 2025, the total amount of rainfall in most areas of the LMB will be higher than the LTA by around 5 - 20 mm, except for some areas in the northeastern part of Thailand, the lowland areas of Cambodia, and the Mekong Delta. Overall, in the next 3 months, rainfall will be mainly concentrated in the central part of the LMB and higher than the LTA from 10 - 20mm.

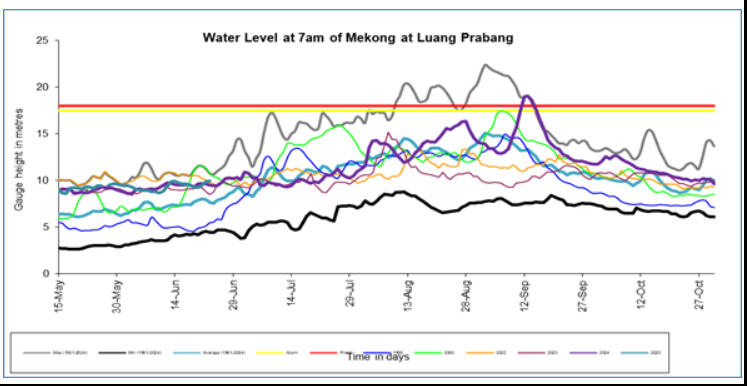
The forecast indicates that no drought conditions are expected in over the LMB from June to August 2025 using the Combined Drought Indicator (CDI)

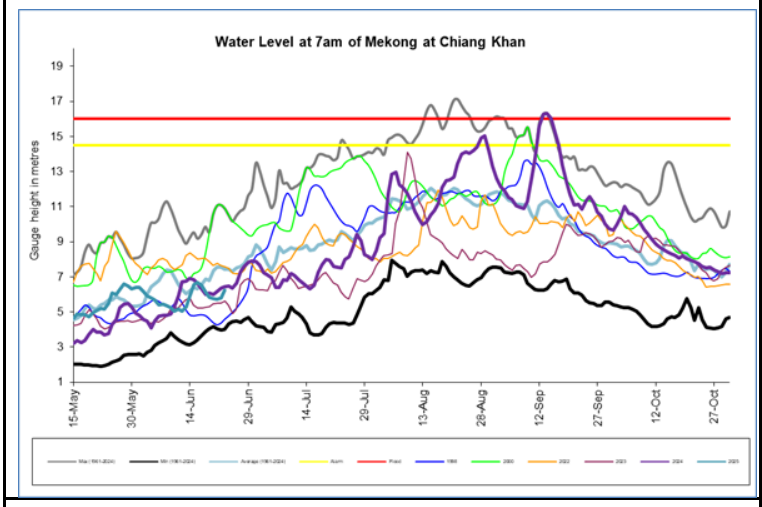
Annex A: Weekly water level monitoring at 22 key stations

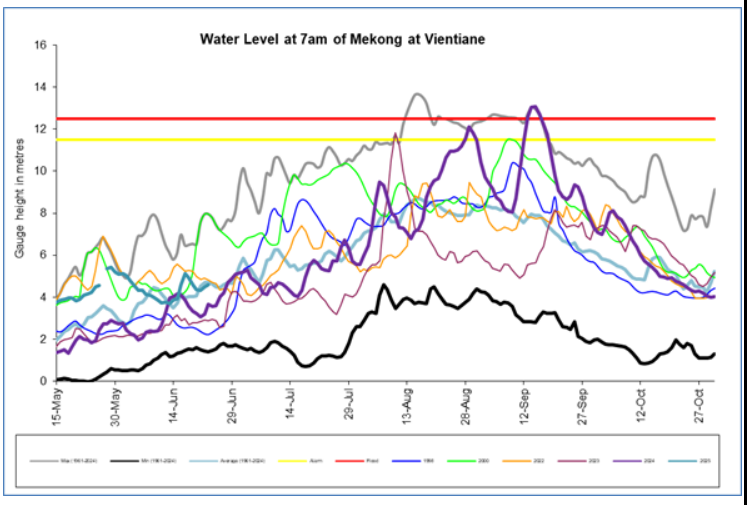


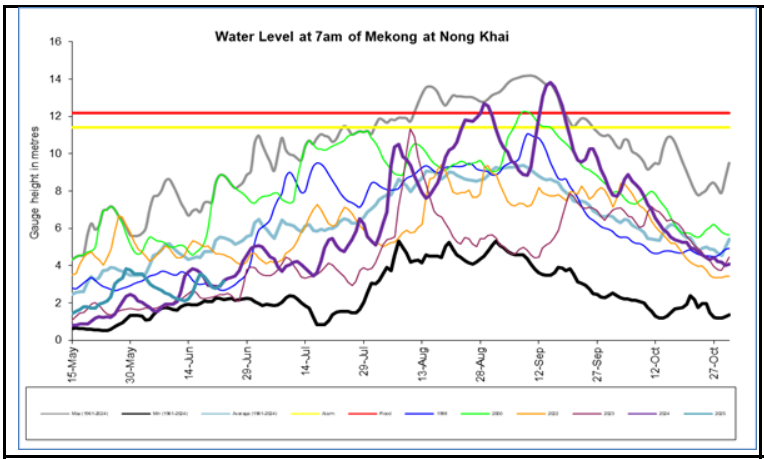


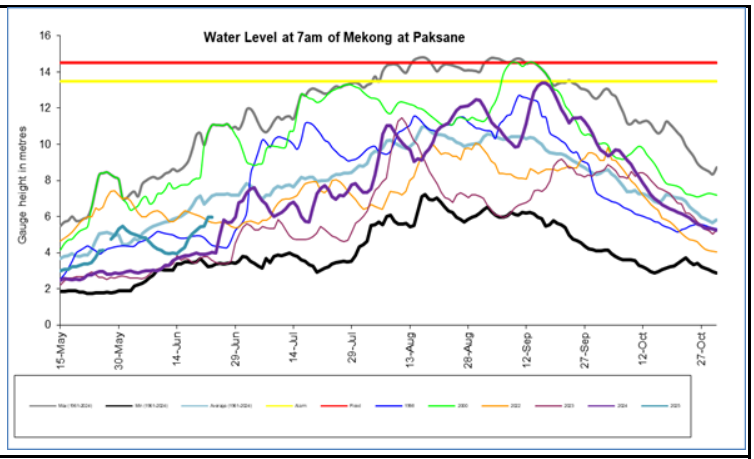


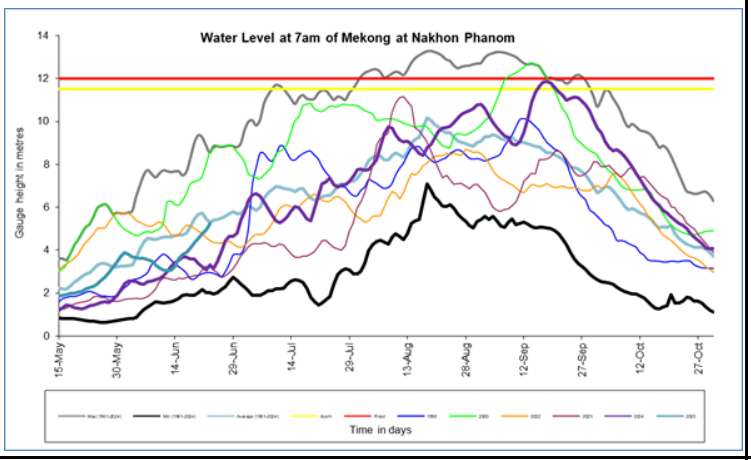


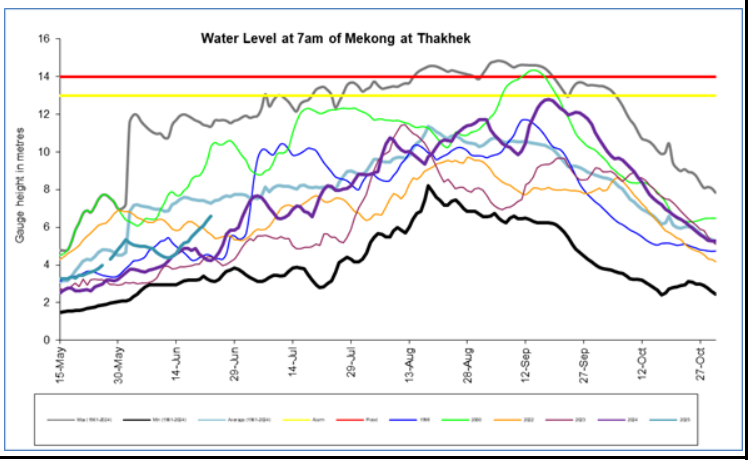


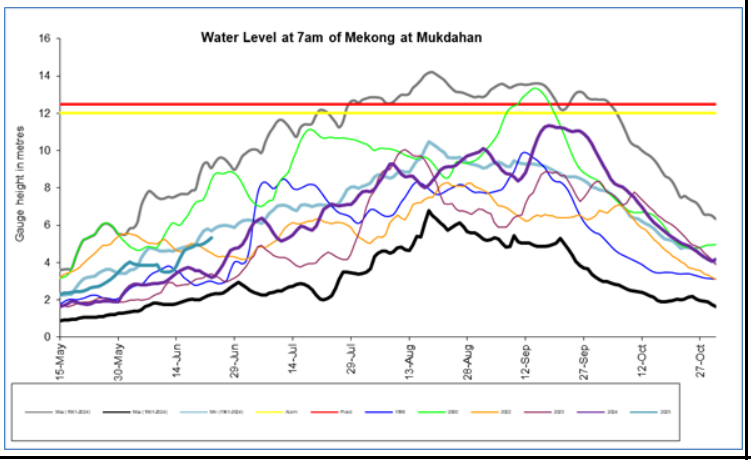


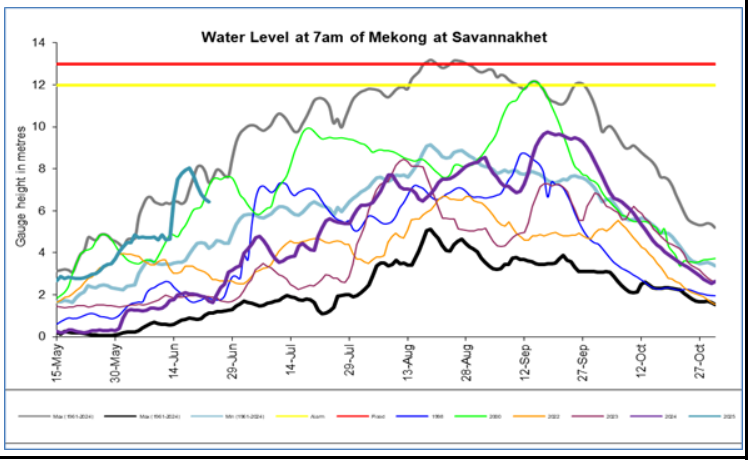

Water Level at 7am of Mekong at Nong Khai
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

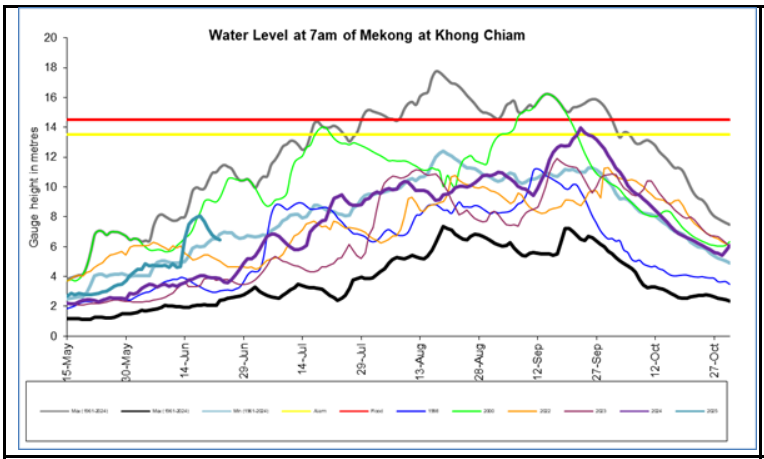

Water Level at 7am of Mekong at Paksane
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

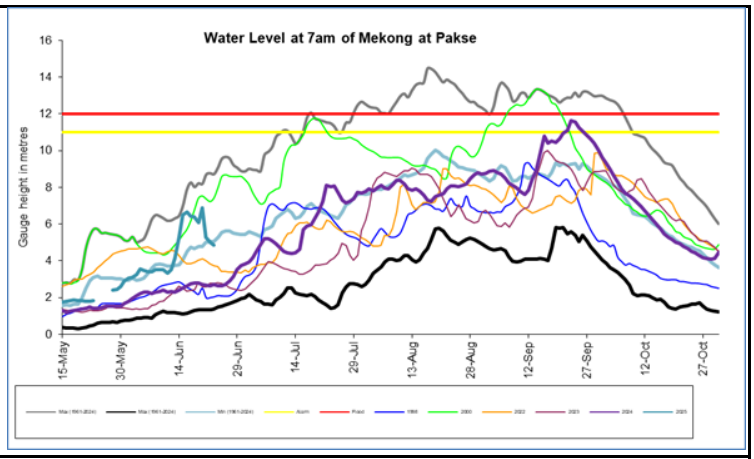

Water Level at 7am of Mekong at Nakhon Phanom
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct
Time in days

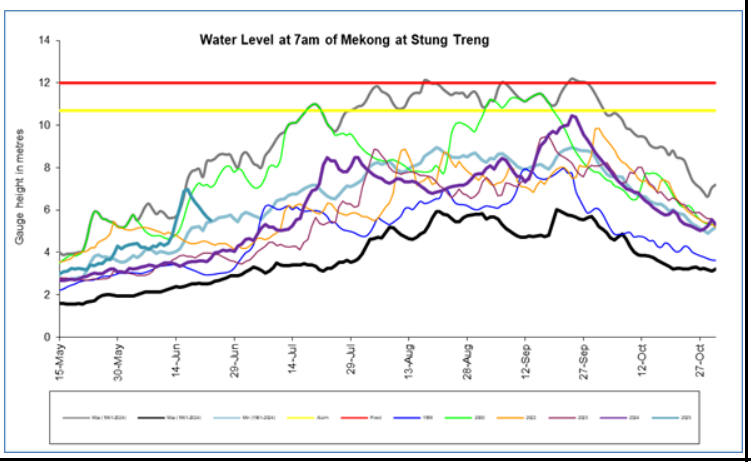

Water Level at 7am of Mekong at Thakhek
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

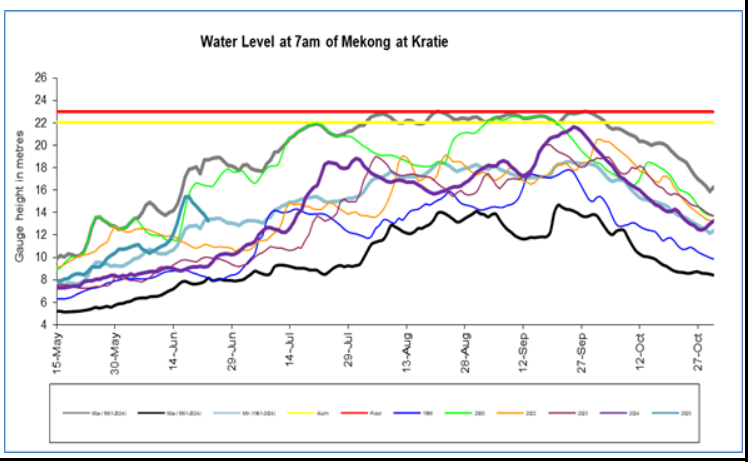

Water Level at 7am of Mekong at Mukdahan
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

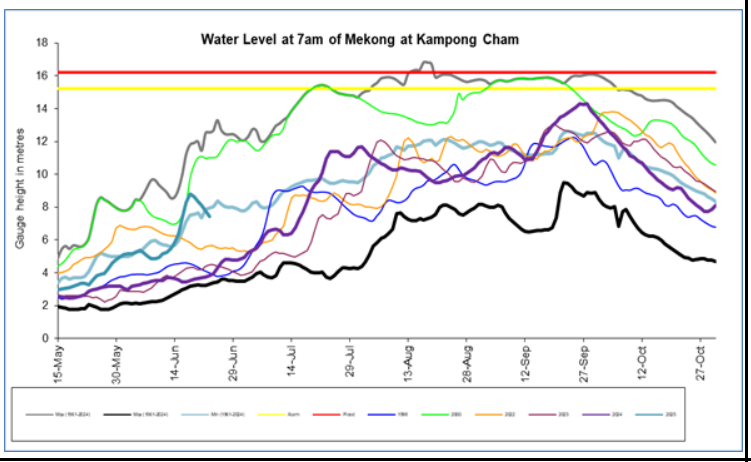

Water Level at 7am of Mekong at Savannakhet
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

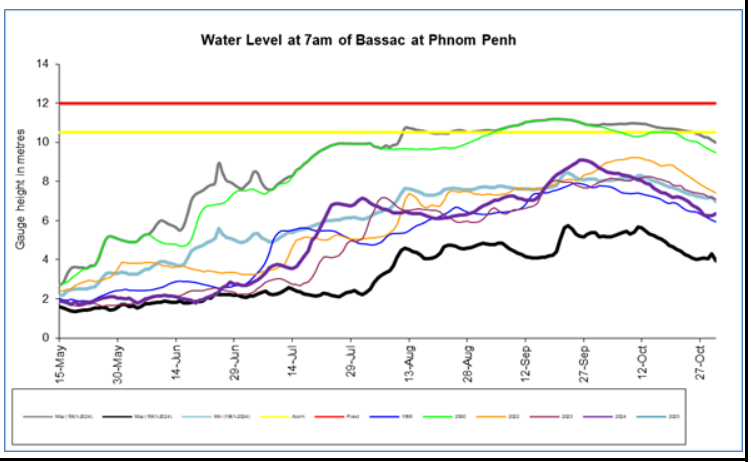

Water Level at 7am of Mekong at Khong Chiam
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

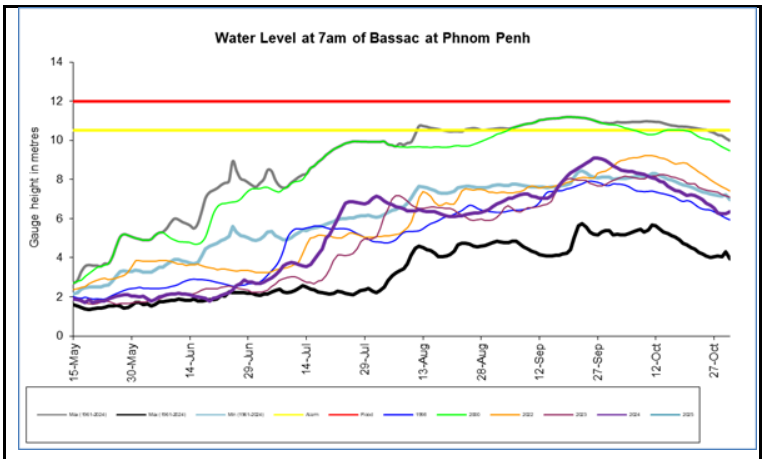

Water Level at 7am of Mekong at Pakse
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

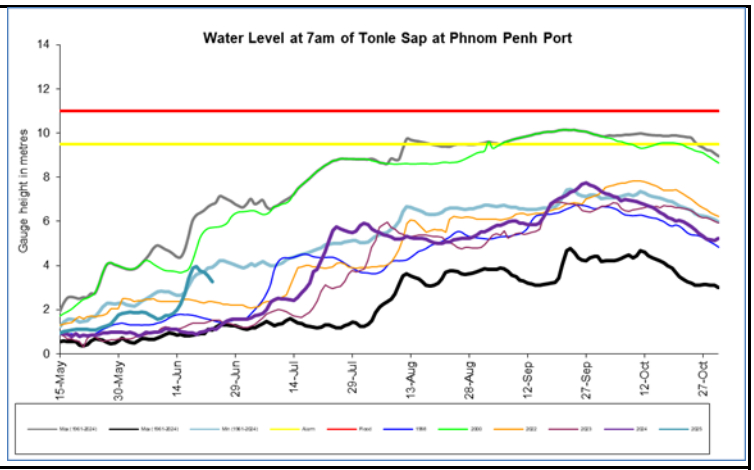

Water Level at 7am of Mekong at Stung Treng
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

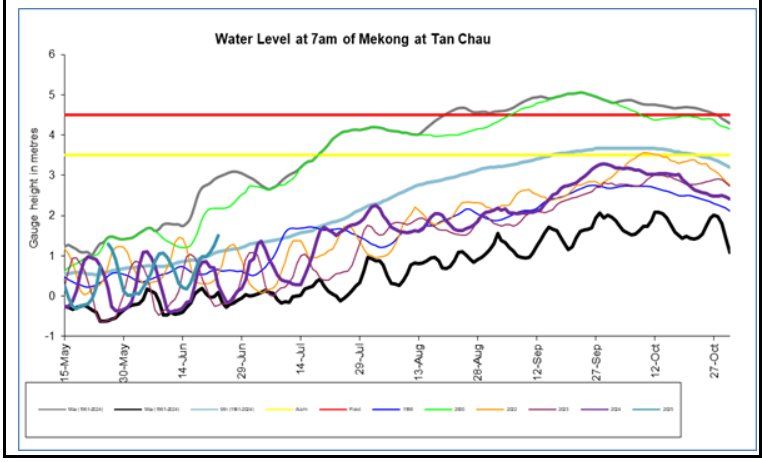

Water Level at 7am of Mekong at Kratie
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

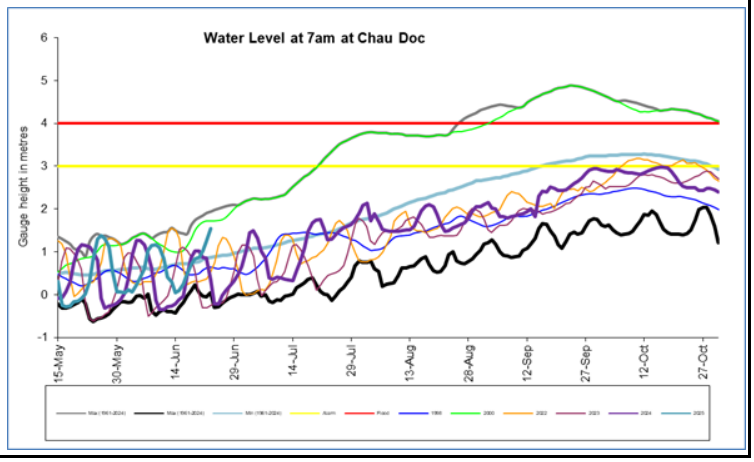

Water Level at 7am of Mekong at Kampong Cham
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct


Water Level at 7am of Bassac at Phnom Penh
Gauge height in metres
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct


Water Level at 7am of Bassac at Phnom Penh
Gauge height in metres
14
12
10
8
6
4
2
0
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct


Water Level at 7am of Tonle Sap at Phnom Penh Port
Gauge height in metres
14
12
10
8
6
4
2
0
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct


Water Level at 7am of Mekong at Tan Chau
Gauge height in metres
6
5
4
3
2
1
0
-1
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct


Water Level at 7am at Chau Doc
Gauge height in metres
6
5
4
3
2
1
0
-1
15-May
30-May
14-Jun
29-Jun
14-Jul
29-Jul
13-Aug
28-Aug
12-Sep
27-Sep
12-Oct
27-Oct

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
17-06-2025	535.81	9.63	8.67	6.52	5.13	3.55	4.77	3.9	5.25	4.74	3.15	7.95	6.44	6.97	15.41	8.3	4.48	3.40	4.22	2.97	3.38	0.59	0.48
18-06-2025	535.35	9.43	8.88	6.1	4.93	3.42	5.05	4.11	5.49	4.81	3.17	8.05	6.39	6.58	15.41	8.8	4.92	3.89	4.67	3.34	3.82	0.87	0.71
19-06-2025	535.59	9.33	9.39	5.86	4.58	3.16	5.23	4.34	5.71	4.92	3.34	7.69	6.10	6.37	14.91	8.65	4.98	3.95	4.71	3.38	3.91	0.99	0.83
20-06-2025	536.23	9.23	9.89	5.78	4.35	2.86	5.45	4.54	5.91	4.94	3.37	7.21	6.89	6.14	14.57	8.35	4.80	3.75	4.58	3.28	3.78	0.99	0.87
21-06-2025	536.71	9.5	9.92	5.72	4.33	2.77	5.48	4.75	6.10	5	3.44	6.8	5.28	5.88	14.18	8.1	4.68	3.69	4.46	3.21	3.68	1.09	1.02
22-06-2025	536.63	9.86	9.79	5.82	4.50	2.92	5.97	4.96	6.33	5.16	3.56	6.56	5.00	5.68	13.81	7.78	4.50	3.53	4.39	3.20	3.55	1.27	1.24
23-06-2025	536.54	9.92	9.63	6.25	4.59	3.16	5.97	5.24	6.59	5.32	3.72	6.44	4.86	5.5	13.28	7.42	4.28	3.28	4.32	3.18	3.35	1.51	1.55
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

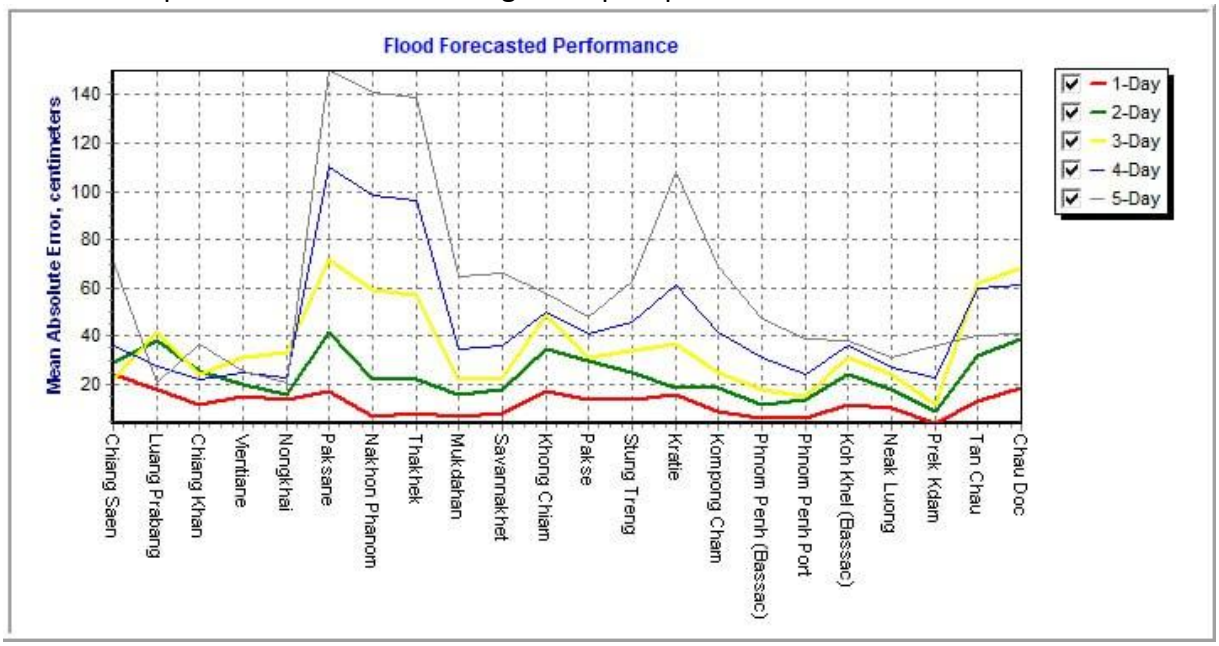
2025	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Thakhek	Mukdahan	Savannakhet	Khong Chiam	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Phnom Penh Port	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
17-06-2025	34.5	5.3	3.8	0	0	0	0	1.2	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-06-2025	14.5	21	1	1.1	0	7.9	3.4	0.2	2.1	0	0	0	0	0	0	0	1.3	0	0	0	0	3.6	0.2
19-06-2025	5.5	8.6	1.8	0	13.6	34.9	40.1	29.5	25.6	0	6.4	2.6	0	15	0	7	1.6	0	0	0	27.3	0.2	0
20-06-2025	1.5	0	0	0	11.7	3.2	26.5	29.2	34.9	0	1.8	16.2	0	3	0	0	0	0	0	2.4	0	0	0
21-06-2025	0	3.3	2	5.3	68.8	55.2	32.1	7.1	6.2	0	0	3.9	0	3	1	13	3.2	0	31.4	80.8	0	14.9	28.3
22-06-2025	11.5	20.5	0.6	19	62	74.3	78.1	15.7	26.4	0	0	0	0	0	3	6	3.5	0	0	0	22.3	0	0
23-06-2025	20.5	29	0.6	22.4	26.5	4.3	8.2	7.3	4.5	0	1.4	0	0	0	0	0	0	0	0	0	0	0.3	1.2
Sum	88.0	80.8	20.6	20.0	182.6	179.8	188.4	90.2	100.9	0.0	9.6	22.7	0.0	21.0	4.0	26.0	9.6	0.0	31.4	83.2	49.6	19.0	29.7

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 17 to 23 June 2025.

The forecasting values from 17 to 23 June 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.



Note: 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.

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