



# Mekong River Commission

## Regional Flood Management and Mitigation Centre

### Weekly Dry Season Situation Report for the Mekong River Basin

Prepared on: 12/03/2019, covering the week from 04<sup>th</sup> to 11<sup>th</sup> March 2019.

### Weather Patterns, General Behaviors of the Mekong River and Dry Season Situation

#### General weather patterns:

No critical weather situation over the Lower Mekong Basin, during this week. Last week, the water levels at stations from upper to middle part of LMB has been fluctuated and continued to this week, in which water level still were stay above their long-term averages (LTAs) from Chiang Saen to Kompong Cham due to inflows operation upstream part. But downstream of Chaktomuk to Tan Chau and Chau Doc are slightly decreased and stay below their LTAs.

#### General behavior of the Mekong River:

From 04<sup>th</sup> to 11<sup>th</sup> March 2019, water levels along the lower Mekong River from Thailand's Chiang Saen to Lao PDR's Luang Prabang were fluctuated above their long-term averages (LTAs) the same trend as last week, although no rainfall in these areas. The trend from 12 to 18 March 2019 will be gradually decreasing but stays above their LTAs. The trends will be the same for the stations from Lao PDR's Vientiane to Cambodia's Kompong Cham. The lower reaches from Cambodia's Phnom Penh at Chaktomuk to Viet Nam's Tan Chau on the Mekong River and Chau Doc on the Bassac River will experience fluctuated below their LTAs.

#### *For stations from Chiang Saen and Luang Prabang*

Water levels from 04<sup>th</sup> to 11<sup>th</sup> March 2019 at Chiang Saen and Luang Prabang stations were stayed above their long-term averages (LTAs). From 12 to 18 March 2019 will be slightly decreasing and stays above their LTAs.

Since last year 2018, the water level at Lao PDR's Luang Prabang rise over their historical long-term averages, based on the observed water level monitoring provided by Department of Hydrology and Meteorology (DMH). It showed the higher levels than previously historical water level recorded from 2010 to 2018. The cause of the abnormal rise of water level at Chiang Saen are likely caused by experience of hydropower operation upstream in the Southern Yunnan province of China during the Dry Season period. This could be affected to the raised water levels at Luang Prabang and Chiang Khan stations (approximal 2 days travelling time of flows from Chiang Saen). However, the continuing rise water level on the Mekong mainstream to date at Luang Prabang is not likely effected by inflows from upstream or rainfall in the catchment. This raising up water level not due to high rainfall in the Upper Mekong Basin but rather a consequence of an increase of water impounding of hydropower downstream and other inflows from tributaries upstream of Luang Prabang. It is needed to deeper investigate for further detail information.

#### *For stations from Chiang Khan, Vientiane-Nong Khai and Paksane*

Water levels from 04<sup>th</sup> to 11<sup>th</sup> March 2019 at Chiang Khan, Vientiane, Nong Khai and Paksane were fluctuated above the LTAs. The trends will be increasing the same trends as upstream inflows. It has been observed that since December 2018, the water level at Lao PDR's Paksane dropped and rise over their historical long-term averages, based on the observed water level monitoring provided by Department of Hydrology and Meteorology (DMH). It showed the higher levels than previously historical water level recorded from 2010 to 2018. This raising up water level not due to high rainfall in the Upper Mekong Basin but rather a consequence of inflows from tributaries. It is needed to deeper investigate for further detail information.

***For stations from Nakhon Phanom to Pakse***

Water levels from 04<sup>th</sup> to 11<sup>th</sup> March 2019 at Nakhon Phanom to Pakse were also increased slightly above their LTAs. The trends will be increasing the same trends as upstream.

***For stations from Stung Treng to Kratie***

Water levels from 04<sup>th</sup> to 11<sup>th</sup> March 2019 at Stung Treng to Kratie were also increased slightly above their LTAs. The trends will be increasing the same trends as upstream.

***For stations from Kompong Cham, Phnom Penh to Prek Kdam***

Water levels from 26 February to 04 March 2019 at Kompong Cham down to Chaktomuk and Prekdam on the Tonle Sap were stayed below their long-term averages (LTAs).

***Tan Chau and Chau Doc***

Water levels from 04<sup>th</sup> to 11<sup>th</sup> March 2019 at Tan Chau on the Mekong and at Chau Doc on the Bassac were fluctuated over their long-term averages (LTAs).

**Dry season situation**

Water levels from Chiang Sean to Kompong Cham of the Mekong River were fluctuating above their LTAs, except at downstream of Kompong Cham to Tan Chau and Chau Doc water levels were fluctuating below their LTAs. The abnormal raised water levels at Luang Prabang and Paksane are needed to further investigate and find out what the reasons cause of these rising.

For details information on water levels and rainfall at each key station are described as follows:

- Tables for observed water levels and rainfall for the last week in Annex A
- The water levels graphs showing the observed water levels for the season in Annex B

**Annex A: Graphs and Tables**

Table A1: observed water levels

Unit: m

2019	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Mukdahan	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
05/03/2019	-	3.52	8.98	6.34	2.70	3.38	4.99	2.92	3.07	2.22	3.24	8.43	3.78	2.19	2.30	1.86	1.24	1.08	1.21
06/03/2019	-	3.56	8.84	6.30	2.65	3.30	4.98	2.94	3.04	2.20	3.22	8.57	3.80	2.15	2.16	1.72	1.26	1.09	1.20
07/03/2019	-	3.65	8.94	6.14	2.60	3.25	4.98	2.96	3.04	2.14	3.22	8.50	3.82	2.24	2.16	1.62	1.25	1.01	1.11
08/03/2019	-	3.75	9.05	6.17	2.54	3.13	4.90	2.93	3.04	2.12	3.24	8.49	3.82	2.25	2.23	1.48	1.26	0.91	1.03
09/03/2019	-	3.79	9.14	6.18	2.47	3.07	4.90	2.89	3.04	2.16	3.17	8.53	3.84	2.24	2.26	1.48	1.32	0.58	0.77
10/03/2019	-	3.78	9.08	6.20	2.45	3.06	4.89	2.83	3.01	2.14	3.15	8.39	3.84	2.32	2.18	1.46	1.34	0.40	0.33
11/03/2019	-	3.78	8.92	6.30	2.50	3.09	4.89	2.73	2.97	2.16	3.16	8.36	3.75	2.26	2.30	1.52	1.32	0.09	0.06

Table A2: observed rainfall

Unit: mm

2019	Jinghong	Chiang Saen	Luang Prabang	Chiang Khan	Vientiane	Nongkhai	Paksane	Nakhon Phanom	Mukdahan	Pakse	Stung Treng	Kratie	Kompong Cham	Phnom Penh (Bassac)	Koh Khel	Neak Luong	Prek Kdam	Tan Chau	Chau Doc
05/03/2019	-	0	0	0	0	0	0	15.5	0	0	0	0	0	0	0	0	0	0	0
06/03/2019	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/03/2019	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/03/2019	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/03/2019	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/03/2019	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/03/2019	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Note: No data available from China during the Dry Season**

### Annex B: Season Water Level Graphs

This Annex has the water level graphs of the report date. These graphs are distributed weekly by email together with the River Monitoring Bulletin.

#### HYDROGRAPH AT 7 AM OF MEKONG TONLE SAP AND BASSAC AT MAINSTREAM STATIONS IN DRY SEASON FROM 04 TO 11 MARCH 2019















