

## InterRisk Thailand Flood Report <2021 No.06>

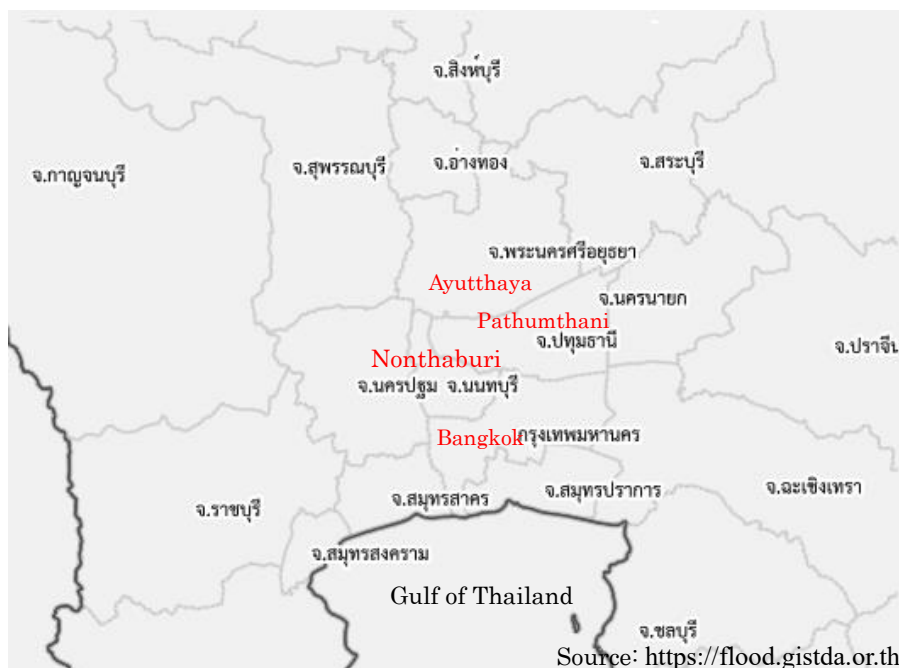
### Thailand Current Water Situation

#### Summary

- ✓ The National Water Command provided flood warning to Bangkok, Nonthaburi and Pathumthani during 7-10 October.
- ✓ Tropical storm “LIONROCK” will become stronger and ashore on upper Vietnam during 10-11 October. This storm may affect northern, northeastern, and central Thailand after 11<sup>th</sup> October.
- ✓ The water storage levels of the Sirikit dam and Bhumibol dam are about 50%. Then, both dams still have room to store water and can control river flows.
- ✓ The water storage level of the Pasak dam and Kwaenoi dam has almost reached the upper control level. The amount of water to be released from the dams will increase which may cause a rise in the river water level.
- ✓ The water level of the lower Chao Phraya River has reached “Critical” level at almost all observation points.
- ✓ Until mid-October, the effects of the tropical storm “LIONROCK” and the water level of the Chao Phraya River should be monitored closely.

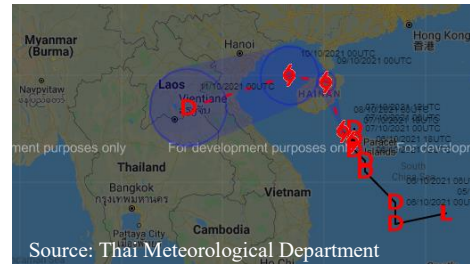
#### Warning announcement from the National Water Command

The flood warning was provided to Bangkok, Nonthaburi and Pathumthani by the National Water Command as there would be water passing Bangsai district in Ayutthaya at the maximum rate of 3,050-3,150 m<sup>3</sup>/second in the Chao Phraya River. The water would flow to the Gulf of Thailand during 7-10 October. During 7-10 October, the sea level would be rising which would cause the water level in the Chao Phraya River to be 30-50 cm higher. The warned areas include the Chaophraya riverside lowlands outside flood dike in Nonthaburi and Pathumthani and areas without dike installation on both sides of the Chao Phraya River in Bangkok.



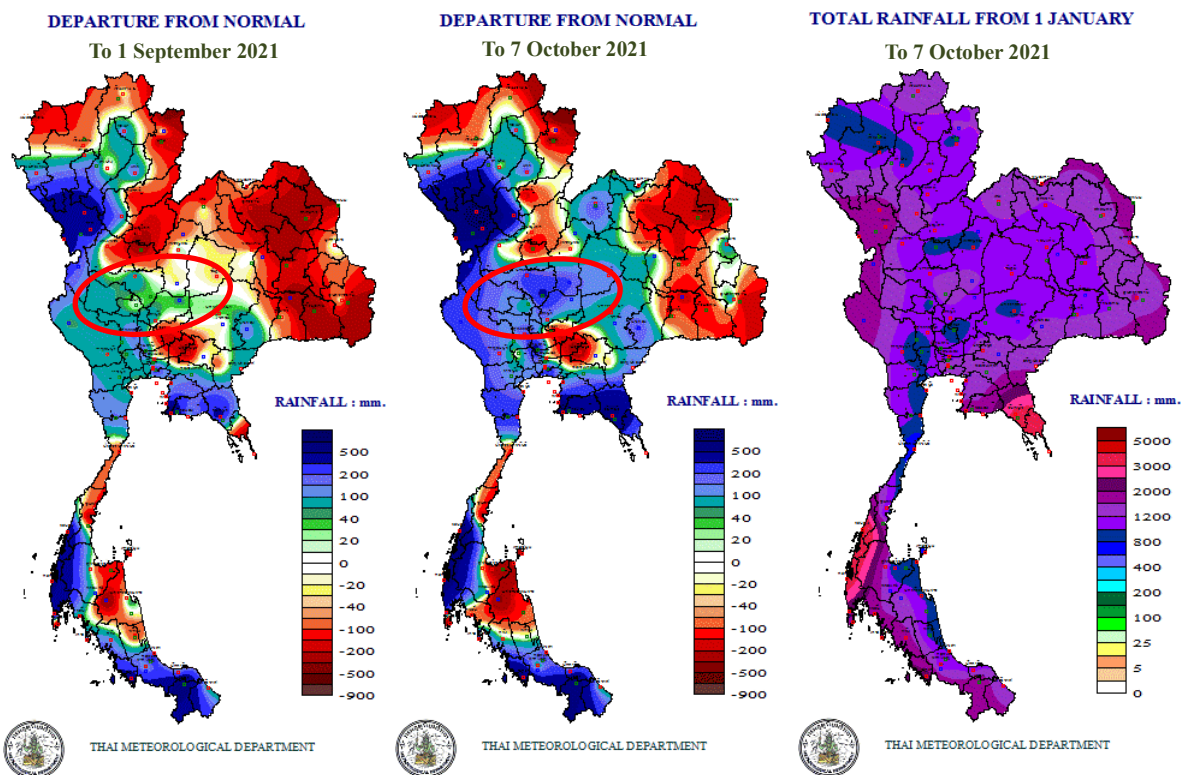
## Weather Forecast

Thai Meteorological Department announced that a tropical storm “LIONROCK” in the middle South China Sea having a speed of 55 km/hr is expected to become stronger and ashore on upper Vietnam during 10-11 October. This storm may affect northern, northeastern, and central Thailand after 11<sup>th</sup> October..



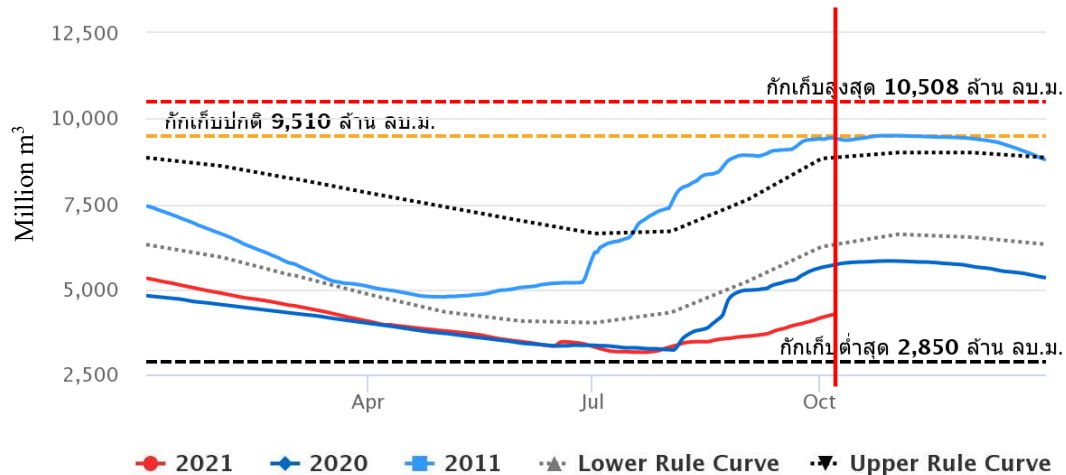
## Precipitation

- ✓ The figures below show: (left) the difference in cumulative rainfall from the normal (the average rainfall of the last 30 years) for 1<sup>st</sup> January to 1<sup>st</sup> September 2021, (center) the difference in cumulative rainfall from the normal for 1<sup>st</sup> January to 7<sup>th</sup> October 2021, and (right) the cumulative rainfall for 1<sup>st</sup> January to 7<sup>th</sup> October 2021.
- ✓ Comparing the left figure with the center figure below, it can be observed that the western part of northeastern Thailand (Chaiyaphum, Nakhon Ratchasima), the southern part of northern Thailand (Nakhon Sawan, Uthai Thani), and the northern part of central Thailand (Lopburi, Singburi, Chainat, etc.) experienced heavy rainfall from September to early October, and the cumulative rainfall since 1<sup>st</sup> January has been much higher than normal (see the area circled in red on the figures below).
- ✓ In Rayong and Chanthaburi in eastern Thailand, the cumulative rainfall since 1st January has been about 500mm above normal.

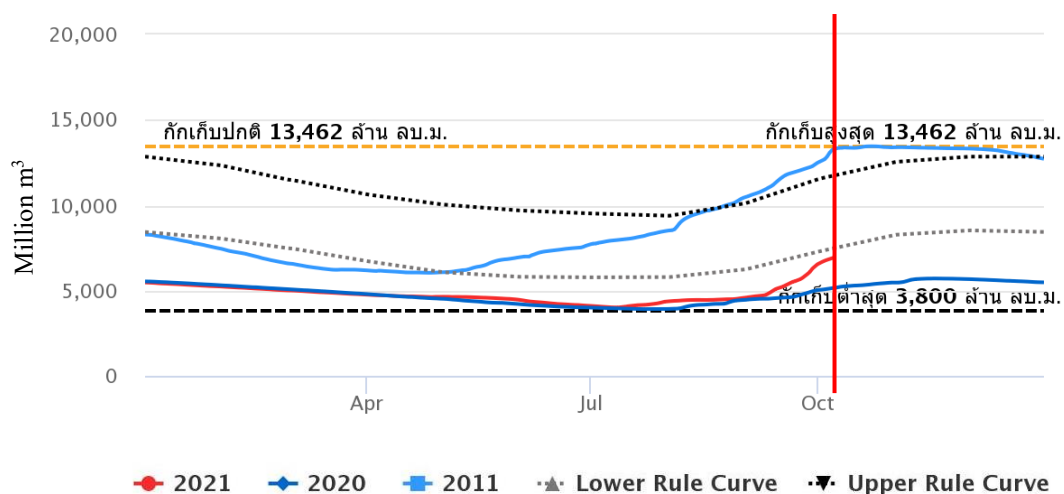


## Dam Storage Level (Sirikit Dam, Bhumibol Dam)

Storage level **Sirikit Dam (45%)**: as of 7 October 2021 \*43% as of 26 September 2021



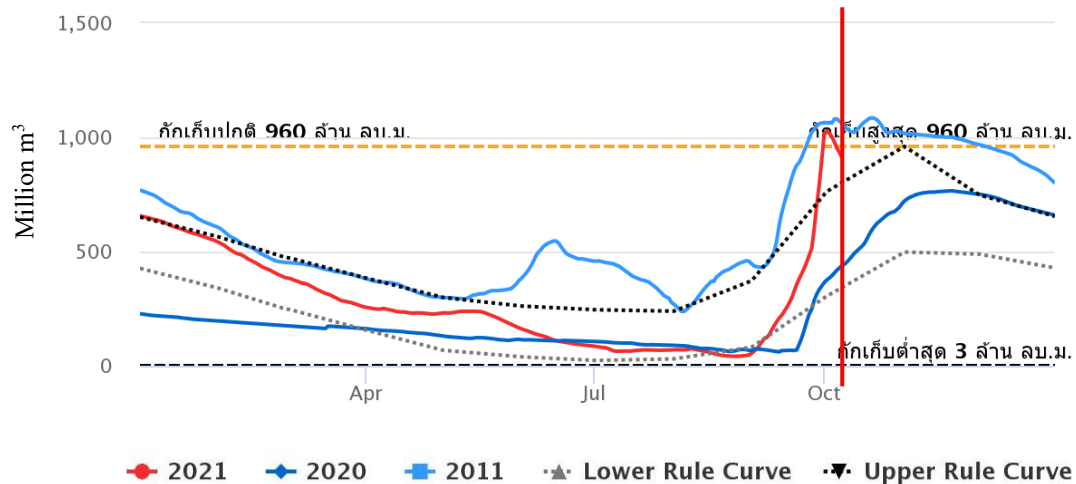
Storage level **Bhumibol Dam (51%)**: as of 7 October 2021 \*45% as of 26 September 2021



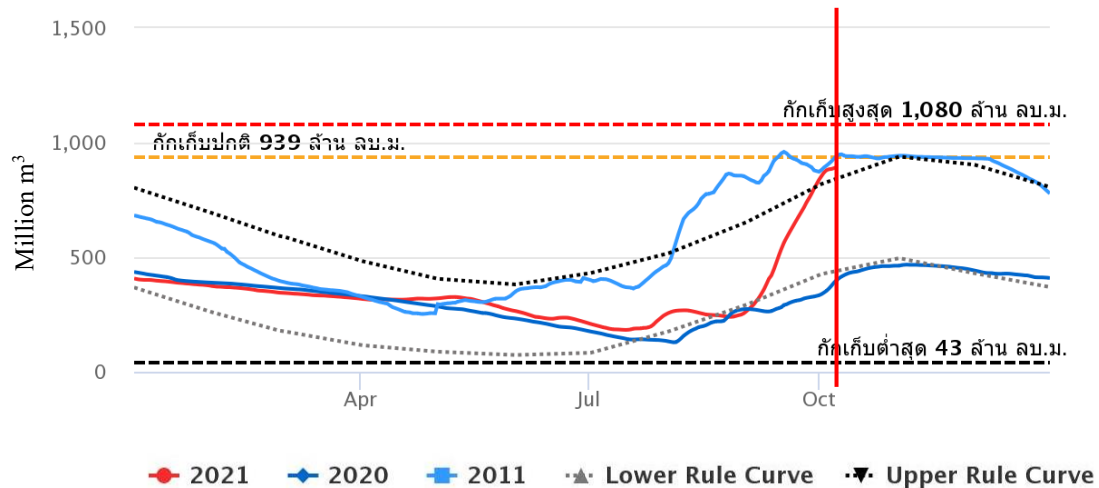
The water storage levels of the Sirikit dam and the Bhumibol dam have increased by 2% and 6% respectively since 26<sup>th</sup> September. At the beginning of October 2011, when the major flood occurred, the storage volume of both dams had almost reached the upper control level. Comparing the storage volume as of October 7<sup>th</sup> 2011 and 2021, the storage volume in Sirikit Dam is 9,409m<sup>3</sup> in 2011 while 4,268m<sup>3</sup> in 2021 (45%), and that in Bhumibol Dam is 13,307m<sup>3</sup> in 2011 while 6,929m<sup>3</sup> in 2021 (52%). Both dams still have room to store water and can control river flows even when heavy rains occur in northern Thailand.

## Dam Storage Level (Pasak Dam, Kwaenoi Dam)

Storage level **Pasak Dam (95%)**: as of 7 October 2021 \*73% as of 26 September 2021



Storage level **Kwaenoi Dam (95%)**: as of 7 October 2021 \*83% as of 26 September 2021



The storage level of the Pasak dam and Kwaenoi dam has almost reached the upper control level. These dams also reached this level in mid-September 2011. The amount of water to be released from the dams will increase to reduce their storage volume, which will cause a rise in the water level of the river.

### The Upper Chao Phraya River Flow

The water level in the upper Chao Phraya River basin has slightly increased since 27<sup>th</sup> September. The water levels of the Yom River, Nan River and at the confluence of the four rivers continue to reach "critical" level.

Water Situation in the Chao Phraya River  
7<sup>th</sup> October 2021



**Note:** - Numbers in bracket indicate the flow rate of water in m³/sec.

- Numbers with underline indicate higher (+) or lower (-) of water level than the river bank in meters.

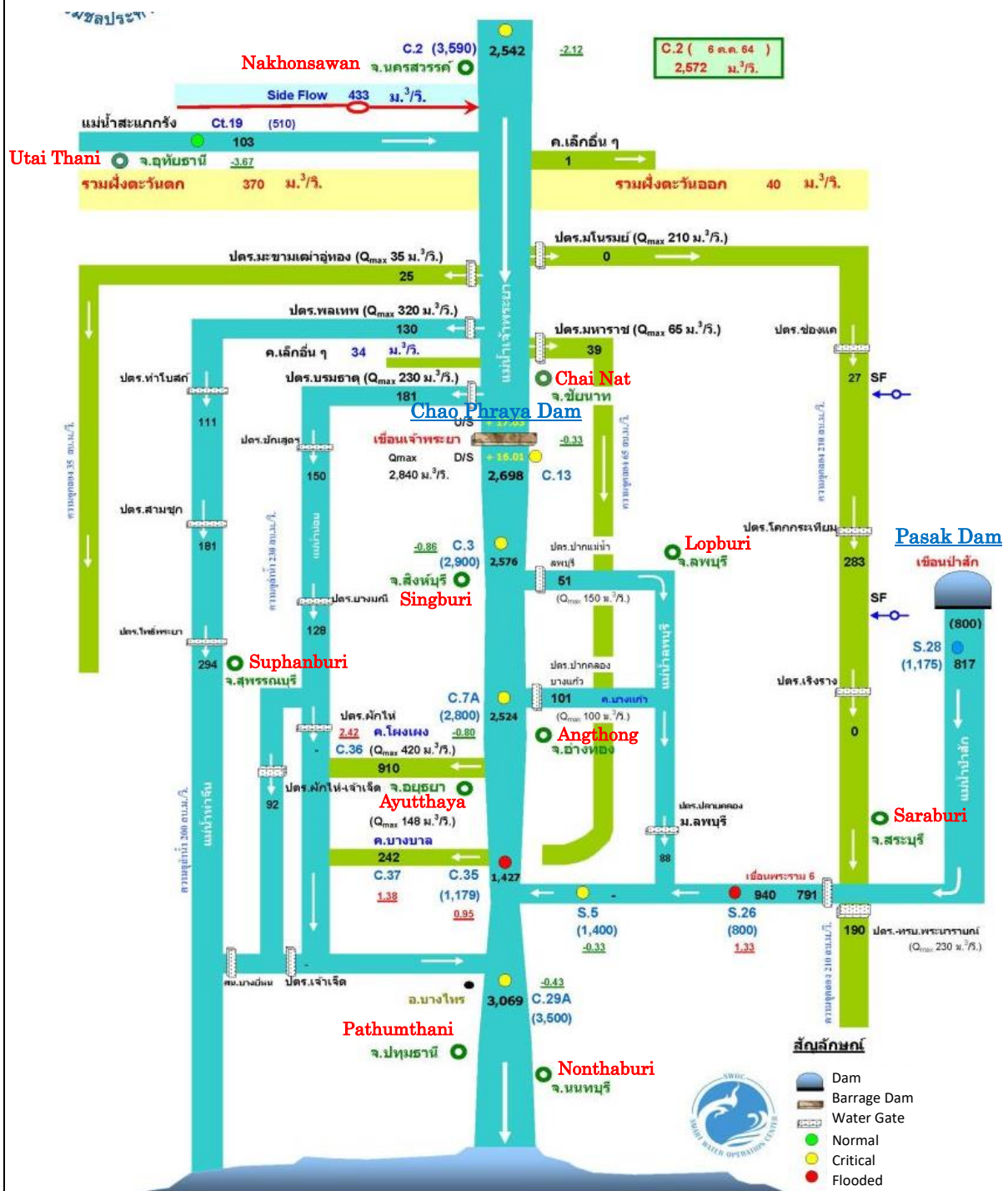
- Water levels U/S and D/S are in meters.



### The Lower Chao Phraya River Flow

The water level in the lower basin of the Chao Phraya River has been also increasing since 27<sup>th</sup> September. The Chao Phraya River and the Pasak River are flooding in Ayutthaya and Saraburi, respectively. The water levels at almost all observation points are “Critical”.

Water Situation in the Chao Phraya River  
7<sup>th</sup> October 2021



**Note:** - Numbers in black indicate the flow rate of water in m³/sec.  
- Numbers in bracket the flow rate of water in m³/day.  
- Numbers with underline indicate higher (+) or lower (-) of water level than the river bank in meters.

### References

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<http://www.arcims.tmd.go.th/dailydata/yearRain.php>

<http://www.thaiwater.net/water/dam/large>

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[http://water.rid.go.th/flood/plan\\_new/chaophaya/Chao\\_low.php?cal2=01092021](http://water.rid.go.th/flood/plan_new/chaophaya/Chao_low.php?cal2=01092021)

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