



Three-month Climate Prediction of Thailand

During September – November 2019

MINISTRY OF DIGITAL ECONOMY AND SOCIETY,
THAI METEOROLOGICAL DEPARTMENT

Issued on 31 August 2019

Climate Outlook

1. During the next three months, the total rain of northern, northeastern, eastern and central parts including with that of Bangkok Metropolitan and Vicinity would be near normal.

In detail, the total rain of the northern part is to be about 330 - 415 millimeters (mm, normal: 375 mm) whereas that of the northeastern, eastern and central parts is to be about 330 - 425 mm (normal: 377 mm), 530 - 680 mm (normal: 608 mm), 395 - 490 mm (normal: 441 mm) consecutively while that of Bangkok Metropolis and Vicinity is to be about 565 - 660 mm (normal: 612 mm).

For the Southern Thailand (east & west coasts), the total rain would be about 5% below normal. In detail, the total rain of the Southern Thailand (east coast) is to be about 655 - 815 mm (normal: 774 mm) whereas that of the Southern Thailand (west coast) is to be about 850 - 1,015 mm (normal: 984 mm).

Meanwhile, the mean temperature of Thailand would be slightly above normal; the mean maximum temperature is to be 31 - 33 °C (normal: 31.7 °C) while the mean minimum temperature is to be 23 - 25 °C (normal: 23.0 °C).

2. In September 2019, the total rain around the whole country of Thailand would be near normal. In detail, the total rain of each part is to be about as follows: the northern part: 185 - 250 mm, the northeastern part: 205 - 280 mm, the central part: 200 - 275 mm, the eastern part: 285 - 380 mm, the Southern Thailand (east coast): 125 - 175 mm, the Southern Thailand (west coast): 370 - 485 mm, and Bangkok Metropolitan and Vicinity: 280 - 330 mm.

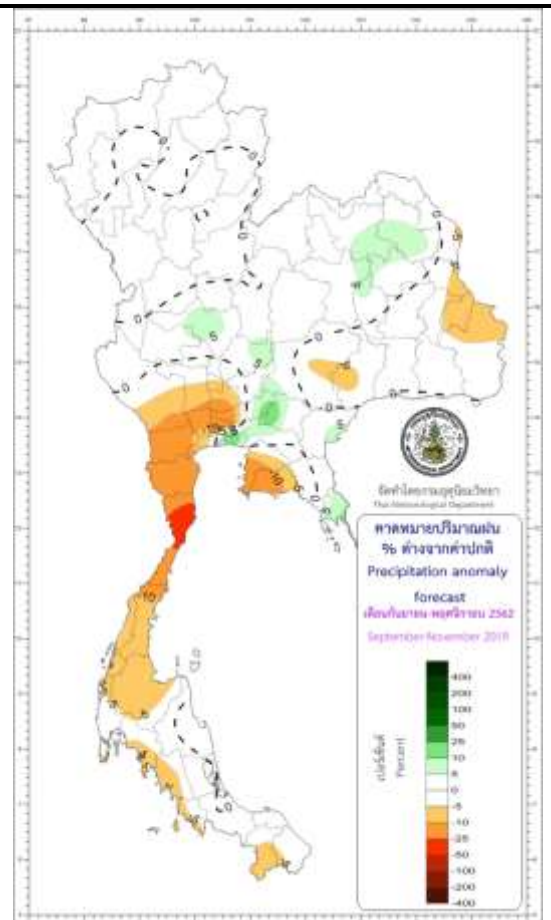
Meanwhile, the mean temperature of the Upper Thailand would be mostly slightly above normal except that of the Southern Thailand (east & west coasts) is to be near normal. In detail, the mean maximum and minimum temperature of Thailand is to be 31 - 34 °C and 24 - 26 °C accordingly.

3. In October 2019, the total rain around the whole country of Thailand would be 5% below normal. In detail, the total rain of each part is to be about as the following: the northern part: 90 - 140 mm, the northeastern part: 80 - 135 mm, the central part: 130 - 190 mm, the eastern part: 180 - 250 mm, the Southern Thailand (east coast): 200 - 280 mm, the Southern Thailand (west coast): 305 - 395 mm, and Bangkok Metropolitan and Vicinity: 190 - 280 mm.

Meanwhile, the mean temperature of the Upper Thailand in this October would be mostly 1 °C above normal except that of the Southern Thailand (east & west coasts) is to be near normal. In detail, the mean maximum and minimum temperature of Thailand is to be 31 - 34 °C and 23 - 25 °C relatively.

4. In November 2019, the total rain around the Upper Thailand would be near normal except that of the Southern Thailand (east & west coasts) is to be 5% below normal. In detail, the total rain of each part is to be about as follows: the northern part: 20 - 50 mm, the northeastern part: 10 - 30 mm, the central part: 20 - 50 mm, the eastern part: 30 - 70 mm, the Southern Thailand (east coast): 295 - 395 mm, the Southern Thailand (west coast): 145 - 215 mm, and Bangkok Metropolis and Vicinity: 30 - 60 mm consecutively.

Meanwhile, the mean temperature of Thailand will be mostly about 1 °C above normal. In detail, the mean maximum and minimum temperature of Thailand is to be 31 - 33 and 22 - 24 °C accordingly.



* The data supporting this 3-month climate outlook are at Tables 1 & 2 on below Pages 7 & 8:

Thailand climate for September – October - November from 30-year normal (A.D. 1981 - 2010 or B.E. 2524 - 2553 baseline average)

September: Thailand will meet densely abundant rainfall. In fact, most areas will be affected by the most abundant monthly rainfall from the whole year. The reason is that the influential low-pressure trough places on the central portion of Thailand along with the Southwest Monsoon prevails over Thailand. Besides, some tropical cyclones may move to dissipate near or toward Thailand directly, specifically at the northeastern and eastern parts.

October: As being a time of transition from the rainy to the winter seasons, the Upper Thailand will meet less rainfall and reducing temperature; cool weather is to start since the middle of this month onward. The reason is that the prevailing Southwest Monsoon over Thailand begins to transform into the Northeast Monsoon and cold high-pressure air mass areas from China prevails over Thailand from time to time.

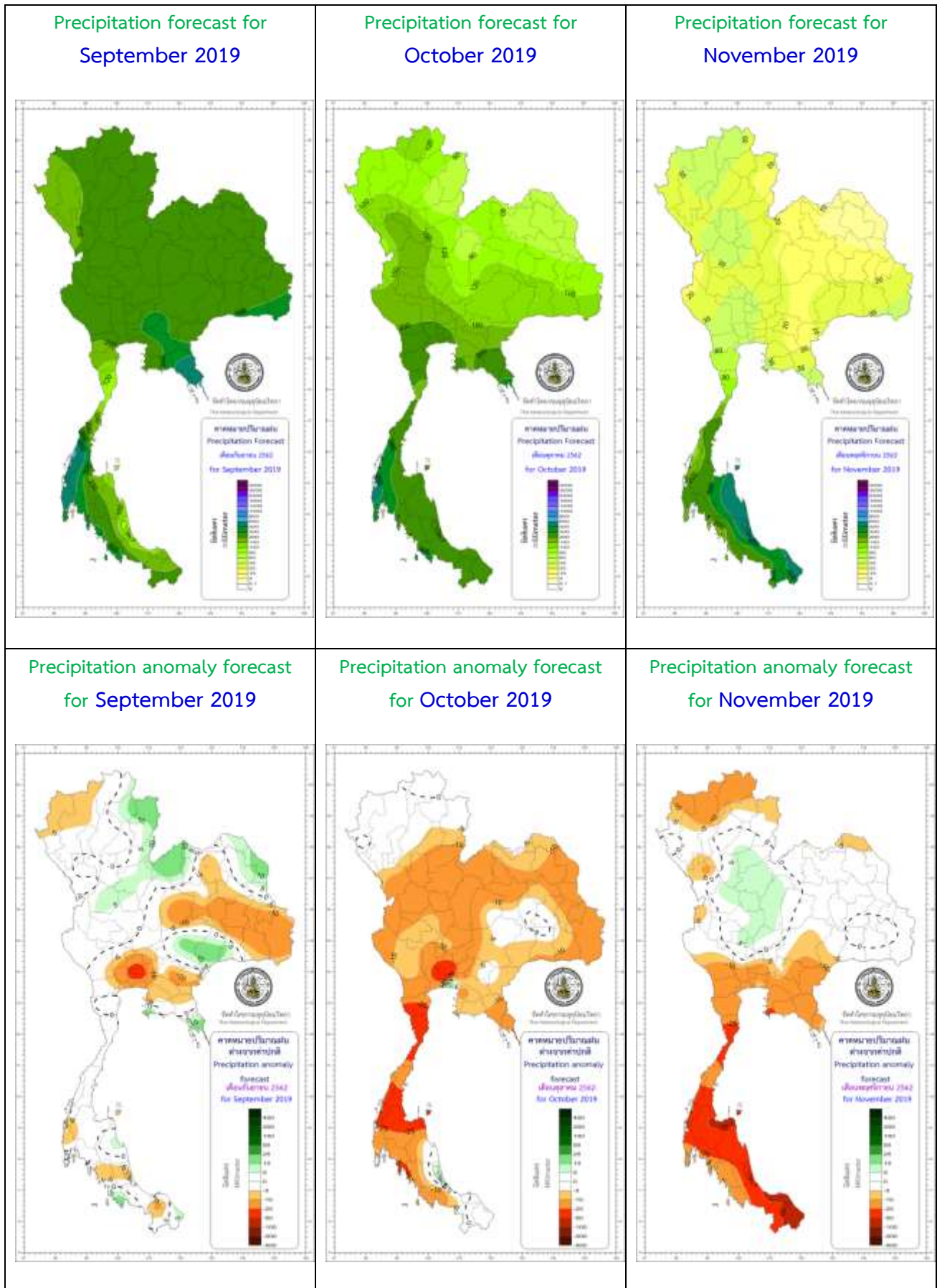
Moreover, the low-pressure trough placing over the central and eastern parts will move downward to place around the Southern Thailand and the Gulf of Thailand during the 2nd half of this month. As a result, the Southern Thailand will meet densely abundant rainfall.

Additionally, some tropical cyclones may move near or toward Thailand around the eastern part, and they would move successively downward to the upper portion of the Gulf of Thailand and the Southern Thailand further.

November: The Upper Thailand will meet much reducing rain with cool weather for this whole month. The reason is that the influential high-pressure air mass areas from China will actively prevail over the Upper Thailand periodically. Thus, temperature will reduce, so cold weather happens at some areas, specifically at the northern & northeastern parts.

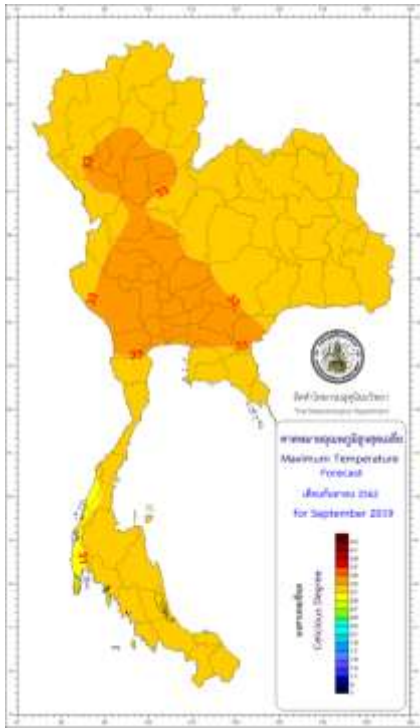
However, the Southern Thailand will still meet abundant rainfall, especially around the east coast. The reason is that the influential Northeastern Monsoon and the low-pressure trough place over the Southern Thailand and the Gulf of Thailand.

Precipitation (mm/month) and Anomaly (mm/month) Forecast:

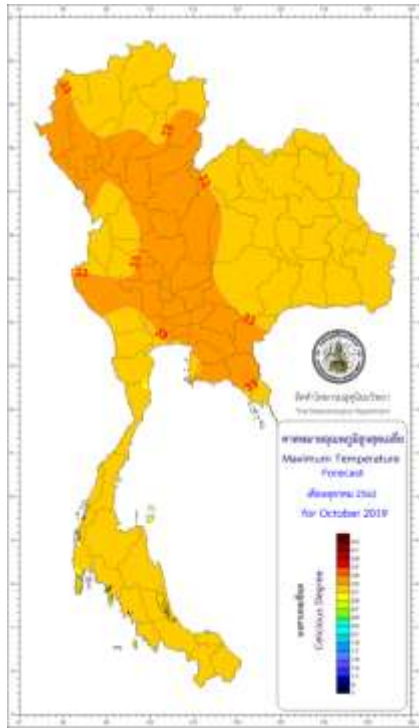


Mean Maximum Temperature (°C) and Anomaly (°C) Forecast:

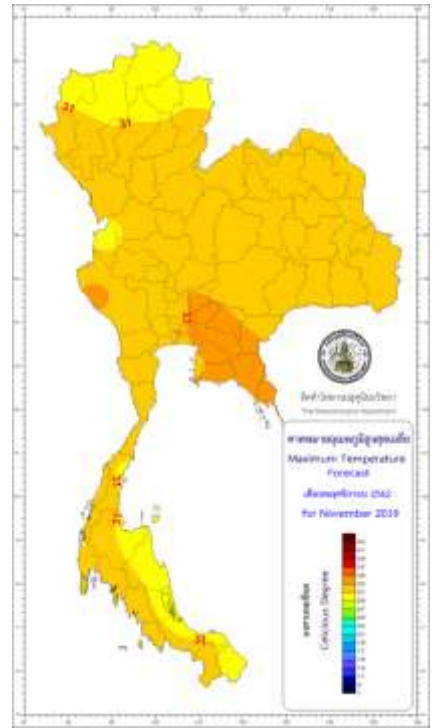
Mean maximum temperature forecast for September 2019



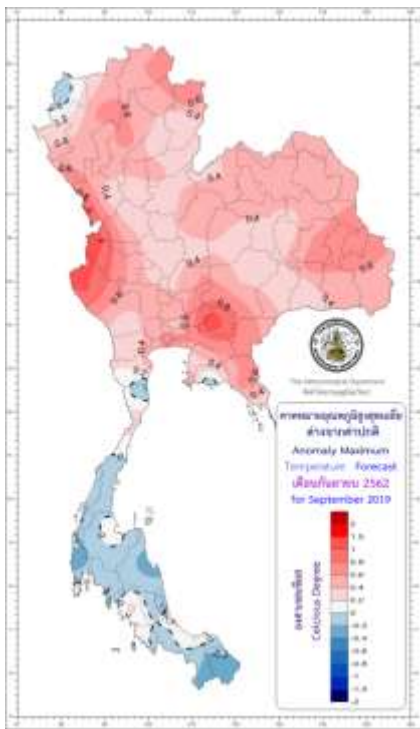
Mean maximum temperature forecast for October 2019



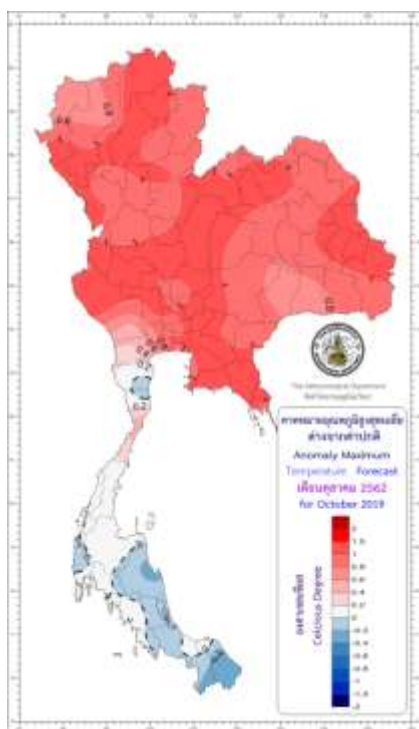
Mean maximum temperature forecast for November 2019



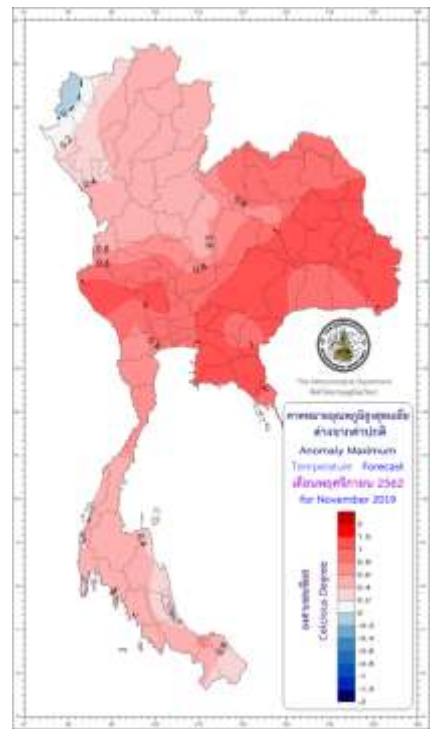
Mean maximum temperature anomaly forecast for September 2019



Mean maximum temperature anomaly forecast for October 2019

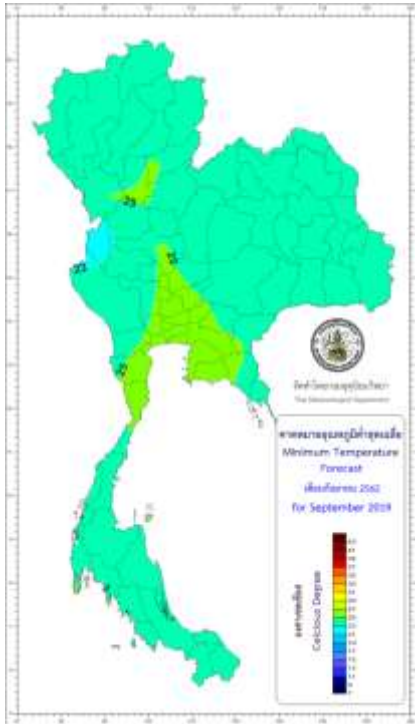


Mean maximum temperature anomaly forecast for November 2019

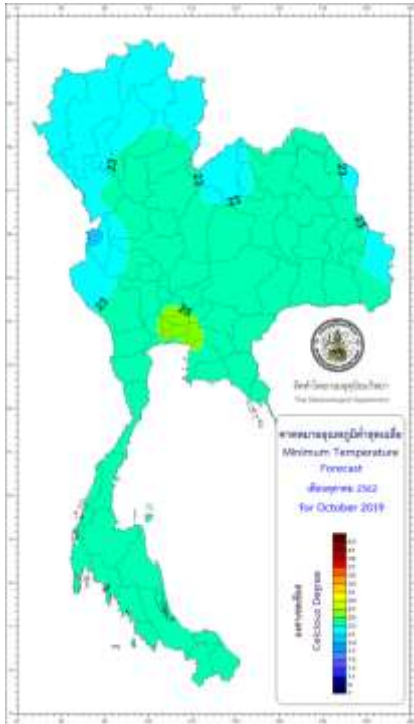


Mean Minimum Temperature (°C) and Anomaly (°C) Forecast:

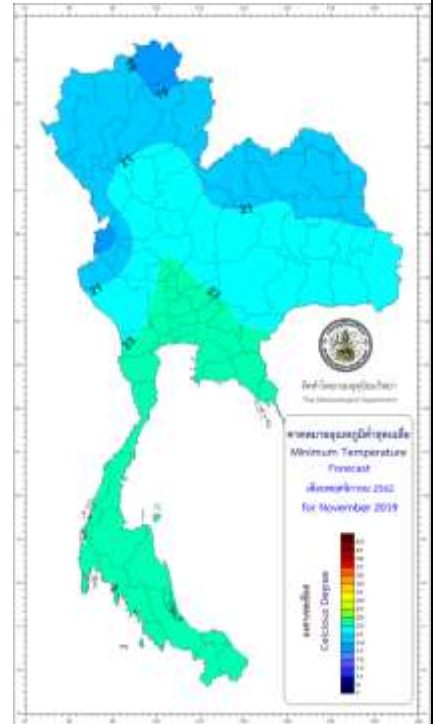
Mean minimum temperature forecast for **September 2019**



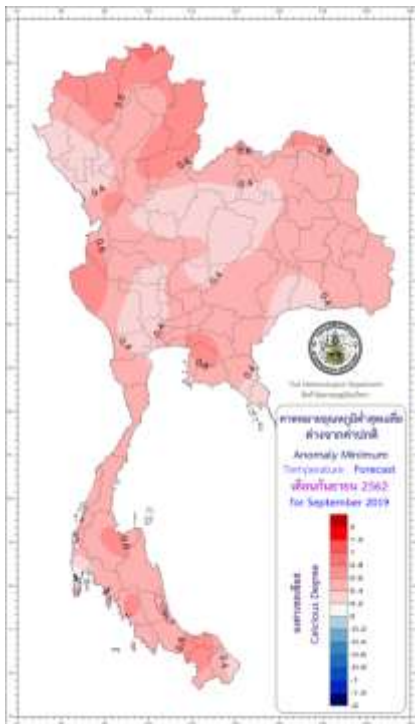
Mean minimum temperature forecast for **October 2019**



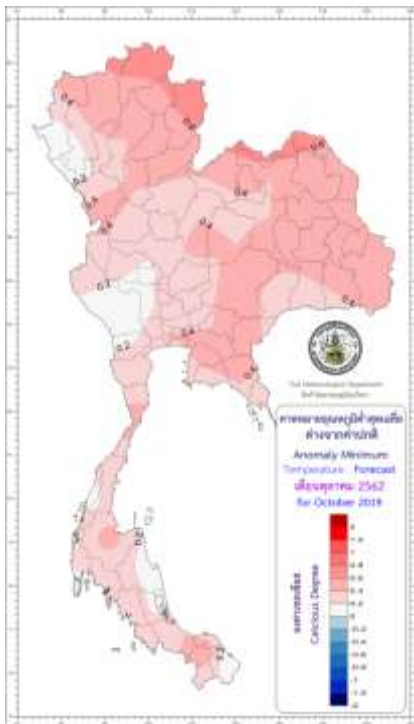
Mean minimum temperature forecast for **November 2019**



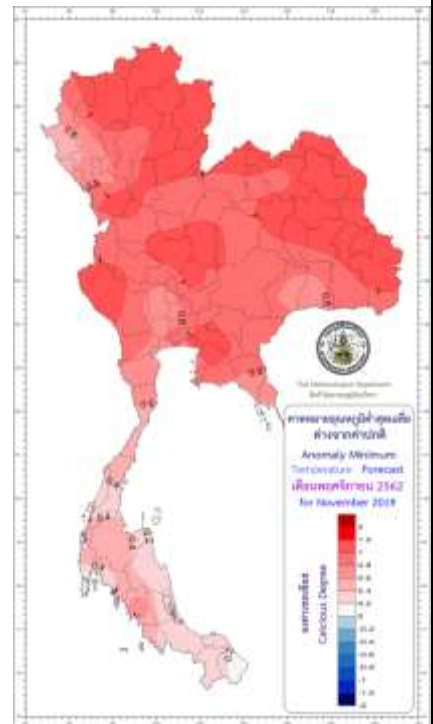
Mean minimum temperature anomaly forecast for **September 2019**



Mean minimum temperature anomaly forecast for **October 2019**



Mean minimum temperature anomaly forecast for **November 2019**



***** Caution: *****

September 2019: Some tropical cyclones often develop at the western side of the northern Pacific Ocean and move northwesterly pass the South China Sea. Consequently, Thailand will meet abundant rainfall with heavy to very heavy rain amount at some areas.

October & November 2019: Some tropical cyclones favor a high chance to pass the tip of the Indochina Peninsula and move toward or near the Southern Thailand. For this reason, the nearby passing areas of the tropical cyclones will meet densely abundant rainfall with heavy to very heavy rain amounts at some areas.

Therefore, the public should follow weather forecast news and tropical cyclone warnings from the Thai Meteorological Department further.

Below right Image source:

https://www.researchgate.net/figure/Study-area-the-Indochina-Peninsula-in-Monsoon-Southeast-Asia_fig5_296329477

The below Image illustrates 7 parts of Thailand with seasons and Monsoons or wind:

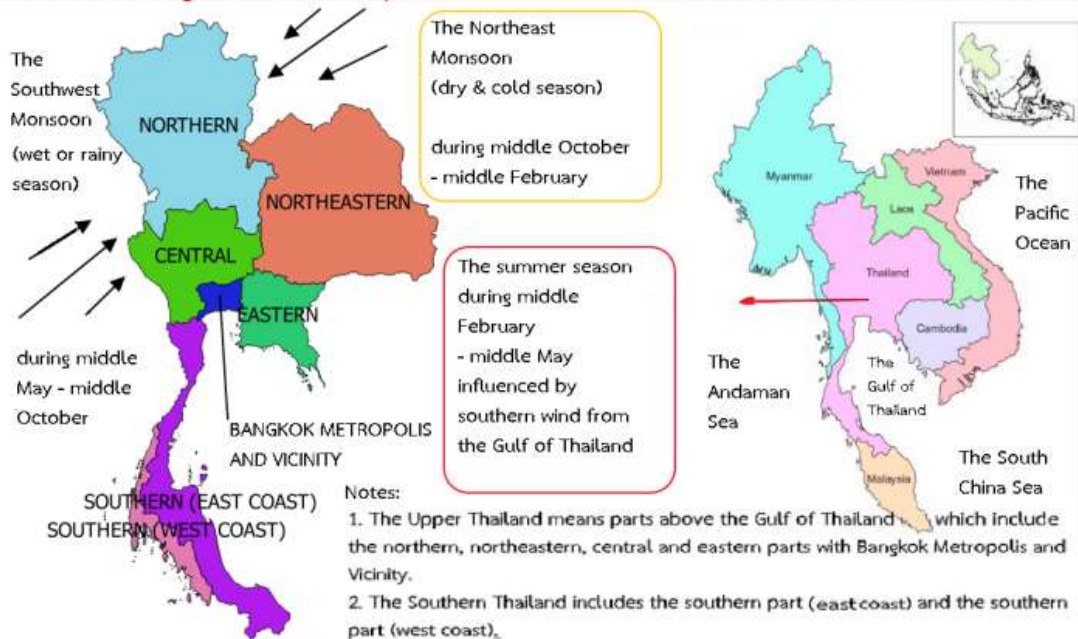


Table 1: Forecast of rain amount (millimeters: mm) comparing with normal, and rainy day (days):

Part	Forecast									Normal (Baseline period: 1981-2010)					
	September 2019			October 2019			November 2019			September		October		November	
	Rain (mm)	Rainy days	Comparing with normal	Rain (mm)	Rainy days	Comparing with normal	Rain (mm)	Rainy days	Comparing with normal	Rain (mm)	Rainy days	Rain (mm)	Rainy days	Rain (mm)	Rainy days
Northern	185-250	16-19	Near normal	90-140	10-13	5 % Below normal	20-50	2-5	Near normal	218.3	18.3	124.1	12.0	32.9	4.1
Northeastern	205-280	16-19	Near normal	80-135	8-11	5 % Below normal	10-30	1-4	Near normal	244.1	17.7	114.0	10.4	18.8	2.9
Central	200-275	17-20	Near normal	130-190	12-15	5 % Below normal	20-50	2-5	Near normal	239.5	19.2	167.1	14.4	34.4	4.1
Eastern	285-380	18-21	Near normal	180-250	14-17	5 % Below normal	30-70	4-7	Near normal	330.1	19.9	225.1	16.5	53.3	5.6
Southern Thailand (east coast)	125-175	16-19	Near normal	200-280	17-20	5 % Below normal	295-395	15-18	10 % Below normal	149.8	16.7	253.6	18.6	370.4	16.3
Southern Thailand (west coast)	370-485	21-24	Near normal	305-395	21-24	5 % Below normal	145-215	15-18	10 % Below normal	423.7	22.4	366.5	22.8	193.3	16.2
Bangkok Metropolis and Vicinity	280-330	19-22	Near normal	190-280	15-18	5 % Below normal	30-60	4-7	Near normal	318.4	21.1	246.1	17.5	47.6	5.8

Table 2: Forecast of mean maximum temperature (Tmax) and mean minimum temperature (Tmin): °C, and comparing (mean temperature: °C) with normal:

Part	Forecast									Normal (Baseline period: 1981-2010)					
	September 2019			October 2019			November 2019			September		October		November	
	Mean Tmax	Mean Tmin	Comparing with Normal	Mean Tmax	Mean Tmin	Comparing with Normal	Mean Tmax	Mean Tmin	Comparing with Normal	Mean Tmax	Mean Tmin	Mean Tmax	Mean Tmin	Mean Tmax	Mean Tmin
Northern	32-34	23-25	Above normal	32-34	22-24	Above normal	30-33	19-22	Above normal	32.2	23.5	31.9	22.5	31.0	19.5
Northeastern	31-33	24-25	Above normal	31-34	22-24	Above normal	30-33	20-23	Above normal	31.9	24.0	31.4	22.8	30.7	20.1
Central	32-34	24-26	Above normal	32-34	23-25	Above normal	32-34	21-24	Above normal	32.9	24.5	32.4	24.0	31.9	22.2
Eastern	31-33	24-26	Above normal	32-34	23-25	Above normal	32-34	23-25	Above normal	31.9	24.7	32.0	24.1	32.1	23.0
Southern Thailand (east coast)	31-33	24-25	Near normal	31-32	22-24	Near normal	30-32	23-25	Above normal	32.3	24.1	31.4	23.8	30.3	23.4
Southern Thailand (west coast)	30-32	23-25	Near normal	30-32	23-25	Near normal	31-33	23-25	Above normal	31.1	23.9	31.2	23.7	31.4	23.5
Bangkok Metropolis and Vicinity	32-34	25-27	Above normal	32-35	24-26	Above normal	32-34	24-26	Above normal	32.8	25.0	32.6	24.8	32.4	23.9

Remarks: 1) Normal means average during the 30-year period (A.D. 1981 – 2010 or B.E. 2524 – 2553). 2) This long-range climate forecast is created by applying some climate models and statistical methods, the public then should follow the daily weather forecast news from the Thai Meteorological Department for more accuracy further.

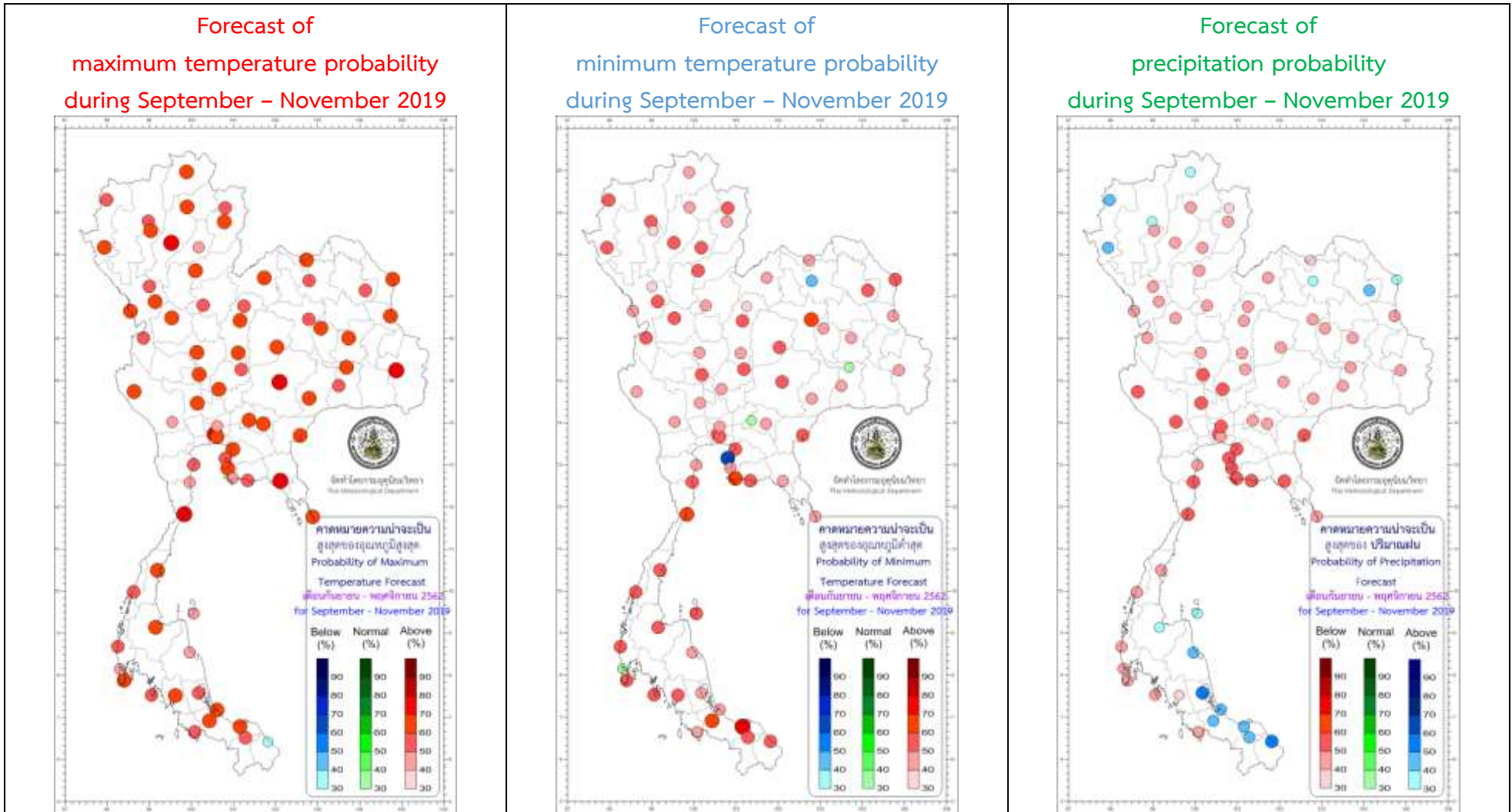
3) The next 3-month climate forecast will be published online before the end of next month.

4) Further enquiry of monthly climate, 3-month climate and seasonal forecasts can be preceded at Tel: (662)-398-9929 or Fax: (662)-383-8827.

5) Also, please follow monthly climate, 3-month climate and seasonal forecasts at www.tmd.go.th/en at the climate tab.

Climate Center, Meteorological Development Division,
Thai Meteorological Department,
Ministry of Digital Economy and Society

Point probability forecast maps of **maximum** and **minimum** temperature, and **precipitation**
 (Point maps for probability percentage (%) of: below normal, near normal or **above normal**)



Note: These maps are mean model forecasts for being included in this three-month climate forecast.