



Three-month Climate Prediction of Thailand

During August – October 2019

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MINISTRY OF DIGITAL ECONOMY AND SOCIETY,
THAI METEOROLOGICAL DEPARTMENT

Climate Outlook

1. During the next three months, the total rain at central and eastern parts, the Southern Thailand (both east and west coasts) with Bangkok Metropolis and Vicinity would be 5% below normal.

In other words, the total rain of the central part is to be about 495-595 millimeters (mm, normal: 578 mm) whereas that of the eastern part is to be about 740- 885 mm (normal: 858 mm). Moreover, the total rain of the Southern Thailand (east coast) is to be about 450-560 mm (normal: 528 mm) while that of the Southern Thailand (west coast) is to be about 1,020 – 1,240 mm (normal: 1.189 mm) whereas that of Bangkok Metropolis and Vicinity is to be about 675-790 mm (normal: 768 mm).

Furthermore, the total rain of northern and northeastern parts would be near normal. In fact, the total rain of the northern part is to be about 510-620 mm (normal: 565 mm) whereas that of the northeastern part is to be 570-695 mm (normal: 632 mm).

Meanwhile, the mean temperature of Thailand would be above normal as the mean maximum temperature is to be 31-33 °C (normal: 32.3 °C) and the mean minimum temperature is to be 23-25 °C (normal: 24.2 °C).

2. In August 2019, the total rain around the northern part would be 10% above normal while that of the northeastern part and the Southern Thailand (west coast) is to be 5% above normal.

However, the total rain of the central and eastern parts including with that of Bangkok Metropolitan and Vicinity is to be 5% below normal. Additionally, the total rain of the Southern Thailand (east coast) would be near normal.

In detail, the total rain of each part would be about as follows: the northern part: 210-280 mm, the northeastern part: 250-330 mm, the central part: 140-190 mm, the eastern part: 250-330 mm, the Southern Thailand (east coast): 100-150 mm, the Southern Thailand (west coast): 350-490 mm, and Bangkok Metropolis and Vicinity: 160-240 mm.

Meanwhile, the mean temperature of Thailand would be mostly near normal except that of the eastern part and the Southern Thailand (east coast) together with Bangkok Metropolis and Vicinity is to be above normal. In fact, the mean maximum temperature of Thailand is to be 31-34 °C whereas the mean minimum temperature of Thailand is to be 24-26 °C.

3. In September 2019, the total rain around Thailand would be mostly near normal except that of the Southern Thailand (both east and west coasts) is to be 5% below normal.

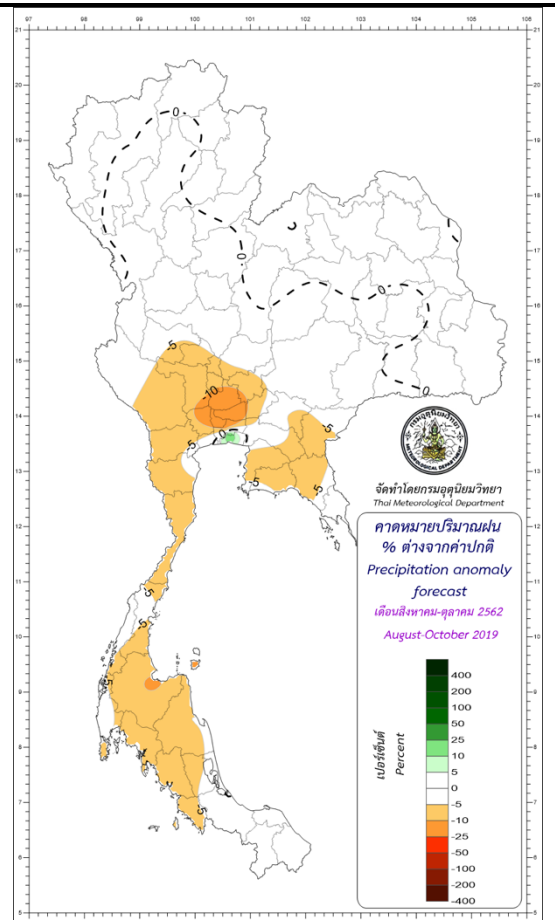
In detail, the total rain of all parts are approximate as follows: the northern part: 190-260 mm, the northeastern part: 220-300 mm, the central part: 200-280 mm, the eastern part: 280-380 mm, the Southern Thailand (east coast): 120-170 mm, the Southern Thailand (west coast): 340-460 mm, and Bangkok Metropolis and Vicinity: 290-350 mm.

Meanwhile, the mean temperature of Thailand would be mostly above normal except that of the northern part is to be near normal. In fact, the mean maximum temperature is to be 32-34 °C while the mean minimum temperature is to be 24-26 °C.

4. In October 2019, the total rain around Thailand would be 10% below normal. In detail, the total rain of each part is to be about the following: the northern part: 80-140 mm, the northeastern part: 70-130 mm, the central part: 120-180 mm, the eastern part: 170-240 mm, the Southern Thailand (east coast): 190-270 mm, the Southern Thailand (west coast): 290-370 mm, and Bangkok Metropolis and Vicinity: 190-260 mm.

Meanwhile, the mean temperature of Thailand would be near normal whereas the mean maximum temperature of Thailand is to be 32-34 °C while the mean minimum temperature of Thailand is to be 23-25 °C.

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



Thailand climate for August-September-October 2019 from 30-year normal (A.D. 1981-2010 or B.E. 2524-2553 baseline average)

August 2019: Commonly, densely abundant rainfall often occurs at this month with more monthly rain amount than previous months each year. The reason is that the low-pressure trough places on the northern and northeastern parts of Thailand along with the prevailing Southwest Monsoon over Thailand becomes more active periodically. Additionally, some tropical cyclones may move closer or toward the upper portion of both of the northern and northeastern parts more than other parts.

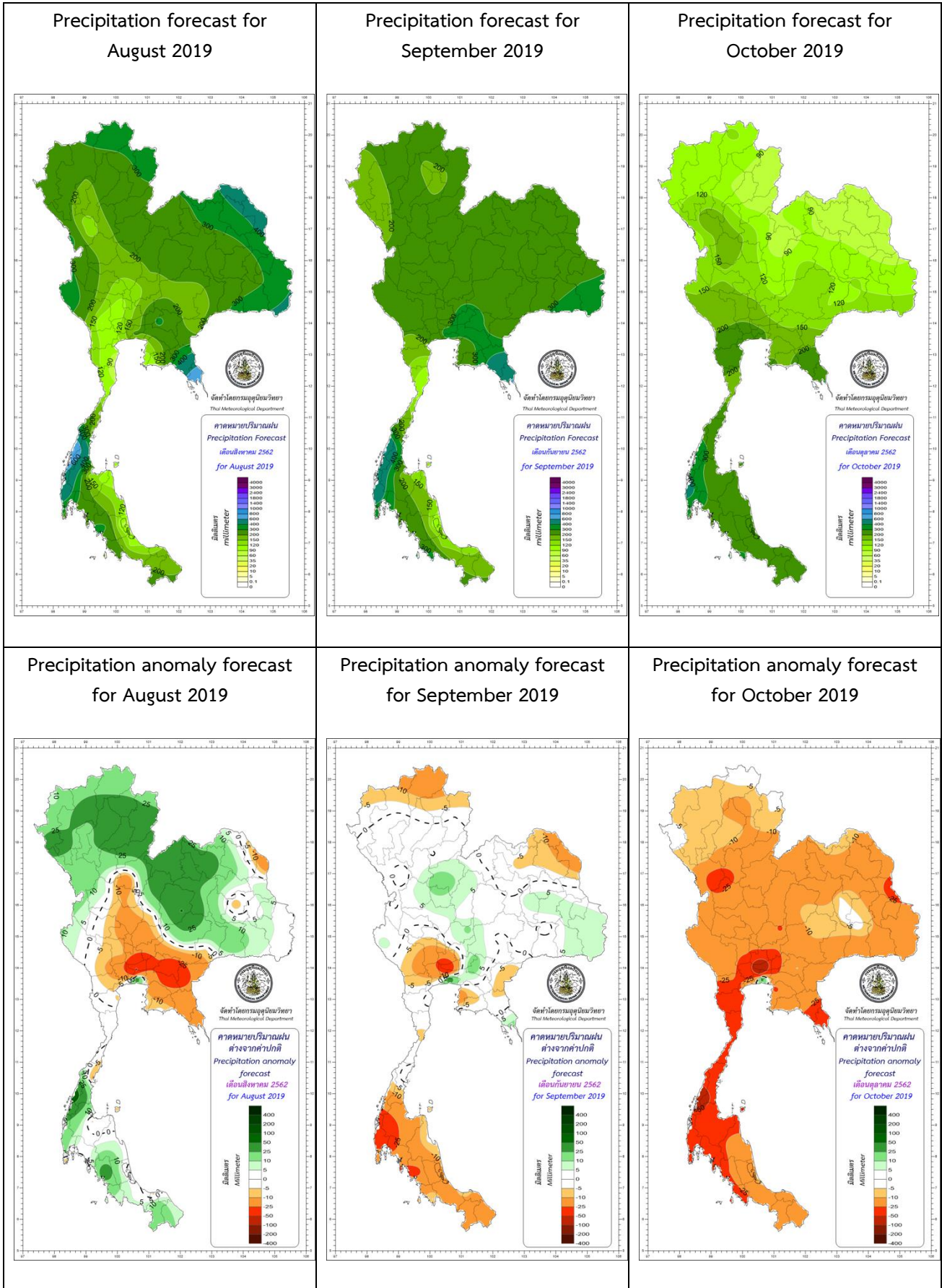
September 2019: Thailand will meet densely abundant rainfall. In fact, most areas will be affected by the most abundant monthly rainfall from the whole year. The reason is that the influential low-pressure trough places on the central portion of Thailand along with the Southwest Monsoon prevails over Thailand. Besides, some tropical cyclones may move to dissipate near or toward Thailand directly, specifically at the eastern portion of the country.

October 2019: 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 still meets densely abundant rainfall.

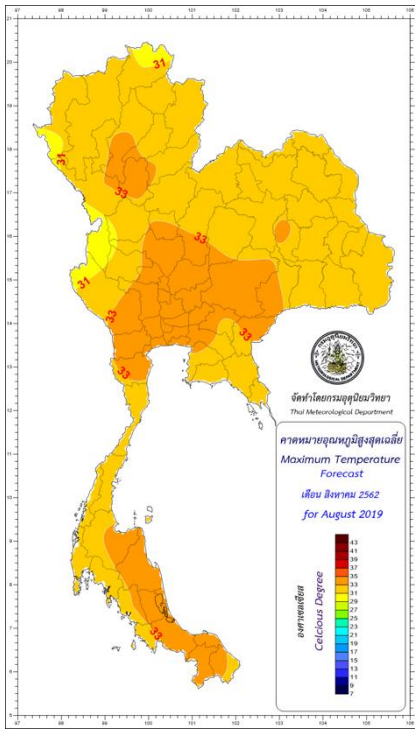
In addition, some tropical cyclones may move near or toward Thailand at the eastern portion of the country; their moving could be successive toward the upper portion of the Gulf of Thailand and the Southern Thailand further.

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

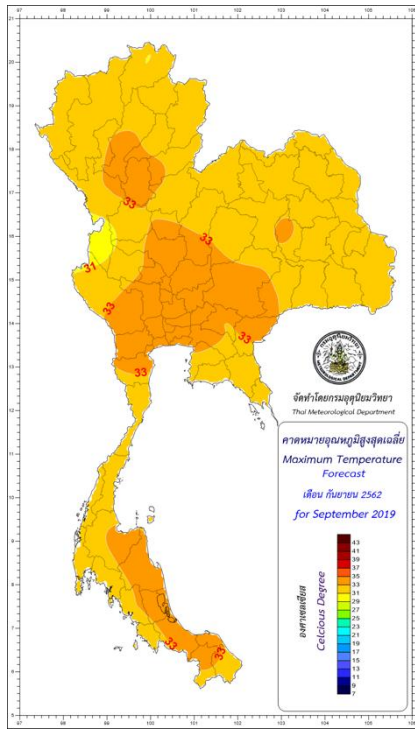


Mean Maximum Temperature (°C) and Anomaly (°C) Forecast:

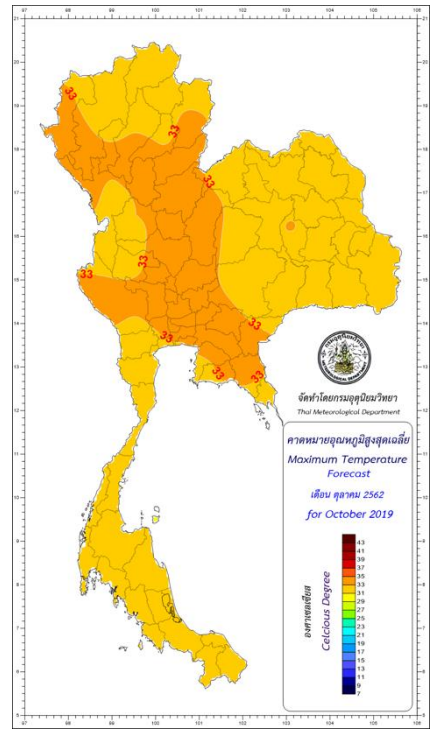
Mean maximum temperature forecast for August 2019



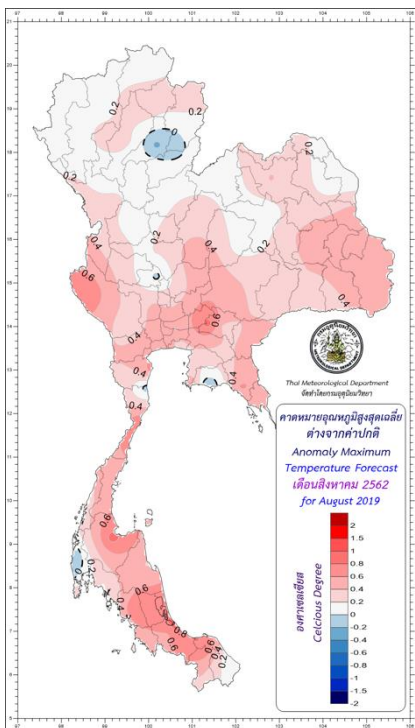
Mean maximum temperature forecast for September 2019



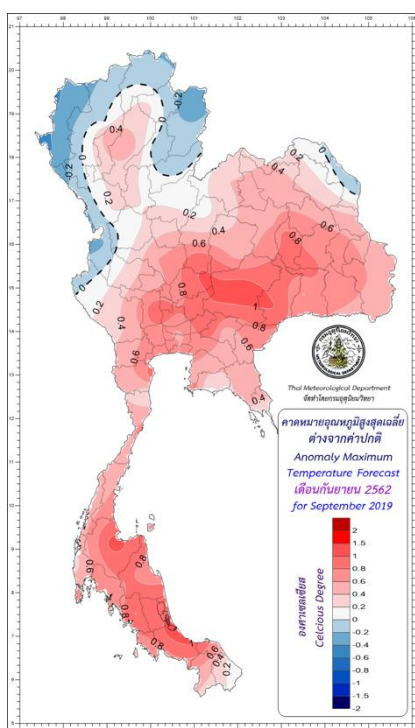
Mean maximum temperature forecast for October 2019



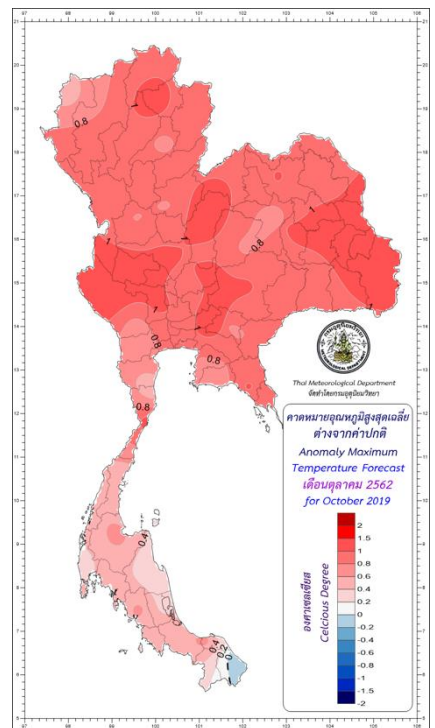
Mean maximum temperature anomaly forecast for August 2019



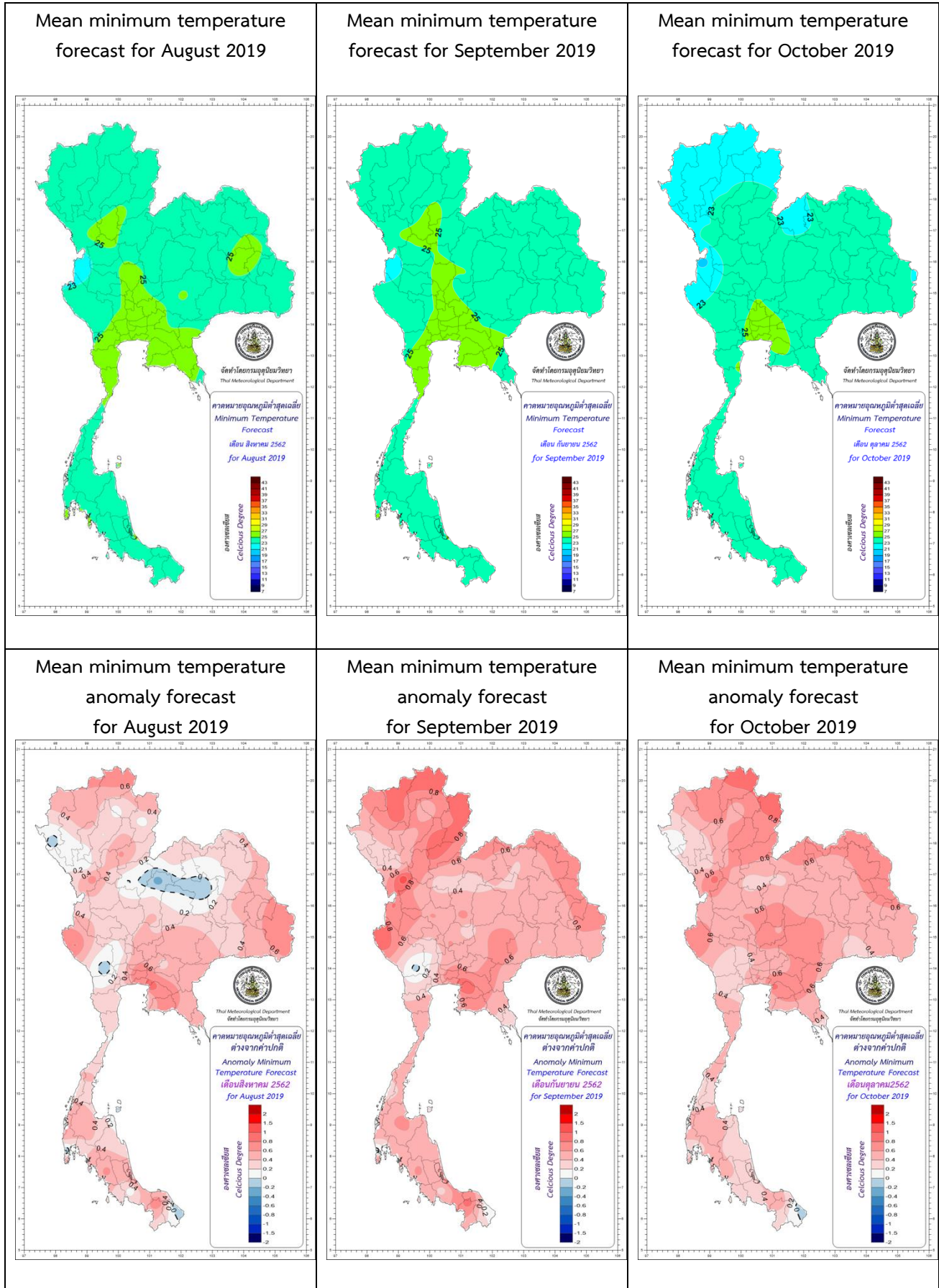
Mean maximum temperature anomaly forecast for September 2019



Mean maximum temperature anomaly forecast for October 2019



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



*** Caution: ***

August and September 2019: Some tropical cyclones may develop at the western side of the northern Pacific Ocean and move northwesterly pass the South China Sea. They favor a high chance to pass the Upper Thailand causing Thailand to meet dense rainfall with heavy to very heavy rain amount at many areas, especially around the areas where the tropical cyclones move trough. Consequently, flash and forest flood with overflow will inundate at many areas.

October 2019: Some tropical cyclones favor a high chance to pass the tip of the Indochina Peninsula toward or near the Southern Thailand. Thus, the Southern Thailand and nearby areas 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.

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:

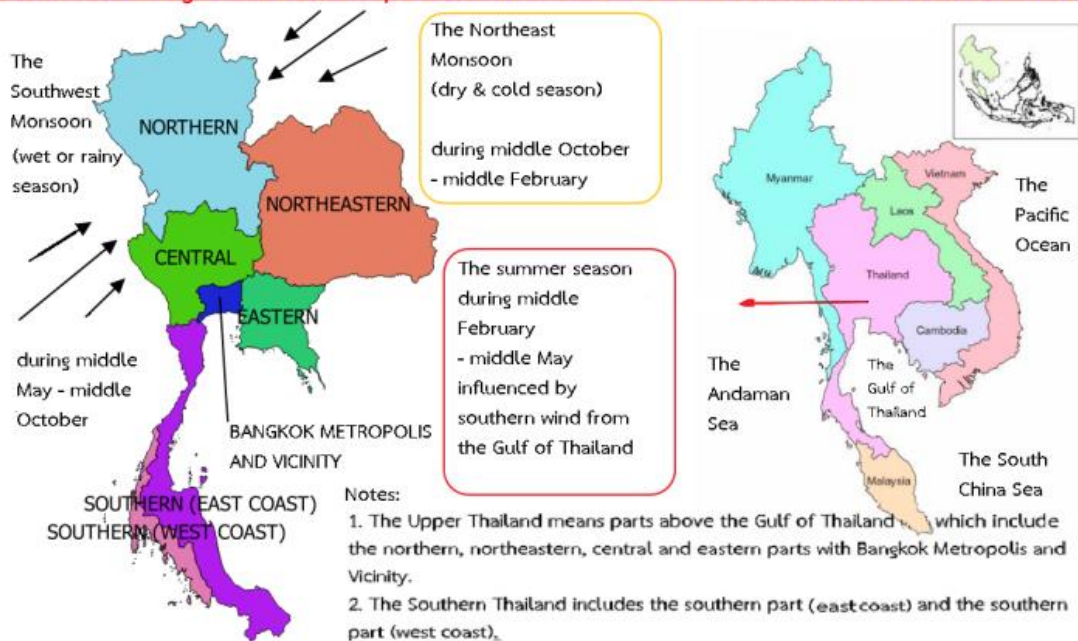


Table 1: Forecast of rain amount (millimeters: mm) comparing with normal, and rainy day (days):

Part	Forecast									Normal (Baseline period: 1981-2010)					
	August 2019			September 2019			October 2019			August		September		October	
	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	210-280	20-23	10 % Above normal	190-260	16-19	Near normal	80-140	10-13	10 % Below normal	223.0	21.0	218.3	18.3	124.1	12.0
Northeastern	250-330	18-21	10 % Above normal	220-300	16-19	Near normal	70-130	8-11	10 % Below normal	266.2	19.4	242.0	17.7	117.1	10.4
Central	140-190	17-20	5 % Below normal	200-280	18-21	Near normal	120-180	12-15	10 % Below normal	181.1	18.2	257.3	19.2	187.1	14.4
Eastern	250-330	17-20	5 % Below normal	280-380	18-21	Near normal	170-240	14-17	10 % Below normal	302.5	18.4	330.1	19.9	225.1	16.5
Southern Thailand (east coast)	100-150	14-16	Near normal	120-170	16-19	5 % Below normal	190-270	16-19	10 % Below normal	124.1	15.4	149.8	16.7	255.3	18.6
Southern Thailand (west coast)	350-490	18-22	5 % Above normal	340-460	21-24	5 % Below normal	290-370	21-24	10 % Below normal	398.5	20.5	423.7	22.4	366.5	22.8
Bangkok Metropolis and Vicinity	160-240	18-21	5 % Below normal	290-350	20-23	Near normal	190-260	15-18	10 % Below normal	211.3	19.1	334.3	21.1	292.1	17.5

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)					
	August 2019			September 2019			October 2019			August		September		October	
	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	31-33	23-25	Near normal	32-34	23-25	Near normal	32-34	22-24	Above normal	31.8	23.8	32.2	23.5	31.9	22.5
Northeastern	31-33	23-25	Near normal	31-33	23-25	Above normal	31-34	22-24	Above normal	32.2	24.4	31.9	24.0	31.4	22.8
Central	32-35	24-26	Near normal	33-35	24-26	Above normal	32-34	23-25	Above normal	33.1	24.8	32.9	24.7	32.4	24.2
Eastern	31-33	25-27	Above normal	31-34	24-26	Above normal	32-34	24-26	Above normal	32.0	25.3	31.9	24.7	32.0	24.1
Southern Thailand (east coast)	32-35	23-25	Above normal	32-34	23-25	Above normal	31-33	23-25	Above normal	32.8	24.2	32.3	24.1	31.4	23.8
Southern Thailand (west coast)	31-33	24-26	Near normal	31-33	23-25	Above normal	31-33	23-25	Above normal	31.5	24.4	31.1	23.9	31.2	23.7
Bangkok Metropolis and Vicinity	32-34	25-27	Above normal	32-35	25-27	Above normal	32-34	24-26	Above normal	33.0	25.5	32.8	25.0	32.6	24.8

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.

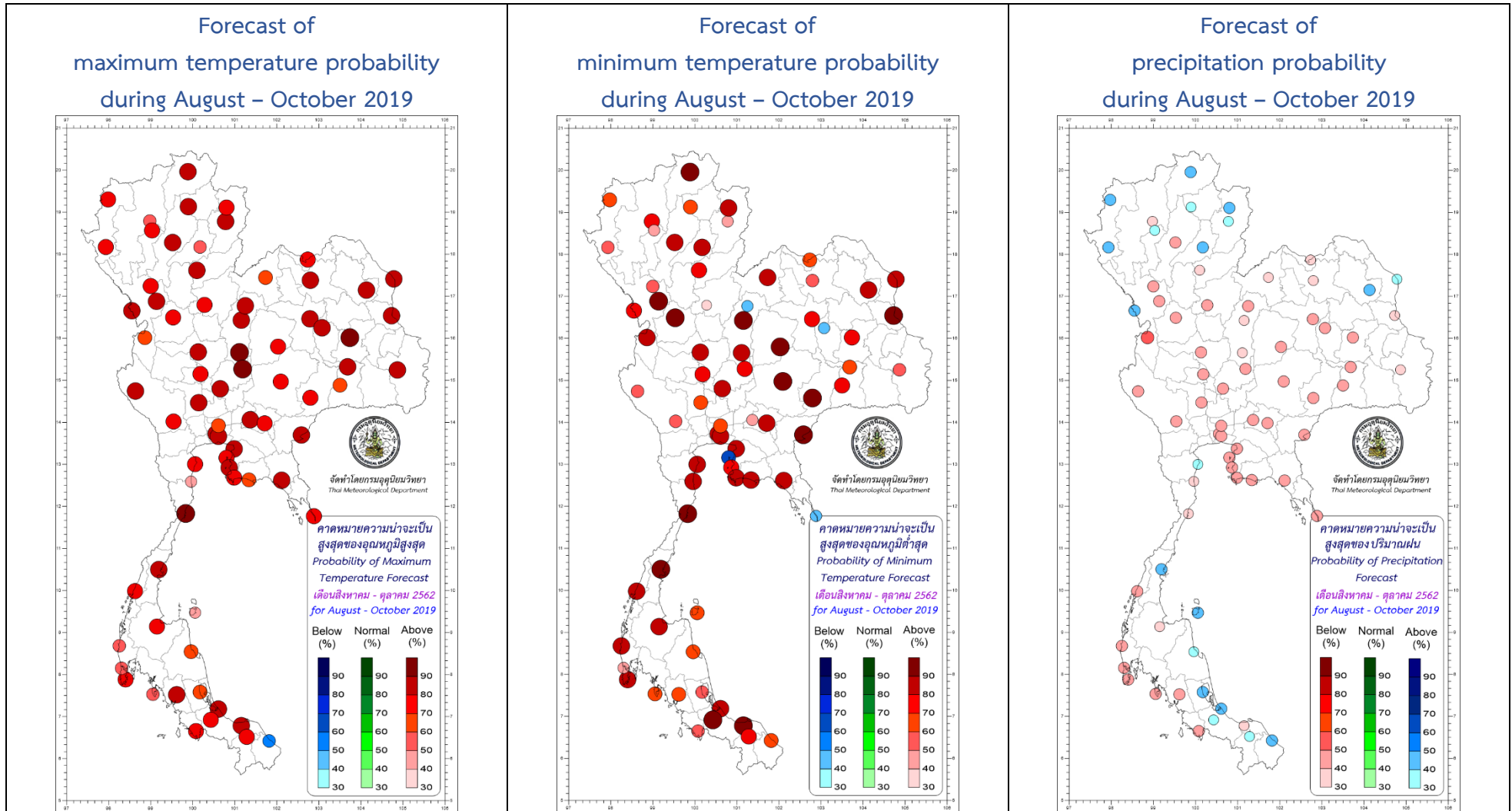
3) The next 3-month climate forecast will be published online before the end of next month.

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.