



# Three-month Climate Prediction of Thailand

During November 2019 – January 2020

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THAI METEOROLOGICAL DEPARTMENT

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## 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 about 40% below normal.

In detail, the total rain of the northern part is to be about 15 - 50 mm (normal: 46 mm) whereas that of the northeastern, eastern and central parts is to be about 10 - 30 mm (normal: 27 mm), 30 - 75 mm (normal: 77 mm), 20 - 40 mm (normal: 44 mm) consecutively while that of Bangkok Metropolis and Vicinity is to be about 35 - 55 mm (normal: 66 mm).

For the Southern Thailand (east & west coasts), the total rain would be about 10% below normal. In detail, the total rain of the Southern Thailand (east coast) is to be about 535 - 745 mm (normal: 702 mm) whereas that of the Southern Thailand (west coast) is to be about 215 - 320 mm (normal: 295 mm).

Meanwhile, the mean temperature of the Upper Thailand would be about 1 °C above normal while that of the Southern Thailand is to be near normal. For the whole country, the mean maximum temperature is to be 32 - 33 °C (normal: 31.2 °C) while the mean minimum temperature is to be 21 - 22 °C (normal: 20.8 °C).

**2. In November 2019,** the total rain around the northern and northeastern part of Thailand would be 30% below normal while that of the eastern part, central part and Bangkok Metropolis and Vicinity would be 20% below normal. However, the total rain of the Southern Thailand (both east and west coasts) would be near normal.

In detail, the total rain of each part is to be about as follows: the northern part: 15 - 35 mm, the northeastern part: 10 - 20 mm, the central part: 20 - 30 mm, the eastern part: 30 - 60 mm, the Southern Thailand (east coast): 305 - 445 mm, the Southern Thailand (west coast): 165 - 230 mm, and Bangkok Metropolitan and Vicinity: 35 - 45 mm.

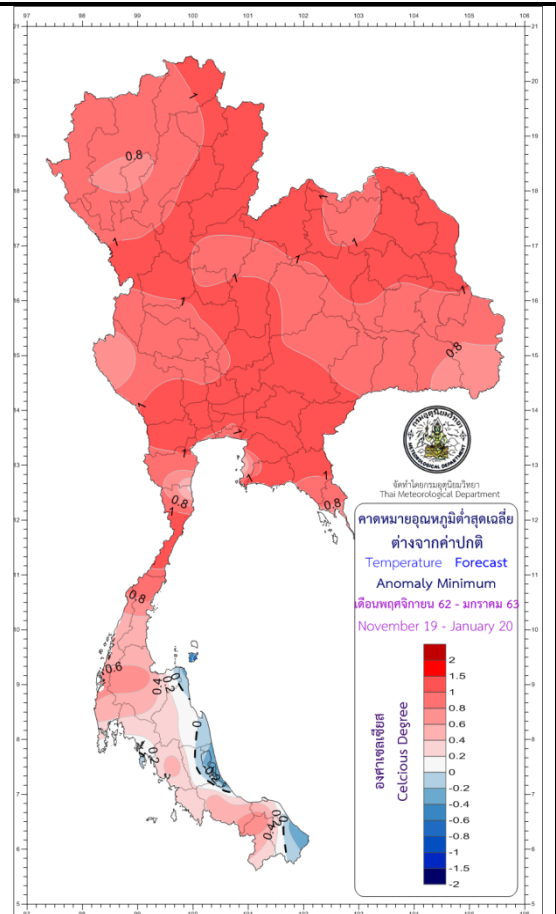
Meanwhile, the mean temperature of the Upper Thailand would be mostly about 1 °C above normal while the Southern Thailand (east & west coasts) is to be near normal. In detail, the mean maximum and minimum temperature of Thailand is to be 31 - 33 °C and 22 - 24 °C accordingly.

**3. In December 2019,** the total rain around the Upper Thailand would be less than 10 mm each parts while that of the Southern Thailand (both east and west coasts) would be about 20% below normal. In detail for the Southern Thailand (east coast) the total rain around 170 - 270 mm and the Southern Thailand (west coast) around 45 - 80 mm

Meanwhile, the mean temperature of the Upper Thailand would be mostly about 1 °C above normal while the Southern Thailand (east & west coasts) is to be near normal. In detail, the mean maximum and minimum temperature of Thailand is to be 30 - 33 °C and 19 - 22 °C accordingly.

**4. In January 2020,** the total rain around the Upper Thailand would be less than 10 mm each parts while that of the Southern Thailand (both east and west coasts) would be near normal. In detail for the Southern Thailand (east coast) the total rain around 50 - 95 mm and the Southern Thailand (west coast) around 20 - 40 mm

Meanwhile, the mean temperature of the Upper Thailand would be mostly about 1 °C above normal while 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 19 - 22 °C accordingly.



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

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

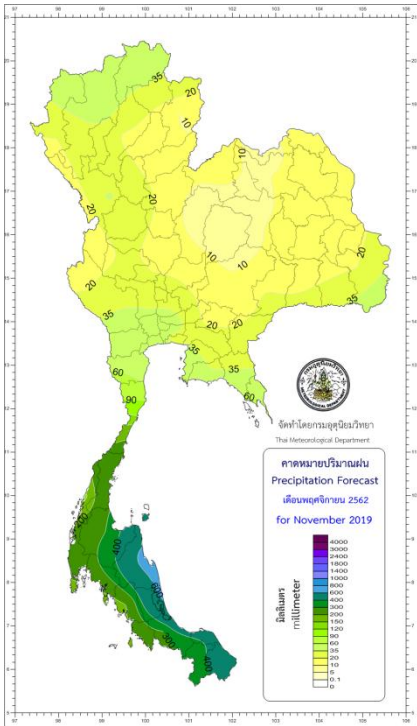
**November:** The Upper Thailand will meet much reducing rain with cool weather for this whole month. The reason is that the influential high-pressure air mass areas from China will actively prevail over the Upper Thailand periodically. Thus, temperature will reduce, so cold weather happens at some areas,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

**December:** Usually, the actively cold or high-pressure air mass areas from China will prevail over the whole of Thailand periodically. As a result, the temperature of the Upper Thailand will reduce to happen as commonly chilly weather, specifically at the upper portion of the northern and northeastern parts together with feasibly very cold weather at mountainous areas and mount tops. For the Southern Thailand, abundant rainfall will mostly appear during the 1st half of this month, especially along the east coast. The reason is that the influential Northeast Monsoon prevails over the Southern Thailand and the Gulf of Thailand. Nevertheless, some tropical cyclones may feasibly move near or toward the Southern Thailand, specifically around the lower portion during this month.

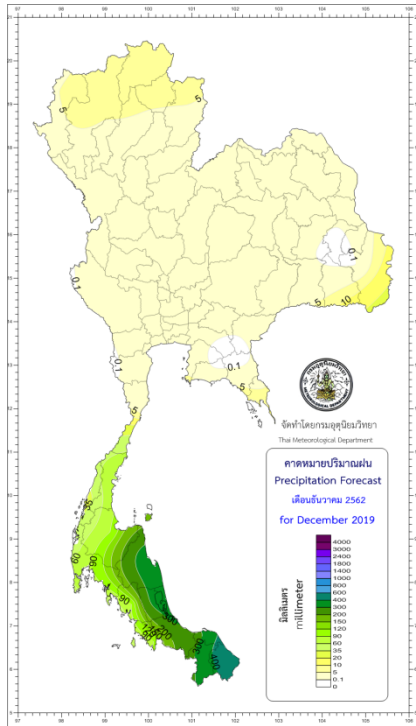
**January:** Cold weather appears because the influential high-pressure air mass prevailing over Thailand for the whole month. In fact, most of Thailand will meet the lowest reducing temperature in this month appearing as commonly chilly weather, specifically at the northern and northeastern parts along with mount tops. Additionally, morning fog occurs while the central and eastern parts will meet cool weather. Furthermore, the Southern Thailand will not meet much chilly weather except at the upper portion because of surrounding seas at both sides.

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

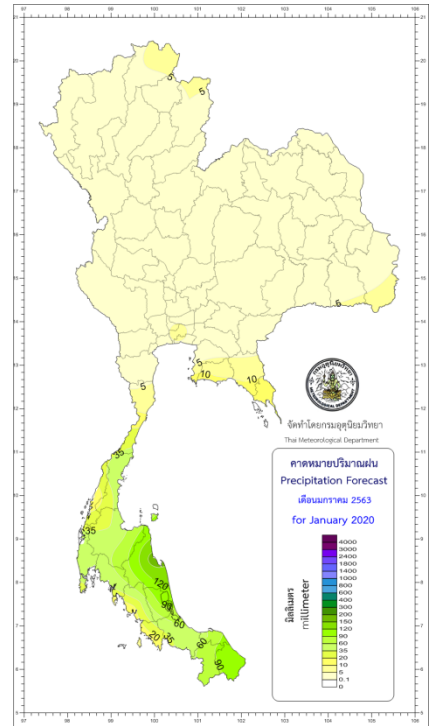
Precipitation forecast for  
November 2019



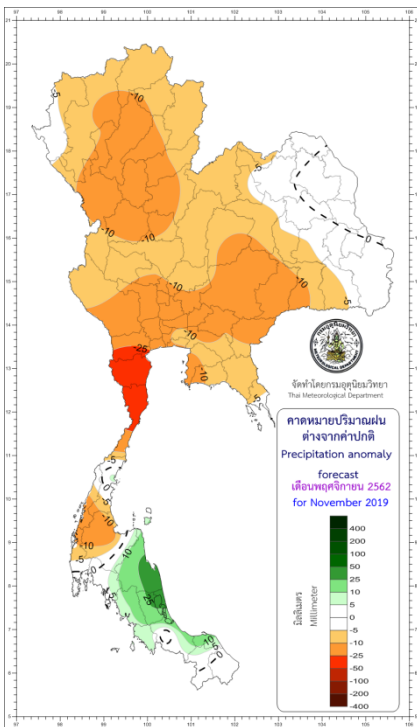
Precipitation forecast for  
December 2019



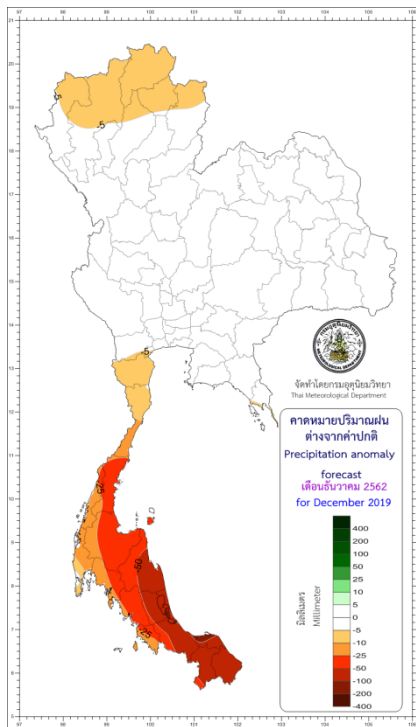
Precipitation forecast for  
January 2020



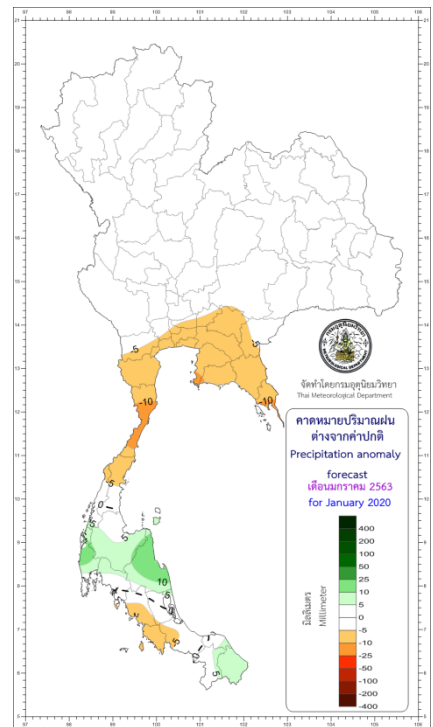
Precipitation anomaly forecast for  
November 2019



Precipitation anomaly forecast for  
December 2019

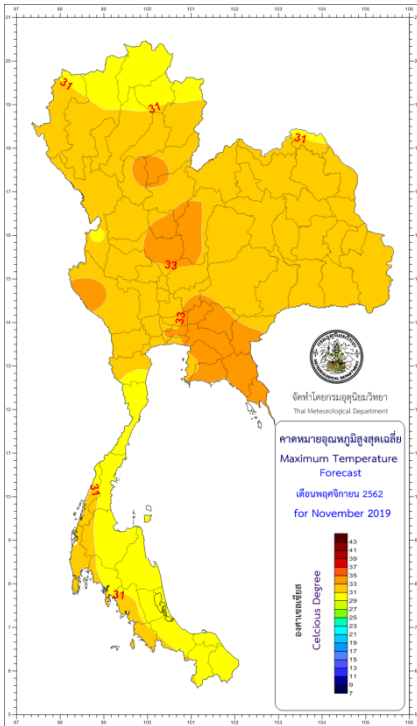


Precipitation anomaly forecast for  
January 2020

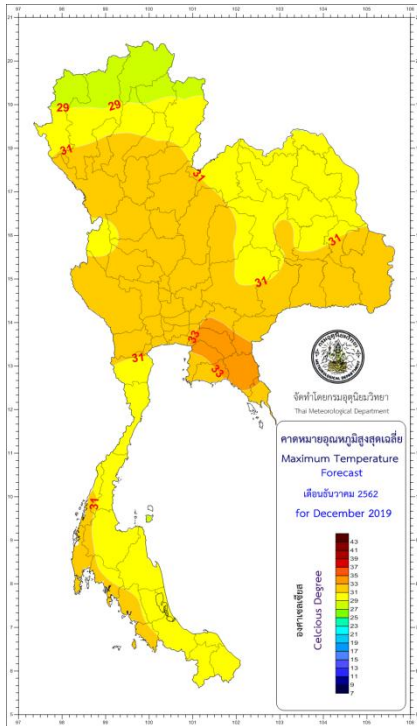


Mean Maximum Temperature (°C) and Anomaly (°C) Forecast:

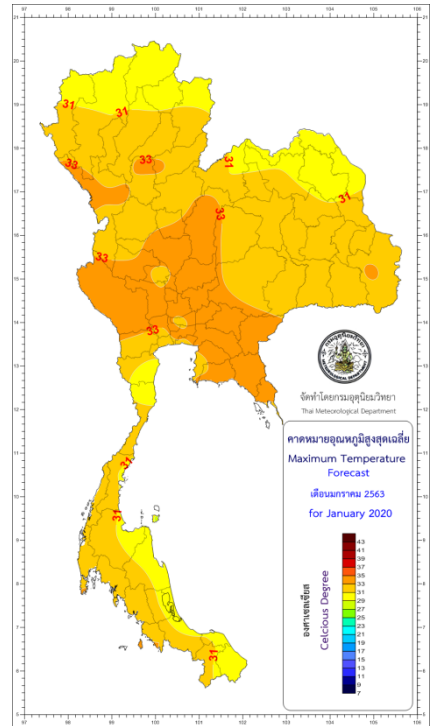
Mean maximum temperature forecast for November 2019



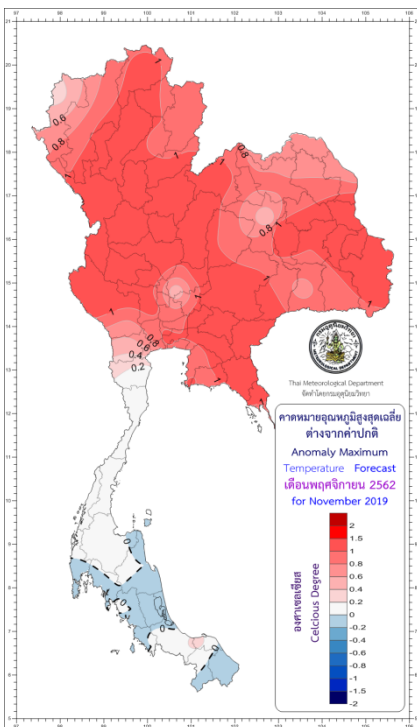
Mean maximum temperature forecast for December 2019



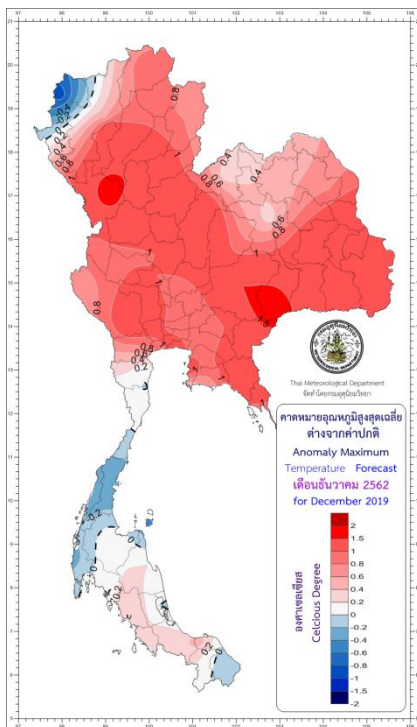
Mean maximum temperature forecast for January 2020



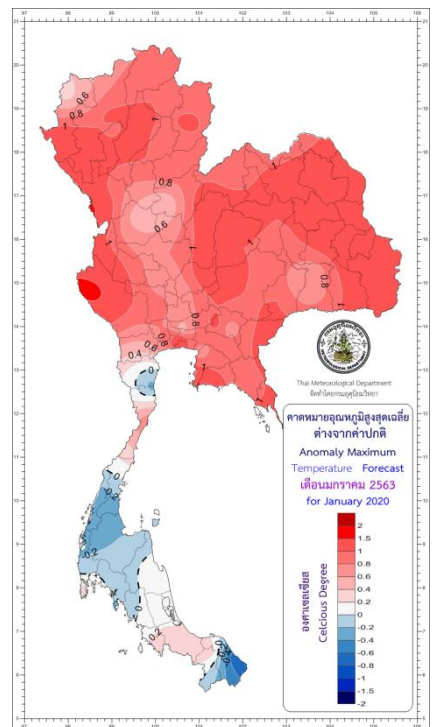
Mean maximum temperature anomaly forecast for November 2019



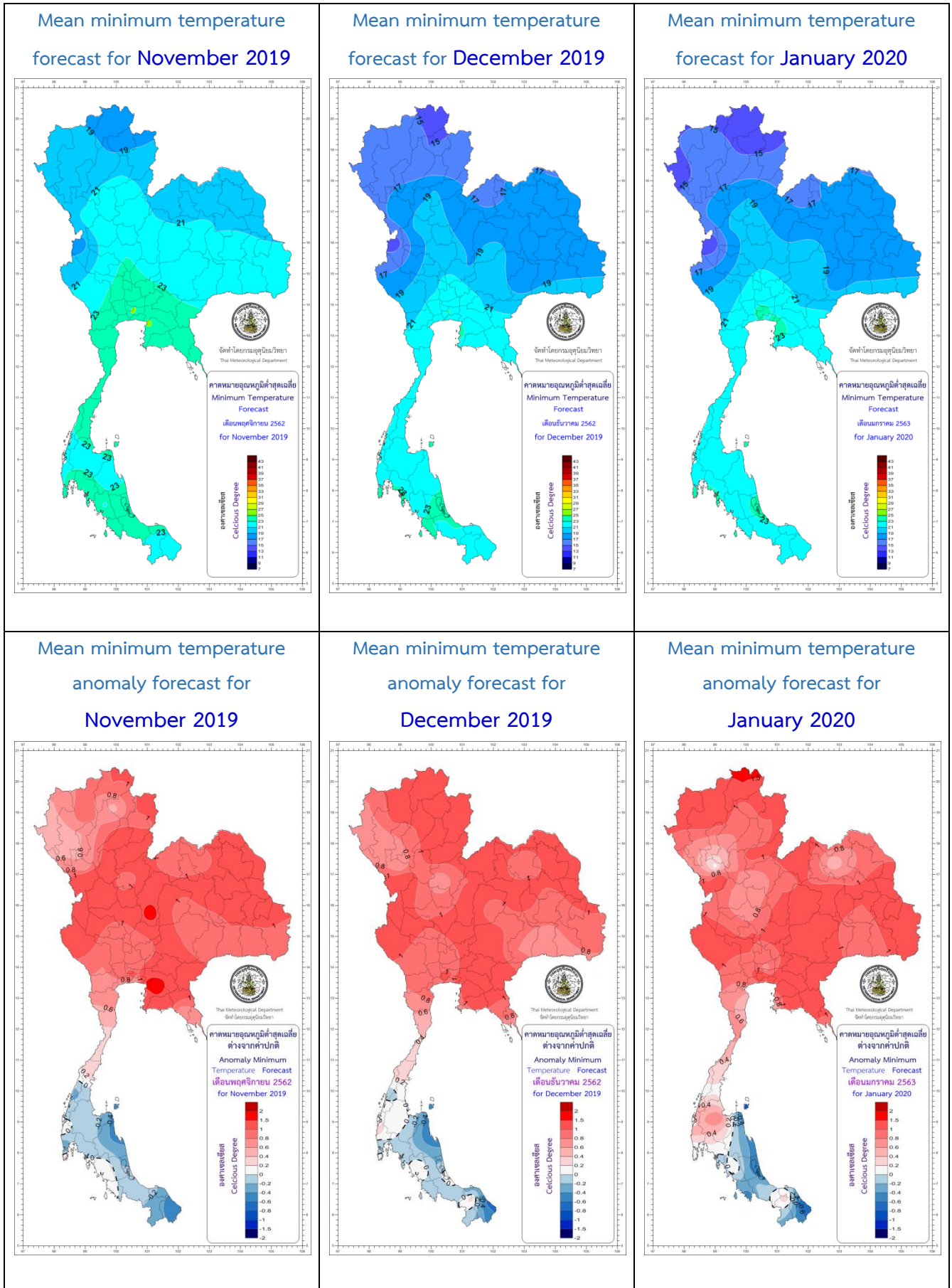
Mean maximum temperature anomaly forecast for December 2019



Mean maximum temperature anomaly forecast for January 2020



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



\*\*\* Caution: \*\*\*

November 2019: Some tropical cyclones favor a high chance to move near Thailand or pass the Southern Thailand. They will pass the tip of the Indochina Peninsula toward the Gulf of Thailand influencing the Southern Thailand (East Coast) to meet increasing rainfall. As a result, flash or forest flood may happen at some areas.

December 2019 & January 2020: Some westerly wind waves from Myanmar may pass the Upper Thailand causing the area to meet thunder rain, gusty wind at some areas and possibly falling hail. The public then should follow weather forecast news from the Thai Meteorological Department closely.

Below right Image source:

[https://www.researchgate.net/figure/Study-area-the-Indochina-Peninsula-in-Monsoon-Southeast-Asia\\_fig5\\_296329477](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:

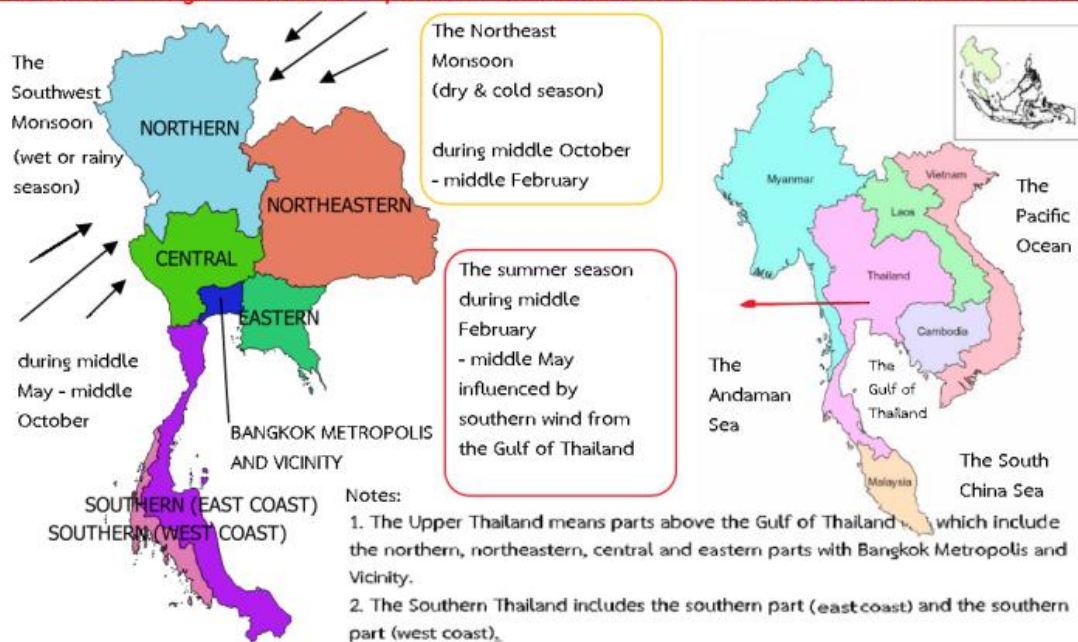


Table 1: Forecast of rain amount (millimeters: mm) comparing with normal, and rainy day (days):

PART	Forecast									Normal (Baseline period: 1981-2010)					
	November 2019			December 2019			January 2020			November		December		January	
	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	15-35	2-5	30 % Below normal	0-10	1-2	50 % Below normal	0-10	1-2	50 % Below normal	32.9	4.1	8.2	1.2	4.6	1.0
Northeastern	10-20	1-4	30 % Below normal	0-10	1-2	50 % Below normal	0-10	1-2	50 % Below normal	18.8	2.9	3.5	0.8	4.9	1.1
Central	20-30	2-5	30 % Below normal	0-10	1-2	50 % Below normal	0-10	1-2	50 % Below normal	34.4	4.1	5.1	1.0	4.7	1.1
Eastern	30-60	4-7	20 % Below normal	5-15	1-3	50 % Below normal	0-10	1-2	50 % Below normal	53.3	5.6	8.1	1.4	16.1	1.8
Southern Thailand (east coast)	305-445	15-18	Near normal	170-270	10-13	20 % Below normal	50-95	5-8	Near normal	370.4	16.3	266.9	12.1	64.5	7.2
Southern Thailand (west coast)	165-230	15-18	Near normal	45-80	7-10	20 % Below normal	20-40	2-5	Near normal	193.3	16.2	75.0	9.1	26.4	4.2
Bangkok	35-45	4-7	20 % Below normal	0-10	1-2	50 % Below normal	0-10	1-2	50 % Below normal	47.6	5.8	6.9	1.2	11.9	1.7

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

PART	Forecast									Normal (Baseline period: 1981-2010)					
	November 2019			December 2019			January 2020			November		December		January	
	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	20-22	Above normal	30-32	16-18	Above normal	31-33	16-18	Above normal	31.0	19.5	29.8	15.9	31.1	15.6
Northeastern	31-33	20-22	Above normal	30-32	17-19	Above normal	30-32	17-19	Above normal	30.7	20.1	29.5	17.1	30.5	17.1
Central	32-34	22-24	Above normal	32-34	20-22	Above normal	32-34	20-22	Above normal	31.9	22.2	31.4	19.7	32.7	19.4
Eastern	32-34	23-25	Above normal	32-34	21-23	Above normal	32-34	21-23	Above normal	32.1	23.0	31.6	21.2	32.1	21.4
Southern Thailand (east coast)	30-32	23-25	Near normal	30-32	23-25	Near normal	30-32	22-24	Near normal	30.3	23.4	29.7	22.5	30.4	22.3
Southern Thailand (west coast)	31-33	23-25	Near normal	31-33	23-25	Near normal	31-33	23-25	Near normal	31.4	23.5	31.5	23.0	32.6	22.8
Bangkok	32-34	24-26	Above normal	32-34	22-24	Above normal	32-34	22-24	Above normal	32.4	23.9	31.7	22.0	32.2	22.3

**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](http://www.tmd.go.th/en) at the climate tab.

Climate Center, Meteorological Development Division, Thai Meteorological Department

[www.climate.tmd.go.th](http://www.climate.tmd.go.th)

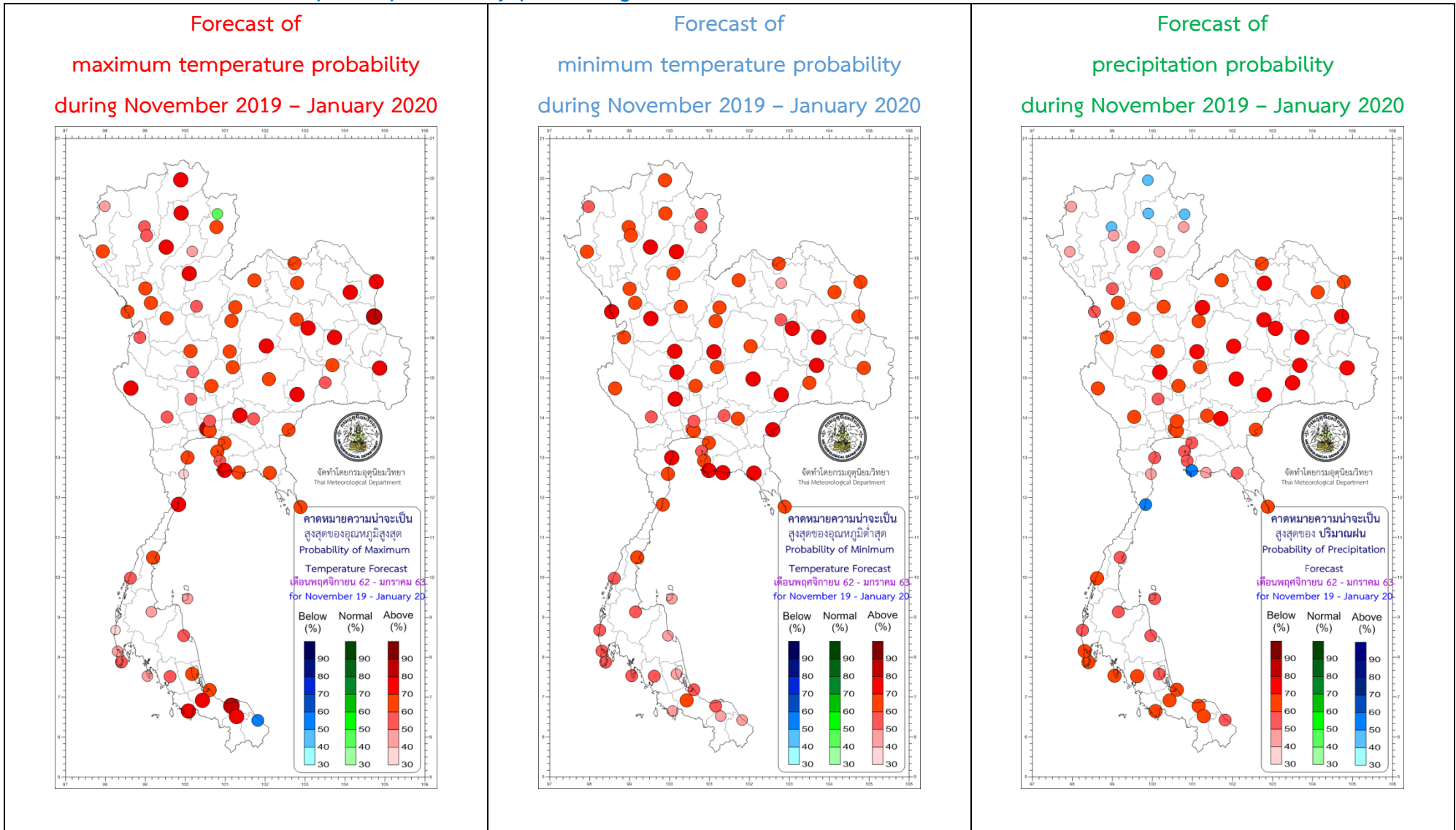
Climate Center, Meteorological Development Division,

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.