MINISTRY OF DIGITAL ECONOMY AND SOCIETY,
THAI METEOROLOGICAL DEPARTMENT

# 3-month Climate Prediction of Thailand

## During March – May 2020

Issued on 2 March 2020

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## Thailand climate for March-April-May 2019 from baseline: 1981-2010

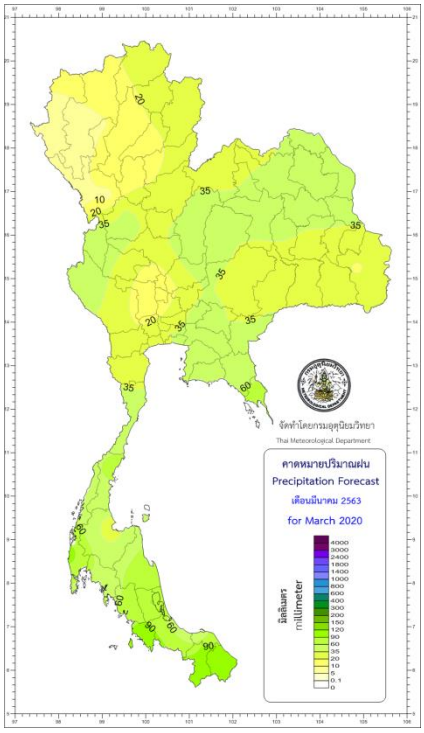
March 2020: Sweltering and dry weather together with little humidity occurs with very hot weather on some days especially around the Upper Thailand because mostly southerly wind prevails over Thailand. Although at some periods, some cold air masses from China will prevail to collide with existing hot air masses over Thailand, this causes summer thunderstorms to happen specifically around the Upper Thailand. These summer thunderstorms often occur at short durations around narrow or small areas along with instantly gusty wind. They can also feasibly contribute to life and property damages.

April 2020: This is the most sweltering month for the whole year, especially around the Upper Thailand. Often, hot to very hot weather occurs including with low-pressure air mass cells along with more heat prevailing over the Upper Thailand. The reason is that this month is at the duration of the Sun radiates perpendicularly to the plane of Thailand. As a result, summer thunderstorms occur influencing the rain amount of this month to increase more than that of the past month in every part of Thailand.

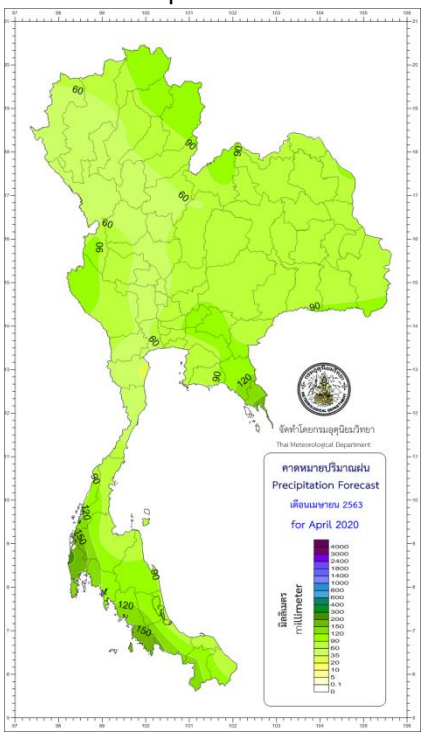
May 2020: As being the transitional period from the summer to the rainy seasons, the common weather during the 1$^{st}$ half of this month is usually sweltering. Also, thunder rain storms and summer thunderstorms occur often. Sometimes, hail happens too. And from the influential heat low-pressure air mass cells, mostly at the 2$^{nd}$ half of this month as the start of the rainy season, temperature will reduce with increasing rain. In other words, the prevailing wind over Thailand will start to transform into southwest monsoon while the low-pressure trough placing over Malaysia moves upward to place over the Southern Thailand and the central part of Thailand consecutively. Besides, some tropical cyclones developing in the Andaman Sea and the Bay of Bengal may move near or toward the western side of Thailand further.

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

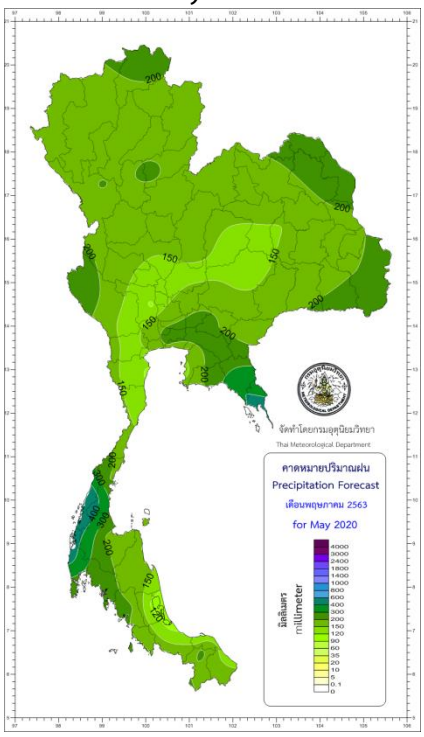
Precipitation forecast for March 2020



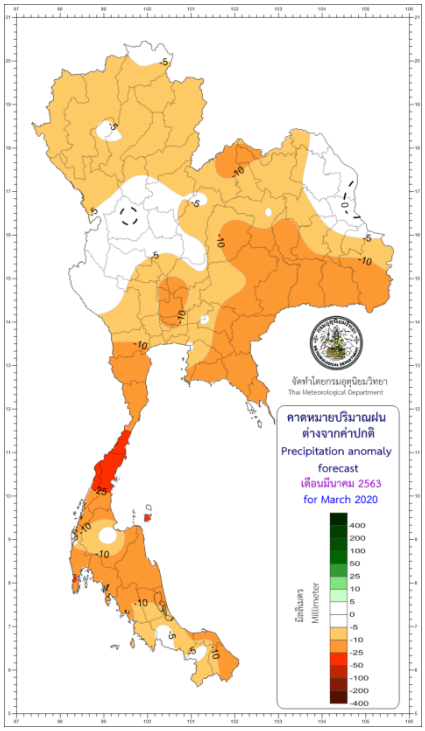

Precipitation forecast for April 2020



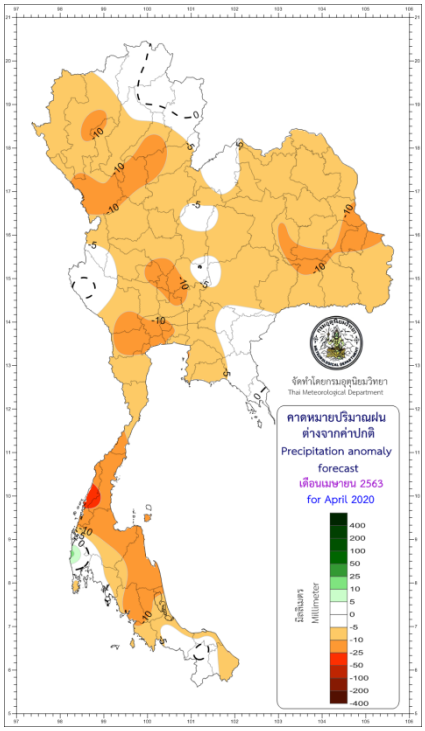

Precipitation forecast for May 2020



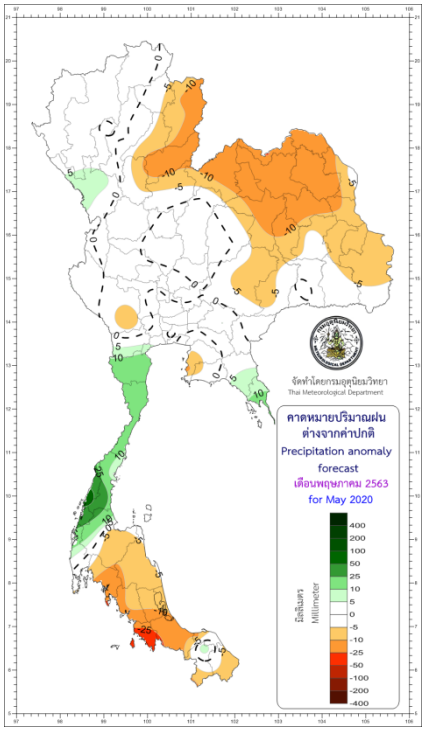

Precipitation anomaly forecast for March 2020




Precipitation anomaly forecast for April 2020

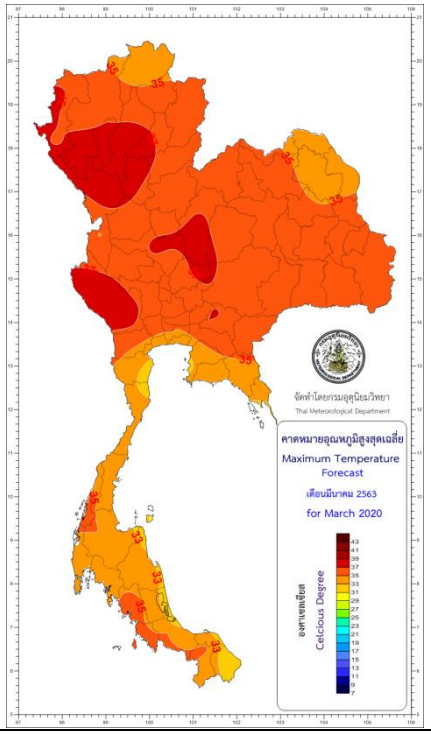



Precipitation anomaly forecast for May 2020

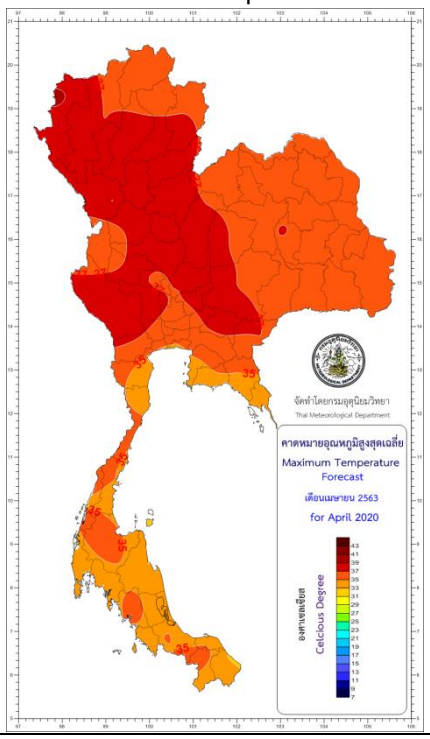


## Mean Maximum Temperature (°C) and Anomaly (°C) Forecast:

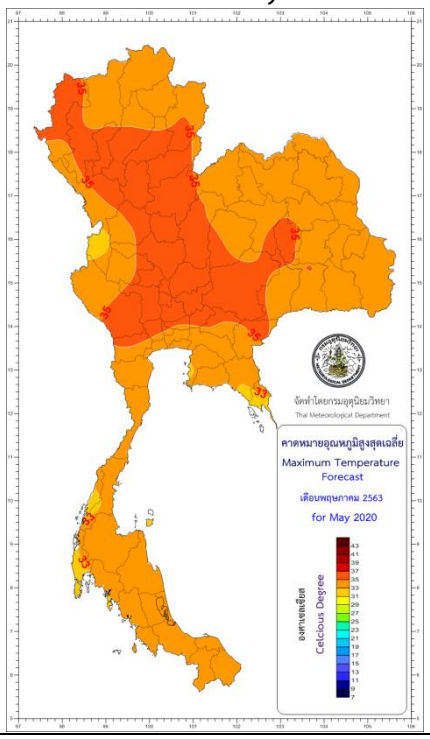
Mean maximum temperature forecast for March 2020



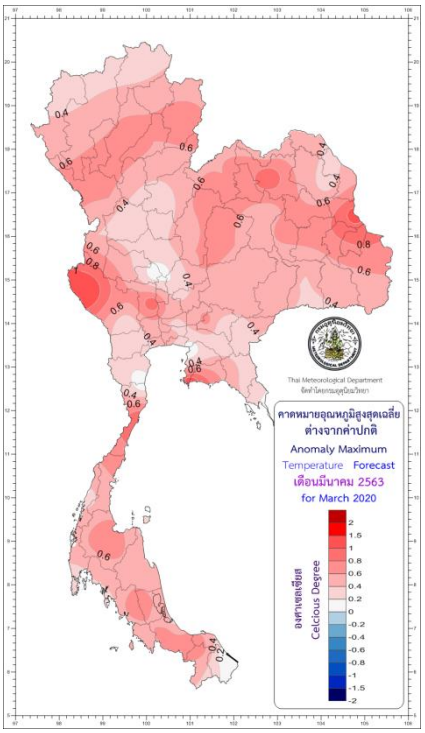

Mean maximum temperature forecast for April 2020



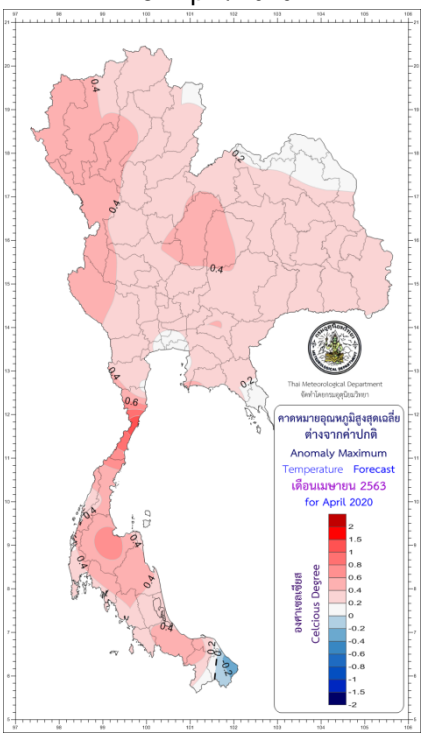

Mean maximum temperature forecast for May 2020



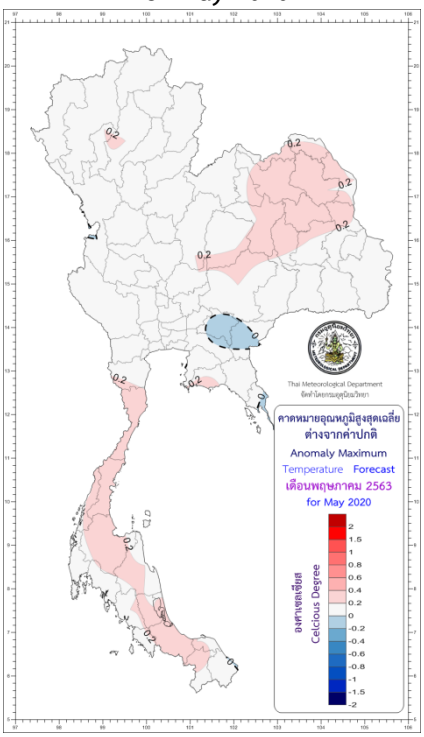

Mean maximum temperature anomaly forecast for March 2020



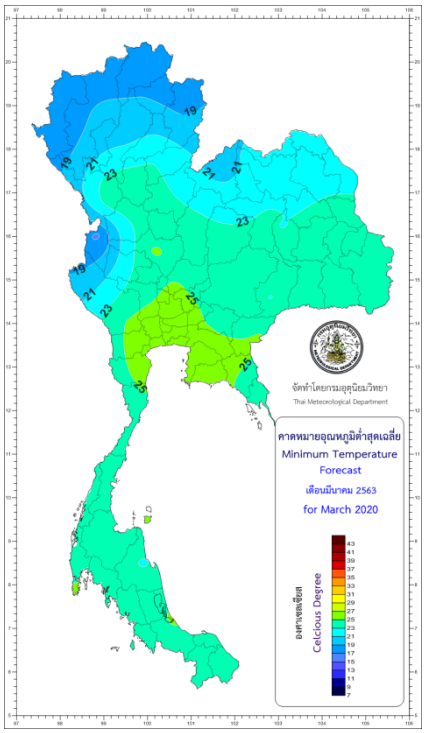
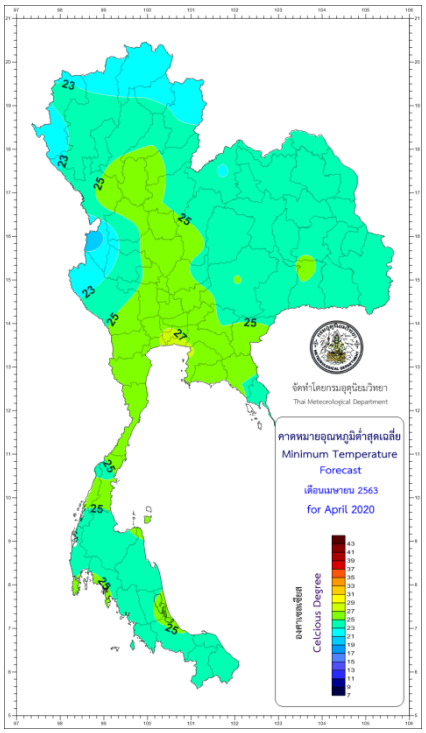
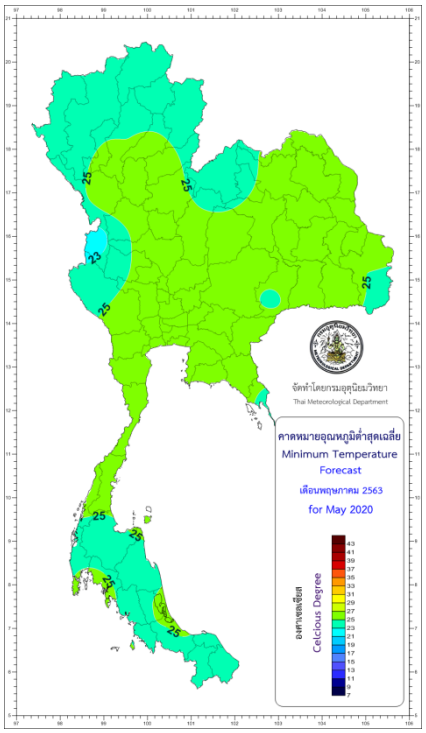
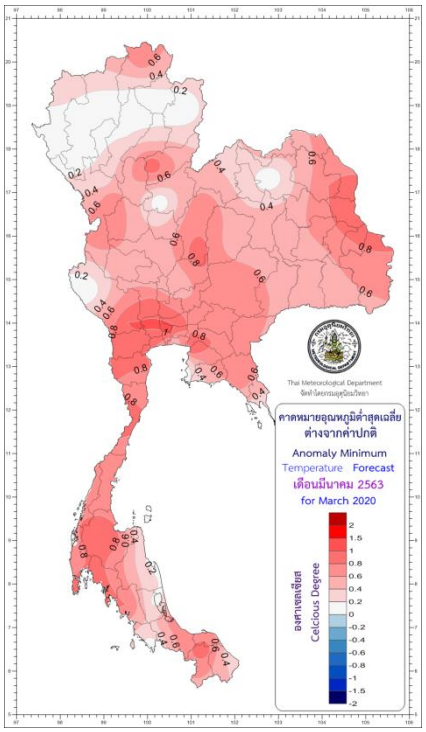
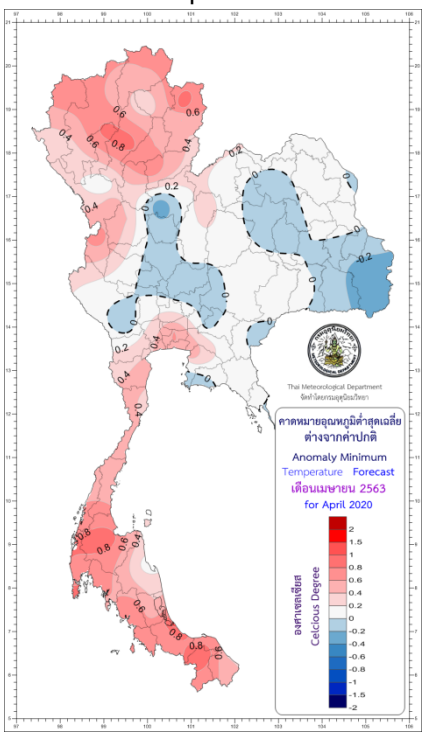
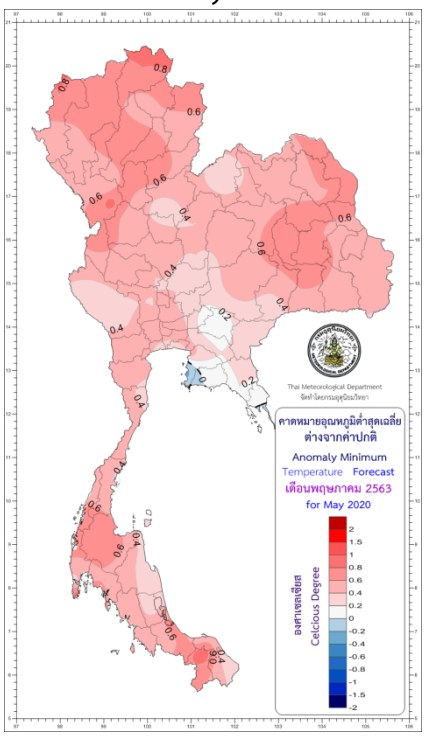

Mean maximum temperature anomaly forecast for April 2020




Mean maximum temperature anomaly forecast for May 2020



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

| Mean minimum temperature forecast for March 2020 | Mean minimum temperature forecast for April 2020 | Mean minimum temperature forecast for May 2020 |
|---|---|---|
|  |  |  |
| **Mean minimum temperature anomaly forecast for March 2020** | **Mean minimum temperature anomaly forecast for April 2020** | **Mean minimum temperature anomaly forecast for May 2020** |
|  |  |  |

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*** Caution: ***

March and April 2020: Often, summer thunderstorms happen as thunder rain storms, gusty wind and possibly falling hail at some areas. As a result, property and crop damages may occur.

During late April and May 2020: Probably, some low-pressure air mass cells develop around the Andaman Sea. These may strengthen to become depressions and tropical cyclones further. Their movements are toward northerly to easterly and may move closely toward the western side of Thailand. Thus, the western portions of both of the northern and central parts including with that of the Southern Thailand will meet more rain.

The public then should follow the weather forecast news from the Thai Meteorological Department closely.

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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:

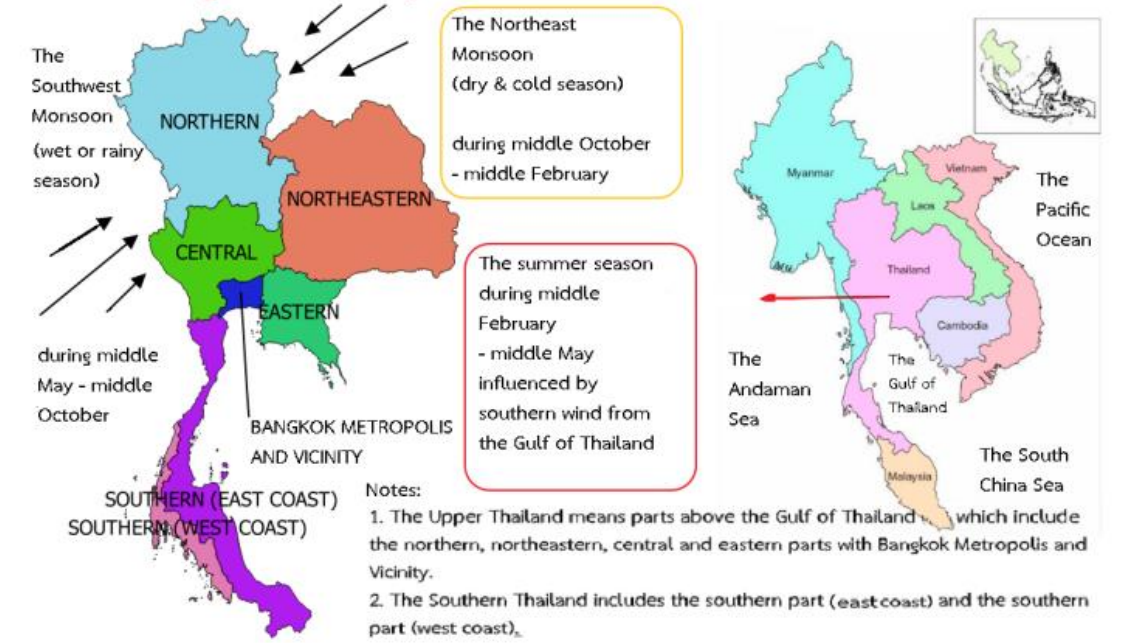

Table 1: Prediction of Rain (mm = millimeters), Rainy Days (days) and comparing with normal

| Part | Prediction | | | | | | | | | Normal (Baseline period: 1981-2010) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | March 2020 | | | April 2020 | | | May 2020 | | | March | | April | | May | |
| | 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 | 20-30 | 2-3 | 20 % Below normal | 50-80 | 5-7 | 10 % Below normal | 160-200 | 14-16 | Near normal | 28.1 | 3.1 | 71.3 | 7.0 | 177.8 | 15.5 |
| Northeastern | 30-50 | 3-5 | 20 % Below normal | 60-90 | 6-8 | 10 % Below normal | 160-200 | 14-16 | 5 % Below normal | 44.7 | 4.8 | 86.3 | 8.0 | 187.1 | 15.3 |
| Central | 20-30 | 2-3 | 20 % Below normal | 50-80 | 4-6 | 10 % Below normal | 130-170 | 13-15 | Near normal | 36.0 | 3.4 | 79.5 | 6.4 | 172.1 | 14.3 |
| Eastern | 40-60 | 3-5 | 20 % Below normal | 70-110 | 6-8 | 5 % Below normal | 190-250 | 15-17 | Near normal | 62.1 | 5.4 | 98.9 | 8.3 | 223.9 | 15.8 |
| Southern Thailand (East Coast) | 50-70 | 3-5 | 20 % Below normal | 60-90 | 5-7 | 10 % Below normal | 120-170 | 13-15 | Near normal | 68.4 | 5.4 | 75.4 | 7.3 | 143.7 | 14.3 |
| Southern Thailand (West Coast) | 60-90 | 6-8 | 20 % Below normal | 130-170 | 11-13 | 5 % Below normal | 270-350 | 19-21 | Near normal | 88.8 | 7.6 | 160.6 | 12.7 | 310.0 | 19.9 |
| Bangkok Metropolis and Vicinity | 20-30 | 2-3 | 20 % Below normal | 60-100 | 4-6 | 10 % Below normal | 200-260 | 15-17 | Near normal | 42.1 | 3.6 | 91.4 | 6.5 | 247.7 | 16.2 |

## Table 2: Prediction of Mean Maximum Temperature (Tmax) and Mean Minimum Temperature (Tmin) (°C) comparing with normal:

| Part | Prediction | | | | | | | | | Normal (Baseline period: 1981-2010) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | March 2020 | | | April 2020 | | | May 2020 | | | March | | April | | May | |
| | 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 | 36-38 | 19-21 | Above normal | 36-38 | 23-25 | Above normal | 34-36 | 24-26 | Near normal | 36.1 | 20.4 | 37.1 | 23.4 | 34.7 | 24.2 |
| Northeastern | 35-37 | 22-24 | Above normal | 35-37 | 24-26 | Above normal | 34-36 | 24-26 | Near normal | 35.1 | 22.4 | 36.1 | 24.5 | 34.4 | 24.8 |
| Central | 36-38 | 23-25 | Above normal | 36-38 | 24-26 | Above normal | 34-36 | 25-27 | Near normal | 36.1 | 24.4 | 37.0 | 25.8 | 35.2 | 25.7 |
| Eastern | 33-35 | 24-26 | Above normal | 34-36 | 25-27 | Above normal | 33-35 | 25-27 | Near normal | 33.8 | 24.9 | 34.7 | 25.9 | 33.7 | 25.8 |
| Southern Thailand (East Coast) | 32-34 | 23-25 | Above normal | 33-35 | 24-26 | Above normal | 33-35 | 24-26 | Near normal | 32.6 | 23.7 | 33.7 | 24.6 | 33.5 | 24.9 |
| Southern Thailand (West Coast) | 34-36 | 23-25 | Above normal | 33-35 | 24-26 | Above normal | 32-34 | 24-26 | Near normal | 34.4 | 23.7 | 34.2 | 24.4 | 32.7 | 24.6 |
| Bangkok Metropolis and Vicinity | 34-36 | 25-27 | Above normal | 34-36 | 26-28 | Above normal | 34-36 | 26-28 | Near normal | 34.3 | 25.9 | 35.4 | 26.9 | 34.4 | 26.3 |

Remarks: - Normal means average during the 30-year period (A.D. 1981 – 2010 or B.E. 2524 – 2553).

- 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.
- The next 3-month climate forecast will be published online before the end of March 2019.
- Further enquiry of monthly climate, 3-month climate and seasonal forecasts can be preceded at Tel: (662)-398-9929 or Fax: (662)-383-8827.
- Also, please follow monthly climate, 3-month climate and seasonal forecasts at http://www.tmd.go.th/en/ at the climate tab.

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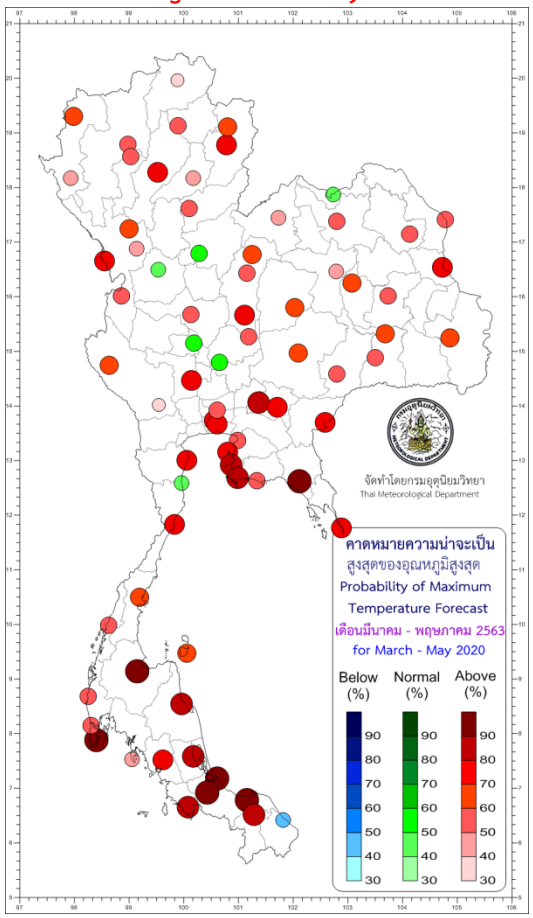
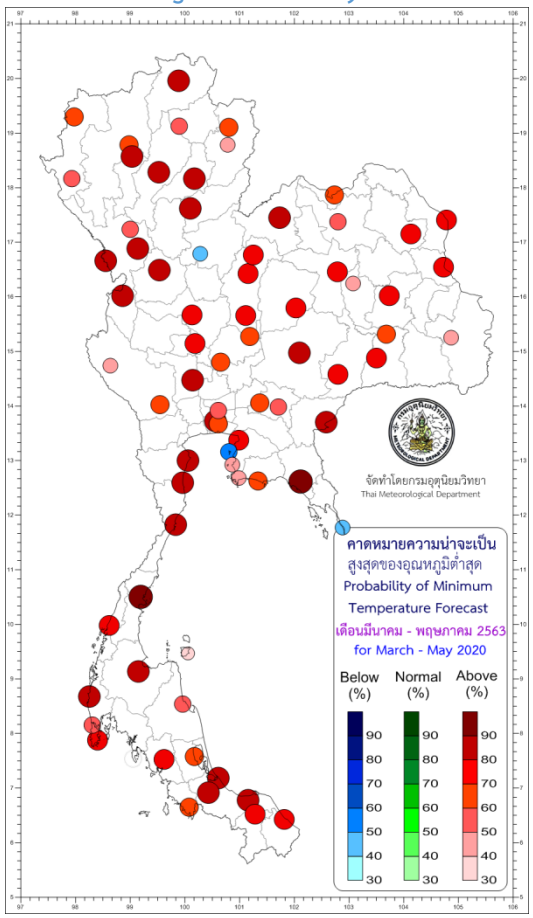
Thai Meteorological Department,
Ministry of Digital Economy and Society

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

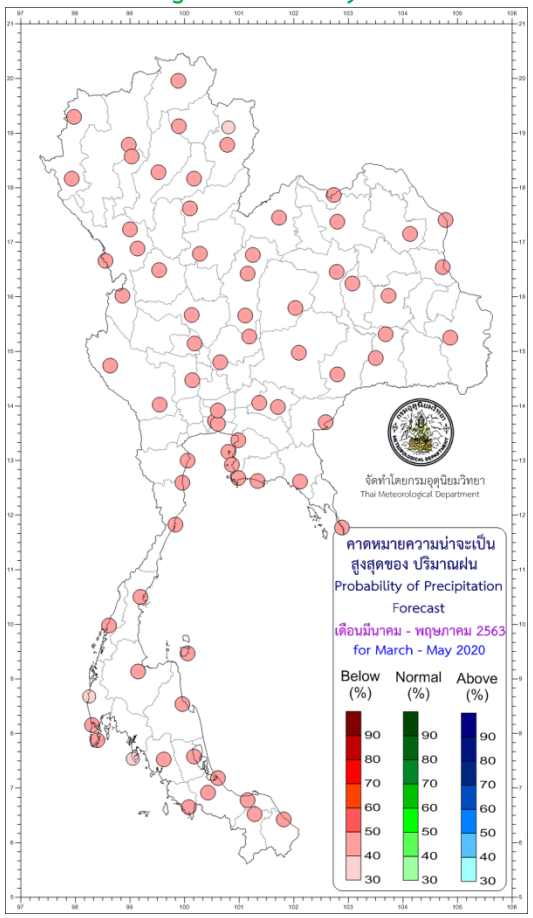
Forecast of
maximum temperature probability
during March – May 2020




Forecast of
minimum temperature probability
during March - May 2020




Forecast of
precipitation probability
during March - May 2020




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

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