



MINISTRY OF DIGITAL ECONOMY AND SOCIETY,
THAI METEOROLOGICAL DEPARTMENT

Summer 2019 forecast
From late February – middle May 2019
Issued on 1 February 2019

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Climate prediction of the 2019 summer during late February till middle May 2019

The summer of Thailand this year is expected to begin about late February which is 1-2 weeks later than usual and will end at about middle May. The weather will be commonly sweltering. In fact, mean maximum temperature around the Upper Thailand is to be about 35-37 °C which is above normal (Normal: 35.4 °C) and higher than that of last year (the mean maximum temperature during the summer 2018 was 34.2 °C) while mean total rain is to be below normal.

Furthermore, summer thunderstorms may occur at many areas as thunder rain, gusty wind and perhaps falling hail at some areas possibly causing life, property and crop damages. However, the falling rain amount will not be suitable at many areas for utilization, consumption and agricultural demands, specifically at repeated drought areas outside irrigation zones. As a result, the public should consume water economically with optimized benefits and prepare for summer thunderstorm protection further.

General weather characteristics

For the Upper Thailand, during late February until middle March, commonly sweltering weather appears during day time with thick fog at many areas. Except at northern and northeastern parts, morning cool weather happens. The reason is that weak high-pressure areas from China still prevail over the upper portion of the northern and northeastern parts.

Then during middle March till late April, commonly sweltering weather occurs with very hot weather at many areas during some periods. The extreme maximum temperature is to be 42-43 °C. Also, summer thunderstorms may develop at many areas on some days as thunder rain, gusty wind including with feasibly falling hail. Thus, heat will be remediated together with periodically prevailing heat low-pressure air mass cells and prevailing southerly or southeasterly wind bringing about moisture from the Gulf of Thailand for nearly this whole period.

Afterward from late April until the 1st half of May, variable weather occurs. In other words, commonly sweltering weather with hot to very hot weather happens on some days. Also, thunder rain will appear at many areas because prevailing southerly or southeasterly wind starts to transform into prevailing southwestern monsoon instead.

For the Southern Thailand, during late February until late April, 20-30% rainfall area with hot weather occurs at many areas during some periods whereas wind waves in the Gulf of Thailand and the Andaman Sea are to be about 1 meter. The reason is that the prevailing easterly or southeasterly wind over the Gulf of Thailand and the Southern Thailand transforms into southwestern monsoon prevailing over the Andaman Sea and the Southern Thailand instead.

Later from late April onward, the Southern Thailand will meet more rain continuously. Especially around the west coast, 60-80% rainfall area appears with heavy to very heavy rain at some areas. Moreover, wind waves in the Andaman Sea will become more active as 2-3 meters high at some periods while those in the Gulf of Thailand are to be 1 meter high. The reason is that the prevailing easterly or southeasterly wind over the Gulf of Thailand and the Southern Thailand transforms into southwestern monsoon prevailing over the Andaman Sea and the Southern Thailand instead.

+++ Cautions +++

Fire and forest fire: During this summer, the sweltering weather will influence to bring about fire and forest fire easily. Then, the public should be cautious in using fuel for their activities.

Tropical cyclones: During late April until May, some low-pressure air mass cells may develop at the Andaman Sea. Also, they can strengthen to become depressions, tropical storms and cyclones further. As a result, they may move northerly toward easterly to the western side of Thailand. Thus, the western portion of the northern and central parts of Thailand and also the Southern Thailand will meet more rain. Consequently, flash and forest flood may inundate the areas.

Table A: showing details of the weather prediction with extreme maximum temperature for each part.

Part	The weather prediction	The extreme maximum temperature
Northern and northeastern	Commonly sweltering weather with very hot weather at many areas during some periods. Thunder rain at many areas on some days. In addition, gusty wind with falling hail happens at some areas helping remediate some heat.	40 – 43 °C around Mae Hong Son, Chiang Mai, Lamphun, Lampang, Phrae, Nan, Tak, Uttaradit, Sukhothai, Kampaengphet, Phitsanulok, Phetchabun, Phichit, Loei, Nong Bua Lumphu, Udon Thani, Mukdaharn, Chaiyaphum, Khon Kaen, Maha Sarakham, Kalasin, Roi Et, Yasothon, Amnat Charoen, Nakhon Ratchasima, Buriram, Surin, Si Sa Ket and Ubon Ratchathani provinces.
Central and Eastern including with their coastal areas.	Sweltering weather commonly with very hot weather at many areas during some periods, mostly at the upper portion. Along with thunder rain at many areas on some days and possibly gusty wind and falling hail at some areas helping remediating some heat.	40 – 42 °C around Nakhon Sawan, Uthai Thani, Chainat, Sing Buri, Ang Thong, Suphan Buri, Lop Buri, Saraburi, Phra Nakhon Si Ayudthaya, Kanchanaburi, Ratchaburi, Phthum Thani, Nakhon Nayok, Prachin Buri, Sa Kaew and Cha Choeng Sao provinces.
Southern Thailand	Hot weather at many areas during some periods with 20-30% rainfall area. Wind waves in the Gulf of Thailand and the Andaman Sea are to be about 1 meter high. And from late April onward, rain amount will increase, specifically at the west coast with heavy to very heavy rain at some areas. Also, wind waves in the Andaman Sea will be more active with 2-3 meters high at some periods.	40 – 42 °C around Prachuap Khiri Khan, Surat Thani, Nakhon Si Thammarat, Yala, Krabi, Trang and Satun provinces.
Bangkok Metropolitan and Vicinity	Commonly hot weather, especially since middle March until late April. Together with rainfall on some days, thus helping remediate some heat.	38 - 39 °C.

Remarks:

- Daily rainfall area (% of the area) criteria:

Isolated:	> 0 until < 20%	Scattered:	>= 40 until < 60%
Widely scattered:	>=20 until < 40%	Widespread:	>= 80%
Almost widespread:	>=60 until < 80%		
- Daily rainfall amount (millimeters) criteria: From 07.00 – 07.00 AM (UTC 00+7)

Light:	> 0 until 10.0		
Moderate:	>=10.1 until <=35.0	Heavy:	>=35.1 until <90
Very heavy:	>= 90.1		
- Daily minimum temperature criteria for the winter season:

Cool weather	=	18.0 - 22.9	°C.
Moderately cold weather	=	16.0 – 17.9	°C.
Cold weather	=	8.0 - 15.9	°C.
Very cold weather	=	<= 7.9	°C.
- Daily maximum temperature criteria for the summer season:

Hot weather	=	35.0 – 39.9	°C.
Very hot weather	=	>= 40.0	°C.
- Normal means average during the 30-year period (A.D. 1981 – 2010 or B.E. 2524 – 2553)
- These long-range forecasts are utilized by applying some climatic models and statistical methods, the public then should follow the daily weather news from the Thai Meteorological Department further.
- The next 3-month climate forecast will be at the last week of February 2019.
- Further enquiry of monthly climate, 3-month climate and seasonal forecasts can be preceded at Tel: 02-398-9929 or Fax: 02-383-8827.
- Please follow monthly climate, 3-month climate and seasonal forecasts at www.tmd.go.th/en/ at the climate tab.

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Table B: Mean maximum temperature (°C) prediction of Thailand during the 2019 summer with Normal.

Part	The 2 nd half of February 2019		March 2019		April 2019		The 1 st half of May 2019	
	Mean Maximum Temp. of 2019	Normal	Mean Maximum Temp. of 2019	Normal	Mean Maximum Temp. of 2019	Normal	Mean Maximum Temp. of 2019	Normal
Northern	34-36	34.6	36-38	36.1	37-39	37.1	35-37	35.4
Northeastern	33-35	33.9	35-37	35.1	36-38	36.1	34-36	34.9
Central	34-36	35.2	36-38	36.1	37-39	37.0	35-37	35.8
Eastern	33-35	33.3	33-35	33.8	34-36	34.7	34-36	34.1
Southern Thailand (East Coast)	31-33	31.8	32-34	32.6	33-35	33.7	33-35	33.6
Southern Thailand (West Coast)	33-35	34.1	34-36	34.4	34-36	34.2	32-34	33.0
Bangkok Metropolis and Vicinity	33-35	33.6	34-36	34.3	35-37	35.4	34-36	34.8

Table C: Rain amount (millimeters) prediction of Thailand during the 2019 summer with Normal.

Part	The 2 st half of February 2019		March 2019		April 2019		The 1 st half of May 2019	
	Rain amount	Normal	Rain amount	Normal	Rain amount	Normal	Rain amount	Normal
Northern	< 10	6.9	20-30	28.1	50-80	71.3	50-80	80.2
Northeastern	< 10	9.7	30-50	44.7	60-90	86.3	60-90	83.6
Central	< 10	5.9	20-30	36.0	50-80	79.5	60-90	83.5
Eastern	10-20	17.0	40-70	62.1	70-100	98.9	70-100	98.6
Southern Thailand (East Coast)	< 10	10.7	40-70	68.4	50-80	75.4	50-80	71.7
Southern Thailand (West Coast)	< 10	13.2	60-90	88.8	120-160	160.6	110-150	147.0
Bangkok Metropolis and Vicinity	< 10	9.3	30-50	42.1	60-90	91.4	90-120	116.4

Table D: Extreme maximum temperature (Ext. = °C) statistic for the past February – May of last year (2018)

Part	February 2018			March 2018			April 2018			May 2018		
	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At
Northern	38.0	15	Thoen district, Lampang province.	40.0	4	Mueang district, Uttaradit province.	41.6	15	Thoen district, Lampang province.	40.0	9	Mueang district, Tak province.
Northeastern	37.8	16	Mueang district, Chaiyaphum province.	39.9	5	Tha Phra district, Khon Kaen province.	41.2	14	Mueang district, Nong Khai province.	38.8	10	Mueang district, Surin province.
Central	38.0	16,17	Mueang district, Kanchana Buri province.	39.1	18	Thong Pha Phum district, Kanchana Buri province.	41.3	15	Mueang district, Kanchana Buri province.	38.3	8	Mueang district, Nakhon Sawan province.
Eastern	36.8	16	Aranya Prathet district, Sa Kaew province.	37.9	5	Aranya Prathet district, Sa Kaew province.	38.3	15	Aranya Prathet district, Sa Kaew province.	37.6	10	Mueang district, Prachin Buri province.
								21	Ko Si Chang district, Chon Buri province.			
Southern Thailand (east coast)	36.3	17	Chawang district, Nakhon Si Thammarat province.	37.7	15	Nong Plub district, Prachuab Khirikhan.	37.5	14,21	Chawang district, Nakhon Si Tham- marat province.	37.0	22	Mueang district, Prachuab Khirikhan province.

Table D: Extreme maximum temperature (Ext. = °C) statistic for the past February – May of last year (2018)
(Continued)

Part	February 2018			March 2018			April 2018			May 2018		
	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At
Southern Thailand (west coast)	36.8	28	Mueang district, Satun province.	38.7	7	Nuea Khlong district, Krabi province.	37.5	17	Nuea Khlong district, Krabi province.	36.0	14	Nuea Khlong district, Krabi province.
The whole of Thailand	38.0	15	Thoen district, Lampang province.	40.0	4	Mueang district, Uttaradit province.	41.6	15	Thoen district, Lampang province.	40.0	9	Mueang district, Tak province.
		16,17	Mueang district, Kanchana Buri province.									
Bangkok Metropolis and Vicinity	35.7	18	Bangkok Port, Klong Toei district.	36.0	20	Queen Sirikit National Convention Center, Klong Toei district.	37.3	23	Bangkok Airport, Don Mueang district.	36.7	16	Queen Sirikit National Convention Center, Klong Toei district.

Map A shows provinces of possibly very hot weather during some periods from middle March – late April 2019.

