



Summer 2021 forecast

From the end of February – middle May 2021

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Climate prediction of the summer 2020 during the end of February till middle May 2021

The summer of Thailand this year is expected to begin about the end of February which is later than usual 1 – 2 week and will end at about middle May. The weather will be few commonly sweltering with very hot weather at many areas in some periods. alternating with several thunderstorms. Mean maximum temperature around the Upper Thailand is about 35 °C which near normal (Normal : 35.4 °C) and less than the last year (the mean maximum temperature during the summer 2019 was 36.1 °C) while mean total rain is to be above 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 prevailed over the upper portion of the northern and northeastern parts.

Then during middle March till April, Few commonly sweltering weather occurs with very hot weather at many areas in some periods. The extreme maximum temperature is to be 40-43 °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 in 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, 30 - 40% rainfall area with heavy rainfall in some areas 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 - 2 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 some 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, Tak, Uttaradit, Sukhothai, Phitsanulok, Kampaengphet, Phetchabun, Phichit, Loei, Nong Bua Lumphu, Nong Khai, Chaiyaphum, Khon Kaen, Maha Sarakham, Nakhon Ratchasima, Buriram and Surin provinces.
Central and Eastern including with their coastal areas.	Sweltering weather commonly with very hot weather at some 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, Phra Nakhon Si Ayudthaya, Suphan Buri, Lop Buri, Saraburi, Kanchanaburi, Nakhon Nayok, Prachin Buri and Sa Kaew provinces.
Southern Thailand	Hot weather at some areas during some periods with 30-40% rainfall area with heavy rainfall in some areas. Wind waves in the Gulf of Thailand and the Andaman Sea are to be 1-2 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.	38 – 39 °C around Surat Thani and Nakhon Si Thammarat 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%
Widely scattered:	>=20 until < 40%
Almost widespread:	>=60 until < 80%
Scattered:	>= 40 until < 60%
Widespread:	>= 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
Very heavy:	>= 90.1
Heavy:	>=35.1 until <90
- 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 summer 2020 forecast will be update about last week of February 2021.
- 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 2021 summer with Normal.

Part	The 2 nd half of February		March		April		The 1 st half of May	
	Mean Maximum Temp.	Normal	Mean Maximum Temp.	Normal	Mean Maximum Temp.	Normal	Mean Maximum Temp.	Normal
Northern	33-35	34.6	35-37	36.1	36-38	37.1	34-36	35.4
Northeastern	33-35	33.9	34-36	35.1	35-37	36.1	34-36	34.9
Central	34-36	35.2	35-37	36.1	36-38	37.0	34-36	35.8
Eastern	32-34	33.3	33-35	33.8	33-35	34.7	33-35	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	33-35	34.4	33-35	34.2	32-34	33.0
Bangkok Metropolis and Vicinity	33-35	33.6	33-35	34.3	34-36	35.4	34-36	34.8

Table C: Rain amount (millimeters) prediction of Thailand during the 2021 summer with Normal.

Part	The 2 st half of February		March		April		The 1 st half of May	
	Rain amount	Normal	Rain amount	Normal	Rain amount	Normal	Rain amount	Normal
Northern	5 - 15	6.9	15-30	28.1	70-100	71.3	80-110	80.2
Northeastern	5 - 15	9.7	30-50	44.7	90-120	86.3	80-110	83.6
Central	5 - 15	5.9	30-50	36.0	70-100	79.5	80-110	83.5
Eastern	10 - 20	17.0	50-80	62.1	100-140	98.9	90-120	98.6
Southern Thailand (East Coast)	10 - 20	10.7	50-80	68.4	70-100	75.4	70-100	71.7
Southern Thailand (West Coast)	10 - 20	13.2	70-100	88.8	170-210	160.6	140-180	147.0
Bangkok Metropolis and Vicinity	5 - 15	9.3	30-50	42.1	90-120	91.4	110-150	116.4

Table D: Extreme maximum temperature (Ext. = °C) statistic for the past February – May of last year (2020)

Part	February 2019			March 2019			April 2019			May 2019		
	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At
Northern	38.4	12	Thoen district, Lampang province.	42.9	30,31	Thoen district, Lampang province.	43.5	21	Mueang district, Tak province.	42.2	6	Thoen district, Lampang province.
Northeastern	38.4	15	Mueang district, Nakhon Ratchasima province.	41.2	14	Mueang district, Nakhon Ratchasima province.	42.2	21	Mueang district, Udon Thani province.	43.0	6	Mueang district, Nong Khai province.
					14	Mueang district, Chaiyaphum province.						
Central	39.0	16	Chai Badan district, Lopburi province.	41.8	14	Chai Badan district, Lopburi province.	43.3	22	Mueang district, Nakhon Sawan province.	42.5	6	Chai Badan district, Lopburi province.
Eastern	38.2	16,17	Snam Chaiket district, Chachoengsao province.	40.3	13	Kabin Buri district, Prachin Buri province.	40.1	1,3	Kabin Buri district, Prachin Buri province.	40.5	9	Snam Chaiket district, Chachoengsao province.
Southern Thailand (east coast)	37.5	16	Chawang district, Nakhon Sithammarat province.	39.8	15	Chawang district, Nakhon Sithammarat province.	39.9	14,21	Chawang district, Nakhon Sithammarat province.	39.5	2	Mueang district, Prachuab Khirikhan province.

Table D: Extreme maximum temperature (Ext. = °C) statistic for the past February – May of last year (2020)
(Continued)

Part	February 2019			March 2019			April 2019			May 2019		
	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At	Ext.	Date	At
Southern Thailand (west coast)	37.2	26	Mueang district, Phuket province.	39.0	28	Mueang district, Trang province.	39.2	13	Nuea Khlong district, Krabi province.	37.8	12	Mueang district, Ranong province.
					31	Nuea Khlong district, Krabi province.						
The whole of Thailand	39.0	16	Chai Badan district, Lopburi province.	42.9	30,31	Thoen district, Lampang province.	43.5	21	Mueang district, Tak province.	43.0	6	Mueang district, Nong Khai province.
Bangkok Metropolis and Vicinity	38.1	7	Queen Sirikit National Convention Center, Klong Toei district.	39.6	9	Queen Sirikit National Convention Center, Klong Toei district.	38.9	23	Queen Sirikit National Convention Center, Klong Toei district.	39.0	28	Queen Sirikit National Convention Center, Klong Toei district.

Map A shows provinces of possibly very hot weather during some periods from Middle March – April 2021.

