



Thai Meteorological Department
Ministry of Thailand Digital Economy

Three-month Climate Outlook
For February – April 2018
Issued on 25 January 2018

Climate Outlook:

1. During the next 3 months, the total rain of Thailand is expected to be near normal.

On the other hand, the mean temperature of Thailand will be near normal. In other words, the mean maximum temperature of Thailand during the next 3 months will be slightly near normal (less than 0.5 °C).

2. In February, the total rain of northern and northeastern parts will be 40-50% lower than normal. However, the total rain of central, eastern, the Southern Thailand (east and west coasts) is about to be 15-25% lower than normal.

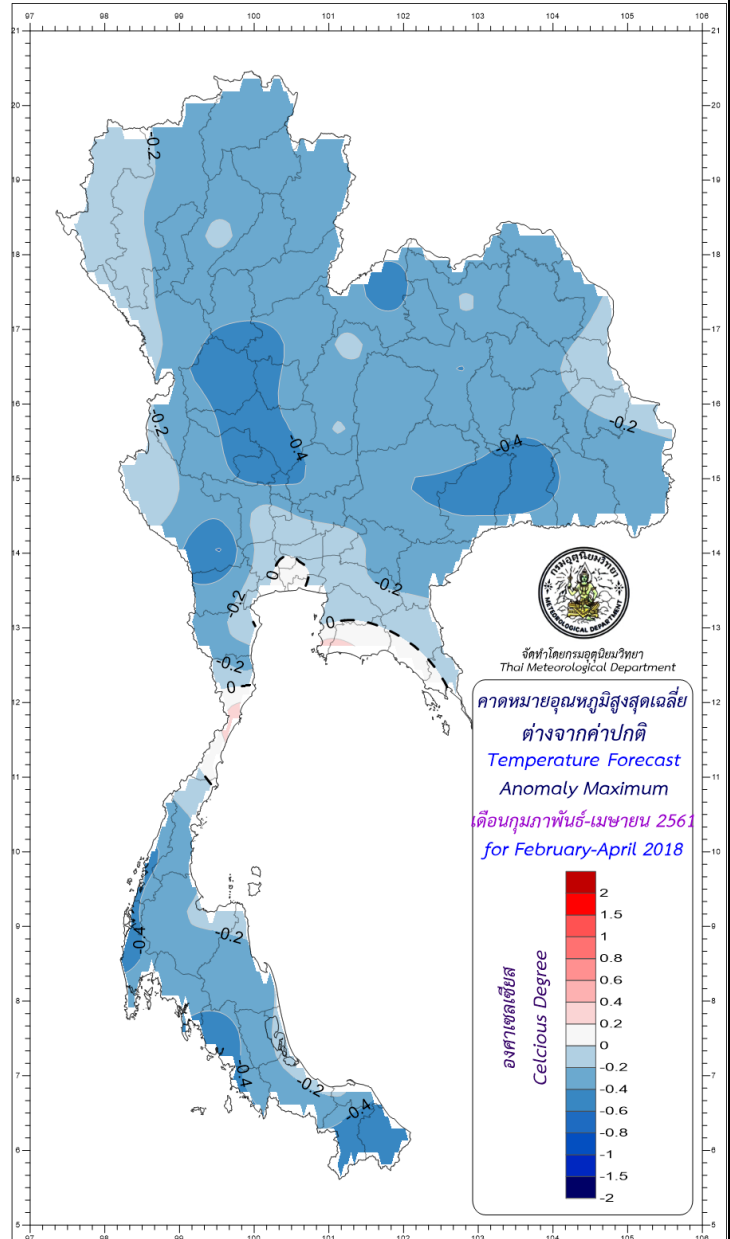
Furthermore, the mean temperature of Thailand will be near normal while that of the northern part is about to be 0.5 °C above normal.

3. In March, the total rain of the northern, northeastern, central parts and the Southern Thailand (both coasts) is expected to be 10% lower than normal. Besides, the total rain of the eastern part will be near normal.

Additionally, the mean temperature of Thailand will be near normal.

4. In April, the total rain of Thailand will be 10-15% above normal.

Otherwise, the mean temperature of Thailand will be near normal except that that of the northeastern part is to be 0.5 °C below normal.



* For the information supporting this 3-month climate outlook are at the following pages.

Thailand Climate for October-November-December from baseline: 1981 – 2010

February: As being the usual transition month from winter to summer, high pressure air-mass areas prevailing over Thailand will start to weaken. General weather condition is still cool with morning fog except that the northern and northeastern parts are still cold to very cold at some areas, mostly during the 1st half of this month. Afterward, temperature will rise due to warm southerly wind prevailing instead of the northeastern monsoon. Thus, the summer season starts since the middle of this month onward whereas the monthly rain of the Southern Thailand lessens than that of past months, specifically at the eastern coast.

March: Dry, sweltering and low humidity weather appears and very hot weather occurs on some days, especially around the Upper Thailand. The reason is that mostly southerly wind prevails over Thailand. Nevertheless, some cold air masses from China will prevail and confront with warm air masses prevailing over Thailand bringing about summer thunderstorms, especially at the Upper Thailand. These summer thunderstorms often occur for short durations at small areas, but they appear with suddenly gusty winds and may be severely destructive for life and possession.

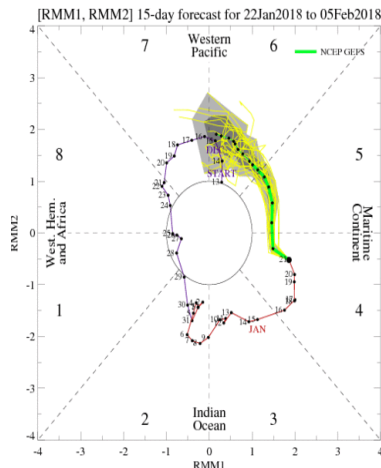
April: As the most sweltering month in the whole year, especially for the Upper Thailand, April is often hot to very hot commonly. The reason is that influential heat low-pressure air mass cells prevail over the Upper Thailand. Also, as being the duration of the Sun radiating perpendicular to Thailand's areas helps create summer thunderstorms. For rainfall of this month, the rain will appear more than past months for all parts of the country.

Outlook of phenomena influencing climate of Thailand

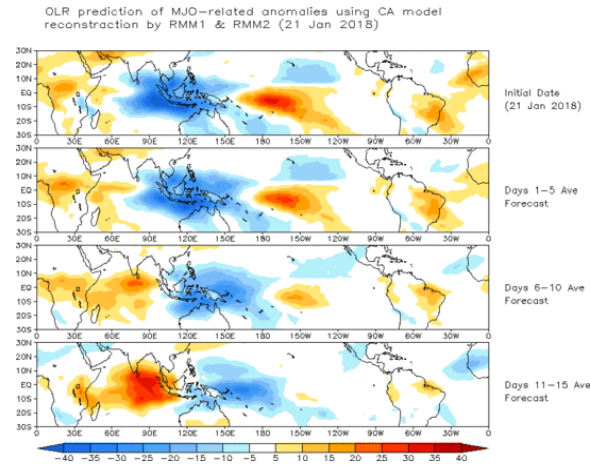
1. Madden Julian Oscillation (MJO)

During the past January 2018, MJO became more active at the Indian Ocean influencing on rainfall of Thailand. In other words, the rain of Thailand during early January became above normal at many areas. Later, MJO will move toward the eastern portion of the Indian Ocean and the Maritime Continent area (the Southern Thailand, Malaysia, Indonesia and the Philippines) influencing on reducing rain of Thailand during the 2nd half of January.

Together with the MJO index and OLR (Orthogonal Long Wave Radiation) forecast models, MJO is expected to move around the Western Pacific. Thus, during the 1st half of February, the rainfall of Thailand will lessen. Nevertheless, MJO is still needed to be under monitoring during the 2nd half of February and April further.



MJO Index and Phase forecast (IRI/CPC)



Mean OLR 3-phase forecast, each phase consisting of 5 days. (IRI/CPC)

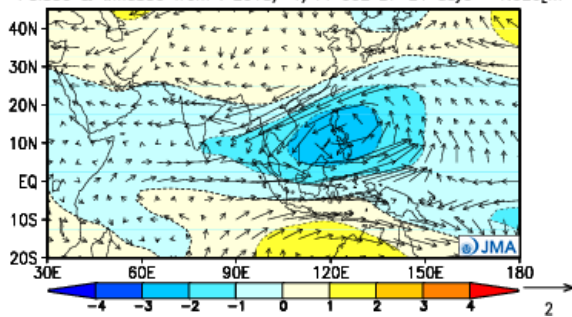
2. Asian Monsoon (Southwest and Northeast monsoon)

During the past early January 2018, the northeastern monsoon prevailing over Thailand was above-normal active. Consequently, temperature reduced for the whole country and rain still appeared at the Southern Thailand. But the northeastern monsoon weakened during the 2nd half of January bringing about rising temperature for the whole of Thailand.

Together with wind forecast analyses at the 850-hPa and 200-hPa levels for early February 2018, the northeastern monsoon is expected to be above-normal active. Consequently, the total rain of the Upper Thailand will be below normal while that of the Southern Thailand is going to be above normal. Furthermore, the mean temperature of the Upper Thailand will be below normal while that of the Southern Thailand is going to be near normal. Moreover, the northeastern monsoon will lessen during the 2nd half of February. Thus, the rain of Thailand will reduce whereas mean temperature rises up for the whole country.

Ensemble forecast (3 months mean : FEB-APR)

PSI850 & wind850 from : 2018/ 1/11 00Z LT=21 days *1.0E6[m**2/s]



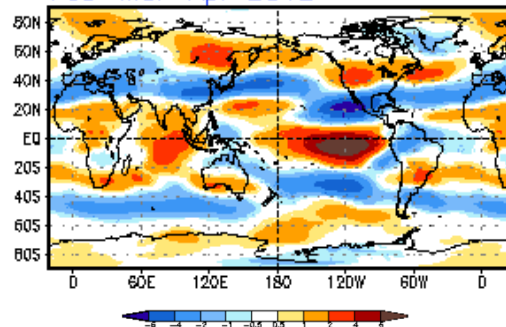
Mean stream function anomalies forecast and 850 hPa wind anomalies forecast for February to April 2018

NWS/NCEP/CPC

Initial conditions: 12Jan2018-21Jan2018
Last update: Mon Jan 22 2018

CFSv2 seasonal u200-u850 (m/s)

Feb-Mar-Apr 2018

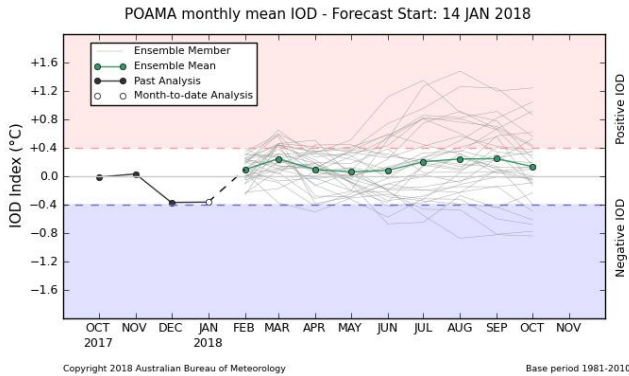


Mean Zonal wind shear forecast (u200-u850) for February to April 2018

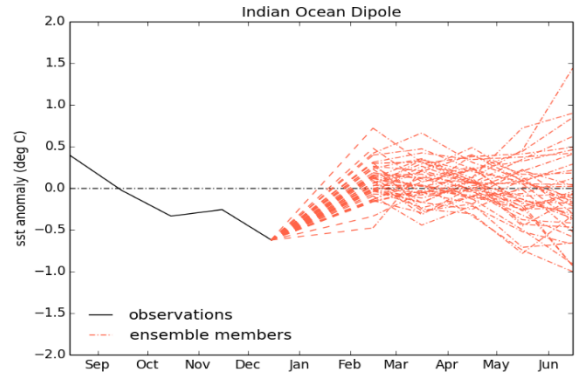
3. Indian Ocean Dipole (IOD)

During the past December 2017 until early January 2018, IOD was still neutral even though IOD was expected to become negative.

Moreover, from IOD index forecast models, IOD probability forecast and the sea surface temperature forecast at the Indian Ocean, they predict that IOD will still become neutral for the whole period from February 2018 until March 2018. For this reason, IOD will not influence on the total rain and mean temperature of Thailand.



IOD index forecast model (BOM)

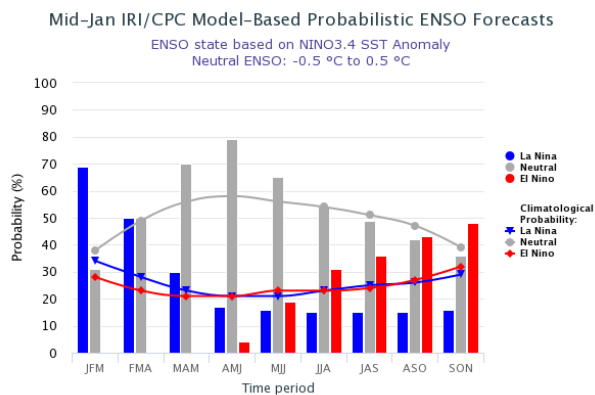


IOD index forecast (UKMO)

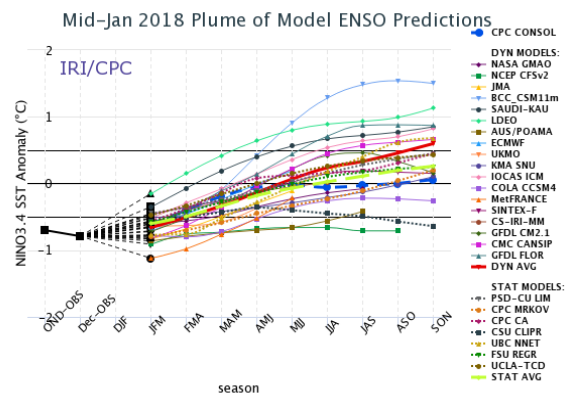
4. El Niño Southern Oscillation (ENSO)

During late December 2017 until the 3rd week of January 2018, ENSO became weak La Niña (Nino 3.4 = -0.79). And from El Niño/Southern Oscillation (ENSO) Diagnostic Discussion, ENSO probability forecast, and sea surface temperature prediction at the Northwest Pacific, ENSO favors 50% chance to be weak La Niña during January 2018 – March 2018 and will become neutral in April 2018.

As a result, the total rain of the northern, northeastern and central parts will probably be above normal whereas that of other parts is possibly near normal. Moreover, the mean temperature of the northeastern part will probably be below normal while that of the northern and central parts is to be below or near normal. However, the mean temperature of the Southern Thailand will be near or above normal.



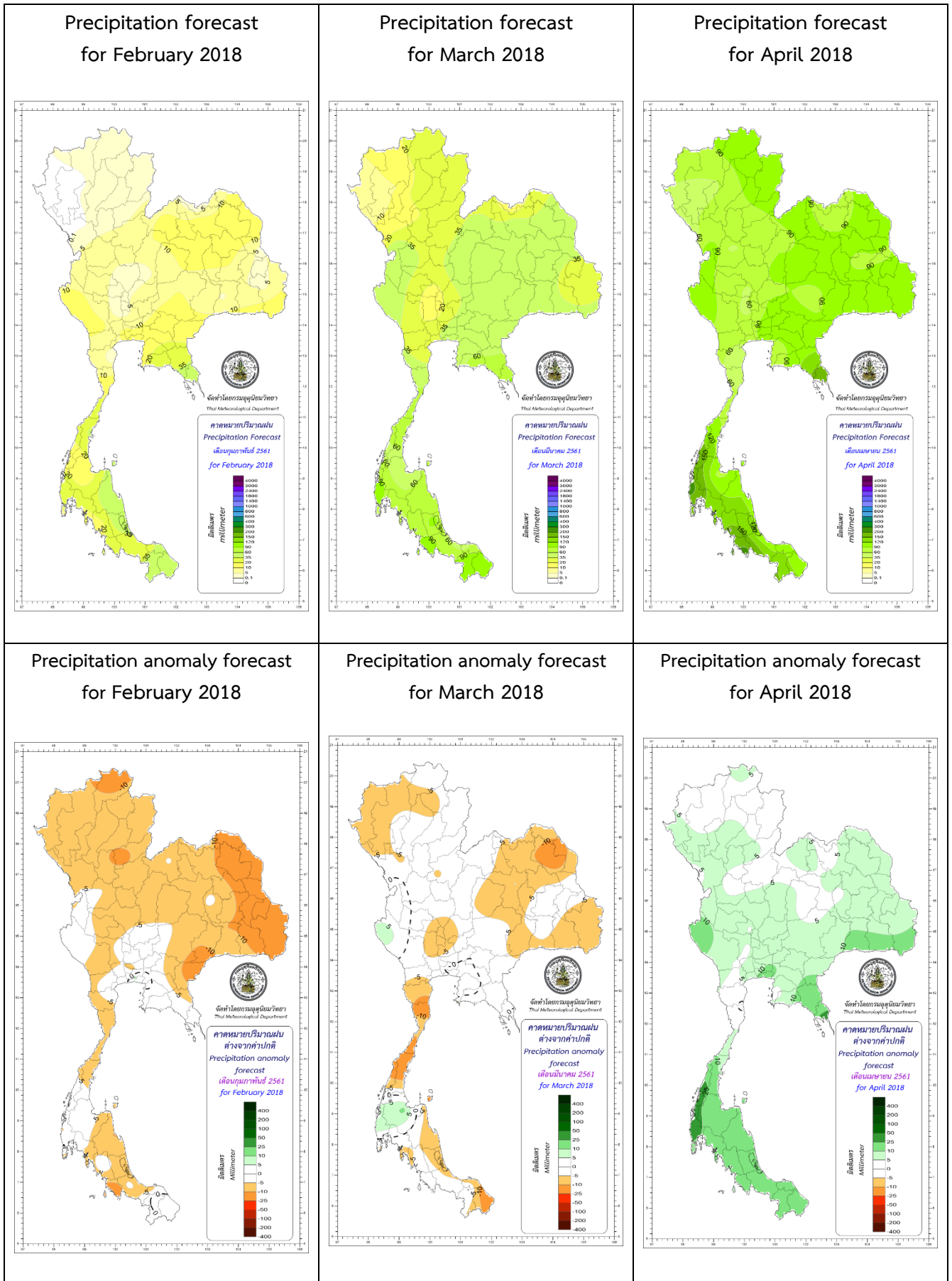
ENSO probability forecast (IRI/CPC)



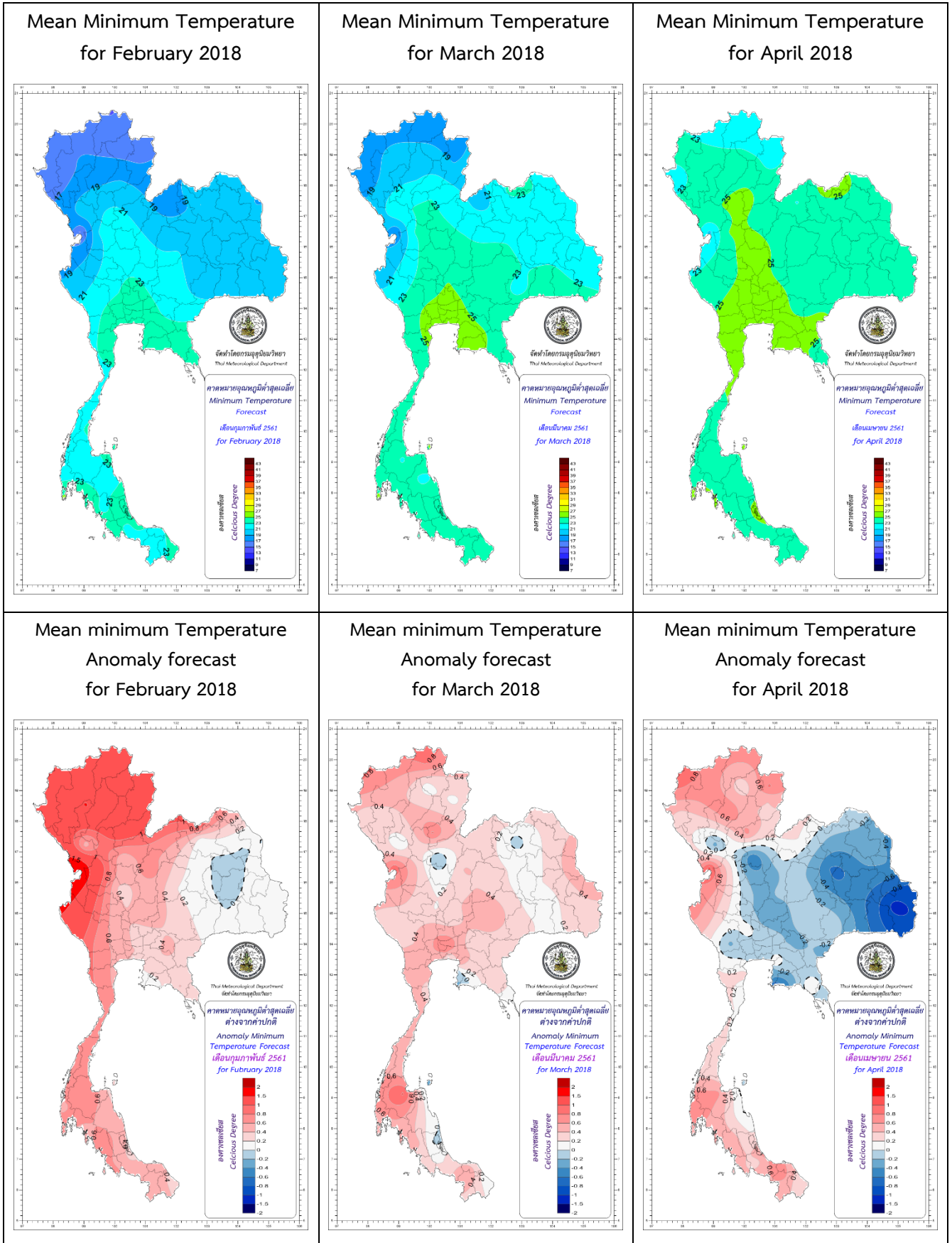
Nino 3.4 SST anomaly forecast from global climate centers (IRI/CPC)

** For further information, please visit www.tmd.go.th/en and www.climate.tmd.go.th **

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



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



***** Cautions *****

February, the westerly “high-level” wind waves from Myanmar may move pass the Upper Thailand influencing the area to confront with thunder rain and gusty wind at some areas together with possible hail.

March and April, summer thunderstorms often occur as thunder rain, gusty wind and possibly falling hail at some areas causing damages for life and possession.

Late April, low-pressure air mass cells often develop around the Andaman Sea and strengthen to become possible depressions, tropical storms or cyclones. Their movements are toward northeasterly and may move closer to the western side of Thailand. As a result, the western side at both of the northern and central parts including with the Southern Thailand will face up with more rain. The public then should follow the weather forecast news from the Thai Meteorological Department closely further.

Prediction of Rain (millimeters), Rainy Days (days) and comparing to normal:

Part	Prediction									Normal (Baseline period 1980-2010)					
	February 2018			March 2018			April 2018			February		March		April	
	Rain (mm)	Rainy Days (days)	Comparing To Normal	Rain (mm)	Rainy Days (days)	Comparing To Normal	Rain (mm)	Rainy Days (days)	Comparing To Normal	Rain (mm)	Rainy Days (days)	Rain (mm)	Rainy Days (days)	Rain (mm)	Rainy Days (days)
Northern	<10	1-3	50 % Below normal	15-35	2-5	10 % Below normal	65-100	7-9	10-15 % Above normal	10.4	1.4	28.1	3.1	71.3	7.0
Northeastern	5-20	2-4	40 % Below normal	30-60	4-6	10 % Below normal	80-120	8-10	10-15 % Above normal	18.5	2.5	44.7	4.8	86.3	8.0
Central	5-15	1-3	25 % Below normal	20-40	3-5	10 % Below normal	70-120	5-7	10 % Above normal	12.3	1.6	36.0	3.4	79.5	6.4
Eastern	15-40	2-4	15 % Below normal	40-70	4-6	Near normal	90-140	8-10	10 % Above normal	29.1	3.1	62.1	5.4	98.9	8.3
Southern Thailand (East Coast)	20-50	3-5	15 % Below normal	45-90	4-6	10 % Below normal	80-125	7-9	15 % Above normal	34.5	3.7	68.4	5.4	75.4	7.3
Southern Thailand (West Coast)	15-40	3-5	25 % Below normal	60-100	6-8	10 % Below normal	155-220	12-14	10 % Above normal	27.5	3.6	88.8	7.6	160.6	12.7
Bangkok Metropolis and Vicinity	10-25	2-4	Near normal	25-50	3-5	Near normal	85-150	6-8	10% Above normal	20.0	2.5	42.1	3.6	91.4	6.5

Prediction of Mean Maximum Temperature (Tmax) and Mean Minimum Temperature (Tmin) (°C) and comparing to normal:

Part	Prediction									Normal (Baseline period 1980-2010)					
	February 2018			March 2018			April 2018			February		March		April	
	Tmax mean	Tmin mean	Comparing to Normal	Tmax mean	Tmin mean	Comparing to Normal	Tmax mean	Tmin mean	Comparing to Normal	Tmax mean	Tmin mean	Tmax mean	Tmin mean	Tmax mean	Tmin mean
Northern	33-35	17-20	Above normal	35-37	20-22	Near normal	35-38	22-25	Near normal	33.7	17.2	36.1	20.4	37.1	23.4
Northeastern	32-34	18-21	Near normal	34-37	22-24	Near normal	34-37	23-25	Below normal	33.0	19.7	35.1	22.4	36.1	24.5
Central	33-36	22-24	Near normal	35-37	24-26	Near normal	35-38	24-26	Near normal	34.6	22.6	36.1	24.4	37.0	25.8
Eastern	32-34	23-25	Near normal	33-35	24-26	Near normal	33-36	25-27	Near normal	32.9	23.4	33.8	24.9	34.7	25.9
Southern Thailand (East Coast)	31-33	22-24	Near normal	32-34	23-25	Near normal	32-35	24-26	Near normal	31.4	22.7	32.6	23.7	33.7	24.6
Southern Thailand (West Coast)	33-34	23-25	Near normal	33-35	23-25	Near normal	33-35	24-26	Near normal	33.8	23.0	34.4	23.7	34.2	24.4
Bangkok Metropolis and Vicinity	33-35	23-26	Near normal	34-36	25-27	Near normal	34-37	25-27	Near normal	33.3	24.4	34.3	25.9	35.4	26.9

Remarks:

- Normal means average during the 30-year period (A.D. 1981 – 2010 or B.E. 2524 – 2553)
- These long range climate expectation is created by applying some climate models and statistical methods, the public then should follow the daily weather news from the Thai Meteorological Department for more accuracy further.
- The next 3-month climate expectation will be at the last week of February 2018.
- 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.

Climate Center, Meteorological Development Division,
Thai Meteorological Department, Ministry of Digital Economy and Society.