



Climate Outlook:

1. During the next 3 months, the total rains of the Upper Thailand (northern, northeastern, central and eastern parts) are expected to be near normal or about 40, 62, 53 and 105 millimeters (from normal) consecutively.

On the other hand, the total rain of the Southern Thailand (east coast) will be 10-20% above normal or 191 millimeters (Normal: 162 millimeters) while that of the Southern Thailand (west coast) is going to be 10-20% above normal or 158 millimeters (Normal: 142 millimeters) consecutively.

Furthermore, the mean temperature of the northern part will be slightly above normal (0.5 C.) whereas that of the northeastern part will be 0.5 – 1.0 C. below normal. Moreover, the mean temperature of the central and eastern parts and that of the Southern Thailand will be near normal.

2. In January, the total rain of the Upper Thailand will be below normal while that of the Southern Thailand (both coasts) will be above normal.

However, the mean temperature of the northern part will be above normal (0.5 C.) while that of the northeastern part will be 0.5 – 1.0 C. below normal. But the mean temperature of other parts will be near normal.

3. Later in February, the total rain for the whole of Thailand will be below normal except that the total rain of the Southern Thailand (east coast) will be near normal.

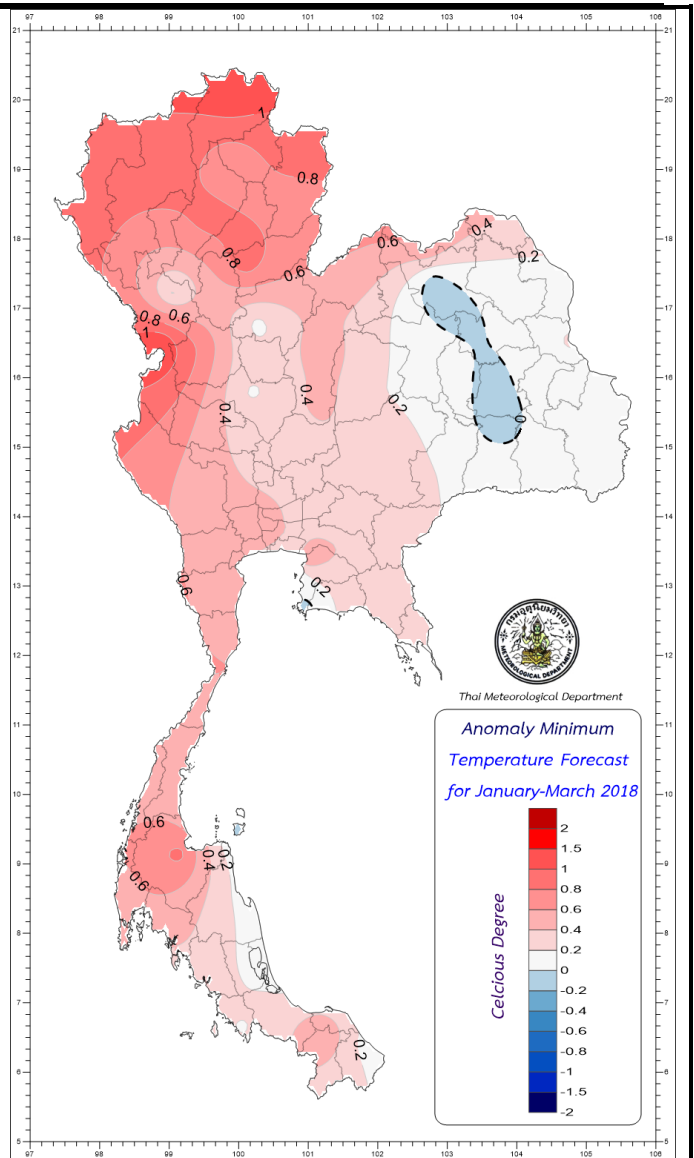
Moreover, the mean temperature for the whole of Thailand will be near normal except that the mean temperature of the northern part will be slightly above normal (0.5 C.).

4. Then during March, the total rain for the whole of Thailand will be above normal except that the total rain of the Southern Thailand (east coast) will be near normal.

Furthermore, the mean temperature of the Upper Thailand will be slightly below normal except that the mean temperature of the northeastern part will be 0.5 – 1.0 C. below normal while that of the Lower Thailand will be near normal.

Notes: The Upper Thailand includes the northern, northeastern, central and eastern parts.

The lower Thailand includes the Southern Thailand (east and west coasts).



General climate characteristics of Thailand during January 2018 until March 2018 comparing to the 30-year normal (A.D. 1981 – 2010 or B.E. 2524 – 2553)

January: Cold weather occurs due to the influential high-pressure air mass areas prevailing over Thailand for the whole month. Actually, most temperature of the country will become lowest at this month for the entire year. In other words, cool or cold weather with morning fog appears commonly, especially for the northern and northeastern parts including with high mountainous areas. While the central and eastern parts will experience cool weather whereas the Southern Thailand is going to experience not too cool or cold weather due to surrounding seas at both sides, except for the upper portion.

February: As the 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 rises 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.

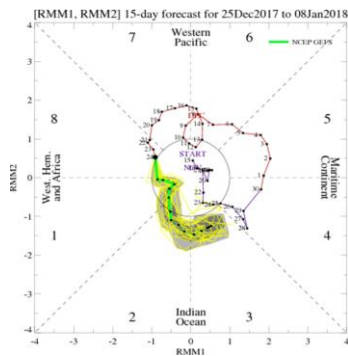
March: Dry, sweltering and low humidity weather appears and very hot weather occurs on some days, especially around the Upper Thailand. The reason is that mostly southerly wind prevails over Thailand. Nevertheless, some cold air masses from China will prevail and confront with warm air masses prevailing 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.

Prediction of the phenomena that influence climate characteristics of Thailand:

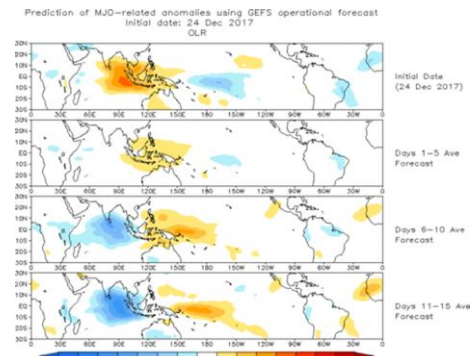
1. Madden Julian Oscillation (MJO)

During the past December 2017, MJO became more active. In other words, MJO developed around the Northwest Pacific and influenced on rain of Thailand during early December 2017. Afterward, MJO became weakened and moved toward the eastern portion of the Pacific Ocean during the 2nd half of December 2017.

Together with the MJO index and OLR (Orthogonal Long wave Radiation) forecast models, MJO is expected to become weakened during the beginning of January 2018 around the western portion of the Indian Ocean. 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) during middle January 2018. Thus, MJO may influence on Thailand. Nevertheless, MJO still needs to be under monitoring during February and March further.



MJO Index and MJO Phase forecast graph from world climate centers (IRI/CPC)



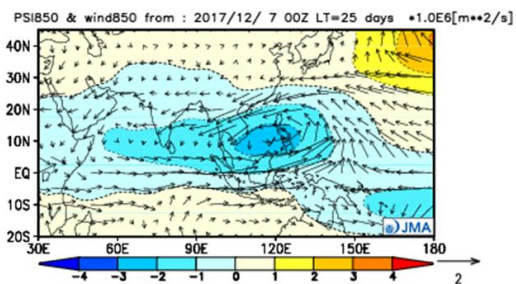
Mean OLR 3-phase forecast, each phase consisting of 5 days. (IRI/CPC)

2. Southwestern and Northeastern Monsoon

During the past December 2017, the northeastern monsoon prevailing over Thailand was near normal. Then during middle December, the northeastern monsoon became more active to prevail over Thailand influencing temperature to reduce for the whole country. Less rain also happened at the Southern Thailand.

Together with wind forecast analyses at the 850-hPa and 200-hPa levels during January till March in the past, 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 (both coasts) is 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.

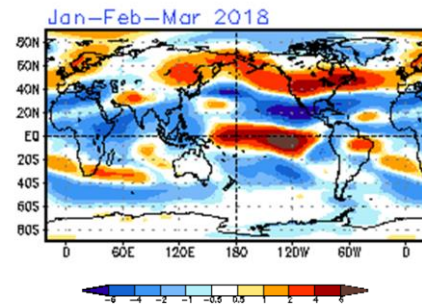
Ensemble forecast (3 months mean : JAN-MAR)



Mean stream function difference from Normal and mean wind speed at 850-hPa level for January - March 2018

NWS/NCEP/CPC
Initial conditions: 10Dec2017-19Dec2017
Last update: Wed Dec 20 2017

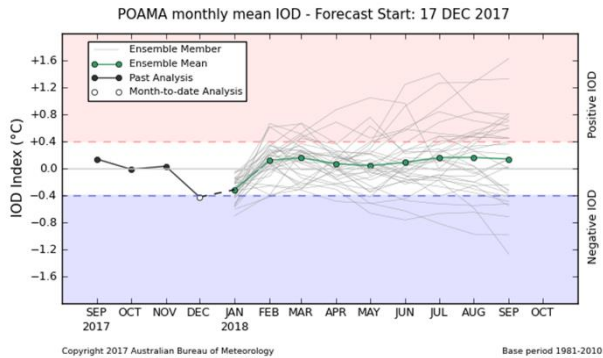
CFSv2 seasonal u200-u850 (m/s)



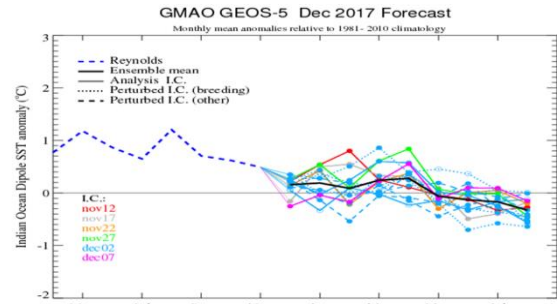
Mean OLR map around the Globe from January - March 2018 between the 850-hPa and 200-hPa levels

3. Indian Ocean Dipole (IOD)

During the past November until December, 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 January 2018 until March 2018. For this reason, IOD will not influence on the total rain and mean temperature of Thailand.



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IOD index forecast model (BOM)

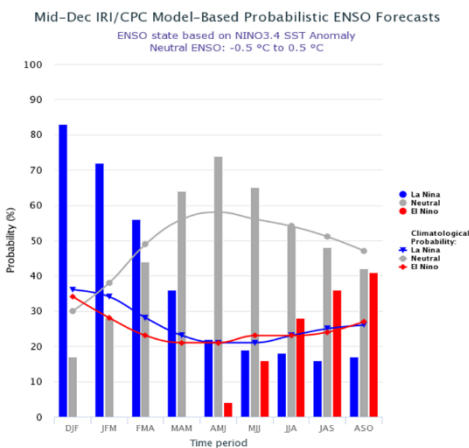


IOD index forecast (NASA)

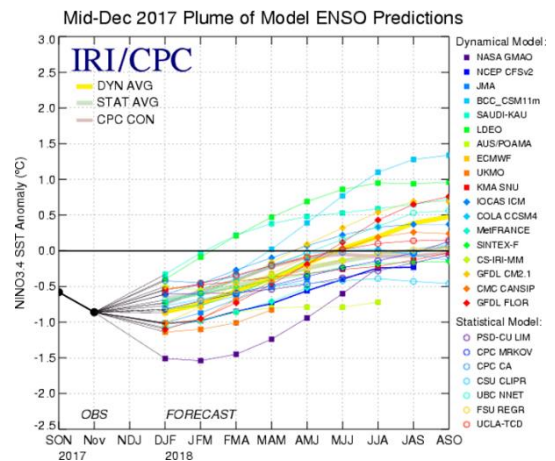
4. El Niño Southern Oscillation (ENSO)

During November until December 2017, ENSO began to become La Niña (Nino 3.4 = -0.7). And from El Niño/Southern Oscillation (ENSO) Diagnostic Discussion, ENSO probability forecast, and sea surface temperature prediction at the Northwest Pacific, ENSO is under monitoring and expected to become weak La Niña during January 2018 – March 2018.

As a result, the total rain of the northern part, the DYNern Thailand, and the western portion of the central part will probably be above normal. Moreover, the mean temperature of the northern part will probably be above normal while that of the northeastern part and the Southern Thailand are probably below normal during January 2018 till March 2018. Afterward, ENSO is expected to become neutral in March 2018.



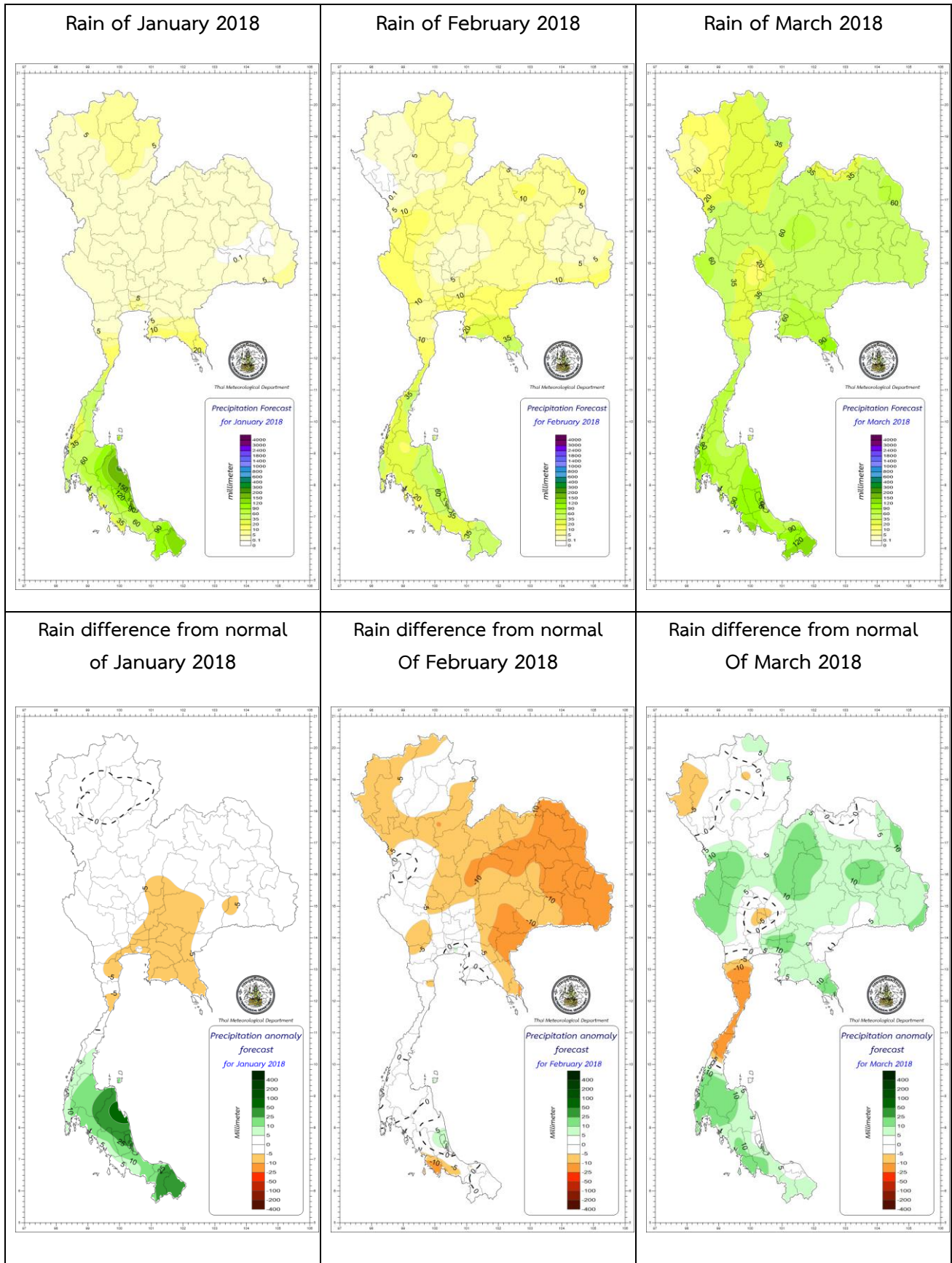
ENSO probability forecast (IRI/CPC)



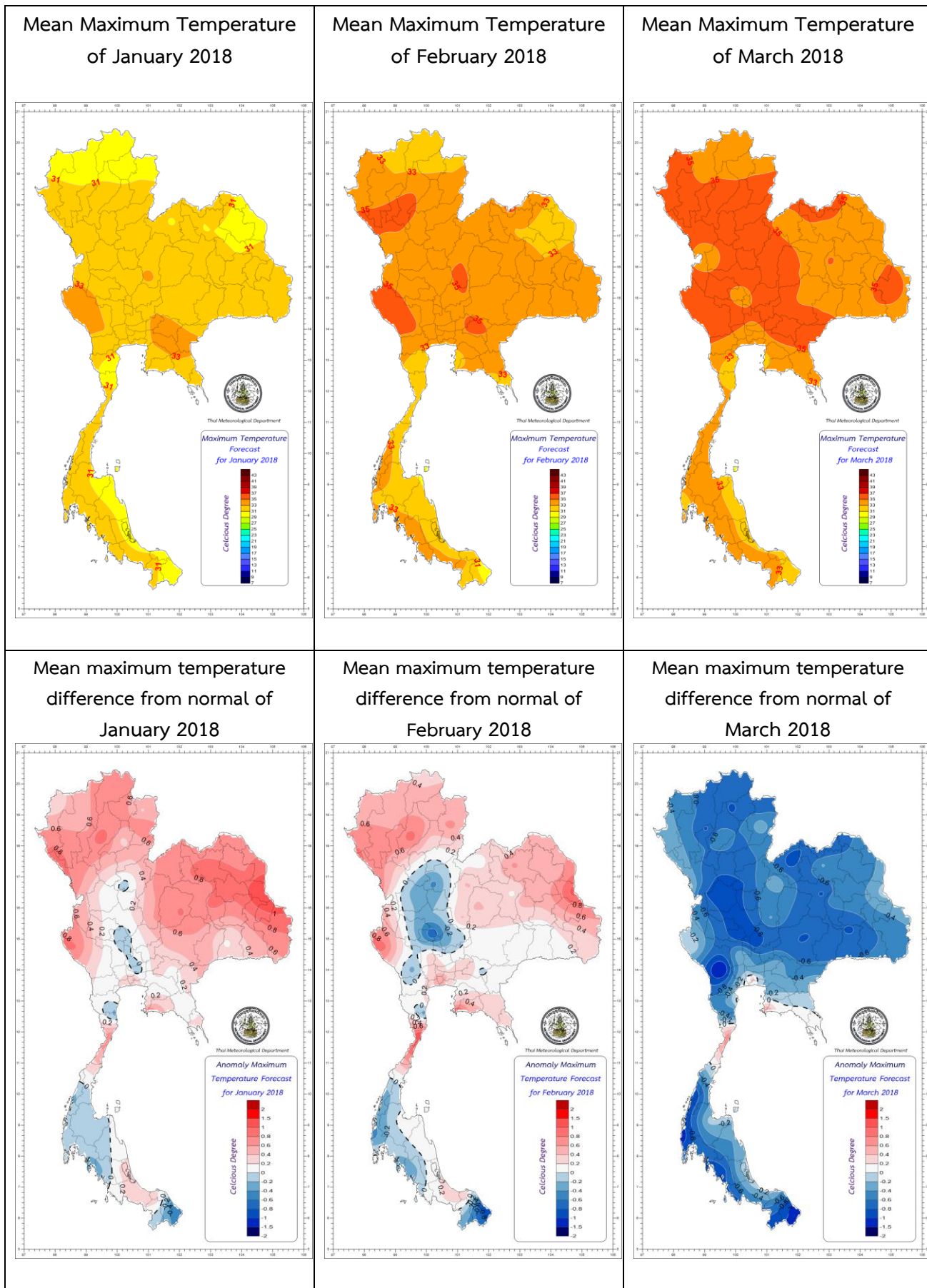
Mean Nino 3.4 index forecast from global climate centers (IRI/CPC)

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

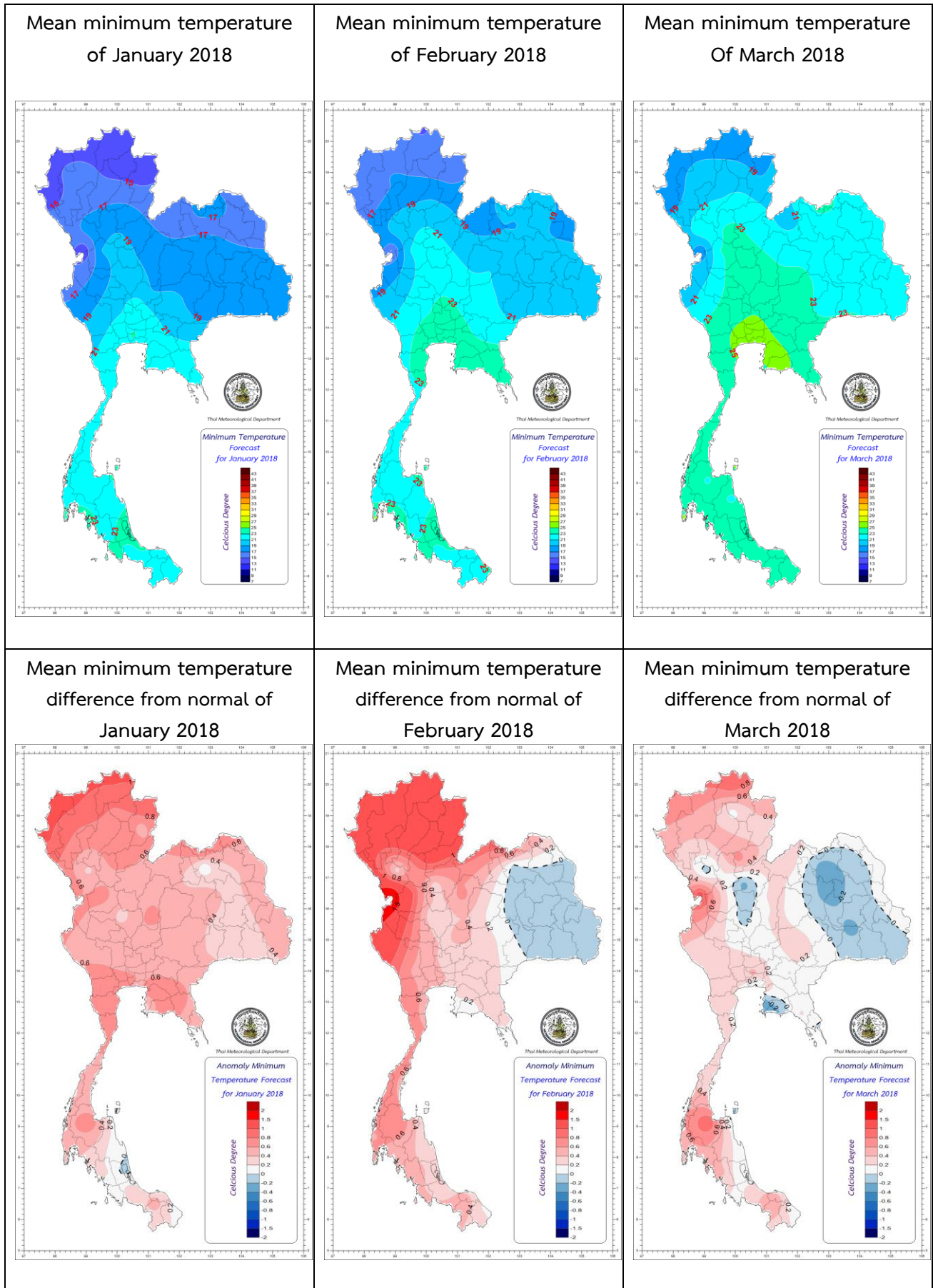
Prediction of rain (millimeters) and difference from normal (millimeters):



Prediction of mean maximum temperature (C.) and difference from normal (C.):



Prediction of mean minimum temperature and difference from normal (C.):



*** Cautions ***

January. chances are high that some tropical cyclones may move toward Thailand or pass the Southern Thailand. They may move pass the tip of the Indochina Peninsula toward the Gulf of Thailand. Consequently, the Southern Thailand (east coast) will face up with more rainfall influencing flash and forest flood to inundate at some areas.

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

March. summer thunderstorms often occur as thunder rain, gusty wind and possibly falling hail at some areas causing damages for life and possession. The public then should follow weather forecast news from the Thai Meteorological Department closely further.

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

Part	Prediction									Normal					
	January 2018			February 2018			March 2018			January		February		March	
	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	5-10	1-2	Below normal 10-20 %	5-10	1-2	Below normal 30-40 %	20-50	2-5	Above normal 5-10 %	4.6	1.0	10.4	1.4	28.1	3.1
Northeastern	Less than 5	1-2	Below normal 60-70 %	5-15	2-4	Below normal 40-50 %	35-75	4-6	Above normal 10-20 %	4.8	1.1	18.5	2.5	44.7	4.8
Central	5-10	1-2	Less than normal 30-40 %	5-15	1-2	Below normal 10-20 %	25-60	3-5	Above normal 10-20 %	6.7	1.1	12.3	1.6	36.0	3.4
Eastern	5-20	1-2	Below normal 30-40 %	15-40	2-4	Less than normal 5-10 %	50-95	4-6	Above normal 10-20 %	16.1	1.8	29.1	3.1	62.1	5.4
Southern Thailand (East Coast)	50-115	7-9	Below normal 20-30 %	20-55	4-6	Near normal	45-110	4-6	Near normal	59.7	7.2	34.5	3.7	68.4	5.4
Southern Thailand (West Coast)	20-45	4-6	Below normal 10-20 %	15-40	3-5	Below normal 5-10 %	65-185	6-8	Above normal 10-20 %	26.4	4.2	27.5	3.6	88.8	7.6
Bangkok Metropolis and Vicinity	5-10	1-2	Below normal 30-40 %	5-15	2-4	Below normal 10-20 %	70-135	3-5	Above normal 10-20 %	13.3	1.7	20.0	2.5	42.1	3.6

Prediction of mean maximum and mean minimum temperatures (° C.) and comparing to normal:

Part	Prediction									Normal					
	January 2018			February 2018			March 2018			January		February		March	
	Mean Maximum	Mean Minimum	Comparing to Normal	Mean Maximum	Mean Minimum	Comparing to Normal	Mean Maximum	Mean Minimum	Comparing to Normal	Mean Maximum	Mean Minimum	Mean Maximum	Mean Minimum	Mean Maximum	Mean Minimum
Northern	30-32	15-17	Slightly above normal	31-33	16-18	Slightly above normal	35-37	19-21	Near normal	31.1	15.6	33.7	17.2	36.1	20.4
Northeastern	29-31	16-18	Slightly above normal	30-32	16-18	Near normal	33-34	20-22	Below normal	30.6	17.1	33.0	19.7	35.1	22.4
Central	32-34	19-21	Near normal	32-34	19-21	Near normal	35-37	23-25	Slightly below normal	32.7	20.6	34.6	22.6	36.1	24.1
Eastern	31-33	20-22	Near normal	31-33	20-22	Near normal	32-34	24-26	Slightly below normal	32.1	21.4	32.9	23.4	33.8	24.9
Southern Thailand (East Coast)	29-31	21-23	Near normal	29-31	21-23	Near normal	31-33	22-24	Near normal	30.3	22.2	31.4	22.7	32.6	23.7
Southern Thailand (West Coast)	31-33	22-24	Near normal	32-34	22-24	Near normal	33-35	22-24	Near normal	32.6	22.8	33.8	23.0	34.4	23.7
Bangkok Metropolis and Vicinity	31-33	21-23	Near normal	31-33	22-24	Near normal	33-35	25-27	Slightly below normal	32.5	22.6	33.3	24.4	34.3	25.9

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 forecast news from the Thai Meteorological Department for more accuracy further.
- The next 3-month climate prediction will be at the last week of January 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.
- Also, please follow monthly climate, 3-month climate and seasonal forecasts at <http://www.tmd.go.th/en/> at the climate tab.

Climate Center, Meteorological Development Division, Thai Meteorological Dept.

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