

Annual Weather Summary of Thailand in 2011

2011 was the wettest year for Thailand in the 61- years (1951-2011) record. This resulted mainly from widespread rain in Thailand especially during summer and rainy seasons. The annual rainfall was about 24 % above normal and 19 % higher than the previous year. Consequently, Thailand experienced severe floods in several provinces in southern part during March followed by the period July to early December was particularly seriously affected the lower northern and central parts. The enormous damages from the floods affected all sectors of the country. Despite monthly mean air temperatures slightly above normal almost the whole year, the annual temperature averaged of 26.8 °C was 0.2 °C below normal. Summer was remarkable for the unusual cool weather, Thailand experienced a spell of very low temperature which affected in most areas with breaking records of daily minimum temperatures in several areas. Moreover there were 5 tropical cyclones having some effects on rainfall of Thailand, with only one namely the tropical storm NOCK-TEN (1108) hit Thailand on July 31. More details on the weather are as follow:

In January, the weather was generally cool and cold in upper Thailand with cold and very cold in the mountainous areas and mountain top caused by the surge of rather active high pressure area from China. Unseasonable rainfall occurred during the passage of the westerly trough over the upper Thailand. Conditions were also cool in the upper southern Thailand and abundant rainfall occurred across the southern part throughout the month. Mean air temperatures in January were considered to be normal while there was 1.5 °C and 0.5 °C below normal in northeastern and central part respectively. The extreme minimum air temperature of the year, 8.5 °C, occurred in the northeastern part at Nakhon Phanom Agrometeorological station in Nakhon Phanom province on January 13 while it was 2.5 °C in mountainous area at Phluang Wildlife Sanctuary in Loei province on January 18.

Summer in Thailand began normally around mid February. Summer months were exceptionally cool especially in March, when the high pressure area from China occasionally extended its ridge to cover upper Thailand. Temperature sharply dropped mainly in northern and northeastern parts. The combination influence of the westerly trough, the prevailing of easterly wind and the low pressure cell dominating over the middle southern part produced significant rain over southern part led to widely severe floods and mudslide in much of southern Thailand. Moreover, torrential rain triggered massive flooding seriously destroyed homes and croplands. Summer rainfalls were above normal with 369 % above normal in March. In April, hot weather occurred in several areas and very hot in some areas of northeastern part. The extreme maximum air temperature of the year was 40.7 °C at Amphoe Satuek in Buriram province on April 18. However, mean air temperature of March and April were below normal in general with the new lowest record of minimum temperature in some stations.

The rainy season started approximately one week earlier than normal on May 6 and prolonged till mid October. Under the influence of monsoon trough which lay across upper Thailand and southwest monsoon, mean monthly rainfalls were above normal throughout the season in most places. In addition, tropical storm "HAIMA (1104)" in the upper South China Sea made landfall over upper Vietnam on June 24. After making landfall, it downgraded to the tropical depression and passed through Lao before weakening to the

active low pressure cell and moved further to cover Nan province in northern part of Thailand on June 26. As HAIMA neared upper Thailand, the southwest monsoon became more strength which resulted in plentiful of rainfall in many areas, producing massive floods that seriously destroyed homes and croplands mainly in northern part during June 25 and 26. Furthermore, the tropical storm "NOCK-TEN" in the middle South China Sea made landfall over upper Vietnam during late July. It moved into Laos and downgraded to tropical depression before heading to Nan province in Thailand on July 31. It later weakened to the low pressure cell for the next time. Stormy conditions caused scattered to fairly widespread rain almost the whole period particularly in the northern and northeastern parts where heavy to very heavy rainfall was observed in several areas during the end of the period. The maximum daily rainfall of 405.9 mm was reported in upper Thailand at Amphoe Muang in Nong Khai province on July 30 and was the highest for the station in 61 years. Flash floods occurred at Mae Hong Son, Nan, Phrae, Uttaradit, Phitsanulok Phicit, Nong Khai, Loei Udon Thani, Sakon Nakhon, and Nakhon Phanom provinces on July 31. Afterward, abundant rainfall prolonged especially in northern and northeastern parts nearly the whole August. During late September till early October the strength of southwest monsoon, monsoon trough lying across upper Thailand, the remnants of tropical storm "HAITANG(1118)", typhoon "NESAT(1117)" and "NALGAE(1119)", associated with high tide during the second half of October resulted in abundant rainfall with widely major flooding across upper Thailand mainly in lower northern and central parts at Phitsanulok, Sukhothai, Phichit, Nakhon Sawan, Lop Buri, Uthai thani, Ayutthaya, Sing Buri, Ang Thong, Sara Buri, Nakhon Nayok, Prachin Buri, Pathum Thani, Nonthaburi and Nakhon Pathom provinces. Extensive flooding in some areas continued the period October to early December.

Moreover high pressure area from China which extended its ridge to cover upper Thailand accompanied with the prevailing of the northeast monsoon during the second half of October brought cool to upper portion of northern and northeastern parts. Then rainfalls and temperatures in upper Thailand were clearly decreasing with generally cool and cold weather in some areas, especially during the second half of December. Extreme minimum temperature was 9.0 °C at Agrometeorological Station in Sakon Nakhon province on December 25 and Agrometeorological Station in Nakhon Phanom province on December 27. The temperature dropped to 1.5 °C at Doi Angkhang, Amphoe Fang in Chiang Mai province on December 21. However mean temperatures in November and December were above normal in all regions. In southern part, cool weather in several areas of the upper portion. As the active northeast monsoon and the low pressure cell in the lower South China Sea moved to cover Malaysia and the lower southern Thailand during late December, several places mainly in east coast experienced plentiful of rainfall with heavy and very heavy rainfall. The maximum daily rainfall was 325.3 mm at Ru So in Narathiwat province on December 31. Strong wind wave occurred at Prachuap Khiri Khan, Chumphon, Surat Thani and Nahkon Si Thammarat provinces on December 25. Floods were also reported at Prachuap Khiri Khan province on December 25 and Narathiwat province on December 31. ❀