

Administration

MONTHLY CLIMATE REVIEW OVER KOREA

(total 4 pages)

Division	National Climate
Division	Data Center
Contact	LEE, Jae-Won
DI / 11	+82-2-2181-0884/
Phone/email	kghyun@korea.kr
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July 2016 Climate Summary

- \diamondsuit The nationwide mean temperature (25.4°C) in July 2016 was 0.9°C above normal.
- ♦ The nationwide-average of precipitation (299.8 mm) was 104.1% of normal.
- ☐ Climate features and long-term trends in July 2016 were analyzed 45 meteorological stations throughout Korea (national average) during 1973-2016 (1908-2016 for Seoul).
 - * Normal: Average value of climatic element data collected from 1981 to 2010

☐ The climatic characteristics in July 2016

- o Korea (as a whole),
 - The mean temperature $(25.4\,^{\circ}\text{C})$, the mean maximum temperature $(29.7\,^{\circ}\text{C})$ and the mean minimum temperature $(22.0\,^{\circ}\text{C})$ were $0.9\,^{\circ}\text{C}$, $0.9\,^{\circ}\text{C}$, $0.9\,^{\circ}\text{C}$ above normal, respectively.
 - A nationally-averaged precipitation was 299.8 mm, which was 104.1% of normal. The number of rainy days was 13.8, which was 0.6 days less than normal.
 - The total number of hours of sunshine was 178.3, which was 120.6% of normal.

o Seoul.

- The mean temperature (26.2°C) , the mean maximum temperature (29.8°C) and the mean minimum temperature (23.3°C) were 1.3°C , 1.2°C , 1.4°C above normal, respectively.
- The amount of precipitation was 358.2mm, which was 90.8% of normal.
- The number of rainy days was 17.0, which was 0.7 days less than normal.
- The total number of hours of sunshine was 160.4, which was 133.7% of normal.

☐ Long-term¹⁾ trend in July 2016 climate

- o Korea (as a whole),
 - The national mean temperatures in July during the 2000s (2001-2010) was $0.1^{\circ}C$ less that of in the 1970s (1973-1980).
 - The nationwide-average of precipitation in July during the 2000s was 111.1 mm more than that of in the 1970s.
 - The number of rainy days in July during the 2000s was 2.2 days more than that of in the 1970s.
- The total sunshine hours in July during the 2000s was 41.5 hours less than that of in the 1970s.

o Seoul,

- The mean temperatures in July during the 2000s (2001-2010) was 0.1° C above that of in the 1970s (1971-1980).
- The precipitation in July during the 2000s was 200.4 mm more than that of in the 1970s.
- The number of rainy days in July during the 2000s was 2.4 days more than that of in the 1970s.
- The total sunshine hours in July during the 2000s was 31.9 hours less than that of in the 1970s.

^{1) 2000}s: 2001~2010 / 1970s of Korea(Seoul): 1973~1980(1971~1980)

Appendix 1 Climate features of July 2016 (Nationwide)

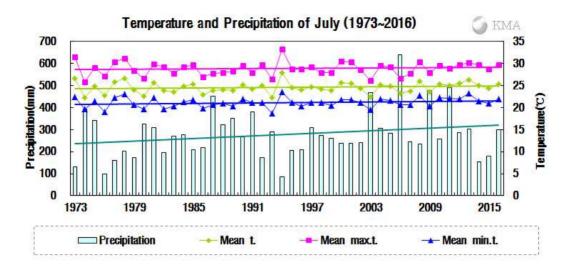


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during July (1973–2016).

☐ The nationwide average value of meteorological element during July (1973-2016)

Elements (whole country)	July 2016(a)	July 2015(b)	Normals of July (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature ($^{\circ}$ C)	25.4	24.4	24.5	1.0	0.9	
Mean maximum temp. (°C)	29.7	28.7	28.8	1.0	0.9	
Mean minimum temp. (℃)	22.0	20.9	21.1	1.1	0.9	
Precipitation (mm)	299.8	180.3	289.7	119.5 (190.0%)	10.1 (104.1%)	
Days of rain (day)	13.8	14.2	14.4	-0.4	-0.6	
Sunshine duration (hour)	178.3	174.0	147.9	4.3 (102.5%)	30.4 (120.6%)	
Mean cloud amount (1/10)	6.8	7.0	7.1	-0.2	-0.3	
Precipitation more than 80mm/day(day)	0.7	0.3	0.7	0.4	0.0	
Days of maximum temperature more than 33°C(day)	5.5	3.2	3.9	2.3	1.6	

☐ The nationwide average value of meteorological element during July in each decade (1973–2010)

Year	Mean temp.	Mean max. temp.	Mean min. temp. (°C)	Prep. (mm)	Days of rain (day)	Sunshine duration (hour)	Mean cloud amount (1/10)	Precipitation more than 80mm/day (day)	Days of maximum temperature more than 33°C (day)
1973-1980(a)	24.5	28.8	21.0	228.0	13.7	165.3	7.0	0.4	4.1
1981-1990(b)	24.3	28.6	20.9	287.5	14.3	157.1	7.1	0.6	3.6
1991-2000(c)	24.7	29.1	21.1	242.5	12.9	163.0	6.8	0.6	4.7
2001-2010(d)	24.4	28.6	21.2	339.1	15.9	123.8	7.3	0.9	3.4
2016(e)	25.4	29.7	22.0	299.8	13.8	178.3	6.8	0.7	5.5
d-a	-0.1	-0.2	0.2	111.1	2.2	-41.5	0.3	0.5	-0.7
d-b	0.1	0.0	0.3	51.6	1.6	-33.3	0.2	0.3	-0.2
d-c	-0.3	-0.5	0.1	96.6	3.0	-39.2	0.5	0.3	-1.3
e-d	1.0	1.1	0.8	-39.3	-2.1	54.5	-0.5	-0.2	2.1

Appendix 2 Climate features of July 2016 (Seoul)

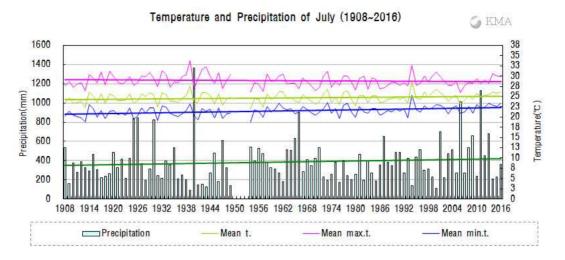


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during July (1908–2016).

☐ The average value of meteorological element during June in Seoul(1908-2016)

Elements (Seoul)	July 2016(a)	July 2015(b)	Normals of July (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	26.2	25.8	24.9	0.4	1.3	
Mean maximum temp. (℃)	29.8	30.0	28.6	-0.2	1.2	
Mean minimum temp. (°C)	23.3	22.6	21.9	0.7	1.4	the 4th highest
Precipitation (mm)	358.2	226.0	394.7	132.2 (158.5%)	-36.5 (90.8%)	
Days of rain (day)	17.0	14.0	16.3	3.0	0.7	
Sunshine duration (hour)	160.4	176.1	120.0	-15.7 (91.1%)	40.4 (133.7%)	
Mean cloud amount (1/10)	7.2	7.0	7.4	0.2	-0.2	
Precipitation more than 80mm/day(day)	2.0	1.0	1.2	1.0	0.8	
Days of maximum temperature more than 33 °C (day)	4.0	4.0	2.2	0.0	1.8	

☐ The average value of meteorological element during July in Seoul in each decade (1911-2010)

Year	Mean temp. (℃)	Mean max. temp. (°C)	Mean min. temp.	Prep. (mm)	Days of rain (day)	Sunshine duration (hour)	Mean cloud amount (1/10)	Precipitation more than 80mm/day (day)	Days of maximum temperature more than 33 °C (day)
1911-1920(a)	24.4	29.1	20.8	326.2	14.9	203.6	7.3	0.9	3.7
1921-1930	24.7	29.2	21.2	477.0	17.4	169.0	8.0	1.5	3.3
1931-1940(b)	24.6	29.4	21.2	385.0	16.3	182.2	7.8	1.1	5.0
1941-1949	24.6	29.9	20.9	269.9	15.9	210.4	7.5	0.2	5.3
1954-1960	24.0	28.2	21.1	422.0	19.1	138.7	7.9	1.0	1.7
1961-1970	24.6	28.4	21.7	446.3	18.1	114.0	8.2	1.4	2.6
1971-1980(c)	24.7	28.8	21.7	288.2	15.2	114.7	7.5	0.5	2.8
1981-1990	24.6	28.4	21.5	372.8	16.5	135.0	7.6	1.1	1.8
1991-2000	25.4	29.2	22.2	322.7	14.7	142.3	7.0	0.9	3.8
2001-2010(d)	24.8	28.3	22.0	488.6	17.6	82.8	7.6	1.7	1.0
2016(e)	26.2	29.8	23.3	358.2	17.0	160.4	7.2	2.0	4.0
d-a	0.4	-0.8	1.2	162.4	2.7	-120.8	0.3	0.8	-2.7
d-b	0.2	-1.1	0.8	103.6	1.3	-99.4	-0.2	0.6	-4.0
d-c	0.1	-0.5	0.3	200.4	2.4	-31.9	0.1	1.2	-1.8
e-d	1.4	1.5	1.3	-130.4	-0.6	77.6	-0.4	0.3	3.0