



NATIONAL CLIMATE REVIEW OF KMA (total 6 pages)

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Monthly (September) 2013 Climate Summary

- ◇ The mean temperature (21.2 °C), the mean maximum temperature (26.4 °C) and the mean minimum temperature (17.0 °C) for September 2013 nationwide were above normals.
- ◇ The nationally-averaged precipitation (75.5 mm) was nearly normal.

- Climate features and long-term trends of September 2013 have been analyzed with the data collected at the 45 meteorological stations throughout Korea (national average) from 1973 to 2013 (1908-2013 for Seoul).

※ Normal : Average value of climatic element data collected from 1981 to 2010

- **The climatic characteristics of September 2013 are described as follows:**

o For Korea (whole country),

- The mean temperature (21.2 °C), the mean maximum temperature (26.4 °C) and the mean minimum temperature (17.0 °C) were 0.7 °C, 0.5 °C and 0.9 °C above normals, respectively.
- The nationally-averaged precipitation was 120.8 mm, which was 76% of normal. The number of the days of rain was 10.1 days, which was 1.1 days above normal.
- The total number of the hours of sunshine was 189.1 hours, which was 110% of normal.

o For Seoul,

- The mean temperature (21.8 °C) and the mean minimum temperature (18.0 °C) were 0.6 °C and 0.8 °C above normals, respectively. The mean maximum temperature (25.9 °C) is 0.1 °C above normal.
- The amount of precipitation was 138.5 mm, which was 82% of normal, which was nearly normal.
- The number of the days of rain was 9.0 days, which is 0.1 days less than normal.
- The total number of the hours of sunshine was 191.0 hours, which was 108% of normal.

□ **Long-term trend of September 2013 climate**

o For Korea (whole country),

- National mean temperatures of September 2000s (2001-2010) was 0.8 °C higher than that of the same month of 1970s.
- The nationally-averaged precipitation of September 2000s was 58.5 mm more than that of the same month of 1970s.
- The number of the days of rain of September 2000s was 1.8 days more than that of the same month of 1970s.
- The total number of the hours of sunshine in September 2000s was 29.4 hours less than that of the same month of 1970s.

o For Seoul,

- The mean temperatures of September 2000s (2001-2010) was 1.2 °C higher than that of the same month of 1970s.
- The precipitation of September 2000s was 94.9 mm more than that of the same month of 1970s.
- The number of the days of rain in September 2000s was 1.3 days more than that of the same month of 1970s.
- The total number of the hours of sunshine in September 2000s was 25.1 hours less than that of the same month of 1970s.

Appendix 1 Climate features of September 2013(Nationwide)

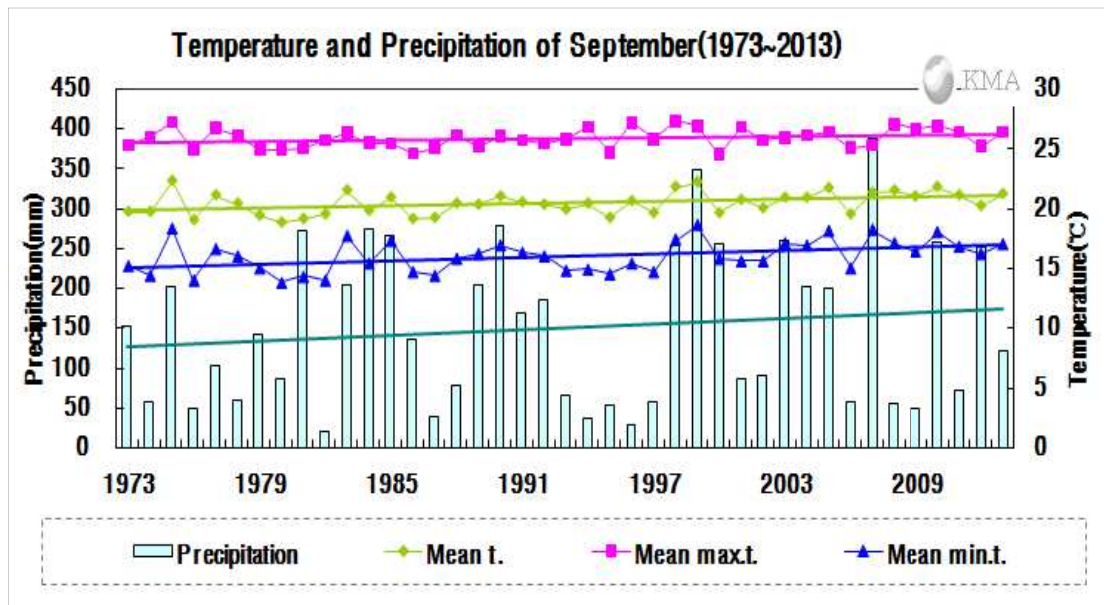


Fig 1. Temperatures (mean, mean maximum, and mean minimum) and precipitation in South Korea during September (1973-2013).

□ Average values of meteorological elements across Korea during September (1973~2013)

Elements (whole country)	Sep. 2013(a)	Sep. 2012(b)	Normals of Sep. (1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	21.2	20.2	20.5	1.0	0.7	
Mean maximum temp. (°C)	26.4	25.2	25.9	1.2	0.5	
Mean minimum temp. (°C)	17.0	16.2	16.1	0.8	0.9	
Precipitation (mm)	120.8	251.5	162.8	-130.7(55.8%)	-42.0(75.7%)	
Days of rain (day)	10.1	11.3	9.0	-1.2	1.1	
Sunshine duration (hour)	189.1	180.6	171.6	8.5(104.7%)	17.5(110.2%)	
Mean cloud amount (1/10)	5.4	5.8	5.6	-0.4	-0.2	
Days of daily temperature range greater than 10°C(day)	13.8	12.7	14.7	1.1	-0.9	

□ Average values of meteorological elements across Korea during September for each decade (1973~2010)

Year	Mean temp. (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Prep. (mm)	Days of rain (day)	Sunshine duration (hour)	Mean cloud amount (1/10)	Days of daily temperature range greater than 10°C(day)
1973-1980(a)	20.1	25.7	15.4	106.6	8.3	185.6	5.5	16.1
1981-1990(b)	20.1	25.5	15.7	177.6	9.0	176.5	5.8	14.8
1991-2000(c)	20.4	26.0	15.9	145.7	7.9	182.1	5.2	15.8
2001-2010(d)	20.9	26.2	16.8	165.1	10.1	156.2	5.8	13.3
2013(e)	21.2	26.4	17.0	120.8	10.1	189.1	5.4	13.8
d-a	0.8	0.5	1.4	58.5	1.8	-29.4	0.3	-2.8
d-b	0.8	0.7	1.1	-12.5	1.1	-20.3	0.0	-1.5
d-c	0.5	0.2	0.9	19.4	2.2	-25.9	0.6	-2.5
e-d	0.3	0.2	0.2	-44.3	0.0	32.9	-0.4	0.5

Appendix 2 Climate features of September 2013(Seoul)

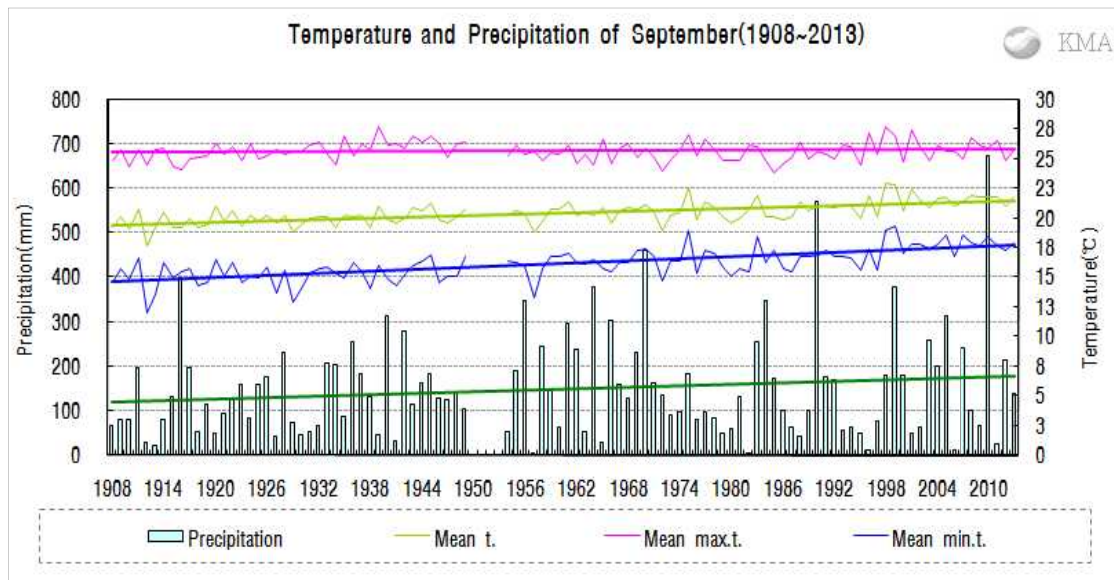


Fig 2. Temperatures (mean, mean maximum, and mean minimum) and precipitation in Seoul during September (1908-2013).

□ Average values of meteorological elements in Seoul during September (1973~2013)

Elements (Seoul)	Sep. 2013(a)	Sep. 2012(b)	Normals of Sep. (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	21.8	21.0	21.2	0.8	0.6	
Mean maximum temp. (°C)	25.9	25.0	25.8	0.9	0.1	
Mean minimum temp. (°C)	18.0	17.4	17.2	0.6	0.8	
Amount of precipitation (mm)	138.5	212.0	169.3	-73.5(65.3%)	-30.8(81.8%)	
Days of rain (day)	9.0	11.0	9.1	-2.0	-0.1	
Sunshine duration (hour)	191.0	190.8	176.2	0.2(100.1%)	14.8(108.4%)	
Mean cloud amount (1/10)	5.5	5.6	5.3	-0.1	0.2	
Days of daily temperature range greater than 10°C(day)	7.0	7.0	10.2	0.0	-3.2	

□ Average values of meteorological elements in Seoul during September for each decade (1911-2010)

Year	Mean temp. (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Prep. (mm)	Days of rain (day)	Sunshine duration (hour)	Mean cloud amount (1/10)	Days of daily temperature range greater than 10°C(day)
1911-1920(a)	19.7	25.3	15.1	125.6	10.1	211.2	6.0	16.3
1921-1930	19.9	25.6	14.9	118.1	8.5	217.8	5.4	18.4
1931-1940(b)	20.1	26.1	15.5	153.3	8.8	220.9	5.7	19.0
1941-1949	20.3	26.4	15.7	140.2	10.3	207.5	5.8	18.7
1954-1960	20.2	25.5	16.0	148.7	9.6	183.2	6.0	14.4
1961-1970	20.7	25.6	16.5	226.6	10.7	172.2	5.8	12.8
1971-1980(c)	20.5	25.5	16.5	102.0	8.6	174.6	5.5	12.0
1981-1990	20.6	25.4	16.6	178.0	8.1	192.0	5.6	11.3
1991-2000	21.3	26.0	17.2	132.9	9.4	187.0	4.9	11.6
2001-2010(d)	21.7	26.1	17.9	196.9	9.9	149.5	5.4	7.8
2013(e)	21.8	25.9	18.0	138.5	9.0	191.0	5.5	7.0
d-a	2.0	0.8	2.8	71.3	-0.2	-61.7	-0.6	-8.5
d-b	1.6	0.0	2.4	43.6	1.1	-71.4	-0.3	-11.2
d-c	1.2	0.6	1.4	94.9	1.3	-25.1	-0.1	-4.2
e-d	0.1	-0.2	0.1	-58.4	-0.9	41.5	0.1	-0.8