



MONTHLY CLIMATE REVIEW OVER KOREA (total 5 pages)

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December 2014 Monthly Climate Summary

- ◇ The nationwide mean temperature ($-0.5\text{ }^{\circ}\text{C}$) in December 2014 was $2.0\text{ }^{\circ}\text{C}$ below normal.
 - ◇ The nationally-averaged precipitation (26.1 mm) was 98.1 % of normal.
- Climate features and long-term trends in December 2014 were analyzed with the data collected at the 45 meteorological stations throughout Korea (national average) from 1973 to 2014 (1908-2014 for Seoul).
- ※ Normal : Average value of climatic element data collected from 1981 to 2010
- **The climatic characteristics in December 2014**
- o Korea (as a whole),
 - The mean temperature ($-0.5\text{ }^{\circ}\text{C}$), the mean maximum temperature ($4.3\text{ }^{\circ}\text{C}$) and the mean minimum temperature ($-5.0\text{ }^{\circ}\text{C}$) were $2.0\text{ }^{\circ}\text{C}$, $2.7\text{ }^{\circ}\text{C}$, $1.8\text{ }^{\circ}\text{C}$ below normal, respectively.
 - The nationally-averaged precipitation was 26.1 mm, which was 98.1 % of normal. The number of rainy days was 10.7, which was 4.1 days more than normal.
 - The total number of hours of sunshine was 190.3, which was 112.3 % of normal.
 - o Seoul,
 - The mean temperature ($-2.9\text{ }^{\circ}\text{C}$), the mean maximum temperature ($1.5\text{ }^{\circ}\text{C}$), the mean minimum temperature ($-6.7\text{ }^{\circ}\text{C}$) were $3.3\text{ }^{\circ}\text{C}$, $2.8\text{ }^{\circ}\text{C}$, $3.5\text{ }^{\circ}\text{C}$ below normal, respectively.
 - The amount of precipitation was 17.8 mm, which was 82.8 % of normal.
 - The number of rainy days was 10.0, which was 2.6 days more than normal.
 - The total number of hours of sunshine was 195.6, which was 128.2 % of normal.

□ **Long-term¹⁾ trend in December 2014 climate**

o Korea (as a whole),

- The national mean temperatures in December in the 2000s (2001-2010) was 0.5 °C more than that of in the 1970s (1973-1980).
- The nationally-averaged precipitation in December in the 2000s was 5.7 mm less than that of in the 1970s.
- The number of rainy days in December in the 2000s was 0.1 days less than that of in the 1970s.
- The total sunshine hours in December in the 2000s was 2.2 hours less than that of in the 1970s.

o Seoul,

- The mean temperatures in December in the 2000s (2001-2010) was 0.6 °C above that of in the 1970s (1971-1980).
- The precipitation in December in the 2000s was 10.3 mm less than that of in the 1970s.
- The number of rainy days in December in the 2000s was 0.2 days more than that of in the 1970s.
- The total sunshine hours in December in the 2000s was 8.2 hours more than that of in the 1970s.

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

Appendix 1 Climate features of December 2014 (Nationwide)

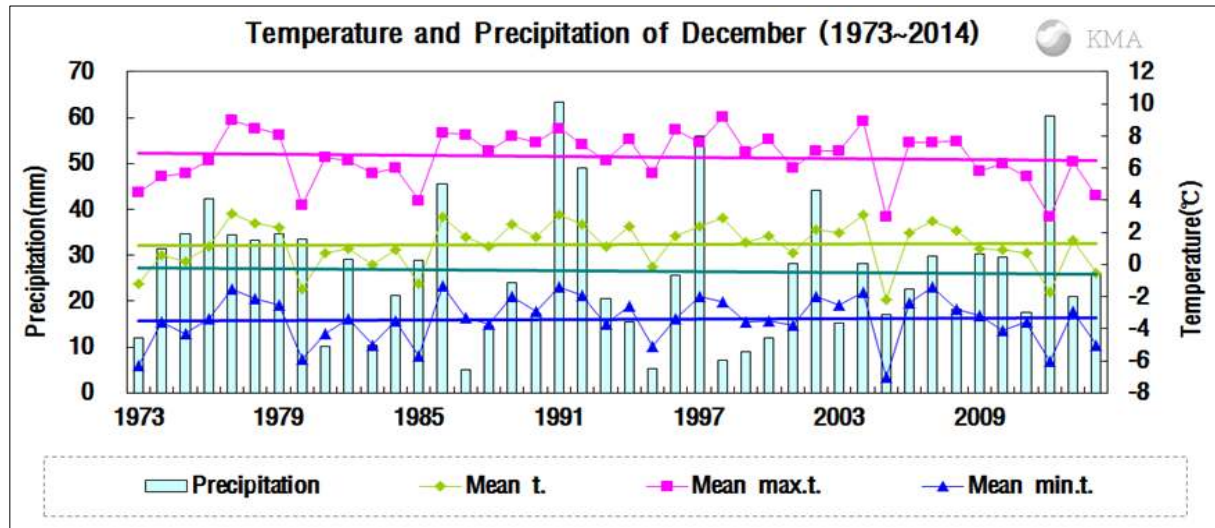


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during December (1973-2014).

□ The nationwide average value of meteorological element during December (1973-2014)

Elements (whole country)	Dec. 2014(a)	Dec. 2013(b)	Normals of Dec. (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	-0.5	1.5	1.5	-2.0	-2.0	
Mean maximum temp. (°C)	4.3	6.4	7.0	-2.1	-2.7	the fifth lowest
Mean minimum temp. (°C)	-5.0	-2.9	-3.2	-2.1	-1.8	
Precipitation (mm)	26.1	21.0	24.5	5.1 (165.0%)	1.6 (98.1%)	
Days of rain (day)	10.7	7.1	6.6	3.6	4.1	the second highest
Sunshine duration (hour)	190.3	182.9	169.4	7.4 (104.0%)	20.9 (112.3%)	
Mean cloud amount (1/10)	4.0	4.0	3.9	0.0	0.1	
Days of minimum temperature less than -10°C (day)	3.3	1.4	2.5	1.9	0.8	
Days of maximum temperature less than 0°C (day)	3.9	1.8	2.3	2.1	1.6	
Days of snow (day)	10.7	7.2	5.0	3.5	5.7	the highest

□ The nationwide average value of meteorological element during December in 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 minimum temperature less than -10°C (day)	Days of maximum temperature less than 0°C (day)	Days of snow (day)
1973-1980(a)	0.9	6.4	-3.7	32.1	7.1	169.5	3.9	3.5	3.1	5.4
1981-1990(b)	1.2	6.8	-3.5	20.7	6.7	173.4	3.9	2.8	2.6	5.3
1991-2000(c)	1.9	7.6	-3.0	26.4	6.0	167.4	3.7	2.0	1.7	4.2
2001-2010(d)	1.4	6.7	-3.1	26.4	7.0	167.3	3.9	2.5	2.6	5.4
2014(e)	-0.5	4.3	-5.0	26.1	10.7	190.3	4.0	3.3	3.9	10.7
d-a	0.5	0.3	0.6	-5.7	-0.1	-2.2	0.0	-1.0	-0.5	0.0
d-b	0.2	-0.1	0.4	5.7	0.3	-6.1	0.0	-0.3	0.0	0.1
d-c	-0.5	-0.9	-0.1	0.0	1.0	-0.1	0.2	0.5	0.9	1.2
e-d	-1.9	-2.4	-1.9	-0.3	3.7	23.0	0.1	0.8	1.3	5.3

Appendix 2 Climate features of December 2014 (Seoul)

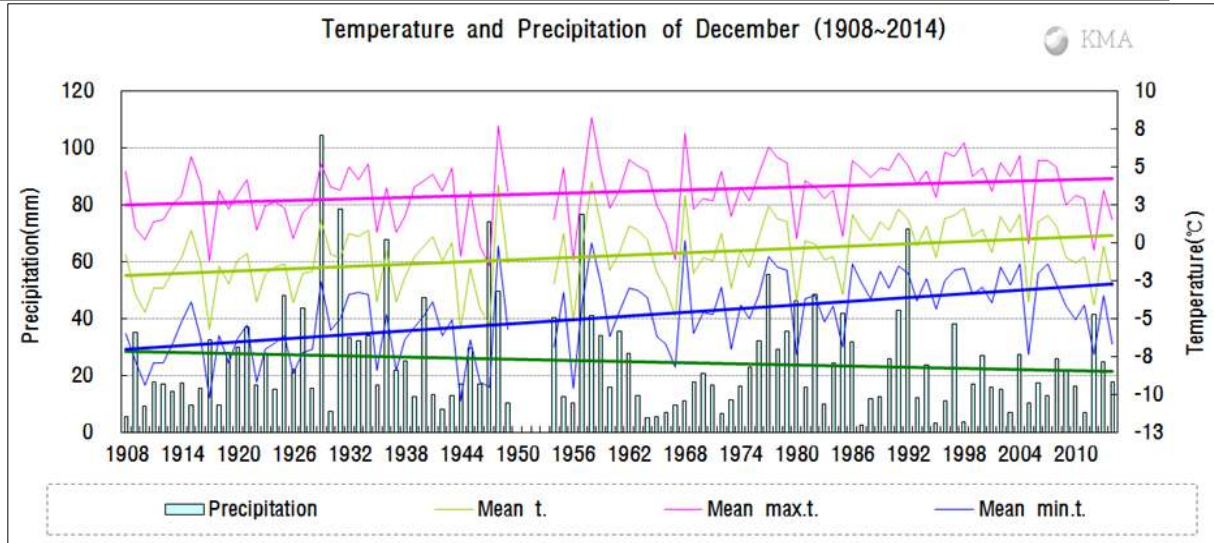


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during December (1908-2014).

□ The average value of meteorological element during December in Seoul (1908-2014)

Elements (Seoul)	Dec. 2014(a)	Dec. 2013(b)	Normals of Dec. (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	-2.9	-0.2	0.4	-2.7	-3.3	
Mean maximum temp. (°C)	1.5	3.5	4.3	-2.0	-2.8	
Mean minimum temp. (°C)	-6.7	-3.5	-3.2	-3.2	-3.5	
Precipitation (mm)	17.8	24.7	21.5	-6.9 (72.1%)	-3.7 (82.8%)	
Days of rain (day)	10.0	9.0	7.4	1.0	2.6	
Sunshine duration (hour)	195.6	184.4	152.6	11.2 (106.1%)	43.0 (128.2%)	
Mean cloud amount (1/10)	3.4	4.0	3.9	-0.6	-0.5	
Days of minimum temperature less than -10°C (day)	3.0	0.0	2.3	3.0	0.7	
Days of maximum temperature less than 0°C (day)	9.0	6.0	5.8	3.0	3.2	
Days of snow (day)	13.0	8.0	6.1	5.0	6.9	the third highest

□ The average value of meteorological element during December in Seoul in 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 minimum temperature less than -10°C (day)	Days of maximum temperature less than 0°C (day)	Days of snow (day)
1911-1920(a)	-2.1	2.6	-6.8	19.1	7.9	175.2	4.3	7.6	9.1	8.4
1921-1930	-1.7	2.6	-6.5	33.7	9.2	150.7	4.6	7.7	8.4	8.5
1931-1940(b)	-1.1	3.2	-5.3	37.0	8.7	158.3	4.5	5.6	6.5	6.4
1941-1949	-1.7	2.7	-6.3	25.8	9.1	170.0	4.4	8.4	9.6	8.7
1954-1960	-0.6	3.4	-4.7	33.0	7.7	146.8	4.3	5.4	9.0	7.1
1961-1970	-0.8	3.4	-4.6	15.3	6.4	141.1	4.5	4.5	7.7	8.7
1971-1980(c)	-0.4	3.8	-3.9	27.2	8.0	146.0	4.2	2.9	6.9	7.4
1981-1990	0.0	3.9	-3.6	22.5	7.3	154.9	4.2	2.9	6.1	7.2
1991-2000	1.1	5.0	-2.6	25.0	6.7	148.7	3.8	1.4	4.5	5.8
2001-2010(d)	0.2	4.0	-3.3	16.9	8.2	154.2	3.6	2.5	6.9	5.4
2014(e)	-2.9	1.5	-6.7	17.8	10.0	195.6	3.4	3.0	9.0	13.0
d-a	2.3	1.4	3.5	-2.2	0.3	-21.0	-0.7	-5.1	-2.2	-3.0
d-b	1.3	0.8	2.0	-20.1	-0.5	-4.1	-0.9	-3.1	0.4	-1.0
d-c	0.6	0.2	0.6	-10.3	0.2	8.2	-0.6	-0.4	0.0	-2.0
e-d	-3.1	-2.5	-3.4	0.9	1.8	41.4	-0.2	0.5	2.1	7.6

Appendix 3 Meteorological observation network

