



MONTHLY CLIMATE REVIEW OVER KOREA (total 4 pages)

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December 2015 Climate Summary

- ◇ The nationwide mean temperature (3.5 °C) in December 2015 was 2.0°C above normal.
 - ◇ The nationally-averaged precipitation (40.2 mm) was 169.0 % of normal.
- Climate features and long-term trends in December 2015 were analyzed with the data collected at the 45 meteorological stations throughout Korea (national average) from 1973 to 2015 (1908-2015 for Seoul).
- ※ Normal : Average value of climatic element data collected from 1981 to 2010

□ The climatic characteristics in December 2015

o Korea (as a whole),

- The mean temperature (3.5 °C), the mean maximum temperature (8.2 °C) and the mean minimum temperature (-0.6 °C) were 2.0 °C, 1.2 °C, 2.6 °C above normal.
- The nationally-averaged precipitation was 40.2 mm, which was 169.0 % of normal. The number of rainy days was 9.9, which was 3.3 days more than normal.
- The total number of hours of sunshine was 156.5, which was 92.4 % of normal.

o Seoul,

- The mean temperature (1.6 °C), the mean maximum temperature (6.0 °C) and the mean minimum temperature (-2.1 °C) were 1.2 °C, 1.7 °C, 1.1 °C above normal, respectively.
- The amount of precipitation was 29.1 mm, which was 135.3 % of normal.
- The number of rainy days was 9.0, which was 1.6 days more than normal.
- The total number of hours of sunshine was 177.8, which was 116.5 % of normal.

□ **Long-term¹⁾ trend in December 2015 climate**

o Korea (as a whole),

- The national mean temperatures in December in the 2000s (2001-2010) was 0.5 °C above 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 2015 (Nationwide)

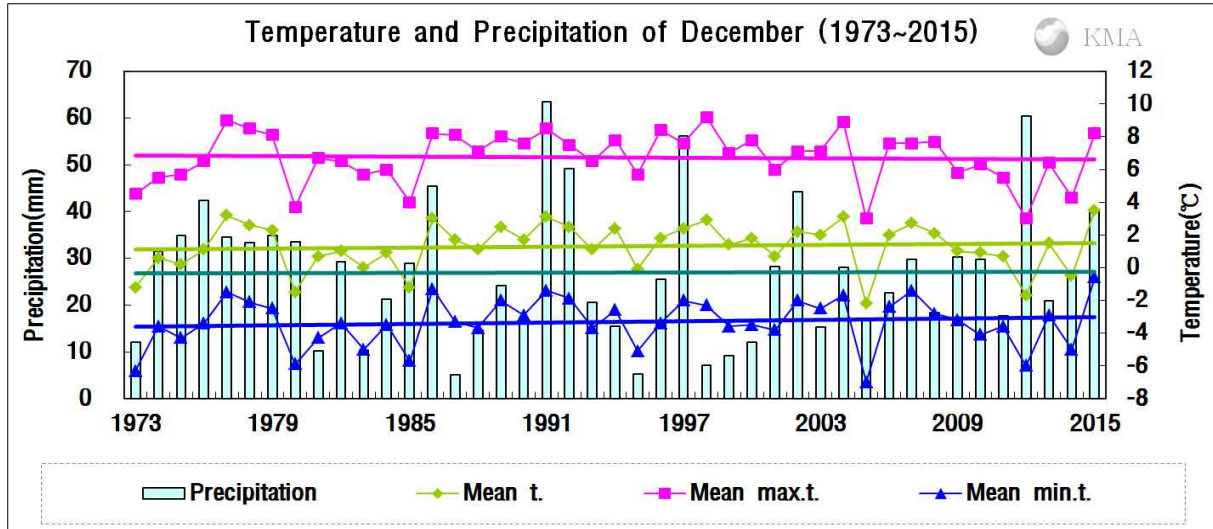


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during December (1973–2015).

□ The nationwide average value of meteorological element during December (1973–2015)

Elements (whole country)	Dec. 2015(a)	Dec. 2014(b)	Normals of Dec. (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	3.5	-0.5	1.5	4.0	2.0	the highest
Mean maximum temp. (°C)	8.2	4.3	7.0	3.9	1.2	-
Mean minimum temp. (°C)	-0.6	-5.0	-3.2	4.4	2.6	the highest
Precipitation (mm)	40.2	26.2	24.5	14.0 (403.4%)	15.7 (169.0%)	-
Days of rain (day)	9.9	10.7	6.6	-0.8	3.3	the 5th highest
Sunshine duration (hour)	156.5	190.3	169.4	-33.8 (82.2%)	-12.9 (92.4%)	-
Mean cloud amount (1/10)	4.8	4.2	3.9	0.6	0.9	the 5th highest
Days of minimum temperature less than -10°C(day)	0.6	3.3	2.5	-2.7	-1.9	-
Days of maximum temperature less than 0°C(day)	0.6	3.9	2.3	-3.3	-1.7	-
Days of snow (day)	4.6	11.6	5.4	-7.0	-0.8	-

□ 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	4.1	3.5	3.1	5.8
1981-1990(b)	1.2	6.8	-3.5	20.7	6.7	173.4	4.0	2.8	2.6	5.8
1991-2000(c)	1.9	7.6	-3.0	26.4	6.0	167.4	3.8	2.0	1.7	4.7
2001-2010(d)	1.4	6.7	-3.1	26.4	7.0	167.3	4.0	2.5	2.6	5.7
2015(e)	3.5	8.2	-0.6	40.2	9.9	156.5	4.8	0.6	0.6	4.6
d-a	0.5	0.3	0.6	-5.7	-0.1	-2.2	-0.1	-1.0	-0.5	-0.1
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	1.0
e-d	2.1	1.5	2.5	13.8	2.9	-10.8	0.8	-1.9	-2.0	-1.1

Appendix 2 Climate features of December 2015 (Seoul)

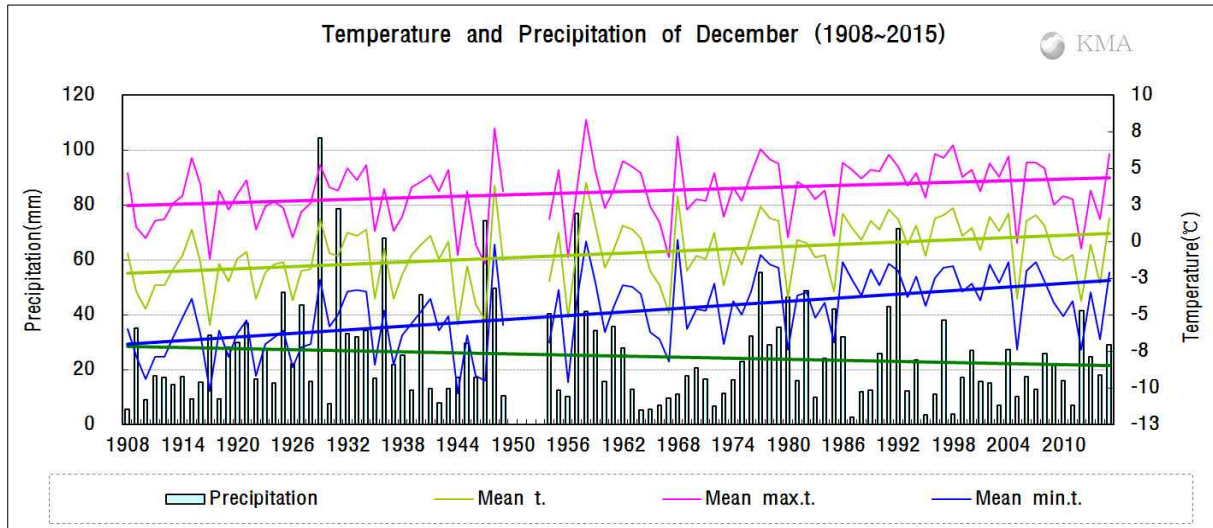


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during December (1908-2015).

The average value of meteorological element during December in Seoul(1908-2015)

Elements (Seoul)	Dec. 2015(a)	Dec. 2014(b)	Normals of Dec. (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	1.6	-2.9	0.4	4.5	1.2	-
Mean maximum temp. (°C)	6.0	1.5	4.3	4.5	1.7	-
Mean minimum temp. (°C)	-2.1	-6.7	-3.2	4.6	1.1	-
Precipitation (mm)	29.1	17.9	21.5	11.2 (162.6%)	7.6 (135.3%)	-
Days of rain (day)	9.0	10.0	7.4	-1.0	1.6	-
Sunshine duration (hour)	177.8	195.6	152.6	-17.8 (90.9%)	25.2 (116.5%)	-
Mean cloud amount (1/10)	4.1	3.4	3.9	0.7	0.2	-
Days of minimum temperature less than -10°C(day)	0.0	3.0	2.3	-3.0	-2.3	-
Days of maximum temperature less than 0°C(day)	4.0	9.0	5.8	-5.0	-1.8	-
Days of snow (day)	7.0	13.0	6.1	-6.0	0.9	-

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
2015(e)	1.6	6.0	-2.1	29.1	9.0	177.8	4.1	0.0	4.0	7.0
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	1.4	2.0	1.2	12.2	0.8	23.6	0.5	-2.5	-2.9	1.6