



# KMA'S BRIEFING IN CLIMATE CHARACTERISTICS

[total 7 pages]

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<b>release</b>	June 5, 2009

## May and Spring (March~May), 2009 Climate

- ◇ May and Spring Mean temperature for the national average are 1.3°C and 1.1°C higher than normal, respectively, making it the first and third highest record since 1973.
- ◇ May and Spring precipitation for the national average are 117.8% and 93.6% relative to normal, respectively.

Climate characteristics of May and Spring (March, April, and May), and their long-term trends are analyzed based on 60 Korean meteorological stations (national average) for the period 1973-2009 (1908-2009 in Seoul).

**May, 2009 climate is as follows:**

- o For the national average,
  - the mean temperature(18.2°C) is 1.3°C higher than normal. The mean maximum (24.7°C) and the mean minimum (12.3°C) temperatures are 1.8°C and 1.1°C higher than normal, respectively.
  - the amount of precipitation (122.6mm) is 117.8% relative to normal.
  - the average rainy days (9.4 days) are 0.9 days smaller than normal.
- o For Seoul,
  - the mean temperature (19.1°C) is 1.7°C higher than normal. The mean maximum (24.3°C) temperature is 1.5°C higher than normal. The mean minimum temperature (14.6°C) is 2.0°C higher than normal.
  - The amount of precipitation (109.0mm) is 106.7% relative to normal.
  - The average rainy days (9.0 days) are 0.2 days greater than normal.

**Spring (March, April, and May), 2009 climate is as follows:**

- o For the national average,
  - the mean (12.6°C), and mean maximum (18.9°C) temperatures are 1.1°C and 1.4°C higher than normal, respectively, making the third and second highest

record since 1973. The mean minimum (6.7°C) temperature is 0.9°C higher than normal.

- the amount of precipitation (243.9mm) is 93.6% relative to normal.
- the average rainy days (24.7 days) are 0.1 days smaller than normal.
- the number of asian dust days (2.5 days) is 1.0 day shorter than normal.

o For Seoul,

- the mean (12.6°C), and mean maximum (17.6°C) temperatures are 1.0°C and 0.7°C higher than normal, respectively. The mean minimum (8.2°C) temperature is 1.2°C higher than normal.
- The amount of precipitation (239.4mm) is 106.4% relative to normal.
- The average rainy days (24.0 days) are 0.4 day greater than normal.
- the number of asian dust days (3.0 days) is 1.4 days shorter than normal.

#### Long term trend of May climate

- o For the national average, mean, mean maximum, and mean minimum temperatures of May 2000s are 0.8°C, 0.8°C, and 1.3°C higher than that of the 1970s.
- o For Seoul, the mean temperature of May 2000s is 3.0°C and 1.5°C higher than that of the 1910s and 1970s, respectively.
  - the mean maximum temperature of May 2000s is 1.8°C and 1.0°C higher than that of the 1910s and 1970s, respectively.
  - the mean minimum temperature of May 2000s is 3.7°C and 1.7°C higher than that of the 1910s and 1970s, respectively.

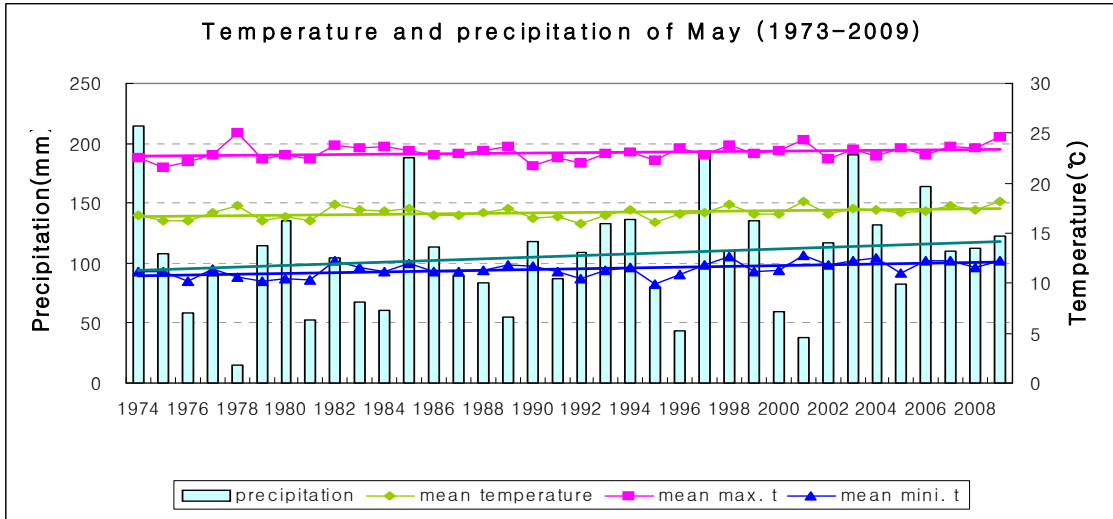
#### Long term trend of Spring climate

- o For the national average, mean, mean maximum, and mean minimum temperatures of Spring 2000s are 0.9°C, 1.1°C, and 0.8°C higher than that of the 1970s.
- o For Seoul, the mean temperature of Spring 2000s is 2.6°C and 1.4°C higher than that of the 1910s and 1970s, respectively.
  - the mean maximum temperature of Spring 2000s is 1.7°C and 0.9°C higher than that of the 1910s and 1970s, respectively.
  - the mean minimum temperature of Spring 2000s is 3.7°C and 1.6°C higher than that of the 1910s and 1970s, respectively.

- ※ Normal: average from 1971 to 2000.
- ※ National average is used average values of 60 meteorological stations starting from 1973.
- ※ In Seoul, data are analyzed from 1908.
- ※ 1910s: average from 1911 to 1920
- ※ 1970s: average from 1973 to 1980
- ※ 2000s: average from 2001 to 2009

## Appendix 1. May , 2009 Climate

Fig. 1. Time series of May temperatures (mean, mean maximum, and mean minimum), and precipitation across the South Korea for the period 1973–2009.



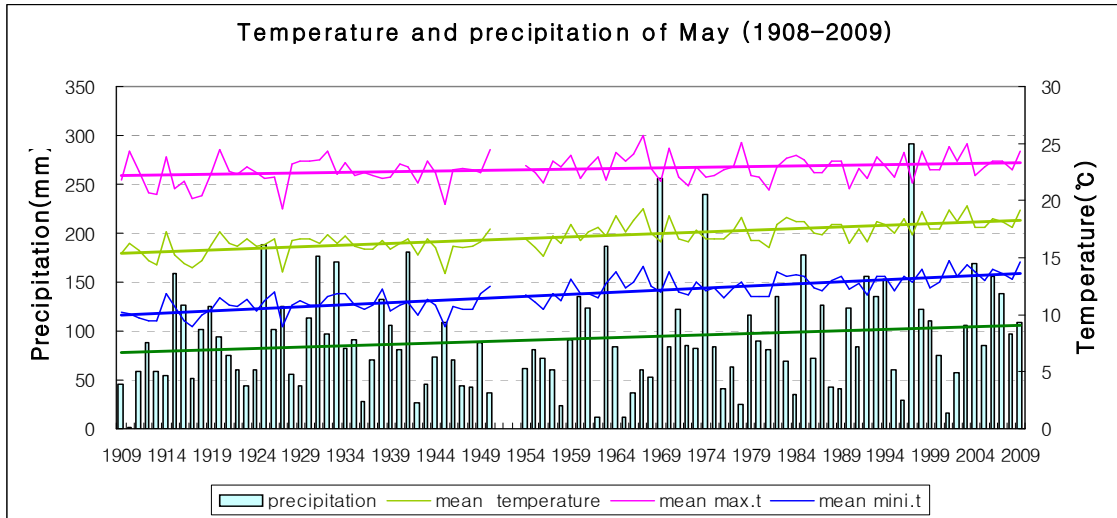
### □ National average values of May meteorological elements (1973–2009)

Elements (National average)	May 2009 (a)	Normals of May (1971–2000) (b)	a-b	rank since 1973 (within 5th)
mean temperature(°C)	18.2	16.9	1.3	highest
mean maximum t (°C)	24.7	22.9	1.8	second highest
mean minimum t(°C)	12.3	11.2	1.1	fourth highest
amount of precipitation (mm)	122.6	104.1	18.5(117.8%)	-
rainy days	9.4	8.5	0.9	-
Asian dust days	0.0	0.9	-0.9	-

### □ National average values of May meteorological elements in each decade (1973–2009)

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Precipitation (mm)	rainy days	asian dust days
1973-1980(a)	16.7	22.7	10.8	111.1	8.4	0.8
1981-1990(b)	17.1	23.2	11.4	93.3	8.2	1.1
1991-2000(c)	16.9	22.9	11.2	108.8	8.9	1.0
2001-2009(d)	17.5	23.5	12.1	118.5	9.3	1.0
d-a	0.8	0.8	1.3	7.4	0.9	0.2
d-b	0.4	0.3	0.7	25.2	1.1	-0.1
d-c	0.6	0.6	0.9	9.7	0.4	0.0

Fig. 2. Time series of May temperatures (mean, mean maximum, and mean minimum), and precipitation in Seoul for the period 1908–2009.



□ Average values of May meteorological elements in Seoul (1908–2009)

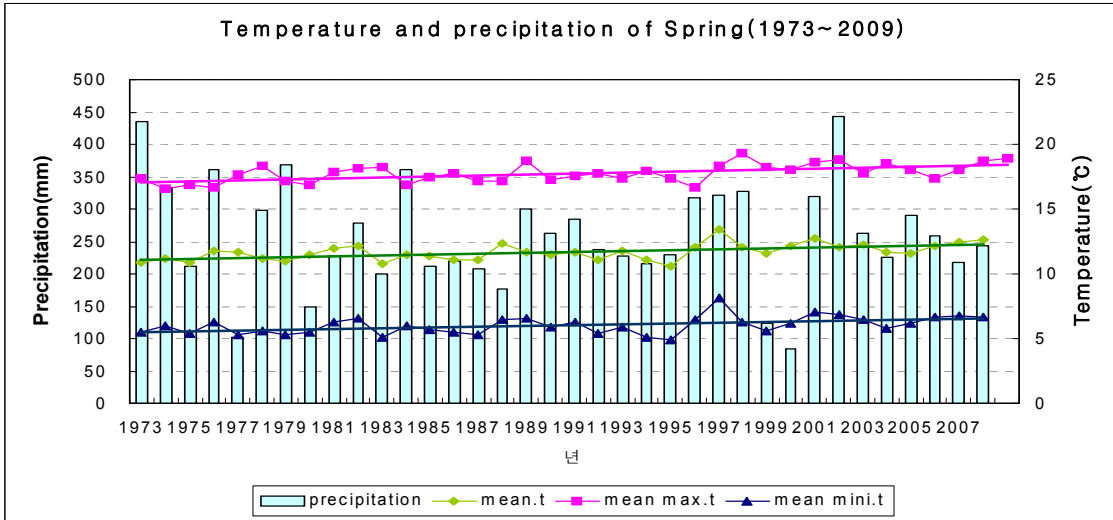
Elements (Seoul) average	May 2009 (a)	Normals of May (1971-2000) (b)	a-b	rank since 1908 (within 5th)
mean temperature(°C)	19.1	17.4	1.7	third highest
mean maximum t (°C)	24.3	22.8	1.5	-
mean minimum t(°C)	14.6	12.6	2.0	second highest
amount of precipitation (mm)	109.0	102.2	6.8	-
rainy days	9.0	8.8	0.2	-
Asian dust days	0.0	1.2	-1.2	-

□ May meteorological elements in Seoul in each decade (1911–2009)

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Precipitation (mm)	rainy days	asian dust days
1911-1920년(a)	15.4	21.8	10.1	92.0	9.4	-
1921-1930	16.1	22.4	10.8	86.8	11.0	-
1931-1940	16.3	22.8	11.2	103.3	9.7	-
1941-1950	16.0	22.5	10.8	72.0	8.4	-
1954-1960	16.5	22.7	11.6	75.1	8.4	-
1961-1970	17.8	23.5	12.8	90.7	7.3	0.7
1971-1980	16.9	22.6	12.1	95.0	8.1	0.6
1981-1990	17.5	22.8	12.8	90.2	9.3	1.6
1991-2000	17.7	22.9	12.9	121.4	9.0	1.4
2001-2009(b)	18.4	23.6	13.8	103.9	8.4	1.2
b-a	3.0	1.8	3.7	11.9	-1.0	-

## Appendix 2. Spring , 2009 Climate

Fig. 3. Time series of Spring temperatures (mean, mean maximum, and mean minimum), and precipitation across the South Korea for the period 1973–2009.



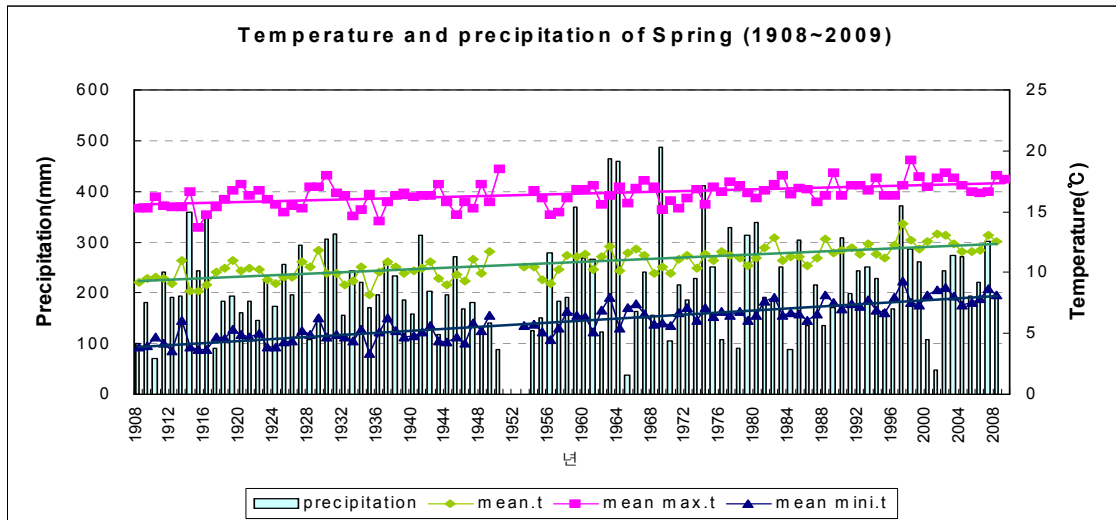
### □ National average values of Spring meteorological elements (1973–2009)

Elements (National) average	Spring 2009 (a)	Normals of Spring (1971-2000) (b)	a-b	rank since 1973 (within 5th)
mean temperature(°C)	12.6	11.5	1.1	third highest
mean maximum t (°C)	18.9	17.5	1.4	second highest
mean minimum t (°C)	6.7	5.8	0.9	fourth highest
amount of precipitation (mm)	243.9	260.7	-16.8(93.6%)	-
rainy days	24.7	24.8	-0.1	-
Asian dust days	2.5	3.5	-1.0	-

### □ National average values of May meteorological elements in each decade (1973–2009)

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Precipitation (mm)	rainy days	asian dust days
1973-1980(a)	11.3	17.2	5.7	301.8	25.1	3.0
1981-1990(b)	11.5	17.6	5.9	232.9	24.9	2.9
1991-2000(c)	11.7	17.8	6.0	254.4	24.4	4.9
2001-2009(d)	12.2	18.3	6.5	260.7	25.2	7.5
d-a	0.9	1.1	0.8	-41.1	0.1	4.5
d-b	0.7	0.7	0.6	27.8	0.3	4.6
d-c	0.5	0.5	0.5	6.3	0.8	2.6

Fig. 4. Time series of Spring temperatures (mean, mean maximum, and mean minimum), and precipitation in Seoul for the period 1908–2009.



□ Average values of Spring meteorological elements in Seoul (1908–2009)

Elements (Seoul) average	Spring 2009 (a)	Normals of Spring (1971-2000) (b)	a-b	rank since 1908 (within 5th)
mean temperature(°C)	12.6	11.6	1.0	-
mean maximum t (°C)	17.6	16.9	0.7	-
mean minimum t(°C)	8.2	7.0	1.2	-
amount of precipitation (mm)	239.4	225.0	14.4	-
rainy days	24.0	23.6	0.4	-
Asian dust days	3.0	4.4	-1.4	-

□ Spring meteorological elements in Seoul in each decade (1911–2009)

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Precipitation (mm)	rainy days	asian dust days
1911-1920(a)	9.8	15.7	4.4	220.8	26.7	-
1921-1930	10.2	16.2	4.7	203.5	26.1	-
1931-1940	9.9	15.8	4.9	213.4	26.0	-
1941-1950	10.2	16.3	5.1	180.9	24.1	-
1954-1960	10.3	16.0	5.7	223.9	25.9	-
1961-1970	11.1	16.4	6.5	250.4	23.2	2.1
1971-1980	11.0	16.5	6.5	247.5	23.5	2.5
1981-1990	11.6	16.9	7.0	199.1	23.8	3.9
1991-2000	12.1	17.3	7.5	228.5	23.6	6.8
2001-2009(b)	12.4	17.4	8.1	220.1	24.4	9.4
b-a	2.6	1.7	3.7	-0.7	-2.3	-