



KMA'S BRIEFING ON CLIMATE CHARACTERISTICS

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Monthly (May) and Seasonal (March-May) 2012 Climate Summary

- ◇ Above normal in mean temperature, below normal in precipitation for May 2012 nationwide
- ◇ The days of asian dust at May 2012 was 0 day
No Asian-Dust event is in May 2012.
 - The mean temperature (18.3°C) for May 2012 was the highest in a record extending back to 1973. but, the averaged precipitation(36.2 mm) was the third lowest for the same period.
- ◇ Above normal in mean temperature, near normal in precipitation and sunshine duration for spring 2012 nationwide.
- ◇ The days of asian dust(0.3 day) at spring 2012 was less than 5.1 days of normal.

- Climate features of May 2012 and the spring 2012 and their long-term trends are analyzed using 45 meteorological stations in Korea (the national average) during 1973-2012 (1908-2012 for Seoul).

※ Normal : average from 1981 to 2010.

- **The climatological characteristics in May 2012 can be described as follows:**

- o For Korea (whole nation),
 - The mean temperature (18.3°C) and the mean maximum temperature (24.5°C) and the mean minimum temperature (13.0°C) were above-normal, respectively. also all temperatures at May 2012 are 0.9-1.7°C higher than those at this time last year.
 - The nationally averaged precipitation (36.2 mm) was 36.4% of normal, the days of rain (7.3 days) was 1.3 days below-normal. In addition, nationally averaged precipitation, and days of rain in May 2012 were 86.9mm and 3.4 days decreased than those at this time last year.
 - The total of sunshine duration (232.5 hours) was 104.8% of normal. and, sunshine duration at May 2012 are 55.4 hours longer than those at this time last year.
 - The average monthly days of Asian Dust (0 day) was less than 1.0 day of normal. and days of Asian Dust at May 2011 was 5.5 days.

o For Seoul,

- The mean temperature (19.7°C), the mean maximum temperature (25.1°C), and the mean minimum (15.4°C) were Above-normal, respectively. also, all temperatures at May 2012 are 1.8-2.1°C higher than those at this time last year.
 - ※ The mean temperature was the highest in a record extending back to 1908. and, The maximum temperature was the second highest for the same period.
- The monthly amount of precipitation (8.2 mm) and the days of rain (7.0 days) was 7.7% and 77.8% of normal. In addition, nationally averaged precipitation, and days of rain in May 2012 were 45.2mm and 2.0 days decreased than those at this time last year.
 - ※ the amount of precipitation was the second lowest in a record extending back to 1908.
- The total of sunshine duration (251.3 hours) was 118.0% of normal. and, sunshine duration at May 2012 are 70.9 hours longer than those at this time last year.
- The number of Asian Dust days (0 day) was less than 1.4 days of normal. and days of Asian Dust at May 2011 was 6.0 days.

□ **The climatological characteristics in spring 2012 can be described as follows:**

o For Korea (whole nation),

- The mean temperature (12.2°C) and the mean maximum temperature (18.0°C) and the mean minimum temperature (6.9°C) were above-normal, respectively. All temperatures at spring 2012 are 1.1-1.4°C higher than those at this time last year.
- The nationally averaged precipitation (256.5 mm) was 106.2% of normal, the days of rain (27.7 days) was 3.2 days above-normal. In addition, precipitation at spring 2012 are 0.4 mm smaller than those at this time last year. and, the days of rain are 3.0 days longer than those at this time last year.
- The total of sunshine duration (628.1 hours) was 99.7% of normal. and, sunshine duration at spring 2012 are 10.4 hours shorter than those at this time last year.
- The number of Asian Dust days (0.3 day) was less than 5.1 days of normal. and days of Asian Dust at spring 2011 was 8.2 days.

o For Seoul,

- The mean temperature (12.4°C), the mean maximum temperature (17.5°C), and the mean minimum (8.2°C) were Above-normal, respectively. also, all temperatures at spring 2012 are 1.4-1.9°C higher than those at this time last year.
- The amount of precipitation (212.6 mm) and the days of rain (23.0 days) was 97.7% and 94.7% of normal. In addition, nationally averaged precipitation, and days of rain in May 2012 were 34.5mm and 1.0 day increased than those at this time last year.
- The total of sunshine duration (655.6 hours) was 108.0% of normal. and, sunshine duration at spring 2012 are 32.9 hours longer than those at this time last year.
- The number of asian dust days (0 day) was less than 6.6 days of normal. and days of asian dust at spring 2011 was 9.0 days.

□ Long-term trend of May climate

o For Korea (whole nation),

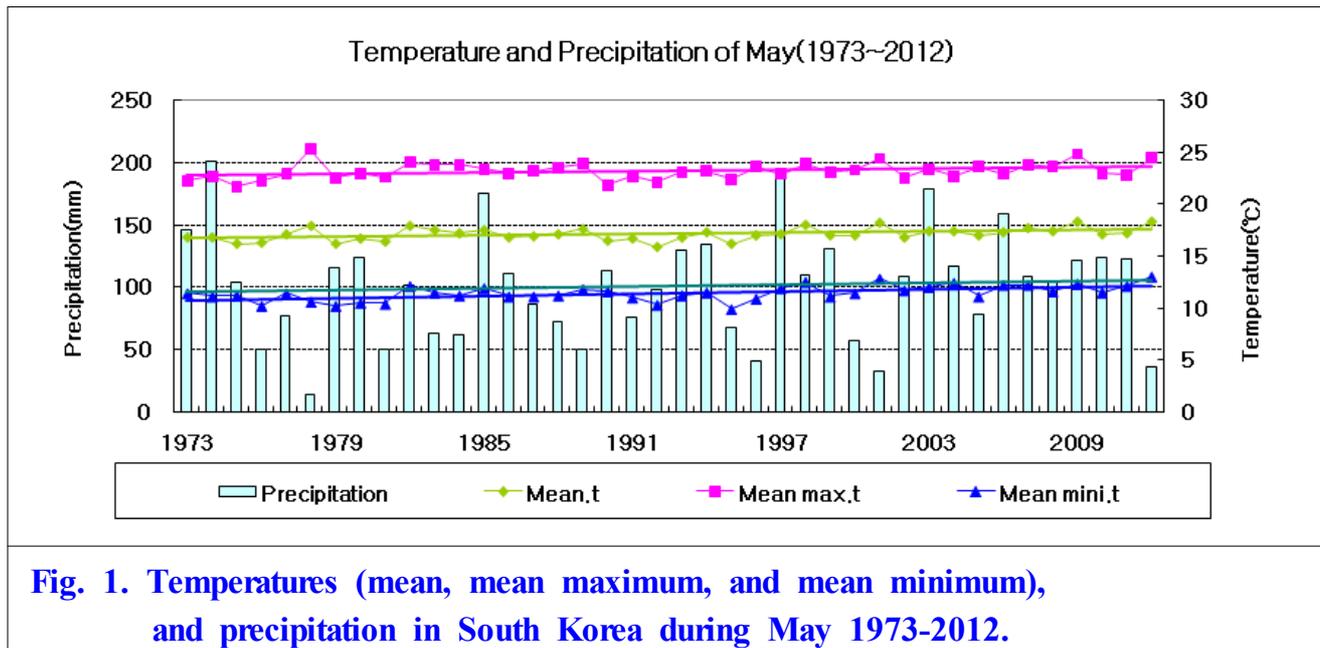
- National mean, mean maximum, and mean minimum temperatures of May 2000s (2001-2010) were 0.7°C, 0.7°C, and 1.2°C higher than those of the 1970s, respectively. National mean, mean maximum, mean minimum temperatures of May 2012 were higher than those of the 2000s.
- Nationally averaged precipitation, and days of rain in May 2000s were 9.2mm and 0.9 day increased than those of the 1970s, respectively. but, nationally averaged precipitation, and days of rain in May 2012 were 77.0mm and 0.8 day shorter than those of the 2000s.
- Nationally total of sunshine duration of May 2000s was 38.2 hours less than those of the 1970s. nationally total of sunshine duration of May 2012 was 9.9 hours longer than those of the 2000s.
- Nationally total of asian dust days of May 2000s was 0.2 day higher than those of the 1970s. Nationally total of asian dust days of May 2012 was 1.0 day less than those of the 2000s.

□ Long-term trend of Spring climate

o For Korea (whole nation),

- National mean, mean maximum, and mean minimum temperatures of spring 2000s (2001-2010) were 0.7°C, 0.8°C, and 0.8°C higher than those of the 1970s, respectively. National mean, mean minimum temperatures of spring 2012 were higher than those of the 2000s. but, National mean maximum temperatures of spring 2012 were lower than those of the 2000s.
- Nationally averaged precipitation in spring 2000s was 35.9mm decreased than those of the 1970s. days of rain in spring 2000s was 0.9 day increased than those of the 1970s. Nationally averaged precipitation, and days of rain in spring 2012 were 4.9mm and 2.2 days higher than those of the 2000s.
- Nationally total of sunshine duration of spring 2000s was 73.8 hours less than those of the 1970s. nationally total of sunshine duration of spring 2012 was 7.4 hours shorter than those of the 2000s.
- Nationally total of Asian Dust days of spring 2000s was 5.4 days higher than those of the 1970s. nationally total of Asian Dust days of spring 2012 was 8.1 days less than those of the 2000s.

Appendix 1. Climate features in May 2012



□ Average values of meteorological elements across Korea (1973-2011)

Elements (National) average	May 2012 (a)	May 2011 (b)	Normals of May (1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	18.3	17.2	17.2	1.1	1.1	the highest
Mean maximum t (°C)	24.5	22.8	23.3	1.7	1.2	3th highest
Mean minimum t (°C)	13.0	12.1	11.5	0.9	1.5	the highest
Amount of precipitation(mm)	36.2	123.1	101.7	- 86.9	- 65.5(36.4%)	3th lowest
Days of rain(day)	7.3	10.7	8.6	- 3.4	- 1.3(84.9%)	
Sunshine duration(hour)	232.5	177.1	221.9	55.4	10.6(104.8%)	
Days of asian dust	-	5.5	1.0	- 5.5	- 1.0	

□ Average values of meteorological elements across Korea for each decade (1973-2010)

Year	Mean temp (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Amount of rain (mm)	Days of rain (day)	Sunshine duration (hour)	Days of Asian Dust (day)
1973-1980(a)	16.8	22.8	10.8	104.0	8.2	260.8	0.8
1981-1990(b)	17.2	23.3	11.4	88.5	8.0	246.4	1.1
1991-2000(c)	16.9	23.0	11.2	103.4	8.8	225.7	1.0
2001-2010(d)	17.5	23.5	12.0	113.2	9.1	222.6	1.0
2012(e)	18.3	24.5	13.0	36.2	7.3	232.5	-
d-a	0.7	0.7	1.2	9.2	0.9	- 38.2	0.2
d-b	0.3	0.2	0.6	24.7	1.1	- 23.8	- 0.1
d-c	0.6	0.5	0.8	9.8	0.3	- 3.1	-
e-d	0.8	1.0	1.0	- 77.0	- 1.8	9.9	- 1.0

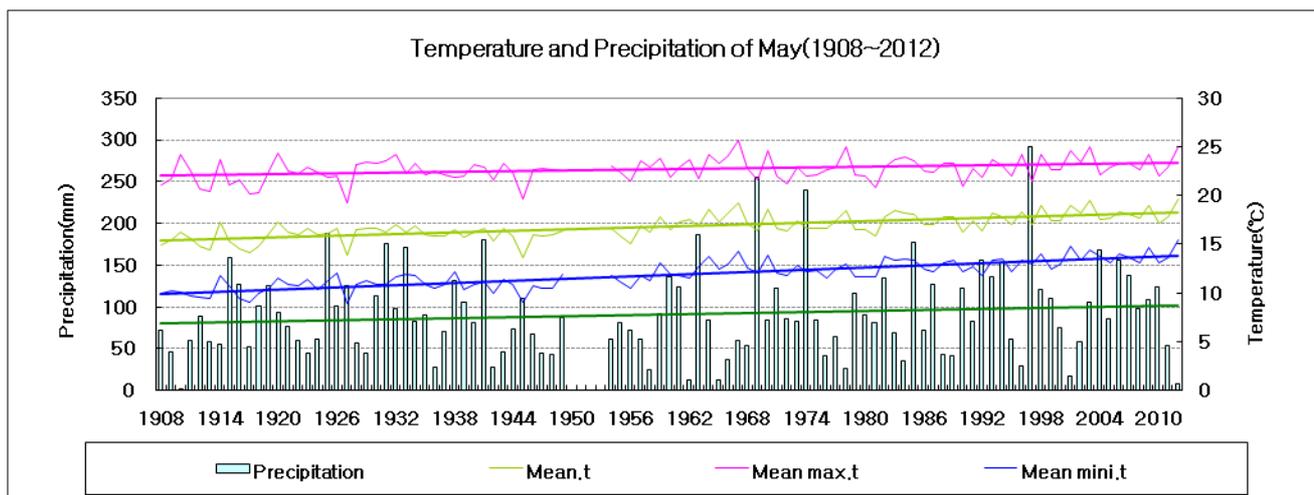


Fig. 2. Temperatures (mean, mean maximum, and mean minimum) and precipitation in Seoul during May 1908-2012

□ Meteorological elements across Seoul during May(1908-2012)

Elements (Seoul)	May 2012 (a)	May 2011 (b)	Normals of May(1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	19.7	17.9	17.8	1.8	1.9	the highest
Mean maximum t (°C)	25.1	23.0	23.0	2.1	2.1	2th highest
Mean minimum t (°C)	15.4	13.6	13.2	1.8	2.2	the highest
Amount of precipitation(mm)	8.2	53.4	105.9	- 45.2	- 97.7(7.7%)	2th lowest
Days of rain(day)	7.0	9.0	9.0	- 2.0	- 2.0(77.8%)	
Sunshine duration(hour)	251.3	180.4	213.0	70.9	38.3(118.0%)	
Days of asian dust	-	6.0	1.4	- 6.0	- 1.4	

□ Meteorological elements across Seoul during May for each decade (1911-2012)

Year	Mean temp (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Amount of rain (mm)	Days of rain (day)	Sunshine duration (hour)	Days of Asian Dust (day)
1911-1920	15.4	21.8	10.1	92.0	9.4	248.1	-
1921-1930	16.1	22.4	10.8	86.8	11.0	235.5	-
1931-1940(a)	16.3	22.8	11.2	103.3	9.7	264.7	-
1941-1949	15.8	22.3	10.7	75.4	8.6	261.7	-
1954-1960	16.5	22.8	11.6	75.1	8.4	239.2	-
1961-1970	17.8	23.5	12.8	90.7	7.3	226.5	0.6
1971-1980(b)	16.9	22.6	12.1	95.0	8.1	227.8	0.6
1981-1990	17.5	22.8	12.8	90.2	9.3	226.9	1.6
1991-2000	17.7	22.9	12.9	121.4	9.0	218.1	1.4
2001-2010(c)	18.3	23.4	13.8	105.9	8.8	194.0	1.3
2012(d)	19.7	25.1	15.4	8.2	7.0	251.3	-
c-a	2.0	0.6	2.6	2.6	- 0.9	- 70.7	-
c-b	1.4	0.8	1.7	10.9	0.7	- 33.8	0.7
d-c	1.4	1.7	1.6	- 97.7	- 1.8	57.3	- 1.3

Appendix 2. Climate features in spring 2012

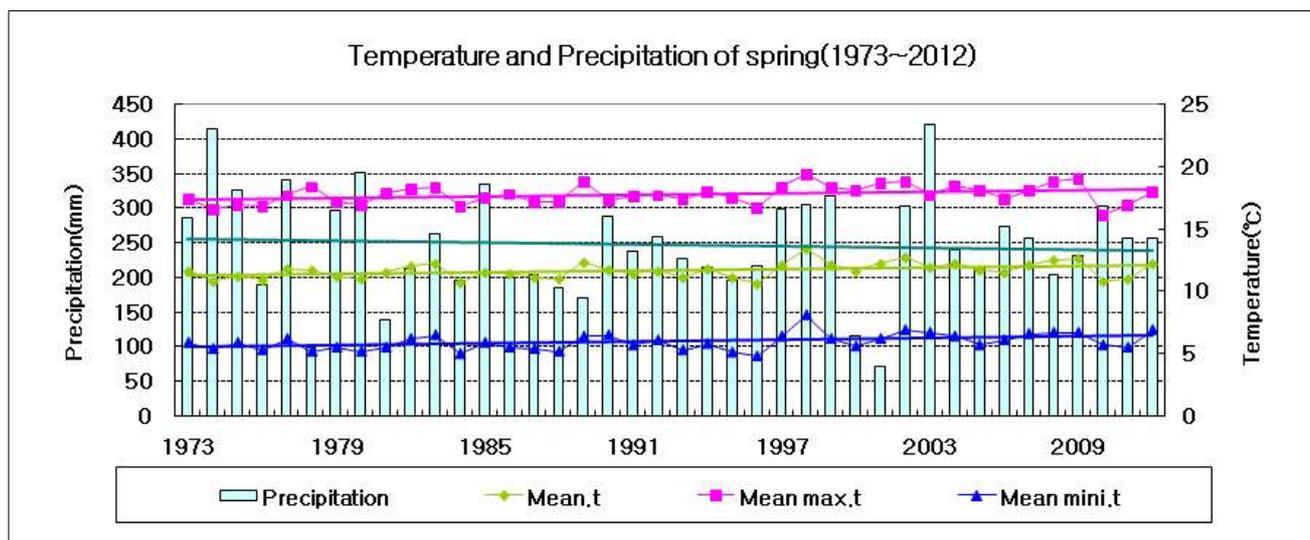


Fig. 1. Temperatures (mean, mean maximum, and mean minimum), and precipitation in South Korea during spring 1973-2012.

□ Average values of meteorological elements across Korea (1973-2011)

Elements (National) average	spring 2012 (a)	spring 2011 (b)	Normals of spring (1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	12.2	11.0	11.7	1.2	0.5	
Mean maximum t (°C)	18.0	16.9	17.9	1.1	0.1	
Mean minimum t (°C)	6.9	5.5	6.0	1.4	0.9	2th highest
Amount of precipitation(mm)	256.5	256.9	236.6	- 0.4	20.0(106.2%)	
Days of rain(day)	27.7	24.7	24.5	3.0	3.2(113.1%)	
Sunshine duration(hour)	628.1	638.5	629.7	- 10.4	- 1.6(99.7%)	
Days of asian dust	0.3	8.2	5.1	- 7.9	- 4.8(5.9%)	

□ Average values of meteorological elements across Korea for each decade (1973-2010)

Year	Mean temp (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Amount of rain (mm)	Days of rain (day)	Sunshine duration (hour)	Days of Asian Dust (day)
1973-1980(a)	11.3	17.3	5.6	287.5	24.6	709.3	3.0
1981-1990(b)	11.5	17.7	5.8	219.2	24.2	690.0	3.0
1991-2000(c)	11.7	17.9	5.9	239.0	23.9	637.7	4.9
2001-2010(d)	12.0	18.1	6.4	251.6	25.5	635.5	7.5
2012(e)	12.2	18.0	6.9	256.5	27.7	628.1	0.3
d-a	0.7	0.8	0.8	- 35.9	0.9	- 73.8	4.5
d-b	0.5	0.4	0.6	32.4	1.3	- 54.5	4.5
d-c	0.3	0.2	0.5	12.6	1.6	- 2.2	2.6
e-d	0.2	- 0.1	0.5	4.9	2.2	- 7.4	- 7.2

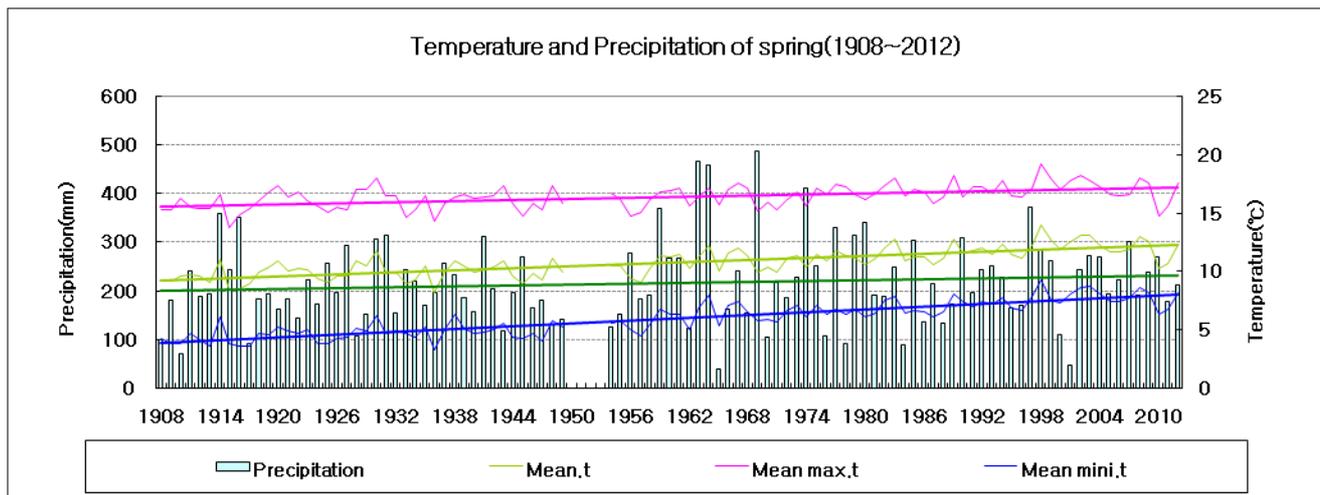


Fig. 2. Temperatures (mean, mean maximum, and mean minimum) and precipitation in Seoul during spring 1908-2012

□ Meteorological elements across Seoul during spring(1908-2012)

Elements (Seoul)	spring 2012 (a)	spring 2011 (b)	Normals of spring(1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	12.4	10.7	12.0	1.7	0.4	
Mean maximum t (°C)	17.5	15.6	17.1	1.9	0.4	
Mean minimum t (°C)	8.2	6.8	7.5	1.4	0.7	5th highest
Amount of precipitation(mm)	212.6	178.1	217.5	34.5	- 4.9(97.7%)	
Days of rain(day)	23.0	22.0	24.3	1.0	- 1.3(94.7%)	
Sunshine duration(hour)	655.6	622.7	607.0	32.9	48.6(108.0%)	
Days of asian dust	-	9.0	6.6	- 9.0	- 6.6	

□ Meteorological elements across Seoul during spring for each decade (1911-2012)

Year	Mean temp (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Amount of rain (mm)	Days of rain (day)	Sunshine duration (hour)	Days of Asian Dust (day)
1911-1920	9.7	15.7	4.4	220.8	26.7	696.5	-
1921-1930	10.2	16.2	4.7	203.5	26.1	673.3	-
1931-1940(a)	9.8	15.8	4.9	213.4	26.0	705.3	-
1941-1949	10.0	16.1	4.9	190.8	25.1	722.4	-
1954-1960	10.3	16.0	5.7	223.9	25.9	636.6	-
1961-1970	11.1	16.4	6.5	250.4	23.2	631.8	1.9
1971-1980(b)	11.0	16.5	6.5	247.5	23.5	619.4	2.5
1981-1990	11.6	16.9	7.0	199.1	23.8	657.8	3.9
1991-2000	12.1	17.3	7.5	228.5	23.6	620.1	6.8
2001-2010(c)	12.2	17.1	8.0	225.0	25.5	543.2	9.2
2012(d)	12.4	17.5	8.2	212.6	23.0	655.6	-
c-a	2.4	1.3	3.1	11.6	- 0.5	- 162.1	-
c-b	1.2	0.6	1.5	- 22.5	2.0	- 76.2	6.7
d-c	0.2	0.4	0.2	- 12.4	- 2.5	112.4	- 9.2