



# KMA'S BRIEFING ON CLIMATE CHARACTERISTICS

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## Monthly (March 2012) Climate Summary

- ◇ Near normal in temperature and sunshine duration, above normal in precipitation for March 2012 nationwide
  - The days of rain (10.8 days) for March 2012 was the second highest in a record extending back to 1973
- ◇ Higher temperature, larger precipitation, and shorter sunshine duration in March of 2012 than those of 2011

- Climate features of March 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 March 2012 can be described as follows:**

- o For Korea (whole nation),

- The mean temperature (5.7°C) and the mean maximum temperature (10.7°C) were 0.2°C and 1.1°C below-normal, respectively. The mean minimum temperature (1.0°C) was 0.4°C above-normal. However, all temperatures at March 2012 are 0.2-1.8°C higher than those at this time last year.
- The nationally averaged precipitation (89.0 mm) was 150% of normal, the days of rain (10.8 days) was the second highest in a record extending back to 1973. In addition, precipitation at March 2012 are 66.1 mm larger than those at this time last year.
- The total of sunshine duration (179.8 hours) was 93% of normal. However, sunshine duration at March 2012 are 68.5 hours shorter than those at this time last year.

o For Seoul,

- The mean temperature ( $5.1^{\circ}\text{C}$ ), the mean maximum temperature ( $9.5^{\circ}\text{C}$ ), and the mean minimum ( $1.5^{\circ}\text{C}$ ) were  $0.6^{\circ}\text{C}$ ,  $0.9^{\circ}\text{C}$  and  $0.1^{\circ}\text{C}$  below-normal, respectively.

However, all temperatures at March 2012 are  $1.2\text{-}1.6^{\circ}\text{C}$  higher than those at this time last year.

- The monthly amount of precipitation ( $47.4\text{ mm}$ ) and the days of rain ( $8.0\text{ days}$ ) was  $100\%$  and  $108\%$  of normal.

In addition, precipitation at March 2012 are  $32.8\text{ mm}$  larger than those at this time last year. The days of rain at March 2012 are 4 days more than those at this time last year.

- The total of sunshine duration ( $191.8\text{ hours}$ ) was  $102\%$  of normal. However, sunshine duration at March 2012 are  $48.4\text{ hours}$  shorter than those at this time last year.

**Long-term trend of March climate**

- o National mean, mean maximum, and mean minimum temperatures of March 2000s (2001-2010) were  $6.3^{\circ}\text{C}$ ,  $12.2^{\circ}\text{C}$ , and  $0.8^{\circ}\text{C}$  higher than those of the 1970s, respectively.

National mean, mean maximum temperatures of March 2012 were lower than those of the 2000s and minimum temperatures were higher than those of the 2000s.

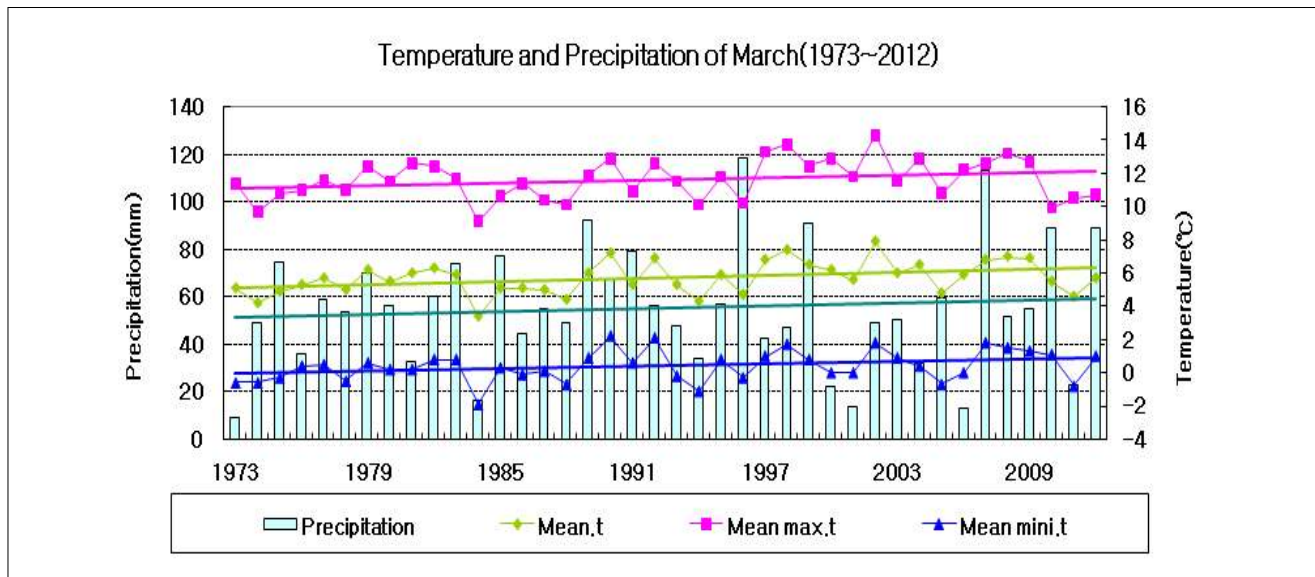
- o Nationally averaged precipitation, and days of rain in March 2000s were  $1.8\text{mm}$  and  $1.2\text{ days}$  higher than those of the 1970s, respectively.

Nationally averaged precipitation, and days of rain in March 2012 were  $36.2\text{mm}$  and  $2.4\text{ days}$  higher than those of the 2000s.

- o Nationally total of sunshine duration of March 2000s was  $22.6\text{ hours}$  less than those of the 1970s.

Nationally total of sunshine duration of March 2012 was  $20.1\text{ hours}$  less than those of the 2000s.

## Appendix 1. Climate features in March 2012



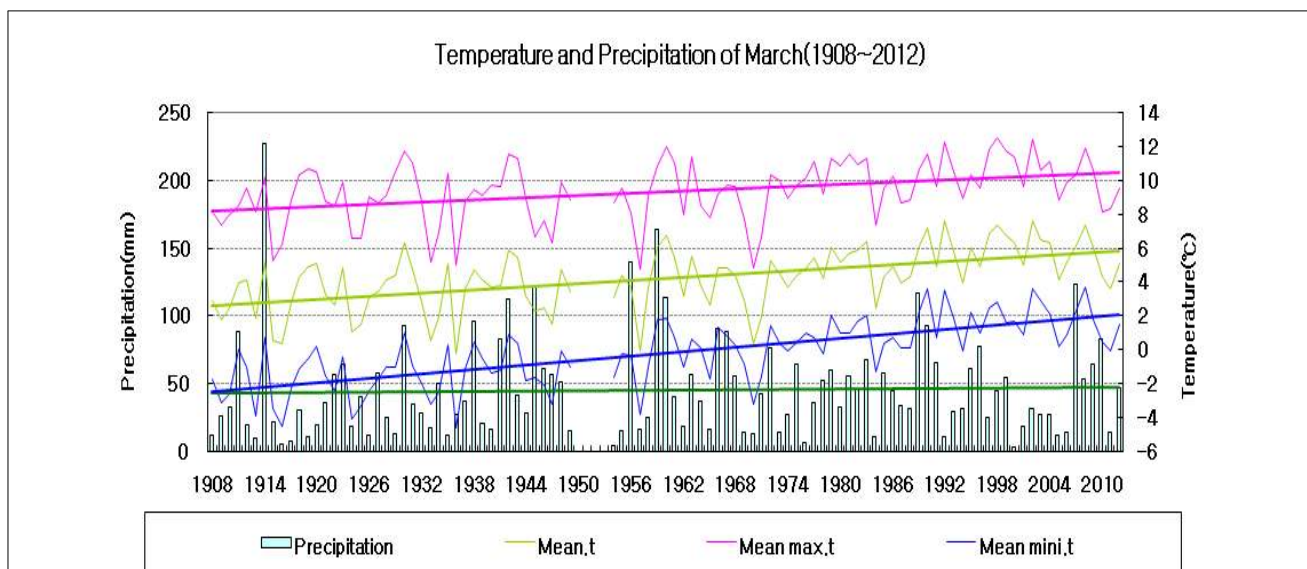
**Fig. 1. Temperatures (mean, mean maximum, and mean minimum), and precipitation in South Korea during March 1973-2012.**

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

Elements (National) average	March 2011 (c)	March 2012 (a)	Normals of March (1981-2010) (b)	a-b	a-c	rank since 1973 (within 5th)
Mean temperature (°C)	4.6	5.7	5.9	-0.2	1.1	-
Mean maximum t (°C)	10.5	10.7	11.8	-1.1	0.2	-
Mean minimum t (°C)	-0.8	1.0	0.6	0.4	1.8	-
Days with max. temp. (< 0°C)	19.6	11.8	14.0	-2.2	-7.8	-
Amount of precipitation (mm)	22.9	89.0	56.4	32.6(150%)	66.1	-
Days of rain (day)	3.7	10.8	8.1	2.7	7.1	2 <sup>th</sup> highest
Sunshine duration (hour)	248.3	179.8	194.0	-14.2(93%)	-68.5	-

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

Year	Mean temp (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Days with max. temp. (< 0°C)	Amount of rain (mm)	Days of rain (day)	Sunshine duration (hour)
1973-1980 (a)	5.2	11.2	0.0	15.9	51.0	7.2	222.5
1981-1990 (b)	5.5	11.3	0.3	14.7	56.9	8.2	212.5
1991-2000 (c)	5.9	11.9	0.6	14.0	59.5	7.7	191.7
2001-2010 (d)	6.3	12.2	0.8	13.3	52.8	8.4	199.9
d-a	1.1	1	0.8	-2.6	1.8	1.2	-22.6
d-b	0.8	0.9	0.5	-1.4	-4.1	0.2	-12.6
d-c	0.4	0.3	0.2	-0.7	-6.7	0.7	8.2



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

**□ Meteorological elements across Seoul during March(1908-2012)**

Elements (Seoul)	March 2011 (c)	March 2012(a)	Normals of March (1981-2010) (b)	a-b	a-c	rank since 1908 (within 5th)
Mean temperature (°C)	3.6	5.1	5.7	-0.6	1.5	
Mean maximum t (°C)	8.3	9.5	10.4	-0.9	1.2	
Mean minimum t (°C)	-0.1	1.5	1.6	-0.1	1.6	
Days with max. temp.< 0°C	18.0	11.0	9.5	1.5	-7.0	
Amount of precipitation(mm)	14.6	47.4	47.2	0.2(100%)	32.8	
Days of rain(day)	4.0	8.0	7.4	0.6	4.0	
Sunshine duration(hour)	240.2	191.8	189.0	2.8(102%)	-48.4	

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

Year	Mean temp (°C)	Mean max. temp. (°C)	Mean min. temp. (°C)	Days with max. temp. (< 0°C)	Amount of rain (mm)	Days of rain (day)	Sunshine duration (hour)
1911-1920	3.3	8.8	-1.6	20.6	44.2	7.6	216.3
1921-1930	3.5	8.9	-1.7	21.1	41.8	7.6	210.0
1931-1940(a)	3.1	8.4	-1.5	19.5	34.0	8.7	214.4
1941-1949	3.6	8.9	-1.1	18.7	63.5	9.0	214.6
1954-1960	3.9	9.0	-0.4	16.0	68.5	8.6	190.1
1961-1970	3.8	8.8	-0.3	16.7	43.2	6.7	208.4
1971-1980(b)	4.6	9.8	0.5	12.4	41.3	6.3	195.5
1981-1990	5.1	10.0	1.1	11.4	55.7	7.3	208.1
1991-2000	6.0	10.8	1.8	8.3	40.5	6.8	188.9
2001-2010(c)	5.8	10.3	1.9	8.9	45.4	8.2	169.9
c-a	2.7	1.9	3.4	-10.6	11.4	-0.5	-44.5
c-b	1.2	0.5	1.4	-3.5	4.1	1.9	-25.6