



# KMA'S BRIEFING ON CLIMATE CHARACTERISTICS

(total 4 pages)

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## January, 2010 climate

- ◇ The mean temperature for January was lower than normal by 0.6°C.
- ◇ The mean precipitation for January accounted for 101% compared to normal.

- Climate characteristics of January 2010 and its long-term trends are analyzed based on 60 meteorological stations across Korea (national average) for the period of 1973-2010 (1908-2010 for Seoul).
- The climatological characteristics in January 2010 can be described as follows:
  - o For Korea (whole nation),
    - The mean temperature (-1.6°C), the mean maximum temperature (3.8°C), and mean minimum (-6.5°C) were 0.6°C, 0.5°C and 0.9°C lower than normal, respectively. Days with minimum temperature below -10°C or equal (7.7 days) and days with maximum temperature below 0°C (6.9 days) had 1.3 more day and 1.7 more day compared to normal, respectively.
    - Maximum depth of fresh snow cover (15.0cm) was 1.3cm more than normal.
    - The amount of precipitation (31.8mm) was 101% of normal.
    - The average number of rainy days (7.2 days) had 0.2 less day compared to normal.
  - o For Seoul,
    - The temperature (-4.5°C), mean maximum (-0.7°C), and mean minimum (-8.1°C) temperatures were 2.0°C, 2.3°C, and 2.0°C lower than normal, respectively. Days with minimum temperature below -10°C or equal (10 days) and days with maximum temperature below 0°C (17 days) had 3 more day and 6.2 more day compared to normal, respectively.
    - Maximum depth of fresh snow cover (28.9cm) was 17.1cm more than normal.
    - The amount of precipitation (29.3mm) accounted for 135.6% of the normal precipitation.
    - The number of rainy days (8 days) had 0.9 more day compared to normal.

□ **Long-term trend of January 2010 climate**

- o Korea's mean, mean maximum, and mean minimum temperatures from 2001 to 2010 were 0.6°C, 0.6°C, and 0.4°C higher than those of the 1970s, respectively.
- o For Korea, days with minimum temperature below -10°C or equal (5.2 days) and days with maximum temperature below 0°C (4.2 days) during 2001 and 2010 were 1.1 days and 1.2 days less than those of the 1970s, respectively.
- o For Seoul, days with minimum temperature below -10°C or equal (4.5 days), days with maximum temperature below 0°C (9.5 days) during 2001 and 2010 were 1.5 days and 1.7 days less than those of the 1970s, respectively.
- o For Korea, maximum depth of fresh snow cover (11.9cm) during 2001 and 2010 were 2.2cm less than those of the 1970s, however, for Seoul, the figures(12.6cm) are 2.2cm more than those of the 1970s.

※ 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.

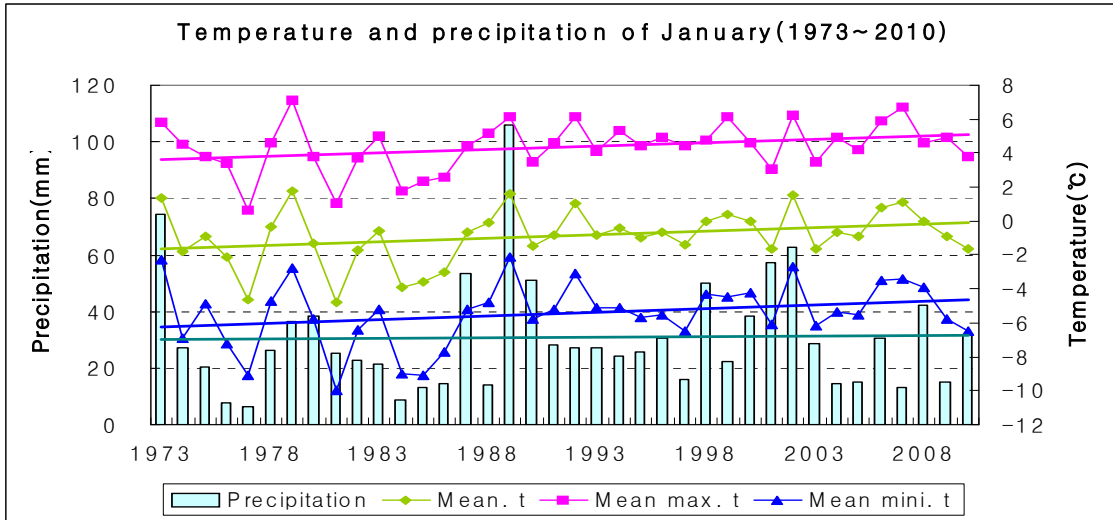
※ 1920s: average from 1921 to 1930

※ 1970s: average from 1973 to 1980

※ 2000s: average from 2001 to 2009

## Appendix January, 2010 climate

**Fig. 1. Temperatures (mean, mean maximum, and mean minimum), and precipitation across South Korea during January (1973-2010)**



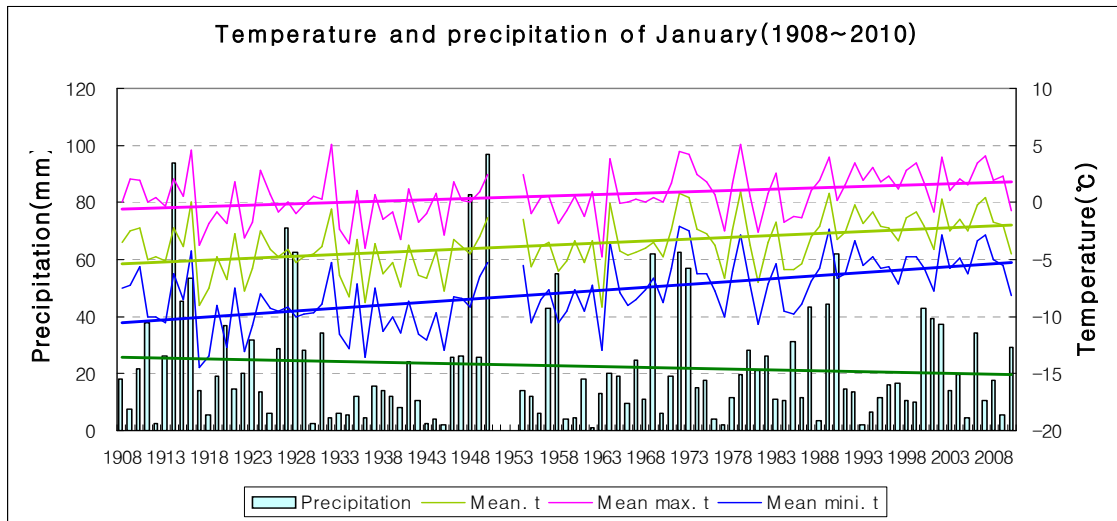
### □ Average values of meteorological elements across Korea (1973-2010)

Elements (Seoul) average	January 2010 (a)	Normals of January (1971-2000) (b)	a-b	rank since 1973 (within 5th)
mean temperature (°C)	-1.6	-1.0	-0.6	-
mean maximum t (°C)	3.8	4.3	-0.5	-
mean minimum t (°C)	-6.5	-5.6	-0.9	-
days with minimum t below -10°C	7.7	6.4	1.3	-
days with maximum t below 0°C	6.9	5.2	1.7	-
maximum depth of fresh snow cover (cm)	15.0	13.7	1.3	-
amount of precipitation (mm)	31.8	31.5	0.3 (101.0%)	-
rainy days	7.2	7.4	-0.2	-

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

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Days with minimum t below -10°C	Days with maximum t below 0°C	maximum depth of fresh snow cover (cm)	Precipitation (mm)	rainy days
1973-1980 (a)	-1.0	4.2	-5.5	6.3	5.4	14.1	29.7	7.5
1981-1990 (b)	-1.8	3.6	-6.5	7.9	6.8	14.9	33.0	7.3
1991-2000 (c)	-0.4	4.9	-4.9	4.9	3.5	12.3	29.0	7.2
2001-2010 (d)	-0.4	4.8	-4.9	5.2	4.2	11.9	31.2	7.0
d-a	0.6	0.6	0.4	-1.1	-1.2	-2.2	1.5	-0.5
d-b	-1.4	1.2	1.4	-2.7	-2.6	-3.0	-1.8	-0.3
d-c	0	-0.1	0	0.3	0.7	-0.4	2.2	-0.2

**Fig. 2. Temperatures (mean, mean maximum, and mean minimum), and precipitation across Seoul (1908-2010)**



**□ Average values of meteorological elements across Seoul during January (1908-2010)**

Elements (Seoul) average	January 2010 (a)	Normals of January (1971-2000) (b)	a-b	rank since 1908 (within 5th)
mean temperature (°C)	-4.5	-2.5	-2.0	-
mean maximum t (°C)	-0.7	1.6	-2.3	-
mean minimum t (°C)	-8.1	-6.1	-2.0	-
days with minimum t below -10°C	10	7.0	3.0	-
days with maximum t below 0°C	17	10.8	6.2	-
maximum depth of fresh snow cover (cm)	28.9	11.8	17.1	-
amount of precipitation (mm)	29.3	21.6	7.7(135.6%)	-
rainy days	8	7.1	0.9	-

**□ Meteorological elements across Seoul during January for each decade (1911-2010)**

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Days with minimum t below -10°C	Days with maximum t below 0°C	maximum depth of fresh snow cover (cm)	Precipitation (mm)	rainy days
1911-1920	-4.9	-0.1	-9.9	15.3	14.5	-	33.5	7.8
1921-1930	-4.6	-0.1	-9.7	15.8	14.4	-	28.0	7.0
1931-1940 (a)	-5.4	-0.8	-9.9	17.3	17.3	-	11.7	6.6
1941-1950	-4.5	0.2	-9.3	14.9	15.1	13.2	30.1	7.0
1954-1960	-4.1	0.1	-8.5	12.4	14.6	20.8	19.9	7.6
1961-1970	-4.3	-0.1	-8.2	11.2	14.1	17.3	18.6	6.4
1971-1980 (b)	-2.2	2.0	-5.7	6.0	9.9	10.4	23.7	7.1
1981-1990	-3.7	0.4	-7.3	9.8	14.4	16.2	26.5	6.8
1991-2000	-1.7	2.3	-5.3	3.8	8.2	9.0	14.5	7.3
2001-2010 (c)	-1.8	1.9	-5.2	4.5	9.5	12.6	21.3	5.5
c-a	3.5	2.7	4.7	-12.8	-7.8	-	9.6	-1.1
c-b	0.4	-0.1	0.5	-1.5	-1.7	2.2	-2.4	-1.6