



# KMA'S BRIEFING IN CLIMATE CHARACTERISTICS

(total 4 pages)

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## September 2009, Climate

- ◇ September mean temperature for the national average is 0.8°C higher than normal.
- ◇ September precipitation for the national average is 35% relative to normal, making it the fifth lowest record since 1973.

- Climate characteristics of September, and its long-term trends are analyzed based on 60 meteorological stations across the Korea (national average) for the period of 1973-2009 (1908-2009 in Seoul).
- September, 2009 climate is as follows:**
  - o For the national average,
    - All of the mean (21.0°C), mean maximum (26.5°C), and mean minimum(16.5°C) temperatures are 0.8°C higher than normal.
    - the amount of precipitation (52.7mm) is 35.3% relative to normal, making it the fifth lowest record since 1973.
    - the average rainy days (7.4 days) are 1.2 days less than normal.
  - o For Seoul,
    - both the mean temperature (21.8°C) and the mean minimum temperatures (17.7°C) are 1.0°C higher than normal. The mean maximum temperature(26.3°C) is 0.7°C higher than normal.
    - The amount of precipitation (64.5mm) is 47% relative to normal.
    - The average rainy days (6 days) are 2.7 day less than normal.
- Long term trend of September climate**
  - o For the national average, mean, mean maximum, and mean minimum temperatures of September 2000s are 0.8°C, 0.4°C, and 1.3°C higher than those of the 1970s, respectively.

- o For Seoul, the mean minimum temperature of September 2000s is 3.0°C and 1.4°C higher than those of the 1920s and 1970s, respectively.
- o For the national average, precipitation and rainy days for 2000s increased by 47% and 1.4days compare to those of the 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.

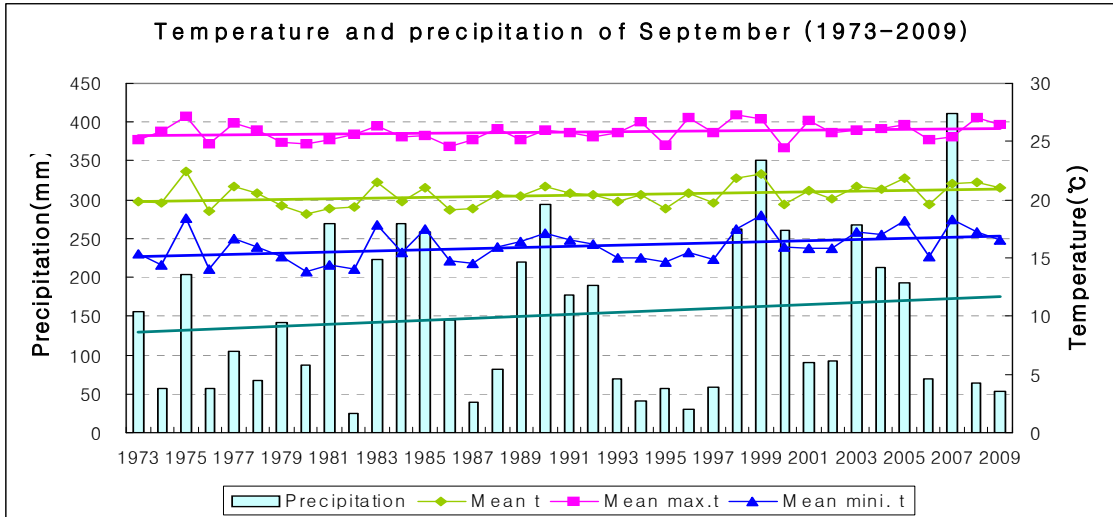
※ 1920s: average from 1921 to 1930

※ 1970s: average from 1973 to 1980

※ 2000s: average from 2001 to 2009

## Appendix

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



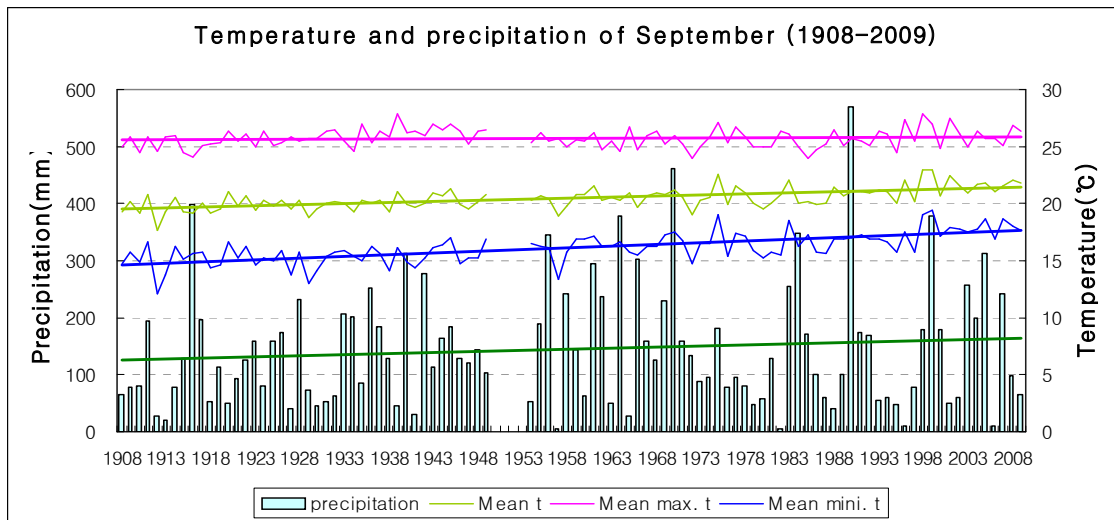
□ National average values of September meteorological elements (1973–2009).

Elements (National average)	September 2009 (a)	Normals of September (1971-2000) (b)	a-b	rank since 1973 (within 5th)
mean temperature (°C)	21.0	20.2	0.8	-
mean maximum t (°C)	26.5	25.7	0.8	-
mean minimum t (°C)	16.5	15.7	0.8	-
amount of precipitation (mm)	52.7	149.4	-96.7(35.3%)	fifth lowest
rainy days	7.4	8.6	-1.2	-
precipitation intensity (mm/day)	7.1	17.4	-10.3	third lowest

□ National average values of September meteorological elements in each decade (1973–2009).

Year	Mean t (°C)	Mean Maximum t (°C)	Mean Minimum t (°C)	Precipitation (mm)	rainy days	precipitation intensity (mm/day)
1973-1980 (a)	20.1	25.7	15.5	109.3	8.5	12.9
1981-1990 (b)	20.1	25.5	15.8	182.3	9.2	19.8
1991-2000 (c)	20.5	26.0	16.0	149.7	8.0	18.7
2001-2009 (d)	20.9	26.1	16.8	161.0	9.9	16.3
d-a	0.8	0.4	1.3	51.7	1.4	3.4
d-b	0.8	0.6	1.0	-21.3	0.7	-3.5
d-c	0.4	0.1	0.8	11.3	1.9	-2.4

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



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

Elements (Seoul) average	September 2009 (a)	Normals of September (1971–2000) (b)	a-b	rank since 1908 (within 5th)
mean temperature (°C)	21.8	20.8	1.0	-
mean maximum t (°C)	26.3	25.6	0.7	-
mean minimum t (°C)	17.7	16.7	1.0	-
amount of precipitation (mm)	64.5	137.6	-73.1(46.9%)	-
rainy days	6	8.7	-2.7	-
precipitation intensity (mm/ day)	10.8	15.8	-5.0	-

□ September 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	precipitation intensity (mm/day)
1911–1920 (a)	19.7	25.3	15.1	125.6	10.1	12.4
1921–1930	19.9	25.6	14.9	118.1	8.5	13.9
1931–1940	20.1	26.1	15.5	153.3	8.8	17.4
1941–1950	20.3	26.4	15.7	140.5	10.4	13.5
1954–1960	20.2	25.5	16.0	148.7	9.6	15.5
1961–1970	20.7	25.6	16.5	226.6	10.7	21.2
1971–1980	20.5	25.5	16.5	102.0	8.6	11.9
1981–1990	20.6	25.4	16.6	178.0	8.1	22.0
1991–2000	21.3	26.0	17.2	132.9	9.4	14.1
2001–2009 (b)	21.7	26.1	17.9	144.1	9.6	15.0
b-a	2.0	0.8	2.8	18.5	-0.5	2.6