



KMA CLIMATE CHARACTERISTICS BRIEFING

(4 pages total)

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September 2010 Climate

◇ The temperature was higher than normal, while the precipitation amount was higher than normal.

- Climate characteristics of September 2010 and their long-term trends are analyzed based on data from 60 meteorological stations in Korea (national values) for the period of 1973-2010 (1908-2010 for Seoul).
- **The climatological characteristics of September 2010 were as follows:**
 - o For Korea (national statistics)
 - The mean (21.9°C), mean maximum (27.0°C), and mean minimum temperatures (18.1°C) were 1.7°C, 1.3°C and 2.4°C higher than normal, respectively.
 - The precipitation amount (260.5 mm) was higher than normal (174.4%)
The average number of rainfall days (12.9 days) increased by 4.3 days compared to normal and the number of days with heavy precipitation exceeding 30 mm/hour (0.7 days) was the highest on record since 1973.
 - o For Seoul:
 - The mean (21.8°C), mean maximum (26.0°C), and mean minimum temperatures (18.5°C) were 1.0°C, 0.4°C and 1.8°C higher than normal, respectively.
 - The precipitation amount (671.5 mm) was higher than normal (488%) and the highest on record since 1908.
The average number of rainfall days (13.0 days) increased by 4.3 days compared to normal and the number of days with heavy precipitation exceeding 30 mm/hour (3 days) was the highest on record since 1908.

□ Long-term climate trend for September

- o The September average temperatures for Korea in the 2000's were 0.9°C higher compared with the 1970's. The mean maximum (26.2°C), and mean minimum temperatures (16.9°C) were 0.5°C and 1.4°C higher respectively compared with the corresponding values for the 1970's.
- o The precipitation amount for the month of September for Korea in the 2000's was 56.4% higher than the corresponding values for the 1970's. The number of precipitation days for the same period was 10.2 days, an increase of 1.7 days over the 1970's.

※ Normal: 30-year (1971-2000) average.

※ National average: Average of values collected from 60 meteorological stations since 1973.

※ The analyzed data for Seoul date back to 1908.

※ 1920s: Average from 1921 to 1930

※ 1970s: Average from 1973 (1971 for Seoul) to 1980

※ 2000s: Average from 2001 to 2009

Appendix 1. September Climate Trends

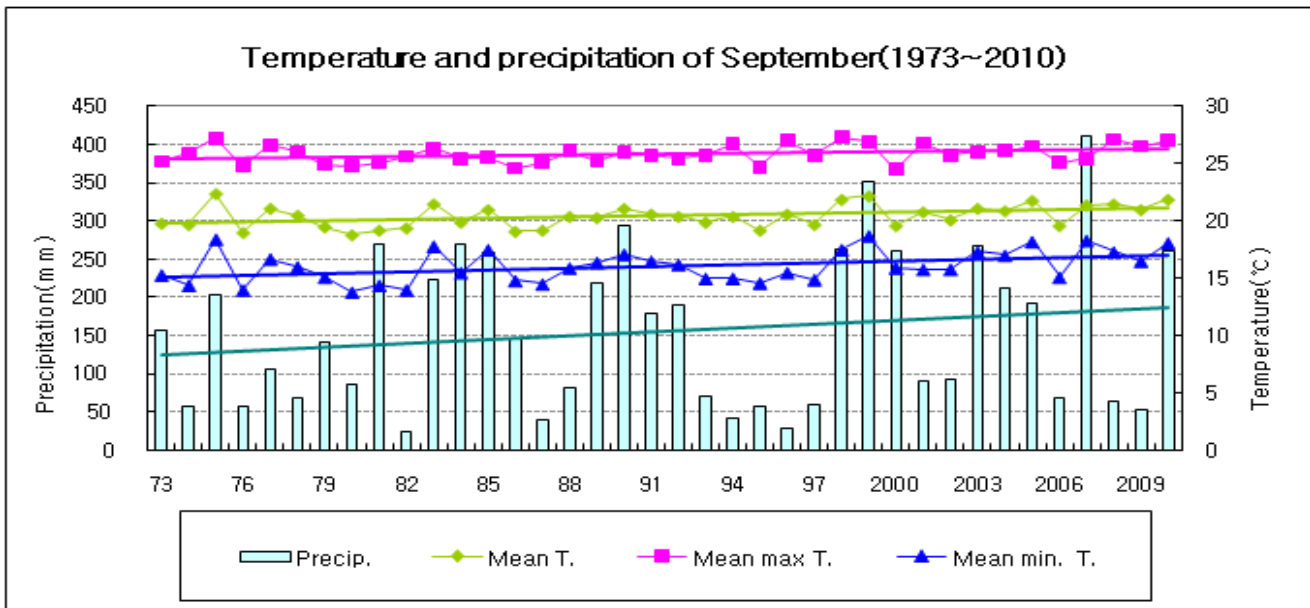


Fig. 1. Temperatures (mean, mean maximum, and mean minimum) and precipitation for the Republic of Korea for September (1973-2010)

□ September averages of meteorological elements for Korea (1973~2010)

Elements (National)	Sep 2010 (a)	Normals for Sep (1971-2000) (b)	a - b	Ranking since 1973 (up to 5th)
Mean temperature (°C)	21.9	20.2	1.7	3rd highest
Mean max. temp. (°C)	27.0	25.7	1.3	4th highest
Mean min. temp. (°C)	18.1	15.7	2.4	5th highest
Precipitation amount (mm)	260.5	149.4	111.1(174.4%)	-
Rainfall days	12.9	8.6	4.3	5th highest
Days with precip. greater than 30mm/hour(day)	0.7	0.2	0.5	Highest
Sunshine duration (hr)	159.9	180.0	-20.1(88.8%)	-

□ September averages of meteorological elements for Korea by decade (1973-2010)

Decade	Mean temp. (°C)	Mean max temp (°C)	Mean min. temp. (°C)	Precip. (mm)	Rainfall days	Days with precip. $\geq 30\text{mm/h}$	Sunshine duration (hr)
1973-1980 (a)	20.1	25.7	15.5	109.3	8.5	0.2	187.1
1981-1990 (b)	20.1	25.5	15.8	182.3	9.2	0.3	174.8
1991-2000 (c)	20.5	26.0	16.0	149.7	8.0	0.2	179.5
2001-2010 (d)	21.0	26.2	16.9	170.9	10.2	0.3	156.4
d - a	0.9	0.5	1.4	61.6	1.7	0.1	-30.7
d - b	0.9	0.7	1.1	-11.4	1.0	0.0	-18.4
d - c	0.5	0.2	0.9	21.2	2.2	0.1	-23.1

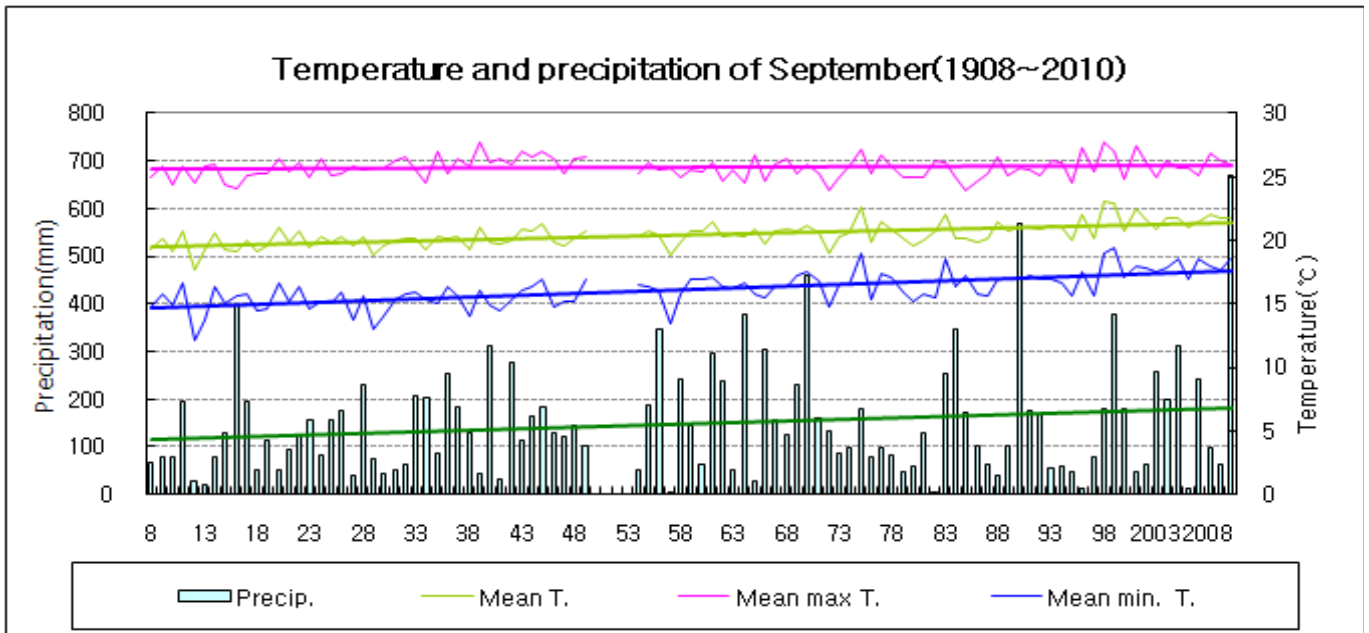


Fig. 2. Temperatures (mean, mean maximum, and mean minimum) and precipitation for Seoul (1908-2010)

□ September averages of meteorological elements for Seoul (1908-2010)

Elements (National)	Sep 2010 (a)	Normals for Sep (1971-2000) (b)	a - b	Ranking since 1973 (up to 5th)
Mean temperature (°C)	21.8	20.8	1.0	-
Mean max. temp. (°C)	26.0	25.6	0.4	-
Mean min. temp. (°C)	18.5	16.7	1.8	-
Precipitation amount (mm)	671.5	137.6	533.9(488.0%)	Highest
Rainfall days	13.0	8.7	4.3	-
Days with precip. greater than 30mm/hour(day)	3	0.3	2.7	Highest
Sunshine duration (hr)	146.4	184.5	-38.1(79.3%)	-

□ September averages of meteorological elements for Seoul by decade (1911-2010)

Decade	Mean temp. (°C)	Mean max temp (°C)	Mean min. temp (°C)	Precip. (mm)	Rainfall days	Days with precip. $\geq 30\text{mm/h}$	Sunshine duration (hr)
1911-1920 (a)	19.7	25.3	15.1	125.6	10.1		211.2
1921-1930	19.9	25.6	14.9	118.1	8.5		217.8
1931-1940	20.1	26.1	15.5	153.3	8.8		220.9
1941-1949	20.3	26.4	15.7	140.5	10.4		207.5
1954-1960	20.2	25.5	16.0	148.7	9.6	0.3	183.2
1961-1970 (b)	20.7	25.6	16.5	226.6	10.7	0.5	172.2
1971-1980	20.5	25.5	16.5	102.0	8.6	0	174.6
1981-1990	20.6	25.4	16.6	178.0	8.1	0.5	192.0
1991-2000	21.3	26.0	17.2	132.9	9.4	0.3	187.0
2001-2010 (c)	21.7	26.1	17.9	196.9	9.9	0.5	149.5
c - a	2.0	0.8	2.8	71.3	-0.2		-61.7
c - b	1.0	0.5	1.4	-29.7	-0.8	0	-22.7