

MONTHLY CLIMATE REVIEW OVER KOREA

(total 4 pages)

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|-------------|------------------|
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March 2015 Monthly Climate Summary

- \diamondsuit The nationwide mean temperature (6.7 °C) in March 2015 was 0.8 °C above normal.
- ♦ The nationally-averaged precipitation (40.5 mm) was 69.0 % of normal.
- ☐ Climate features and long-term trends in March 2015 were analyzed with the data collected at the 45 meteorological stations throughout Korea (national average) from 1973 to 2015 (1908-2015 for Seoul).
 - * Normal: Average value of climatic element data collected from 1981 to 2010

☐ The climatic characteristics in March 2015

- o Korea (as a whole),
 - The mean temperature $(6.7 \,^{\circ}\text{C})$, the mean maximum temperature $(13.5 \,^{\circ}\text{C})$ were $0.8 \,^{\circ}\text{C}$, $1.7 \,^{\circ}\text{C}$ above normal, respectively. And the mean minimum temperature $(0.5 \,^{\circ}\text{C})$ was were $0.1 \,^{\circ}\text{C}$ below normal
 - The nationally-averaged precipitation was 40.5 mm, which was 69.0 % of normal. The number of rainy days was 5.1, which was 3.0 days less than normal.
- The total number of hours of sunshine was 263.5, which was 135.8 % of normal.

o Seoul,

- The mean temperature $(6.3 \,^{\circ}\text{C})$, the mean maximum temperature $(12.4 \,^{\circ}\text{C})$ were $0.6 \,^{\circ}\text{C}$, $2.0 \,^{\circ}\text{C}$ above normal, respectively. And the mean minimum temperature $(1.0 \,^{\circ}\text{C})$ was were $0.6 \,^{\circ}\text{C}$ below normal
- The amount of precipitation was 9.6 mm, which was 20.3 % of normal.
- The number of rainy days was 4.0, which was 3.4 days less than normal.
- The total number of hours of sunshine was 270.8, which was 143.3 % of normal.

☐ Long-term¹) trend in March 2015 climate

- o Korea (as a whole),
 - The national mean temperatures in March in the 2000s (2001-2010) was $1.1 \,^{\circ}$ C above that of in the 1970s (1973-1980).
 - The nationally-averaged precipitation in March in the 2000s was 1.8 mm more than that of in the 1970s.
 - The number of rainy days in March in the 2000s was 1.2 days more than that of in the 1970s.
 - The total sunshine hours in March in the 2000s was 15.5 hours less than that of in the 1970s.

o Seoul,

- The mean temperatures in March in the 2000s (2001-2010) was $1.2 \,^{\circ}$ C above that of in the 1970s (1971-1980).
- The precipitation in March in the 2000s was 4.1 mm more than that of in the 1970s.
- The number of rainy days in March in the 2000s was 1.9 days more than that of in the 1970s.
- The total sunshine hours in March in the 2000s was 25.6 hours less than that of in the 1970s.

^{1) 2000}s: 2001~2010 / 1970s of Korea(Seoul): 1973~1980(1971~1980)

Appendix 1 Climate features of March 2015 (Nationwide)

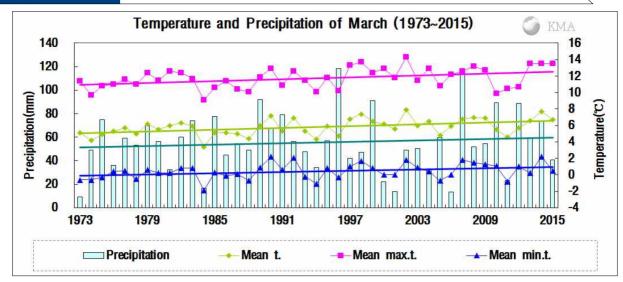


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during March (1973–2015).

☐ The nationwide average value of meteorological element during March (1973-2015)

| Elements (whole country) | Mar. 2015(a) | Mar. 2014(b) | Normals of Mar. (1981-2010)(c) | a-b | а-с | Rank since 1973 (within 5th) |
|---|--------------|-----------------|--------------------------------|---------------|---------------|------------------------------------|
| Mean temperature ($^{\circ}$ C) | 6.7 | 7.7 | 5.9 | -1.0 | 0.8 | |
| Mean maximum temp. (°C) | 13.5 | 13.5 | 11.8 | 0.0 | 1.7 | the third highest |
| Mean minimum temp. (℃) | 0.5 | 2.2 | 0.6 | -1.7 | -0.1 | |
| Precipitation (mm) | 40.5 | 74.1 | 56.4 | -33.6 (65.6%) | -15.9 (69.0%) | |
| Days of rain (day) | 5.1 | 9.1 | 8.1 | -4.0 | -3.0 | minimum days rank 3th |
| Sunshine duration (hour) | 263.5 | 212.3 | 194.0 | 51.2 (124.1%) | 69.5 (135.8%) | the highest |
| Mean cloud amount (1/10) | 3.2 | 4.3 | 4.8 | -1.1 | -1.6 | the lowest |
| Days of minimum temperature less than $0 ^{\circ}\mathrm{C}(\mathrm{day})$ | 16.2 | 11.7 | 14.0 | 4.5 | 2.2 | |
| Days of maximum temperature more than $10^{\circ}\mathbb{C}(\text{day})$ | 22.6 | 21.5 | 20.3 | 1.1 | 2.3 | |
| Asian dust days (day) | 5.6 | 1.6 | 1.8 | 4.0 | 3.8 | maximum days rank 3th |

☐ The nationwide average value of meteorological element during March in each decade (1973-2010)

| Year | Mean temp. | Mean max. temp. | Mean min. temp. (°C) | Prep. (mm) | Days of rain (day) | Sunshine duration (hour) | Mean cloud amount (1/10) | Days of minimum temperature less than 0°C (day) | Days of maximum temperature more than $10^{\circ}\mathrm{C}(\mathrm{day})$ | Asian dust days (day) |
|--------------|------------|-----------------|----------------------|------------|--------------------------|--------------------------------|--------------------------|---|--|--------------------------|
| 1973-1980(a) | 5.2 | 11.2 | 0.0 | 51.0 | 7.2 | 206.3 | 4.7 | 15.9 | 19.2 | 0.6 |
| 1981-1990(b) | 5.5 | 11.3 | 0.3 | 56.9 | 8.2 | 201.9 | 4.9 | 14.7 | 19.2 | 0.5 |
| 1991-2000(c) | 5.9 | 11.9 | 0.6 | 59.5 | 7.7 | 189.2 | 4.8 | 14.0 | 20.8 | 1.0 |
| 2001-2010(d) | 6.3 | 12.2 | 0.8 | 52.8 | 8.4 | 190.8 | 4.6 | 13.3 | 21.0 | 3.8 |
| 2015(e) | 6.7 | 13.5 | 0.5 | 40.5 | 5.1 | 263.5 | 3.2 | 16.2 | 22.6 | 5.6 |
| d-a | 1.1 | 1.0 | 0.8 | 1.8 | 1.2 | -15.5 | -0.1 | -2.6 | 1.8 | 3.2 |
| d-b | 0.8 | 0.9 | 0.5 | -4.1 | 0.2 | -11.1 | -0.3 | -1.4 | 1.8 | 3.3 |
| d-c | 0.4 | 0.3 | 0.2 | -6.7 | 0.7 | 1.6 | -0.2 | -0.7 | 0.2 | 2.8 |
| e-d | 0.4 | 1.3 | -0.3 | -12.3 | -3.3 | 72.7 | -1.4 | 2.9 | 1.6 | 1.8 |

Appendix 2 Climate features of March 2015 (Seoul)

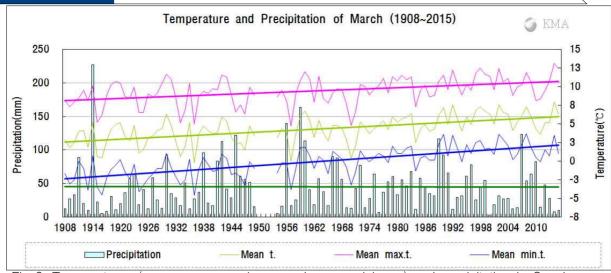


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during March (1908-2015).

☐ The average value of meteorological element during March in Seoul (1908-2015)

| Elements (Seoul) | Mar. 2015(a) | Mar. 2014(b) | Normals of Mar. (1981-2010)(c) | a-b | a-c | Rank since 1908 (within 5th) |
|--|--------------|-----------------|--------------------------------|---------------|---------------|------------------------------------|
| Mean temperature ($^{\circ}$ C) | 6.3 | 7.9 | 5.7 | -1.6 | 0.6 | |
| Mean maximum temp. (°C) | 12.4 | 13.1 | 10.4 | -0.7 | 2.0 | the third highest |
| Mean minimum temp. (℃) | 1.0 | 3.5 | 1.6 | -2.5 | -0.6 | |
| Precipitation (mm) | 9.6 | 7.2 | 47.2 | 2.4 (133.3%) | -37.6 (20.3%) | |
| Days of rain (day) | 4.0 | 6.0 | 7.4 | -2.0 | -3.4 | minimum days rank 3th |
| Sunshine duration (hour) | 270.8 | 214.7 | 189.0 | 56.1 (126.1%) | 81.8 (143.3%) | the second highest |
| Mean cloud amount (1/10) | 2.8 | 3.9 | 4.6 | -1.1 | -1.8 | the lowest |
| Days of minimum temperature less than $0^{\circ}C(day)$ | 13.0 | 10.0 | 9.5 | 3.0 | 3.5 | |
| Days of maximum temperature more than $10^{\circ}C(day)$ | 22.0 | 20.0 | 16.8 | 2.0 | 5.2 | the third highest |
| Asian dust days (day) | 8.0 | 2.0 | 1.9 | 6.0 | 6.1 | maximum days rank 2th |

\square The average value of meteorological element during March in Seoul in each decade (1911-2010)

| | Year | Mean temp. | Mean max. temp. | Mean min. temp. | Prep. (mm) | Days of rain (day) | Sunshine duration (hour) | Mean cloud amount (1/10) | Days of minimum temperature less than $0 ^{\circ}\!$ | Days of maximum temperature more than $10^{\circ}\text{C}(\text{day})$ | Asian dust days (day) |
|---|-------------|------------|-----------------|-----------------|------------|--------------------------|--------------------------------|--------------------------|---|--|--------------------------|
| 1 | 911-1920(a) | 3.3 | 8.8 | -1.6 | 44.2 | 7.6 | 216.3 | 5.2 | 20.6 | 12.2 | 0.3 |
| | 1921-1930 | 3.5 | 8.9 | -1.7 | 41.8 | 7.6 | 210.0 | 5.0 | 21.1 | 11.2 | 0.2 |
| 1 | 931-1940(b) | 3.1 | 8.4 | -1.5 | 34.0 | 8.7 | 214.4 | 4.8 | 19.5 | 12.0 | 0.0 |
| | 1941-1949 | 3.6 | 8.9 | -1.1 | 63.5 | 9.0 | 214.6 | 5.2 | 18.7 | 13.4 | 0.0 |
| | 1954-1960 | 3.9 | 9.0 | -0.4 | 68.5 | 8.6 | 190.1 | 5.1 | 16.0 | 13.4 | 0.3 |
| _ | 1961-1970 | 3.8 | 8.8 | -0.3 | 43.2 | 6.7 | 208.4 | 5.0 | 16.7 | 13.5 | 0.3 |
| 1 | 971-1980(c) | 4.6 | 9.8 | 0.5 | 41.3 | 6.3 | 195.5 | 4.7 | 12.4 | 15.4 | 0.5 |
| _ | 1981-1990 | 5.1 | 10.0 | 1.1 | 55.7 | 7.3 | 208.1 | 4.8 | 11.4 | 15.4 | 0.7 |
| | 1991-2000 | 6.0 | 10.8 | 1.8 | 40.5 | 6.8 | 188.9 | 4.5 | 8.3 | 17.9 | 0.9 |
| 2 | 001-2010(d) | 5.8 | 10.3 | 1.9 | 45.4 | 8.2 | 169.9 | 4.6 | 8.9 | 17.1 | 4.0 |
| | 2015(e) | 6.3 | 12.4 | 1.0 | 9.6 | 4.0 | 270.8 | 2.8 | 13.0 | 22.0 | 8.0 |
| | d-a | 2.5 | 1.5 | 3.5 | 1.2 | 0.6 | -46.4 | -0.6 | -11.7 | 4.9 | 3.7 |
| | d-b | 2.7 | 1.9 | 3.4 | 11.4 | -0.5 | -44.5 | -0.2 | -10.6 | 5.1 | 4.0 |
| | d-c | 1.2 | 0.5 | 1.4 | 4.1 | 1.9 | -25.6 | -0.1 | -3.5 | 1.7 | 3.5 |
| _ | e-d | 0.5 | 2.1 | -0.9 | -35.8 | -4.2 | 100.9 | -1.8 | 4.1 | 4.9 | 4.0 |