



MONTHLY CLIMATE REVIEW OVER KOREA (total 7 pages)

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November and Fall(September–November) 2015 Climate Summary

- ◇ The nationwide mean temperature (10.1 °C) in November 2015 was 2.5 °C above normal and the nationally-averaged precipitation (127.8 mm) was 267.2 % of normal.
 - ◇ The nationwide mean temperature (15.2°C) in Fall 2015 was 1.1 °C above normal and the nationally-averaged precipitation (247.3 mm) was 94.9 % of normal.
- Climate features and long-term trends in November and Fall 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 November 2015

- o Korea (as a whole),
 - The mean temperature (10.1 °C), the mean maximum temperature (14.1 °C) and the mean minimum temperature (6.6 °C) were 2.5 °C, 0.5 °C, 4.1 °C above normal.
 - The nationally-averaged precipitation was 127.8 mm, which was 267.2 % of normal. The number of rainy days was 14.9, which was 7.8 days more than normal.
 - The total number of hours of sunshine was 96.2, which was 57.4 % of normal.
- o Seoul,
 - The mean temperature (8.9 °C), the mean maximum temperature (12.7 °C) and the mean minimum temperature (5.9 °C) were 1.7 °C, 1.1 °C, 2.7 °C above normal, respectively.
 - The amount of precipitation was 104.6 mm, which was 199.2 % of normal.
 - The number of rainy days was 14.0, which was 5.3 days more than normal.
 - The total number of hours of sunshine was 109.0, which was 71.1 % of normal.

□ Long-term¹⁾ trend in November 2015 climate

o Korea (as a whole),

- The national mean temperatures in November in the 2000s (2001-2010) was 0.7 °C above that of in the 1970s (1973-1980).
- The nationally-averaged precipitation in November in the 2000s was 7.4 mm less than that of in the 1970s.
- The number of rainy days in November in the 2000s was 1.3 days less than that of in the 1970s.
- The total sunshine hours in November in the 2000s was 2.5 hours more than that of in the 1970s.

o Seoul,

- The mean temperatures in November in the 2000s (2001-2010) was 0.8 °C above that of in the 1970s (1971-1980).
- The precipitation in November in the 2000s was 1.5 mm less than that of in the 1970s.
- The number of rainy days in November in the 2000s was 1.0 days less than that of in the 1970s.
- The total sunshine hours in November in the 2000s was 6.0 hours more than that of in the 1970s.

□ The climatic characteristics in Fall 2015

o Korea (as a whole),

- The mean temperature (15.2 °C), the mean maximum temperature (20.6 °C) and the mean minimum temperature (10.6 °C) were 1.1 °C, 0.5 °C, 1.4 °C above normal, respectively.
- The nationally-averaged precipitation was 247.3 mm, which was 94.9 % of normal. The number of rainy days was 27.6, which was 5.8 days more than normal.
- The total number of hours of sunshine was 562.6, which was 104.5 % of normal.

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

o Seoul,

- The mean temperature (15.6 °C), the mean maximum temperature (20.7 °C) and the mean minimum temperature (11.4 °C) were 1.2 °C, 1.6°C, 1.1 °C above normal, respectively.
- The amount of precipitation was 212.1 mm, which was 77.5 % of normal.
- The number of rainy days was 25.0, which was 0.9 days more than normal.
- The total number of hours of sunshine was 610.8, which was 115.6 % of normal.

□ **Long-term²⁾ trend in Fall 2015 climate**

o Korea (as a whole),

- The national mean temperatures in Fall in the 2000s (2001-2010) was 0.7 °C above that of in the 1970s (1973-1980).
- The nationally-averaged precipitation in Fall in the 2000s was 33.7 mm more than that of in the 1970s.
- The number of rainy days in Fall in the 2000s was 0.5 days less than that of in the 1970s.
- The total sunshine hours in Fall in the 2000s was 27.1 hours less than that of in the 1970s.

o Seoul,

- The mean temperatures in Fall in the 2000s (2001-2010) was 1.0 °C above that of in the 1970s (1971-1980).
- The precipitation in Fall in the 2000s was 100.8 mm more than that of in the 1970s.
- The number of rainy days in Fall in the 2000s was 0.7 days less than that of in the 1970s.
- The total sunshine hours in Fall in the 2000s was 24.0 hours less than that of in the 1970s.

2) 2000s : 2001~2010 / 1970s of Korea(Seoul) : 1973~1980(1971~1980)

Appendix 1 Climate features of November 2015 (Nationwide)

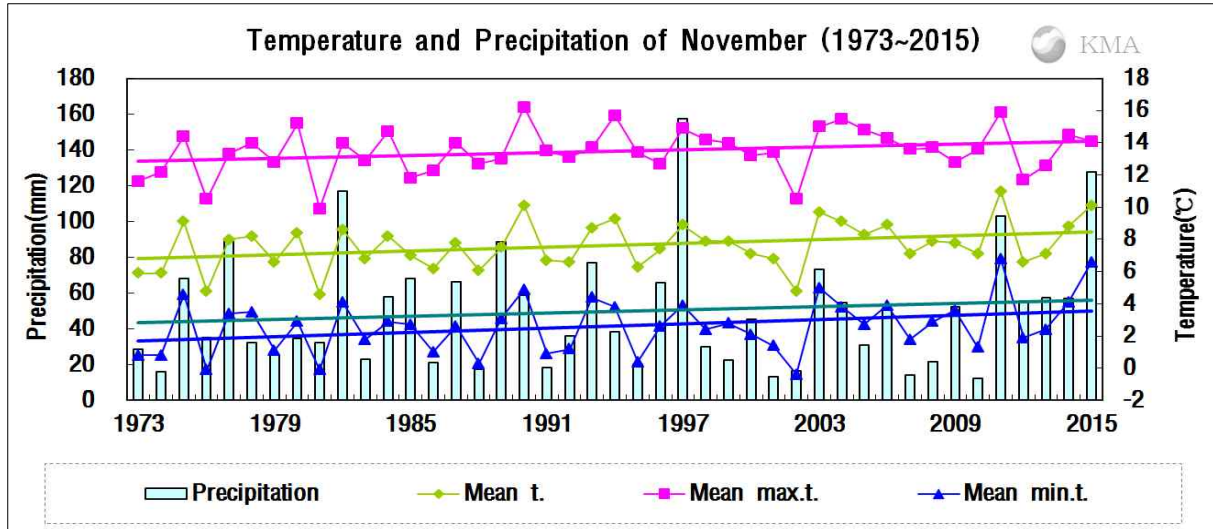


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during November (1973–2015).

□ The nationwide average value of meteorological element during November (1973–2015)

Elements (whole country)	Nov. 2015(a)	Nov. 2014(b)	Normals of Nov. (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	10.1	8.8	7.6	1.3	2.5	the 2nd highest
Mean maximum temp. (°C)	14.1	14.5	13.6	-0.4	0.5	-
Mean minimum temp. (°C)	6.6	4.1	2.5	2.5	4.1	the 2nd highest
Precipitation (mm)	127.8	56.8	46.7	71.0 (265.4%)	81.1 (267.2%)	the 2nd highest
Days of rain (day)	14.9	8.3	7.1	6.6	7.8	the highest
Sunshine duration (hour)	96.2	177.7	167.6	-81.5 (54.1%)	-71.4 (57.4%)	the lowest
Mean cloud amount (1/10)	6.9	4.6	4.1	2.3	2.8	the highest
Days of minimum temperature less than 0°C(day)	3.0	5.7	9.7	-2.7	-6.7	-
Days of daily temperature range greater than 10°C(day)	8.1	15.6	17.5	-7.5	-9.4	-
Days of snow (day)	2.2	0.8	1.3	1.4	0.9	

□ The nationwide average value of meteorological element during November in each decade (1973–2010)

Year	Mean temp. (°C)	Mean max. temp. (°C)	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 daily temperature range greater than 10°C(day)	Days of snow (day)
1973-1980(a)	7.1	13.0	2.1	41.3	7.5	167.5	4.3	10.7	16.9	1.8
1981-1990(b)	7.3	13.1	2.3	55.1	7.8	165.8	4.4	10.3	16.6	1.4
1991-2000(c)	7.7	13.8	2.5	51.2	7.3	166.9	4.0	9.6	18.2	1.4
2001-2010(d)	7.8	13.7	2.6	33.9	6.2	170.0	3.9	9.3	17.7	1.2
2015(e)	10.1	14.1	6.6	127.8	14.9	96.2	6.9	3.0	8.1	2.2
d-a	0.7	0.7	0.5	-7.4	-1.3	2.5	-0.4	-1.4	0.8	-0.6
d-b	0.5	0.6	0.3	-21.2	-1.6	4.2	-0.5	-1.0	1.1	-0.2
d-c	0.1	-0.1	0.1	-17.3	-1.1	3.1	-0.1	-0.3	-0.5	-0.2
e-d	2.3	0.4	4.0	93.9	8.7	-73.8	3.0	-6.3	-9.6	1.0

Appendix 2 Climate features of November 2015 (Seoul)

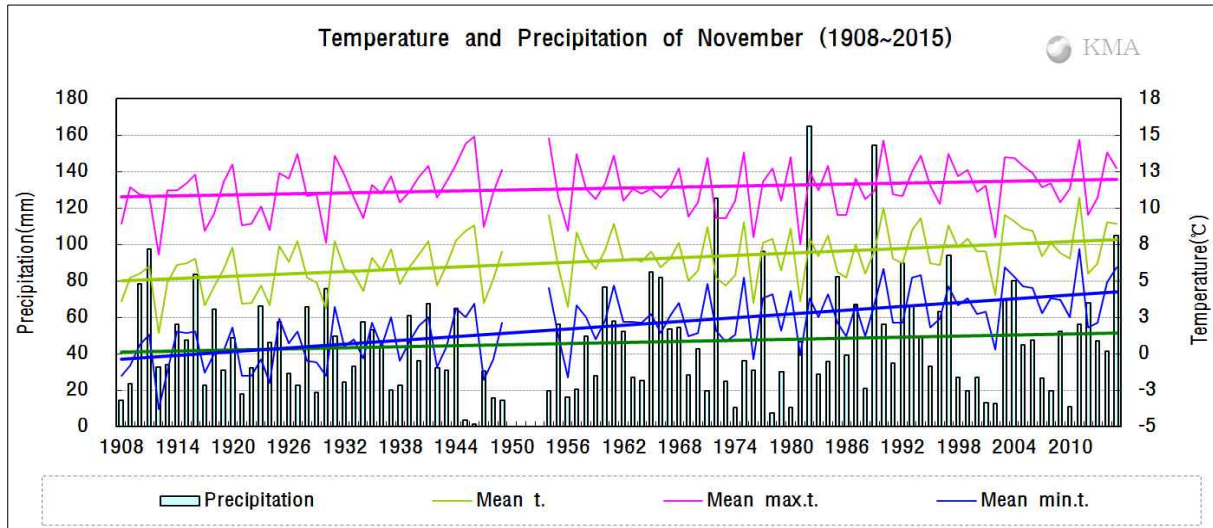


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during November (1908-2015).

□ The average value of meteorological element during November in Seoul(1908-2015)

Elements (Seoul)	Nov. 2015(a)	Nov. 2014(b)	Normals of Nov. (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	8.9	9.0	7.2	-0.1	1.7	-
Mean maximum temp. (°C)	12.7	13.8	11.6	-1.1	1.1	-
Mean minimum temp. (°C)	5.9	4.9	3.2	1.0	2.7	the 2nd highest
Precipitation (mm)	104.6	41.5	52.5	63.1 (252.0%)	52.1 (199.2%)	the 4th highest
Days of rain (day)	14.0	9.0	8.7	5.0	5.3	the 5th highest
Sunshine duration (hour)	109.0	194.1	153.2	-85.1 (56.2%)	-44.2 (71.1%)	the 5th lowest
Mean cloud amount (1/10)	6.6	4.3	4.1	2.3	2.5	the highest
Days of minimum temperature less than 0°C(day)	3.0	5.0	7.3	-2.0	-4.3	-
Days of daily temperature range greater than 10°C(day)	7.0	11.0	8.4	-4.0	-1.4	-
Days of snow (day)	4.0	1.0	2.1	3.0	1.9	-

□ The average value of meteorological element during November in Seoul in each decade (1911-2010)

Year	Mean temp. (°C)	Mean max. temp. (°C)	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 daily temperature range greater than 10°C(day)	Days of snow (day)
1911-1920(a)	5.2	10.7	0.1	51.7	8.8	179.8	4.5	15.6	16.9	2.4
1921-1930	5.0	10.4	-0.3	43.2	9.6	176.6	4.3	16.0	16.5	3.5
1931-1940(b)	6.0	11.4	1.2	40.2	9.4	176.9	4.4	11.8	16.1	2.1
1941-1949	6.6	12.2	1.2	29.0	7.0	200.0	4.1	11.6	18.0	1.7
1954-1960	6.6	11.6	1.9	38.1	6.7	159.5	4.2	9.3	13.7	1.4
1961-1970	6.6	11.2	2.4	50.7	10.3	153.9	4.9	9.7	10.0	2.7
1971-1980(c)	6.6	11.3	2.7	39.1	9.1	141.8	4.5	9.9	8.8	2.4
1981-1990	6.7	11.2	2.7	69.6	9.6	156.9	4.4	8.6	8.5	1.9
1991-2000	7.4	11.9	3.3	50.4	8.3	155.1	4.0	6.5	10.6	2.2
2001-2010(d)	7.4	11.7	3.6	37.6	8.1	147.8	3.9	6.8	6.2	2.1
2015(e)	8.9	12.7	5.9	104.6	14.0	109.0	6.6	3.0	7.0	4.0
d-a	2.2	1.0	3.5	-14.1	-0.7	-32.0	-0.6	-8.8	-10.7	-0.3
d-b	1.4	0.3	2.4	-2.6	-1.3	-29.1	-0.5	-5.0	-9.9	0.0
d-c	0.8	0.4	0.9	-1.5	-1.0	6.0	-0.6	-3.1	-2.6	-0.3
e-d	1.5	1.0	2.3	67.0	5.9	-38.8	2.7	-3.8	0.8	1.9

Appendix 3 Climate features of Fall 2015 (Nationwide)

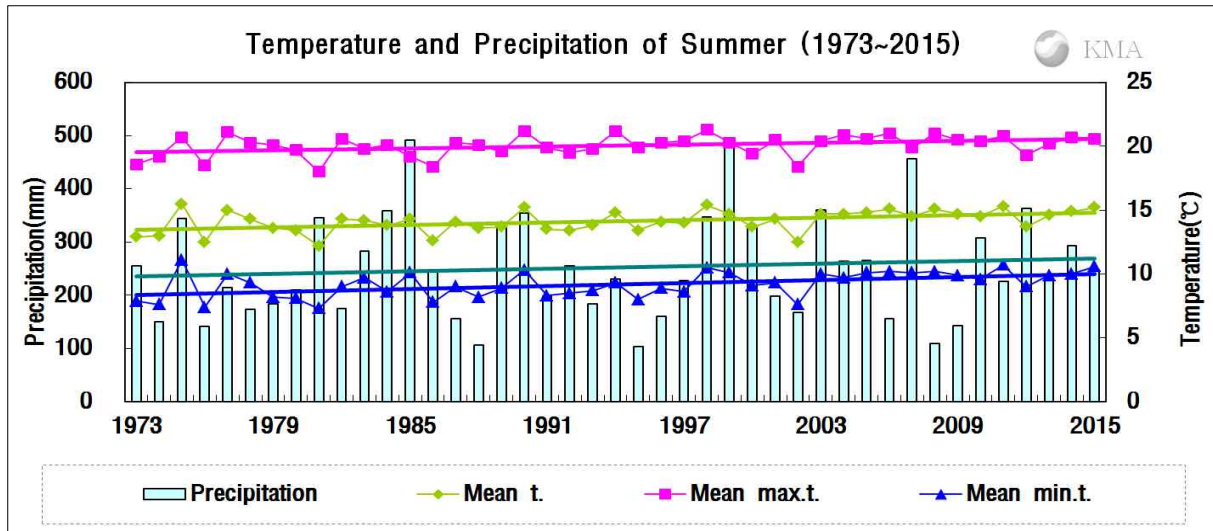


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during Fall (1973–2015).

□ The nationwide average value of meteorological element during Fall (1973–2015)

Elements (whole country)	Fall 2015(a)	Fall 2014(b)	Normals of Fall (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	15.2	14.9	14.1	0.3	1.1	the 4th highest
Mean maximum temp. (°C)	20.6	20.7	20.1	-0.1	0.5	-
Mean minimum temp. (°C)	10.6	10.0	9.2	0.6	1.4	the 3th highest
Precipitation (mm)	247.3	293.1	259.7	-45.8 (87.1%)	-12.4 (94.9%)	-
Days of rain (day)	27.6	21.9	21.8	5.7	5.8	the 5th highest
Sunshine duration (hour)	562.6	605.9	538.5	-43.3 (92.9%)	24.1 (104.5%)	-
Mean cloud amount (1/10)	4.8	4.5	4.5	0.3	0.3	-
Days of minimum temperature less than 0°C(day)	3.6	6.0	10.7	-2.4	-7.1	-
Days of daily temperature range greater than 10°C(day)	45.8	51.3	52.9	-5.5	-7.1	-
Days of snow (day)	2.2	0.8	1.4	1.4	0.8	-

□ The nationwide average value of meteorological element during Fall in each decade (1973–2010)

Year	Mean temp. (°C)	Mean max. temp. (°C)	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 daily temperature range greater than 10°C(day)	Days of snow (day)
1973-1980(a)	13.8	19.8	8.7	208.9	22.5	549.3	4.7	11.9	53.9	1.9
1981-1990(b)	13.8	19.8	8.9	284.6	22.8	544.3	4.8	11.5	52.2	1.4
1991-2000(c)	14.1	20.2	9.0	251.9	20.7	548.8	4.4	10.5	55.3	1.4
2001-2010(d)	14.5	20.4	9.7	242.6	22.0	522.2	4.5	10.0	51.1	1.2
2015(e)	15.2	20.6	10.6	247.3	27.6	562.6	4.8	3.6	45.8	2.2
d-a	0.7	0.6	1.0	33.7	-0.5	-27.1	-0.2	-1.9	-2.8	-0.7
d-b	0.7	0.6	0.8	-42.0	-0.8	-22.1	-0.3	-1.5	-1.1	-0.2
d-c	0.4	0.2	0.7	-9.3	1.3	-26.6	0.1	-0.5	-4.2	-0.2
e-d	0.7	0.2	0.9	4.7	5.6	40.4	0.3	-6.4	-5.3	1.0

Appendix 4 Climate features of Fall 2015 (Seoul)

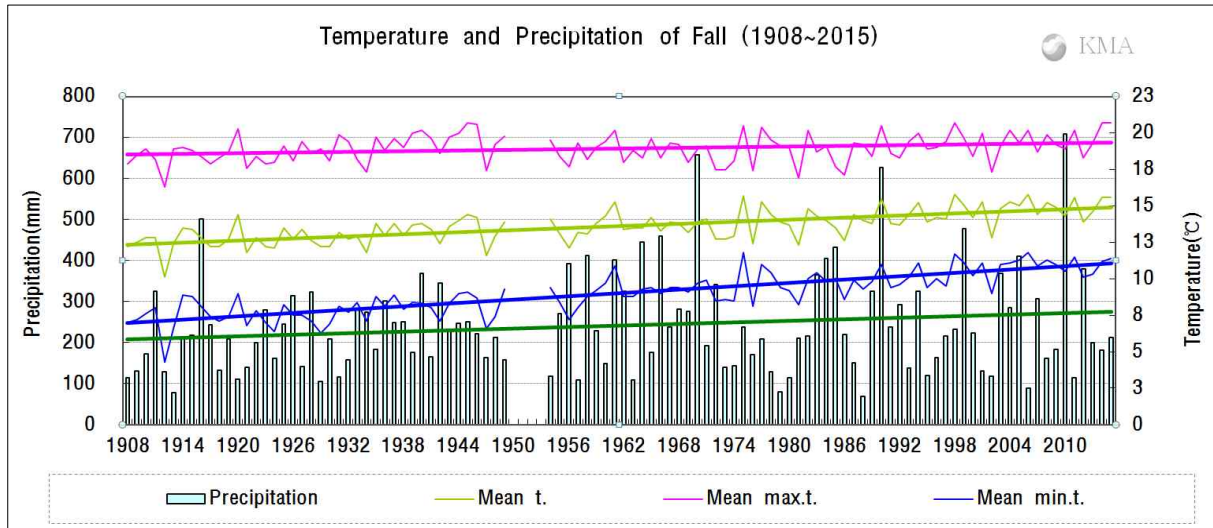


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during Fall (1908–2015).

□ The average value of meteorological element during Fall in Seoul (1908–2015)

Elements (Seoul)	Fall 2015(a)	Fall 2014(b)	Normals of Fall (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	15.6	15.6	14.4	0.0	1.2	the 4th highest
Mean maximum temp. (°C)	20.7	20.7	19.1	0.0	1.6	the highest
Mean minimum temp. (°C)	11.4	11.2	10.3	0.2	1.1	the 5th highest
Precipitation (mm)	212.1	181.8	273.6	30.3 (116.7%)	-61.5 (77.5%)	-
Days of rain (day)	25.0	22.0	24.1	3.0	0.9	-
Sunshine duration (hour)	610.8	648.2	528.3	-37.4 (94.2%)	82.5 (115.6%)	-
Mean cloud amount (1/10)	4.4	4.2	4.4	0.2	0.0	-
Days of minimum temperature less than 0°C (day)	3.0	5.0	7.5	-2.0	-4.5	-
Days of daily temperature range greater than 10°C (day)	46.0	44.0	32.9	2.0	13.1	-
Days of snow (day)	4.0	1.0	2.1	3.0	1.9	-

□ The average value of meteorological element during Fall in Seoul in each decade (1911–2010)

Year	Mean temp. (°C)	Mean max. temp. (°C)	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 daily temperature range greater than 10°C (day)	Days of snow (day)
1911-1920(a)	12.7	18.5	7.6	215.9	26.3	625.7	5.0	16.9	56.3	2.4
1921-1930	12.6	18.4	7.2	211.6	24.7	619.5	4.7	17.7	58.0	3.5
1931-1940(b)	13.2	19.2	8.2	235.5	25.6	630.1	4.8	12.8	58.1	2.3
1941-1949	13.4	19.5	8.2	221.4	24.1	646.5	4.6	12.3	61.2	1.7
1954-1960	13.4	18.8	8.7	239.7	23.4	561.4	4.7	9.7	48.7	1.4
1961-1970	13.8	18.9	9.4	337.0	27.0	537.3	4.9	9.7	42.3	2.8
1971-1980(c)	13.8	18.8	9.5	175.5	24.8	510.7	4.7	10.1	38.7	2.5
1981-1990	13.9	18.7	9.7	301.8	23.7	556.4	4.8	8.9	35.4	2.0
1991-2000	14.4	19.2	10.2	242.6	24.4	541.7	4.3	6.7	37.2	2.3
2001-2010(d)	14.8	19.3	10.9	276.3	24.1	486.7	4.3	6.9	26.1	2.1
2015(e)	15.6	20.7	11.4	212.1	25.0	610.8	4.4	3.0	46.0	4.0
d-a	2.1	0.8	3.3	60.4	-2.2	-139.0	-0.7	-10.0	-30.2	-0.3
d-b	1.6	0.1	2.7	40.8	-1.5	-143.4	-0.5	-5.9	-32.0	-0.2
d-c	1.0	0.5	1.4	100.8	-0.7	-24.0	-0.4	-3.2	-12.6	-0.4
e-d	0.8	1.4	0.5	-64.2	0.9	124.1	0.1	-3.9	19.9	1.9