



MONTHLY CLIMATE REVIEW OVER KOREA (total 7 pages)

Division	National Climate Data Center
Contact	LEE, Jae-Won
Phone/email	+82-2-2181-0891/ hyunmj@korea.kr
Release	March 02, 2016

February and Winter(December–February) 2015 Climate Summary

- ◇ The nationwide mean temperature (1.7 °C) in February 2016 was 0.6 °C above normal and the nationwide-average of precipitation (43.8 mm) was 129.9 % of normal.
- ◇ The nationwide mean temperature (1.4°C) in Winter 2015 was 0.8 °C above normal and the nationwide-average of precipitation (109.1 mm) was 123.5 % of normal.

- Climate features and long-term trends in February and Winter 2015 were analyzed 45 meteorological stations throughout Korea (national average) during 1973-2016 (1908-2016 for Seoul).

※ Normal : Average value of climatic element data collected from 1981 to 2010

□ The climatic characteristics in February 2016

o Korea (as a whole),

- The mean temperature (1.7 °C), the mean maximum temperature (7.0 °C) and the mean minimum temperature (-3.1 °C) were 0.6 °C, 0.2 °C, 0.7 °C above normal, respectively.
- A nationally-averaged precipitation was 43.8 mm, which was 129.9% of normal. The number of rainy days was 7.3, which was 0.8 days more than normal.
- The total number of hours of sunshine was 198.1, which was 115.2 % of normal.

o Seoul,

- The mean temperature (0.2 °C) and the mean minimum temperature (-4.1 °C) were 0.2 °C, 0.7 °C below normal, respectively. The mean maximum temperature (5.1 °C) was 0.4 °C above normal.
- The amount of precipitation was 47.6 mm, which was 190.4% of normal.
- The number of rainy days was 8.0, which was 2.2 days more than normal.
- The total number of hours of sunshine was 195.2, which was 119.5 % of normal.

□ Long-term¹⁾ trend in February 2016 climate

o Korea (as a whole),

- The national mean temperatures in February during the 2000s (2001-2010) was 1.6°C above that of in the 1970s (1973-1980).
- The nationwide-average of precipitation in February during the 2000s was 1.6 mm more than that of in the 1970s.
- The number of rainy days in February during the 2000s was 0.6 days less than that of in the 1970s.
- The total sunshine hours in February during the 2000s was 3.4 hours less than that of in the 1970s.

o Seoul,

- The mean temperatures in February during the 2000s (2001-2010) was 2.1°C above that of in the 1970s (1971-1980).
- The precipitation in February during the 2000s was 4.3 mm more than that of in the 1970s.
- The number of rainy days in February during the 2000s was 0.8 days less than that of in the 1970s.
- The total sunshine hours in February during the 2000s was same as that of in the 1970s.

□ The climatic characteristics in Winter 2015

o Korea (as a whole),

- The mean temperature (1.4 °C), the mean maximum temperature (6.3 °C) and the mean minimum temperature (-3.0 °C) were 0.8 °C, 0.2 °C, 1.1 °C above normal, respectively.
- A nationally-averaged precipitation was 109.1 mm, which was 123.5 % of normal. The number of rainy days was 22.8, which was 3.0 days more than normal.
- The total number of hours of sunshine was 535.2, which was 104.2 % of normal.

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

o Seoul,

- The mean temperature (-0.5 °C) and the mean minimum temperature (-4.3 °C) were 0.1 °C, 0.2 °C below normal, respectively. The mean maximum temperature (4.1 °C) was 0.5°C above normal.
- The amount of precipitation was 77.7 mm, which was 114.4 % of normal.
- The number of rainy days was 21.0, which was 1.3 days more than normal.
- The total number of hours of sunshine was 569.1, which was 119.7 % of normal.

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

o Korea (as a whole),

- The national mean temperatures in winter during the 2000s (2001-2010) was 1.2°C above that of in the 1970s (1973-1980).
- The nationwide-average of precipitation in winter during the 2000s was 2.4 mm less than that of in the 1970s.
- The number of rainy days in winter during the 2000s was 1.8 days less than that of in the 1970s.
- The total sunshine hours in winter during the 2000s was 11.4 hours less than that of in the 1970s.

o Seoul,

- The mean temperatures in winter during the 2000s (2001-2010) was 1.1°C above that of in the 1970s (1971-1980).
- The precipitation in winter during the 2000s was 11.9 mm less than that of in the 1970s.
- The number of rainy days in winter during the 2000s was 2.6 days less than that of in the 1970s.
- The total sunshine hours in winter during the 2000s was 23.3 hours more than that of in the 1970s.

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

Appendix 1 Climate features of February 2016 (Nationwide)

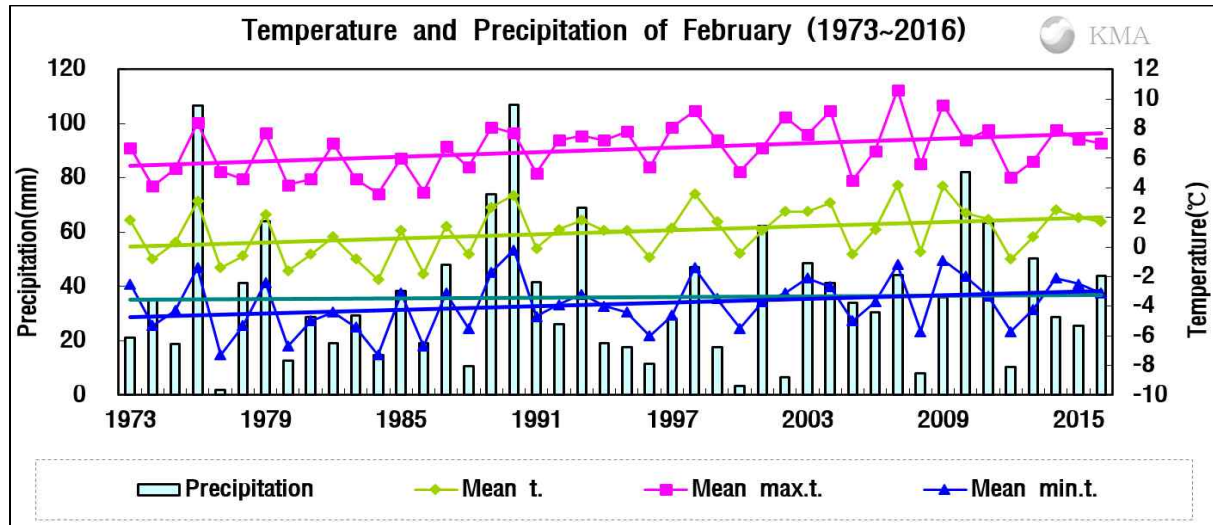


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during February (1973–2016).

□ The nationwide average value of meteorological element during February (1973–2016)

Elements (whole country)	Feb. 2016(a)	Feb. 2015(b)	Normals of Feb. (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	1.7	2.0	1.1	-0.3	0.6	
Mean maximum temp. (°C)	7.0	7.3	6.8	-0.3	0.2	
Mean minimum temp. (°C)	-3.1	-2.5	-3.8	-0.6	0.7	
Precipitation (mm)	43.8	25.5	35.5	18.3 (184.1%)	8.3 (129.9%)	
Days of rain (day)	7.3	6.0	6.5	1.3	0.8	
Sunshine duration (hour)	198.1	178.7	171.9	19.4 (110.9%)	26.2 (115.2%)	
Mean cloud amount (1/10)	4.0	4.5	4.2	-0.5	-0.2	
Days of minimum temperature less than -10°C(day)	1.6	1.4	2.8	0.2	-1.2	
Days of maximum temperature less than 0°C(day)	1.1	0.3	1.8	0.8	-0.7	
Days of snow (day)	6.5	2.2	4.7	4.3	1.8	

□ The nationwide average value of meteorological element during February 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 -10°C(day)	Days of maximum temperature less than 0°C(day)	Days of snow (day)
1973-1980(a)	0.4	5.8	-4.4	37.7	6.8	170.8	4.4	4.0	4.0	5.2
1981-1990(b)	0.4	5.7	-4.2	38.9	7.4	167.0	4.7	3.7	2.9	5.3
1991-2000(c)	1.1	7.0	-4.1	28.1	5.8	181.4	3.7	2.7	1.2	4.9
2001-2010(d)	2.0	7.6	-3.0	39.3	6.2	167.4	4.2	1.9	1.2	3.8
2016(e)	1.7	7.0	-3.1	43.8	7.3	198.1	4.0	1.6	1.1	6.5
d-a	1.6	1.8	1.4	1.6	-0.6	-3.4	-0.2	-2.1	-2.8	-1.4
d-b	1.6	1.9	1.2	0.4	-1.2	0.4	-0.5	-1.8	-1.7	-1.5
d-c	0.9	0.6	1.1	11.2	0.4	-14.0	0.5	-0.8	0.0	-1.1
e-d	-0.3	-0.6	-0.1	4.5	1.1	30.7	-0.2	-0.3	-0.1	2.7

Appendix 2 Climate features of February 2015 (Seoul)

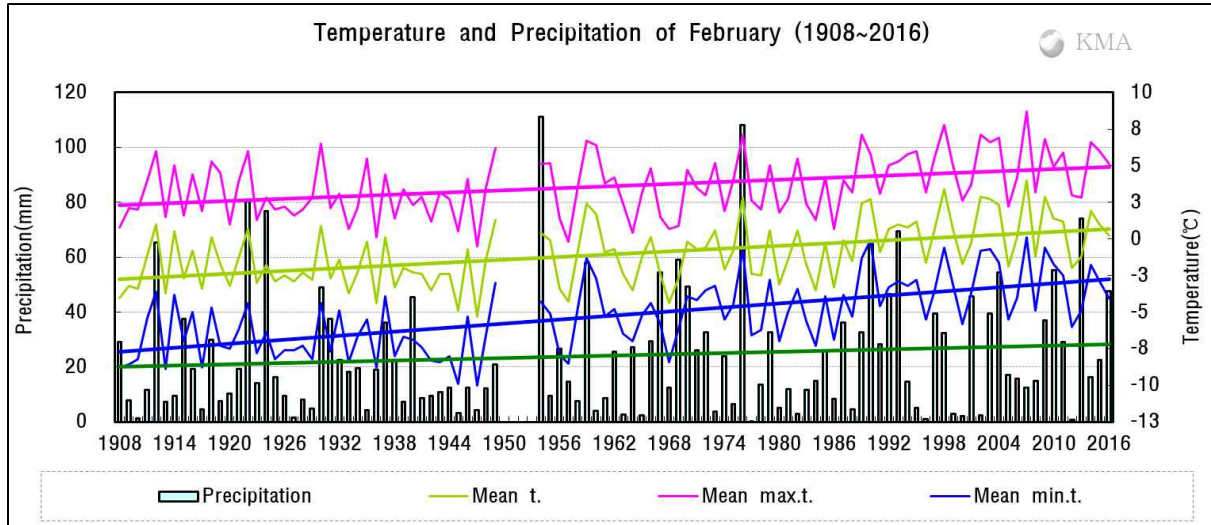


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during February (1908-2016).

□ The average value of meteorological element during February in Seoul(1908-2016)

Elements (Seoul)	Feb. 2016(a)	Feb. 2015(b)	Normals of Feb. (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	0.2	1.0	0.4	-0.8	-0.2	
Mean maximum temp. (°C)	5.1	6.0	4.7	-0.9	0.4	
Mean minimum temp. (°C)	-4.1	-2.9	-3.4	-1.2	-0.7	
Precipitation (mm)	47.6	22.7	25.0	24.9 (209.7%)	22.6 (190.4%)	
Days of rain (day)	8.0	7.0	5.8	1.0	2.2	
Sunshine duration (hour)	195.2	180.0	163.3	15.2 (108.4%)	31.9 (119.5%)	
Mean cloud amount (1/10)	3.7	4.5	4.0	-0.8	-0.3	
Days of minimum temperature less than -10°C(day)	0.0	2.0	1.8	-2.0	-1.8	
Days of maximum temperature less than 0°C(day)	3.0	2.0	4.2	1.0	-1.2	
Days of snow (day)	7.0	2.0	5.2	5.0	1.8	

□ The average value of meteorological element during February 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 -10°C(day)	Days of maximum temperature less than 0°C(day)	Days of snow (day)
1911-1920(a)	-1.5	3.5	-6.2	20.3	6.6	182.2	4.5	5.2	6.3	7.3
1921-1930	-1.8	3.1	-6.8	28.0	6.1	181.0	4.4	7.9	7.5	6.3
1931-1940(b)	-2.2	2.5	-6.7	23.3	6.0	182.0	4.3	6.8	8.0	9.0
1941-1949	-2.4	2.6	-7.4	10.5	5.1	194.4	3.8	9.3	8.4	6.0
1954-1960	-0.6	4.0	-4.9	33.1	6.1	166.9	4.4	4.6	5.3	5.7
1961-1970	-1.8	2.7	-5.7	27.2	5.8	176.6	4.3	5.6	7.9	7.5
1971-1980(c)	-0.8	3.6	-4.4	25.2	6.5	151.5	4.5	3.3	6.2	6.8
1981-1990	-0.6	3.7	-4.3	21.4	6.0	167.1	4.5	3.4	6.2	5.7
1991-2000	0.4	4.9	-3.5	24.2	5.6	171.2	3.4	1.1	2.5	5.5
2001-2010(d)	1.3	5.4	-2.3	29.5	5.7	151.5	4.0	1.0	4.0	4.3
2016(e)	0.2	5.1	-4.1	47.6	8.0	195.2	3.7	0.0	3.0	7.0
d-a	2.8	1.9	3.9	9.2	-0.9	-30.7	-0.5	-4.2	-2.3	-3.0
d-b	3.5	2.9	4.4	6.2	-0.3	-30.5	-0.3	-5.8	-4.0	-4.7
d-c	2.1	1.8	2.1	4.3	-0.8	0.0	-0.5	-2.3	-2.2	-2.5
e-d	-1.1	-0.3	-1.8	18.1	2.3	43.7	-0.3	-1.0	-1.0	2.7

Appendix 3 Climate features of Winter 2015 (Nationwide)

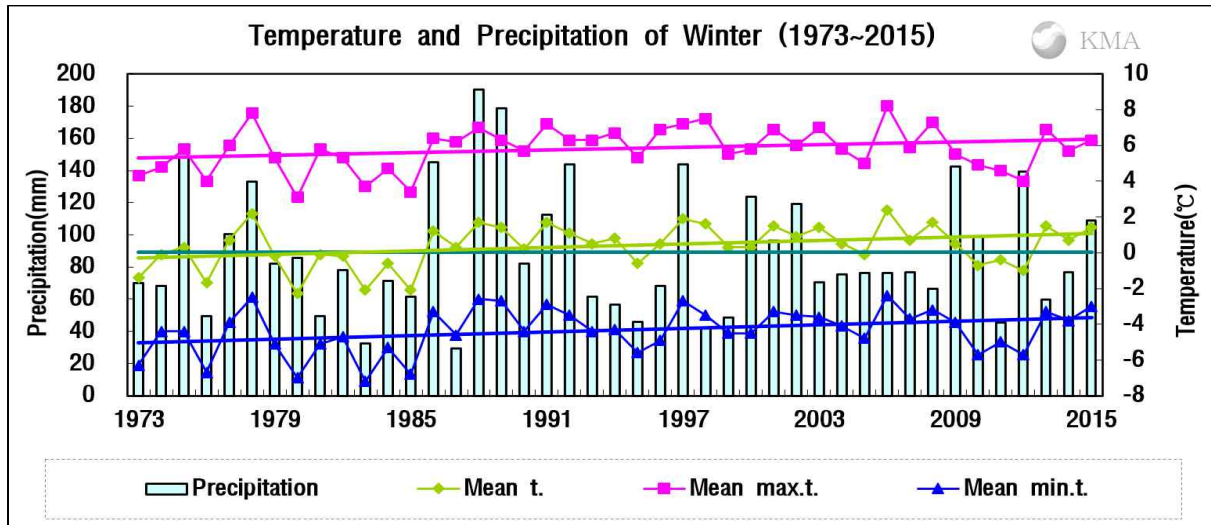


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during winter (1973–2015).

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

Elements (whole country)	Winter 2015(a)	Winter 2014(b)	Normals of Winter (1981-2010)(c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	1.4	0.7	0.6	0.7	0.8	
Mean maximum temp. (°C)	6.3	5.7	6.1	0.6	0.2	
Mean minimum temp. (°C)	-3.0	-3.8	-4.1	0.8	1.1	
Precipitation (mm)	109.1	76.7	88.5	32.3 (154.2%)	20.6 (123.5%)	
Days of rain (day)	22.8	26.1	19.8	-3.3	3.0	
Sunshine duration (hour)	535.2	552.8	513.4	-17.6 (96.8%)	21.8 (104.2%)	
Mean cloud amount (1/10)	4.5	4.3	4.1	0.2	0.4	
Days of minimum temperature less than -10°C(day)	7.9	6.9	10.6	1.0	-2.7	
Days of maximum temperature less than 0°C(day)	7.3	6.1	8.4	1.2	-1.1	
Days of snow (day)	18.7	17.8	16.9	0.9	1.8	

□ The nationwide average value of meteorological element during winter 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 -10°C(day)	Days of maximum temperature less than 0°C(day)	Days of snow (day)
1973-1980(a)	-0.3	5.1	-5.0	92.2	20.8	521.6	4.1	15.5	14.1	19.2
1981-1990(b)	0.0	5.5	-4.7	91.9	21.5	518.7	4.3	13.4	11.6	18.2
1991-2000(c)	0.8	6.5	-4.1	84.7	18.6	515.2	3.8	9.4	6.3	16.7
2001-2010(d)	0.9	6.3	-3.8	89.8	19.0	510.2	4.0	9.8	8.4	16.1
2015(e)	1.4	6.3	-3.0	109.1	22.8	535.2	4.5	7.9	7.3	18.7
d-a	1.2	1.2	1.2	-2.4	-1.8	-11.4	-0.1	-5.7	-5.7	-3.1
d-b	0.9	0.8	0.9	-2.1	-2.5	-8.5	-0.3	-3.6	-3.2	-2.1
d-c	0.1	-0.2	0.3	5.1	0.4	-5.0	0.2	0.4	2.1	-0.6
e-d	0.5	0.0	0.8	19.3	3.8	25.0	0.5	-1.9	-1.1	2.6

Appendix 4 Climate features of Winter 2015 (Seoul)

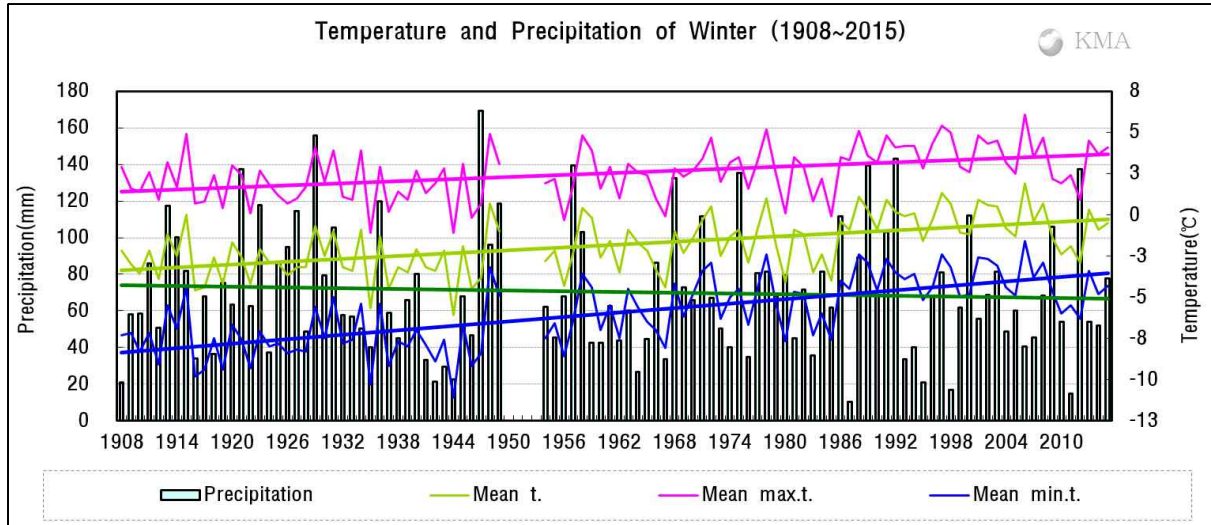


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during winter (1908-2015).

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

Elements (Seoul)	Winter 2015(a)	Winter 2014(b)	Normals of Winter (1981-2010)(c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	-0.5	-0.9	-0.4	0.4	-0.1	
Mean maximum temp. (°C)	4.1	3.7	3.6	0.4	0.5	
Mean minimum temp. (°C)	-4.3	-4.8	-4.1	0.5	-0.2	
Precipitation (mm)	77.7	51.9	67.9	25.8 (149.7%)	9.8 (114.4%)	
Days of rain (day)	21.0	24.0	19.7	-3.0	1.3	
Sunshine duration (hour)	569.1	568.9	475.4	0.2 (100.0%)	93.7 (119.7%)	
Mean cloud amount (1/10)	3.9	3.9	3.9	0.0	0.0	
Days of minimum temperature less than -10°C(day)	8.0	5.0	9.4	3.0	-1.4	
Days of maximum temperature less than 0°C(day)	14.0	15.0	20.1	-1.0	-6.1	
Days of snow (day)	20.0	19.0	19.1	1.0	0.9	

□ The average value of meteorological element during winter 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 -10°C(day)	Days of maximum temperature less than 0°C(day)	Days of snow (day)
1911-1920(a)	-2.7	2.1	-7.6	71.4	21.9	539.2	4.3	27.2	29.5	25.1
1921-1930	-2.8	1.8	-7.8	93.5	22.7	498.2	4.5	31.7	30.7	24.1
1931-1940(b)	-2.9	1.7	-7.3	68.0	20.9	532.3	4.1	29.1	32.0	23.8
1941-1949	-3.0	1.7	-7.9	60.8	20.4	560.3	3.9	34.3	34.0	22.9
1954-1960	-2.0	2.3	-6.3	72.0	21.0	479.4	4.2	23.1	30.0	25.0
1961-1970	-2.2	2.1	-6.0	62.8	18.5	485.5	4.2	20.4	29.3	26.5
1971-1980(c)	-1.3	3.0	-4.9	74.9	21.2	454.1	4.3	13.3	24.2	23.3
1981-1990	-1.3	2.8	-4.9	71.4	20.7	490.2	4.2	14.9	25.2	22.1
1991-2000	-0.1	4.0	-3.9	68.0	19.6	465.4	3.7	6.3	15.4	20.1
2001-2010(d)	-0.2	3.8	-3.7	63.0	18.6	477.4	3.7	8.7	21.8	14.9
2015(e)	-0.5	4.1	-4.3	77.7	21.0	569.1	3.9	8.0	14.0	20.0
d-a	2.5	1.7	3.9	-8.4	-3.3	-61.8	-0.6	-18.5	-7.7	-10.2
d-b	2.7	2.1	3.6	-5.0	-2.3	-54.9	-0.4	-20.4	-10.2	-8.9
d-c	1.1	0.8	1.2	-11.9	-2.6	23.3	-0.6	-4.6	-2.4	-8.4
e-d	-0.3	0.3	-0.6	14.7	2.4	91.7	0.2	-0.7	-7.8	5.1