



## MONTHLY CLIMATE REVIEW OVER KOREA (total 9 pages)

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### Monthly (May) and Seasonal (Spring : March - May) 2014 Climate Summary

- ◇ The mean temperature (18.4 °C) for May 2014 nationwide was the highest in a record extending back to 1973 and the monthly amount of precipitation (56.2 mm) was 51.6% of normal
- ◇ The mean temperature (13.1 °C) for Spring 2014 nationwide was the second highest in a record extending back to 1973 and the precipitation (215.9 mm) was 90.3% of normal

- Climate features and long-term trends in May and Spring 2014 have been analyzed with the data collected at the 45 meteorological stations throughout Korea (national average) from 1973 to 2014 (1908-2014 for Seoul).

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

#### □ The climatic characteristics in May 2014 are described as follows:

- o For Korea (whole country),
  - The mean temperature (18.4 °C), the mean maximum temperature (25.0 °C) and the mean minimum temperature (12.1 °C) were 1.2 °C, 1.7 °C, 0.6 °C above normals, respectively.
    - The mean temperature was the highest and the maximum temperature was the second highest in a record extending back to 1973.
  - The nationally-averaged precipitation was 56.2 mm, which was 51.6% of normal. The number of the days of rain was 7.6 days, which was 1.0 days less than normal.
  - The total number of the hours of sunshine was 287.6 hours, which was 129.6% of normal and the highest in a record extending back to 1973.

o For Seoul,

- The mean temperature (18.9 °C), the mean maximum temperature (25.3 °C), the mean minimum temperature (13.8 °C) were 1.1 °C, 2.3 °C, 0.6 °C above normals, respectively.
- The mean maximum temperature was the second highest in a record extending back to 1908.
- The amount of precipitation was 63.0 mm, which was 59.5% of normal.
- The number of the days of rain was 9.0 days, which was same as normal.
- The total number of the hours of sunshine was 304.0 hours, which was 142.7% of normal.

□ **Long-term trend in May 2014 climate**

o For Korea (whole country),

- The national mean temperatures in May 2000s (2001-2010) is 0.7 °C above those of the same month in 1970s.
- The nationally-averaged precipitation in May 2000s (2001-2010) is 9.2 mm more than that of the same month in 1970s.
- The number of the days of rain in May 2000s are 0.9 days more than those of the same month in 1970s.
- The total sunshine in May 2000s (2001-2010) is 34.3 hours less than that of the same month in 1970s.

o For Seoul,

- The mean temperatures in May 2000s (2001-2010) are 1.4 °C above those of the same month in 1970s.
- The precipitation in May 2000s (2001-2010) is 10.9 mm more than that of the same month in 1970s.
- The number of the days of rain in May 2000s are 0.7 days more than those of the same month in 1970s.
- The total sunshine in May 2000s (2001-2010) is 33.8 hours less than that of the same month in 1970s.

**□ The climatological characteristics in Spring can be described as follows:**

o For Korea (whole nation),

- The mean temperature (13.1 °C) and the mean maximum temperature (19.5 °C) the mean minimum temperature (7.3 °C) and were higher than normals 1.4 °C, 1.6 °C, 1.3 °C, respectively.
- The mean maximum temperature was the highest and mean temperature and the mean minimum temperature were the second highest in a record extending back to 1973.
- The nationally-averaged precipitation was 215.9 mm, which was 90.3 % above normal. The days of rain were 24.4 days, which were 0.1 days less normal.
- Total hours of sunshine were 712.2 hours, which was 113.1% above normal.

o For Seoul,

- The mean temperature (13.6 °C) and the mean maximum temperature (19.3 °C) and the mean minimum temperature (8.9 °C) were lower than normals 1.6 °C, 2.2 °C, 1.4 °C, respectively.
- The mean maximum temperature was the highest and mean temperature and the mean minimum temperature were the second highest in a record extending back to 1908.
- The amount of precipitation was 101.2 mm, which was 46.5 % less than normal. The days of rain were 20.0 days, which were 4.3 days less than normal.
- Total hours of sunshine were 731.9 hours, which were 120.6 % above normal.

**□ Long-term trend of Spring 2014 climate**

o For Korea (whole country),

- The national mean temperatures in Spring 2000s (2001-2010) is 0.7 °C above those of the same season in 1970s.
- The nationally-averaged precipitation in Spring 2000s (2001-2010) is 35.9 mm less than that of the same season in 1970s.
- The number of the days of rain in Spring 2000s are 0.9 days more than those of the same season in 1970s.
- The total sunshine in Spring 2000s (2001-2010) is 57.1 hours less than that of the same season in 1970s.

o For Seoul,

- The mean temperatures in Spring 2000s (2001-2010) are 1.2 °C above those of the same season in 1970s.
- The precipitation in Spring 2000s (2001-2010) is 22.5 mm less than that of the same season in 1970s.
- The number of the days of rain in Spring 2000s are 2.0 days more than those of the same season in 1970s.
- The total sunshine in Spring 2000s (2001-2010) is 76.2 hours less than that of the same season in 1970s.

**Remarks**

	temperature difference between the normal temperature (°C)		precipitation ratio of the normal precipitation (%)	
	ten-day	month	ten-day	month
above(more)	>0.7	>0.5	>130	>120
nearly	-0.7~0.7	-0.5~0.5	50~130	70~120
below(less)	<-0.7	<-0.5	<50	<70

## Appendix 1 Climate features of May 2014 (Nationwide)

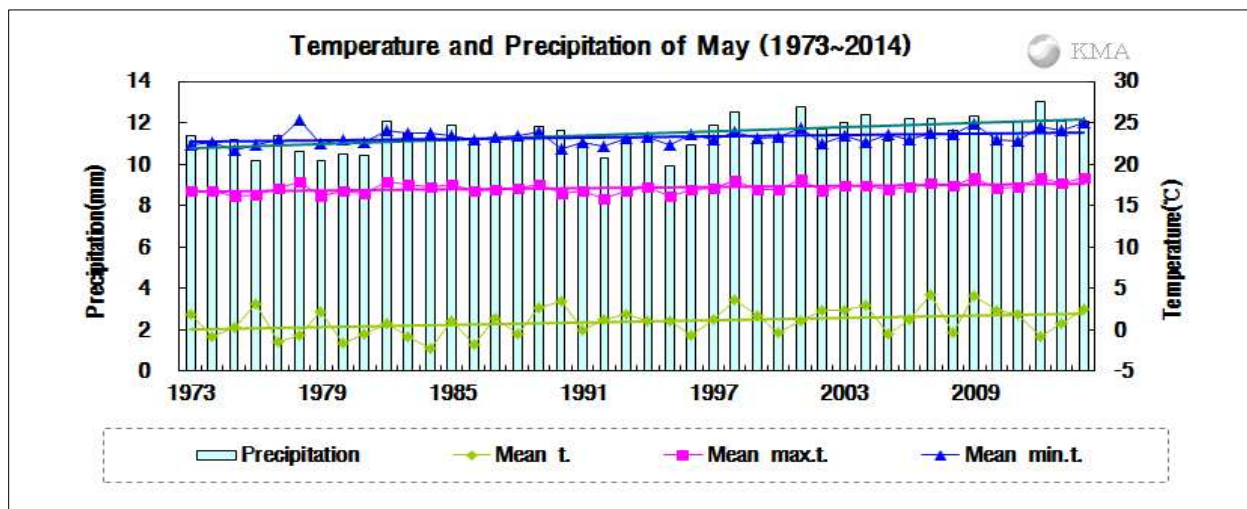


Fig 1. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during May (1973~2014).

### □ Average values of meteorological elements across Korea during May (1973-2014)

Elements (whole country)	May 2014(a)	May 2013(b)	Normals of May (1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	18.4	17.8	17.2	0.6	1.2	the highest
Mean maximum temp. (°C)	25.0	24.1	23.3	0.9	1.7	the second highest
Mean minimum temp. (°C)	12.1	12.1	11.5	0.0	0.6	
Precipitation (mm)	56.2	129.0	101.7	-72.8(41.4%)	-45.5(51.6%)	
Days of rain (day)	7.6	7.8	8.6	-0.2	-1.0	
Sunshine duration (hour)	287.6	239.8	221.9	47.8(119.9%)	65.7(129.6%)	the highest
Asian dust days(day)	3.5	0.0	1.0	3.5	2.5	the fifth highest
Mean cloud amount (1/10)	3.4	4.7	5.2	-1.3	-1.8	the lowest
Days of maximum temperature more than 30°C(day)	4.0	2.7	1.1	1.3	2.9	the second highest

### □ Average values of meteorological elements across Korea during May for 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)	Asian dust days(day)	Mean cloud amount (1/10)	Days of maximum temperature more than 30°C(day)
1973-1980(a)	16.8	22.8	10.8	104.0	8.2	243.0	0.8	5.0	1.3
1981-1990(b)	17.2	23.3	11.4	88.5	8.0	232.8	1.2	5.4	1.0
1991-2000(c)	16.9	23.0	11.2	103.4	8.8	224.3	1.0	5.0	1.0
2001-2010(d)	17.5	23.5	12.0	113.2	9.1	208.7	1.0	5.1	1.2
2014(e)	18.4	25.0	12.1	56.2	7.6	287.6	3.5	3.4	4.0
d-a	0.7	0.7	1.2	9.2	0.9	-34.3	0.2	0.1	-0.1
d-b	0.3	0.2	0.6	24.7	1.1	-24.1	-0.2	-0.3	0.2
d-c	0.6	0.5	0.8	9.8	0.3	-15.6	0.0	0.1	0.2
e-d	0.9	1.5	0.1	-57.0	-1.5	78.9	2.5	-1.7	2.8

## Appendix 2 Climate features of May 2014 (Seoul)

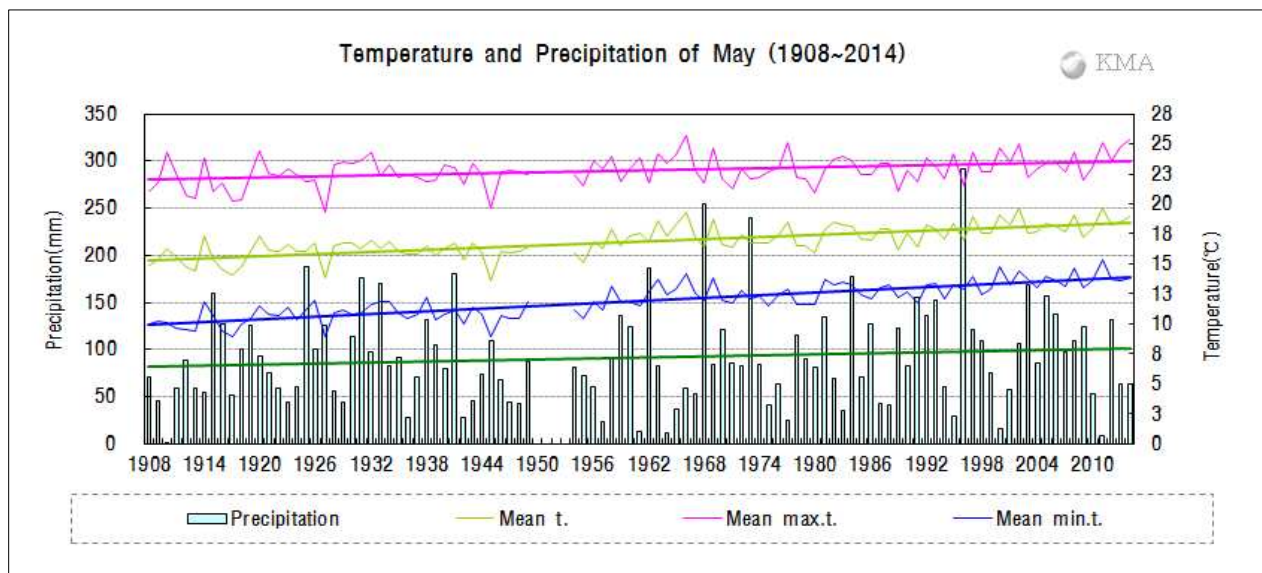


Fig 2. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during April (1908~2014).

### □ Average values of meteorological elements in Seoul during May (1908-2014)

Elements (Seoul)	May 2014(a)	May 2013(b)	Normals of May (1981-2010) (c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	18.9	18.2	17.8	0.7	1.1	
Mean maximum temp. (°C)	25.3	23.6	23.0	1.7	2.3	the second highest
Mean minimum temp. (°C)	13.8	13.7	13.2	0.1	0.6	
Precipitation (mm)	63.0	132.0	105.9	-69.0(47.7%)	-42.9(59.5%)	
Days of rain (day)	9.0	10.0	9.0	-1.0	0.0	
Sunshine duration (hour)	304.0	238.1	213.0	65.9(127.7%)	91.0(142.7%)	the forth highest
Asian dust days(day)	4.0	0.0	1.4	4.0	2.6	the fifth highest
Mean cloud amount (1/10)	3.2	4.7	5.2	-1.5	-2.0	the lowest
Days of maximum temperature more than 30°C(day)	3.0	2.0	0.5	1.0	2.5	the second highest

### □ Average values of meteorological elements in Seoul during May for 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)	Asian dust days(day)	Mean cloud amount (1/10)	Days of maximum temperature more than 30°C(day)
1911-1920(a)	15.4	21.8	10.1	92.0	9.4	248.1	0.2	5.9	0.2
1921-1930	16.1	22.4	10.8	86.8	11.0	235.5	0.1	6.3	0.1
1931-1940(b)	16.3	22.8	11.2	103.3	9.7	264.7	0.0	5.7	0.7
1941-1949	15.8	22.3	10.7	75.4	8.6	261.7	0.0	6.2	0.3
1954-1960	16.5	22.8	11.6	75.1	8.4	239.2	0.4	5.7	0.1
1961-1970	17.8	23.5	12.8	90.7	7.3	226.5	0.6	5.6	0.6
1971-1980(c)	16.9	22.6	12.1	95.0	8.1	227.8	0.6	4.9	0.5
1981-1990	17.5	22.8	12.8	90.2	9.3	226.9	1.6	5.6	0.1
1991-2000	17.7	22.9	12.9	121.4	9.0	218.1	1.4	5.0	0.7
2001-2010(d)	18.3	23.4	13.8	105.9	8.8	194.0	1.3	4.9	0.7
2014(e)	18.9	25.3	13.8	63.0	9.0	304.0	4.0	3.2	3.0
d-a	2.9	1.6	3.7	13.9	-0.6	-54.1	1.1	-1.0	0.5
d-b	2.0	0.6	2.6	2.6	-0.9	-70.7	1.3	-0.8	0.0
d-c	1.4	0.8	1.7	10.9	0.7	-33.8	0.7	0.0	0.2
e-d	0.6	1.9	0.0	-42.9	0.2	110.0	2.7	-1.7	2.3

## Appendix 3 Climate features of Spring 2014 (Nationwide)

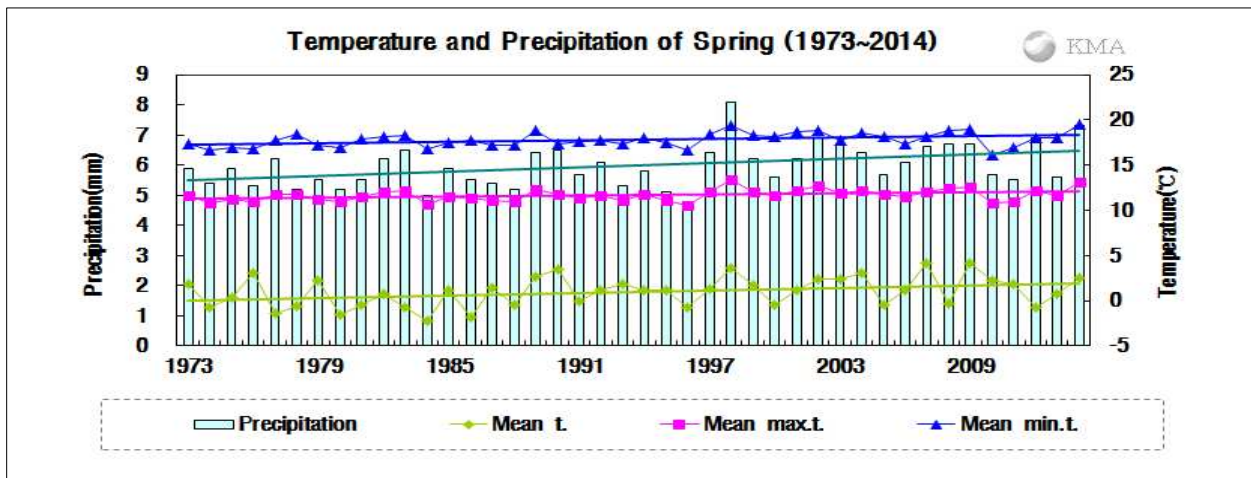


Fig 3. Temperatures (mean, mean maximum and mean minimum) and precipitation in South Korea during Spring (1973-2014).

### □ Average values of meteorological elements across Korea during Spring (1973-2014)

Elements (whole country)	Apr. 2014(a)	Apr. 2013(b)	Normals of Apr. (1981-2010) (c)	a-b	a-c	Rank since 1973 (within 5th)
Mean temperature (°C)	13.1	11.6	11.7	1.5	1.4	the second highest
Mean maximum temp. (°C)	19.5	18.0	17.9	1.5	1.6	the highest
Mean minimum temp. (°C)	7.3	5.6	6.0	1.7	1.3	the second highest
Precipitation (mm)	215.9	264.3	236.6	-48.4(82.1%)	-20.7(90.3%)	
Days of rain (day)	24.4	25.5	24.5	-1.1	-0.1	
Sunshine duration (hour)	712.2	699.1	629.5	13.1(101.9%)	82.7 (113.1%)	the second highest
Asian dust days(day)	5.1	1.5	5.2	3.6	-0.1	
Mean cloud amount (1/10)	4.1	4.4	4.9	-0.3	-0.8	the second lowest
Days of maximum temperature more than 30°C(day)	4.0	2.7	1.1	1.3	2.9	the second highest

### □ Average values of meteorological elements across Korea during Spring for 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)	Asian dust days(day)	Mean cloud amount (1/10)	Days of maximum temperature more than 30°C(day)
1973-1980(a)	11.3	17.3	5.6	287.5	24.6	659.7	3.0	5.0	1.3
1981-1990(b)	11.5	17.7	5.8	219.2	24.2	655.0	3.1	5.1	1.0
1991-2000(c)	11.7	17.9	5.9	239.0	23.9	631.0	4.9	4.8	1.1
2001-2010(d)	12.0	18.1	6.4	251.6	25.5	602.6	7.6	4.8	1.3
2014(e)	13.1	19.5	7.3	215.9	24.4	712.2	5.1	4.1	4.0
d-a	0.7	0.8	0.8	-35.9	0.9	-57.1	4.6	-0.2	0.0
d-b	0.5	0.4	0.6	32.4	1.3	-52.4	4.5	-0.3	0.3
d-c	0.3	0.2	0.5	12.6	1.6	-28.4	2.7	0.0	0.2
e-d	1.1	1.4	0.9	-35.7	-1.1	109.6	-2.5	-0.7	2.7

## Appendix 4 Climate features of Spring 2014 (Seoul)

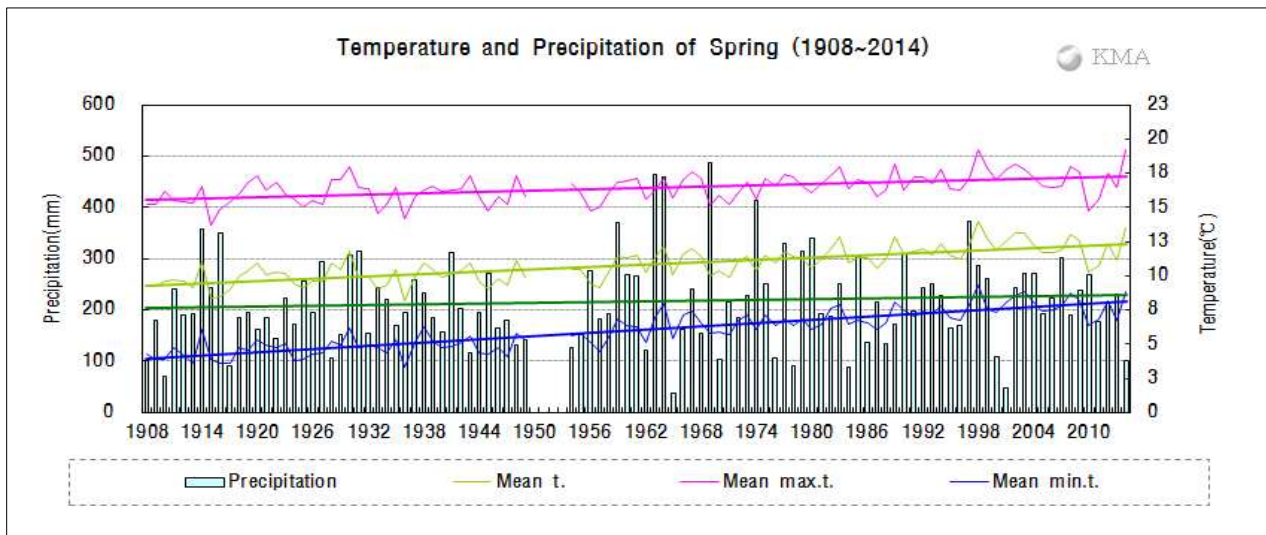


Fig 4. Temperatures (mean, mean maximum and mean minimum) and precipitation in Seoul during Spring (1908–2014).

### □ Average values of meteorological elements in Seoul during Spring (1908-2014)

Elements (Seoul)	Apr. 2014(a)	Apr. 2013(b)	Normals of Apr. (1981-2010) (c)	a-b	a-c	Rank since 1908 (within 5th)
Mean temperature (°C)	13.6	11.1	12.0	2.5	1.6	the second highest
Mean maximum temp. (°C)	19.3	16.5	17.1	2.8	2.2	the highest
Mean minimum temp. (°C)	8.9	6.7	7.5	2.2	1.4	the second highest
Precipitation (mm)	101.2	231.0	217.5	-129.8(43.8%)	-116.3(46.5%)	
Days of rain (day)	20.0	33.0	24.3	-13.0	-4.3	
Sunshine duration (hour)	731.9	707.6	607.0	24.3(103.4%)	124.9(120.6%)	
Asian dust days(day)	6.0	3.0	6.6	3.0	-0.6	
Mean cloud amount (1/10)	3.9	4.3	4.8	-0.4	-0.9	the lowest
Days of maximum temperature more than 30°C(day)	3.0	2.0	0.5	1.0	2.5	the second highest

### □ Average values of meteorological elements in Seoul during Spring for 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)	Asian dust days(day)	Mean cloud amount (1/10)	Days of maximum temperature more than 30°C (day)
1911-1920(a)	9.7	15.7	4.4	220.8	26.7	696.5	1.7	5.6	0.2
1921-1930	10.2	16.2	4.7	203.5	26.1	673.3	0.3	5.6	0.1
1931-1940(b)	9.8	15.8	4.9	213.4	26.0	705.3	0.0	5.4	0.7
1941-1949	10.0	16.1	4.9	190.8	25.1	722.4	0.0	5.5	0.3
1954-1960	10.4	16.0	5.7	223.9	25.9	636.6	1.3	5.4	0.1
1961-1970	11.1	16.5	6.5	250.4	23.2	631.8	1.9	5.4	0.6
1971-1980(c)	11.0	16.5	6.5	247.5	23.5	619.4	2.5	5.0	0.5
1981-1990	11.6	16.9	7.0	199.1	23.8	657.8	3.9	5.1	0.1
1991-2000	12.1	17.3	7.5	228.5	23.6	620.1	6.8	4.6	0.7
2001-2010(d)	12.2	17.1	8.0	225.0	25.5	543.2	9.2	4.7	0.7
2014(e)	13.6	19.3	8.9	101.2	20.0	731.9	6.0	3.9	3.0
d-a	2.5	1.4	3.6	4.2	-1.2	-153.3	7.5	-0.9	0.5
d-b	2.4	1.3	3.1	11.6	-0.5	-162.1	9.2	-0.7	0.0
d-c	1.2	0.6	1.5	-22.5	2.0	-76.2	6.7	-0.3	0.2
e-d	1.4	2.2	0.9	-123.8	-5.5	188.7	-3.2	-0.8	2.3



