Incidence and mortality of kidney cancer: temporal patterns and global trends in 38 countries

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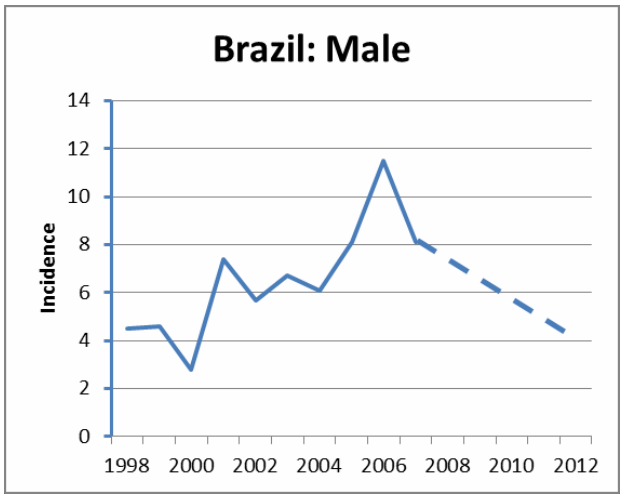
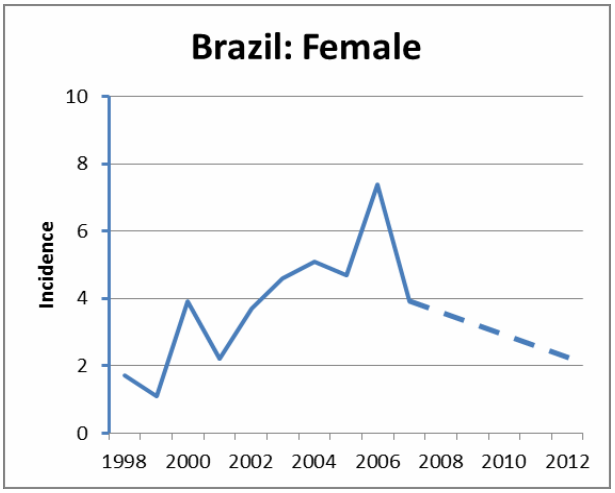
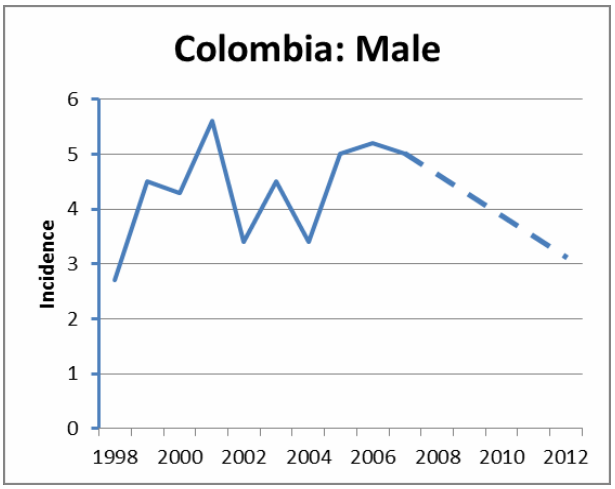
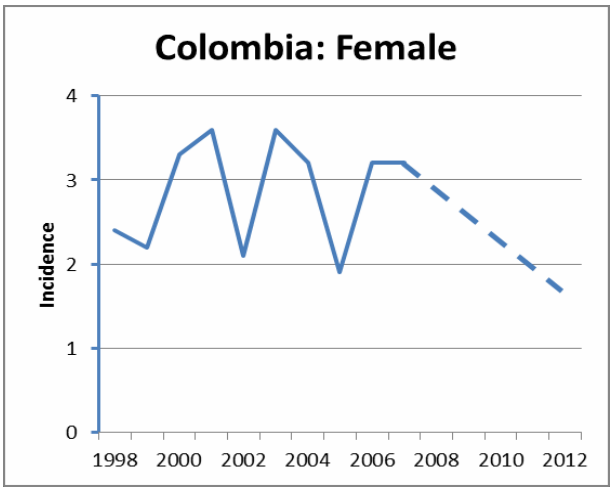
Supplementary Figure 1 Temporal trends in the age-standardized incidence and mortality of kidney cancer according to country and gender

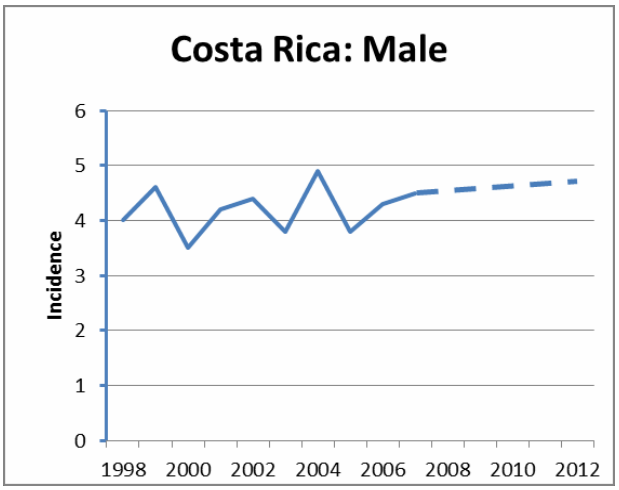
1). Latin America and the Caribbean

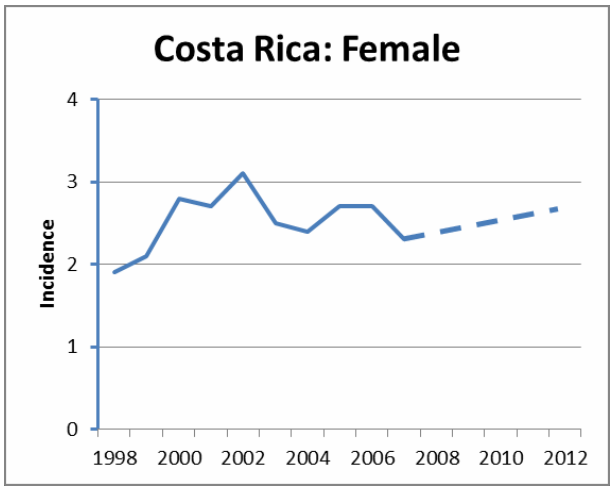


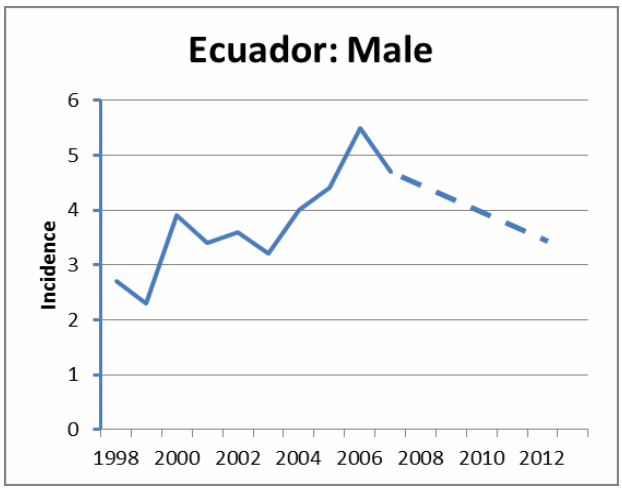


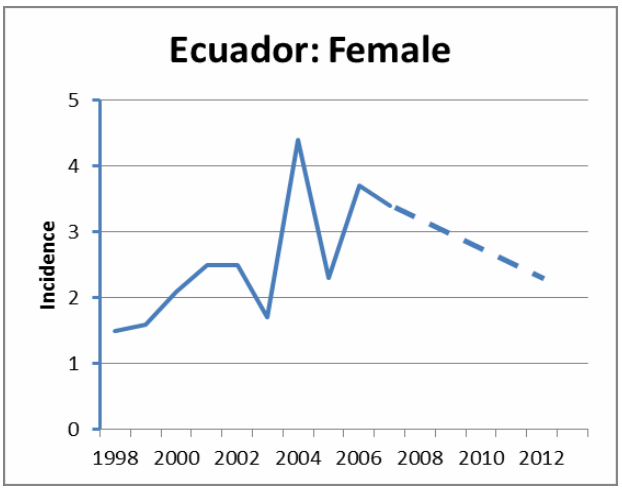




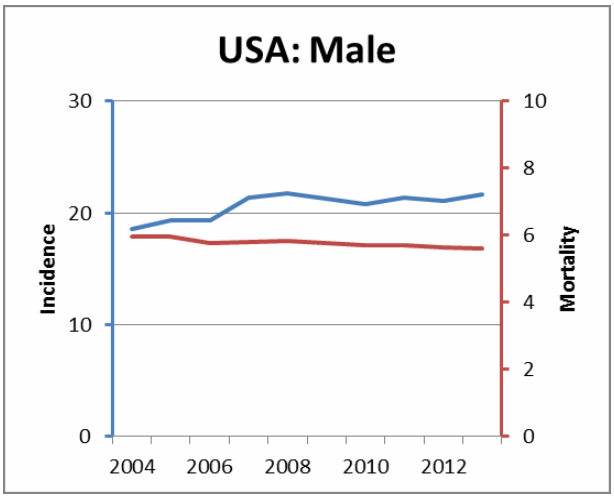


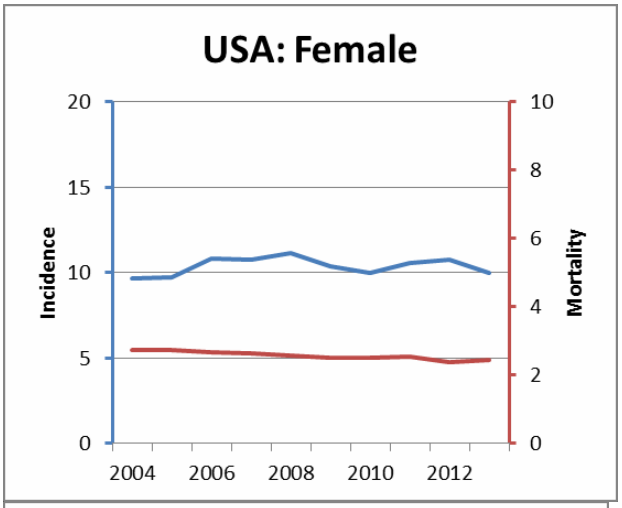


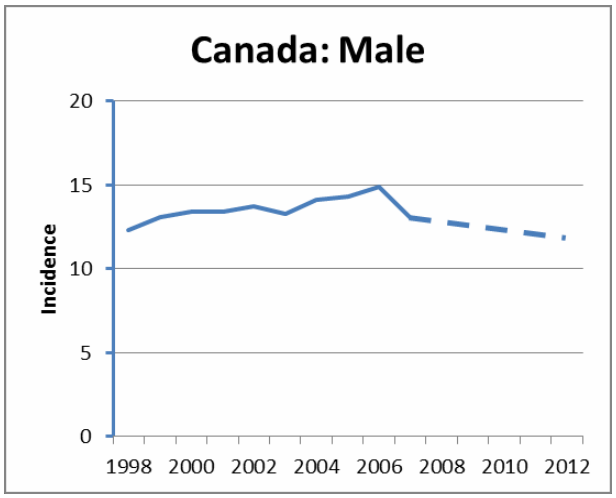


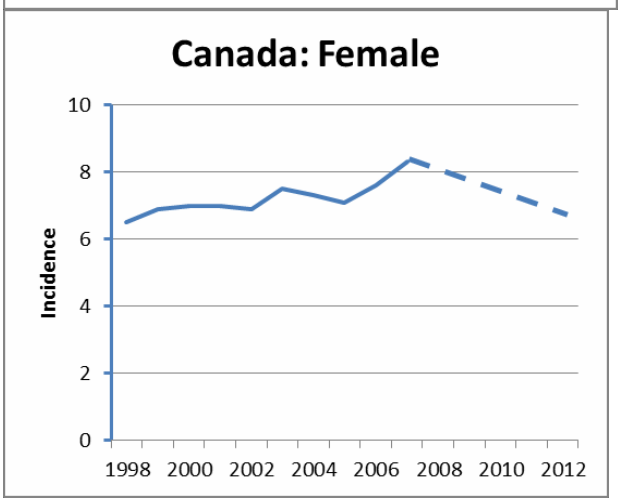


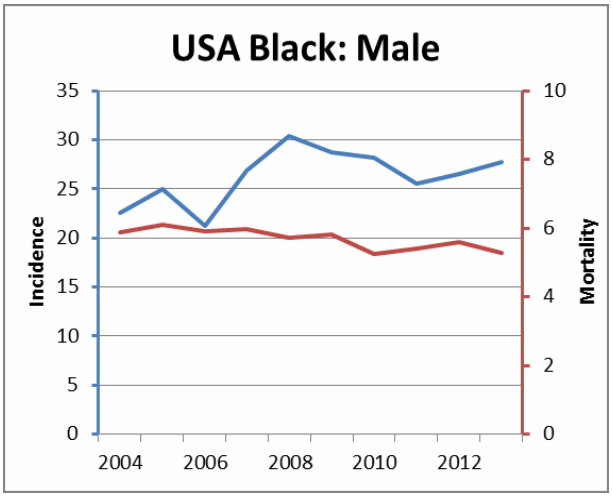
2). Northern America

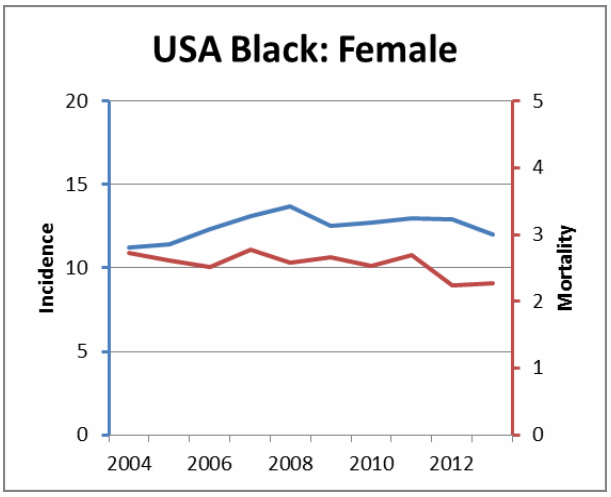


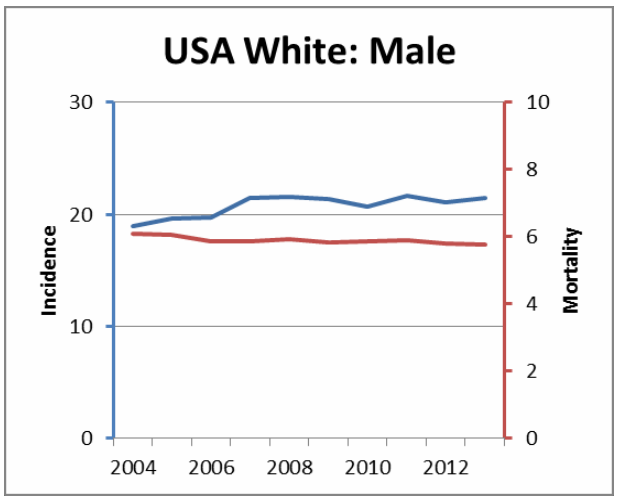


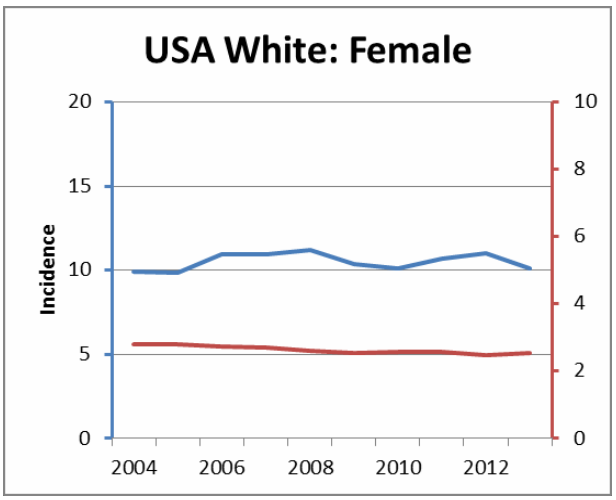




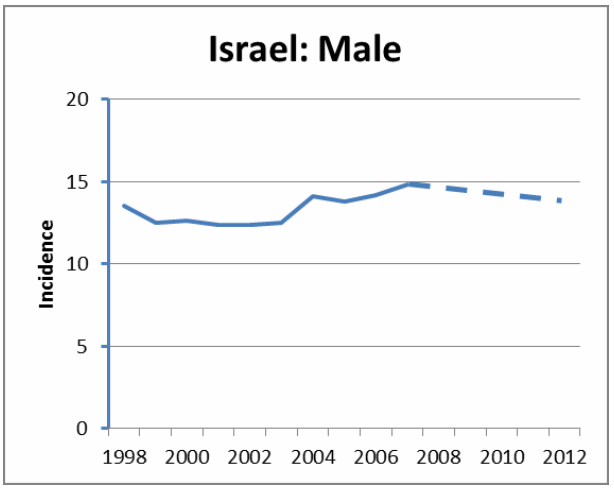

USA Black: Male
Incidence
Mortality
35
30
25
20
15
10
5
0
10
8
6
4
2
0
2004
2006
2008
2010
2012

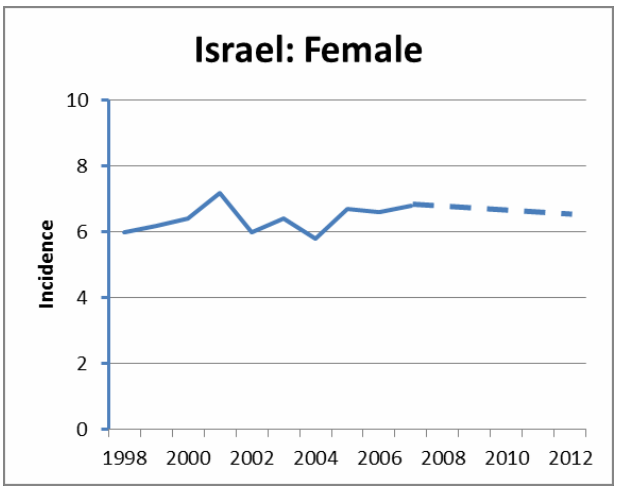

USA Black: Female
Incidence
Mortality
20
15
10
5
0
5
4
3
2
1
0
2004
2006
2008
2010
2012

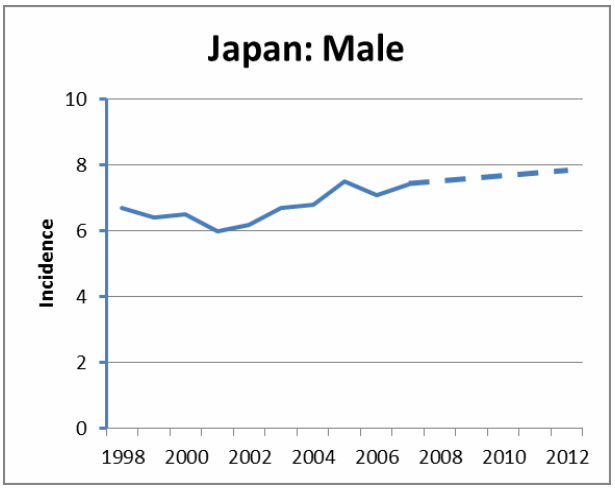

USA White: Male
Incidence
Mortality
30
20
10
0
10
8
6
4
2
0
2004
2006
2008
2010
2012

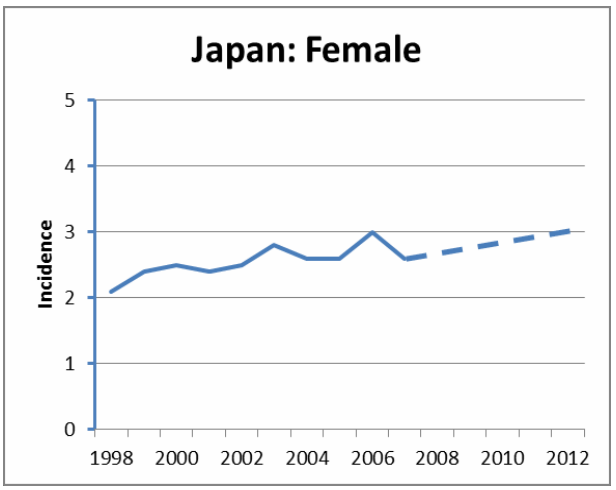

USA White: Female
Incidence
Mortality
20
15
10
5
0
10
8
6
4
2
0
2004
2006
2008
2010
2012

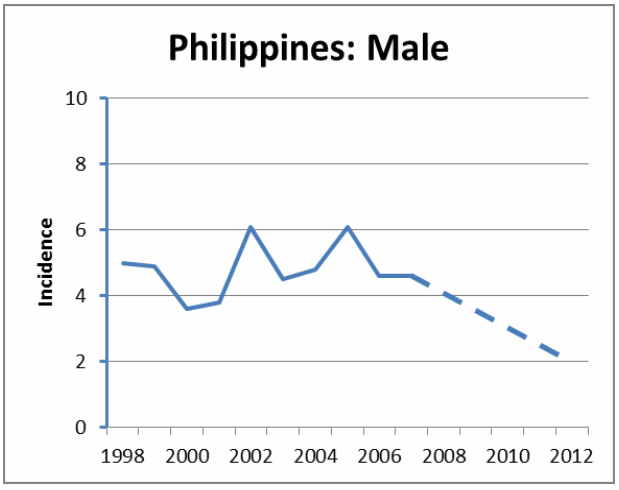
3). Asia

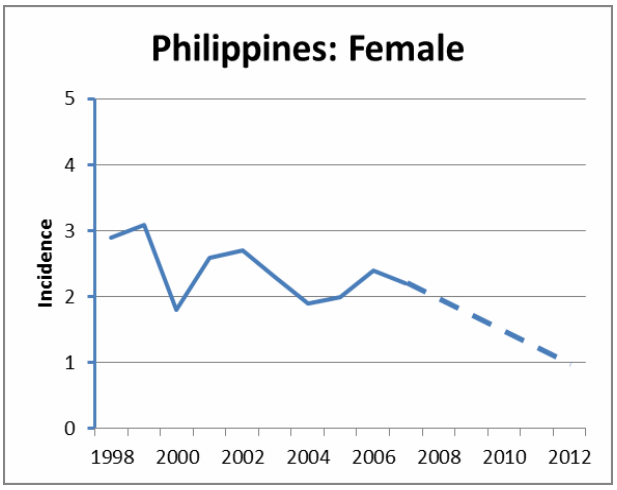

Israel: Male
Incidence
20
15
10
5
0
1998 2000 2002 2004 2006 2008 2010 2012

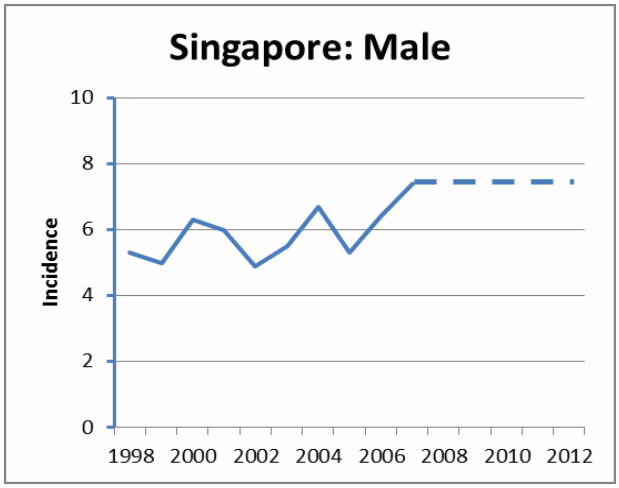

Israel: Female
Incidence
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

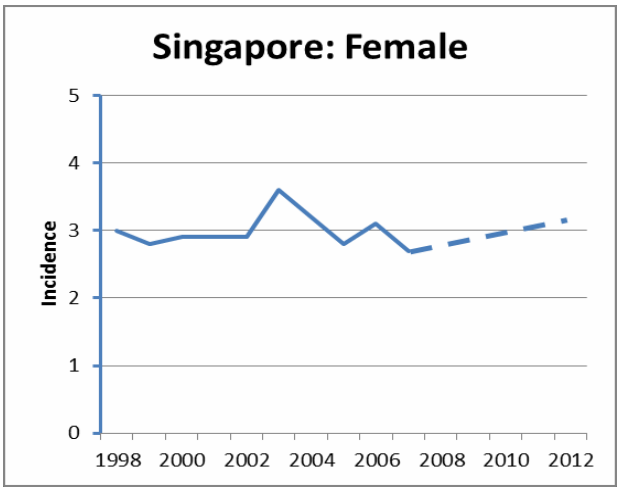

Japan: Male
Incidence
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

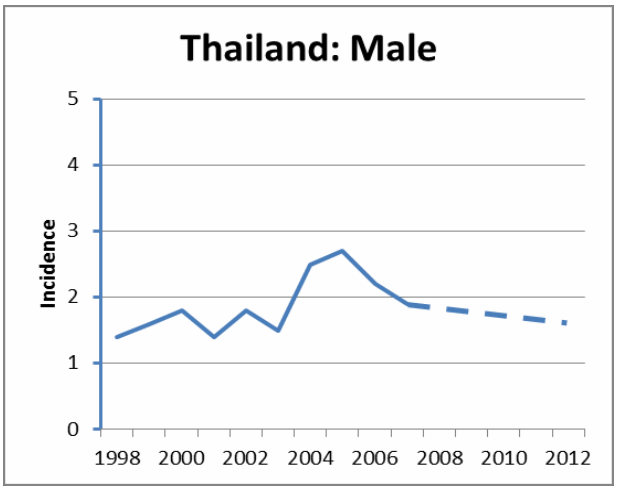

Japan: Female
Incidence
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012

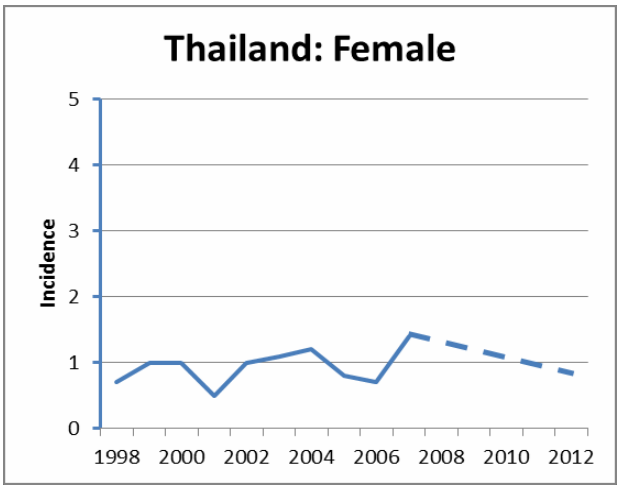

Philippines: Male
Incidence
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

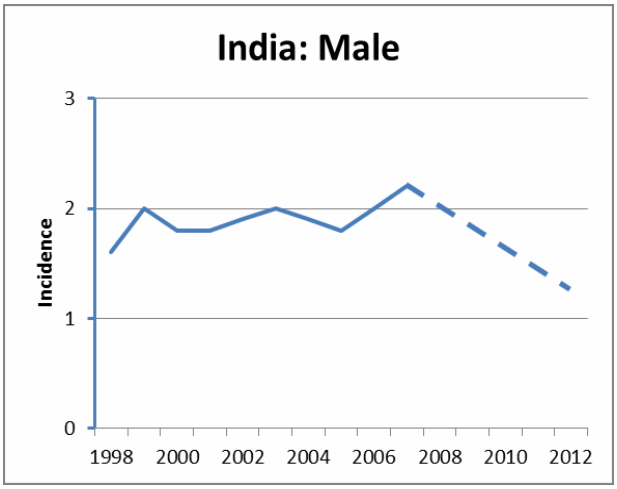

Philippines: Female
Incidence
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012

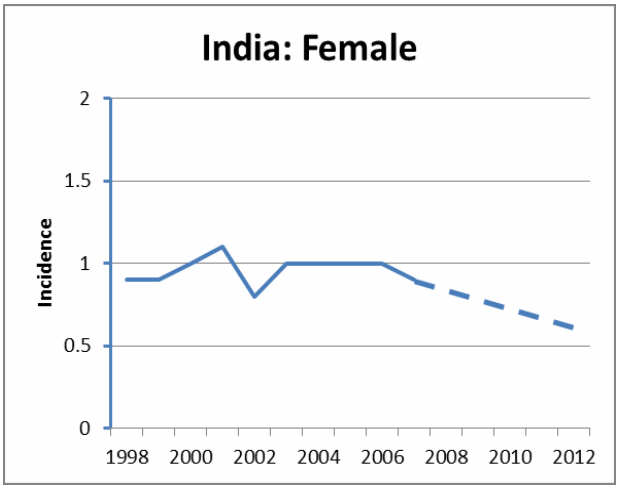

Singapore: Male
Incidence
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

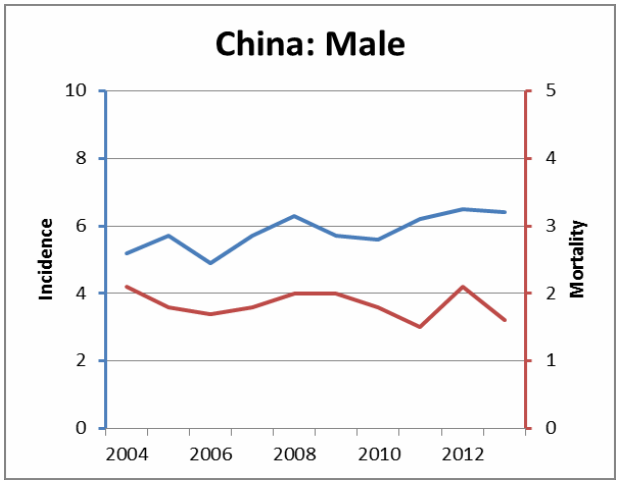

Singapore: Female
Incidence
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012

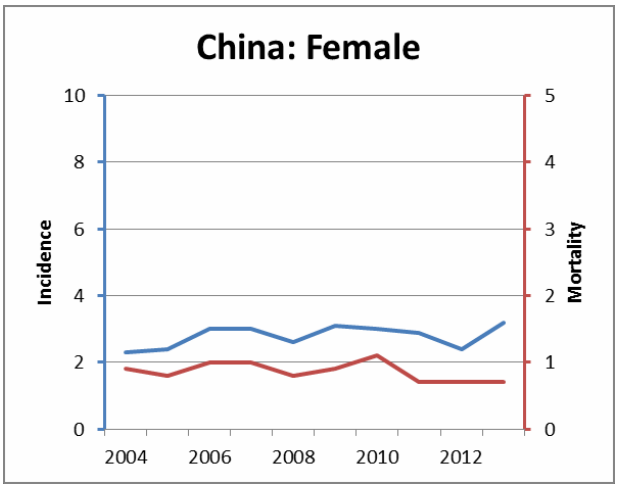

Thailand: Male
Incidence
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012


Thailand: Female
Incidence
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012


India: Male
Incidence
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012


India: Female
Incidence
2
1.5
1
0.5
0
1998 2000 2002 2004 2006 2008 2010 2012


China: Male
Incidence
Mortality
0
2
4
6
8
10
0
1
2
3
4
5
2004
2006
2008
2010
2012


China: Female
Incidence
Mortality
0
2
4
6
8
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0
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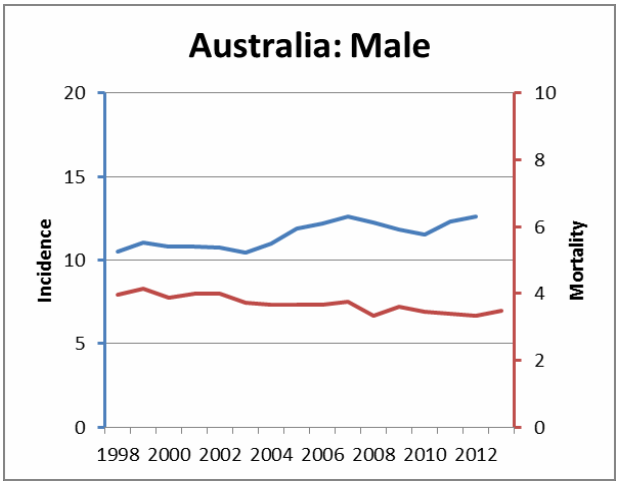
2004
2006
2008
2010
2012

4). Oceania


Australia: Male
Incidence
Mortality
0
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2
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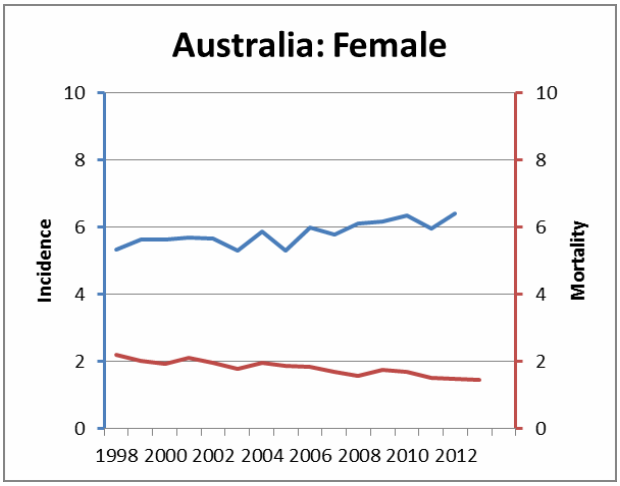
6
8
10
1998 2000 2002 2004 2006 2008 2010 2012


Australia: Female
Incidence
Mortality
0
2
4
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8
10
0
2
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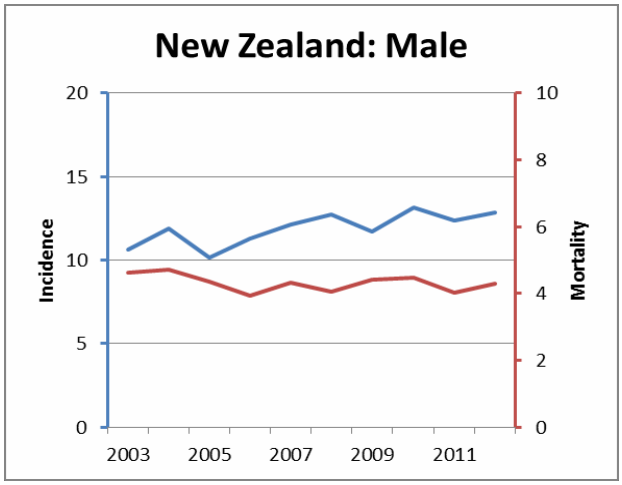
8
10
1998 2000 2002 2004 2006 2008 2010 2012


New Zealand: Male
Incidence
Mortality
0
5
10
15
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0
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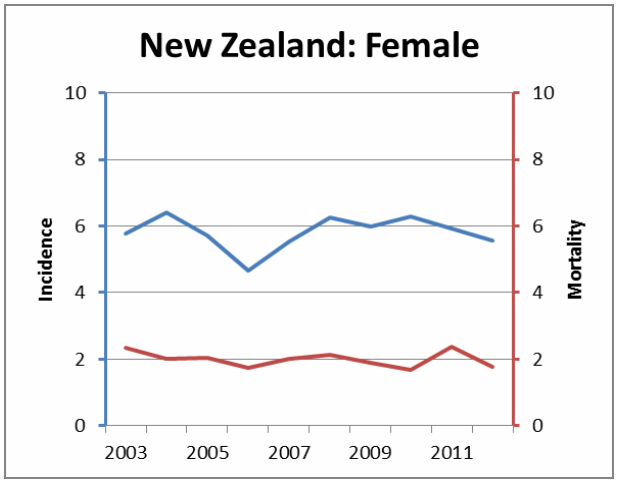
6
8
10
2003
2005
2007
2009
2011


New Zealand: Female
Incidence
Mortality
0
2
4
6
8
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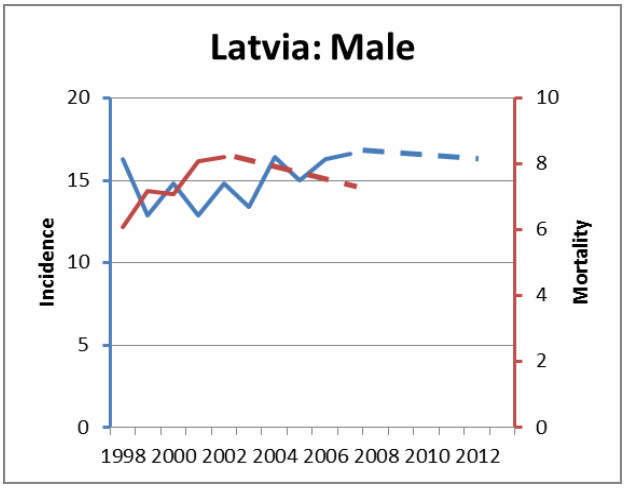
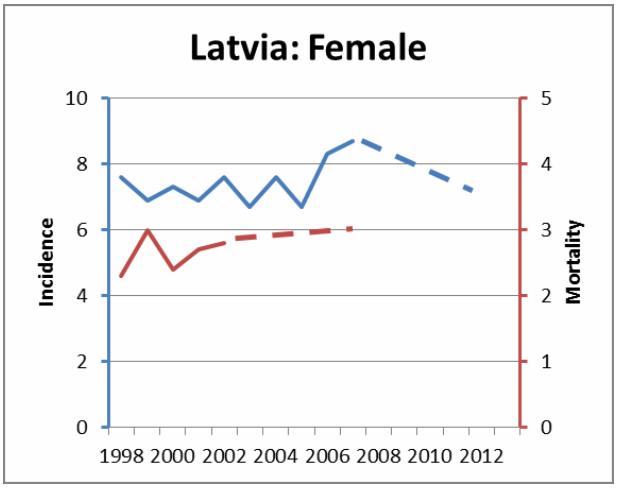
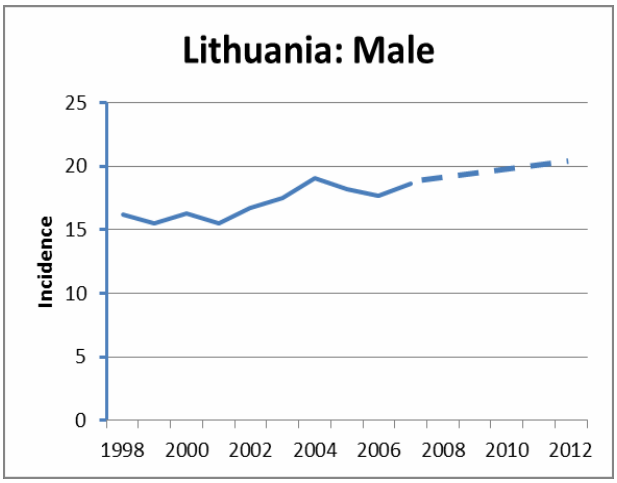
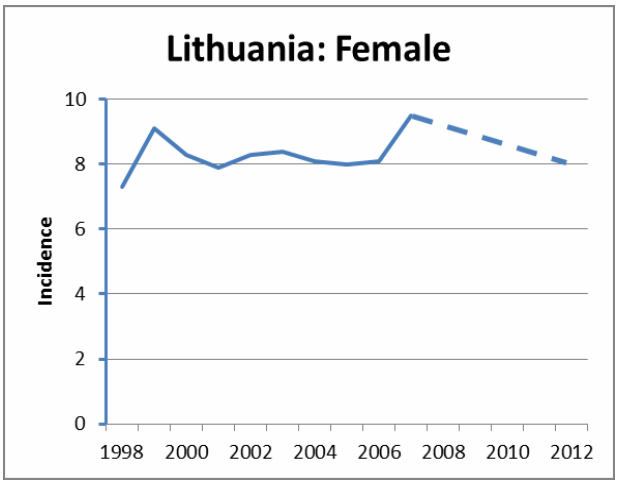
2003
2005
2007
2009
2011

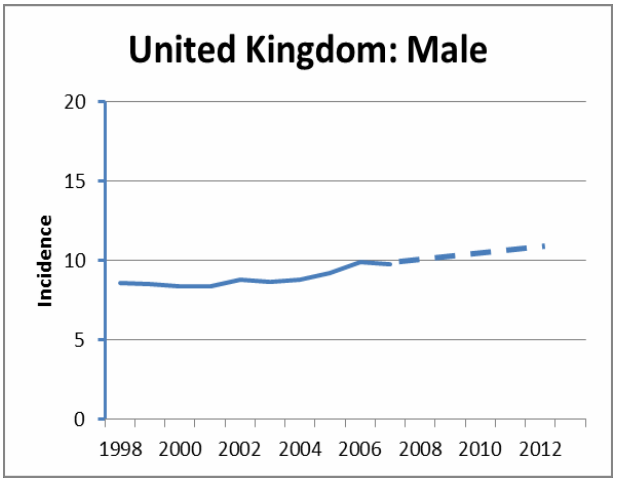
5). Northern Europe

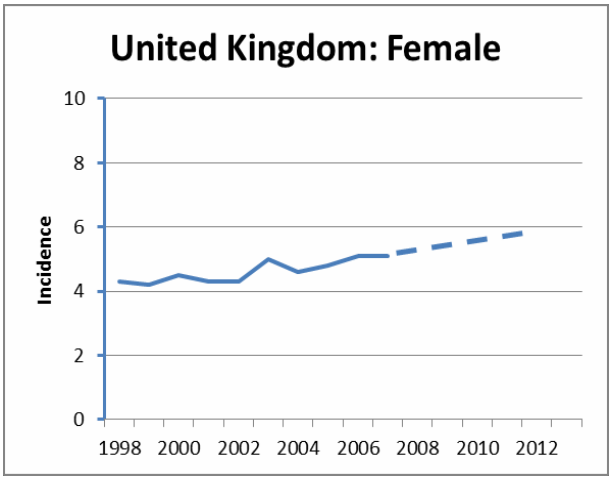


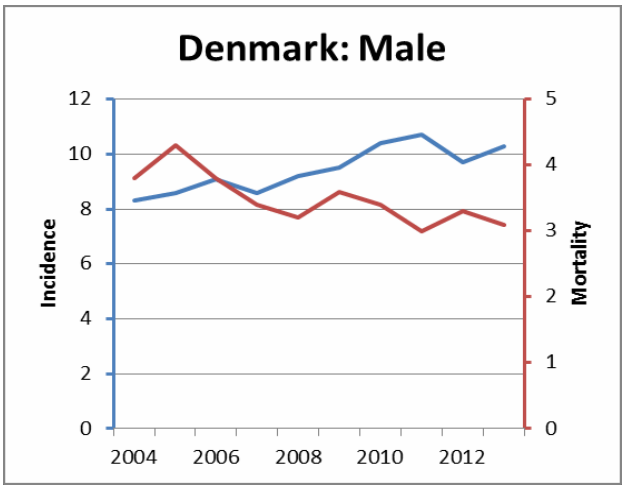


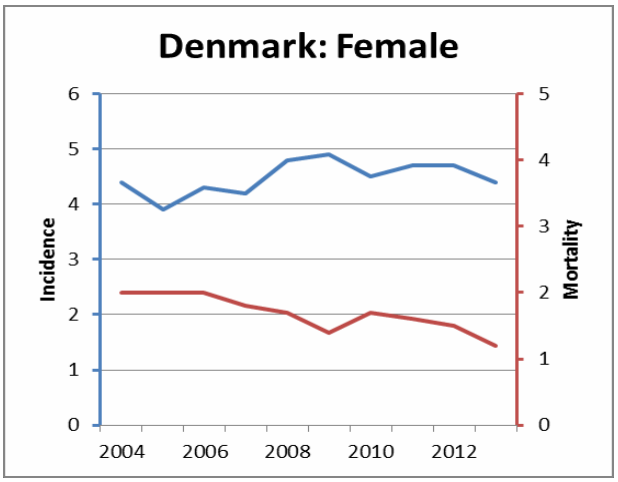


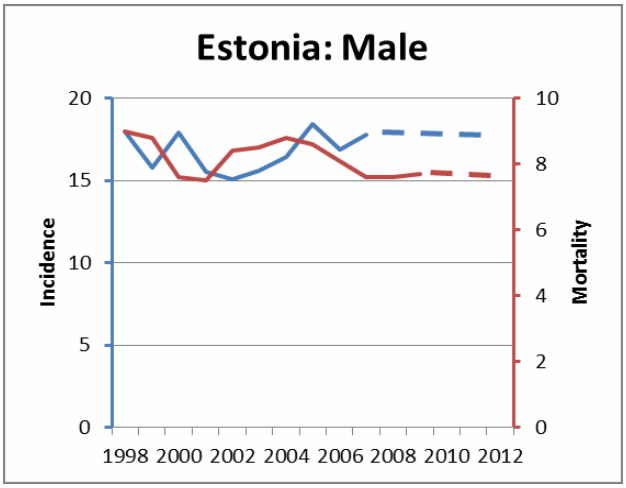


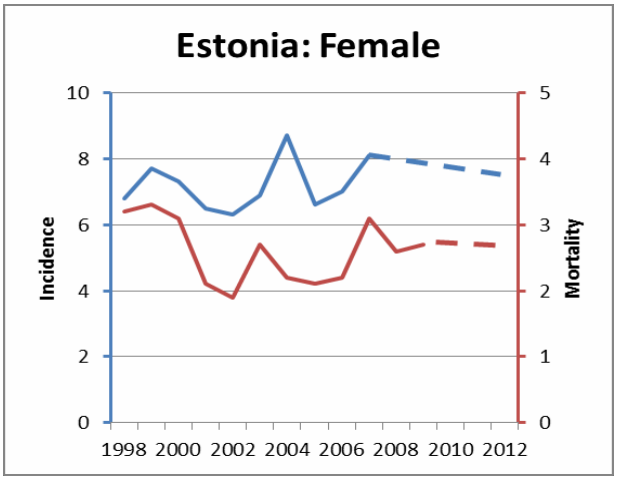


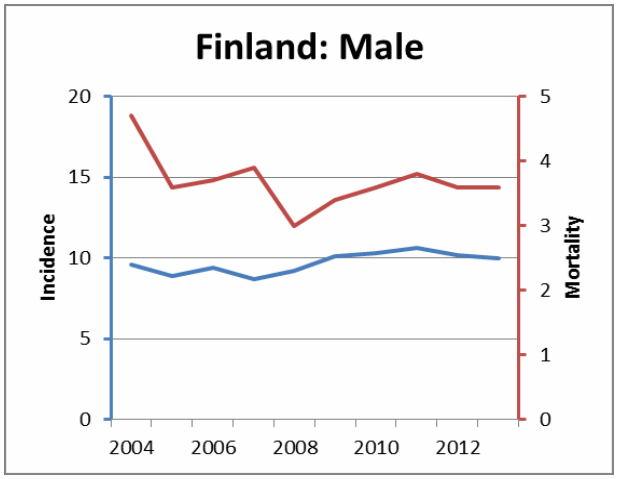


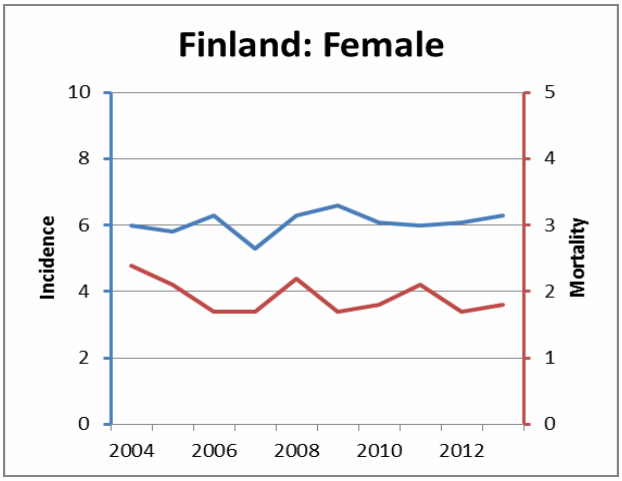

Denmark: Male
Incidence
Mortality
0
2
4
6
8
10
12
0
1
2
3
4
5
2004
2006
2008
2010
2012

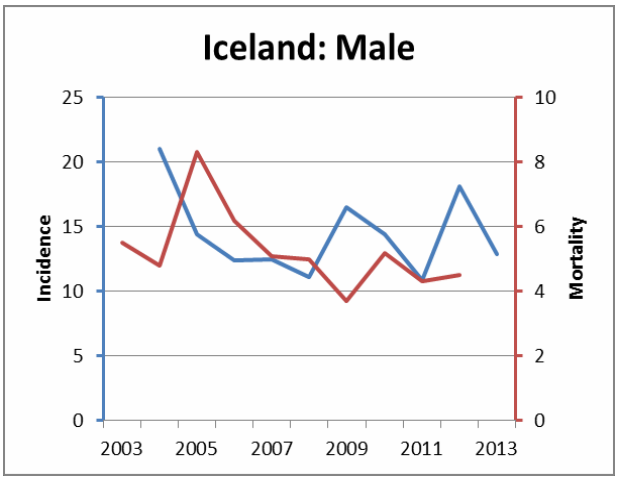

Denmark: Female
Incidence
Mortality
0
1
2
3
4
5
6
0
1
2
3
4
5
2004
2006
2008
2010
2012

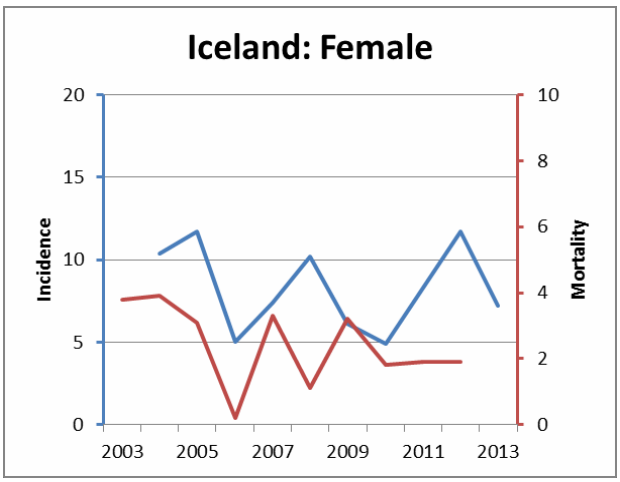

Estonia: Male
Incidence
Mortality
0
5
10
15
20
0
2
4
6
8
10
1998 2000 2002 2004 2006 2008 2010 2012

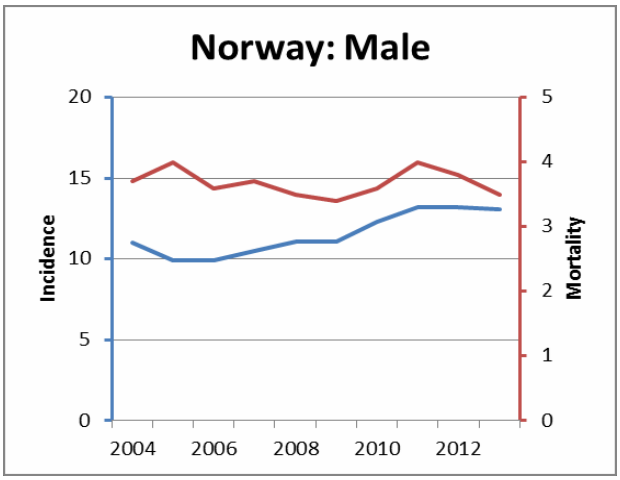

Estonia: Female
Incidence
Mortality
0
2
4
6
8
10
0
1
2
3
4
5
1998 2000 2002 2004 2006 2008 2010 2012

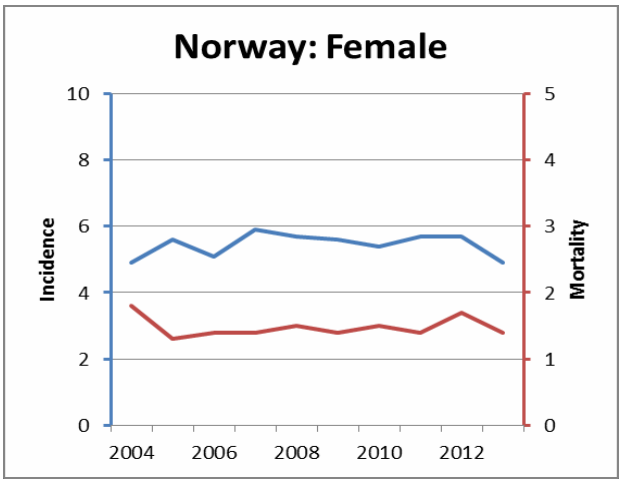

Finland: Male
Incidence
Mortality
0
5
10
15
20
0
1
2
3
4
5
2004
2006
2008
2010
2012

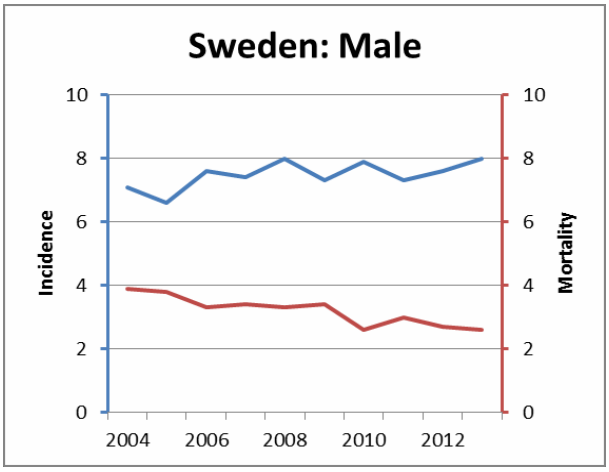

Finland: Female
Incidence
Mortality
0
2
4
6
8
10
0
1
2
3
4
5
2004
2006
2008
2010
2012

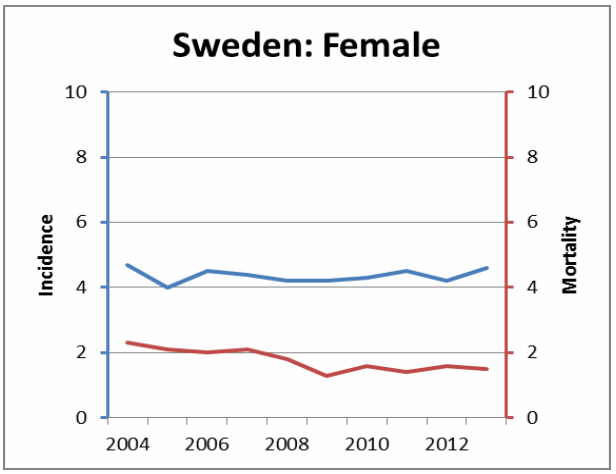

Iceland: Male
Incidence
Mortality
25
20
15
10
5
0
10
8
6
4
2
0
2003
2005
2007
2009
2011
2013


Iceland: Female
Incidence
Mortality
20
15
10
5
0
10
8
6
4
2
0
2003
2005
2007
2009
2011
2013

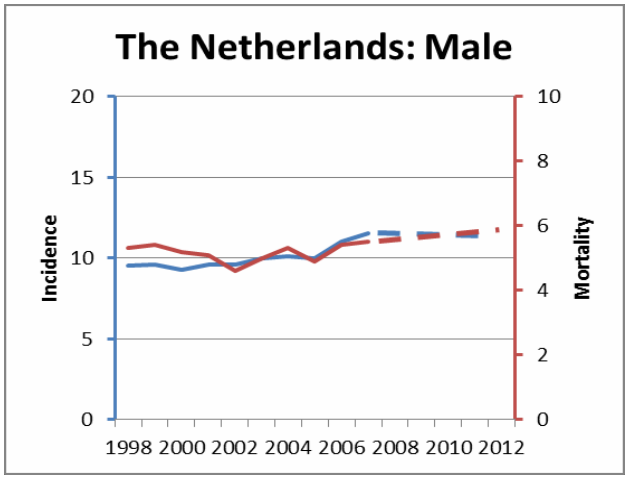

Norway: Male
Incidence
Mortality
20
15
10
5
0
5
4
3
2
1
0
2004
2006
2008
2010
2012

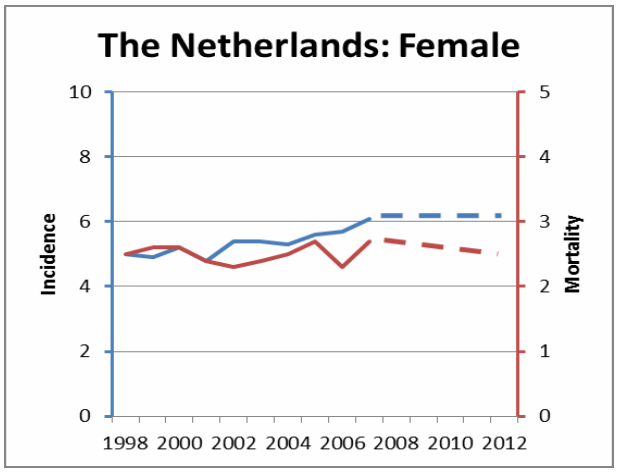

Norway: Female
Incidence
Mortality
10
8
6
4
2
0
5
4
3
2
1
0
2004
2006
2008
2010
2012

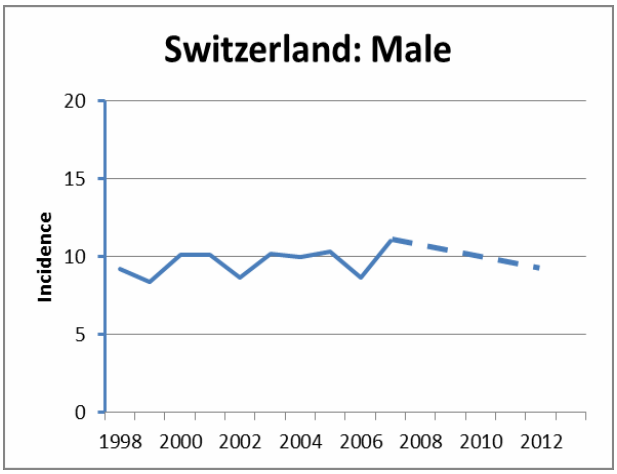

Sweden: Male
Incidence
Mortality
10
8
6
4
2
0
10
8
6
4
2
0
2004
2006
2008
2010
2012

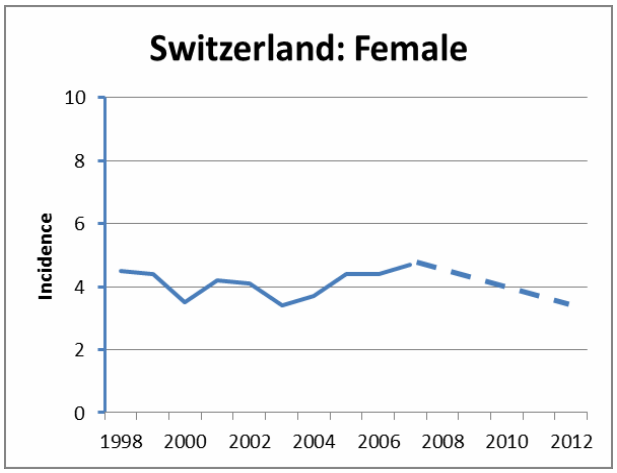

Sweden: Female
Incidence
Mortality
10
8
6
4
2
0
10
8
6
4
2
0
2004
2006
2008
2010
2012

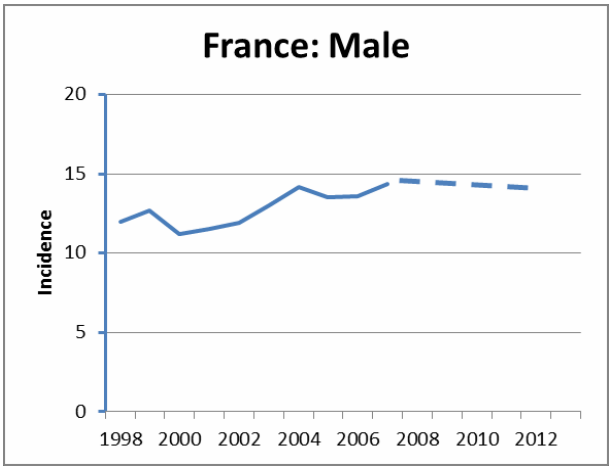
6). Western Europe

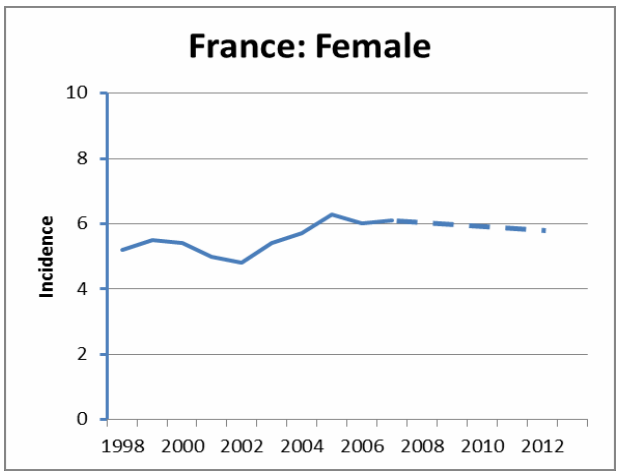


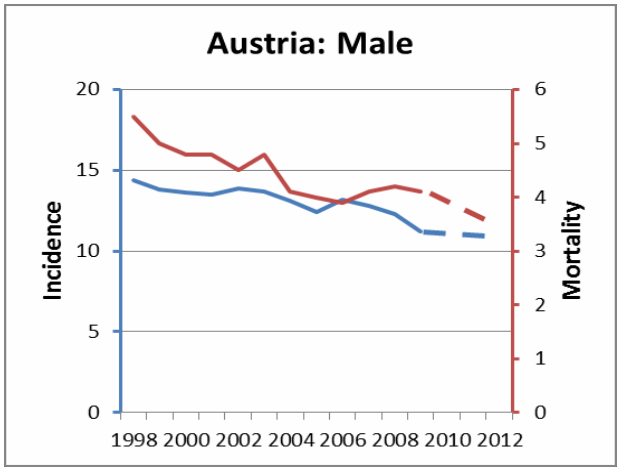


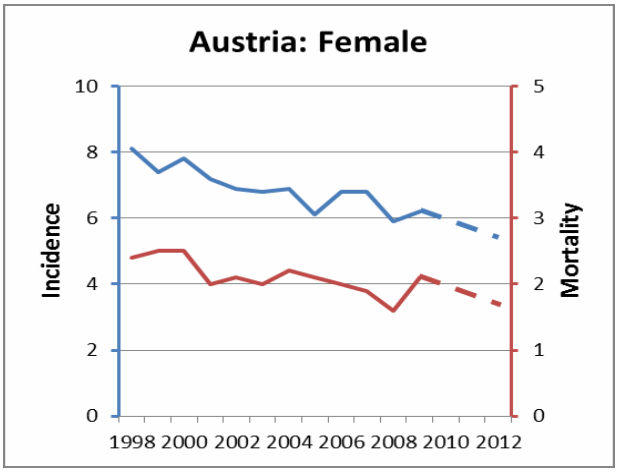


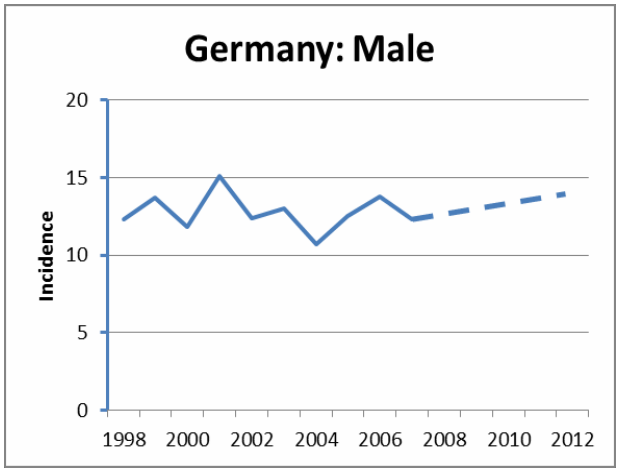


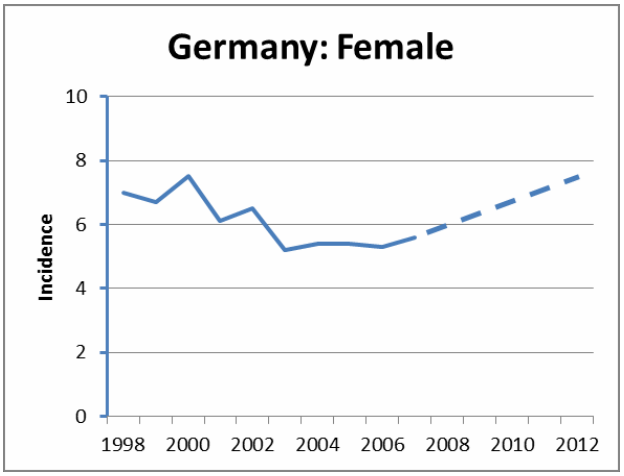


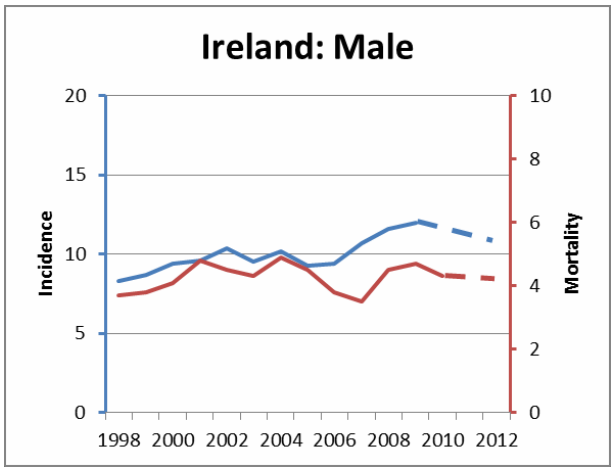


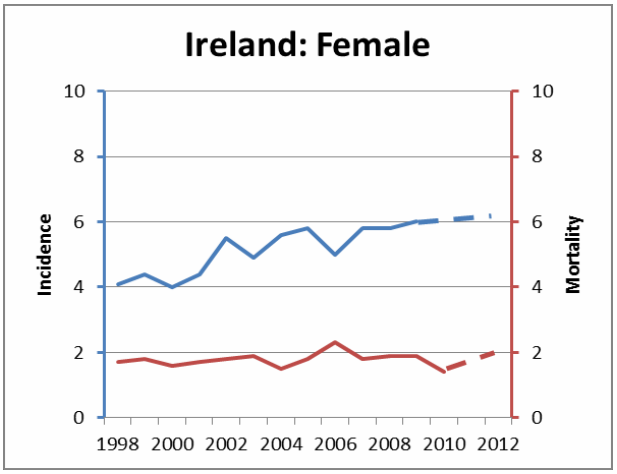

Austria: Male
Incidence
Mortality
20
15
10
5
0
6
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012


Austria: Female
Incidence
Mortality
10
8
6
4
2
0
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012

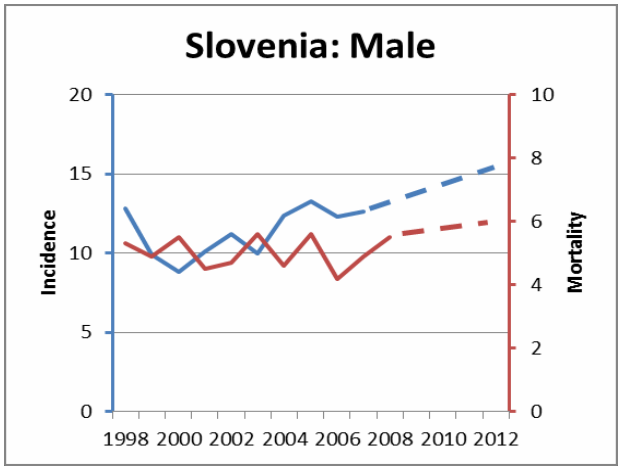

Germany: Male
Incidence
20
15
10
5
0
1998 2000 2002 2004 2006 2008 2010 2012

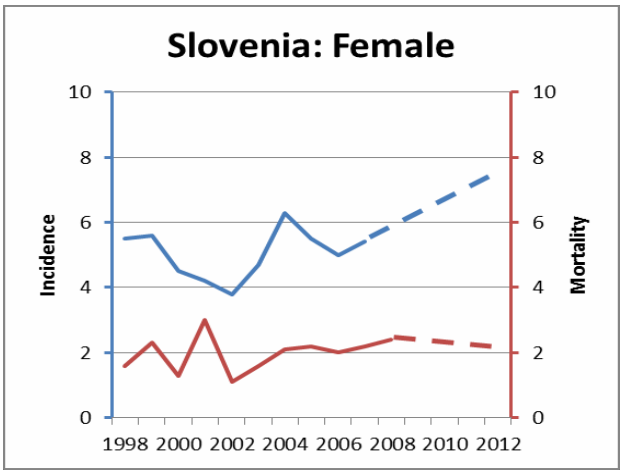

Germany: Female
Incidence
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

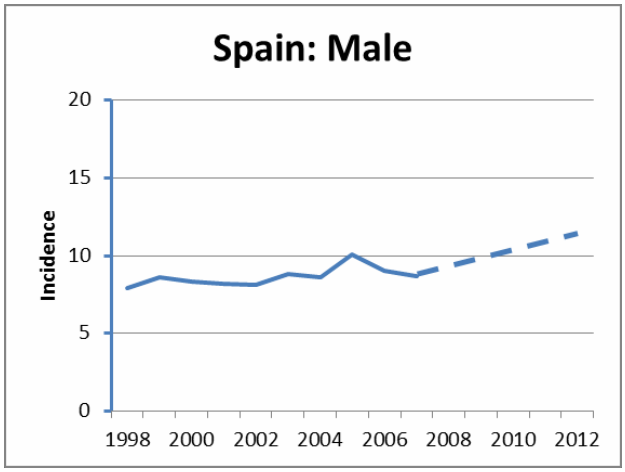

Ireland: Male
Incidence
Mortality
20
15
10
5
0
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

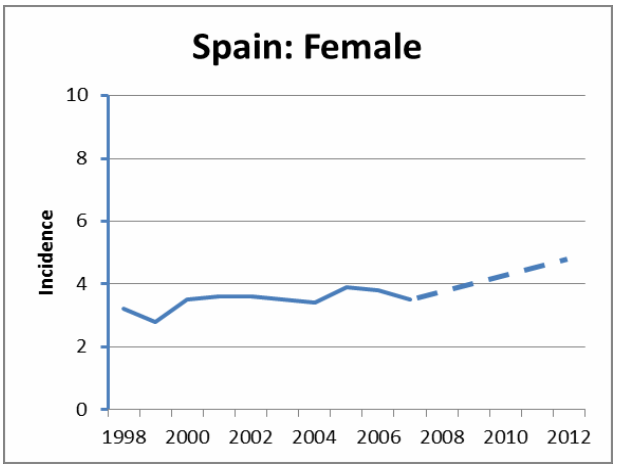

Ireland: Female
Incidence
Mortality
10
8
6
4
2
0
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

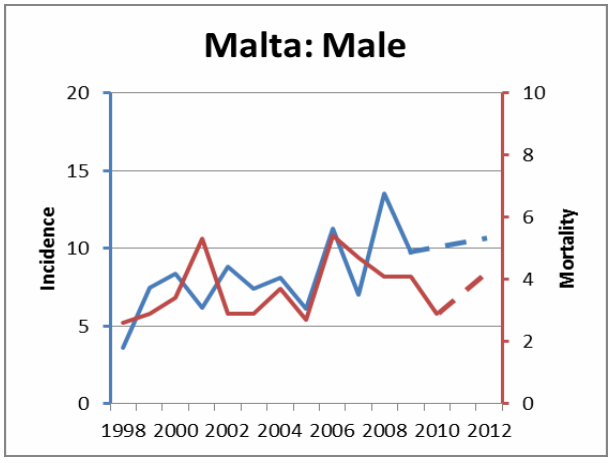
7). Southern Europe

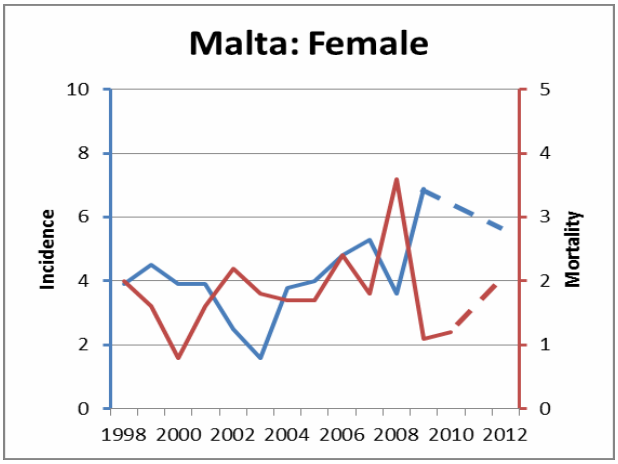


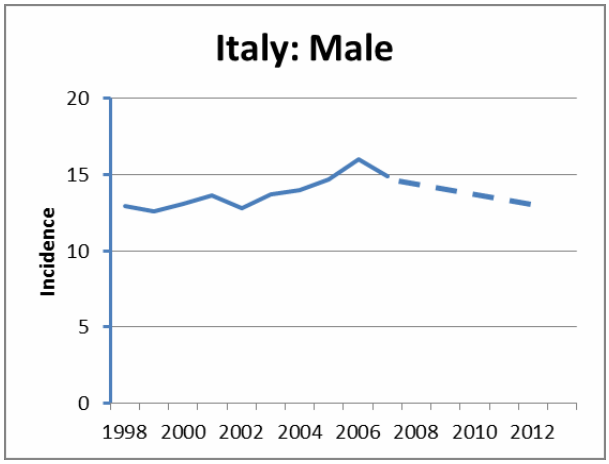


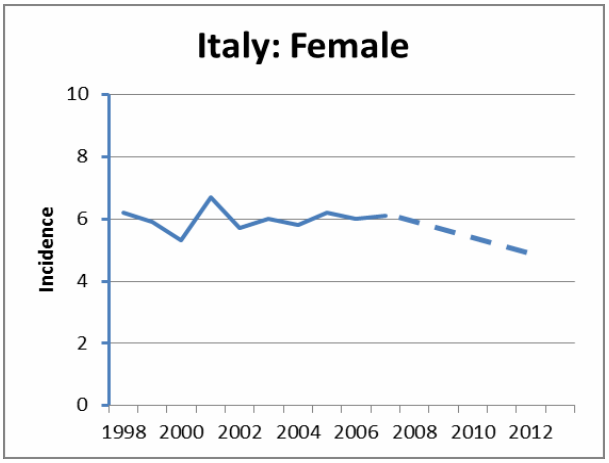


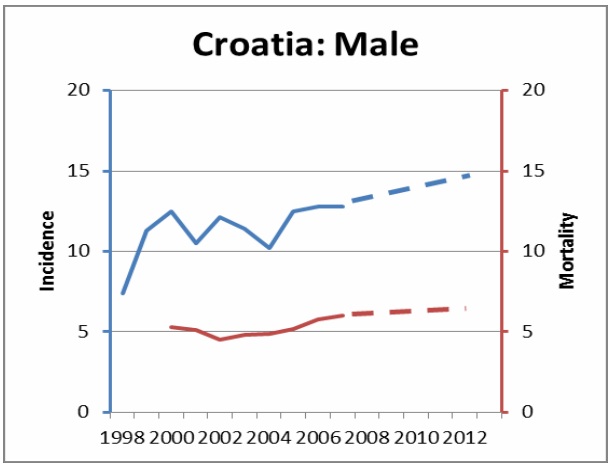


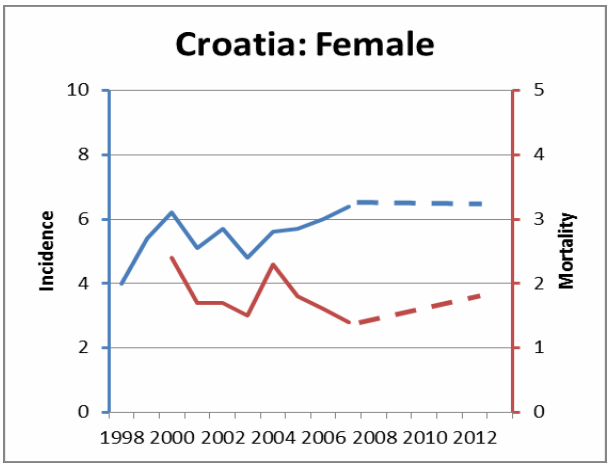




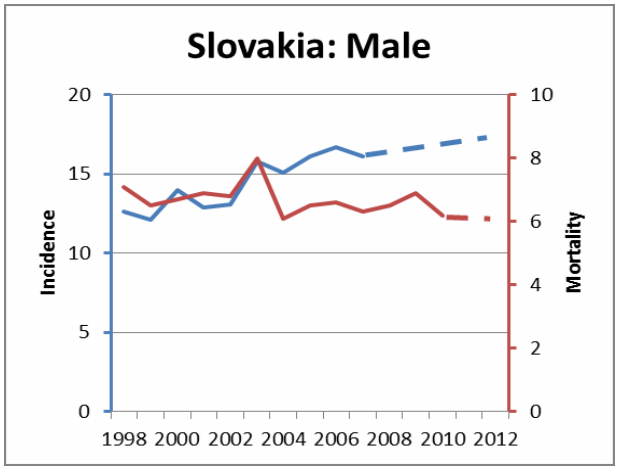

Italy: Male
Incidence
20
15
10
5
0
1998 2000 2002 2004 2006 2008 2010 2012

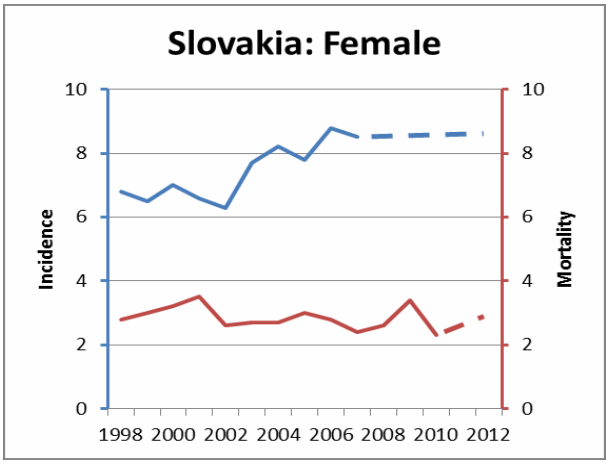

Italy: Female
Incidence
10
8
6
4
2
0
1998 2000 2002 2004 2006 2008 2010 2012

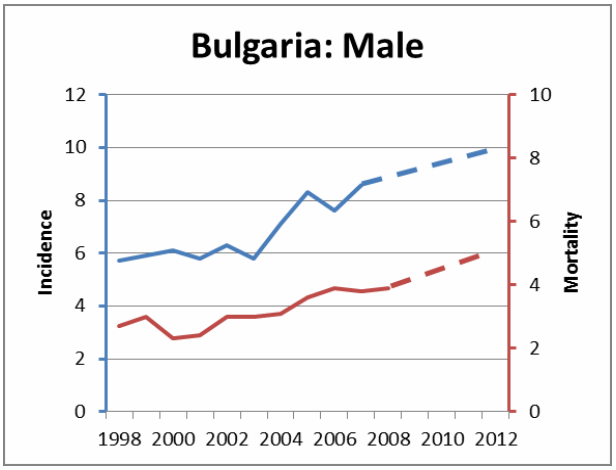

Croatia: Male
Incidence
Mortality
20
15
10
5
0
1998 2000 2002 2004 2006 2008 2010 2012

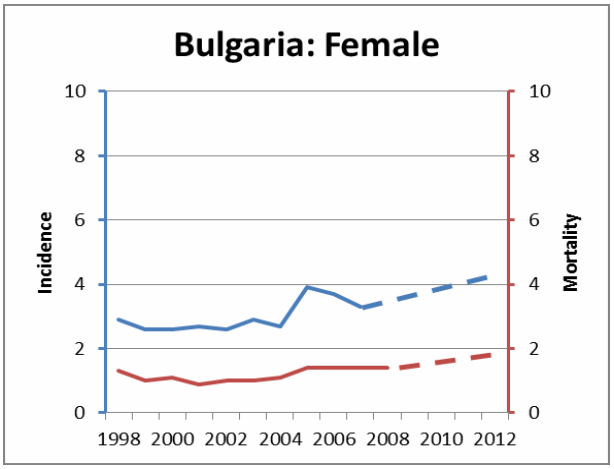

Croatia: Female
Incidence
Mortality
10
8
6
4
2
0
5
4
3
2
1
0
1998 2000 2002 2004 2006 2008 2010 2012

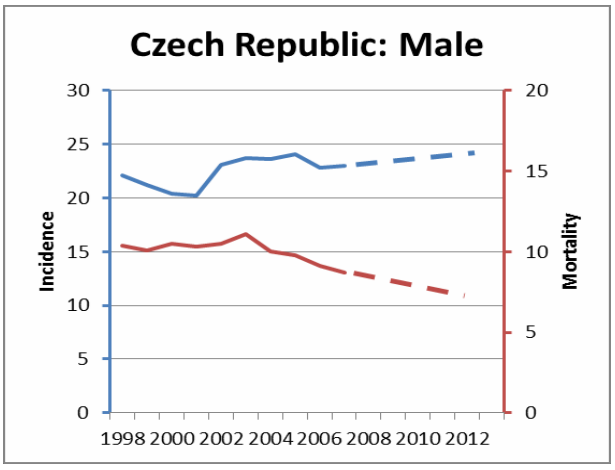
8). Eastern Europe

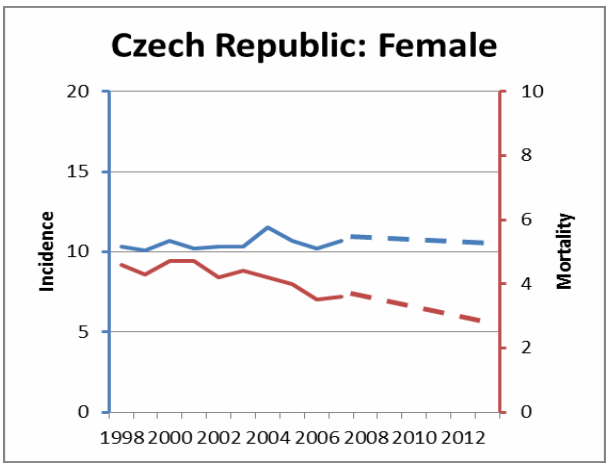


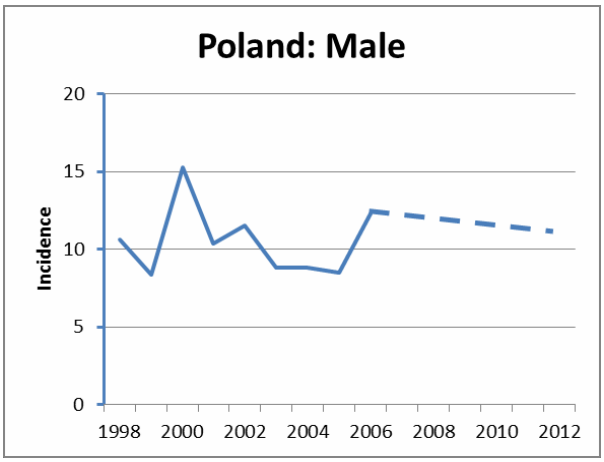


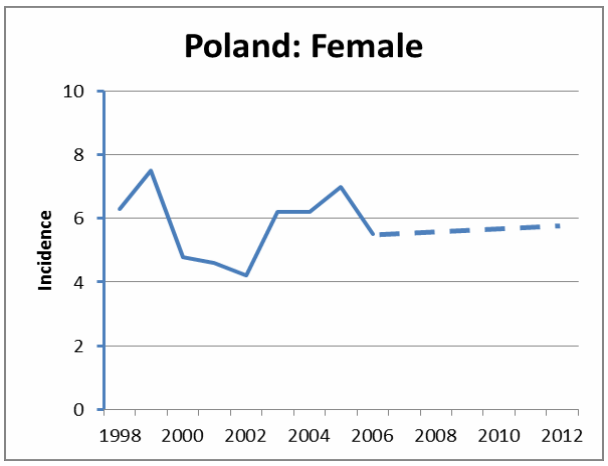






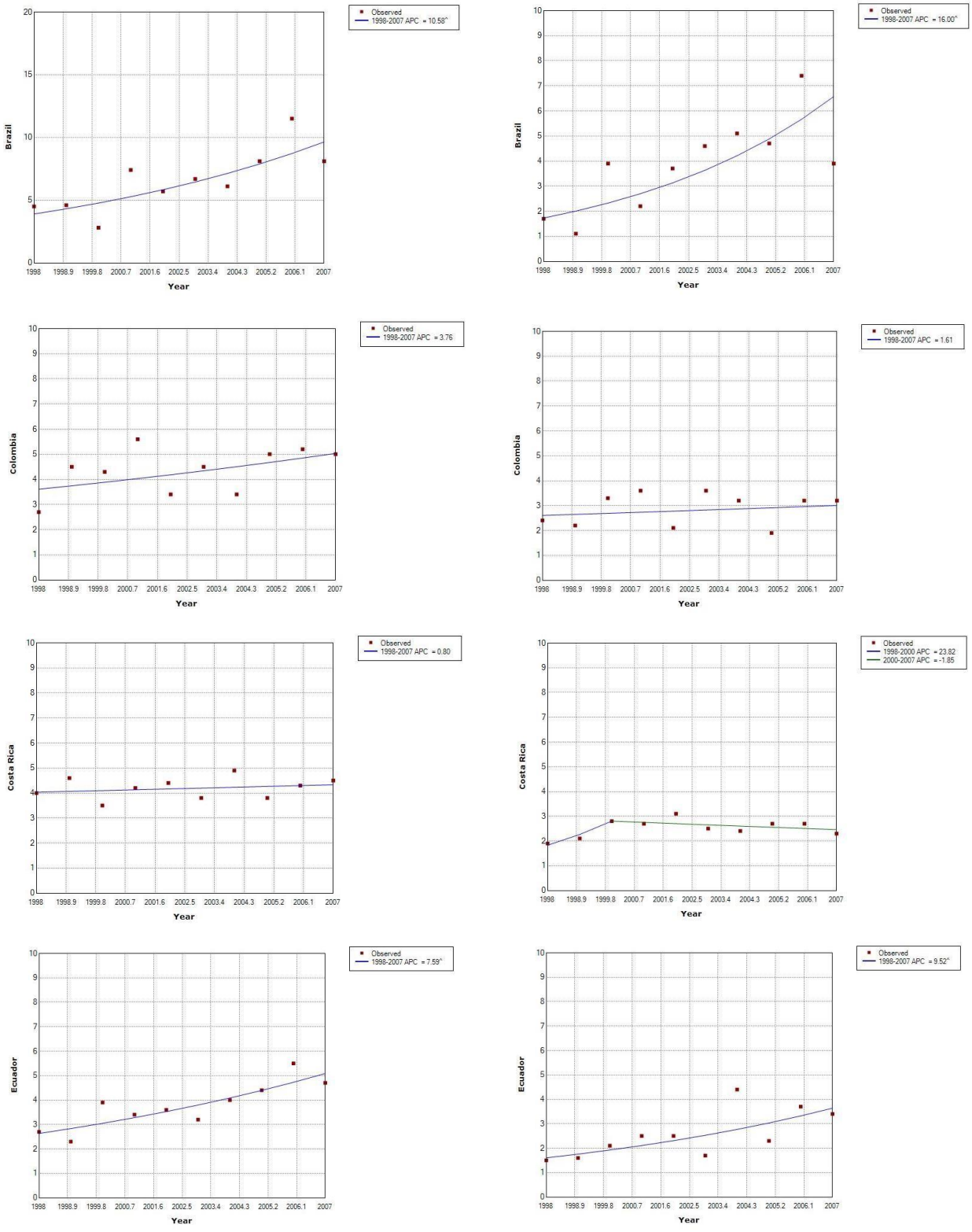



Poland: Male
Incidence
20
15
10
5
0
1998
2000
2002
2004
2006
2008
2010
2012

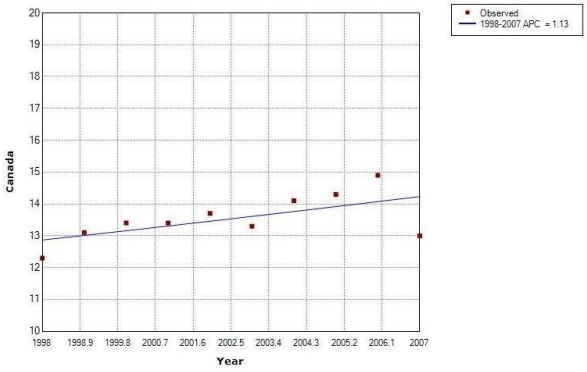

Poland: Female
Incidence
10
8
6
4
2
0
1998
2000
2002
2004
2006
2008
2010
2012

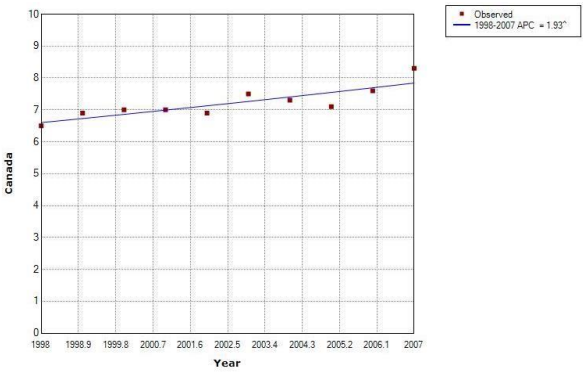
Supplementary Figure 2 Findings from the joinpoint regression analysis of the global incidence rates of kidney cancer (Left: Male, Right: Female)

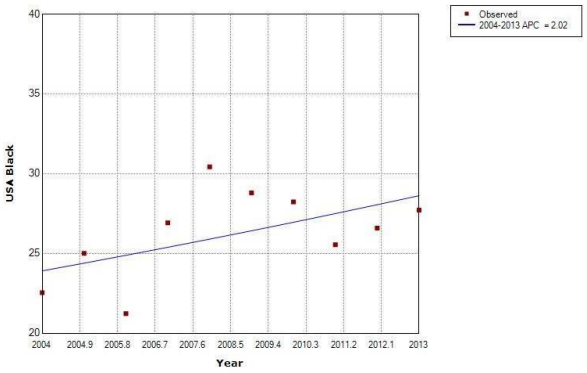
1) Latin America and the Caribbean

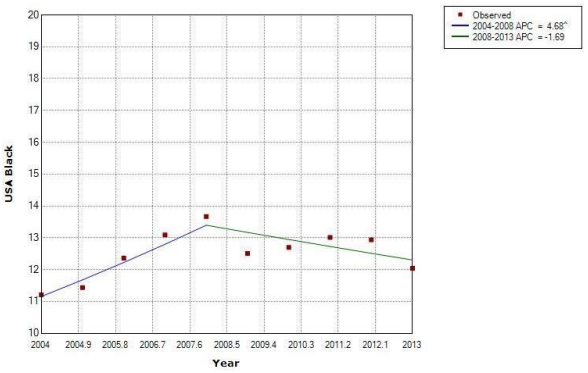


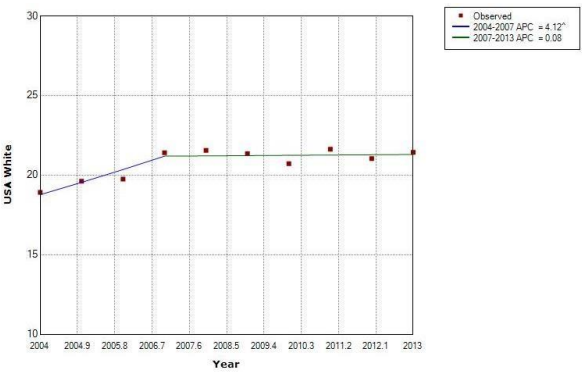
2) Northern America

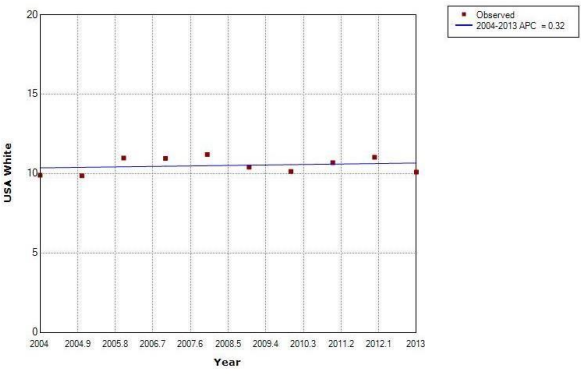


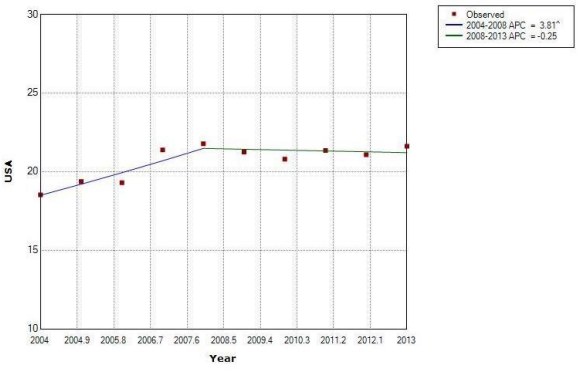


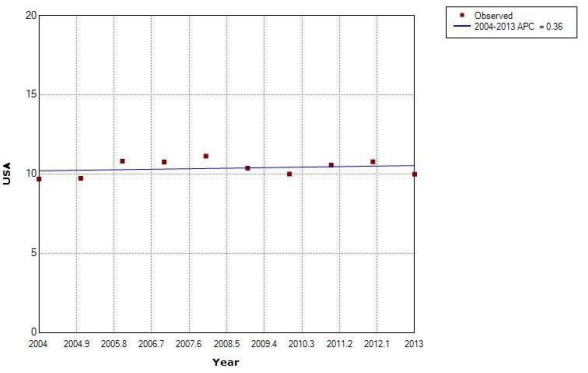




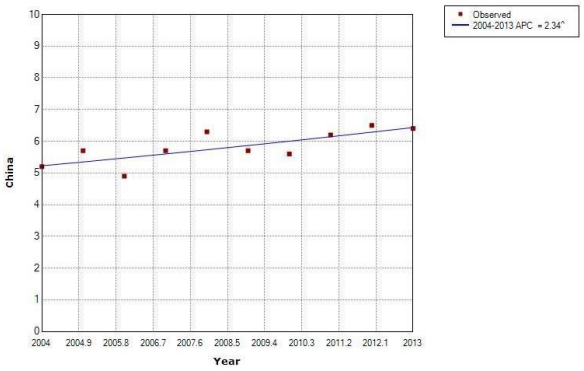


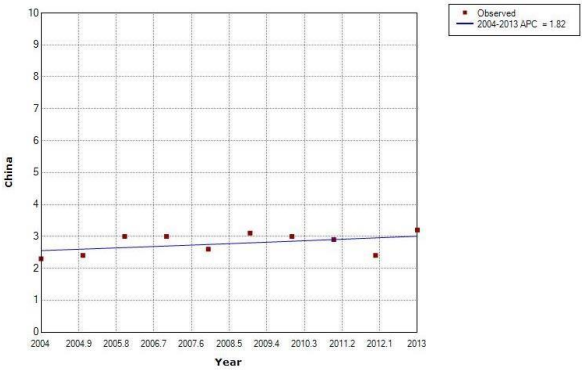


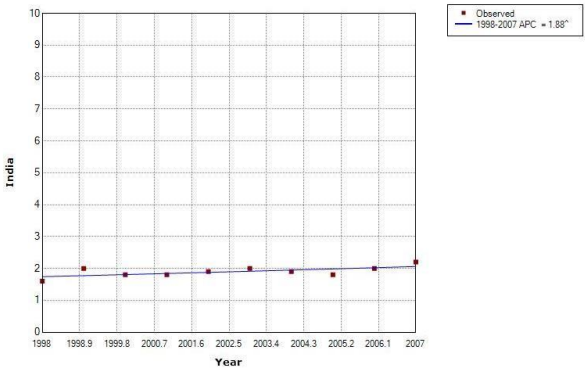


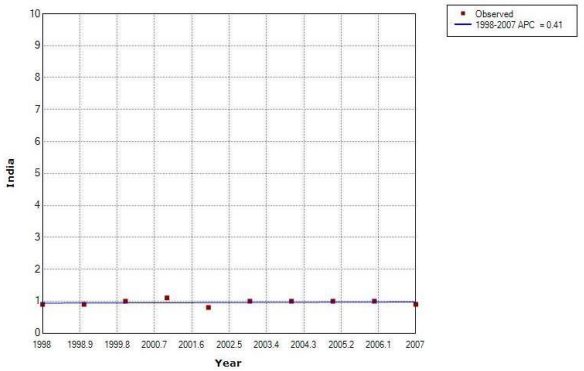


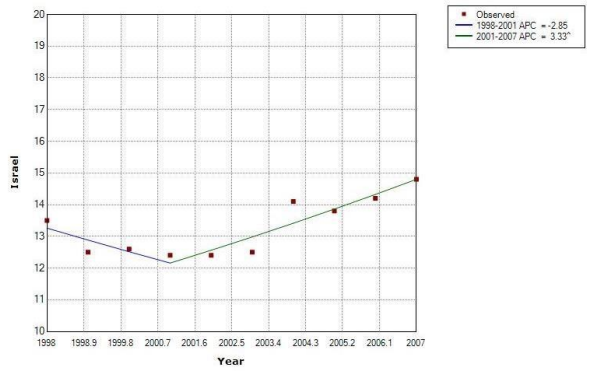
3) Asia

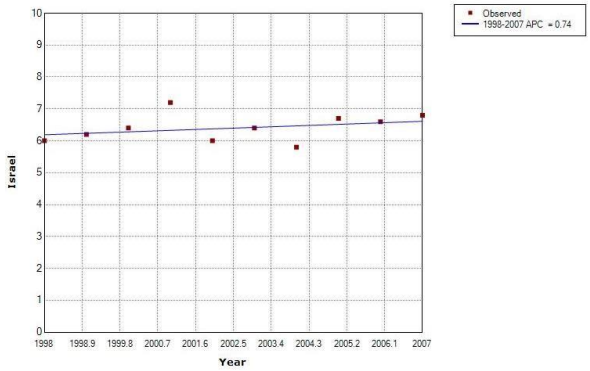

Observed
2004-2013 APC = 2.34^
China
Year

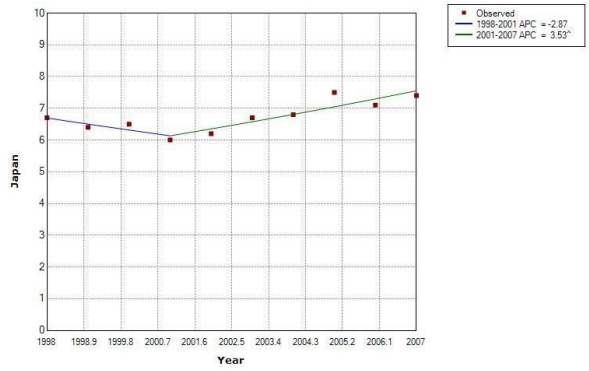

Observed
2004-2013 APC = 1.82
China
Year

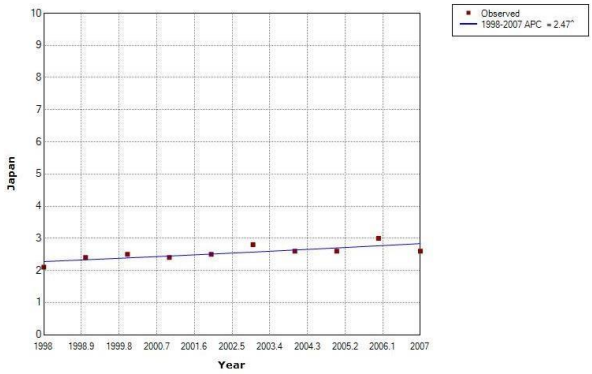

Observed
1998-2007 APC = 1.88^
India
Year

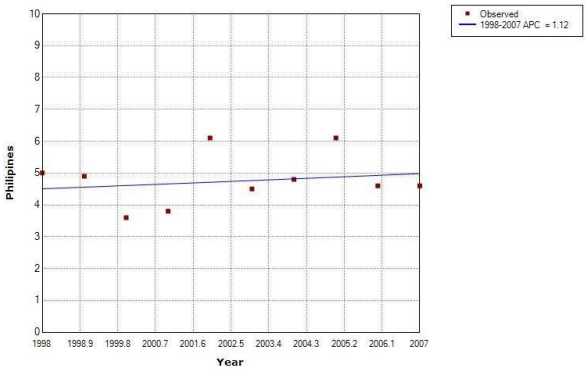

Observed
1998-2007 APC = 0.41
India
Year

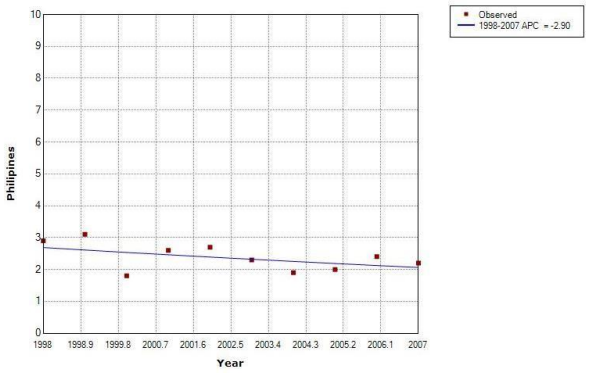

Observed
1998-2001 APC = -2.85
2001-2007 APC = 3.33^
Israel
Year

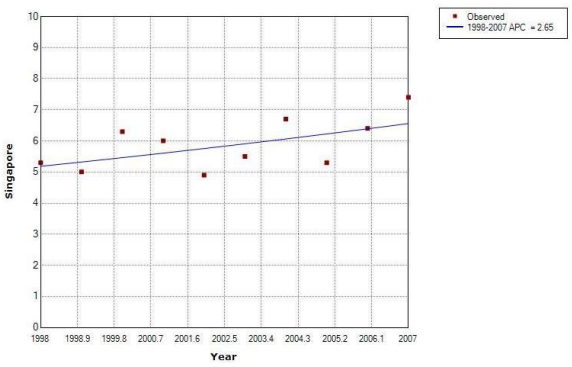

Observed
1998-2007 APC = 0.74
Israel
Year

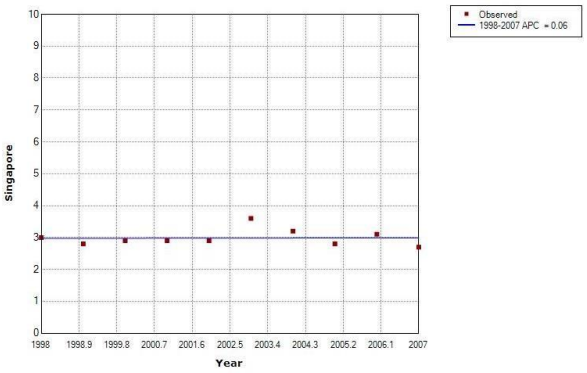

Observed
1998-2001 APC = -2.87
2001-2007 APC = 3.53^
Japan
Year

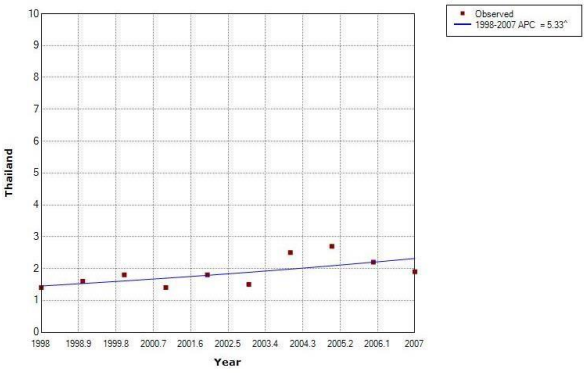

Observed
1998-2007 APC = 2.47^
Japan
Year

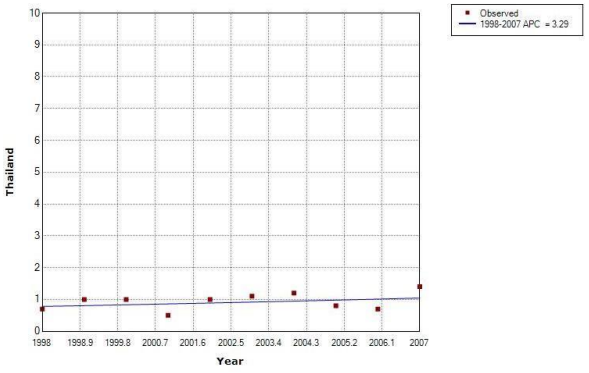

Observed
1998-2007 APC = 1.12
Philipines
Year


Observed
1998-2007 APC = -2.90
Philipines
Year

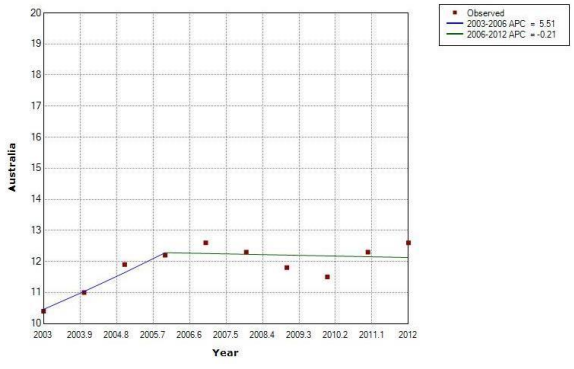

Observed
1998-2007 APC = 2.65
Singapore
Year

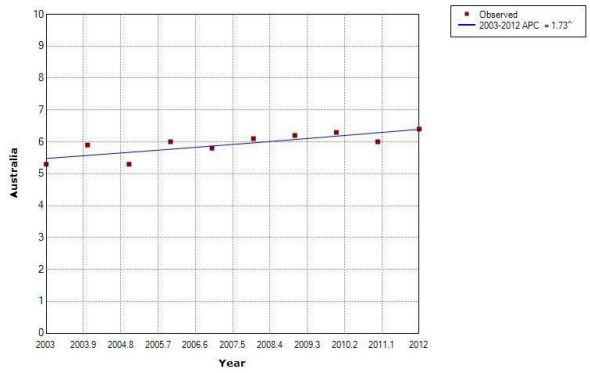

Observed
1998-2007 APC = 0.06
Singapore
Year

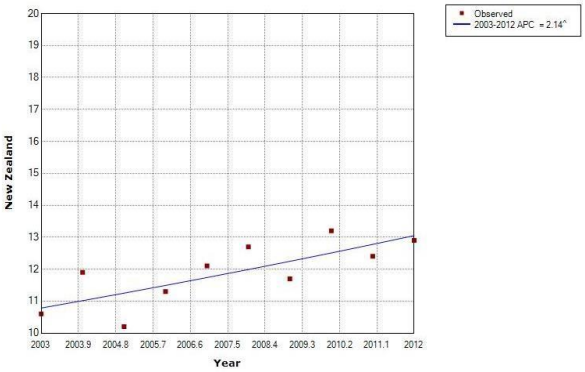

Observed
1998-2007 APC = 5.33^
Thailand
Year

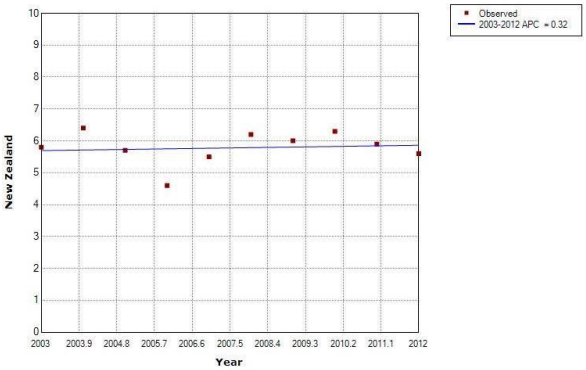

Observed
1998-2007 APC = 3.29
Thailand
Year

4) Oceania

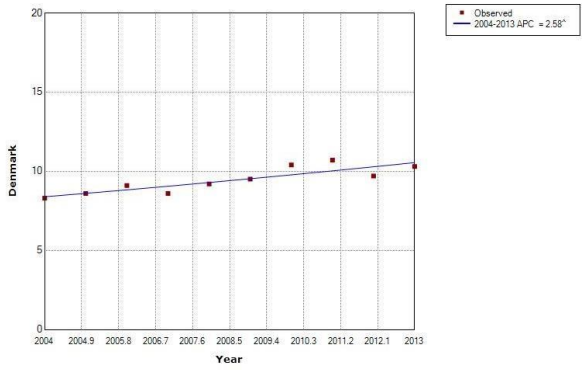

Observed
2003-2006 APC = 5.51
2006-2012 APC = -0.21
Australia
Year

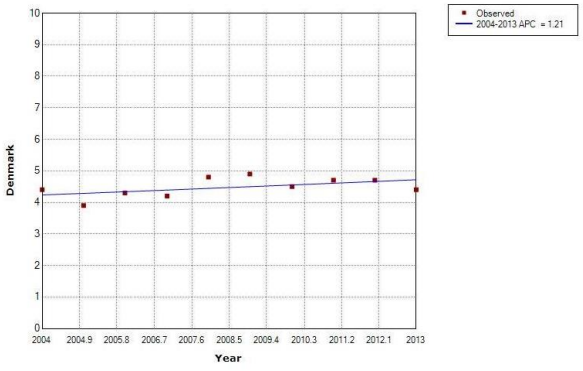

Observed
2003-2012 APC = 1.73^
Australia
Year

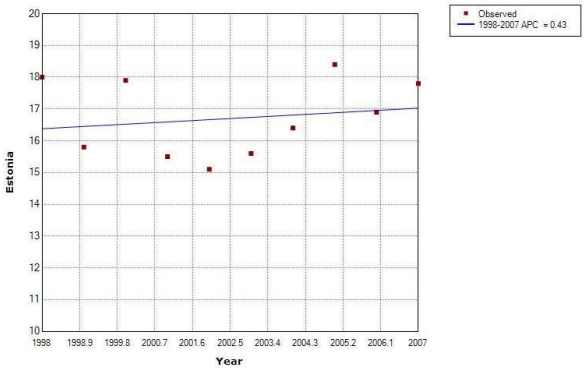


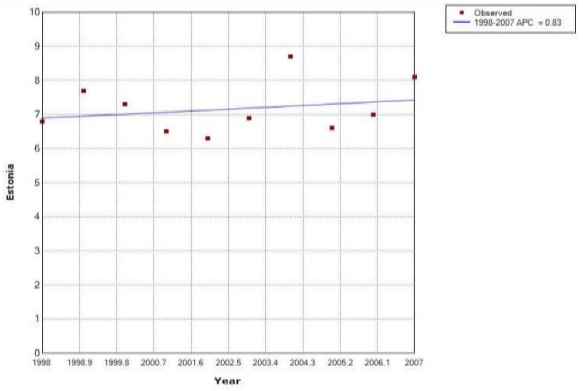


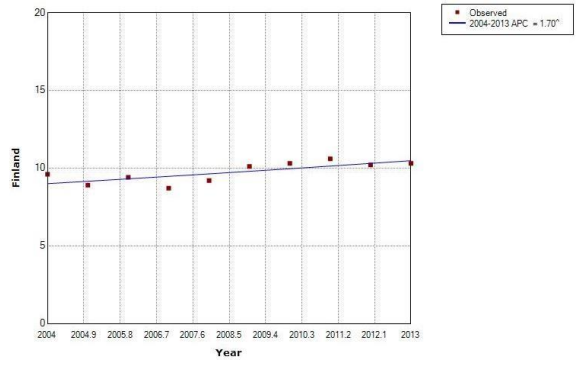
5). Northern Europe

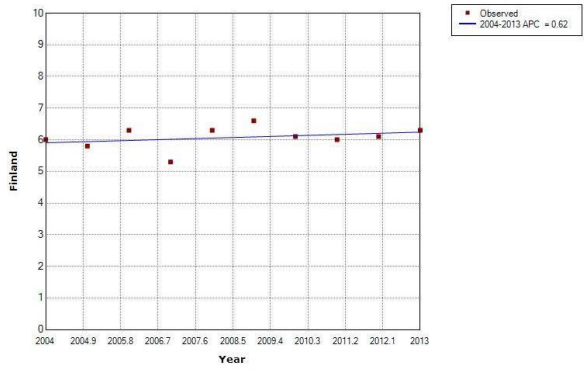


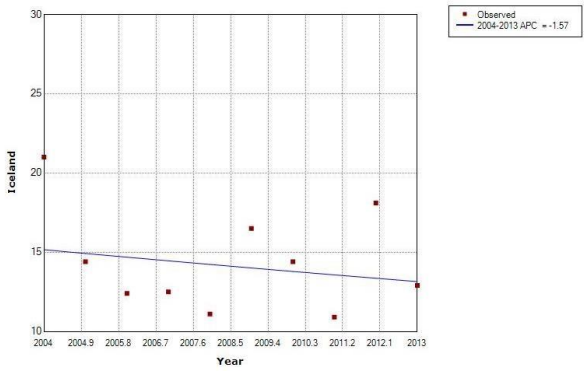


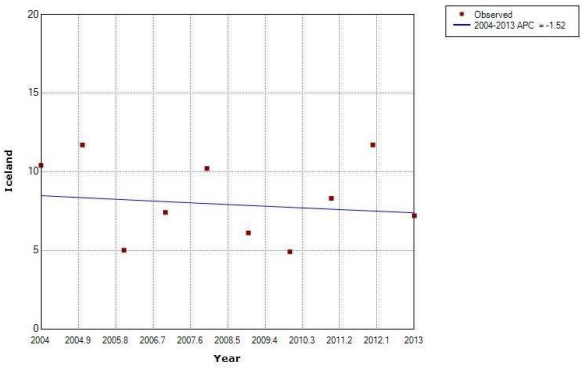


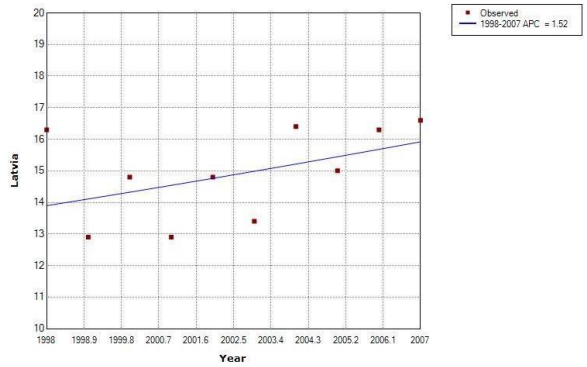


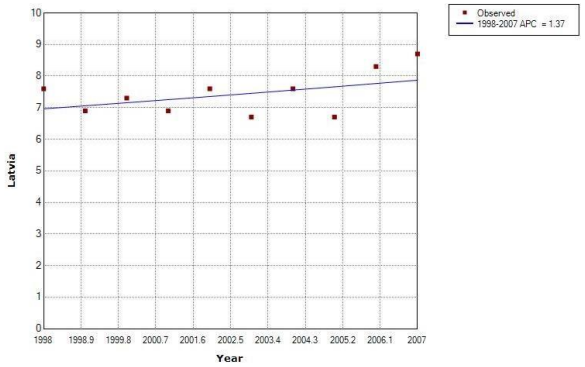


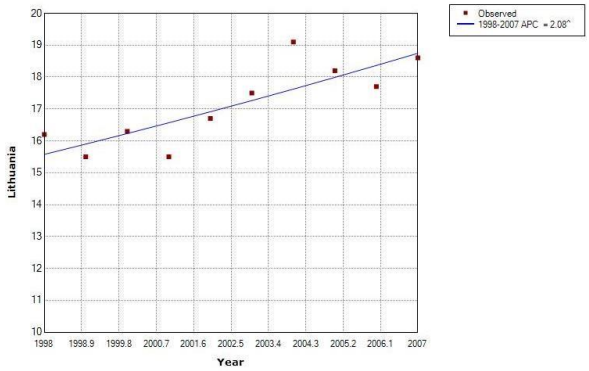


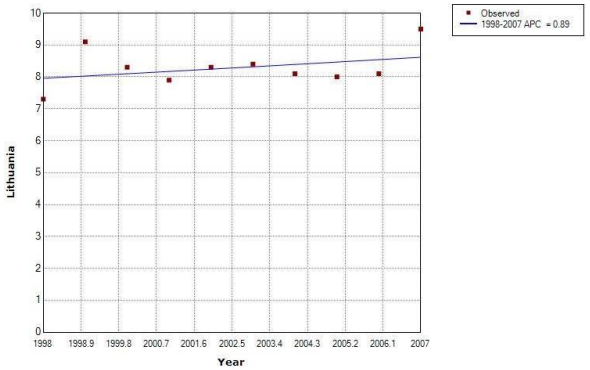

Observed
2004-2013 APC = -1.57
Iceland
Year

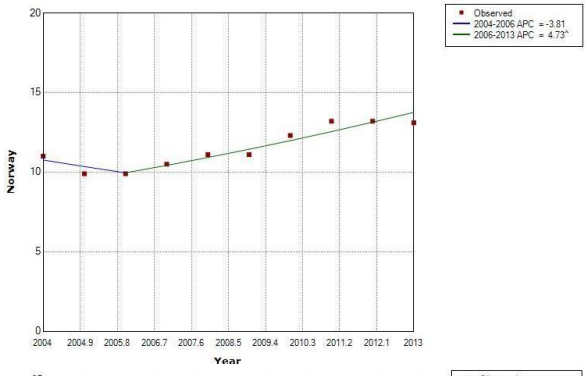

Observed
2004-2013 APC = -1.52
Iceland
Year

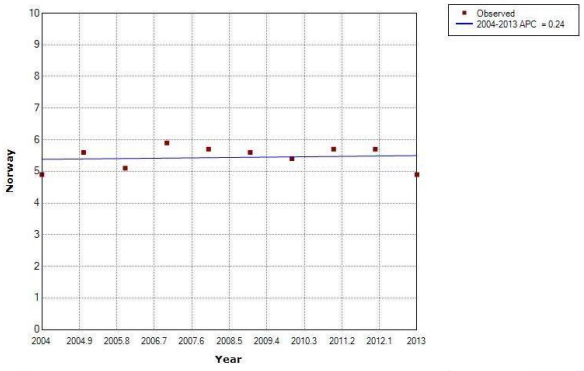

Observed
1998-2007 APC = 1.52
Latvia
Year

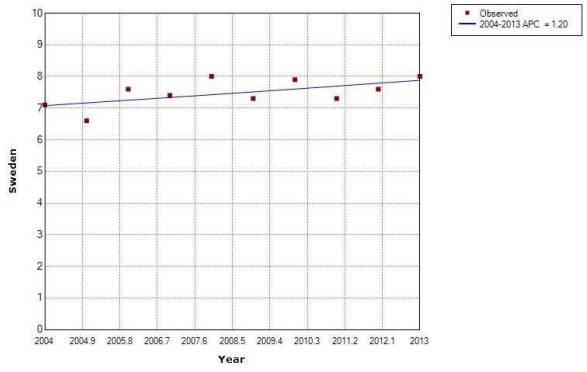

Observed
1998-2007 APC = 1.37
Latvia
Year

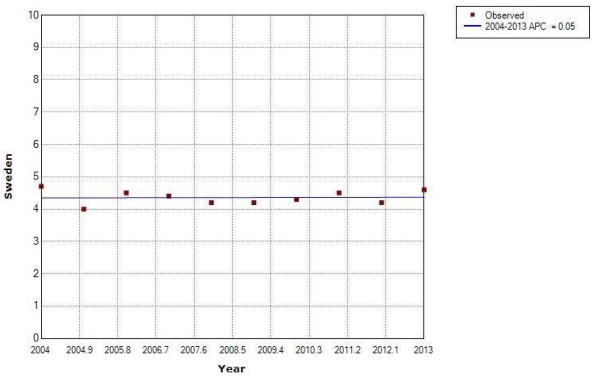

Observed
1998-2007 APC = 2.08*
Lithuania
Year

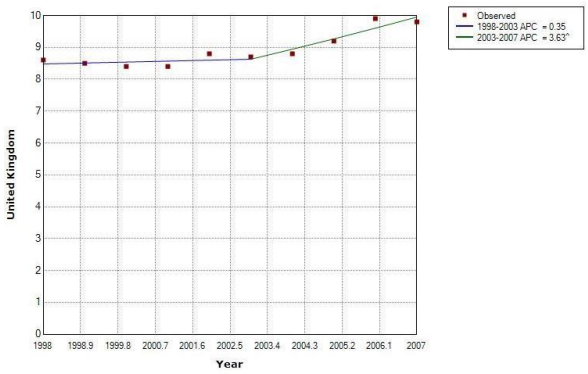

Observed
1998-2007 APC = 0.89
Lithuania
Year

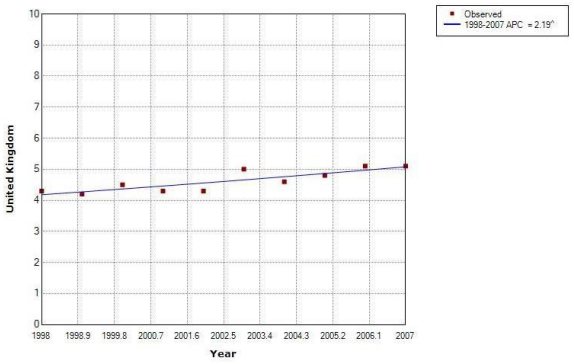

Observed
2004-2006 APC = -3.81
2006-2013 APC = 4.73*
Norway
Year


Observed
2004-2013 APC = 0.24
Norway
Year

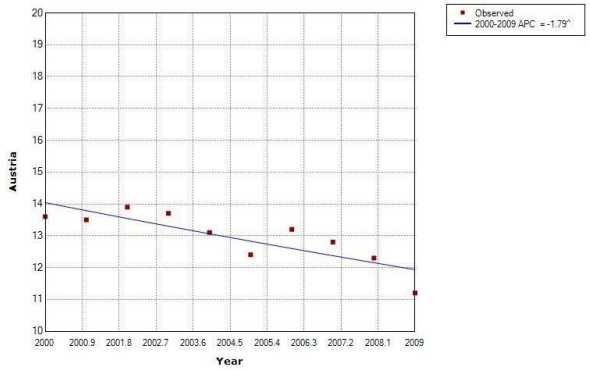

Observed
2004-2013 APC = 1.20
Sweden
Year

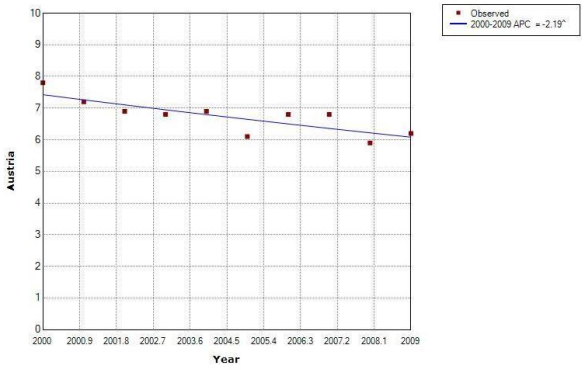

Observed
2004-2013 APC = 0.05
Sweden
Year

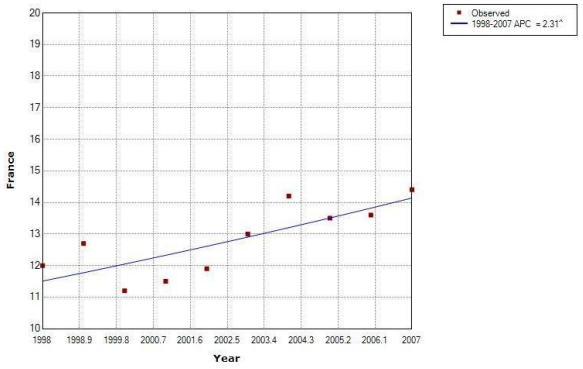


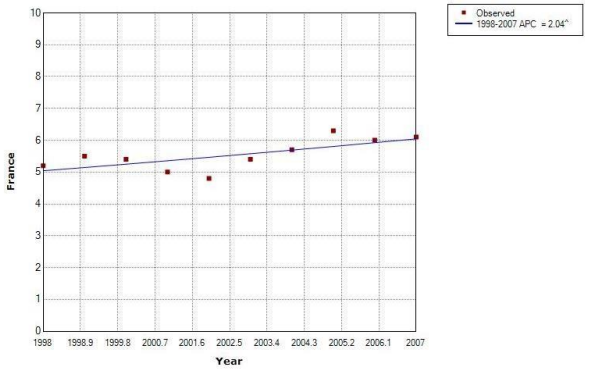


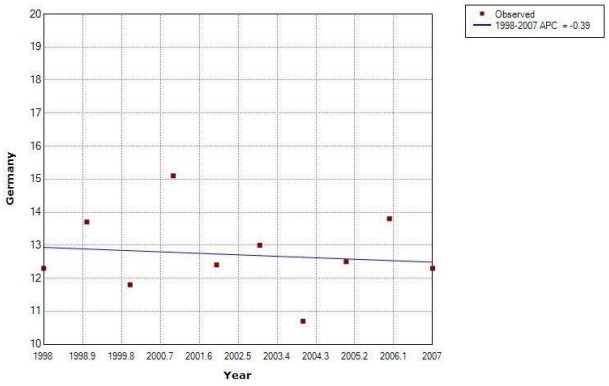
6) Western Europe

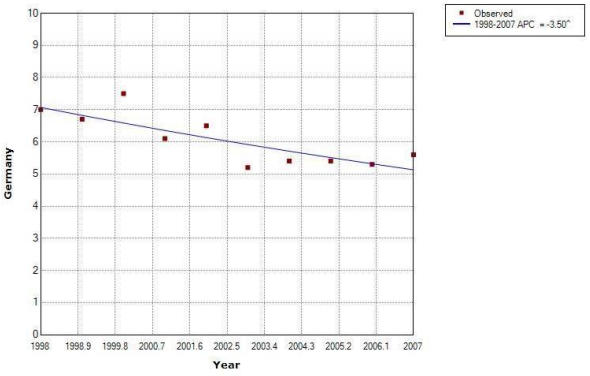


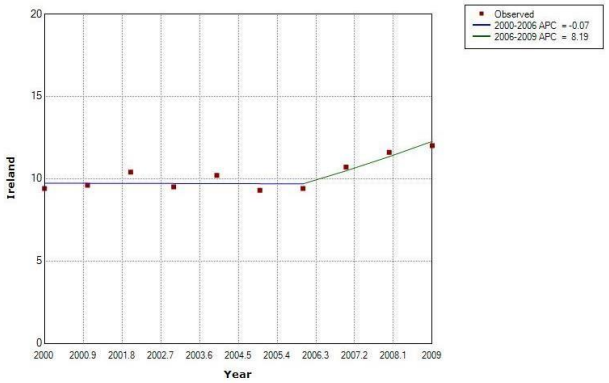


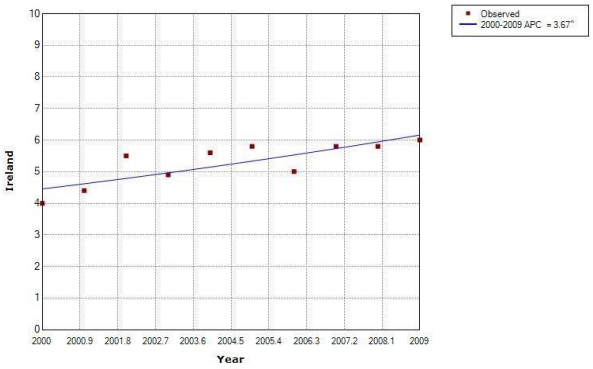


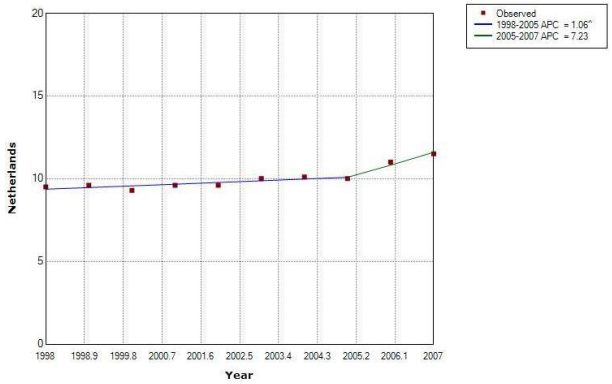


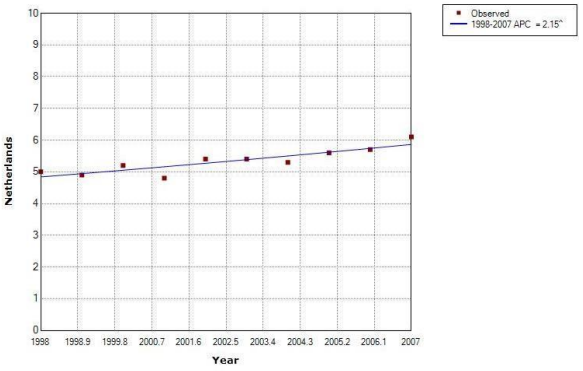

Observed
1998-2007 APC = -0.39
Germany
Year

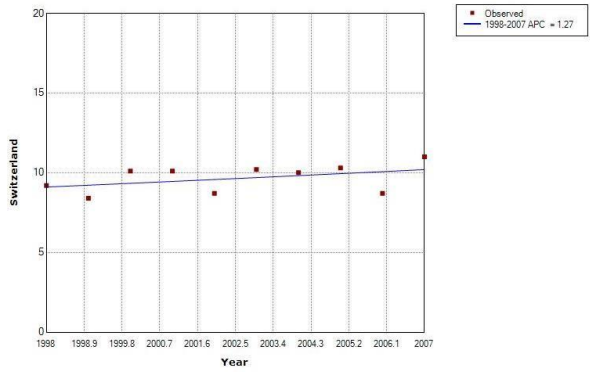

Observed
1998-2007 APC = -3.50*
Germany
Year

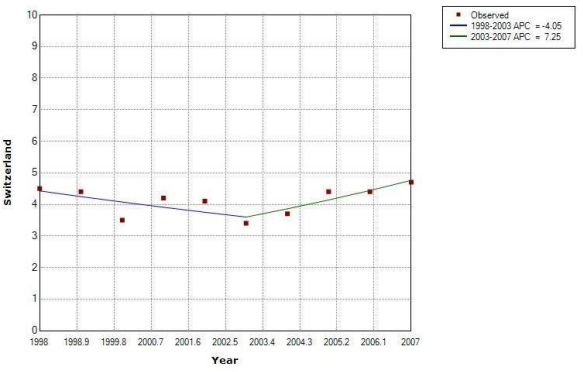

Observed
2000-2006 APC = -0.07
2006-2009 APC = 8.19
Ireland
Year


Observed
2000-2009 APC = 3.67*
Ireland
Year

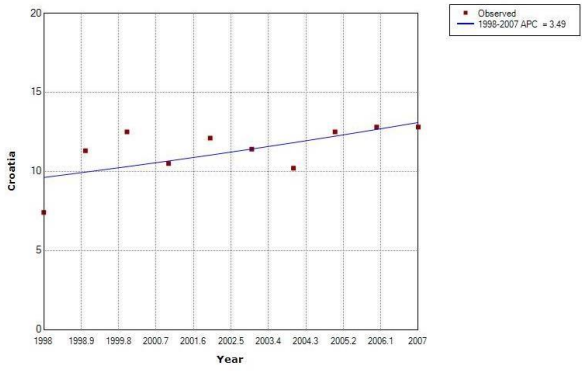

Observed
1998-2005 APC = 1.06*
2005-2007 APC = 7.23
Netherlands
Year

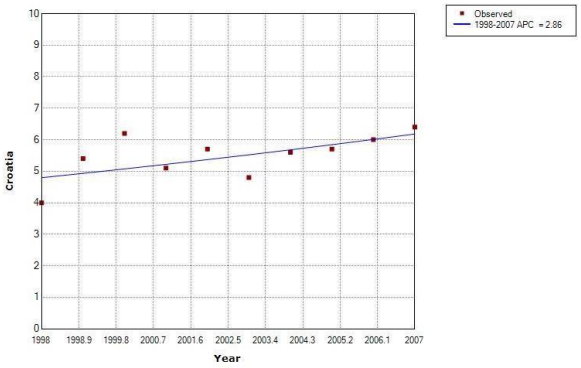

Observed
1998-2007 APC = 2.15*
Netherlands
Year

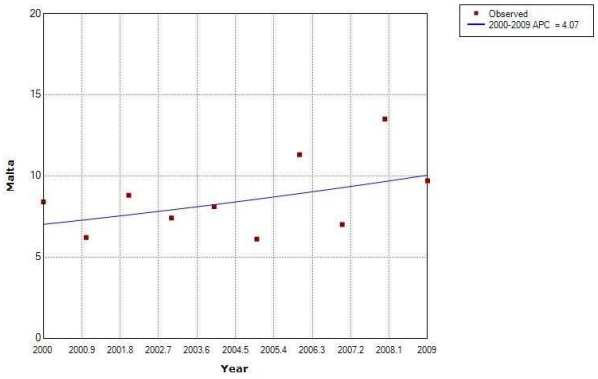

Observed
1998-2007 APC = 1.27
Switzerland
Year

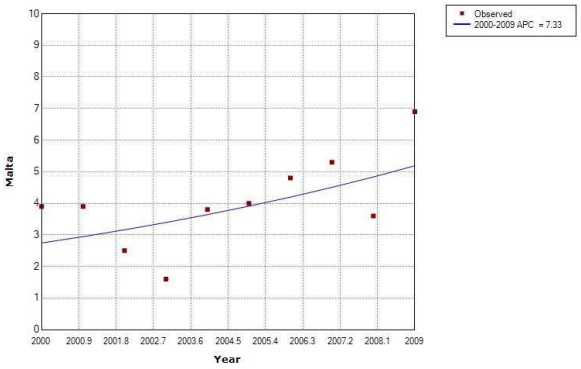

Observed
1998-2003 APC = -4.05
2003-2007 APC = 7.25
Switzerland
Year

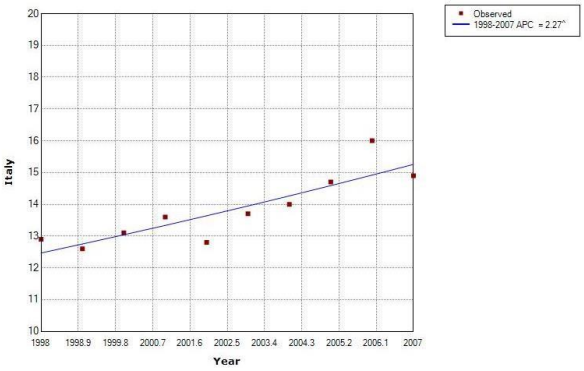
7) Southern Europe

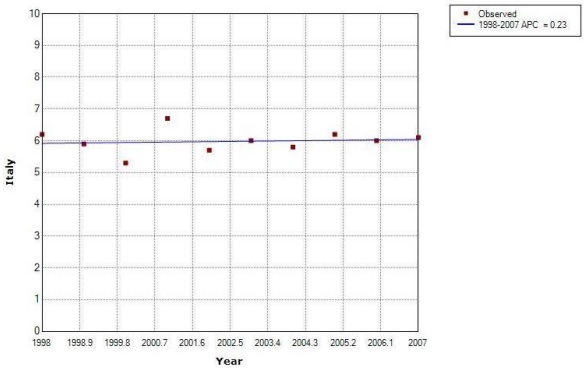


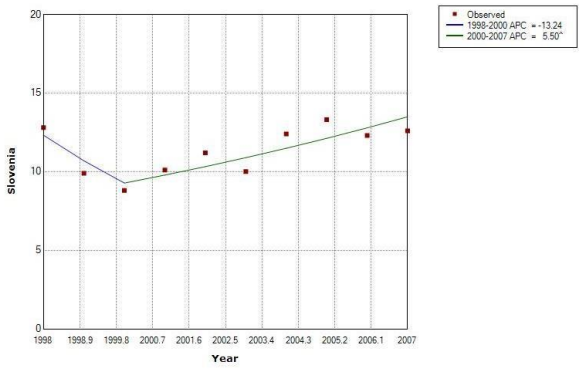


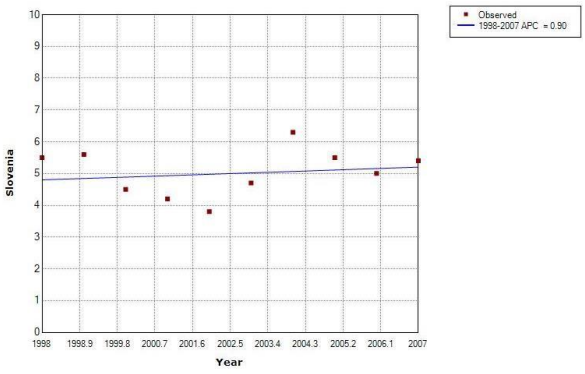


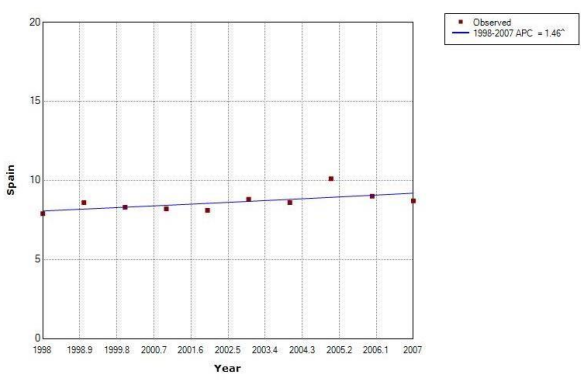


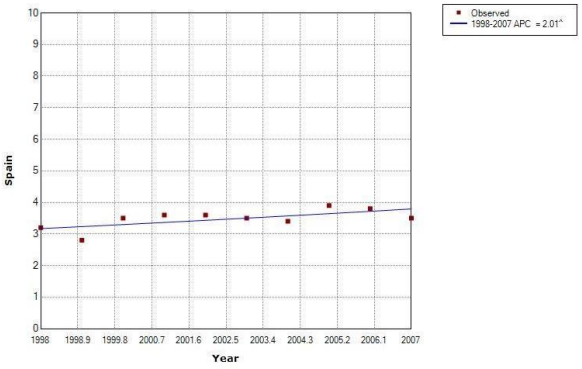




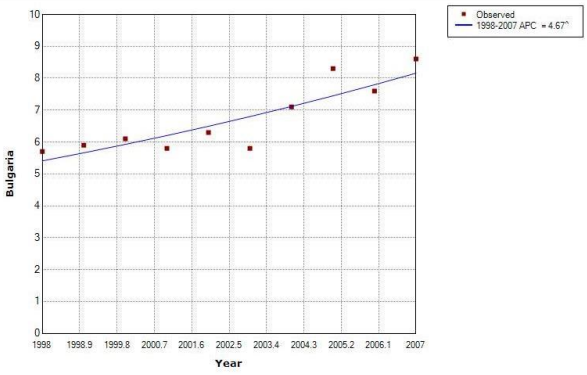


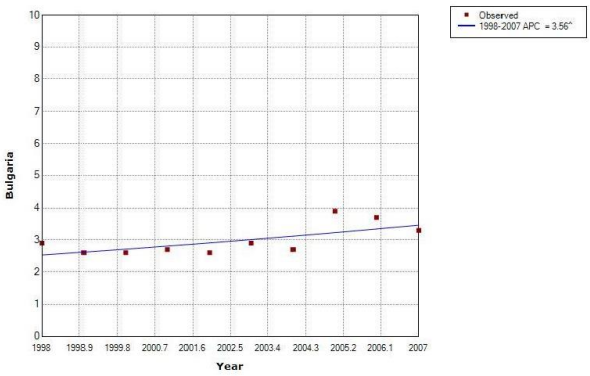


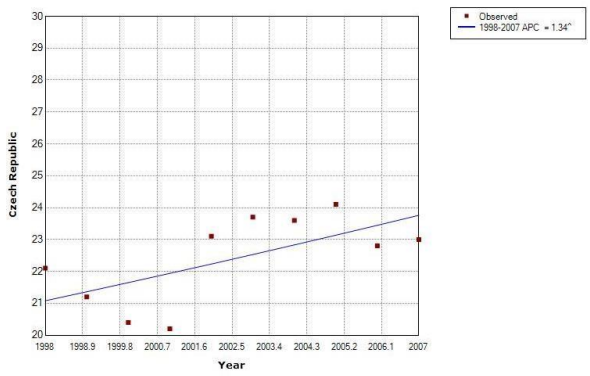


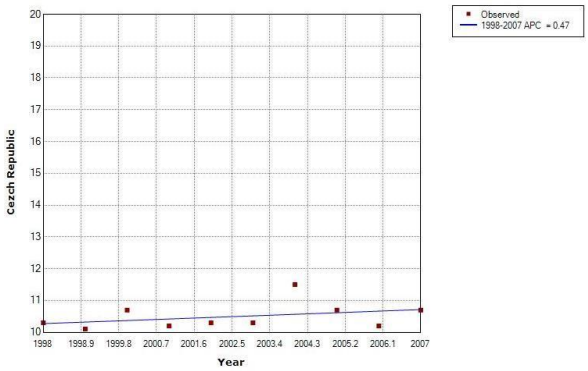


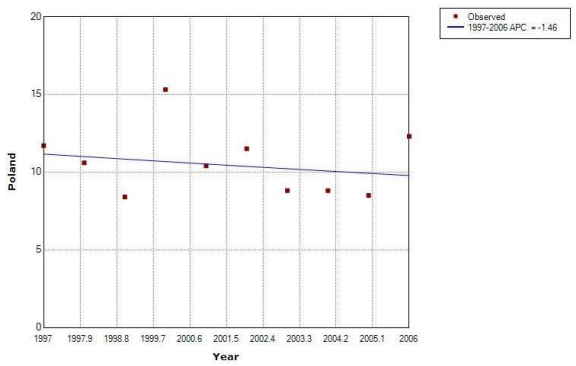
8) Eastern Europe

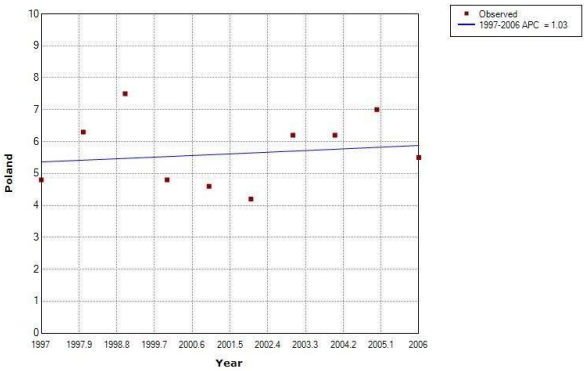


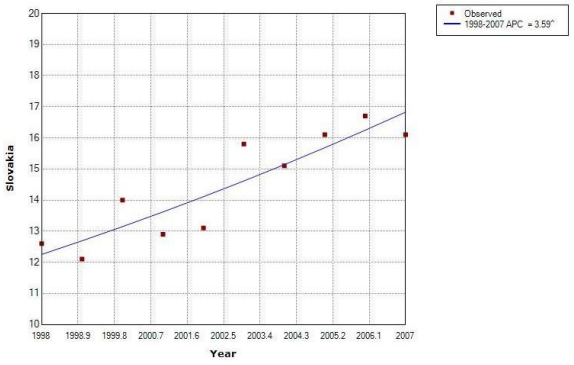


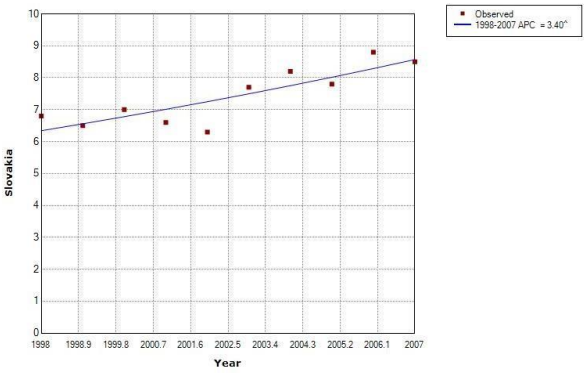






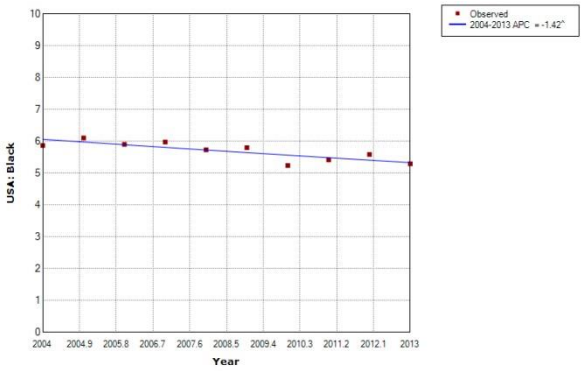


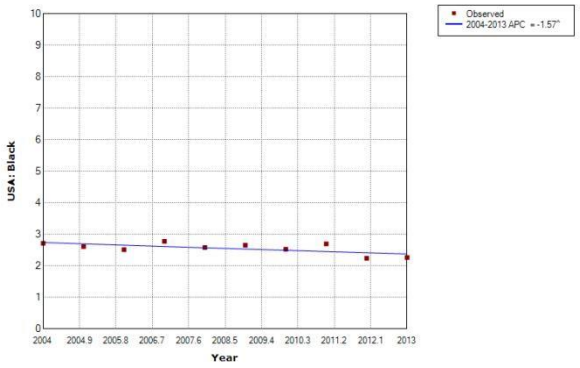

Observed
1998-2007 APC = 3.59*
Slovakia
Year
20
19
18
17
16
15
14
13
12
11
10
1998
1998.9
1999.8
2000.7
2001.6
2002.5
2003.4
2004.3
2005.2
2006.1
2007

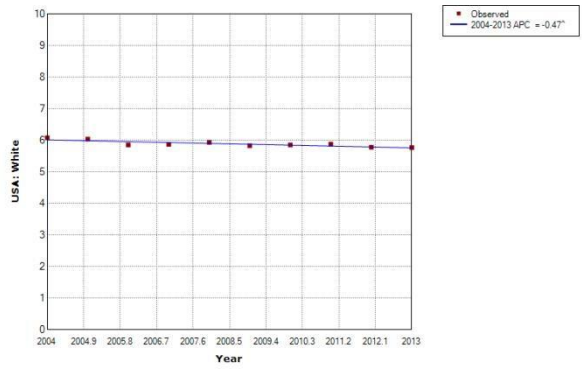

Observed
1998-2007 APC = 3.40*
Slovakia
Year
10
9
8
7
6
5
4
3
2
1
0
1998
1998.9
1999.8
2000.7
2001.6
2002.5
2003.4
2004.3
2005.2
2006.1
2007

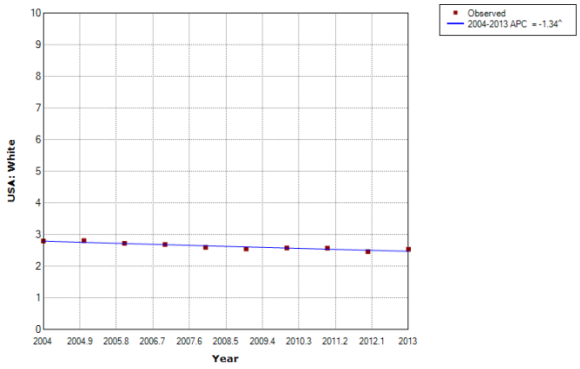
Supplementary Figure 3 Findings from the joinpoint regression analysis of the global mortality rates of kidney cancer (Left: Male, Right: Female)

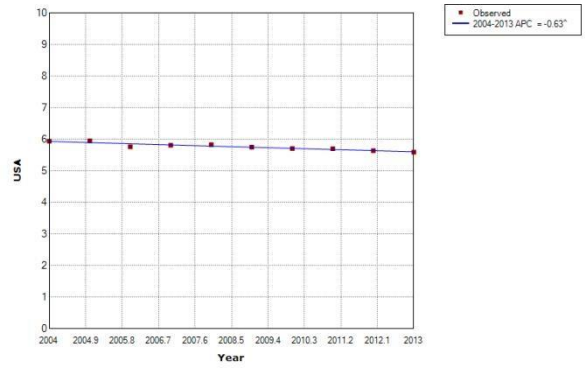
1) North America

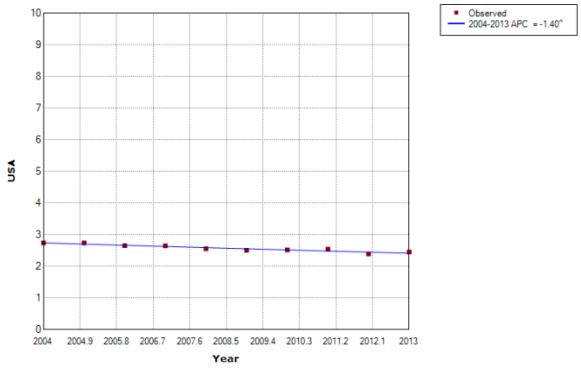




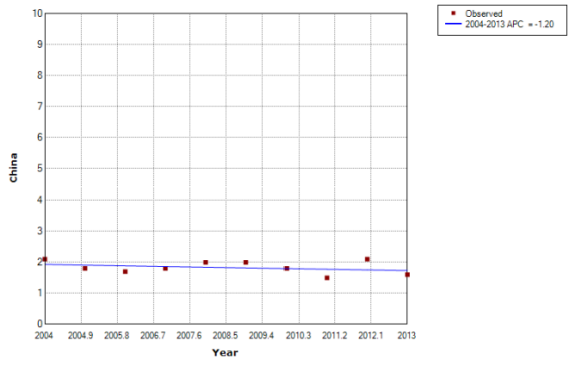


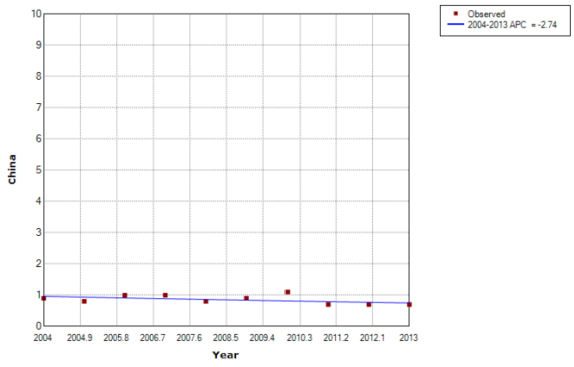




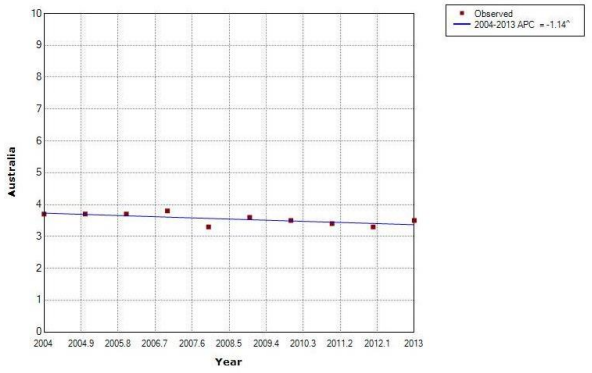


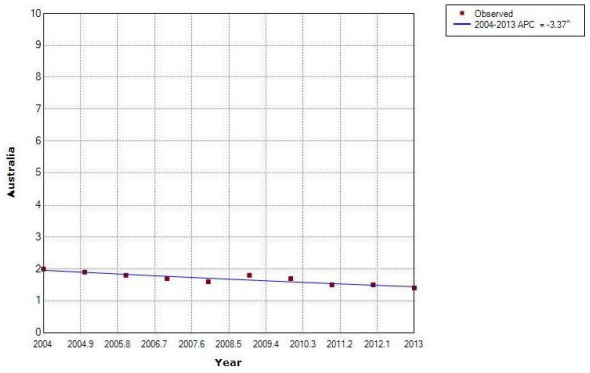
2) Asia

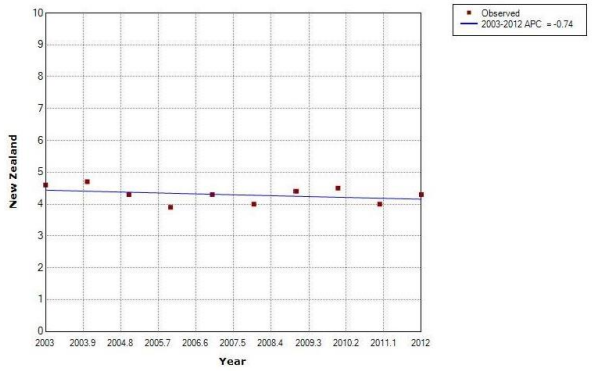


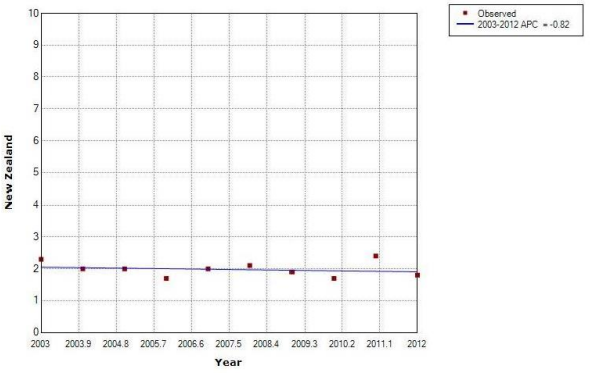


3) Oceania

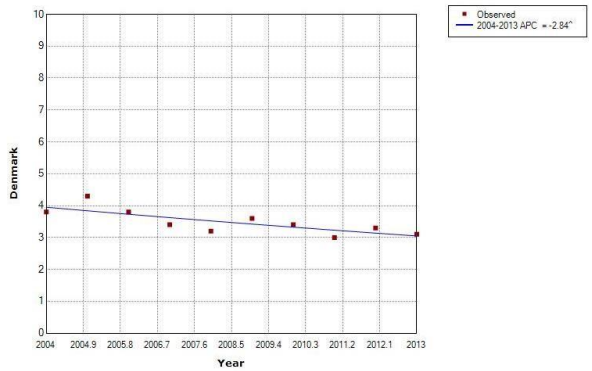


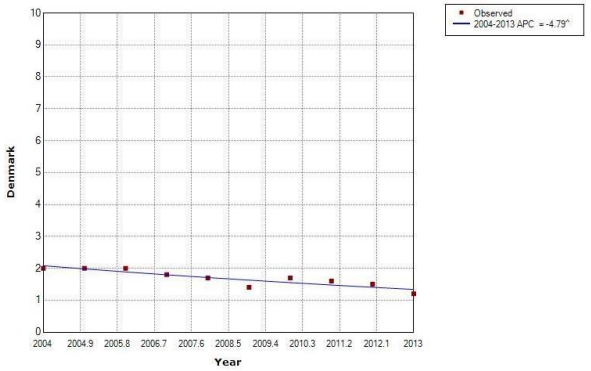


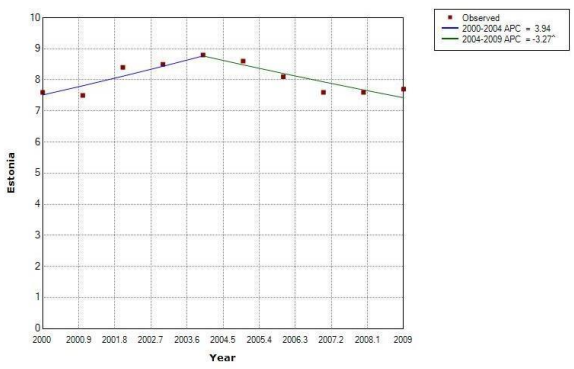


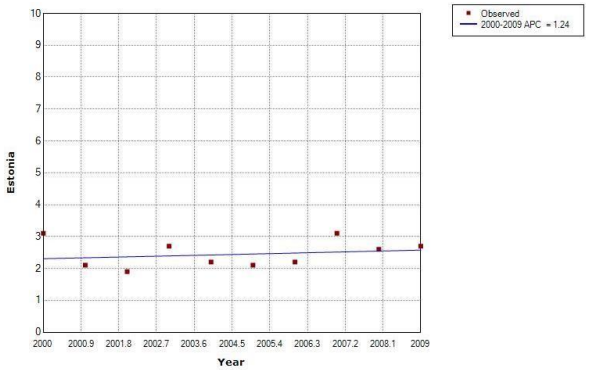


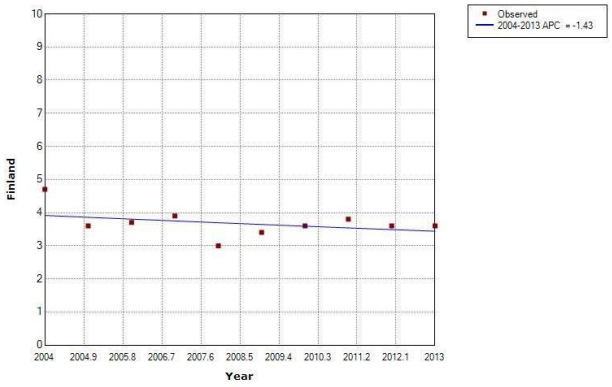
4) Northern Europe

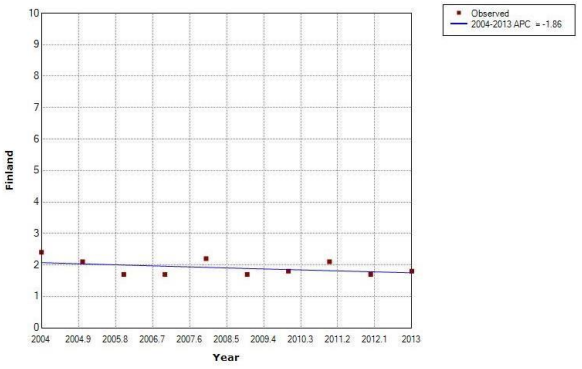









Observed
2004-2013 APC = -1.43
Finland
Year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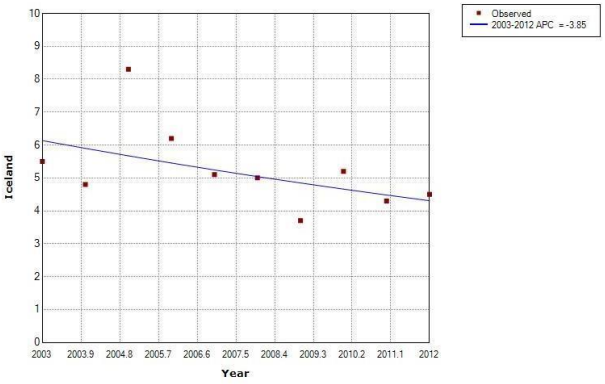
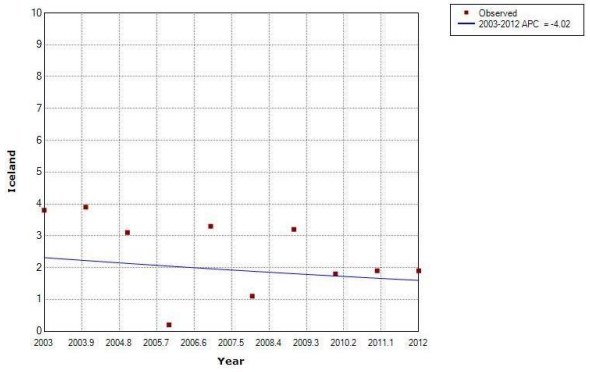
Finland
Year


Observed
2003-2012 APC = -3.85
Iceland
Year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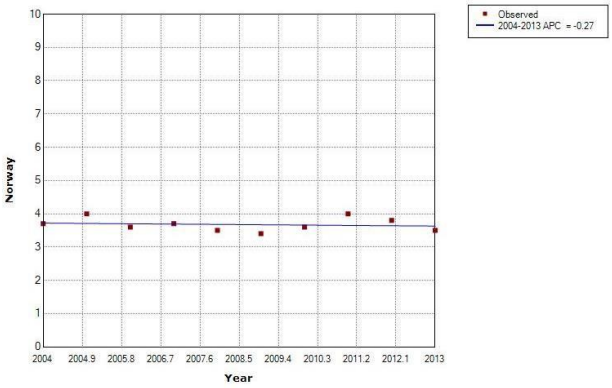
Iceland
Year


Observed
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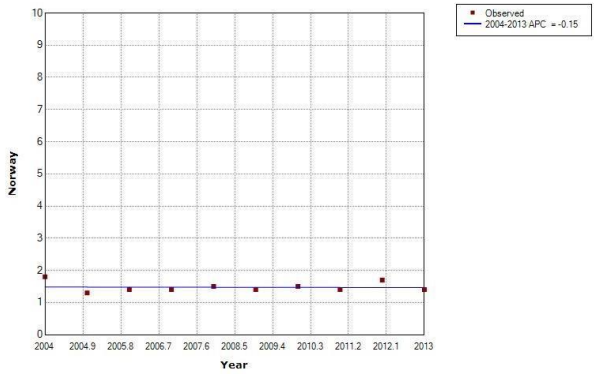
Norway
Year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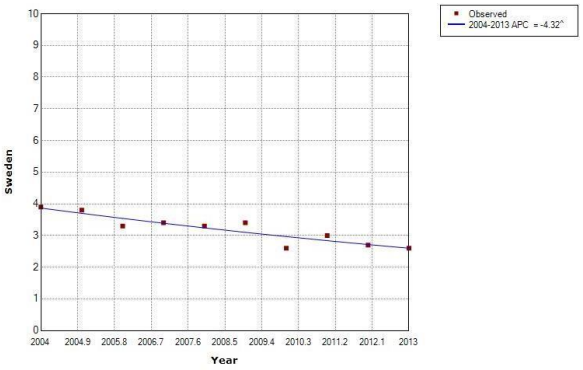
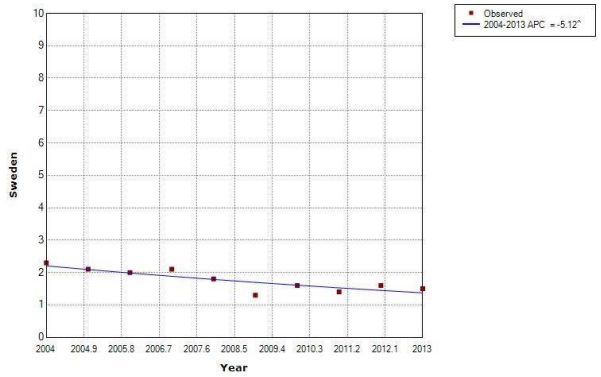
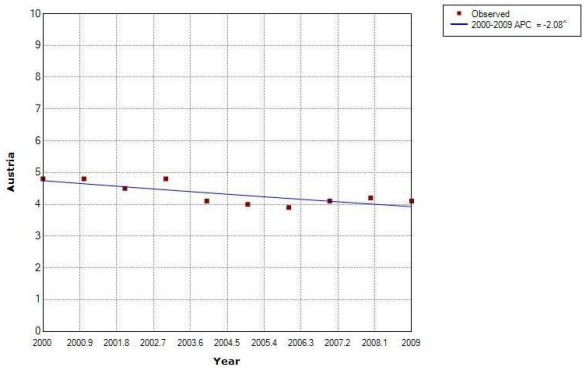
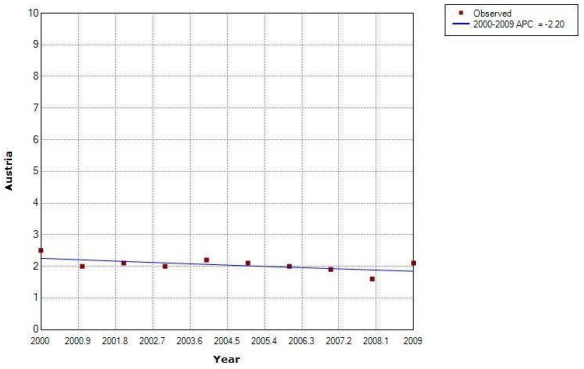
Norway
Year

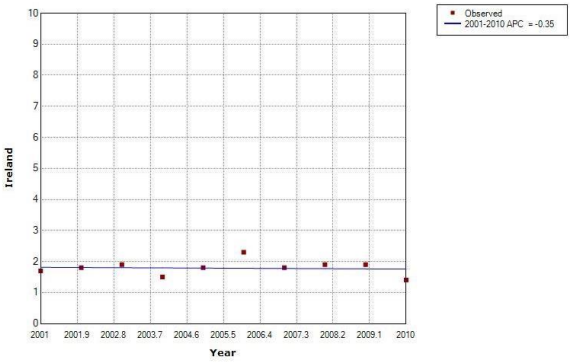

Observed
2004-2013 APC = -4.32^
Sweden
Year

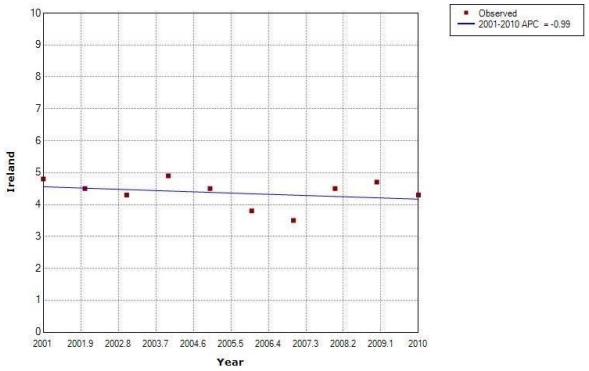

Observed
2004-2013 APC = -5.12^
Sweden
Year

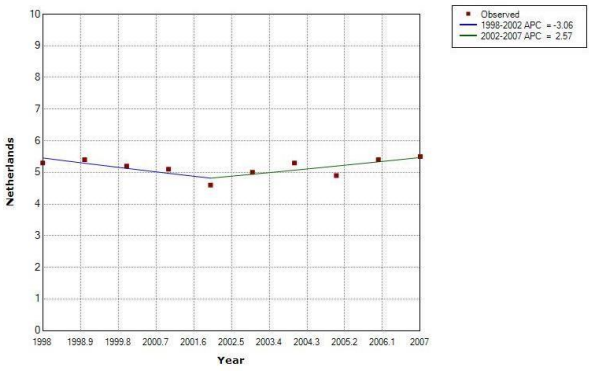
5) Western Europe

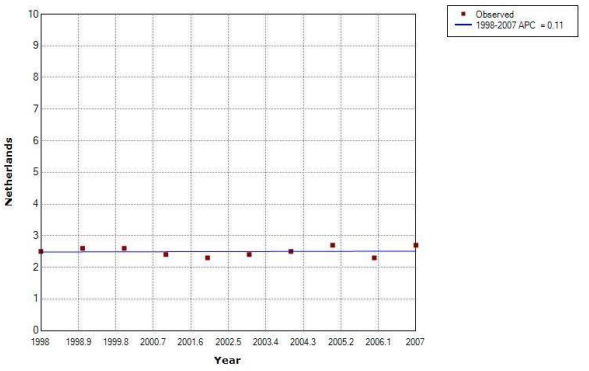




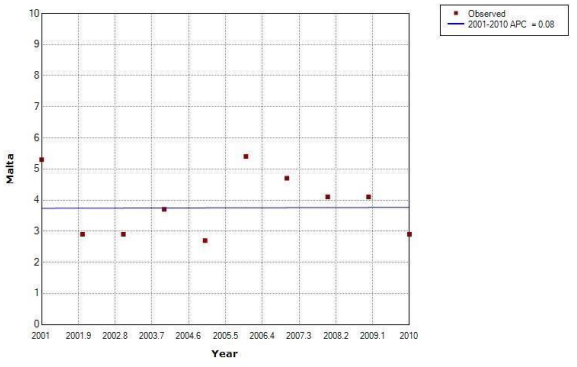


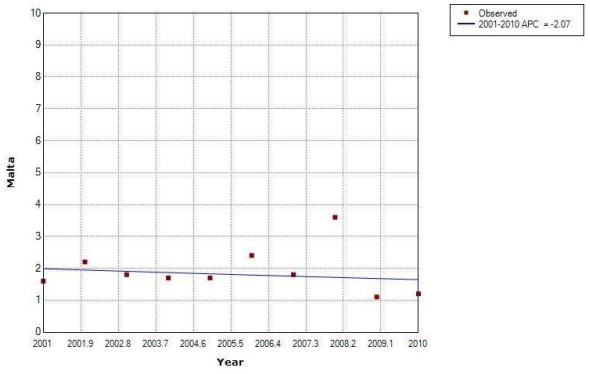


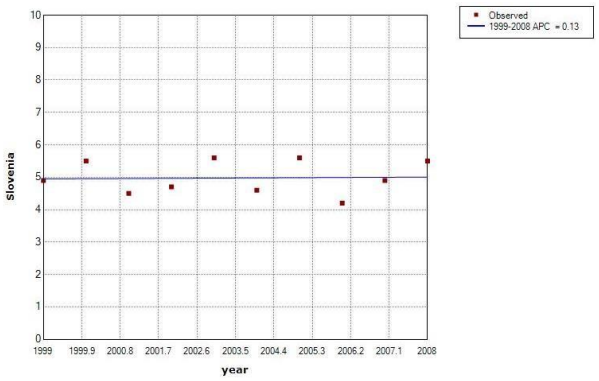


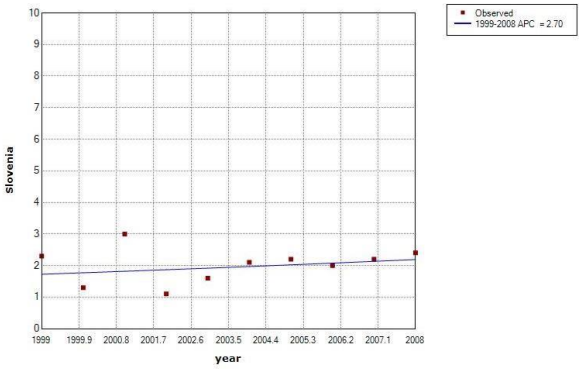


6) Southern Europe

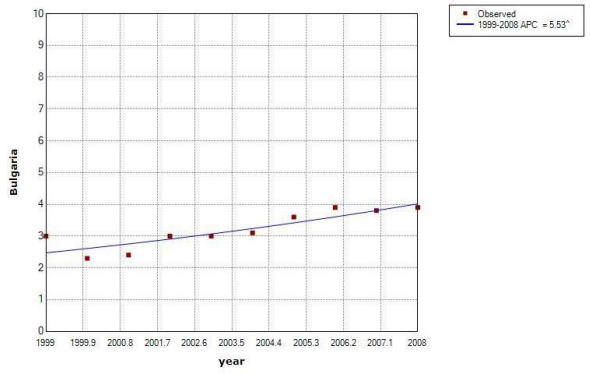


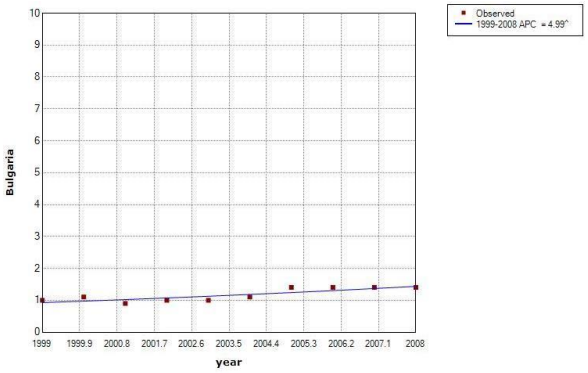


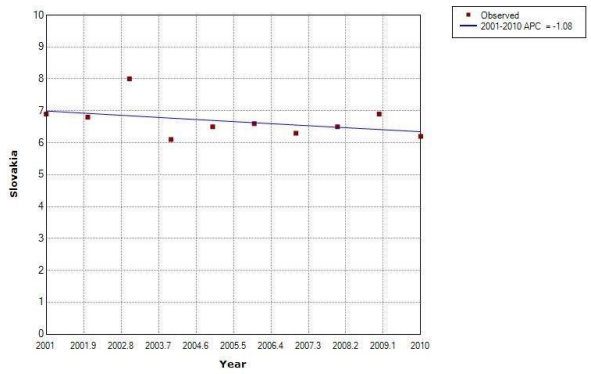


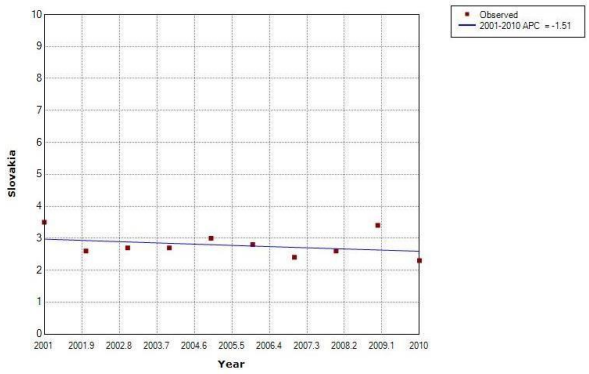


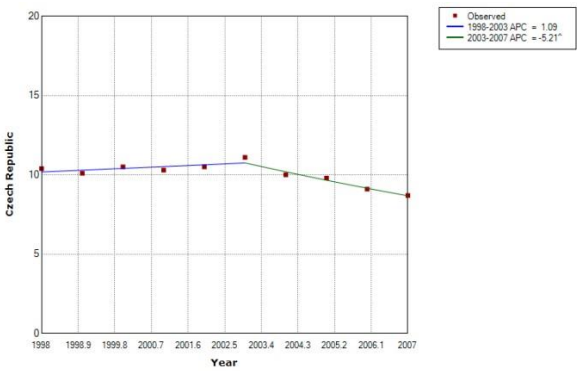
7) Eastern Europe

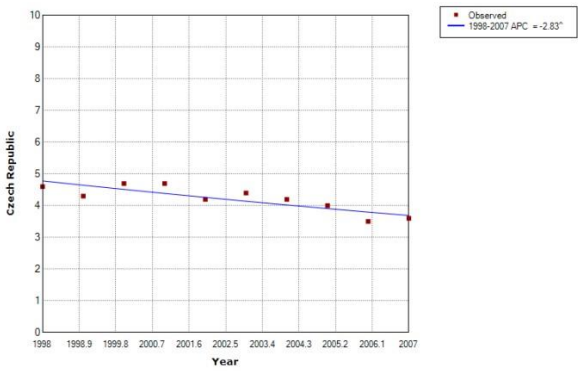






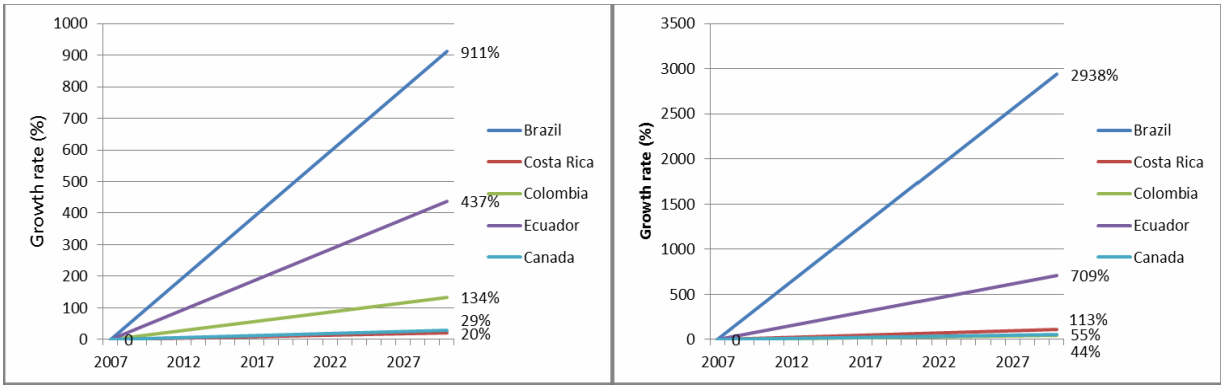




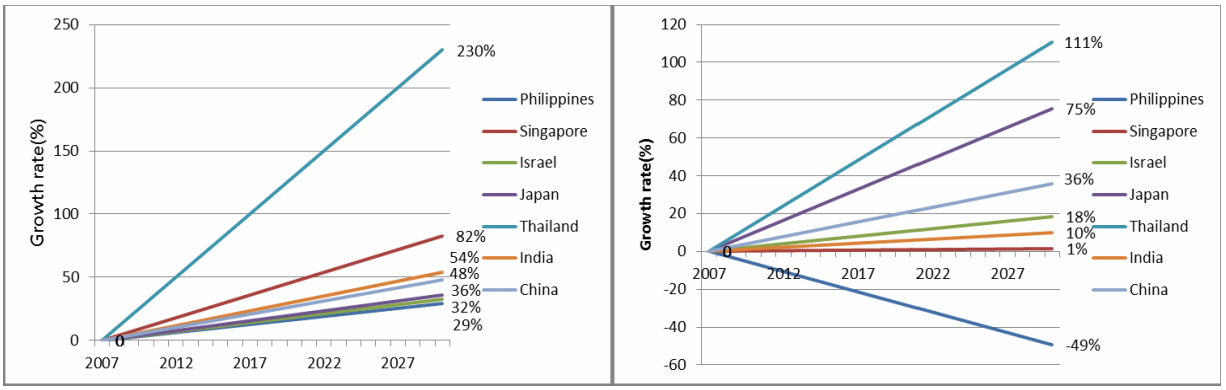


Supplementary Figure 4 Annual Percent Change (APC)-based predicted incidence and mortality rates of kidney cancer compared with the latest available rates (left: men; right: women)

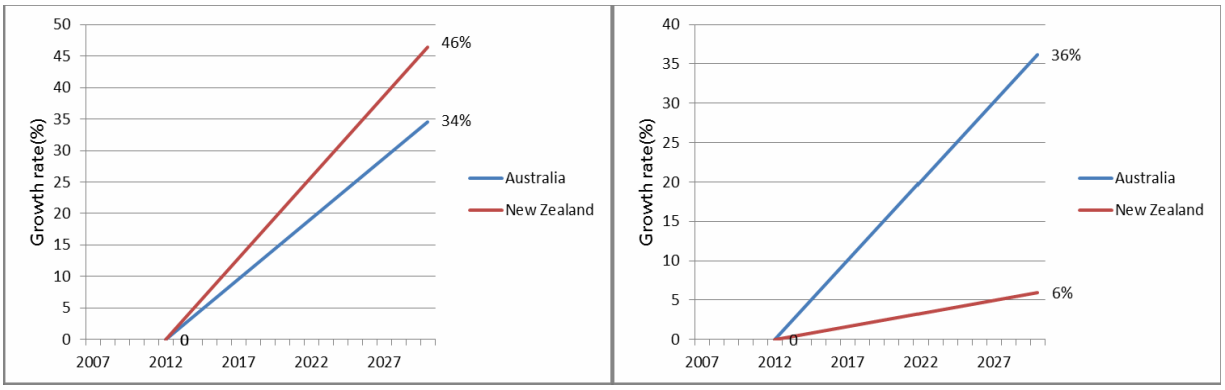
(A). Latin America, the Caribbean and Northern America



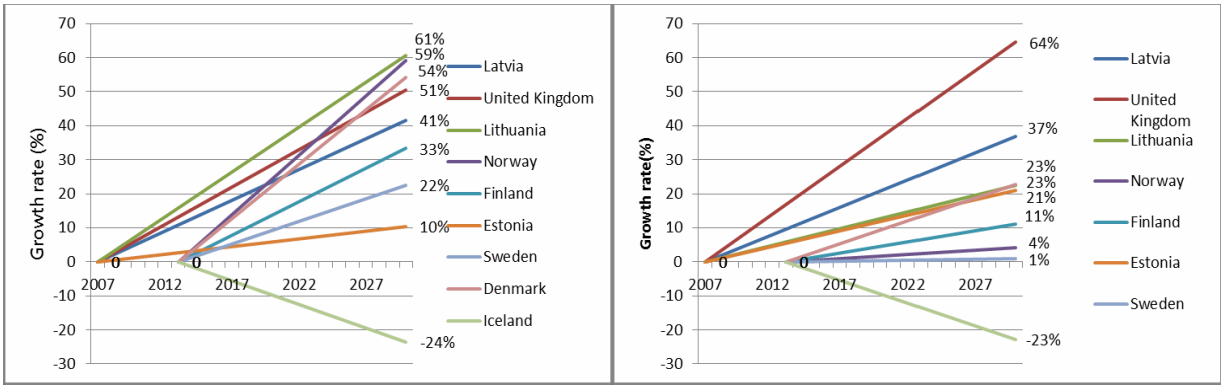
(B). Asia



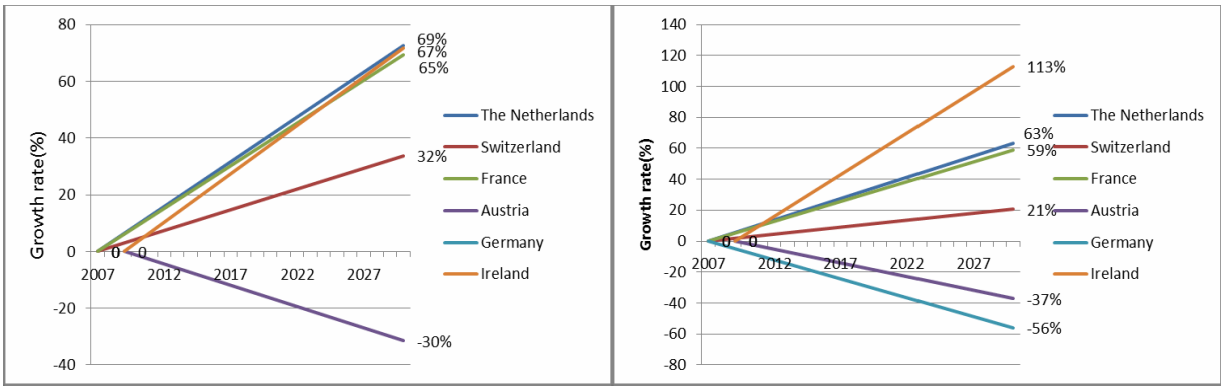
(C). Oceania



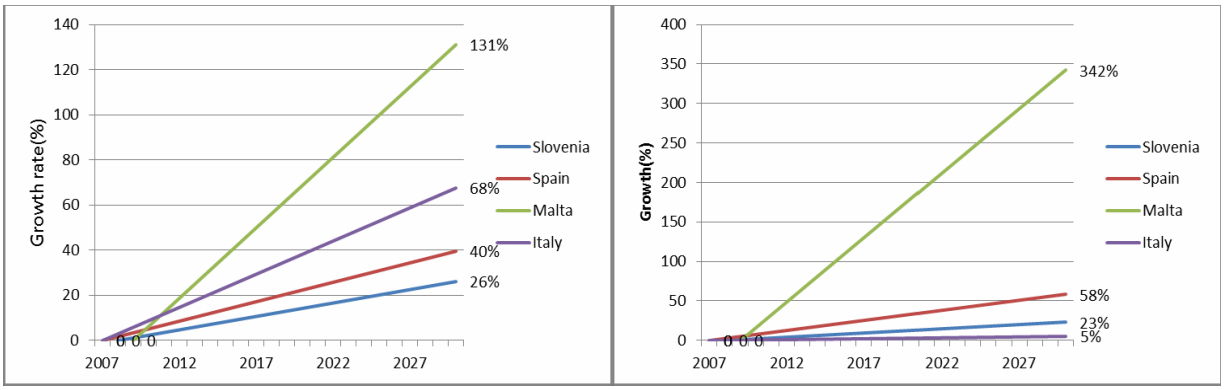
(D). Northern Europe



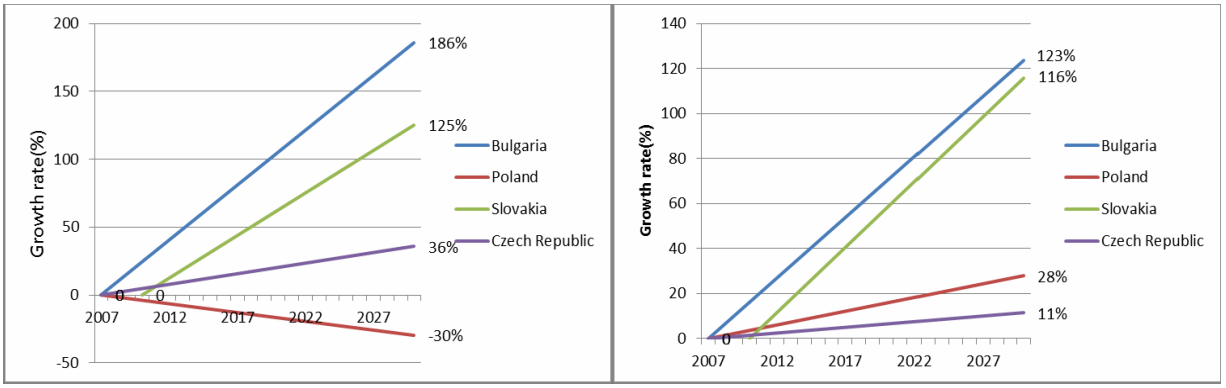
(E). Western Europe



(F). Southern Europe

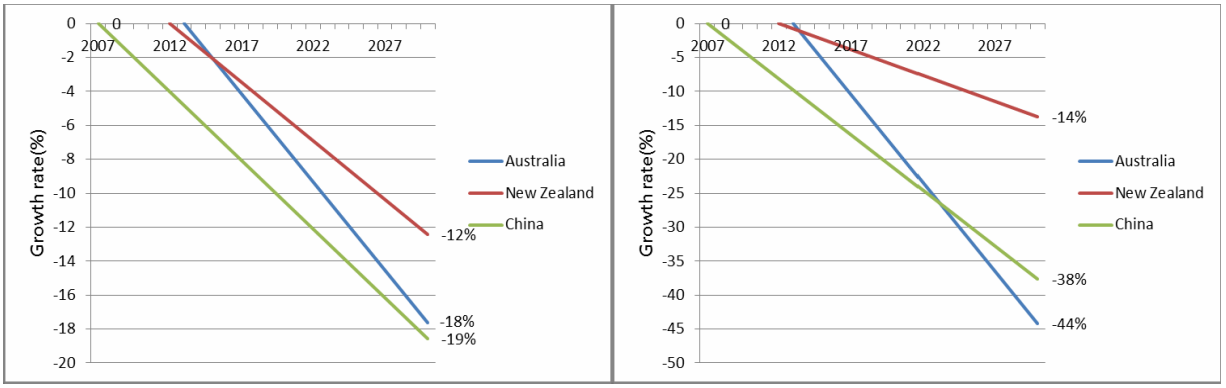


(G). Eastern Europe

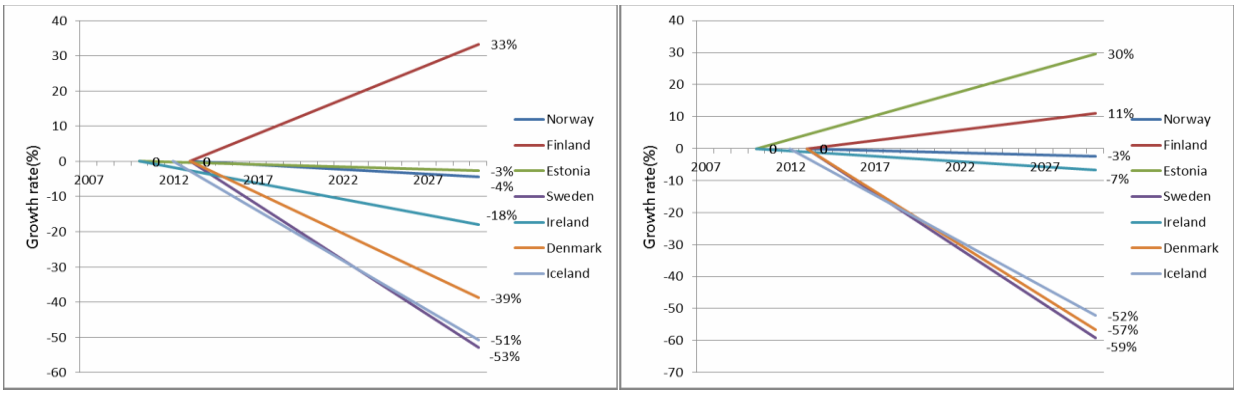


Supplementary Figure 5 Annual Percent Change (APC)-based predicted mortality rates of kidney cancer compared with the latest available rates (left: men; right: women)

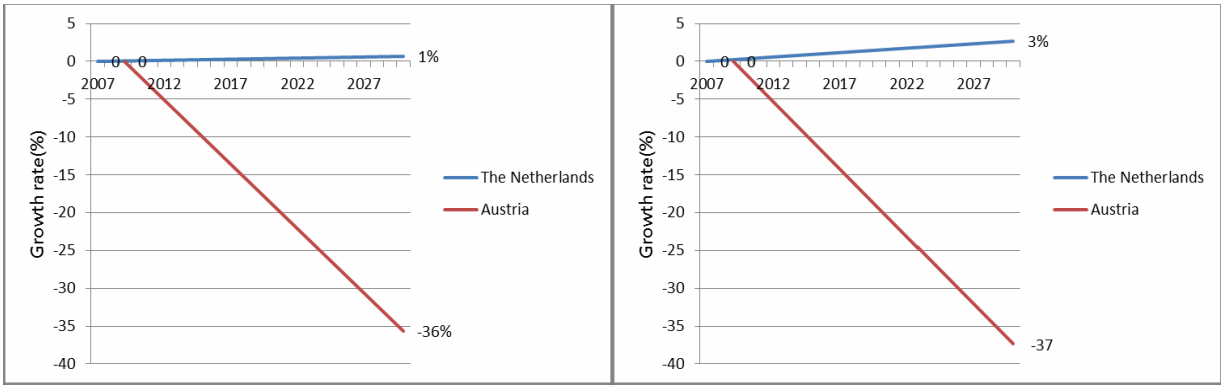
(A). Asia & Oceania



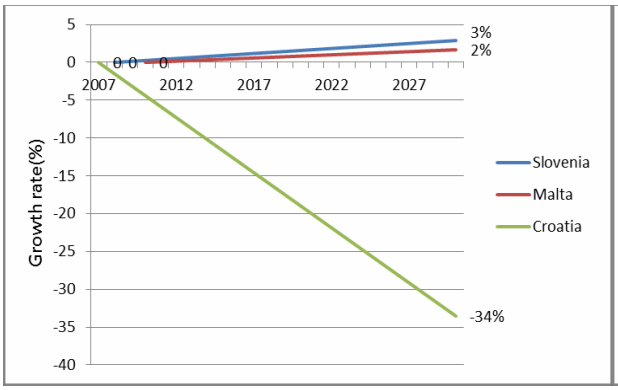
(B). Northern Europe

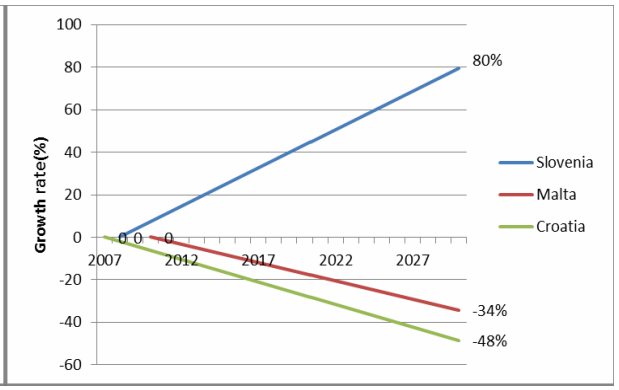
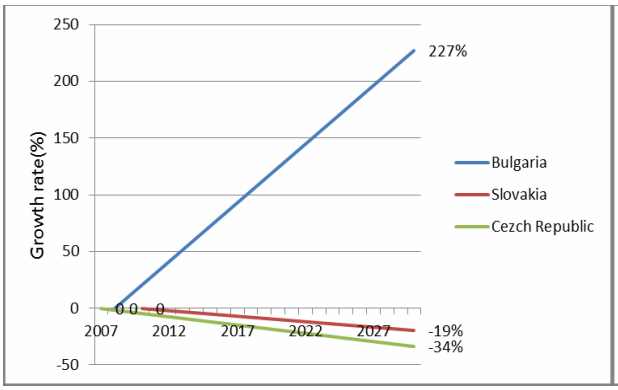
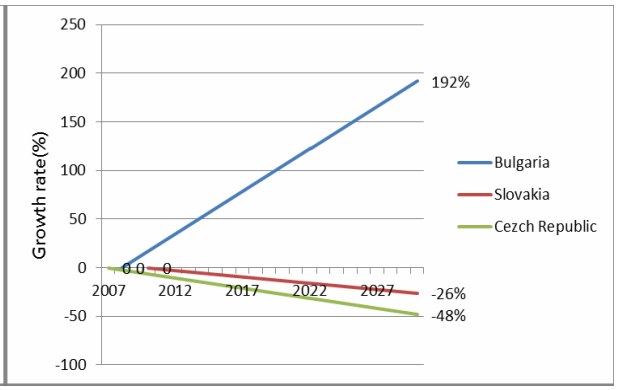


(C). Western Europe



(D). Southern Europe





(E). Eastern Europe