

## World on the Edge - Supporting Data for Chapter 6

[Effects of 1 to 5 Meters of Sea Level Rise on Populations and Land Area around the World](#)

[Effects of 10 Meter Rise in Sea Level on Populations and Land Area around the World](#)

[Leading Causes of Death in the World, 2004](#)

[Leading Causes of Death in China: Urban Population, 1982-2008](#)

[Leading Causes of Death in China: Rural Population, 1982-2008](#)

A full listing of data for the entire book is on-line at:

[http://www.earth-policy.org/books/wote/wote\\_data](http://www.earth-policy.org/books/wote/wote_data)

This is part of a supporting dataset for Lester R. Brown, **World On the Edge: How to Prevent Environmental and Economic Collapse** (New York: W.W. Norton & Company, 2010). For more information and a free download of the book, see Earth Policy Institute on-line at [www.earth-policy.org](http://www.earth-policy.org).

### Effects of 1 to 5 Meters of Sea Level Rise on Populations and Land Area around the World

Region	Sea Level Rise	Population Directly Affected		Area Inundated		Urban Area Inundated		Agricultural Area Inundated	
	Meters	Millions	Percent	Square Kilometers	Percent	Square Kilometers	Percent	Square Kilometers	Percent
Latin America & Caribbean	1	2.9	0.6	64,632	0.3	3,080	0.6	16,104	0.3
	2	4.7	0.9	101,736	0.5	5,212	1.0	29,514	0.6
	3	7.2	1.5	149,183	0.8	8,090	1.6	47,003	1.0
	4	10.3	2.1	193,786	1.0	11,614	2.3	66,330	1.4
	5	13.5	2.7	234,117	1.2	15,294	3.0	85,959	1.8
Middle East and North Africa	1	8.3	3.2	24,654	0.3	3,679	1.9	4,086	1.2
	2	10.9	4.2	33,864	0.3	5,037	2.7	6,031	1.7
	3	13.7	5.3	43,727	0.4	6,529	3.4	8,007	2.3
	4	16.5	6.3	53,615	0.5	7,951	4.2	9,819	2.8
	5	19.4	7.5	63,120	0.6	9,384	4.9	11,451	3.2
Sub-Saharan Africa	1	2.1	0.5	18,641	0.1	430	0.4	1,646	0.0
	2	3.7	0.8	28,083	0.2	742	0.7	3,404	0.1
	3	4.3	0.9	42,645	0.3	1,268	1.2	6,595	0.2
	4	8.5	1.8	59,661	0.4	1,853	1.7	11,231	0.3
	5	11.0	2.4	77,253	0.5	2,449	2.2	16,145	0.4
East Asia	1	37.2	2.0	74,020	0.5	6,648	1.7	45,393	0.8
	2	60.2	3.2	119,370	0.8	11,127	2.9	78,347	1.4
	3	90.0	4.8	178,177	1.3	17,596	4.5	121,728	2.2
	4	126.2	6.7	248,970	1.8	25,725	6.6	174,076	3.2
	5	162.4	8.6	325,089	2.3	34,896	9.0	229,185	4.2
South Asia	1	5.9	0.5	12,362	0.3	809	0.3	3,442	0.1
	2	10.2	0.8	21,983	0.5	1,379	0.6	6,951	0.2
	3	17.8	1.4	35,696	0.9	2,311	1.0	13,501	0.5
	4	22.1	1.7	52,207	1.2	3,599	1.5	23,716	0.8
	5	39.5	3.0	69,225	1.7	5,117	2.1	35,190	1.2
World	1	56.3	1.3	194,309	0.3	14,646	1.0	70,671	0.4
	2	89.6	2.0	305,036	0.5	23,497	1.6	124,247	0.7
	3	133.0	3.0	449,428	0.7	35,794	2.5	196,834	1.1
	4	183.5	4.2	608,239	1.0	50,742	3.5	285,172	1.6
	5	245.9	5.6	768,804	1.2	67,140	4.7	377,930	2.1

Notes: These data are for 84 coastal developing countries; low-lying island nations, which are among those nations most affected by rising seas, are not included in this study. Population and GDP data are from 2000. The data presented here are conservative; they likely underestimate the magnitude of impacts because coastal populations have increased over the last decade and because the analysis does not take into account changes in storm surges as a result of sea level rise. Methodology of study from which these data are taken consisted of overlaying population and area data onto inundation zones with GIS software. Inundation zones were determined through analysis of coastline and elevation data and exclude low-lying areas that are not contiguous with the coast.

Source: Susmita Dasgupta et al., *The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis* (Washington, DC: World Bank, February 2007).

### Effects of 10 Meter Rise in Sea Level on Populations and Land Area around the World

Region	Population and Land Area in Low Elevation Coastal Zone				Share of Population and Land Area in Low Elevation Coastal Zone			
	Total Population	Urban Population	Total Land Area	Urban Land Area	Share of Population	Share of Urban Population	Share of Land Area	Share of Urban Land Area
	Million People		Thousand Square Kilometers		Percent		Percent	
Africa	56	31	191	15	7	12	1	7
Asia	466	238	881	113	13	18	3	12
Europe	50	40	490	56	7	8	2	7
Latin America	29	23	397	33	6	7	2	7
Australia and New Zealand	3	3	131	6	13	13	2	13
North America	24	21	553	52	8	8	3	6
Small Island States	6	4	58	5	13	13	16	13
<b>World</b>	<b>634</b>	<b>360</b>	<b>2,700</b>	<b>279</b>	<b>10</b>	<b>13</b>	<b>2</b>	<b>8</b>

Note: "Low Elevation Coastal Zone" is defined as the "contiguous area along the coast that is less than 10 meters above sea level."

Source: Gordon McGranahan, Deborah Balk, and Bridget Anderson, "The Rising Tide: Assessing the Risks of Climate Change and Human Settlements in Low Elevation Coastal Zones," *Environment and Urbanization*, vol. 16, no. 1 (2007), pp. 17-37.

## Leading Causes of Death in the World, 2004

Cause	World	High-income	Low- and
		countries	middle- income countries
Million Deaths			
Cardiovascular diseases	17.1	3.0	14.0
Infectious and parasitic diseases, <i>including:</i>	9.5	0.2	9.3
<i>Diarrhoeal diseases</i>	2.2	0.0	2.1
<i>HIV/AIDS</i>	2.0	0.0	2.0
<i>Tuberculosis</i>	1.5	0.0	1.4
<i>Malaria</i>	0.9	0.0	0.9
<i>Cancers, including:</i>	7.6	2.2	5.4
<i>Trachea/bronchus/lung</i>	1.3	0.5	0.8
Respiratory infections	4.3	0.3	3.9
Respiratory diseases	4.0	0.5	3.6
Unintentional injuries	3.9	0.3	3.6
Perinatal conditions	3.2	0.0	3.1
Digestive diseases	2.0	0.3	1.7
Intentional injuries	1.6	0.2	1.5
Neuropsychiatric conditions	1.3	0.5	0.8
Diabetes mellitus	1.1	0.2	0.9
Diseases of the genitourinary system	0.9	0.2	0.8
Maternal conditions	0.5	0.0	0.5
Nutritional deficiencies	0.5	0.0	0.5
<b>All Causes</b>	<b>58.8</b>	<b>8.1</b>	<b>50.6</b>

Note: Sums do not always add to totals because WHO excludes some "residual populations" outside WHO member states from its income categories and because minor causes of death are omitted from list.

Source: Compiled by Earth Policy Institute from World Health Organization (WHO), "Mortality and Morbidity: Deaths - LMIC Countries by WHO Region," table for *The Global Burden of Disease: 2004 Update* (World Health Organization 2008), at [www.who.int/healthinfo/global\\_burden\\_disease/estimates\\_regional/en/index.html](http://www.who.int/healthinfo/global_burden_disease/estimates_regional/en/index.html).

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### Leading Causes of Death in China: Urban Population, 1982-2008

Year	Malignant Neoplasms (Cancer)	Cerebrovascular Diseases	Heart Diseases	Respiratory Diseases	Injury and Poisoning	Endocrine and Metabolic Diseases	Digestive Diseases	Genitourinary Diseases	Nervous System Diseases	Mental Disorders	Infectious Diseases	
											Tuberculosis	Other
Deaths per 100,000 People												
1982	115.2	124.4	117.7	48.5	29.6	-	24.4	9.0	-	-	11.3	-
1983	114.2	118.6	119.3	49.4	30.8	-	24.3	9.0	-	-	10.8	-
1984	116.2	116.3	124.6	48.4	29.5	-	23.8	8.5	-	-	10.2	8.1
1985	113.9	117.5	131.0	50.9	32.5	-	23.3	9.1	-	-	10.2	7.9
1986	114.7	114.5	124.9	48.1	31.1	-	22.9	8.9	-	-	9.3	-
1987	132.0	125.9	92.8	91.8	46.5	9.0	27.4	10.1	-	-	9.8	-
1988	119.1	116.6	84.0	85.8	43.8	8.8	24.1	9.0	-	-	-	8.3
1989	124.9	122.0	91.9	93.0	43.3	8.7	22.9	9.1	-	-	7.6	-
1990	128.0	121.8	92.5	92.2	40.4	10.2	23.6	9.3	-	-	7.0	-
1991	123.9	116.5	82.4	84.2	39.9	10.1	22.5	8.7	-	-	6.4	-
1992	125.8	122.7	85.1	97.8	40.4	11.5	22.3	9.0	-	6.6	-	-
1993	126.5	124.2	85.6	99.2	38.8	12.1	21.6	9.1	-	6.9	-	-
1994	128.1	129.6	87.9	94.4	39.5	13.1	20.6	8.9	5.0	7.0	-	-
1995	128.6	130.5	90.1	92.5	40.6	13.8	19.5	9.2	5.1	7.2	-	-
1996	130.9	134.6	98.9	92.3	39.4	15.2	19.4	9.1	5.1	6.8	-	-
1997	135.4	134.9	100.0	84.0	36.8	15.8	36.8	8.9	5.8	6.9	-	-
1998	139.3	137.7	106.6	86.8	38.3	17.2	18.7	9.3	5.8	7.0	-	-
1999	140.5	127.2	98.9	81.7	37.0	16.9	17.9	8.9	5.3	6.7	-	-
2000	146.6	128.0	106.7	79.9	35.6	18.0	18.4	9.0	5.5	6.7	-	-
2001	135.6	111.0	95.8	72.6	31.9	17.2	17.1	8.6	5.2	5.4	-	-
2002	135.4	100.6	84.1	89.9	50.4	14.1	19.6	9.7	5.2	-	-	-
2003	134.5	105.4	76.2	77.3	32.6	14.1	19.3	7.1	4.8	-	-	-
2004	126.4	100.9	99.4	69.3	31.1	14.9	17.1	9.5	4.6	-	-	-
2005	126.0	116.6	98.2	69.0	45.3	13.8	18.1	8.6	4.6	5.2	-	-
2006	144.6	93.7	90.7	69.3	32.4	17.6	15.6	7.3	5.0	3.4	-	-
2007	176.2	115.5	100.6	80.9	37.6	20.4	17.5	7.9	5.9	5.4	-	-
2008	167.0	120.8	121.0	73.0	31.3	21.1	17.6	7.0	6.3	3.7	-	-

**Notes:**

"-" indicates data not available.

Perinatal diseases are excluded from this table.

Figures presented are those reported by Qin and Shi and the Chinese Ministry of Health. Jumps in data may not reflect actual trends.

Source: Compiled by Earth Policy Institute from Chinese Ministry of Health data cited in Qin Xue-jun and Shi Huan-zhong, "Major Causes of Death During the Past 25 Years in China," *Chinese Medical Journal*, vol. 120, no. 24 (2007), pp. 2,317-20, with updates from the Ministry of Health of the People's Republic of China, "Health Career Statistics Bulletins," at [www.moh.gov.cn/publicfiles/business/htmlfiles/zwgkzt/pwstj/index.htm](http://www.moh.gov.cn/publicfiles/business/htmlfiles/zwgkzt/pwstj/index.htm), viewed July 2010.

### Leading Causes of Death in China: Rural Population, 1982-2008

Year	Malignant Neoplasms (Cancer)	Cerebrovascular Diseases	Heart Diseases	Respiratory Diseases	Injury and Poisoning	Endocrine and Metabolic Diseases	Digestive Diseases	Genitourinary Diseases	Nervous System Diseases	Mental Disorders	Infectious Diseases	
											Tuberculosis	Other
Deaths per 100,000 People												
1982	103.0	103.5	159.3	77.3	48.4	-	38.3	-	-	-	28.3	16.8
1983	100.6	100.5	161.0	81.7	49.4	-	37.9	-	-	-	30.3	18.5
1984	103.0	104.8	168.3	83.3	51.4	-	38.6	-	-	-	28.5	16.3
1985	98.8	101.3	165.8	79.7	46.8	-	35.5	-	-	-	24.2	14.0
1986	95.7	98.8	154.5	79.3	47.1	-	34.4	8.0	-	-	21.8	-
1987	97.5	101.9	89.7	143.1	70.5	-	34.5	8.1	-	-	20.2	14.3
1988	95.0	100.9	74.3	162.6	74.8	-	34.4	8.3	-	-	18.7	16.8
1989	97.7	99.0	76.9	159.0	74.8	-	32.8	8.4	-	-	17.3	13.7
1990	112.4	103.9	69.6	169.7	68.5	-	32.2	9.5	-	-	11.9	11.2
1991	101.4	97.5	67.5	157.1	75.8	-	33.6	8.9	-	-	14.2	11.2
1992	102.5	103.8	64.7	168.3	68.9	-	30.6	8.1	-	-	11.6	9.1
1993	102.2	98.2	62.7	165.6	71.6	-	31.2	8.4	-	-	11.8	8.8
1994	105.5	104.5	66.6	161.6	76.7	-	30.9	8.4	-	-	11.4	9.2
1995	111.4	108.1	62.0	169.4	72.7	-	30.2	8.5	-	-	10.2	8.2
1996	104.6	110.9	69.1	161.1	71.2	-	28.7	9.4	-	-	8.7	8.9
1997	82.1	105.5	73.7	143.4	60.4	7.3	22.9	7.6	-	-	-	7.2
1998	105.6	113.1	80.0	142.1	69.2	-	24.8	9.2	-	-	8.5	6.5
1999	111.6	111.6	75.0	133.7	66.9	6.4	24.2	9.2	-	-	7.9	-
2000	112.6	115.2	73.4	142.2	64.9	6.8	23.9	9.3	-	-	7.4	-
2001	105.4	112.6	77.7	133.4	63.7	6.6	24.1	9.1	-	-	7.4	-
2002	84.3	70.6	58.5	63.8	41.5	4.9	14.5	5.9	-	-	4.3	-
2003	95.7	89.9	45.5	70.9	21.5	10.5	14.5	7.2	-	-	4.2	-
2004	119.7	74.9	63.4	67.2	33.5	12.7	14.2	8.1	-	-	3.3	-
2005	107.1	111.7	62.1	123.8	44.7	7.0	17.1	6.2	2.3	2.9	-	-
2006	130.2	105.5	71.8	84.9	46.1	8.2	17.0	6.7	4.2	3.8	-	-
2007	144.2	119.7	86.0	100.2	52.1	8.8	15.6	7.1	4.5	3.5	-	-
2008	156.7	134.2	87.1	104.2	53.0	11.1	16.3	5.7	4.4	4.3	-	-

**Notes:**

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