

## MDG 6: Combat HIV/AIDS, Malaria, and Other Diseases

### Snapshots

- HIV prevalence in the Asia and Pacific region declined between 2001 and 2011 in countries with relatively high rates of the infection. Of the 27 reporting economies, 18 have already met or are expected to meet the target to halt and start to reverse the spread of HIV/AIDS, but 9 are not making progress.
- In 2011, most economies increased access to antiretroviral drugs to people with advanced HIV infection; only two economies reached 80% coverage, though.
- Of 44 reporting economies, 40 have either met the target to reverse the incidence of tuberculosis or are expected to do so by 2015.
- Malaria remains a problem and deaths from the disease are relatively high in the Pacific.

### Introduction

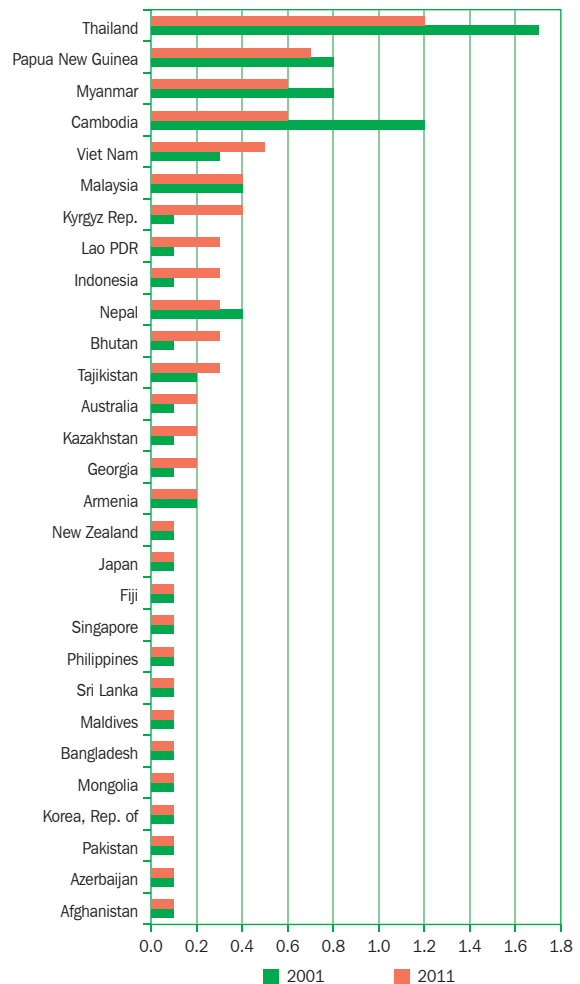
Millennium Development Goal (MDG) 6 has three targets:

- 6.A: *Have halted by 2015 and begun to reverse the spread of HIV/AIDS.* This is targeted at the 15–24 age group, but most economies have comparable data on HIV prevalence only for people in the 15–49 age group.
- 6.B: *Achieve, by 2010, universal access to treatment for HIV/AIDS for those who need it.*
- 6.C: *Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases, including tuberculosis.*

### Key trends

**HIV prevalence declined in countries with relatively high rates of the infection.** Figure 6.1 shows that in Cambodia, Myanmar, Papua New Guinea, and Thailand—the four countries with the highest rates of HIV measured as a percentage of the population aged 15–49 years—HIV prevalence declined between 2001 and 2011. The declines were particularly steep in Cambodia (from 1.2% to 0.6%) and Thailand (from 1.7% to 1.2%). Nepal also reduced HIV prevalence during this period.

Figure 6.1 HIV prevalence (percent of population 15–49 years), 2001 and 2011



Lao PDR = Lao People's Democratic Republic.  
Source: Table 6.1.

However, HIV prevalence increased in nine countries for which data are available. Four of these countries are in Central and West Asia and three are in Southeast Asia. The Kyrgyz Republic reported a steep rise, from 0.1% to 0.4%. Among the most populous countries, Indonesia had a relatively high HIV rate at 0.3%, up from 0.1% in 2001.

Box 6.1 shows progress on the MDG target to halt by 2015 and start to reverse the spread of HIV/AIDS. The box covers 27 economies with enough data to make an assessment. Eighteen have achieved or are expected to meet the target. The remaining nine are likely to fall short unless they accelerate their efforts, including Indonesia, the Lao People’s Democratic Republic (Lao PDR), and Viet Nam in Southeast Asia and five economies in Central and West Asia.

A basic understanding of HIV and how it spreads is crucial to changing, in ways that reduce HIV infections, the behavior of those infected or at risk of becoming infected. Yet surveys showed that, across developing Asia and the Pacific, the share of the population aged 15–24 years that had a good understanding of HIV was low, generally in the range of 20%–40% (Table 6.1).

Most countries increased access to antiretroviral drugs to people with advanced HIV infection between 2010 and 2011 (Figure 6.2). Notably, the Philippines raised access to such drugs from 40% of those in need in 2010 to 51% in 2011. Nevertheless, only two countries—Cambodia and Fiji—provided antiretroviral therapy to at least 80% of the people who needed it. Georgia, Thailand, and Papua New Guinea were approaching the 80% mark, but other countries fell far short of it.

Bhutan and the Kyrgyz Republic reported reduced access to antiretroviral drugs in 2011 compared with 2010, even though both reported increases in HIV prevalence between 2001 and 2011. Malaysia and Mongolia reported marginal reductions in access to antiretroviral drugs.

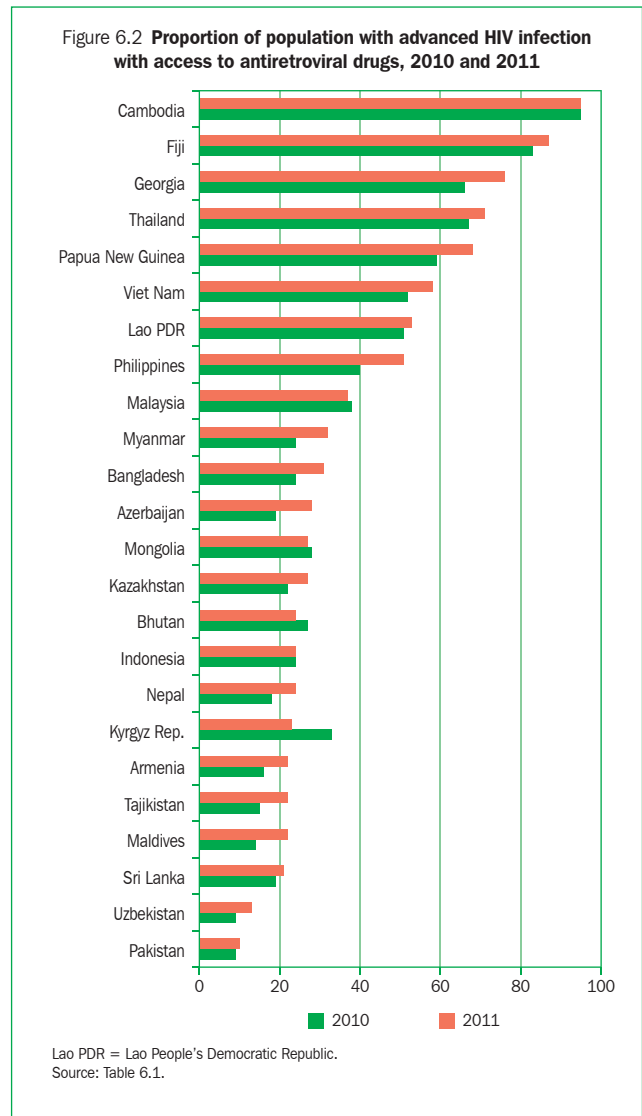
**Box 6.1 Progress toward target for HIV prevalence**

Early achievers	
Cambodia	Nepal
Malaysia	Papua New Guinea
Myanmar	Thailand

On track	
Afghanistan	Maldives
Azerbaijan	Mongolia
Bangladesh	Pakistan
China, People's Rep. of	Philippines
Fiji	Singapore
Korea, Rep. of	Sri Lanka

No progress/regressing	
Armenia	Kyrgyz Rep.
Bhutan	Lao PDR
Georgia	Tajikistan
Indonesia	Viet Nam
Kazakhstan	

Lao PDR = Lao People’s Democratic Republic.  
Source: Table 6.1.



**The incidence and prevalence of and deaths from tuberculosis declined in all but a few economies.**

Figure 6.3, with data from 46 countries, shows the changes in incidence rates (new tuberculosis cases per 100,000 population). The incidence of tuberculosis fell or was unchanged between 1990 and 2011 in 38 countries and rose in eight. Figure 6.4 presents the prevalence of tuberculosis (the total number of tuberculosis cases per 100,000 people). Prevalence of tuberculosis fell in all but eight countries. The increases were in Central and West Asia and the Pacific. In the most populous countries, the People's Republic of China (PRC) reduced the tuberculosis prevalence rate from 215 per 100,000 population in 1990 to a relatively low 104 in 2011, and prevalence rates also fell in Bangladesh (to 411 per 100,000 population), India (249), Indonesia (281), and Pakistan (350).

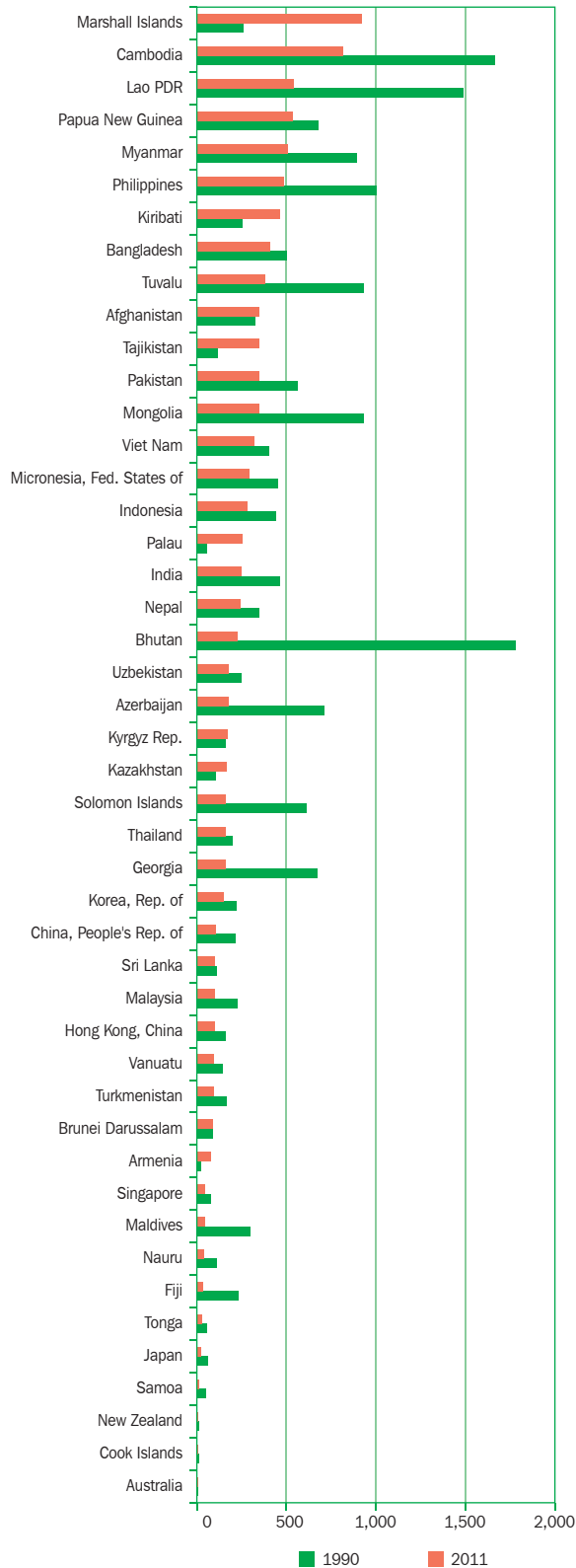
Six countries had tuberculosis prevalence rates of over 500 cases per 100,000 population—the Marshall Islands, Papua New Guinea, and Timor-Leste in the Pacific, and Cambodia, the Lao PDR, and Myanmar in Southeast Asia.

Figure 6.3 Change in tuberculosis incidence rates, 1990 and 2011



Lao PDR = Lao People's Democratic Republic.  
Source: Table 6.2.

Figure 6.4 Prevalence of tuberculosis, per 100,000 population, 1990 and 2011



Lao PDR = Lao People's Democratic Republic.  
Source: Table 6.2.

Box 6.2 shows progress on halting by 2015 and starting to reverse the incidence of tuberculosis in 44 economies with data to make an assessment. Forty have met the target or are expected to do so in the next 2 years, including the five most populous economies. Regarding the prevalence of tuberculosis, 40 countries have already achieved the target. However, the remaining four—the Marshall Islands, Nauru, Nepal, and Palau—appear to be making no progress on reducing prevalence.

Deaths from tuberculosis also declined across the region between 1990 and 2011, again except in eight countries of Central and West Asia and the Pacific (Figure 6.5). Progress in detecting and curing tuberculosis is attributed to the implementation since 1995 of the Directly Observed Treatment Short Course (DOTS) strategy and its 2006 successor, the Stop TB Strategy, with support from the World Health Organization (WHO).

Box 6.2 Progress toward target for incidence of tuberculosis

**Early achievers**

Armenia	Maldives
Azerbaijan	Micronesia, Fed. States of
Bhutan	Mongolia
Brunei Darussalam	Myanmar
Cambodia	Papua New Guinea
China, People's Rep. of	Philippines
Hong Kong, China	Samoa
Cook Islands	Singapore
Fiji	Solomon Islands
Georgia	Tajikistan
India	Thailand
Indonesia	Tonga
Kazakhstan	Turkmenistan
Kiribati	Tuvalu
Kyrgyz Rep.	Uzbekistan
Lao PDR	Vanuatu
Malaysia	Viet Nam

**On track**

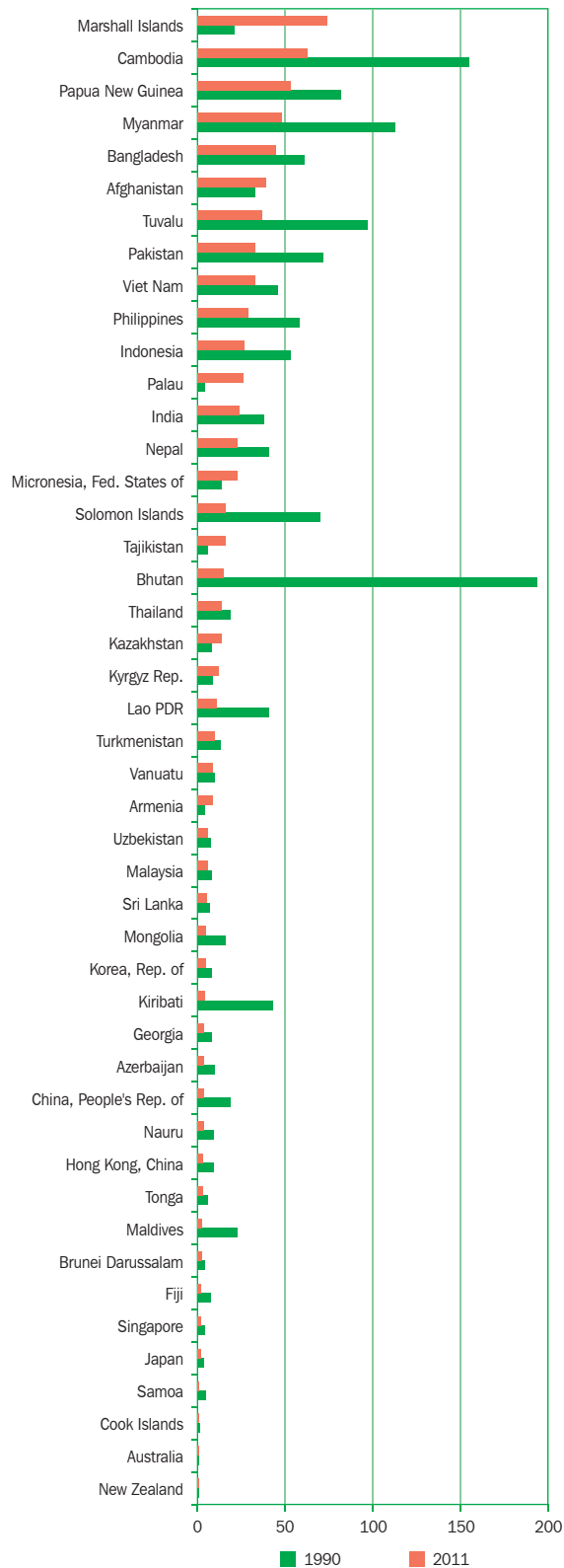
Afghanistan	Pakistan
Bangladesh	Sri Lanka
Nepal	Timor-Leste

**No progress/regressing**

Korea, Rep. of	Nauru
Marshall Islands	Palau

Lao PDR = Lao People's Democratic Republic.  
Source: Table 6.2.

Figure 6.5 **Death rates associated with tuberculosis, per 100,000 population, 1990 and 2011**



Lao PDR = Lao People's Democratic Republic.  
Source: Table 6.2.

**Malaria remains a danger in some subregions.** Box 6.3 groups economies for which data are available into four categories based on the incidence of malaria (new cases reported each year) per 100,000 population in 2010. Thirteen countries reported a high incidence, with 1,000 or more cases per 100,000 population. Five are in Southeast Asia (Cambodia, Indonesia, the Lao PDR, Malaysia, and Myanmar); four are in the Pacific (Papua New Guinea, Solomon Islands, Timor-Leste, and Vanuatu); and the remaining four are Afghanistan, Bangladesh, India, and Pakistan.

Table 6.2 shows that death rates associated with malaria in 2010 were below 15 per 100,000 population, except for Papua New Guinea (46), Timor-Leste (25), and Solomon Islands (24). Mortality rates from malaria worldwide have declined, largely owing to the greater use of insecticide-treated mosquito nets and artemisinin-based combination therapy. Worryingly, resistance to artemisinin has been detected in four Southeast Asian countries, and mosquito resistance to insecticides has been found in 64 countries globally (UN 2013).

Box 6.3 **Incidence of malaria, 2010** (per 100,000 population)

**Less than 1**

Georgia 0

**1-99**

China, People's Rep. of	4	Azerbaijan	56
Tajikistan	10	Sri Lanka	93
Uzbekistan	13		

**100-999**

Viet Nam	104	Bhutan	240
Philippines	145	Korea, Rep. of	258
Nepal	147	Thailand	703
Kyrgyz Rep.	166		

**1000 or more**

Malaysia	1,632	Bangladesh	6,095
Pakistan	1,800	Myanmar	6,556
Lao PDR	2,343	Vanuatu	10,783
Cambodia	2,790	Timor-Leste	11,724
India	3,555	Solomon Islands	12,203
Afghanistan	3,599	Papua New Guinea	18,498
Indonesia	5,830		

Lao PDR = Lao People's Democratic Republic.

Source: Table 6.2.

## Data issues and comparability

Data for estimating trends in HIV/AIDS, malaria, and tuberculosis are difficult to compare because of the varied practices and methods, changing processes, and assumptions used to arrive at the desired data. This results in widening data gaps and more volatile data, and difficulty reconciling data and applying corrective policies. Data may not be comparable as a result.

For HIV/AIDS, the quality of data varies among countries, with the range of uncertainty depending on the actual HIV prevalence, concentration of HIV epidemic levels, and the number of steps or assumptions used to arrive at the estimate. Data on the prevalence of HIV are only available until 2011, with a 2-year lag in reported data, which makes it difficult to assess the current progress of the disease.

The proportion of the population with comprehensive correct knowledge of HIV/AIDS (Table 6.1) is gender-related. However, the data are not comparable across the years due to the variation in the years for which data are observed. HIV trends by gender cannot be determined for a specific year, and there are fewer data points for males than females. The latest year for both sexes is 2011, while the earliest data for females is 2005 and for males it is 2006.

Estimating the number of people receiving or having access to antiretroviral therapy is difficult because there are no established regular reporting systems on

patients who underwent treatment for the first time, received or discontinued treatment, were not followed up, or died. Hence, data may be underreported. Data for 2010 and 2011 are not comparable to that of 2004 because of the revised guidelines for estimating the number of people receiving antiretroviral therapy.

Malaria estimates are mostly based on reporting systems that are not firmly established, tested, or accepted. Health facilities are therefore unable to report a complete, accurate, and scientific estimate of the actual counts of malaria cases. The latest available data on the incidence and death rates of malaria are for 2010, which may not be applicable to the current situation.

The DOTS course is the internationally recommended strategy for controlling tuberculosis, and has been recognized as highly efficient and cost effective. Data on tuberculosis cases treated through DOTS and other strategies are not comparable because the data are mostly sourced from administrative records of health agencies or services, which may not have established reporting systems. These agencies may not have established patterns of measuring accurate information, which may result in the delay of reporting data. Using 2012 as a reference year, the data for DOTS tuberculosis cases are available for 2011 (a 1-year lag in reported data), while the data for cases cured through DOTS are for 2010 (a 2-year lag).

## MDG 6 Targets and Indicators

**Table 6.1 Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS and Target 6.B: Achieve by 2010, universal access to treatment for HIV/AIDS for all those who need it**

Regional Member	6.1 HIV Prevalence (% of population 15–49 years)		6.3 Proportion of Population Aged 15–24 Years with Comprehensive Correct Knowledge of HIV/AIDS (%)		6.5 Proportion of Population with Advanced HIV infection with Access to Antiretroviral Drugs (%)		
	2001	2011	Female	Male	2004 <sup>a</sup>	2010	2011
	<b>Developing Member Economies</b>						
<b>Central and West Asia</b>							
Afghanistan	0.1	0.1	...	...	...	...	6
Armenia	0.2	0.2	15.8 (2010)	8.9 (2010)	8 (2006)	16	22
Azerbaijan	0.1	0.1	4.8 (2006)	5.3 (2006)	1 (2006)	19	28
Georgia	0.1	0.2	15.0 (2005)	...	16	66	76
Kazakhstan	0.1	0.2	36.2 (2011)	34.1 (2011)	1	22	27
Kyrgyz Republic	0.1	0.4	20.3 (2006)	...	9 (2005)	33	23
Pakistan	0.1	0.1	3.4 (2007)	...	1	9	10
Tajikistan	0.2	0.3	13.9 (2010)	12.8 (2010)	2 (2006)	15	22
Turkmenistan	...	...	4.8 (2006)	...	...	...	...
Uzbekistan	...	...	31.0 (2006)	...	30 (2006)	9	13
<b>East Asia</b>							
China, People's Rep. of	...	0.1	...	...	19 (2006)	...	...
Hong Kong, China	...	...	...	...	...	...	...
Korea, Rep. of	0.1	0.1	...	...	...	...	...
Mongolia	0.1	0.1	31.6 (2010)	29.3 (2010)	3 (2006)	28	27
Taipei, China	...	...	...	...	...	...	...
<b>South Asia</b>							
Bangladesh	0.1	0.1	11.9 (2011)	14.4 (2011)	1	24	31
Bhutan	0.1	0.3	21.0 (2010)	...	10	27	24
India	...	...	19.9 (2006)	36.1 (2006)	...	...	...
Maldives	0.1	0.1	35.0 (2009)	...	6 (2006)	14	22
Nepal	0.4	0.3	25.8 (2011)	33.9 (2011)	2 (2006)	18	24
Sri Lanka	0.1	0.1	...	...	5	19	21
<b>Southeast Asia</b>							
Brunei Darussalam	...	...	...	...	...	...	...
Cambodia	1.2	0.6	44.4 (2010)	43.7 (2010)	...	95	95
Indonesia	0.1	0.3	9.5 (2007)	14.7 (2007)	12	24	24
Lao PDR	0.1	0.3	...	...	26	51	53
Malaysia	0.4	0.4	...	...	12	38	37
Myanmar	0.8	0.6	31.8 (2010)	...	2	24	32
Philippines	0.1	0.1	20.7 (2008)	...	10	40	51
Singapore	0.1	0.1	...	...	...	...	...
Thailand	1.7	1.2	46.1 (2006)	...	17	67	71
Viet Nam	0.3	0.5	51.1 (2011)	44.1 (2009)	1	52	58
<b>The Pacific</b>							
Cook Islands	...	...	...	...	...	...	...
Fiji	0.1	0.1	...	...	22 (2007)	83	87
Kiribati	...	...	44.4 (2009)	48.6 (2009)	...	...	...
Marshall Islands	...	...	26.6 (2007)	39.4 (2007)	...	...	...
Micronesia, Fed. States of	...	...	...	...	...	...	...
Nauru	...	...	13.3 (2007)	9.6 (2007)	...	...	...
Palau	...	...	...	...	3	59	68
Papua New Guinea	0.8	0.7	...	...	...	...	...
Samoa	...	...	3.0 (2009)	5.8 (2009)	...	...	...
Solomon Islands	...	...	29.3 (2007)	35.1 (2007)	...	...	...
Timor-Leste	...	...	12.2 (2010)	19.7 (2010)	...	...	...
Tonga	...	...	...	...	...	...	...
Tuvalu	...	...	39.4 (2007)	60.7 (2007)	...	...	...
Vanuatu	...	...	15.4 (2007)	...	...	...	...
<b>Developed Member Economies</b>							
Australia	0.1	0.2	...	...	...	...	...
Japan	0.1	0.1	...	...	...	...	...
New Zealand	0.1	0.1	...	...	...	...	...

... = Data not available at cutoff date, HIV = human immunodeficiency virus, AIDS = acquired immunodeficiency syndrome.

a Data in 2004 may not be consistent with the later years because of the change in the WHO guidelines for treatment of adults and adolescents with HIV, including pregnant women in 2010. As a consequence, the number of people needing the antiretroviral therapy expanded.

Sources: Millennium Indicators Database Online (UNSD 2013), World Health Organization Online (WHO 2013).

## MDG 6 Targets and Indicators

Table 6.2 **Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases**

Regional Member	6.6 Incidence of Malaria (per 100,000 population)		6.6 Death Rates Associated with Malaria (per 100,000 population)		6.9 Incidence of Tuberculosis (per 100,000 population)		6.9 Prevalence of Tuberculosis (per 100,000 population)	
	2010		2010		1990	2011	1990	2011
<b>Developing Member Economies</b>								
<b>Central and West Asia</b>								
Afghanistan	3599		1		189	189	326	351
Armenia	...		0		17	55	25	78
Azerbaijan	56		0		305	113	711	177
Georgia	0		0		280	125	675	159
Kazakhstan <sup>a</sup>	...		...		79	129	107	168
Kyrgyz Republic	166		0		92	128	163	175
Pakistan	1800		2		231	231	566	350
Tajikistan	10		0		70	193	115	350
Turkmenistan	...		0		101	74	165	96
Uzbekistan	13		0		125	101	248	177
<b>East Asia</b>								
China, People's Rep. of	4		0		153	75	215	104
Hong Kong, China <sup>a</sup>	...		...		127	78	163	99
Korea, Rep. of	258		0		167	100	223	149
Mongolia <sup>a</sup>	...		...		405	223	934	348
Taipei, China	...		...		...	...	...	...
<b>South Asia</b>								
Bangladesh	6095		14		225	225	501	411
Bhutan	240		0		784	192	1782	230
India	3555		4		216	181	465	249
Maldives <sup>a</sup>	...		...		150	34	299	44
Nepal	147		0		163	163	349	243
Sri Lanka	93		0		66	66	110	101
<b>Southeast Asia</b>								
Brunei Darussalam <sup>a</sup>	...		...		71	70	90	89
Cambodia	2790		6		580	424	1667	817
Indonesia	5830		9		206	187	445	281
Lao PDR	2343		7		492	213	1490	540
Malaysia	1632		2		127	81	227	101
Myanmar	6556		14		393	381	894	506
Philippines	145		0		393	270	1003	484
Singapore <sup>a</sup>	...		...		63	37	79	46
Thailand	703		1		138	124	199	161
Viet Nam	104		0		204	199	403	323
<b>The Pacific</b>								
Cook Islands <sup>a</sup>	...		...		11	6	14	8
Fiji	...		...		112	26	232	33
Kiribati <sup>a</sup>	...		...		116	356	257	462
Marshall Islands <sup>a</sup>	...		...		137	536	261	924
Micronesia, Fed. States of <sup>a</sup>	...		...		379	200	455	294
Nauru <sup>a</sup>	...		...		89	33	114	42
Palau <sup>a</sup>	...		...		45	153	57	256
Papua New Guinea	18498		46		308	346	678	534
Samoa <sup>a</sup>	...		...		36	10	53	13
Solomon Islands	12203		24		312	103	615	162
Timor-Leste	11724		25		...	498	...	701
Tonga <sup>a</sup>	...		...		38	16	59	27
Tuvalu <sup>a</sup>	...		...		536	228	933	381
Vanuatu	10783		14		127	67	146	97
<b>Developed Member Economies</b>								
Australia <sup>a</sup>	...		...		7	6	8	8
Japan <sup>a</sup>	...		...		49	20	63	26
New Zealand <sup>a</sup>	...		...		11	8	14	10

continued



## MDG 6 Targets and Indicators

Table 6.2 **Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases**  
(continued)

Regional Member	6.9 Death Rates Associated with Tuberculosis (per 100,000 population)		6.10 Proportion of Tuberculosis Cases under DOTS (%)			
	1990	2011	Detected		Cured	
			1995	2011	1995	2010
<b>Developing Member Economies</b>						
<b>Central and West Asia</b>						
Afghanistan	33	39	3 (1997)	46	33 (1998)	90
Armenia	4	9	79	74	55	72
Azerbaijan	10	4	3	62	65	77
Georgia	8	4	12	84	58	76
Kazakhstan <sup>a</sup>	8	14	22	87	74 (1997)	61
Kyrgyz Republic	9	12	44	80	50 (1996)	82 (2009)
Pakistan	72	33	5	64	70	91
Tajikistan	6	16	24	47	88	80
Turkmenistan	13	10	31	71 (2010)	73	84 (2009)
Uzbekistan	8	6	22	52	78	81
<b>East Asia</b>						
China, People's Rep. of	19	4	33	89	93	96
Hong Kong, China <sup>a</sup>	9	3	83	86	85 (1998)	68
Korea, Rep. of	8	5	94	88	76	89
Mongolia <sup>a</sup>	16	5	38	68	74	86
Taipei, China	...	...	...	...	...	...
<b>South Asia</b>						
Bangladesh	61	45	21	45	71	92
Bhutan	194	15	45	87	97	90
India	38	24	58	59	25	88
Maldives <sup>a</sup>	23	3	88	81	97	82
Nepal	41	23	56	71	73	90
Sri Lanka	7	5	49	70	79	86
<b>Southeast Asia</b>						
Brunei Darussalam <sup>a</sup>	4	3	...	81	85 (1998)	81
Cambodia	155	63	23	64	91	94
Indonesia	53	27	9	70	91	90
Lao PDR	41	11	4	32	70	91
Malaysia	8	6	53	85	69	80
Myanmar	113	48	11	74	67	86
Philippines	58	29	48	76	60	91
Singapore <sup>a</sup>	5	2	86	86	86	80
Thailand	19	14	59	76	64	85
Viet Nam	46	33	37	56	89	92
<b>The Pacific</b>						
Cook Islands <sup>a</sup>	1	1	62	82	100	50 (2008)
Fiji	8	2	34	92	86	67
Kiribati <sup>a</sup>	43	4	71 (1996)	95	87	93
Marshall Islands <sup>a</sup>	21	74	57 (1996)	47	25	80
Micronesia, Fed. States of <sup>a</sup>	14	23	49	66	80	97
Nauru <sup>a</sup>	9	3	68 (1999)	150	83 (1998)	67
Palau <sup>a</sup>	5	26	75	38	67	88
Papua New Guinea	82	53	53	61	56	58
Samoa <sup>a</sup>	5	1	90	110	80	100
Solomon Islands	70	16	41	70	65	87
Timor-Leste	...	63	62	76	81 (2002)	88
Tonga <sup>a</sup>	6	3	63 (2002)	55	75	83
Tuvalu <sup>a</sup>	97	37	89	53	100 (1999)	100
Vanuatu	10	9	75	67	85	80
<b>Developed Member Economies</b>						
Australia <sup>a</sup>	0	0	88	90	55 (1996)	80
Japan <sup>a</sup>	3	2	83	86	80 (1998)	52
New Zealand <sup>a</sup>	1	0	97	91	30 (2000)	74

... = Data not available at cutoff date, 0 = Magnitude is less than half of unit employed, DOTS = directly observed treatment short course.

a The indicators incidence and death rates associated with malaria, as defined for the global monitoring, do not apply to the circumstances of the economy.

Source: Millennium Indicators Database Online (UNSD 2013).