

**Table A2.4: DALYs attributable to environmental factors, by disease and mortality stratum for WHO regions in 2004.**  
**Updated data for 2004, from "Preventing disease through healthy environments", WHO 2006.**

Disease/disease group <sup>a</sup>	Total		Children 0-14 years		Developed countries		Developing countries		AFRICA		THE AMERICAS		
									Mortality stratum		Mortality stratum		
									High child/high adult	High child/very high adult	Very low child, very low adult	Low child, low adult	High child/high adult
<i>Population ('000)</i>	6425275								344816	392720	340046	458510	75824
	(000)	% <sup>c</sup>	(000)	% <sup>c</sup>	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)
Total DALYs	1 523 259		548 367		214 222	1 309 037		172 710	203 816	46 620	80 210	16 402	
Total environmental DALYs <sup>b</sup>	355 979		184 503		34 964	321 015		52 403	54 092	6 268	15 075	3 558	
% of total DALYs	23%		34%		16%	25%		30%	27%	13%	19%	22%	
Lower respiratory infections	38 400	10.8	30 077	16.3	1 113	37287		8 936	8 330	68	953	387	
Upper respiratory infections and otitis	770	0.2	609	0.3	69	702		101	96	6	37	14	
Diarrhoeal diseases	68 085	19.1	61 004	33.1	1 442	66 643		15 357	14 794	105	1 643	658	
Malaria	14 069	4.0	13 432	7.3	2	14 067		7 210	5 657	0	43	14	
Intestinal nematode infections <sup>d</sup>	4 009	1.1	3 225	1.7	6	4 003		1 014	514	2	81	98	
Trachoma	1 332	0.4	7	0.0	0	1 332		183	419	0	15	0	
Schistosomiasis	1 706	0.5	862	0.5	1	1 705		776	726	0	46	0	
Chagas disease	239	0.1	0	0.0	0	239		0	0	0	196	42	
Lymphatic filariasis	3 841	1.1	1 253	0.7	1	3 840		455	453	0	6	1	
Onchocerciasis	40	0.0	8	0.0	0	40		34	5	0	0	0	
Leishmaniasis	517	0.1	255	0.1	2	515		37	48	0	5	1	
Dengue	638	0.2	605	0.3	0	638		1	7	0	34	36	
Japanese encephalitis	645	0.2	548	0.3	3	641		0	0	0	0	0	
HIV/AIDS (>15 years)	5 296	1.5	n.a.	n.a.	113	5 183		736	3 484	29	82	30	
STDs (>15 years) <sup>e</sup>	1 580	0.4	n.a.	n.a.	35	1 545		175	191	6	35	4	
Hepatitis B (>15 years)	92	0.0	n.a.	n.a.	3	89		0	0	0	1	1	
Tuberculosis	6 120	1.7	648	0.4	331	5 790		792	973	2	93	71	
Perinatal conditions	13 873	3.9	13 873	7.5	437	13 436		2 050	2 167	50	475	150	
Congenital anomalies	1 360	0.4	40	0.0	147	1 212		164	149	37	105	16	
Mainnutrition (only PEM, not consequences of)	7 527	2.1	7 527	4.1	119	7 408		1 270	1 832	12	316	151	
Childhood-cluster diseases <sup>g, h</sup>	6 172	1.7	6 172	3.3	3	6 169		1 507	728	0	3	10	
Meningitis <sup>h</sup>	1 369	0.4	1 369	0.7	22	1 347		282	279	0	7	4	
Cancer, total	14 976	4.2	550	0.3	4 990	9 986		524	533	1 116	914	140	
Lung cancer	3 607	1.0	5	0.0	1 534	2 073		35	47	408	156	12	
Other cancers <sup>i</sup>	11 370	3.2	545	0.3	3 456	7 913		489	486	708	758	128	
Neuropsychiatric disorders, total	24 594	6.9	10 984	6.0	3 922	20 672		1 806	1 711	1 046	2 621	430	
Depression	5 190	1.5	450	0.2	1 114	4 076		175	196	373	417	65	
Bipolar affective disorder	521	0.1	26	0.0	84	437		32	37	20	38	6	
Schizophrenia	650	0.2	63	0.0	93	557		34	39	21	49	8	
Epilepsy	1 746	0.5	630	0.3	126	1 620		205	222	14	174	33	
Alcohol use disorder	2 322	0.7	79	0.0	703	1 619		29	48	184	239	50	
Alzheimer and other dementias	447	0.1	28	0.0	212	235		9	9	56	29	3	
Parkinson's disease	84	0.0	1	0.0	42	42		2	2	13	3	0	
Multiple sclerosis	49	0.0	5	0.0	15	35		2	2	4	3	1	
Drug use disorders	242	0.1	7	0.0	73	169		21	6	32	32	6	
Post-traumatic stress disorder	667	0.2	12	0.0	142	524		32	36	36	41	6	
Obsessive-compulsive disorder	165	0.0	20	0.0	36	129		14	16	7	18	3	
Panic disorder	391	0.1	13	0.0	68	323		22	26	16	29	5	
Insomnia	735	0.2	18	0.0	211	524		32	36	56	68	10	
Migraine	796	0.2	345	0.2	194	602		22	28	52	77	16	
Mental retardation, lead-caused	9 525	2.7	9 452	5.1	513	9 012		1 093	930	77	1 304	197	
Other	1 064	0.3	364	0.2	296	767		81	80	83	98	18	

**Table A2.4: DALYs attributable to environmental factors, by disease and mortality stratum for WHO regions in 2004.**  
**Updated data for 2004, from "Preventing disease through healthy environments", WHO 2006.**

Disease/disease group <sup>a</sup>							AFRICA		THE AMERICAS		
	Total		Children 0-14 years	Developed countries	Developing countries	Mortality stratum		Mortality stratum			
						High child/high adult	High child/very high adult	Very low child, very low adult	Low child, low adult	High child/high adult	
<i>Population ('000)</i>	<i>6425275</i>					<i>344816</i>	<i>392720</i>	<i>340046</i>	<i>458510</i>	<i>75824</i>	
	<b>(000)</b>	<b>%<sup>c</sup></b>	<b>(000)</b>	<b>%<sup>c</sup></b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	
Cataracts	1 270	0.4	13	0.0	40	1 230	124	157	5	53	12
Deafness	4 503	1.3	0	0.0	707	3 796	175	206	124	165	22
Cardiovascular diseases <sup>1</sup>	23 808	6.7	706	0.4	7 336	16 472	1 065	1 085	1 119	1 223	145
COPD	13 375	3.8	0	0.0	872	12 503	356	312	242	379	24
Asthma	7 178	2.0	2 813	1.5	1 085	6 093	583	735	346	689	123
Musculoskeletal diseases, total	5 316	1.5	0	0.0	1 419	3 897	224	242	292	364	49
Low back pain	897	0.3	0	0.0	141	756	47	55	28	51	7
Osteoarthritis	3 083	0.9	0	0.0	892	2 190	134	142	171	178	22
Rheumatoid arthritis	770	0.2	0	0.0	240	530	22	24	51	83	13
Other musculoskeletal diseases	566	0.2	0	0.0	145	421	20	21	42	52	8
Road traffic accidents	16 380	4.6	3 851	2.1	1 625	14 755	1 296	1 649	238	1 188	136
Poisonings	5 246	1.5	1 019	0.6	1 847	3 399	398	463	341	45	11
Falls	5 405	1.5	1 990	1.1	792	4 613	156	159	104	211	45
Fires	786	0.2	318	0.2	50	736	66	74	6	9	2
Drownings	7 791	2.2	3 593	1.9	653	7 138	580	755	54	324	56
Other unintentional injuries	22 540	6.3	8 070	4.4	2 539	20 001	1 442	1 754	199	987	410
Suicide	5 689	1.6	277	0.1	1 004	4 685	43	80	205	125	15
Violence	4 066	1.1	358	0.2	478	3 588	430	767	105	1 061	71

**Table A2.4: DALYs attributable to environmental factors, by disease and mortality stratum for WHO regions in 2004.**  
**Updated data for 2004, from "Preventing disease through healthy environments", WHO 2006.**

Disease/disease group <sup>a</sup>	EASTERN MEDITERRANEAN		EUROPE			SOUTH-EAST ASIA		WESTERN PACIFIC	
	Mortality stratum		Mortality stratum			Mortality stratum		Mortality stratum	
	Low child, low adult	High child/high adult	Very low child, very low adult	Low child, low adult	Low child, high adult	Low child, low adult	High child/high adult	Very low child, very low adult	Low child, low adult
Population ('000)	145753	373934	422026	223210	238074	304830	1367074	156569	1581888
	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)
Total DALYs	23 038	118 955	51 489	38 106	61 866	70 721	372 258	16 141	248 631
Total environmental DALYs <sup>b</sup>	4 554	29 243	6 939	7 329	12 123	16 216	92 230	2 305	53 645
% of total DALYs	20%	25%	13%	19%	20%	23%	25%	14%	22%
Lower respiratory infections	261	4 673	90	590	298	984	10 603	67	2 161
Upper respiratory infections and otitis	12	78	8	26	26	24	168	2	171
Diarrhoeal diseases	525	7 292	104	1 010	184	1 476	20 047	40	4 850
Malaria	1	507	1	0	1	59	504	0	71
Intestinal nematode infections <sup>d</sup>	1	268	0	0	0	254	822	4	952
Trachoma	10	198	0	0	0	0	88	0	419
Schistosomiasis	39	106	0	0	0	0	0	0	13
Chagas disease	0	0	0	0	0	0	0	0	0
Lymphatic filariasis	0	30	0	1	0	224	2 618	0	52
Onchocerciasis	0	1	0	0	0	0	0	0	0
Leishmaniasis	4	70	0	1	0	0	337	0	13
Dengue	6	21	0	0	0	81	291	0	161
Japanese encephalitis	0	0	0	0	3	44	422	0	176
HIV/AIDS (>15 years)	6	45	15	3	65	200	506	0	95
STDs (>15 years) <sup>e</sup>	12	48	6	11	10	34	211	2	96
Hepatitis B (>15 years)	1	5	1	1	1	0	14	0	0
Tuberculosis	23	482	8	70	244	542	1 775	7	1 039
Perinatal conditions	193	1 680	32	257	92	354	4 782	7	1 585
Congenital anomalies	35	164	30	32	38	39	374	10	165
Malnutrition (only PEM, not consequences of)	113	800	9	70	19	248	2 024	9	655
Childhood-cluster diseases <sup>g, h</sup>	2	732	0	2	1	114	3 008	0	66
Meningitis <sup>h</sup>	5	190	0	18	4	40	440	0	100
Cancer, total	178	612	1 622	695	1 038	681	1 973	519	4 430
Lung cancer	23	88	495	225	279	153	321	128	1 237
Other cancers <sup>i</sup>	155	525	1 128	471	759	528	1 652	391	3 193
Neuropsychiatric disorders, total	580	1 716	1 003	726	884	1 140	5 344	263	5 326
Depression	104	308	310	191	170	230	1 446	71	1 135
Bipolar affective disorder	14	33	22	17	17	25	116	8	134
Schizophrenia	19	43	23	23	17	41	153	9	171
Epilepsy	27	123	20	45	40	83	441	5	312
Alcohol use disorder	8	19	158	67	264	84	332	29	810
Alzheimer and other dementias	4	10	86	16	22	16	51	33	103
Parkinson's disease	1	4	15	3	5	2	11	6	17
Multiple sclerosis	1	3	5	2	3	2	9	1	12
Drug use disorders	17	32	21	5	13	5	32	1	19
Post-traumatic stress disorder	17	39	41	25	25	36	148	15	169
Obsessive-compulsive disorder	6	12	8	9	9	6	29	2	25
Panic disorder	11	26	18	14	14	20	90	7	94
Insomnia	7	35	72	24	32	25	186	27	124
Migraine	13	44	76	26	24	34	186	15	181
Mental retardation, lead-caused	296	908	54	203	166	477	1 927	13	1 879
Other	32	77	73	55	62	53	187	23	141

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**Updated data for 2004, from "Preventing disease through healthy environments", WHO 2006.**

Disease/disease group <sup>a</sup>	EASTERN MEDITERRANEAN		EUROPE			SOUTH-EAST ASIA		WESTERN PACIFIC	
	Mortality stratum		Mortality stratum			Mortality stratum		Mortality stratum	
	Low child, low adult	High child/high adult	Very low child, very low adult	Low child, low adult	Low child, high adult	Low child, low adult	High child/high adult	Very low child, very low adult	Low child, low adult
<i>Population ('000)</i>	145753	373934	422026	223210	238074	304830	1367074	156569	1581888
	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>	<b>(000)</b>
Cataracts	45	100	4	15	15	122	296	2	321
Deafness	89	255	167	144	227	357	1 217	45	1 311
Cardiovascular diseases <sup>l</sup>	453	1 547	1 385	1 391	3 044	1 012	5 470	398	4 472
COPD	66	490	213	157	185	728	3 824	74	6 325
Asthma	139	483	299	163	123	268	1 704	154	1 367
Musculoskeletal diseases, total	85	219	377	261	333	297	941	157	1 477
Low back pain	14	47	33	32	34	50	211	14	275
Osteoarthritis	46	114	233	168	215	194	487	104	874
Rheumatoid arthritis	15	33	70	42	54	21	138	23	181
Other musculoskeletal diseases	11	25	40	18	29	32	105	15	147
Road traffic accidents	678	1 431	264	303	773	1 263	3 268	47	3 847
Poisonings	54	238	97	80	1 306	109	1 190	23	891
Falls	128	441	185	157	303	410	1 626	43	1 438
Fires	11	81	4	10	29	41	420	2	32
Drownings	109	574	44	130	392	290	1 722	32	2 729
Other unintentional injuries	472	1 831	221	551	1 487	3 719	6 468	82	2 920
Suicide	43	196	203	94	381	306	2 232	121	1 645
Violence	36	227	24	41	303	150	501	5	344

**Notes**

Other diseases considered in this analysis but not listed in Table A2.3 include hepatitis C, leprosy and diabetes mellitus, as their environmental contributions to the disease burden are negligible and/or they are secondary to another risk factor.

These estimates are not formal WHO estimates (data based on literature review, comparative risk assessment and expert survey).

- a Abbreviations: COPD = chronic obstructive pulmonary disease; HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome; STDs = sexually transmitted diseases
- b Total of all deaths attributable to environmental risk factors. Subtotals for the diseases/disease groups do not add up to 100% because minor diseases are not listed.
- c Percentage of all deaths attributable to environmental risk factors.
- d Intestinal nematode infections include ascariasis, trichuriasis and hookworm disease in this analysis.
- e STDs include syphilis, chlamydia and gonorrhoea in this analysis.
- f Totals include only deaths attributable to protein-energy malnutrition, and not those caused by the consequences of malnutrition.
- g Childhood cluster diseases include pertussis, poliomyelitis, diphtheria, measles and tetanus in this analysis.
- h Induced by malnutrition related to the environment.
- i Other cancers include the 16 other cancer categories as listed in the World Health Report 2004.
- j Cardiovascular diseases include rheumatic heart disease, hypertensive heart disease, ischaemic heart disease, cerebrovascular disease and inflammatory heart disease in this analysis.