

## Statistical Annex

# DISASTER RISK INDEX TABLES

TABLE 1 DISASTER RISK INDEX SUMMARY TABLE, 1980 - 2000

	Number of people killed per year	Average number of people killed per million inhabitants	Average HDI 1980-2000	Gross Domestic Product Purchasing Power Parity, 1990	Percentage of population infected by HIV/AIDS virus, 2001	Control of corruption 2002	Average percentage of people affected by conflicts per year, 1980 - 2000
Country Name (alphabetical order)	Killed per Year	Killed per million	HDI <sub>av</sub> *	GDPcap (ppp)	%	Corruption	%population
Afghanistan	820.00	49.06	--	--	--	-1.35	98
Albania	0.76	0.25	0.725	2 843	--	-0.85	0
Algeria	150.71	6.02	0.693	4 502	0.04	-0.70	37
Angola	1.38	0.13	0.422	1 581	2.59	-1.12	79
Antigua and Barbuda	0.33	5.26	--	7 270	--	-0.84	0
Argentina	12.57	0.38	0.842	7 721	0.37	-0.77	0
Armenia	1 190.67	323.68	0.745	3 565	0.06	-0.72	0
Australia	9.95	0.59	0.936	17 271	0.06	1.91	0
Austria	1.48	0.19	0.921	18 664	0.12	1.85	0
Azerbaijan	2.29	0.29	0.738	4591	0.02	-1.07	0.8
Bahamas	0.24	0.89	0.82	14 521	2.29	1.41	0
Bahrain	--	--	0.824	12 088	--	0.95	0
Bangladesh	7 930.95	68.84	0.47	1 004	0.01	-1.12	4
Barbados	0.00	0.00	0.864	11 252	--	1.29	0
Belarus	0.33	0.03	0.782	7 031	0.15	-0.78	0
Belgium	0.43	0.04	0.935	19 411	0.08	1.57	0
Belize	0.67	3.21	0.776	3 633	1.23	-0.25	0
Benin	4.67	0.94	0.42	706	1.94	-0.61	0
Bhutan	10.57	5.44	0.477	882	--	0.91	0
Bolivia	20.43	3.12	0.648	1 826	0.05	-0.82	0
Bosnia and Herzegovina	0.00	0.00	--	--	--	-0.60	27
Botswana	1.48	1.26	0.577	4 911	20.91	0.76	0
Brazil	106.00	0.72	0.75	5 562	0.35	-0.05	0
Brunei Darussalam	--	--	0.857	14 727	--	0.32	0
Bulgaria	0.19	0.02	0.772	5 797	--	-0.17	0
Burkina Faso	2.10	0.24	0.32	636	4.26	-0.04	0
Burundi	0.86	0.14	0.309	722	6.00	-1.02	16
Cambodia	48.52	4.24	0.541	980	1.30	-0.90	75
Cameroon	1.76	0.13	0.506	1 561	6.05	-1.10	0
Canada	5.10	0.18	0.936	20 122	0.18	2.03	0
Cape Verde	1.52	4.92	0.708	2 926	--	0.33	0
Central African Republic	0.33	0.11	0.372	1 060	6.61	-1.02	3.6

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Country Name (alphabetical order)	Killed per Year	Killed per million	HDI <sub>av</sub> *	GDPcap (ppp)	%	Corruption	%population
Chad	147.38	25.89	0.359	766	1.82	-1.02	43
Chile	32.95	2.47	0.825	4 981	0.11	1.55	0
China	2 173.10	1.88	0.718	1 394	0.09	-0.41	0
Colombia	134.43	3.76	0.765	7 195	0.33	-0.47	100
Comoros	2.81	6.15	0.51	1 716	--	-0.73	0
Congo	0.10	0.04	0.502	760	3.60	-0.94	6
Costa Rica	8.48	2.61	0.821	5 288	0.27	0.88	0
Cote d'Ivoire	1.33	0.11	0.426	1 552	4.74	-0.86	0
Croatia	0.00	0.00	0.803	7 133	0.00	0.23	4
Cuba	7.24	0.68	--	--	0.03	-0.13	0
Cyprus	0.10	0.13	0.877	12 784	--	0.89	0
Czech Republic	1.38	0.13	0.844	--	0.00	0.38	0
Democratic People's Republic of Korea	12 887.76	605.90	--	--	--	-1.18	0
Democratic Republic of the Congo	3.05	0.07	0.429	1 290	2.53	-1.42	18
Denmark	0.86	0.17	0.921	19 513	0.09	2.26	0
Djibouti	8.57	17.66	0.447	--	--	-0.73	23.4
Dominica	0.14	1.99	--	--	--	0.52	0
Dominican Republic	22.19	3.11	0.722	3 361	1.47	-0.39	0
Ecuador	58.95	5.59	0.726	2 781	0.16	-1.02	0
Egypt	58.43	0.98	0.635	2 509	0.01	-0.29	0
El Salvador	103.52	19.01	0.701	2 969	0.38	-0.54	44
Equatorial Guinea	--	--	--	1 052	1.26	-1.89	0
Eritrea	0.00	0.00	0.416	--	1.44	0.04	70
Estonia	--	--	--	7 957	0.56	0.66	0
Ethiopia	14 330.33	272.57	0.321	486	3.26	-0.35	24
Fiji	7.29	10.08	0.757	3 804	0.04	0.12	0
Finland	0.00	0.00	0.925	17 797	0.02	2.39	0
France	15.86	0.28	0.924	17 966	0.17	1.45	0
Gabon	0.00	0.00	0.617	5 241	--	-0.55	0
Gambia	2.52	2.98	0.398	1 488	0.61	-0.83	0
Georgia	18.10	3.38	0.742	9 101	0.02	-1.03	0
Germany	2.52	0.03	0.921	18 224	0.05	1.82	0
Ghana	9.95	0.65	0.542	1 368	1.65	-0.40	0
Greece	14.76	1.44	0.881	11 464	0.08	0.58	0
Grenada	0.00	0.00	--	4 567	--	0.71	0
Guatemala	58.24	6.34	0.626	2 824	0.58	-0.71	76
Guinea	13.86	2.27	0.397	1 520	--	-0.58	3
Guinea-Bissau	0.05	0.06	0.339	686	1.39	-0.61	0
Guyana	0.00	0.00	0.704	2 858	2.29	-0.50	0
Haiti	93.14	13.72	0.467	1 638	3.51	-1.70	0
Honduras	732.90	143.61	0.634	2 074	0.87	-0.78	0
Hungary	2.52	0.25	0.829	9 447	0.03	0.60	0
Iceland	0.00	0.00	0.932	21 343	0.08	2.19	0
India	2 931.81	3.51	0.571	1 400	0.39	-0.25	3
Indonesia	373.90	2.06	0.677	1 952	0.05	-1.16	1
Iran (Islamic Republic of)	2 393.14	40.29	0.714	3 878	0.03	-0.38	22
Iraq	0.95	0.05	--	--	0.00	-1.43	71
Ireland	1.81	0.51	0.916	12 687	0.06	1.67	0
Israel	0.90	0.17	0.893	13 450	--	1.08	99
Italy	242.86	4.27	0.909	17 438	0.19	0.80	0
Jamaica	6.57	2.81	0.738	3 261	0.67	-0.46	0
Japan	351.29	2.87	0.928	20 183	0.01	1.20	0

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Country Name (alphabetical order)	Killed per Year	Killed per million	HDI <sub>av</sub> *	GDPcap (ppp)	%	Corruption	%population
Jordan	1.33	0.35	0.714	3 304	--	0.00	0
Kazakhstan	5.86	0.35	0.742	6 095	0.04	-1.05	0
Kenya	19.29	0.78	0.514	977	7.99	-1.05	0
Kiribati	0.00	0.00	--	--	--	-0.44	0
Kuwait	0.10	0.06	0.818	--	--	1.06	0
Kyrgyzstan	2.86	0.62	0.707	3 608	0.01	-0.84	0
Lao People's Democratic Republic	5.95	1.36	0.476	900	0.03	-1.25	6
Latvia	--	--	--	8 487	--	0.09	0
Lebanon	1.19	0.44	0.758	1 870	--	-0.34	25
Lesotho	1.90	1.13	0.541	1 087	17.25	-0.28	0
Liberia	0.48	0.22	--	--	--	-0.98	28
Libyan Arab Jamahiriya	0.00	0.00	0.77	--	0.13	-0.82	0
Liechtenstein	--	--	--	--	--	1.29	0
Lithuania	0.29	0.08	0.803	8 534	0.04	0.25	0
Luxembourg	0.00	0.00	0.924	21 363	--	2.00	0
Madagascar	58.33	4.65	0.462	818	0.13	0.14	0
Malawi	23.76	2.43	0.397	445	7.86	-0.91	0
Malaysia	17.29	0.89	0.774	4 739	0.19	0.38	0
Maldives	0.00	0.00	0.739	3 611	--	0.04	0
Mali	1.81	0.20	0.378	582	0.95	-0.32	0
Malta	--	--	0.866	8 742	--	0.80	0
Marshall Islands	0.00	0.00	--	--	--	-0.02	0
Mauritania	107.05	52.63	0.437	1 167	--	0.23	0
Mauritius	0.33	0.31	0.765	5 597	0.06	0.53	0
Mexico	629.19	7.26	0.79	6 383	0.13	-0.19	0
Micronesia (Federated States of)	0.24	2.33	--	--	--	-0.44	0
Moldova, Republic of	3.05	0.71	0.699	5 216	0.13	-0.89	0
Mongolia	4.81	2.00	0.569	1 804	--	-0.14	0
Morocco	40.29	1.48	0.596	2 888	0.04	-0.04	0
Mozambique	4 827.71	327.51	0.323	521	6.33	-1.01	46
Myanmar	10.90	0.25	0.551	--	0.62	-1.37	74
Namibia	0.00	0.00	0.601	4 411	10.63	0.21	40
Nepal	242.52	13.58	0.48	883	0.24	-0.30	0
Netherlands	0.10	0.01	0.931	17 407	0.10	2.15	0
New Zealand	0.81	0.24	0.913	14 190	0.03	2.28	0
Nicaragua	173.95	39.84	0.635	1 721	0.11	-0.44	33
Niger	4.57	0.56	0.274	738	--	-1.10	0
Nigeria	17.43	0.17	0.455	764	2.99	-1.35	0
Norway	0.05	0.01	0.939	19 527	0.04	2.00	0
Oman	1.24	1.04	0.747	--	0.05	1.03	0
Pakistan	292.05	2.61	0.498	1 394	0.06	-0.73	0
Panama	4.24	1.70	0.784	3 871	0.88	-0.24	0
Papua New Guinea	12.76	3.30	0.534	1 580	0.34	-0.90	0
Paraguay	5.19	1.17	0.738	3 922	--	-1.22	0
Peru	110.62	5.22	0.743	3 251	0.20	-0.20	70
Philippines	1 059.86	17.49	0.749	3 332	0.01	-0.52	100
Poland	2.95	0.08	0.828	5 684	--	0.39	0
Portugal	7.29	0.73	0.874	11 176	0.31	1.33	0
Qatar	--	--	0.801	--	--	0.92	0
Republic of Korea	123.48	2.86	0.875	8 880	0.01	0.33	0
Romania	11.14	0.49	0.772	6 219	0.03	-0.34	0
Russian Federation	132.14	0.90	0.775	10 079	0.46	-0.90	0
Rwanda	2.29	0.34	0.395	952	6.29	-0.58	23

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Country Name (alphabetical order)	Killed per Year	Killed per million	HDI <sub>av</sub> *	GDPcap (ppp)	%	Corruption	%population
Saint Kitts and Nevis	0.29	6.91	--	6 334	--	0.40	0
Saint Lucia	2.76	21.74	--	4 360	--	0.40	0
Saint Vincent and the Grenadines	0.14	1.37	--	3 631	--	0.40	0
Samoa	1.00	6.28	0.701	4 325	--	-0.06	0
Sao Tome and Principe	0.00	0.00	--	--	--	-0.25	0
Saudi Arabia	1.52	0.13	0.754	9 401	--	0.57	0
Senegal	8.90	1.22	0.423	1 199	0.27	-0.17	6
Seychelles	0.24	3.08	--	--	--	0.52	0
Sierra Leone	4.05	1.02	0.258	894	3.71	-0.82	24
Singapore	--	--	0.876	12 783	0.08	2.30	0
Slovakia	2.67	0.49	0.831	9 028	--	0.28	0
Slovenia	0.00	0.00	0.874	--	0.01	0.89	3.7
Solomon Islands	5.00	15.42	--	1 801	--	-0.86	0
Somalia	148.62	19.88	--	--	0.47	-1.19	3
South Africa	62.38	1.67	0.702	8 282	11.42	0.36	22
Spain	13.24	0.34	0.908	12 848	0.31	1.46	0
Sri Lanka	27.86	1.66	0.735	2 036	0.03	-0.14	65
Sudan	7 160.00	275.43	0.439	803	1.35	-1.09	65
Suriname	--	--	0.758	2 508	0.89	0.19	0
Swaziland	26.33	34.77	0.583	3 630	17.60	-0.26	0
Sweden	0.00	0.00	0.936	18 284	0.04	2.25	0
Switzerland	0.76	0.11	0.924	24 154	0.27	2.17	0
Syrian Arab Republic	0.00	0.00	0.7	2 215	--	-0.29	4
Taiwan	134.33	6.36	--	--	--	0.81	0
Tajikistan	82.95	14.64	0.66	2 796	0.00	-1.07	15
Thailand	108.76	1.91	0.757	3 835	1.05	-0.15	11
The former Yugoslav Republic of Macedonia	0.00	0.00	0.766	5 011	--	-0.73	0
Togo	0.14	0.04	0.489	1 400	3.22	-0.68	0
Tonga	0.38	3.97	--	--	--	-0.44	0
Trinidad and Tobago	0.24	0.19	0.798	6 035	1.73	-0.04	0
Tunisia	8.43	1.11	0.714	3 900	--	0.35	0
Turkey	972.24	16.46	0.735	4 834	--	-0.38	3
Turkmenistan	0.00	0.00	0.73	5 962	--	-1.21	0
Tuvalu	0.00	0.00	--	--	--	--	0
Uganda	12.86	0.66	0.435	746	2.50	-0.92	45
Ukraine	3.48	0.07	0.742	6 694	0.51	-0.96	0
United Arab Emirates	--	--	0.809	20 204	--	1.19	0
United Kingdom of Great Britain & Northern Ireland	9.76	0.17	0.923	16 706	0.06	1.97	2
United Republic of Tanzania	22.24	0.75	0.436	453	4.03	-1.00	0
United States of America	253.57	0.97	0.934	23 447	0.32	1.77	0
Uruguay	0.10	0.03	0.828	6 177	0.19	0.79	0
Uzbekistan	4.95	0.22	0.698	--	0.00	-1.03	0
Vanuatu	5.10	33.30	--	2 445	--	-0.44	0
Venezuela	1 449.38	70.54	0.765	5 050	--	-0.94	0
Viet Nam	573.14	8.36	0.682	--	0.17	-0.68	10
Yemen	119.00	9.57	0.468	567	0.05	-0.69	4
Yugoslavia	4.86	0.48	--	--	--	-0.80	0
Zambia	0.00	0.00	0.427	837	10.94	-0.97	0
Zimbabwe	5.05	0.47	0.554	2 336	17.51	-1.17	0

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	Number of people killed per year	Average number of people killed per million inhabitants	Average HDI 1980-2000	Gross Domestic Product Purchasing Power Parity, 1990	Percentage of population infected by HIV/AIDS virus, 2001	Control of corruption 2002	Average percentage of people affected by conflicts per year, 1980 - 2000
Tributarians Territories (alphabetical order)	Killed per Year	Killed per million	HDI <sub>av</sub> *	GDPcap (ppp)	%	Corruption	%population
American Samoa	1.19	27.78	--	--	--	--	0
Anguilla	0.00	0.00	--	--	--	--	0
Bermuda	0.00	0.00	--	--	--	1.29	0
British Virgin Islands	0.00	0.00	--	--	--	--	0
Cocos (Keeling) Islands	--	--	--	--	--	--	0
Cook Islands	1.19	65.09	--	--	--	--	0
French Guiana	0.00	0.00	--	--	--	--	0
French Polynesia	0.33	2.02	--	18 594	--	--	0
Guadeloupe	0.43	1.09	--	--	--	--	0
Guam	0.05	0.34	--	--	--	--	0
Macau, China	0.00	0.00	--	14 080	--	-0.07	0
Martinique	0.48	1.33	--	--	--	--	0
Montserrat	0.52	48.73	--	--	--	--	0
New Caledonia	0.29	1.76	--	19 745	--	--	0
Netherlands Antilles	0.10	0.49	--	--	--	--	0
Niue	0.00	0.00	--	--	--	--	0
Puerto Rico	25.81	7.22	--	--	--	1.19	0
Reunion	2.90	4.87	--	--	--	--	0
Tokelau	0.00	0.00	--	--	--	--	0
Turks and Caicos Islands	0.00	0.00	--	--	--	--	0
United States Virgin Islands	0.52	4.49	--	--	--	--	0
Wallis and Futuna	0.29	21.18	--	--	--	--	0

**Source:**

Columns 1 and 2: EM-DAT: The OFDA/CRED International Disaster Database

Column 3: calculated by UNDP/BCPR and UNEP/GRID-Geneva for this report. For details, see note below

Column 4: calculated by UNDP/BCPR and UNEP/GRID-Geneva from World Development Indicators (World Bank), "ppp", purchasing power parity

Column 5: UNAIDS "Report on the global HIV/AIDS epidemic July 2002. For details, see <http://www.unaids.org/barcelona/presskit/barcelona%20report/contents.html>

Column 6: World Bank estimates (From +2.5 maximum control of corruption to -2.5 minimum control of corruption).

World Bank Governance Matters III: updated indicators for 1996-2002. For more details see <http://www.worldbank.org/wbi/governance>

Column 7: Armed Conflict 1946-2001, International Peace Research Institute, Oslo (PRIO), For more detailed information see <http://www.prio.no/cwp/armedconflict>

**\*Note:** Human Development Index has been adjusted as follows:  $HDI_{av} = (\sum K_i HDI_i) / (\sum K_i)$

Where "K" is the number of people killed by this disaster, "i" is the year and HDI<sub>i</sub> is the HDI linearly extrapolated from the standard 5-year interval HDI.

TABLE 2 DISASTER RISK FOR DROUGHTS, 1980 - 2000

	Average number of events per year	Number of people killed per year	Average number of people killed per million inhabitants	Average physical exposure per year	Physical exposure in percentage of population	Relative Vulnerability	Percentage of total population with access to safe water
Country Name	Event per year	Killed per year	Killed per million	People per year	%	Killed per million exposed	%
Democratic People's Republic of Korea	0.10	12 857.14	579.43	763174	3.44	16 846.94	--
Mozambique	0.43	4 764.29	357.06	878 635	6.58	5 422.37	60.0
Ethiopia	0.57	14 303.19	286.24	2 756 273	5.52	5 189.32	23.0
Sudan	0.48	7 142.86	294.05	2 478 870	10.20	2 881.50	71.0
Mauritania	0.33	106.81	57.86	172 159	9.33	620.41	37.0
Chad	0.33	142.86	27.87	514 050	10.03	277.91	27.0
Somalia	0.24	29.57	4.14	726 181	10.17	40.72	--
Madagascar	0.24	9.52	0.78	324 977	2.66	29.31	45.5
Uganda	0.29	5.48	0.29	242 373	1.30	22.59	47.0
Papua New Guinea	0.14	4.67	1.16	436 919	10.83	10.68	42.0
China	0.86	161.90	0.14	26 855 212	2.31	6.03	73.0
Guinea	0.14	0.57	0.10	161 647	2.73	3.54	46.5
Kenya	0.29	4.05	0.16	1 219 322	4.97	3.32	44.5
Indonesia	0.29	60.29	0.34	29 982 870	16.77	2.01	72.5
Burundi	0.10	0.29	0.05	269 943	4.28	1.06	65.0
Pakistan	0.05	6.81	0.05	9 811 893	6.95	0.69	86.0
India	0.38	19.52	0.02	3 3701 757	3.91	0.58	83.0
Brazil	0.43	0.95	0.01	10 345 734	6.89	0.09	84.5
Philippines	0.24	0.38	0.01	8 240 940	13.39	0.05	87.0

Source: Columns 1, 2 and 3: EM-DAT: The OFDA/CRED International Disaster Database; Columns 4, 5, and 6: calculated by the IRI of Columbia University, UNDP/BCPR and UNEP/GRID-Geneva for this report. For details, see technical annex; Column 7: UNEP/GRID-Geneva, calculated from WHO figures. For more details see <http://geodata.grid.unep.ch>

**TABLE 3 DISASTER RISK FOR EARTHQUAKES, 1980 - 2000**

	Average number of events per year*	Number of people killed per year	Average number of people killed per million inhabitants	Average physical exposure per year	Physical exposure in percentage of population	Relative Vulnerability	Percentage of Urban growth (as average for 3-year period)
Country Name	Event per year	Killed per Year	Killed per million	People per year	%	Killed per million exposed	%
Armenia	0.05	1 190.48	343.96	155 560	4.49	7 652.82	0.03
Iran (Islamic Republic of)	1.43	2 250.81	38.68	2 094 097	3.60	1 074.84	0.15
Yemen	0.10	72.29	6.90	95 423	0.91	757.53	0.24
Turkey	0.76	949.86	15.58	2 745 757	4.50	345.94	0.15
Afghanistan	0.81	399.95	2480	1 749 097	0.11	228.1	0.13
India	0.67	576.52	0.73	2 730 309	0.35	211.16	0.09
Italy	0.52	225.71	3.98	1 288 265	2.27	175.21	0.00
Russian Federation	0.29	95.29	0.65	658 876	0.45	144.62	0.03
Algeria	0.38	137.19	5.79	1 252 109	5.28	109.57	0.14
Mexico	0.76	427.24	5.05	4 145 529	4.90	103.06	0.08
Nepal	0.10	38.52	2.42	512 716	3.22	75.14	0.19
Georgia	0.14	13.29	2.44	286 210	5.25	46.42	0.04
El Salvador	0.10	53.33	11.23	1 272 919	26.81	41.90	0.07
Pakistan	0.62	30.95	0.30	793 845	0.77	38.99	0.14
Egypt	0.10	27.19	0.45	834 006	1.38	32.60	0.08
Colombia	0.48	85.05	2.34	2 663 322	7.33	31.93	0.09
Bolivia	0.14	5.95	0.86	186 491	2.69	31.92	0.13
Australia	0.14	1.10	0.07	40 727	0.25	26.89	0.04
China	2.10	92.24	0.08	3 493 705	0.30	26.40	0.13
South Africa	0.14	1.62	0.05	82 467	0.25	19.63	0.08
Ecuador	0.43	28.33	2.75	1 542 854	14.97	18.36	0.12
Panama	0.05	1.43	0.58	95 128	3.89	15.02	0.08
Kyrgyzstan	0.10	2.76	0.62	227 769	5.10	12.13	0.04
Indonesia	1.62	193.24	1.04	16 301 764	8.80	11.85	0.15
Venezuela	0.14	4.62	0.25	435 949	2.34	10.60	0.09
Japan	1.14	281.29	2.31	30 855 862	25.39	9.12	0.02
Philippines	0.57	120.57	2.03	16 228 511	27.30	7.43	0.14
Peru	0.62	13.00	0.62	1 844 498	8.81	7.05	0.08
Greece	0.62	11.29	1.11	1 621 341	15.89	6.96	0.03
Nicaragua	0.14	8.86	2.05	1 515 588	35.13	5.84	0.11
Uganda	0.14	0.33	0.02	62 081	0.35	5.37	0.16
Azerbaijan	0.14	1.52	0.19	439 907	5.51	3.46	0.04
Malawi	0.05	0.43	0.05	13 0484	1.44	3.28	0.18
Brazil	0.05	0.05	0.00	14 592	0.01	3.26	0.09
Costa Rica	0.33	2.52	0.85	868 232	29.33	2.91	0.11
Chile	0.24	9.48	0.73	4 465 047	34.34	2.12	0.06
Papua New Guinea	0.33	3.10	0.83	1 645 460	44.19	1.88	0.12
Cyprus	0.05	0.10	0.13	58 652	7.89	1.62	0.07
Bangladesh	0.19	1.38	0.01	925 173	0.73	1.49	0.17
Kazakhstan	0.10	0.05	0.00	39 696	0.24	1.20	0.04
United States of America	0.48	6.52	0.03	6 745 799	2.61	0.97	0.04
Uzbekistan	0.10	0.43	0.02	477 708	2.44	0.90	0.05
Belgium	0.10	0.10	0.01	108 164	1.09	0.88	0.01
United Republic of Tanzania	0.05	0.05	0.00	64 343	0.18	0.74	0.22
Guatemala	0.24	1.71	0.20	2 671 752	30.85	0.64	0.10
Argentina	0.05	0.29	0.01	515 880	1.70	0.55	0.06
Romania	0.14	0.52	0.02	1 007 506	4.37	0.52	0.03
Albania	0.14	0.05	0.02	155 688	5.41	0.31	0.07
New Zealand	0.05	0.05	0.01	239 427	7.28	0.20	0.03
Germany	0.05	0.05	0.00	357 730	0.44	0.13	0.02

Source: Columns 1, 2 and 3: EM-DAT: The OFDA/CRED International Disaster Database; Columns 4, 5, and 6: calculated by UNDP/BCPR and UNEP/GRID-Geneva for this report. For details, see technical annex; Column 7: UNEP/GRID-Geneva, calculated from UNDESA: UN Dep. Of Economic and Social Affairs/Population Division.

\*Note: These include events equal or greater than a magnitude of 5.5 on the Richter scale.

TABLE 4 DISASTER RISK FOR FLOODS, 1980 - 2000

	Average number of events per year	Number of people killed per year	Average number of people killed per million inhabitants	Average physical exposure per year	Physical exposure in percentage of population	Relative Vulnerability	Density of population (living in the watershed exposed to flood)	Gross Domestic Product, per capita, ppp
Country Name	Event per year	Killed per Year	Killed per million	People per year	%	Killed per million exposed	Inhab. per km <sup>2</sup>	
Venezuela	0.66	1 439.62	68.30	3 136 576	14.88	458.98	0.26	5 081
Somalia	0.52	117.62	15.38	693 220	0.09	169.67	0.11	--
Morocco	0.33	39.62	1.40	395 262	1.40	100.23	0.95	2 650
Papua New Guinea	0.24	2.76	0.72	37 288	0.98	74.07	0.04	1 898
Egypt	0.14	28.95	0.48	406 277	0.68	71.26	1.44	2 287
Botswana	0.14	1.48	1.07	23 330	1.69	63.28	0.06	4 734
Yemen	0.52	46.71	3.65	938 991	7.34	49.75	0.48	746
Zimbabwe	0.10	5.05	0.41	150 152	1.21	33.62	0.31	2 158
Fiji	0.14	1.57	2.10	50 037	6.67	31.41	16.71	3 721
South Africa	0.67	54.71	1.38	1 828 614	4.61	29.92	0.12	7 699
Mozambique	0.33	41.33	2.66	1 471 643	9.46	28.09	0.23	556
Malawi	0.43	23.33	2.36	899 039	9.11	25.95	3.12	459
Ghana	0.19	9.95	0.60	387 393	2.33	25.69	1.02	1 391
Georgia	0.14	4.81	0.90	189 551	3.54	25.37	14.27	2 353
Guatemala	0.43	38.24	4.02	1 541 278	16.18	24.81	3.10	2 885
Mexico	1.10	121.19	1.41	4 931 631	5.75	24.57	0.17	6 453
Gambia	0.10	2.52	2.09	105 270	8.70	23.97	31.44	1 340
El Salvador	0.33	26.76	4.92	1 239 827	22.80	21.59	29.00	3 159
Ethiopia	1.00	27.14	0.50	1 354 486	2.51	20.04	0.15	525
Honduras	0.62	30.62	6.09	1 762 646	35.07	17.37	2.50	2 043
Algeria	0.71	13.33	0.50	796 804	3.01	16.73	0.15	4 394
Tunisia	0.14	8.43	1.13	533 010	7.12	15.81	1.96	4 090
United Republic of Tanzania	0.71	22.00	0.77	1 414 090	4.93	15.56	0.21	453
Angola	0.24	1.38	0.11	93 118	0.75	14.83	0.16	1 811
Mali	0.29	1.81	0.18	124 529	1.23	14.53	0.10	576
Saudi Arabia	0.05	1.52	0.12	117 250	0.96	13.00	0.11	10 201
Viet Nam	1.00	137.90	1.98	10 896 441	15.64	12.66	2.63	1 427
Uganda	0.14	7.05	0.36	570 394	2.88	12.36	5.60	794
Burkina Faso	0.24	2.10	0.23	174 801	1.93	11.99	0.68	713
Nepal	0.90	199.38	10.92	17 156 240	93.97	11.62	13.00	927
China	5.57	1 490.57	1.32	147 884 196	13.06	10.08	0.14	1 741
Kenya	0.24	12.86	0.50	1 370 897	5.33	9.38	1.13	878
Thailand	1.33	78.52	1.37	8 376 157	14.63	9.37	1.12	3952
Bangladesh	2.00	461.95	4.11	51 929 673	46.19	8.90	19.93	1 014
Turkey	0.67	20.90	0.36	2 419 658	4.19	8.64	0.64	4 681
Sierra Leone	0.05	0.57	0.14	66 651	1.63	8.57	9.58	665
Portugal	0.19	3.33	0.34	389 574	3.92	8.56	23.43	10 920
Cambodia	0.29	48.52	4.08	5 678 181	47.72	8.55	4.21	1 096
India	3.86	1 313.24	1.55	157 540 274	18.57	8.34	0.58	1 424
Spain	0.52	8.38	0.21	1 025 097	2.63	8.18	0.65	12 301
Philippines	1.76	75.71	1.22	9 314 934	14.98	8.13	5.73	3 191
Peru	1.10	97.62	4.56	13 072 909	61.09	7.47	0.49	3 843
Sri Lanka	1.29	27.62	1.62	4 072 445	23.90	6.78	13.39	2 142
Republic of Korea	0.71	51.95	1.19	7 721 548	17.63	6.73	20.03	9 243
Chile	0.57	16.48	1.21	2 547 463	18.77	6.47	0.29	5 512
Chad	0.29	4.00	0.63	671 973	10.53	5.95	0.09	705
Rwanda	0.05	2.29	0.34	391 316	5.84	5.84	40.32	952
Romania	0.43	9.24	0.41	1 633 626	7.23	5.65	1.78	5 955
Niger	0.29	4.57	0.47	810 946	8.41	5.64	0.26	719
Moldova, Republic of	0.14	2.67	0.62	476 922	11.03	5.59	61.78	2 876
Jamaica	0.24	3.43	1.45	655 203	27.75	5.23	216.78	3 124
Haiti	0.81	11.90	1.72	2 565 270	37.11	4.64	59.27	1 449
Slovakia	0.10	2.67	0.49	593 686	11.01	4.49	23.06	7 905



**TABLE 4 DISASTER RISK FOR FLOODS, 1980 - 2000**

	Average number of events per year	Number of people killed per year	Average number of people killed per million inhabitants	Average physical exposure per year	Physical exposure in percentage of population	Relative Vulnerability	Density of population (living in the watershed exposed to flood)	Gross Domestic Product, per capita, ppp
Country Name	Event per year	Killed per Year	Killed per million	People per year	%	Killed per million exposed	Inhab. per km <sup>2</sup>	
Cote d'Ivoire	0.10	1.33	0.10	297 627	2.21	4.48	3.48	1413
Nicaragua	0.24	2.52	0.60	569 095	13.44	4.43	1.46	2146
Colombia	1.14	47.90	1.34	10 901 999	30.50	4.39	0.30	4625
Benin	0.48	4.67	0.91	1 092 463	21.33	4.27	4.64	736
Panama	0.29	0.81	0.32	190 108	7.48	4.26	2.21	4352
Albania	0.19	0.71	0.22	169 207	5.29	4.22	24.40	2755
Italy	0.57	14.00	0.24	3 371 565	5.89	4.15	3.42	16619
Pakistan	0.95	200.38	1.77	48 751 464	42.97	4.11	1.86	1308
Australia	1.10	4.43	0.26	1 094 340	6.37	4.05	0.02	17293
Jordan	0.10	0.81	0.26	204 262	6.46	3.96	11.32	3498
Burundi	0.10	0.57	0.10	157 991	2.66	3.62	44.81	610
Russian Federation	1.33	9.24	0.06	2 711 300	1.85	3.41	0.01	8179
Brazil	2.19	99.33	0.67	29 369 028	19.79	3.38	0.06	5623
Iran (Islamic Republic of)	1.90	131.19	2.20	39 127 510	65.55	3.35	0.26	3932
Costa Rica	0.38	1.67	0.51	536 809	16.36	3.10	4.04	5415
Malaysia	0.43	4.43	0.24	1 432 155	7.61	3.09	1.15	5380
Ecuador	0.38	30.62	2.92	10 184 870	97.12	3.01	2.89	2695
Nigeria	0.62	12.67	0.12	4 251 902	3.92	2.98	0.87	783
Japan	0.62	30.71	0.25	10 975 689	8.90	2.80	8.50	18629
Cameroon	0.24	1.76	0.13	632 109	4.84	2.79	1.55	1521
Bolivia	0.48	14.48	2.27	5 933 207	93.00	2.44	0.60	1868
Indonesia	2.48	120.29	0.67	49 405 779	27.39	2.43	0.55	1964
Czech Republic	0.05	1.38	0.13	587 703	5.70	2.35	15.99	12296
Ukraine	0.29	3.00	0.06	1 324 692	2.58	2.26	1.31	5178
Poland	0.24	2.95	0.08	1 430 858	3.83	2.06	1.51	6939
United States of America	3.48	24.19	0.09	11 912 776	4.56	2.03	0.03	22494
France	1.10	5.29	0.09	2 850 310	4.96	1.85	0.99	17072
Canada	0.52	1.52	0.05	876 436	3.14	1.74	0.03	19456
Greece	0.19	1.19	0.11	844 233	8.00	1.41	13.90	11148
Bhutan	0.10	10.57	5.44	8 529 300	439.23	1.24	63.42	336
Argentina	1.19	11.14	0.34	9 899 475	30.24	1.13	0.14	9310
Paraguay	0.38	3.62	0.85	3 268 907	76.69	1.11	0.92	3841
Lao People's Democratic Republic	0.43	3.29	0.75	3 190 331	72.86	1.03	1.22	918
Austria	0.29	0.90	0.12	932 211	12.14	0.97	7.74	18289
Azerbaijan	0.19	0.76	0.10	832 565	10.78	0.92	4.83	3670
Dominican Republic	0.29	3.00	0.42	3 388 907	47.79	0.89	17.69	3700
Israel	0.10	0.52	0.09	880 972	15.42	0.59	66.76	14084
United Kingdom of Great Britain & Northern Ireland	0.43	0.48	0.01	2 192 765	3.72	0.22	8.58	18738
Germany	0.38	1.00	0.01	4 612 953	5.73	0.22	2.54	21848

Source: Columns 1, 2 and 3: EM-DAT: The OFDA/CRED International Disaster Database; Columns 4, 5, and 6: calculated by UNDP/BCPR and UNEP/GRID-Geneva for this report. For details, see technical annex; Column 7: UNEP/GRID-Geneva, calculated from UNEP/GRID-Geneva spatial modelling based on CIESIN population data. For more details see <http://geodata.grid.unep.ch>; Column 8: UNEP/GRID-Geneva from World Development Indicators (World Bank), "ppp", purchasing power parity.

TABLE 5 DISASTER RISK FOR TROPICAL CYCLONES, 1980 - 2000

Country Name	Average number of events per year	Number of people killed per year	Number of people killed per million inhabitants	Average physical exposure per year	Physical exposure in percentage of population	Relative Vulnerability	Percentage of Arable Land	Average HDI 1980-2000
	Event per year	Killed per Year	Killed per million	People per year	%	Killed per million exposed	%	HDI <sub>av</sub> *
Honduras	0.19	702.29	139.65	2 185 215	43.45	321.38	16.44	0.61
Nicaragua	0.33	162.57	37.39	804 228	18.50	202.15	17.92	0.60
Cape Verde	0.10	1.52	5.07	18 402	6.12	82.80	10.21	0.65
Swaziland	0.05	2.52	4.04	34 728	5.56	72.67	10.26	0.59
Bangladesh	3.43	7 467.62	64.02	135 835 143	116.45	54.98	67.77	0.41
El Salvador	0.19	23.43	3.90	847 932	14.12	27.63	38.56	0.64
Comoros	0.19	2.81	5.97	137 528	29.25	20.43	49.81	0.50
Haiti	0.29	81.24	11.63	6 269 306	89.77	12.96	32.82	0.45
Pakistan	0.62	53.90	0.46	4 697 462	4.04	11.48	27.40	0.44
Malaysia	0.10	12.86	0.60	1 368 871	6.41	9.39	19.91	0.72
Papua New Guinea	0.10	2.24	0.52	289 367	6.76	7.73	1.32	0.49
Fiji	0.67	5.71	7.99	1 012 072	141.57	5.65	12.87	0.72
Viet Nam	2.24	435.24	6.40	77 521 410	114.01	5.61	20.60	0.63
Mozambique	0.33	22.10	1.41	4 698 084	29.88	4.70	4.17	0.31
Madagascar	0.71	48.81	3.87	11 638 792	92.36	4.19	5.27	0.44
Belize	0.10	0.67	3.01	176 043	79.48	3.79	3.05	0.75
Costa Rica	0.19	4.29	1.22	1 196 901	34.15	3.58	10.04	0.79
Philippines	5.57	863.19	14.35	259 304 805	430.94	3.33	32.99	0.71
Guatemala	0.05	18.29	1.69	6 226 716	57.65	2.94	16.87	0.58
India	2.76	1 022.52	1.24	352 431 552	42.75	2.90	56.94	0.51
Dominican Republic	0.38	19.19	2.68	6 889 529	96.30	2.79	30.72	0.68
United States of America	12.14	222.86	0.86	89 407 185	34.41	2.49	20.23	0.91
Thailand	0.71	30.24	0.54	12 739 238	22.84	2.37	38.38	0.71
Republic of Korea	1.00	71.52	1.67	37 649 377	87.85	1.90	20.98	0.81
Jamaica	0.24	3.14	1.34	2 169 085	92.57	1.45	22.52	0.72
Colombia	0.14	1.48	0.05	1 180 056	3.68	1.25	4.66	0.72
Mexico	1.57	80.76	0.93	65 081 375	74.78	1.24	13.64	0.76
Australia	2.38	4.43	0.26	3 666 088	21.72	1.21	6.26	0.90
Venezuela	0.10	5.14	0.26	6 534 046	33.13	0.79	4.20	0.75
China	6.90	428.38	0.37	579 217 240	49.51	0.74	13.50	0.63
Lao People's Democratic Republic	0.19	2.67	0.60	4 554 774	102.72	0.59	3.75	0.42
New Zealand	0.29	0.48	0.13	848 108	23.87	0.56	13.03	0.88
Japan	1.95	39.29	0.32	226 166 900	184.04	0.17	14.26	0.90

Source: Columns 1, 2 and 3: EM-DAT: The OFDA/CRED International Disaster Database; Columns 4, 5, and 6: calculated by UNDP/BCPR and UNEP/GRID-Geneva for this report. For details, see technical annex; Column 7: UNEP/GRID-Geneva, calculated from FAOSTAT; Column 8: Calculated by UNEP/GRID-Geneva, for details see note below

\*Note: Human Development Index has been adjusted as follows:  $HDI_{av} = (\sum K_i HDI_i) / (\sum K_i)$

Where "K" is the number of people killed by this disaster, "i" is the year and HDI<sub>i</sub> is the HDI linearly extrapolated from the standard 5-year interval HDI.