

International Federation of Red Cross and Red Crescent Societies

WORLD DISASTERS REPORT

2005

Annex 1

Disaster Data
(part 1)

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Table 1. Total number of reported disasters ¹, by continent and by year (1995 to 2004)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Africa	63	58	56	83	144	196	186	201	163	161	1,311
Americas	99	95	102	112	137	147	128	153	119	131	1,223
Asia	177	176	195	209	240	289	295	301	264	313	2,459
Europe	72	55	60	66	78	122	92	111	85	93	834
Oceania	8	17	15	17	15	13	18	18	20	21	162
<i>High human development</i> ²	128	104	128	126	135	176	145	165	135	131	1,373
<i>Medium human development</i>	237	237	237	274	366	431	402	455	372	456	3,467
<i>Low human development</i>	54	60	63	87	113	160	172	164	144	132	1,149
Total	419	401	428	487	614	767	719	784	651	719	5,989

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ In Tables 1-13, "disasters refer to those with a natural and technological trigger only, and do not include wars, conflict-related famines, diseases or epidemics.

² See note on UNDP's Human Development Index country status in the section on disaster definitions in the introduction to this chapter.

Comments Table 1

- After the years of 2002 and 2000, 2004 was the third worst year of the decade (equalizing 2001) for disaster occurrence.
- Occurrence per continent was highest in Asia, the continent the most frequently struck by disasters.
- Disaster occurrence also peaked in Medium Human Development countries, which correspond to 46.5% of all countries and 67.8% of the world's population.
- If the entire period is considered, we see that, after a relatively stable number of disasters reported between 1995 and 1997, a sharp increase occurred during the years 1998 – 1999, reaching new levels starting in 2000, levelling out in the following years.
- When comparing the two periods 1995 - 1999 and 2000 - 2004, the global number of reported disasters is 1.55 times higher in the later period.
- Disaster occurrence increased by a factor of 2.05 in Low Human Development countries, 1.57 in Medium Human Development countries and 1.21 in High Human Development countries.
- Occurrence increase is highest in Africa (x 2.25) and Europe (x 1.52). The number of disasters was multiplied by 1.47 in Asia, 1.25 in Oceania and 1.24 in the Americas.

Table 2. Total number of people reported killed, by continent and by year (1995 to 2004)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Africa	2,962	3,484	4,064	7,006	2,688	5,756	4,462	8,272	5,810	4,308	48,812
Americas	2,628	2,541	3,069	21,865	33,989	1,820	3,460	2,285	2,026	8,269	81,952
Asia	75,590	69,706	71,033	82,373	75,890	11,608	29,255	13,358	37,860	236,102	702,775
Europe	3,366	1,204	1,166	1,434	19,448	1,627	2,196	1,699	31,046	1,182	64,368
Oceania	24	111	388	2,227	116	205	9	91	64	35	3,270
<i>High human development</i> ¹	8,223	2,170	2,435	3,070	5,420	2,221	2,136	2,115	31,606	1,248	60,644
<i>Medium human development</i>	19,493	17,146	18,157	42,635	70,163	13,272	33,349	15,169	41,743	239,904	511,031
<i>Low human development</i>	56,854	57,730	59,128	69,200	56,548	5,523	3,897	8,421	3,457	8,744	329,502
Total	84,570	77,046	79,720	114,905	132,131	21,016	39,382	25,705	76,806	249,896	901,177

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ See note on UNDP's Human Development Index country status in the section on disaster definitions in the introduction to this chapter.

Comments Table 2

- The tsunami in December sharply changed the figure of disaster mortality in 2004. With 224,495 people dead, it caused around 90 % of disaster deaths reported that year.
- During the decade, 7 other large disasters were reported - a famine in North Korea from 1995 – 1999 (at least 270,000 deaths), a flood in Venezuela in 1999 (30,000 deaths), a heat wave in Europe in 2003 (29,915 deaths), three earthquakes in Iran in 2003 (Bam : 26,796 deaths), one in India in 2001 (Gujarat : 20,005 deaths) and in Turkey in 1999 (Izmit : 17,127 deaths), and a hurricane in Central America (Mitch : 18,791 deaths) – however, the tsunami was exceptional in extent and impact.
- During the decade from 1995 - 2004, 34 disasters caused between 1,000 and 10,000 deaths, and 379 caused between 100 and 1,000 deaths.
- If the tsunami's reported deaths and missing people are not considered, the number of people who died from disasters in 2004 drops to 25,401. With such a figure 2004 would have been a year with fewer deaths than the average in the past decade.
- With or without the tsunami of Dec. 2004 the mortality figures are highest in Asia and Medium Human Development countries (which correspond to the greatest proportion of the world population). However, if the 8 largest disasters are not considered in analysis, disaster deaths in Africa become more prominent.

Table 3. Total number of people reported affected, by continent and by year (1995 to 2004) - in thousands

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Africa	9,535	4,281	7,736	10,150	14,362	23,043	18,385	31,736	20,951	9,000	149,183
Americas	1,152	2,379	2,711	16,966	5,008	1,348	11,246	2,046	3,739	4,268	50,864
Asia	2,5621	207,163	56,269	315,714	188,605	230,044	141,177	583,216	228,895	131,956	2,308,659
Europe	8,220	30	679	622	6,549	2,907	786	1,205	1,121	524	22,644
Oceania	2,682	652	730	328	151	7	32	41	39	124	4,785
<i>High human development</i> ¹	11,648	2,610	1,946	2,663	5,698	1,058	7,361	2,075	813	887	36,758
<i>Medium human development</i>	219,830	203,207	57,506	334,198	196,443	228,970	142,708	584,875	232,711	139,708	2,340,156
<i>Low human development</i>	15,732	8,690	8,673	6,918	12,534	27,322	21,558	31,294	21,221	5,278	159,220
Total	247,210	214,507	68,125	343,780	214,676	257,350	171,627	618,243	254,745	145,872	2,536,134

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ See note on UNDP's Human Development Index country status in the section on disaster definitions in the introduction to this chapter.

Comments Table 3

- Contrary to the number of deaths, the tsunami “only” affected about 2.5 million persons. A flash flood that hit Bangladesh and India in June affected 69 million people, and two floods in China in July and September directly affected a total of nearly 42 million.
- However, these disasters are “less” severe than the drought that affected 300 million people in India in 2002, or the floods and storms in China that affected 180 million people in 2002 and 150 million in 2003.
- The number of people affected by drought/famine decrease in 2004. This is in fact the result of the new EM-DAT methodology for recording this type of disaster. Only the drought/famines that adhere to the new methodology have been taken into account in 2004.
- During the 1995 - 2004 decade, 7 disasters affected more than 100 million people, 31 between 10 and 90 million, and 145 between 1 and 10 million.
- An average 250 million people were affected yearly by disasters in 1995 - 2004.
- The majority of these people lived in Asian and/or Medium Human Development countries.
- If the two periods from 1995 - 1999 and 2000 - 2004 are compared, the global number of people reported affected by disasters increases by a factor of 1.33.
- The number of people affected increased by factor 2.03 in Low Human Development countries and 1.31 in Medium Human Development countries. In contrast to these increases, the number was halved in High Human Development countries.
- Increases are highest in Africa (x 2.24) and Asia (x 1.32). At the same time, the number of people affected was divided by 1.25 in the Americas, by 2.5 in Europe and by 20 in Oceania.

Table 4. Total reported amount of disaster estimated damage, by continent and by year (1995 to 2004)
- in millions of US dollars (2004 prices)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Africa	205	134	22	366	823	164	339	144	5684	1480	9362
Americas	27702	14835	11682	20094	14639	3588	11090	3547	14272	27891	149340
Asia	192918	35896	30832	33169	30238	18074	17160	7853	17766	67395	451301
Europe	15695	396	11408	5430	40654	9070	895	17081	19108	2028	121765
Oceania	1585	1126	291	327	967	553	364	411	617	516	6756
<i>High human development</i> ¹	207499	16344	21190	18954	44331	11850	11810	19484	40533	76794	468789
<i>Medium human development</i>	11893	32324	33026	40289	42973	12745	17495	9499	16553	21837	238634
<i>Low human development</i>	18711	3719	19	143	17	6853	542	53	362	679	31099
Total	238104	52387	54235	59386	87321	31448	29848	29036	57448	99310	738523

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ See note on UNDP's Human Development Index country status in the section on disaster definitions in the introduction to this chapter.

Comments Table 4

- As we pointed out in the introduction, damage estimations are notoriously unreliable. On average, they are missing for 84% of disasters. Moreover, methodologies are not standardized for calculating damages, and their coverage may vary greatly. Depending on where the disaster occurred and who is reporting, estimations will vary from none to billions of US dollars.
- The available estimation of direct damages from the tsunami (for 8 of the 12 affected countries) was nearly 8 billion US\$, making it the second most costly disaster in 2004. The earthquake near Honshu, Japan, in October caused an estimated 28 billion US\$ of damage.
- In 2004, 12 other disasters caused estimated damages of more than 1 billion US\$: 4 typhoons in Japan and China, 4 hurricanes in the U.S.A. and Cuba, 3 floods in Japan, China and Bangladesh and 1 drought in Portugal.
- For the entire decade, more than 100 disasters with damages equalling or over 1 billion US\$ were reported.
- Compared to previous years, the total amount of damages reported in 2004 ranks second in the entire decade (with damages reported for only 14% of disasters). In 1995, direct damages from the Kobe earthquake were estimated at almost 163 billion US\$.
- Damages from earthquakes and typhoons in Japan, from hurricanes, storms and floods in North America and from floods and storms in Western Europe explain the overall greater amount of damage reported for High Human Development countries. For Medium Human Development countries, floods in China strongly contribute to the total amount of damages reported.

Table 5. Total number of reported disasters, by type of phenomena and by year (1995 to 2004)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Avalanches/landslides	15	24	13	21	15	29	21	19	21	16	194
Droughts/famines	16	8	18	34	30	48	47	41	21	13	276
Earthquakes/tsunamis	25	12	17	18	33	31	25	36	40	42	279
Extreme temperatures	13	5	13	13	8	31	23	15	18	15	154
Floods	95	70	76	88	112	152	159	172	158	128	1210
Forest/scrub fires	7	5	15	16	22	30	14	22	14	7	152
Volcanic eruptions	5	5	4	4	5	5	6	7	2	5	48
Windstorms	59	63	68	72	86	101	98	112	76	121	856
Other natural disasters ¹	4	1	3	1	2	4	2	0	0	13	30
<i>Subtotal hydro-meteorological disasters</i>	<i>209</i>	<i>176</i>	<i>206</i>	<i>245</i>	<i>275</i>	<i>395</i>	<i>364</i>	<i>381</i>	<i>308</i>	<i>313</i>	<i>2872</i>
<i>Subtotal geophysical disasters</i>	<i>30</i>	<i>17</i>	<i>21</i>	<i>22</i>	<i>38</i>	<i>36</i>	<i>31</i>	<i>43</i>	<i>42</i>	<i>47</i>	<i>327</i>
Total natural disasters	239	193	227	267	313	431	395	424	350	360	3199
Industrial accidents	45	35	35	43	36	50	54	48	46	81	473
Miscellaneous accidents	29	37	30	29	51	47	49	52	44	62	430
Transport accidents	106	136	136	148	214	239	221	260	211	216	1887
Total technological disasters	180	208	201	220	301	336	324	360	301	359	2790
Total	419	401	428	487	614	767	719	784	651	719	5989

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Comments Table 5

- In 2004, transport accidents (30 %), floods (18 %) and windstorms (17 %) were the three most frequent types of disasters, as was the case for each year of the decade (1995 – 2004).
- Disasters of geophysical origin, windstorms, industrial and miscellaneous accidents peaked in 2004 for the past decade.
- Half the disasters of geophysical origin occurred in Asia.
- For the first time in the past decade, windstorms accounted for one third of natural disasters. Numerous devastating storms were reported from the Caribbean, U.S.A, and East and South East Asia. For the first time, a storm similar to a tropical cyclone hit the Brazilian coast, a region considered virtually devoid of such storms.
- Two thirds of industrial accidents occurred in China, 70% of them being mine accidents. This proportion is close to the average of 77% for the whole period.
- In the miscellaneous accidents category, 11 fires in poor areas, shanty towns or refugee camp were reported, leaving several thousand people without lodging each time. 23 fires, collapses or explosions also affected houses or public buildings.
- Almost 60% of transport accidents were in traffic accidents. Water transportation accounts for another 25% of accidents. Air and railroad accidents correspond respectively to 8 and 7% of the total.
- When comparing the two periods 1995 - 1999 and 2000 - 2004, the number of reported extreme temperature disasters almost doubled for second period and the number of floods increased by factor 1.74. The increase for other disasters approximates an average of 1.55 or is below.

Table 6. Total number of people reported killed, by type of phenomenon and by year (1995 to 2004)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Avalanches/landslides	1497	1129	801	981	351	1099	692	1149	700	357	8756
Droughts/famines	54000	54000	54520	57875	54029	370	199	538	9	81	275621
Earthquakes/tsunamis	7966	596	3039	9599	21870	204	21355	1606	29617	225377	321229
Extreme temperatures	1730	300	619	3225	771	922	1653	3369	32403	239	45231
Floods	8145	7309	6958	9695	34366	6330	4678	4354	4050	6957	92842
Forest/scrub fires	29	45	32	109	70	47	33	6	53	14	438
Volcanic eruptions	n.a.	4	53	n.a.	n.a.	n.a.	n.a.	254	n.a.	2	313
Windstorms	3724	4380	5330	24657	11899	1129	1864	1093	995	6513	61584
Other natural disasters ¹	n.a.	20	400	n.a.	3	1	n.a.	ndr	ndr	27	451
<i>Subtotal hydro-meteorological disasters</i>	<i>69125</i>	<i>67183</i>	<i>68660</i>	<i>96542</i>	<i>101489</i>	<i>9898</i>	<i>9119</i>	<i>10509</i>	<i>38210</i>	<i>14188</i>	<i>484923</i>
<i>Subtotal geophysical disasters</i>	<i>7966</i>	<i>600</i>	<i>3092</i>	<i>9599</i>	<i>21870</i>	<i>204</i>	<i>21355</i>	<i>1860</i>	<i>29617</i>	<i>225379</i>	<i>321542</i>
Total natural disasters	77091	67783	71752	106141	123359	10102	30474	12369	67827	239567	806465
Industrial accidents	513	674	1033	1942	742	1743	1271	1147	1101	1797	11963
Miscellaneous accidents	1711	1159	1277	748	1330	1112	1783	2023	1361	2115	14619
Transport accidents	5255	7430	5658	6074	6700	8059	5854	10166	6517	6417	68130
Total technological disasters	7479	9263	7968	8764	8772	10914	8908	13336	8979	10329	94712
Total	84570	77046	79720	114905	132131	21016	39382	25705	76806	249896	901177

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Note : n.a. signifies "no data available"; ndr signifies "no disaster reported". For more information, see section on caveats in introductory text.

Comments Table 6

- As already mentioned, rare and unusually deadly disasters like the December 2004 tsunami introduce high variability to the mortality data series and are also a sign of a varying composition and degree of vulnerability in the affected areas.
- The tsunami was responsible for around 90 % of all reported disaster related deaths in 2004 and relegates nearly all disasters of the decade to a position of secondary importance, reminding us that earthquakes and tsunamis, rare events compared to floods and windstorms, remain among the deadliest disasters.
- In 2004, the number of deaths caused by the three most frequent disasters (transport accidents, floods and windstorms) was nearly identical.
- When comparing the two periods 1995 - 1999 and 2000 - 2004, the number of deaths due to disasters of geological origin and to extreme temperatures increased in the second period, even if unusually deadly events like the tsunami in 2004 and the heat wave in Europe in 2003 are excluded. Inversely, people killed by floods and windstorms decreased for the 2000 – 2004 period, even if hurricane Mitch in 1998 and the Venezuela flood in 1999 are excluded.
- In the technological disasters category, the number of people killed by industrial accidents increased by a factor of 1.4 in the second period. The proportions of increase for deaths in transport and miscellaneous accidents were 1.19 and 1.35, respectively

Table 7. Total number of people reported affected, by type of phenomenon and by year (1995 to 2004) - in thousands

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Avalanches/landslides	1122	9	34	209	15	208	67	771	459	13	2908
Droughts/famines	30431	5836	8016	24495	38647	176477	86757	338536	70274	7780	787250
Earthquakes/tsunamis	3029	2018	634	1888	3893	2458	19307	549	3956	3058	40791
Extreme temperatures	535	n.a.	615	36	725	28	213	104	1840	2140	6236
Floods	198233	178451	44956	290073	150167	62506	34500	167186	166828	116583	1409482
Forest/scrub fires	12	6	53	167	19	39	6	26	9	20	356
Volcanic eruptions	26	7	7	8	34	119	78	298	25	53	654
Windstorms	13771	28144	13594	26784	21153	15459	30645	110709	10781	15920	286962
Other natural disasters ¹	n.a.	n.a.	29	n.a.	1	17	n.a.	ndr	ndr	n.a.	48
<i>Subtotal hydro-meteorological disasters</i>	<i>244105</i>	<i>212446</i>	<i>67297</i>	<i>341765</i>	<i>210727</i>	<i>254734</i>	<i>152189</i>	<i>617333</i>	<i>250191</i>	<i>142455</i>	<i>2493242</i>
<i>Subtotal geophysical disasters</i>	<i>3055</i>	<i>2025</i>	<i>641</i>	<i>1896</i>	<i>3928</i>	<i>2577</i>	<i>19386</i>	<i>847</i>	<i>3981</i>	<i>3110</i>	<i>41445</i>
Total natural disasters	247160	214471	67939	343661	214655	257312	171574	618180	254171	145566	2534687
Industrial accidents	27	16	163	63	3	18	19	2	555	157	1023
Miscellaneous accidents	19	18	20	52	12	15	30	56	14	102	340
Transport accidents	3	3	3	4	5	6	3	5	4	48	85
Total technological disasters	50	36	186	119	21	38	53	63	574	307	1447,258
Total	247210	214507	68125	343780	214675	257350	171627	618243	254745	145872	2536134

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Note : n.a. signifies "no data available"; ndr signifies "no disaster reported". For more information, see section on caveats in introductory text.

Comments Table 7

- In 2004, floods affected the greatest number of people among all disasters (nearly 117 million people, 80 % of the total amount of people affected by disasters), followed by windstorms (nearly 16 million people, 11 % of the total amount).
- In the same year an unusually high number of people were affected by transport and miscellaneous accidents compared to previous years.
- In the 1995 – 2004 decade, hydro-meteorological disasters accounted for 98% of all people affected by disasters.
- Floods affected an average of 141 million people per year, droughts and famines an average of 79 million, and windstorms an average of 29 million. Geophysical disasters “only” affected an average of 4 million per year.
- When comparing the two periods from 1995 - 1999 and 2000 - 2004, the number of people affected by disasters is 1.33 times higher for the second period. But this increase is unequally distributed. In the natural disasters category the number of people affected by droughts and famine increased by a factor of 6.33. Geophysical disasters and extreme temperatures affected 2.59 and 2.26 times the number of people than in the first period.
- In the technological disasters category, people affected by transport accidents increased by a factor of 3.72, those affected by industrial accident by 2.75 and those affected by miscellaneous accident by 1.8.

Table 8. Total reported amount of disaster estimated damage, by continent and by year (1995 to 2004) - in millions of US dollars (2004 prices)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Avalanches/landslides	13	n.a.	19	n.a.	n.a.	185	75	13	53	n.a.	358
Droughts/famines	7158	1444	481	522	7768	6927	4033	1535	729	1341	31939
Earthquakes/tsunamis	165146	636	5798	438	35704	156	10623	1279	9765	36483	266029
Extreme temperatures	1034	n.a.	3534	4287	1134	136	213	n.a.	11550	n.a.	21888
Floods	32310	30006	15081	33778	15095	11700	3327	24703	15095	12840	193935
Forest/scrub fires	167	2071	20011	702	556	1154	75	96	2664	3	27500
Volcanic eruptions	1	20	9	n.a.	n.a.	n.a.	16	9	n.a.	n.a.	55
Windstorms	30250	15041	8836	19451	26834	10581	11474	1347	17591	47434	188841
Other natural disasters ¹	129	n.a.	4	2	n.a.	132	n.a.	ndr	ndr	n.a.	267
<i>Subtotal hydro-meteorological disasters</i>	<i>71060</i>	<i>48562</i>	<i>47967</i>	<i>58743</i>	<i>51387</i>	<i>30815</i>	<i>19198</i>	<i>27694</i>	<i>47682</i>	<i>61619</i>	<i>464727</i>
<i>Subtotal geophysical disasters</i>	<i>165147</i>	<i>656</i>	<i>5807</i>	<i>438</i>	<i>35704</i>	<i>156</i>	<i>10639</i>	<i>1289</i>	<i>9765</i>	<i>36483</i>	<i>266084</i>
Total natural disasters	236208	49218	53774	59181	87090	30971	29837	28983	57448	98102	730812
Industrial accidents	772	1451	449	149	3	n.a.	11	n.a.	n.a.	800	3635
Miscellaneous accidents	273	1471	n.a.	22	2	477	n.a.	53	n.a.	n.a.	2298
Transport accidents	850	249	12	34	225	n.a.	n.a.	n.a.	n.a.	408	1778
Total technological disasters	1896	3170	461	205	231	477	11	53	n.a.	1208	7711
Total	238104	52387	54235	59386	87321	31448	29848	29036	57448	99310	738523

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Note : n.a. signifies "no data available"; ndr signifies "no disaster reported". For more information, see section on caveats in introductory text.

Comments Table 8

- Estimates of damages caused by disasters should be treated with caution, since the financial value linked to infrastructure in more developed countries is much higher than in developing countries. Moreover, low reporting rates of direct damage costs make analysis difficult. However, damage estimates are more frequently reported for large disasters.
- In 2004, the highest sum of damages was reported for windstorms (47 billion US\$), followed by earthquakes and tsunamis (36 billion) and floods (13 billion).
- For the whole period, damages caused by earthquakes and tsunamis are the most prominent (266 billion US\$), followed by floods (194 billion) and windstorms (189 billion).
- However, looking at costs per disaster, damages caused by geophysical disasters (especially earthquakes) were significantly higher than those reported for all other disaster types. This still holds true for the entire period if the damage of 160 billion US\$ from the Kobe earthquake is excluded.
- Relative to the frequency of occurrence, damages from windstorms appear to be the second most prominent, followed by flood damages.
- Damages from technological disasters are significantly lower than those caused by natural disasters, and are most often more limited in a spatial and temporal space.

Table 9. Total number of reported disasters, by continent and by type of phenomenon (1995 to 2004)

	Africa	Americas	Asia	Europe	Oceania	HHD	MHD	LHD	Total
Avalanches/landslides	11	44	112	19	8	24	153	17	194
Droughts/famines	120	48	85	14	9	30	127	119	276
Earthquakes/tsunamis	17	50	154	50	8	53	201	25	279
Extreme temperatures	8	37	44	63	2	63	80	11	154
Floods	277	267	432	199	35	297	638	275	1210
Forest/scrub fires	12	63	22	46	9	84	62	6	152
Volcanic eruptions	4	23	13	2	6	13	33	2	48
Windstorms	69	305	320	94	68	404	389	63	856
Other natural disasters ¹	14	3	10	1	2	2	17	11	30
<i>Subtotal hydro-meteorological disasters</i>	<i>511</i>	<i>767</i>	<i>1,025</i>	<i>436</i>	<i>133</i>	<i>904</i>	<i>1,466</i>	<i>502</i>	<i>2872</i>
<i>Subtotal geophysical disasters</i>	<i>21</i>	<i>73</i>	<i>167</i>	<i>52</i>	<i>14</i>	<i>66</i>	<i>234</i>	<i>27</i>	<i>327</i>
Total natural disasters	532	840	1192	488	147	970	1,7	529	3199
Industrial accidents	45	43	313	72	0	72	351	50	473
Miscellaneous accidents	84	63	212	67	4	90	269	71	430
Transport accidents	650	277	742	207	11	241	1,147	499	1887
Total technological disasters	779	383	1,267	346	15	403	1,767	620	2790
Total	1,311	1,223	2,459	834	162	1,373	3,467	1,149	5,989

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Comments Table 9

- Floods are the most common natural disasters, followed by windstorms.
- Put into proportion with the continent of occurrence, floods are most frequent in Africa, Asia and Europe, and windstorms most common in the Americas and Oceania. Inversely, windstorms are the second most frequent disasters in Asia and Europe, and floods in the Americas and Oceania.
- Half of earthquake and tsunami disasters occurred in Asia. Two-fifths of droughts and famines occurred in Africa and the same proportion extreme temperatures were located in Europe.
- Windstorm disasters are more often reported in High Human Development countries, floods in Medium and Low Human Development countries.
- 80% of avalanches and landslides are reported in Medium Human Development countries, as well as 72 % of earthquakes and tsunamis, and 68% of volcanic eruptions.
- Extreme temperatures, forest and scrub fires are rarely reported in Low Human Development countries, while 43% of droughts (and famines) occurred there.
- On average, at least one transport accident is reported per week in Asia and Africa and at least one industrial accident every two weeks.

Table 10. Total number of people reported killed, by continent and by type of phenomenon (1995 to 2004)

	Africa	Americas	Asia	Europe	Oceania	HHD	MHD	LHD	Total
Avalanches/landslides	251	1,742	6,219	416	128	370	7,576	810	8,756
Droughts/famines	4,551	59	270,923	n.a.	88	n.a.	927	274,694	275,621
Earthquakes/tsunamis	3,262	2,99	292,05	20,727	2,2	8,231	304,237	8,761	321,229
Extreme temperatures	200	2,325	9,817	32,888	1	32,986	11,378	867	45,231
Floods	9,176	38	44,219	1,414	33	3,599	76,093	13,15	92,842
Forest/scrub fires	114	83	125	107	9	146	288	4	438
Volcanic eruptions	254	52	3	n.a.	4	20	39	254	313
Windstorms	1,385	25,271	33,958	720	250	4,514	52,391	4,679	61,584
Other natural disasters ¹	n.a.	3	448	n.a.	n.a.	n.a.	451	n.a.	451
<i>Subtotal hydro-meteorological disasters</i>	<i>15,677</i>	<i>67,483</i>	<i>365,709</i>	<i>35,545</i>	<i>509</i>	<i>41,615</i>	<i>149,104</i>	<i>294,204</i>	<i>484,923</i>
<i>Subtotal geophysical disasters</i>	<i>3,516</i>	<i>3,042</i>	<i>292,053</i>	<i>20,727</i>	<i>2,204</i>	<i>8,251</i>	<i>304,276</i>	<i>9,015</i>	<i>321,542</i>
Total natural disasters	19,193	70,525	657,762	56,272	2,713	49,866	453,38	303,219	806,465
Industrial accidents	2,810	279	7,956	918	ndr	385	8,655	2,923	11,963
Miscellaneous accidents	2,781	2,784	7,592	1,416	46	2,806	9,32	2,493	14,619
Transport accidents	24,028	8,364	29,465	5,762	511	7,587	39,676	20,867	68,130
Total technological disasters	29,619	11,427	45,013	8,096	557	10,778	57,651	26,283	94,712
Total	48,812	81,952	702,775	64,368	3,27	6,0644	511,031	329,502	901,177

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Note : n.a. signifies "no data available"; ndr signifies "no disaster reported". For more information, see section on caveats in introductory text.

Comments Table 10

- The greatest causes of death per region for the whole period were, in Asia, droughts, tsunamis and earthquakes; in the Americas, floods and windstorms; in Europe, earthquakes and extreme temperatures; in Africa, floods and droughts (and famines) and finally in Oceania, earthquakes and tsunamis.
- Extreme temperatures were the greatest cause of death in High Human Development countries, tsunamis and earthquakes in Medium Human Development countries and droughts and famines in Low Development countries.
- Deaths from industrial and transport accidents were significantly higher in Asia and Africa than on other continents. In Africa, reported deaths from technological accidents even exceed deaths reported from natural disasters.
- Low Human development countries show a lower proportion of technological accidents.

Table 11. Total number of people reported affected, by continent and by type of phenomenon (1995 to 2004) - in thousands

	Africa	Americas	Asia	Europe	Oceania	HHD	MHD	LHD	Total
Avalanches/landslides	3	204	2,685	14	1	15	2,887	7	2,908
Droughts/famines	122,984	15,183	639,187	7,063	2,833	8,415	658,759	120,075	787,250
Earthquakes/tsunamis	378	3,584	34,619	2,175	35	2,791	36,465	1,535	40,791
Extreme temperatures	0	4,072	893	771	500	579	5,458	200	6,236
Floods	21,636	9,717	1,372,252	5,784	93	6,507	1,371,298	31,677	1,409,482
Forest/scrub fires	8	159	58	113	17	147	207	2	356
Volcanic eruptions	139	298	187	n.a.	29	60	465	130	654
Windstorms	3,893	17,051	258,119	6,636	1,264	18,099	263	5,397	286,962
Other natural disasters ¹	n.a.	1	47	n.a.	n.a.	n.a.	19	29	48
<i>Subtotal hydro-meteorological disasters</i>	<i>148,524</i>	<i>46,387</i>	<i>2,273,241</i>	<i>20,382</i>	<i>4,708</i>	<i>33,761</i>	<i>2,302,093</i>	<i>157,388</i>	<i>2,493,242</i>
<i>Subtotal geophysical disasters</i>	<i>517</i>	<i>3,882</i>	<i>34,806</i>	<i>2,175</i>	<i>65</i>	<i>2,851</i>	<i>36,930</i>	<i>1,665</i>	<i>41,445</i>
Total natural disasters	149,041	50,269	2,308,047	22,557	4,773	36,612	2,339,023	159,053	2,534,687
Industrial accidents	6	577	369	71	ndr	120	897	5	1,023
Miscellaneous accidents	124	10	183	11	12	17	211	111	340
Transport accidents	12	8	61	4	n.a.	9	25	52	85
Total technological disasters	141	594	612	87	12	146	1,133	167	1,447
Total	149,183	50,864	2,308,659	22,644	4,785	36,758	2,340,156	159,220	2,536,134

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Note : n.a. signifies "no data available"; ndr signifies "no disaster reported". For more information, see section on caveats in introductory text.

Comments Table 11

- When considering each continent, Africa has the highest number of people affected by droughts and famines (together 83% of people affected by disasters), followed by Oceania (59%) and Europe (31%); Asia has the highest amount for floods (59%), and the Americas for windstorms (33%).
- The second disaster types affecting the most people per continent were droughts in the Americas (30%) and Asia (28%), windstorms in Europe (29%) and Oceania (26%) and floods in Africa (15%).
- In High Human Development countries, windstorms were the disasters affecting the most people (accounting for 49% of total of people affected) followed by droughts (23%); in Medium Human Development countries these were floods (59%) and droughts (28%); in Low Human Development countries these were droughts (75%) and floods (20%).
- The Americas have the highest number of people affected by extreme temperatures, volcanic eruptions and forest (and scrub) fires.
- Among technological disasters, industrial accidents affected a high proportion of people in the Americas, Europe and Asia, and in High and Medium Human Development countries likewise. Miscellaneous accidents take over this role for Oceania and Africa, as well as for Low Human Development countries.

**Table 12. Total reported amount of disaster estimated damage, by continent and by type of phenomenon (1995 to 2004)
- in millions of US dollars (2004 prices)**

	Africa	Americas	Asia	Europe	Oceania	HHD	MHD	LHD	Total
Avalanches/landslides	n.a.	194	138	26	n.a.	7	350	n.a.	358
Droughts/famines	445	3,447	14,435	11,993	1,620	15,940	15,596	403	31,939
Earthquakes/tsunamis	5,633	9,931	219,912	30,554	n.a.	215,646	50,383	n.a.	266,029
Extreme temperatures	1	5,449	3,529	12,696	213	18,234	3,655	n.a.	21,888
Floods	1,440	21,956	125,636	43,433	1,471	62,211	108,776	22,948	193,935
Forest/scrub fires	9	2,645	22,378	2,062	412	4,938	22,562	n.a.	27,500
Volcanic eruptions	9	22	1	23	n.a.	23	23	9	55
Windstorms	941	102,461	63,264	19,265	2,909	146,853	34,887	7,101	188,841
Other natural disasters ¹	6	129	n.a.	n.a.	132	132	131	4	267
<i>Subtotal hydro-meteorological disasters</i>	<i>2,837</i>	<i>136,280</i>	<i>229,380</i>	<i>89,475</i>	<i>6,756</i>	<i>248,315</i>	<i>185,956</i>	<i>30,456</i>	<i>464,727</i>
<i>Subtotal geophysical disasters</i>	<i>5,642</i>	<i>9,953</i>	<i>219,913</i>	<i>30,577</i>	<i>0</i>	<i>215,669</i>	<i>50,406</i>	<i>9</i>	<i>266,084</i>
Total natural disasters	8,479	146,233	449,292	120,051	6,756	463,984	236,362	30,466	730,812
Industrial accidents	811	1,278	828	749	ndr	,2024	1,401	210	3,635
Miscellaneous accidents	5	1,700	24	569	n.a.	2,232	61	5	2,298
Transport accidents	67	129	1,156	426	n.a.	550	811	418	1,778
Total technological disasters	883	3,106	2,008	1,714	n.a.	4,805	2,273	633	7,711
Total	9,362	149,340	451,301	121,765	6,756	468,789	238,634	31,099	738,523

Source : EM-DAT, CRED, University of Louvain, Belgium

¹ Insect infestations and waves/surges

Note : n.a. signifies "no data available"; ndr signifies "no disaster reported". For more information, see section on caveats in introductory text.

Comments Table 12

- Once again, amounts of estimated damages must be approached with caution due to low reporting rates and methodological weaknesses.
- On the whole, earthquakes were responsible for the highest amounts of reported damages (36 % of the total amount of damage reported), followed by floods (26%) and windstorms (26%).
- In Asia, these damage sums were significantly higher for earthquakes (49%) and floods (28%) than for other disasters; as they also were for windstorms in the Americas (69 %), for floods (36%) and earthquakes (25%) in Europe, for earthquakes (60%) in Africa, and for windstorms (43%) and droughts (24%) in Oceania.
- In High Human Development countries, earthquakes, windstorms and floods account for 46%, 31% and 13%, respectively, of the total amount of available estimated damages.
- In Medium Human Development countries, the same disasters account for 21%, 15% and 46%, respectively, of the total amount of damage reported.
- In Low Human Development countries, floods are responsible for 74% of the total amount of available estimated damages, and windstorms for 23%.
- The highest amount of damages attributed to technological disasters was reported for the Americas and High Human Development countries.