1. Impacts of Natural Disasters by Region, 2008

Among all regions across the world in 2008, Asia not only ranks first but also dominates in all natural disaster’s impact categories—occurrence, killed, total affected as well as damage. In terms of share, in Asia, the number of people killed and the total affected people respectively made up more than 80 percent of the world’s total. The next most impacted regions in descending order are the Americas, Africa, Europe and Oceania.

![Graph showing impacts of natural disasters by region, 2008](image)

**Figure 1: Impacts of Natural Disasters by Region, 2008**

<table>
<thead>
<tr>
<th>Region</th>
<th>Occurrence (share in %)</th>
<th>Killed (share in %)</th>
<th>Total Affected (in ’000s) (share in %)</th>
<th>Damage (US$ millions) (share in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>99 (25.4)</td>
<td>4,050 (1.7)</td>
<td>16,300 (7.6)</td>
<td>866 (0.5)</td>
</tr>
<tr>
<td>Americas</td>
<td>99 (25.4)</td>
<td>1,895 (0.8)</td>
<td>20,023 (9.3)</td>
<td>64,041 (33.7)</td>
</tr>
<tr>
<td>Asia</td>
<td>146 (37.5)</td>
<td>166,178 (40.1)</td>
<td>177,621 (82.9)</td>
<td>118,231 (62.1)</td>
</tr>
<tr>
<td>Europe</td>
<td>33 (8.5)</td>
<td>256 (0.1)</td>
<td>256 (0.1)</td>
<td>4,661 (2.4)</td>
</tr>
<tr>
<td>Oceania</td>
<td>12 (3.1)</td>
<td>25 (0.0)</td>
<td>30 (0.0)</td>
<td>2,515 (1.3)</td>
</tr>
<tr>
<td>Total</td>
<td>389 (100)</td>
<td>238,602 (100)</td>
<td>214,296 (100)</td>
<td>190,314 (100)</td>
</tr>
</tbody>
</table>

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
2. Impacts of Natural Disasters by Disaster Type, 2008

In terms of disaster type, no single, same disaster dominates all the impact categories. However, storm is rather significant in occurrence (second place), killed (first place), and economic damage (second place). Similarly, earthquake comes in second in terms of killed and affected, and first in damage although it has a relatively low occurrence.

![Figure 2: Impacts of Natural Disasters by Disaster Type, 2008](image)

**Table 2: Impacts of Natural Disasters by Disaster Type, 2008**

<table>
<thead>
<tr>
<th>Disaster Type</th>
<th>Occurrence (share in %)</th>
<th>Killed (share in %)</th>
<th>Total Affected (in '000s) (share in %)</th>
<th>Damage (US$ millions) (share in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drought</td>
<td>13 (3.3)</td>
<td>4 (0.0)</td>
<td>26,585 (12.4)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Earthquake</td>
<td>23 (5.9)</td>
<td>87,914 (36.8)</td>
<td>47,576 (22.2)</td>
<td>85,796 (45.1)</td>
</tr>
<tr>
<td>Epidemic</td>
<td>35 (9.0)</td>
<td>3,338 (1.4)</td>
<td>250 (0.1)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Extreme temperature</td>
<td>14 (3.6)</td>
<td>370 (0.2)</td>
<td>79,001 (36.9)</td>
<td>21,940 (11.5)</td>
</tr>
<tr>
<td>Flood</td>
<td>166 (42.7)</td>
<td>3,955 (1.7)</td>
<td>44,895 (20.9)</td>
<td>19,475 (10.2)</td>
</tr>
<tr>
<td>Landslide</td>
<td>15 (3.9)</td>
<td>624 (0.3)</td>
<td>6 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Storm</td>
<td>112 (28.8)</td>
<td>142,302 (59.6)</td>
<td>15,799 (07.4)</td>
<td>60,673 (31.9)</td>
</tr>
<tr>
<td>Volcano</td>
<td>6 (1.5)</td>
<td>9 (0.0)</td>
<td>127 (0.1)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Wildfire</td>
<td>5 (1.3)</td>
<td>86 (0.0)</td>
<td>59 (0.0)</td>
<td>2430 (1.3)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>389 (100)</strong></td>
<td><strong>238,602 (100)</strong></td>
<td><strong>214,296 (100)</strong></td>
<td><strong>190,314 (100)</strong></td>
</tr>
</tbody>
</table>

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
3. Impacts of Natural Disasters in Asia by Disaster Type, 2008

In Asia, impact analysis by disaster type shows a similar pattern to the world as a whole. The exception is in damage category, where earthquake is so significant that it occupies more than 70 percent of the total share and the next significant is extreme temperature which has a share of close to 20 percent.

![Figure 3: Impacts of Natural Disasters in Asia by Disaster Type, 2008](image)

**Table 3: Impacts of Natural Disasters in Asia by Disaster Type, 2008**

<table>
<thead>
<tr>
<th>Disaster type</th>
<th>Occurrence (share in %)</th>
<th>Killed (share in %)</th>
<th>Total Affected (share in %)</th>
<th>Damage (US$ millions) (share in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drought</td>
<td>4 (2.7)</td>
<td>0 (0.0)</td>
<td>12,080,000 (6.8)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Earthquake</td>
<td>17 (11.6)</td>
<td>87,845 (37.8)</td>
<td>47,549,524 (26.8)</td>
<td>85,779,000 (72.6)</td>
</tr>
<tr>
<td>Epidemic</td>
<td>3 (2.1)</td>
<td>29 (0.0)</td>
<td>5,143 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Extreme temperature</td>
<td>4 (2.7)</td>
<td>215 (0.1)</td>
<td>79,000,000 (44.5)</td>
<td>21,940,000 (18.6)</td>
</tr>
<tr>
<td>Flood</td>
<td>65 (44.5)</td>
<td>2,763 (1.2)</td>
<td>27,679,909 (15.6)</td>
<td>3,722,183 (3.1)</td>
</tr>
<tr>
<td>Landslide</td>
<td>8 (5.5)</td>
<td>418 (0.2)</td>
<td>5,113 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Storm</td>
<td>43 (29.5)</td>
<td>141,105 (60.7)</td>
<td>11,300,163 (6.4)</td>
<td>6,789,905 (5.7)</td>
</tr>
<tr>
<td>Volcano</td>
<td>1 (0.0)</td>
<td>0 (0.0)</td>
<td>600 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Wildfire</td>
<td>1 (0.0)</td>
<td>2 (0.0)</td>
<td>300 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Total</td>
<td>146 (100)</td>
<td>232,376 (100)</td>
<td>177,620,752 (100)</td>
<td>118,231,088 (100)</td>
</tr>
</tbody>
</table>

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)

In terms of number of people killed, Sichuan Earthquake and Cyclone Nargis combined makes up over 90 percent of the world’s total in 2008. Approximately 50 percent of the damage of all disasters in the world in 2008 is caused by these two disasters alone.

![Figure 4: Impacts of Cyclone Nargis and Sichuan Earthquake, 2008](image_url)

![Table 4: Impacts of Cyclone Nargis and Sichuan Earthquake, 2008](table_url)

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)
5. Impacts of World Natural Disasters by Region, 1975-2008

For the period 1975-2008, Asia dominates and ranks first in all natural disaster's impact categories across regions of the world. This is similar to the trend for 2008.

![Figure 5: Impacts of World Natural Disasters by Region, 1975-2008](image_url)

**Table 5: Impacts of World Natural Disasters by Region, 1975-2008**

<table>
<thead>
<tr>
<th>Region</th>
<th>Occurrence (share in %)</th>
<th>Killed (in '000s) (share in %)</th>
<th>Total Affected (in millions) (share in %)</th>
<th>Damage (US$ millions) (share in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1,959 (20.4)</td>
<td>717 (29.0)</td>
<td>426 (7.2)</td>
<td>20,398 (1.3)</td>
</tr>
<tr>
<td>Americas</td>
<td>2,191 (22.8)</td>
<td>185 (7.5)</td>
<td>186 (3.2)</td>
<td>528,477 (34.7)</td>
</tr>
<tr>
<td>Asia</td>
<td>3,584 (37.3)</td>
<td>1,514 (61.1)</td>
<td>5,225 (88.7)</td>
<td>712,565 (46.8)</td>
</tr>
<tr>
<td>Europe</td>
<td>1,280 (13.3)</td>
<td>56 (2.2)</td>
<td>32 (0.5)</td>
<td>231,969 (15.2)</td>
</tr>
<tr>
<td>Oceania</td>
<td>582 (6.1)</td>
<td>5 (0.2)</td>
<td>20 (0.3)</td>
<td>30,262 (2.0)</td>
</tr>
<tr>
<td>Total</td>
<td>9,596 (100)</td>
<td>2,477 (100)</td>
<td>5,890 (100)</td>
<td>1,523,671 (100)</td>
</tr>
</tbody>
</table>

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)

The number of disasters in general follows an upward trend. Since 1998, the trend undergoes a level shift and the number has increased without falling back to pre-1998 levels. The highest value was recorded in 2000 with over 500 disasters.

![Graph of Disaster Occurrence, 1975-2008](image)

In terms of number of people killed, in general, the number remains well below 100,000 except for a few spikes in 1976, 1984, 1985, 2004, and 2008. The highest value was recorded in 1984 (over 400,000 people).

![Graph of Number of People Killed, 1975-2008](image)

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
6. Trends of World Natural Disasters, 1975-2008 (continued)

In terms of total affected people, the trend fluctuates and goes sideways with a spike in 2002. The highest value was over 600 million people.

For damage, before 1991, the recorded values were below US$40,000 million. However, since then, damage in some years exceeded US$40,000 million and even US$140,000 million (1995, 2005, and 2008). 2008 saw the highest recorded damage in the period of interest at approximately USD$180,000 million.
7. Trends of World Disaster Occurrence by Disaster Type, 1975-2008

Flood and storm are observed to be the most prevalent forms of disaster in terms of occurrence throughout the period 1975-2008. Starting at the end of the 20th century, there is an upward trend for these two disaster types, especially flood. Trends for the other disaster types are sideway in this period and remain relatively.

![Graph showing trends of disaster occurrence by disaster type from 1975 to 2008.](image)

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)

8. Trends of World Disaster Occurrence by Fatality Size, 1975-2008

By fatality size, natural disasters with fatalities of less than 100 and fatalities from 100-999 are relatively few and have a rather stable trend in terms of occurrence in the period 1975-2008. However, for fatalities more than 100, the trend increases sharply at the end of the 20th century and remains at a significantly higher level since.

![Graph showing trends of disasters by fatality size from 1975 to 2008.](image)

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)
9. The 25 Worst Disasters by Number of People Killed, 2008

In 2008, with over 138,000 deaths from Cyclone Nargis, Myanmar tops the list of the 25 worst disasters using the index of the number of people killed. The earthquake in Sichuan, China, also in the same month, comes second with a death toll of over 87,000 people; while the landslide that hit the same country in September ranks eighth. The epidemic in Zimbabwe comes third, while two more epidemic disasters in Burkina Faso and Angola rank ninth and tenth respectively. Three more storms in Afghanistan (cold wave), Philippines (Typhoon Fengshen) and Haiti (Tropical Storm Hanna) round up the top ten, ranking fourth, sixth and seventh respectively.

In the table below, although storm and earthquake top the list of death toll, epidemic dominates the list (garnering eight spots out of 25). See Table 6 for more details.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Disaster Type</th>
<th>Country</th>
<th>Date Started</th>
<th>Killed</th>
<th>Total Affected</th>
<th>Damage (US$ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Storm (name: Nargis)</td>
<td>Myanmar</td>
<td>2-May</td>
<td>138,366</td>
<td>2,420,000</td>
<td>4,000</td>
</tr>
<tr>
<td>2</td>
<td>Earthquake (in Sichuan)</td>
<td>China P. Rep.</td>
<td>12-May</td>
<td>87,476</td>
<td>45,976,596</td>
<td>85,000</td>
</tr>
<tr>
<td>3</td>
<td>Epidemic</td>
<td>Zimbabwe</td>
<td>26-Aug</td>
<td>1,561</td>
<td>29,522</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Storm (cold wave)</td>
<td>Afghanistan</td>
<td>5-Jan</td>
<td>1,317</td>
<td>170,684</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Flood</td>
<td>India</td>
<td>11-Jun</td>
<td>1,063</td>
<td>7,900,000</td>
<td>123</td>
</tr>
<tr>
<td>6</td>
<td>Storm (name: Fengshen)</td>
<td>Philippines</td>
<td>21-Jun</td>
<td>644</td>
<td>4,785,460</td>
<td>285</td>
</tr>
<tr>
<td>7</td>
<td>Storm (name: Hanna)</td>
<td>Haiti</td>
<td>2-Sep</td>
<td>529</td>
<td>48,000</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Landslide</td>
<td>China P. Rep.</td>
<td>8-Sep</td>
<td>277</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Epidemic</td>
<td>Burkina Faso</td>
<td>Jan</td>
<td>250</td>
<td>2,000</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Epidemic</td>
<td>Angola</td>
<td>1-Jan</td>
<td>229</td>
<td>9,942</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>Epidemic</td>
<td>Guinea-Bissau</td>
<td>May</td>
<td>221</td>
<td>14,004</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Flood</td>
<td>China P. Rep.</td>
<td>7-Jun</td>
<td>176</td>
<td>1,600,000</td>
<td>2,200</td>
</tr>
<tr>
<td>13</td>
<td>Flood</td>
<td>India</td>
<td>14-Sep</td>
<td>173</td>
<td>2,400,000</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Epidemic</td>
<td>Sierra Leone</td>
<td>June</td>
<td>170</td>
<td>1,746</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>Earthquake (in Balochistan)</td>
<td>Pakistan</td>
<td>29-Oct</td>
<td>166</td>
<td>75,320</td>
<td>10</td>
</tr>
<tr>
<td>16</td>
<td>Storm (name: Kammuri)</td>
<td>Viet Nam</td>
<td>8-Aug</td>
<td>162</td>
<td>57,630</td>
<td>120</td>
</tr>
<tr>
<td>17</td>
<td>Flood</td>
<td>Brazil</td>
<td>22-Nov</td>
<td>151</td>
<td>1,500,015</td>
<td>750</td>
</tr>
<tr>
<td>18</td>
<td>Flood</td>
<td>India</td>
<td>20-Jul</td>
<td>142</td>
<td>225,000</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>Extreme temperature</td>
<td>China P. Rep.</td>
<td>Jan</td>
<td>129</td>
<td>77,000,000</td>
<td>21,100</td>
</tr>
<tr>
<td>20</td>
<td>Epidemic</td>
<td>Brazil</td>
<td>Mar</td>
<td>123</td>
<td>162,701</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>Epidemic</td>
<td>Mozambique</td>
<td>1-Nov</td>
<td>113</td>
<td>10,066</td>
<td>0</td>
</tr>
<tr>
<td>22</td>
<td>Storm (dust storm)</td>
<td>India</td>
<td>May</td>
<td>111</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>Epidemic</td>
<td>Niger</td>
<td>1-Jan</td>
<td>111</td>
<td>1,991</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>Flood</td>
<td>Viet Nam</td>
<td>27-Oct</td>
<td>99</td>
<td>600,000</td>
<td>479</td>
</tr>
<tr>
<td>25</td>
<td>Landslide</td>
<td>Egypt</td>
<td>6-Sep</td>
<td>98</td>
<td>697</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)
10. The 25 Worst Disasters by Number of People Killed per Million Population, 2008

With over 2,700 deaths per one million population, Cyclone Nargis that hit Myanmar in May again tops the list of the 25 worst disasters using the index of number of people killed to total population of country. The Sichuan earthquake in China came fourth with (66 deaths per million population). Four epidemic disasters in different countries (Guinea-Bissau in second place; Zimbabwe, third; Sierra Leone, seventh; Burkina Faso, tenth) were also among the ten deadliest in this index. The remaining spots in the top ten belong to four storms (Haiti, fifth; Afghanistan sixth; Belize, eighth; and Mongolia, ninth).

Not only does storm top the list using the index of ratio of deaths to population, it also dominates the list with eleven incidences in nine countries (Haiti has three).

### Table 7. The 25 Worst Disasters by Number of People Killed per Million Population, 2008

<table>
<thead>
<tr>
<th>Rank</th>
<th>Disaster Type</th>
<th>Country</th>
<th>Date Started</th>
<th>Killed (in '000s)</th>
<th>Population* (in '000s)</th>
<th>Killed (per million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Storm</td>
<td>Myanmar</td>
<td>2-May</td>
<td>138,366</td>
<td>49,563</td>
<td>2,792</td>
</tr>
<tr>
<td>2</td>
<td>Epidemic</td>
<td>Guinea-Bissau</td>
<td>May</td>
<td>221</td>
<td>1,575</td>
<td>140</td>
</tr>
<tr>
<td>3</td>
<td>Epidemic</td>
<td>Zimbabwe</td>
<td>26-Aug</td>
<td>1,561</td>
<td>12,463</td>
<td>125</td>
</tr>
<tr>
<td>4</td>
<td>Earthquake</td>
<td>China P. Rep.</td>
<td>12-May</td>
<td>87,476</td>
<td>1,324,655</td>
<td>66</td>
</tr>
<tr>
<td>5</td>
<td>Storm</td>
<td>Haiti</td>
<td>2-Sep</td>
<td>529</td>
<td>9,876</td>
<td>54</td>
</tr>
<tr>
<td>6</td>
<td>Storm</td>
<td>Afghanistan</td>
<td>5-Jan</td>
<td>1,317</td>
<td>29,021</td>
<td>45</td>
</tr>
<tr>
<td>7</td>
<td>Epidemic</td>
<td>Sierra Leone</td>
<td>June</td>
<td>170</td>
<td>5,560</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>Storm</td>
<td>Belize</td>
<td>31-May</td>
<td>7</td>
<td>322</td>
<td>22</td>
</tr>
<tr>
<td>9</td>
<td>Storm</td>
<td>Mongolia</td>
<td>26-May</td>
<td>52</td>
<td>2,641</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>Epidemic</td>
<td>Burkina Faso</td>
<td>Jan</td>
<td>250</td>
<td>15,234</td>
<td>16</td>
</tr>
<tr>
<td>11</td>
<td>Earthquake</td>
<td>Kyrgyzstan</td>
<td>5-Oct</td>
<td>74</td>
<td>5,278</td>
<td>14</td>
</tr>
<tr>
<td>12</td>
<td>Epidemic</td>
<td>Angola</td>
<td>1-Jan</td>
<td>229</td>
<td>18,021</td>
<td>13</td>
</tr>
<tr>
<td>13</td>
<td>Flood</td>
<td>Honduras</td>
<td>19-Oct</td>
<td>67</td>
<td>7,319</td>
<td>9</td>
</tr>
<tr>
<td>14</td>
<td>Storm</td>
<td>Haiti</td>
<td>26-Aug</td>
<td>85</td>
<td>9,876</td>
<td>9</td>
</tr>
<tr>
<td>15</td>
<td>Flood</td>
<td>Namibia</td>
<td>30-Jan</td>
<td>18</td>
<td>2,130</td>
<td>8</td>
</tr>
<tr>
<td>16</td>
<td>Storm</td>
<td>Fiji</td>
<td>28-Jan</td>
<td>7</td>
<td>844</td>
<td>8</td>
</tr>
<tr>
<td>17</td>
<td>Epidemic</td>
<td>Niger</td>
<td>1-Jan</td>
<td>111</td>
<td>14,704</td>
<td>8</td>
</tr>
<tr>
<td>18</td>
<td>Storm</td>
<td>Haiti</td>
<td>6-Sep</td>
<td>74</td>
<td>9,876</td>
<td>7</td>
</tr>
<tr>
<td>19</td>
<td>Storm</td>
<td>Philippines</td>
<td>21-Jun</td>
<td>644</td>
<td>90,348</td>
<td>7</td>
</tr>
<tr>
<td>20</td>
<td>Epidemic</td>
<td>Congo</td>
<td>Feb</td>
<td>25</td>
<td>3,615</td>
<td>7</td>
</tr>
<tr>
<td>21</td>
<td>Epidemic</td>
<td>Mozambique</td>
<td>1-Nov</td>
<td>113</td>
<td>22,383</td>
<td>5</td>
</tr>
<tr>
<td>22</td>
<td>Flood</td>
<td>El Salvador</td>
<td>3-Jul</td>
<td>30</td>
<td>6,134</td>
<td>5</td>
</tr>
<tr>
<td>23</td>
<td>Storm</td>
<td>Madagascar</td>
<td>17-Feb</td>
<td>93</td>
<td>19,111</td>
<td>5</td>
</tr>
<tr>
<td>24</td>
<td>Flood</td>
<td>Panama</td>
<td>3-Sep</td>
<td>16</td>
<td>3,399</td>
<td>5</td>
</tr>
<tr>
<td>25</td>
<td>Storm</td>
<td>Jamaica</td>
<td>28-Aug</td>
<td>12</td>
<td>2,687</td>
<td>4</td>
</tr>
</tbody>
</table>

Sources:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
11. The 25 Worst Disasters by Total Number of People Affected, 2008

Using the index of number of people affected, extreme temperature in China ranks first with over 77 million affected people. Given its huge population, China again comes second with the Sichuan earthquake in May affecting more than 45 million people. In this index, the worst flood of 2008 occurred in the United States (ranked third overall) in June; while the worst storm in the list occurred in the Philippines (ranked seventh overall) also in June. The highest-ranking drought occurred in Thailand in April affecting approximately 10 million people.

Although extreme temperature is the worst disaster in this index, flood is the most prevalent with 10 incidences in eight countries (India has three).

<table>
<thead>
<tr>
<th>Rank</th>
<th>Disaster Type</th>
<th>Country</th>
<th>Date Started</th>
<th>Total Affected (in '000s)</th>
<th>Killed</th>
<th>Damage (US$ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extreme temperature</td>
<td>China P. Rep.</td>
<td>10-Jan</td>
<td>77,000</td>
<td>129</td>
<td>21,100</td>
</tr>
<tr>
<td>2</td>
<td>Earthquake</td>
<td>China P. Rep.</td>
<td>12-May</td>
<td>45,977</td>
<td>87,476</td>
<td>85,000</td>
</tr>
<tr>
<td>3</td>
<td>Flood</td>
<td>United States</td>
<td>9-Jun</td>
<td>11,000</td>
<td>24</td>
<td>10,000</td>
</tr>
<tr>
<td>4</td>
<td>Drought</td>
<td>Thailand</td>
<td>Apr</td>
<td>10,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Flood</td>
<td>India</td>
<td>11-Jun</td>
<td>7,900</td>
<td>1,063</td>
<td>123</td>
</tr>
<tr>
<td>6</td>
<td>Drought</td>
<td>Ethiopia</td>
<td>May</td>
<td>6,400</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Storm</td>
<td>Philippines</td>
<td>21-Jun</td>
<td>4,785</td>
<td>644</td>
<td>285</td>
</tr>
<tr>
<td>8</td>
<td>Drought</td>
<td>Somalia</td>
<td>Jan</td>
<td>3,300</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Flood</td>
<td>China P. Rep.</td>
<td>7-Jul</td>
<td>3,000</td>
<td>19</td>
<td>102</td>
</tr>
<tr>
<td>10</td>
<td>Flood</td>
<td>India</td>
<td>30-Aug</td>
<td>2,600</td>
<td>47</td>
<td>20</td>
</tr>
<tr>
<td>11</td>
<td>Storm</td>
<td>Myanmar</td>
<td>2-May</td>
<td>2,420</td>
<td>138,366</td>
<td>4,000</td>
</tr>
<tr>
<td>12</td>
<td>Flood</td>
<td>India</td>
<td>14-Sep</td>
<td>2,400</td>
<td>173</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>Storm</td>
<td>United States</td>
<td>1-Sep</td>
<td>2,100</td>
<td>43</td>
<td>7,000</td>
</tr>
<tr>
<td>14</td>
<td>Extreme temperature</td>
<td>Tajikistan</td>
<td>Jan</td>
<td>2,000</td>
<td>0</td>
<td>840</td>
</tr>
<tr>
<td>15</td>
<td>Drought</td>
<td>Eritrea</td>
<td>Oct</td>
<td>1,700</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>Flood</td>
<td>China P. Rep.</td>
<td>7-Jun</td>
<td>1,600</td>
<td>176</td>
<td>2,200</td>
</tr>
<tr>
<td>17</td>
<td>Flood</td>
<td>Brazil</td>
<td>22-Nov</td>
<td>1,500</td>
<td>151</td>
<td>750</td>
</tr>
<tr>
<td>18</td>
<td>Storm</td>
<td>Philippines</td>
<td>18-May</td>
<td>1,497</td>
<td>64</td>
<td>99</td>
</tr>
<tr>
<td>19</td>
<td>Drought</td>
<td>Kenya</td>
<td>Jul</td>
<td>1,400</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>20</td>
<td>Flood</td>
<td>Colombia</td>
<td>15-Sep</td>
<td>1,200</td>
<td>76</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>Earthquake</td>
<td>China P. Rep.</td>
<td>30-Aug</td>
<td>1,001</td>
<td>40</td>
<td>492</td>
</tr>
<tr>
<td>22</td>
<td>Drought</td>
<td>Syrian Arab Rep.</td>
<td>Oct</td>
<td>1,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>Storm</td>
<td>China P. Rep.</td>
<td>22-Aug</td>
<td>900</td>
<td>4</td>
<td>58</td>
</tr>
<tr>
<td>24</td>
<td>Flood</td>
<td>Philippines</td>
<td>12-Feb</td>
<td>875</td>
<td>63</td>
<td>31</td>
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<tr>
<td>25</td>
<td>Flood</td>
<td>Thailand</td>
<td>13-Sep</td>
<td>840</td>
<td>18</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)

In terms of ratio of affected people to population, the July drought in Djibouti tops the list with 400 affected people for every 1,000 population or 40 percent of the whole population. Two more droughts rank second and third: in Somalia, affecting approximately 37 percent of the population and in Eritrea, 34.5 percent. Three more droughts (in Thailand, Tajikistan and Ethiopia) rank within the top ten. The storm in Antigua and Barbuda is the highest-ranking storm (fourth overall), while the highest-ranking flood occurred in Guyana (seventh overall).

Drought is the worst disaster in this index in terms of people affected (relative to population) as well as in terms of prevalence in the top 25 (10 disasters in 10 different countries).

<table>
<thead>
<tr>
<th>Rank</th>
<th>Disaster Type</th>
<th>Country</th>
<th>Date Started</th>
<th>Total Affected</th>
<th>Population* (in '000s)</th>
<th>Total Affected (per '000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Drought</td>
<td>Djibouti</td>
<td>Jul</td>
<td>340,000</td>
<td>849</td>
<td>400</td>
</tr>
<tr>
<td>2</td>
<td>Drought</td>
<td>Somalia</td>
<td>Jan</td>
<td>3,300,000</td>
<td>8,926</td>
<td>370</td>
</tr>
<tr>
<td>3</td>
<td>Drought</td>
<td>Eritrea</td>
<td>Oct</td>
<td>1,700,000</td>
<td>4,927</td>
<td>345</td>
</tr>
<tr>
<td>4</td>
<td>Storm</td>
<td>Antigua and Barbuda</td>
<td>15-Oct</td>
<td>25,800</td>
<td>87</td>
<td>298</td>
</tr>
<tr>
<td>5</td>
<td>Extreme temperature</td>
<td>Tajikistan</td>
<td>Jan</td>
<td>2,000,000</td>
<td>6,836</td>
<td>293</td>
</tr>
<tr>
<td>6</td>
<td>Drought</td>
<td>Thailand</td>
<td>Apr</td>
<td>10,000,000</td>
<td>67,386</td>
<td>148</td>
</tr>
<tr>
<td>7</td>
<td>Flood</td>
<td>Guyana</td>
<td>8-Dec</td>
<td>100,000</td>
<td>763</td>
<td>131</td>
</tr>
<tr>
<td>8</td>
<td>Flood</td>
<td>Belize</td>
<td>19-Oct</td>
<td>38,000</td>
<td>322</td>
<td>118</td>
</tr>
<tr>
<td>9</td>
<td>Drought</td>
<td>Tajikistan</td>
<td>Oct</td>
<td>800,000</td>
<td>6,836</td>
<td>117</td>
</tr>
<tr>
<td>10</td>
<td>Drought</td>
<td>Ethiopia</td>
<td>May</td>
<td>6,400,000</td>
<td>80,713</td>
<td>79</td>
</tr>
<tr>
<td>11</td>
<td>Extreme temperature</td>
<td>China P. Rep.</td>
<td>10-Jan</td>
<td>77,000,000</td>
<td>1,324,655</td>
<td>58</td>
</tr>
<tr>
<td>12</td>
<td>Storm</td>
<td>Philippines</td>
<td>21-Jun</td>
<td>4,785,460</td>
<td>90,348</td>
<td>53</td>
</tr>
<tr>
<td>13</td>
<td>Storm</td>
<td>Myanmar</td>
<td>2-May</td>
<td>2,420,000</td>
<td>49,563</td>
<td>49</td>
</tr>
<tr>
<td>14</td>
<td>Drought</td>
<td>Syrian Arab Rep.</td>
<td>Oct</td>
<td>1,000,000</td>
<td>20,581</td>
<td>49</td>
</tr>
<tr>
<td>15</td>
<td>Flood</td>
<td>Honduras</td>
<td>19-Oct</td>
<td>313,357</td>
<td>7,319</td>
<td>43</td>
</tr>
<tr>
<td>16</td>
<td>Storm</td>
<td>Cuba</td>
<td>29-Aug</td>
<td>450,000</td>
<td>11,205</td>
<td>40</td>
</tr>
<tr>
<td>17</td>
<td>Flood</td>
<td>United States</td>
<td>9-Jun</td>
<td>11,000,148</td>
<td>304,060</td>
<td>36</td>
</tr>
<tr>
<td>18</td>
<td>Drought</td>
<td>Kenya</td>
<td>Jul</td>
<td>1,400,000</td>
<td>38,765</td>
<td>36</td>
</tr>
<tr>
<td>19</td>
<td>Earthquake</td>
<td>China P. Rep.</td>
<td>12-May</td>
<td>45,976,596</td>
<td>1,324,655</td>
<td>35</td>
</tr>
<tr>
<td>20</td>
<td>Flood</td>
<td>Lao P. Dem. Rep.</td>
<td>12-Aug</td>
<td>204,190</td>
<td>6,205</td>
<td>33</td>
</tr>
<tr>
<td>21</td>
<td>Storm</td>
<td>Belize</td>
<td>31-May</td>
<td>10,000</td>
<td>322</td>
<td>31</td>
</tr>
<tr>
<td>22</td>
<td>Storm</td>
<td>Madagascar</td>
<td>17-Feb</td>
<td>524,153</td>
<td>19,111</td>
<td>27</td>
</tr>
<tr>
<td>23</td>
<td>Flood</td>
<td>Colombia</td>
<td>15-Sep</td>
<td>1,200,091</td>
<td>45,012</td>
<td>27</td>
</tr>
<tr>
<td>24</td>
<td>Drought</td>
<td>Uganda</td>
<td>Jul</td>
<td>750,000</td>
<td>31,657</td>
<td>24</td>
</tr>
<tr>
<td>25</td>
<td>Drought</td>
<td>Mozambique</td>
<td>Dec</td>
<td>500,000</td>
<td>22,383</td>
<td>22</td>
</tr>
</tbody>
</table>

Sources:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)

In terms of estimated economic damage incurred in 2008, the Sichuan earthquake in China (the only earthquake in the list) tops the list with approximately US$85 billion. The worst-hit countries in this index are China (with 3 disasters in top 10, and 5 disasters in top 25), and the United States (with 5 in top 10, and 10 in top 25).

Using this index, storms are the most devastating disasters (with 15 incidences in the table below, affecting five countries), followed by floods (with six, all in different countries).

Table 10. The 25 Worst Disasters by Economic Damage, 2008

<table>
<thead>
<tr>
<th>Rank</th>
<th>Disaster Type</th>
<th>Country</th>
<th>Date Started</th>
<th>Killed</th>
<th>Total Affected</th>
<th>Damage (US$ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Earthquake</td>
<td>China P. Rep.</td>
<td>12-May</td>
<td>87,476</td>
<td>45,976,596</td>
<td>85,000</td>
</tr>
<tr>
<td>2</td>
<td>Storm</td>
<td>United States</td>
<td>12-Sep</td>
<td>82</td>
<td>200,000</td>
<td>30,000</td>
</tr>
<tr>
<td>3</td>
<td>Extreme temperature</td>
<td>China P. Rep.</td>
<td>10-Jan</td>
<td>129</td>
<td>77,000,000</td>
<td>21,100</td>
</tr>
<tr>
<td>4</td>
<td>Flood</td>
<td>United States</td>
<td>9-Jun</td>
<td>24</td>
<td>11,000,148</td>
<td>10,000</td>
</tr>
<tr>
<td>5</td>
<td>Storm</td>
<td>United States</td>
<td>1-Sep</td>
<td>43</td>
<td>2,100,000</td>
<td>70,000</td>
</tr>
<tr>
<td>6</td>
<td>Storm</td>
<td>Myanmar</td>
<td>2-May</td>
<td>138,366</td>
<td>2,420,000</td>
<td>4,000</td>
</tr>
<tr>
<td>7</td>
<td>Flood</td>
<td>China P. Rep.</td>
<td>7-Jun</td>
<td>176</td>
<td>1,600,000</td>
<td>2,200</td>
</tr>
<tr>
<td>8</td>
<td>Storm</td>
<td>Cuba</td>
<td>29-Aug</td>
<td>0</td>
<td>450,000</td>
<td>2,072</td>
</tr>
<tr>
<td>9</td>
<td>Wildfire</td>
<td>United States</td>
<td>13-Nov</td>
<td>0</td>
<td>55,020</td>
<td>2,000</td>
</tr>
<tr>
<td>10</td>
<td>Storm</td>
<td>United States</td>
<td>22-May</td>
<td>7</td>
<td>70</td>
<td>1,600</td>
</tr>
<tr>
<td>11</td>
<td>Storm</td>
<td>Germany</td>
<td>29-May</td>
<td>3</td>
<td>0</td>
<td>1,500</td>
</tr>
<tr>
<td>12</td>
<td>Storm</td>
<td>Cuba</td>
<td>8-Sep</td>
<td>7</td>
<td>0</td>
<td>1,500</td>
</tr>
<tr>
<td>13</td>
<td>Storm</td>
<td>United States</td>
<td>5-Feb</td>
<td>59</td>
<td>150</td>
<td>1,300</td>
</tr>
<tr>
<td>14</td>
<td>Storm</td>
<td>Germany</td>
<td>Feb-29</td>
<td>5</td>
<td>0</td>
<td>1,200</td>
</tr>
<tr>
<td>15</td>
<td>Storm</td>
<td>United States</td>
<td>23-Jul</td>
<td>0</td>
<td>0</td>
<td>1,200</td>
</tr>
<tr>
<td>16</td>
<td>Flood</td>
<td>Australia</td>
<td>13-Feb</td>
<td>2</td>
<td>1,000</td>
<td>1,100</td>
</tr>
<tr>
<td>17</td>
<td>Storm</td>
<td>United States</td>
<td>9-Apr</td>
<td>3</td>
<td>0</td>
<td>1,100</td>
</tr>
<tr>
<td>18</td>
<td>Flood</td>
<td>Ecuador</td>
<td>30-Jan</td>
<td>41</td>
<td>289,122</td>
<td>1,000</td>
</tr>
<tr>
<td>19</td>
<td>Flood</td>
<td>Ukraine</td>
<td>26-Jul</td>
<td>38</td>
<td>224,725</td>
<td>1,000</td>
</tr>
<tr>
<td>20</td>
<td>Storm</td>
<td>United States</td>
<td>4-Jan</td>
<td>12</td>
<td>0</td>
<td>1,000</td>
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<tr>
<td>21</td>
<td>Extreme temperature</td>
<td>Tajikistan</td>
<td>Jan</td>
<td>0</td>
<td>2,000,000</td>
<td>840</td>
</tr>
<tr>
<td>22</td>
<td>Storm</td>
<td>China P. Rep.</td>
<td>24-Sep</td>
<td>12</td>
<td>0</td>
<td>824</td>
</tr>
<tr>
<td>23</td>
<td>Flood</td>
<td>Brazil</td>
<td>22-Nov</td>
<td>151</td>
<td>1,500,015</td>
<td>750</td>
</tr>
<tr>
<td>24</td>
<td>Storm</td>
<td>China P. Rep.</td>
<td>17-Apr</td>
<td>0</td>
<td>0</td>
<td>733</td>
</tr>
<tr>
<td>25</td>
<td>Storm</td>
<td>United States</td>
<td>10-May</td>
<td>22</td>
<td>150</td>
<td>700</td>
</tr>
</tbody>
</table>

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
In terms of estimated economic damage incurred relative to gross domestic product (GDP), the extreme temperature in Tajikistan tops the list, accounting for over 16 percent of its total GDP in 2008. All the other disasters account for less than two percent of the GDP. The Sichuan earthquake in China comes second with an economic damage amounting to 1.96 percent of GDP. Floods are the most prevalent in this index (12 spots in the list), followed by storms (eight).

Table 11. The 25 Worst Disasters by Ratio of Economic Damage to Gross Domestic Product, 2008

<table>
<thead>
<tr>
<th>Rank</th>
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<th>GDP* (US$ billions)</th>
<th>Damage (as % of GDP)</th>
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Sources:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
### 15. Disasters in Asia by Country, 2008

#### Table 12. Disasters in Asia by Country, 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Disaster Type</th>
<th>Occurrence</th>
<th>Killed</th>
<th>Total Affected</th>
<th>Damage (US$ '000s)</th>
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Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)

Among the 149 disasters recorded in 2008, China, one of the biggest countries in the world both in land area and population, has the most incidences of disasters (29). The Philippines comes second with 20, while Indonesia ranks third with 17 disasters. The world’s second most populous country, India, recorded 11 disasters in 2008, Vietnam with 10, and Thailand 6. Taiwan, Bangladesh and Iran all had five disasters, while Sri Lanka, Pakistan and Afghanistan all recorded four disasters in the same year.

In other indexes, Myanmar (with only one disaster) accounts for 60 percent of all disaster-related deaths in Asia in 2008, while China accounts for 38 percent. Moreover, China has the most number of people affected (75 percent of all affected population) in Asia in 2008, as well as incurred the most economic damage (94 percent).
16. Disasters in Asia by Disaster Type, 2008

<table>
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<th>Disaster Type</th>
<th>Country</th>
<th>Occurrence</th>
<th>Killed</th>
<th>Total Affected</th>
<th>Damage (US$ '000s)</th>
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Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium)

Among the 149 disasters recorded in 2008, flood accounts for 44 percent (66 incidences) of the total disasters. Storm (43) and earthquake (18) account for 29 and 12 percent respectively. Landslide (9) account for 6 percent, drought (4) and extreme temperature (4), 2.7 percent each. In 2008, there are only three epidemic disasters, one wildfire (Turkey) and one volcanic eruption (Indonesia).

Earthquake and landslide struck China the most (seven and four times respectively) in 2008; flood affected Indonesia the most (12 times); and storm, the Philippines (11 times).

Storm and earthquake account for 61 and 38 percent respectively of all disaster-related deaths in Asia in 2008. Extreme temperature and earthquake are the most pervasive disasters in terms of total affected population (accounting for 43 and 27 percent respectively), while earthquake is the most destructive disaster in terms of economic damage (73 percent).