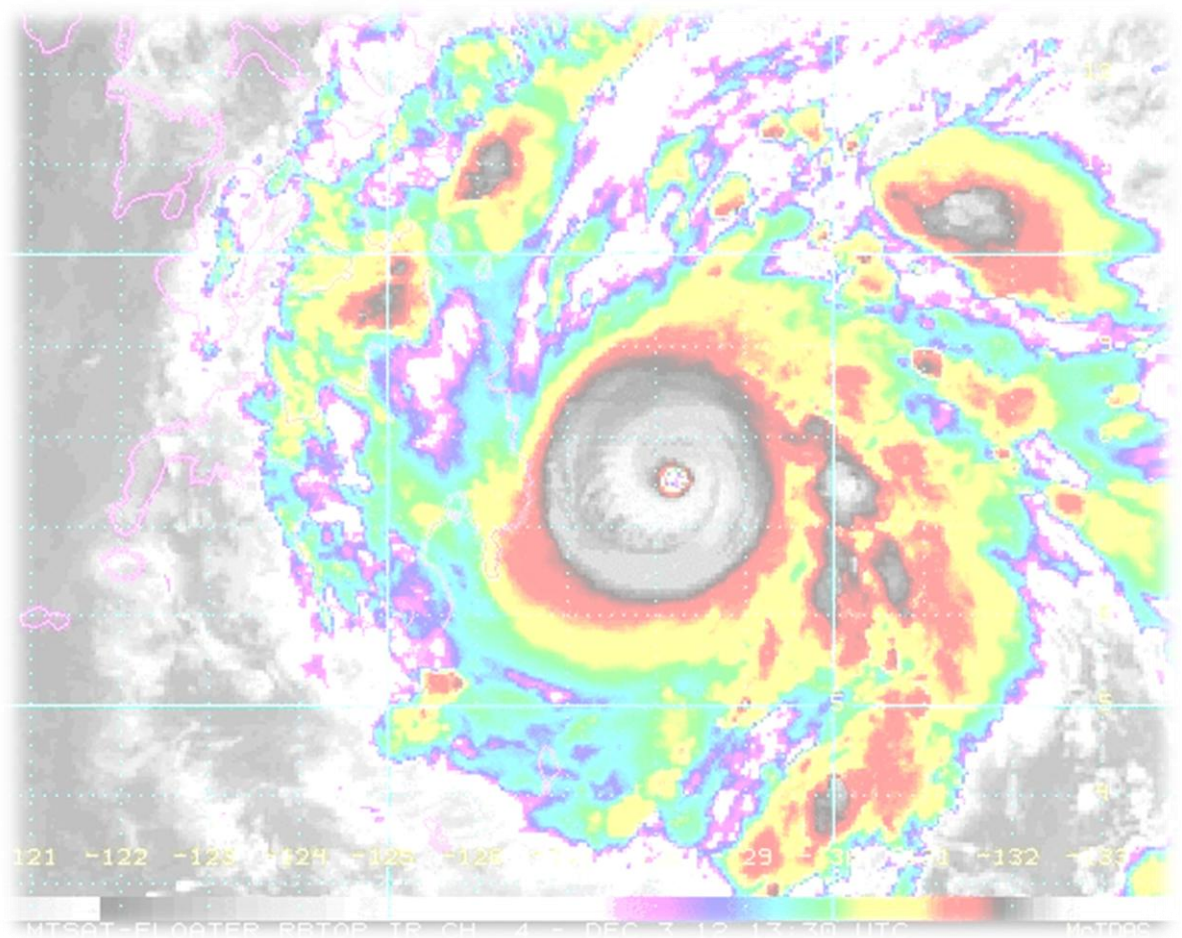


Natural Disaster Data Book 2012 (An Analytical Overview)



Asian Disaster Reduction Center

Overview

The Asian Disaster Reduction Center (ADRC) Natural Disasters Data Book 2012 provides the statistical perspectives in figures and tables for 2012 as well as for the period 1983-2012 based on data obtained by EM-DAT.

According to EM-DAT, 328 natural disasters occurred in 2012 worldwide, killing 10,783 people and affecting over 104 million people. The estimated amount of economic damage came close to US\$142 billion.

In 2012, Typhoon Bopha which hit Philippines brought about largest death toll of the year, some 1,900 together with over 6 million people affected and nearly 1.7 billion USD in economic damage.

On the other hand, a flood in China in July has largest 17 million people affected and another flood in December caused largest economic damage worth 8 billion USD.

By region, Asia is ranked the highest in the indices of disaster occurrences, number of people killed and affected. Asia accounts for 39.3 percent, occurrences; number of people killed, 55.9 percent; number of affected people, 69.2 percent; and amount of economic damage, 23.0 percent. As for economic damage, Americas amount to 61.1 percent of the total damage of the year.

By disaster types, floods has greatest impacts among all in terms of occurrence, number of people killed and affected, 36.9 percent, 31.6 percent and 58.6 percent, respectively while storm shares largest in economic damage, 52.8 percent.

The indices in 2012 show a similar trend to the previous year. In all categories, hydro meteorological disasters such as flood, storm, and drought are dominant in all indices.

Data Book 2012 also contains tables of the 25 worst disasters by number of people killed and total affected people, economic damage, and their respective ratios to population and gross domestic product. It also includes tables of 2012 disasters in ADRC member and other Asian countries sorted by country and disaster type.

[Notes]

Source:

All disaster data are based on EM-DAT: The OFDA/CRED International Disaster Database - www.emdat.be, Université Catholique de Louvain, Brussels (Belgium), data version v12.07 on 15 April 2013, unless otherwise stated.

EM-DAT Criteria:

For a disaster to be entered into the database, at least one of the following criteria must be fulfilled:

- Ten (10) or more people reported killed
- Hundred (100) or more people reported affected
- Declaration of a state of emergency
- Call for international assistance.

In this Data Book 2012 “killed people” are defined as persons confirmed as dead and persons missing and presumed dead. “Affected people” are the sum of injured, homeless, and affected in EM-DAT. EM-DAT defines affected people as people requiring immediate assistance during a period of emergency; it can also include displaced or evacuated people.

Disaster Terms:

“Earthquake or seismic activity” includes ground shaking and tsunami.

“Epidemic” includes bacterial and viral infectious diseases.

“Extreme Temperature” includes heat wave, cold wave, and extreme winter conditions.

“Flood” includes general flood, and flash flood.

“Mass Movement” includes avalanche, landslide, and rockfall.

“Storm” includes local storm, tropical cyclone, and winter storm.

“Volcano” means volcanic eruption.

“Wildfire” includes bush/brush fire, forest fire, and scrub/grassland fire.

Disclaimer:

Country and region classification used in this book are based on EM-DAT criteria.

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Sources of Image on the front page

National Oceanic and Atmospheric Administration Satellite Services Division

1. IMPACTS OF NATURAL DISASTERS BY REGION, 2012

This section covers the impacts of natural disasters—occurrence, number of deaths, number of affected people, and economic damage—that took place in different regions across the world in 2012. As shown in Figure 1, Asia ranks first among regions in the categories of disaster occurrence, the number of killed and affected people, accounting for 39.3 percent, 55.9 percent and 69.2 percent. As for economic damage, Americas has 61.1 percent share, due mainly to hurricanes and storms that devastated in the United States in the year. While Africa accounts for around 20 percent in occurrence, the number of killed and affected, economic damages have only 0.8 percent, the lowest share.

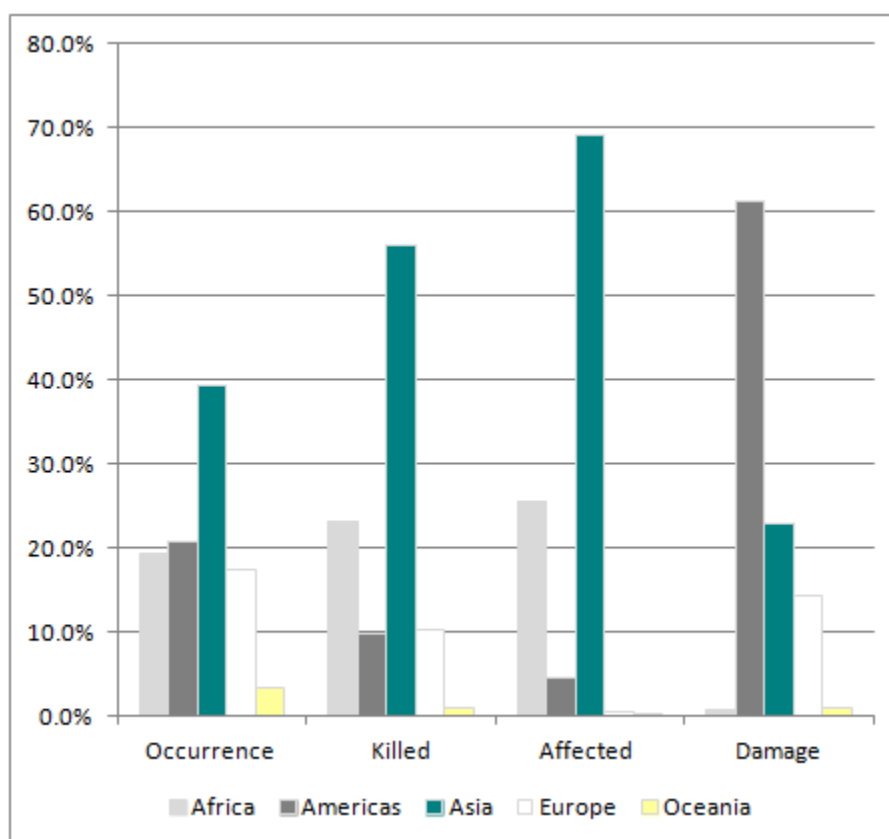


Figure 1: Impacts of Natural Disasters by Region, 2012

Table 1: Impacts of Natural Disasters by Region, 2012

Region	Impact			
	Occurrence (share in %)	Killed (share in %)	Affected (share in %)	Damage (US\$ million) (share in %)
Africa	63 (19.2%)	2,489 (23.1%)	26,532,108 (25.4%)	1,084 (0.8%)
Americas	68 (20.7%)	1,051 (9.7%)	4,749,370 (4.6%)	87,063 (61.1%)
Asia	129 (39.3%)	6,032 (55.9%)	72,178,335 (69.2%)	32,687 (23.0%)
Europe	57 (17.4%)	1,111 (10.3%)	557,319 (0.5%)	20,346 (14.3%)
Oceania	11 (3.4%)	100 (0.9%)	258,229 (0.2%)	1,208 (0.8%)
Total	328 (100.0%)	10,783 (100.0%)	104,275,361 (100.0%)	142,387 (100.0%)

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, 2012

This section provides the breakdown of impacts of disasters sorted by disaster type. As Figure 2 shows, flood is dominant in the categories of disaster occurrences, number of people killed and affected. Especially flood has 58.6 percent share in number of people affected, while storm tops in economic damage amounting to 52.8 percent.

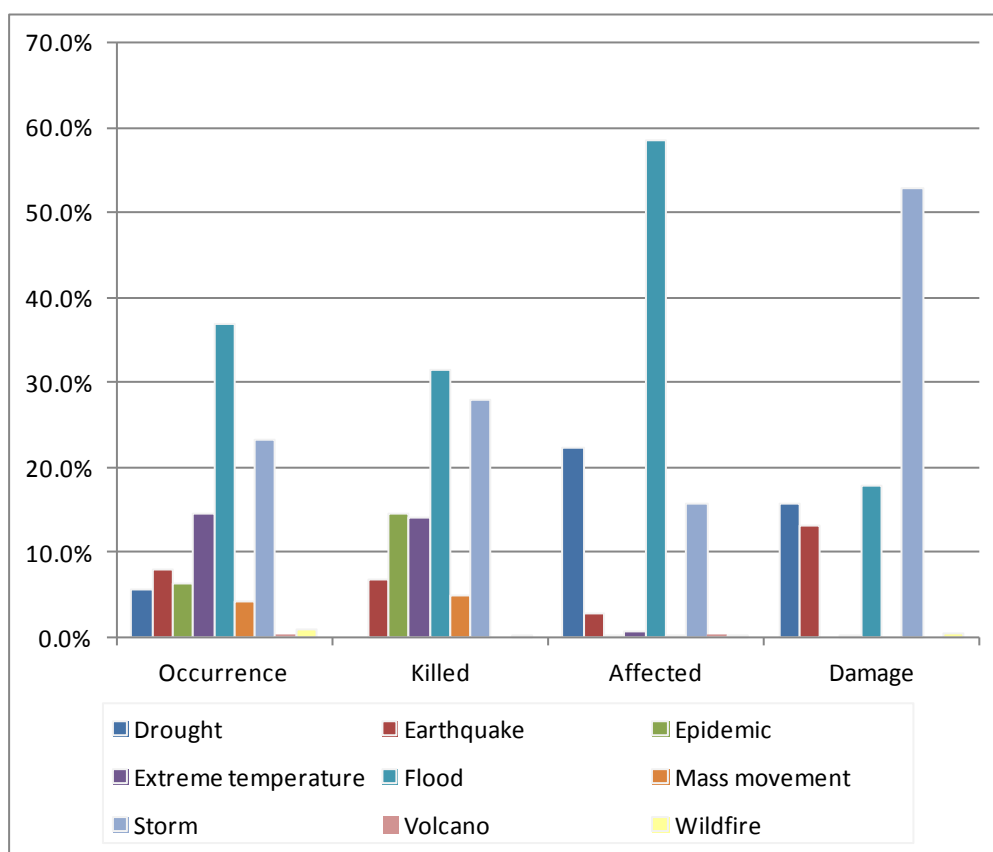


Figure 2: Impacts of Natural Disasters by Disaster Type, 2012

Table 2: Impacts of Natural Disasters by Disaster Type, 2012

Disaster Type	Impact			
	Occurrence (share in %)	Killed (share in %)	Affected (share in %)	Damage (US\$ million) (share in %)
Drought	18 (5.5%)	(0.0%)	23,301,085 (22.3%)	22,370 (15.7%)
Earthquake	26 (7.9%)	741 (6.9%)	2,798,553 (2.7%)	18,689 (13.1%)
Epidemic	21 (6.4%)	1,561 (14.5%)	107,021 (0.1%)	(0.0%)
Extreme temperature	48 (14.6%)	1,525 (14.1%)	560,525 (0.5%)	133 (0.1%)
Flood	121 (36.9%)	3,406 (31.6%)	61,156,619 (58.6%)	25,494 (17.9%)
Mass movement	14 (4.3%)	527 (4.9%)	3,852 (0.0%)	(0.0%)
Storm	76 (23.2%)	3,015 (28.0%)	16,335,911 (15.7%)	75,202 (52.8%)
Volcano	1 (0.3%)	(0.0%)	10,000 (0.0%)	(0.0%)
Wildfire	3 (0.9%)	8 (0.1%)	1,795 (0.0%)	500 (0.4%)
Total	328 (100.0%)	10,783 (100.0%)	104,275,361 (100.0%)	142,387 (100.0%)

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, 2012

This section provides the overview of impacts of disasters sorted by disaster type in Asia. Flood ranks top in occurrence, the number of affected and economic while storm outnumbers in the number of killed.

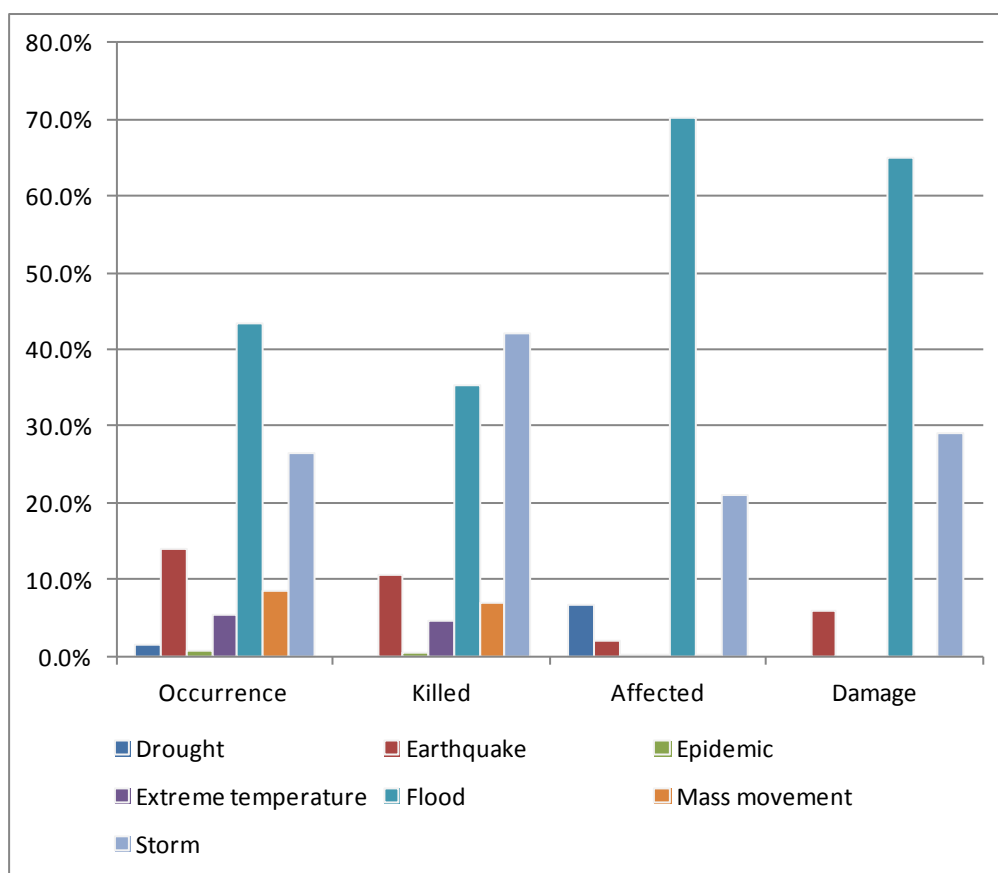


Figure 3: Impacts of Natural Disasters by Disaster Type in Asia, 2012

Table 3: Impacts of Natural Disasters by Disaster Type in Asia, 2012

Disaster Type	Impact			
	Occurrence (share in %)	Killed (share in %)	Affected (share in %)	Damage (US\$ million) (share in %)
Drought	2 (1.6%)	(0.0%)	4,800,000 (6.7%)	(0.0%)
Earthquake	18 (14.0%)	638 (10.6%)	1,390,573 (1.9%)	1,929 (5.9%)
Epidemic	1 (0.8%)	30 (0.5%)	3,158 (0.0%)	(0.0%)
Extreme temperature	7 (5.4%)	271 (4.5%)	80,068 (0.1%)	(0.0%)
Flood	56 (43.4%)	2,134 (35.4%)	50,735,664 (70.3%)	21,262 (65.0%)
Mass movement	11 (8.5%)	427 (7.1%)	184 (0.0%)	(0.0%)
Storm	34 (26.4%)	2,532 (42.0%)	15,168,688 (21.0%)	9,495 (29.0%)
Total	129 (100.0%)	6,032 (100.0%)	72,178,335 (100.0%)	32,687 (100.0%)

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

4. TRENDS OF WORLD NATURAL DISASTERS, 1983-2012

4-1 NUMBER OF DISASTERS IN THE WORLD (1983-2012)

In terms of number of disasters, the year 2012 sees slight decline for three years in a row, In the long run, the upward shift of disaster occurrence's trend continues from the early 1980s through early 2000s, which is clearly depicted in the collective 5-year period representation of data in Figure 4-2. Hereafter, downward trend is observed in the last 15 years.

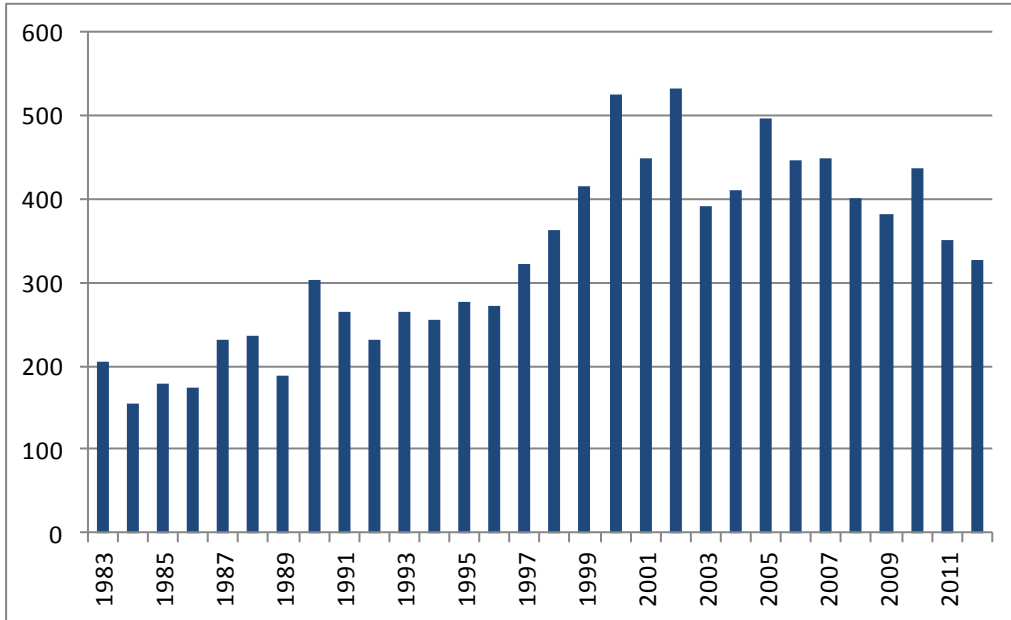


Figure 4-1: Disaster Occurrence, 1983-2012

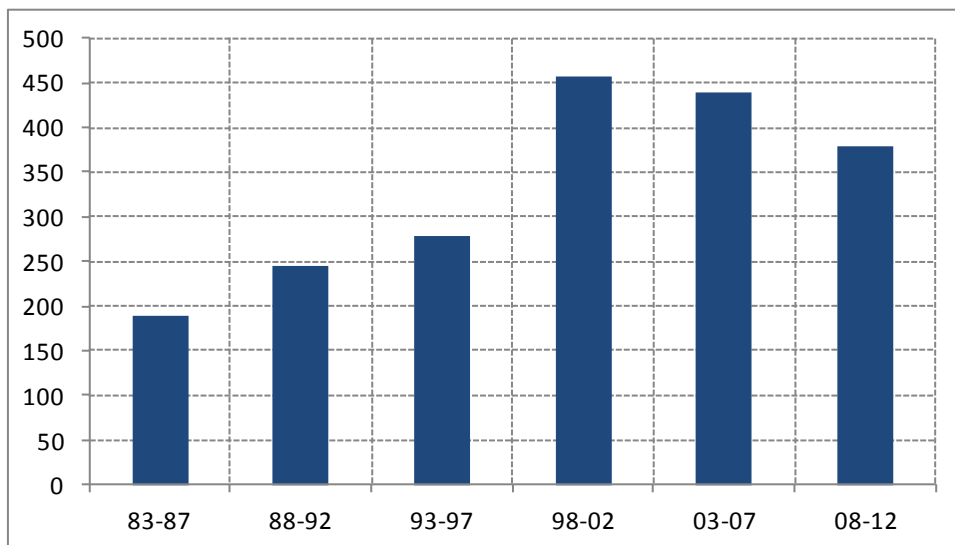


Figure 4-2: Disaster Occurrence (Average of 5-year period), 1983-2012

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

4-2 NUMBER OF PEOPLE KILLED IN THE WORLD (1983-2012)

The death toll in 2012 stands at 10,783, indicating lowest level in the past three decades compared to recent years which claimed nearly or more than 100,000 lives such as in 2003, 2004, 2005, 2008 and 2010. As seen in Figure 4-4, for the trend of the 5-year period average, the number of people killed reaches highest in the period 1983-2012.

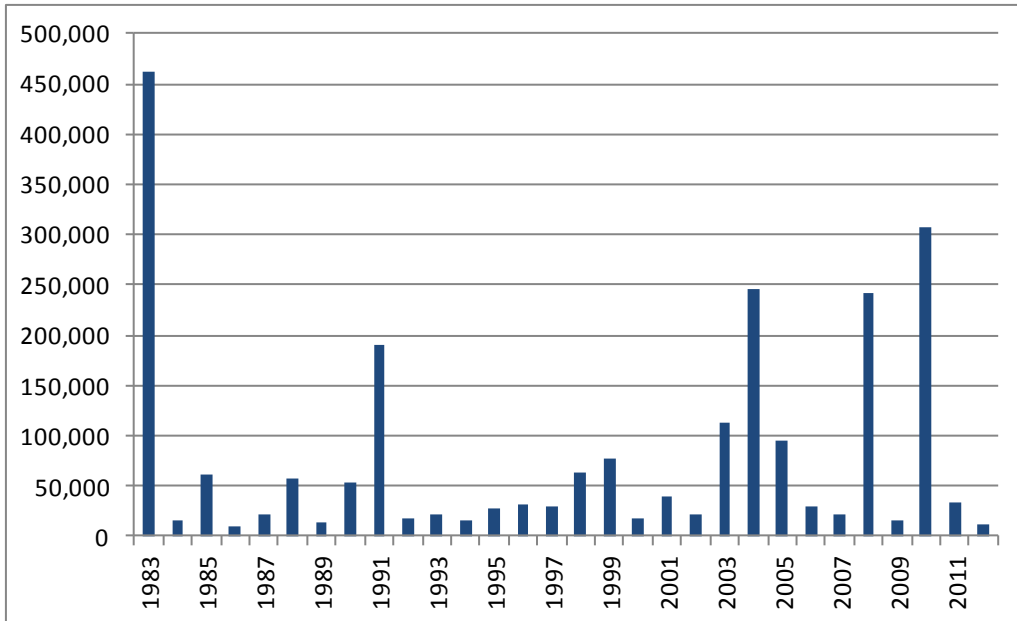


Figure 4-3: Number of People Killed, 1983-2012

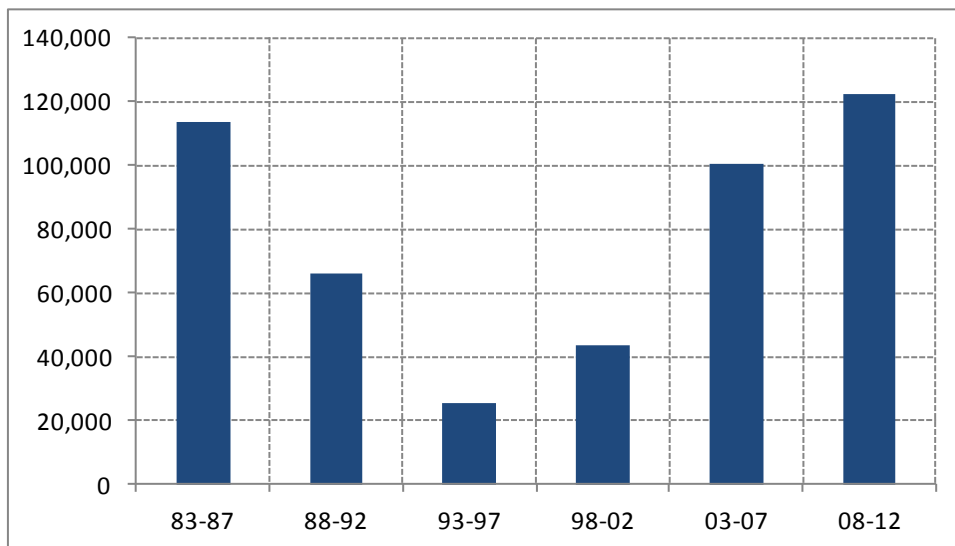


Figure 4-4: Number of People Killed (Average of 5-year period), 1983-2012

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

4-3 NUMBER OF PEOPLE AFFECTED IN THE WORLD (1983-2012)

In terms of number of affected people, 2012 sees lowest in the past 15 years. For the 5 year period average representation of data, number of affected people in the last five-year still remains high, with nearly 200 million people affected.

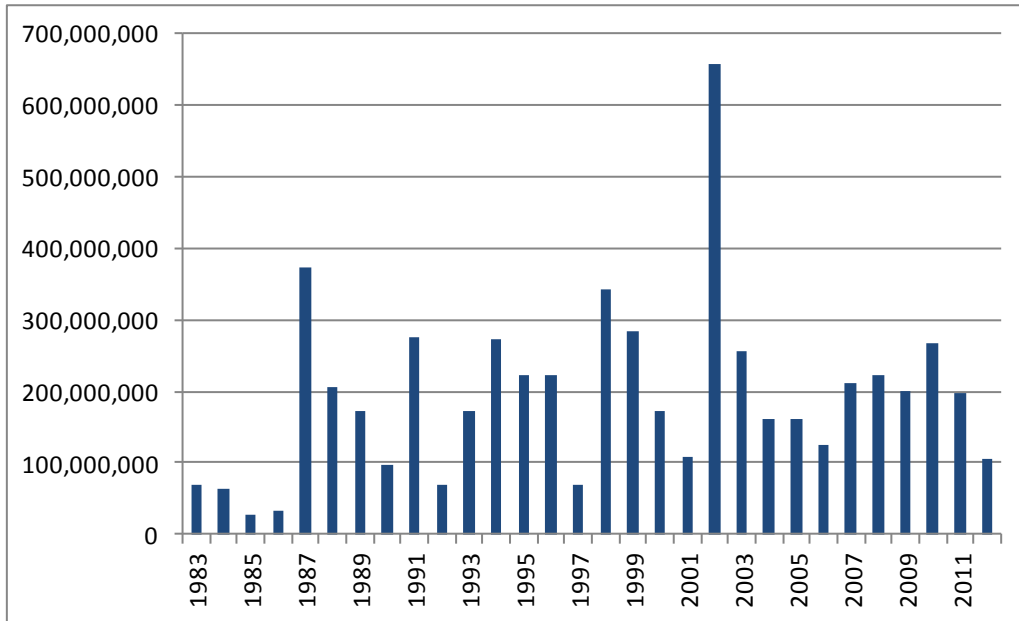


Figure 4-5: Total Number of Affected People, 1983-2012

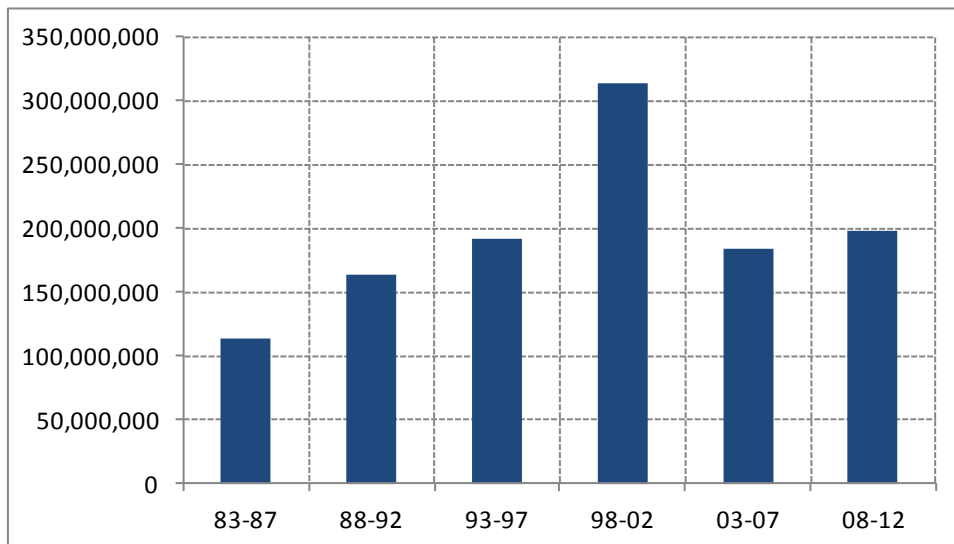


Figure 4-6: Number of Affected People (Average of 5 year period), 1983-2012

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

4-4 ECONOMIC DAMAGE IN THE WORLD (1983-2012)

Economic damage caused by natural disasters in 2012 (approximately US\$142 billion) shows sharp decline from the previous year but it still ranks fifth in the period 1983-2012. For the 5-year period average analysis, the 2008-2012 average has reached record high level, which is largely attributed to the earthquake and tsunami in 2011 in Japan.

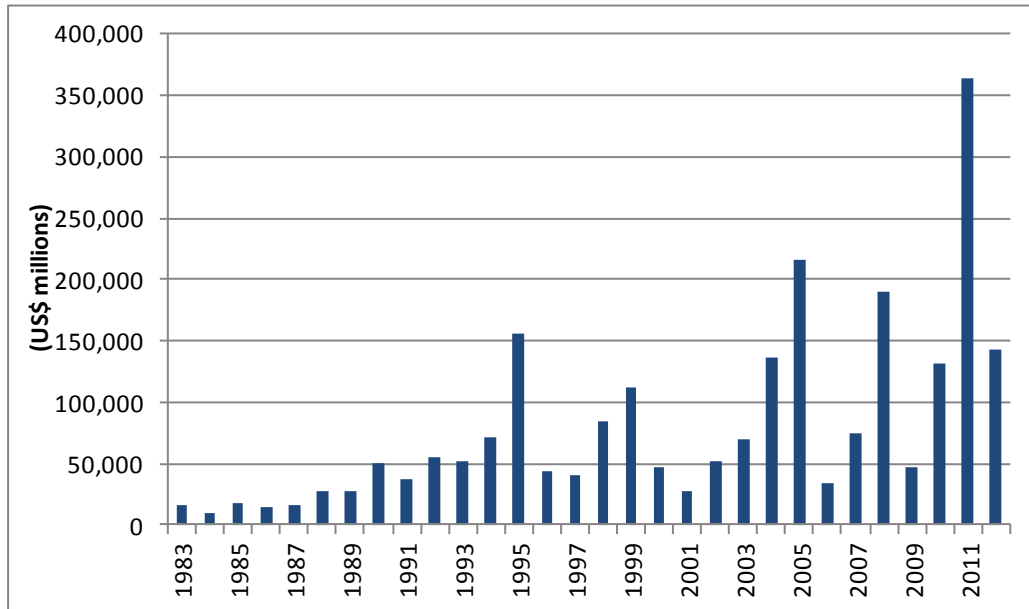


Figure 4-7: Amount of Damage, 1983-2012

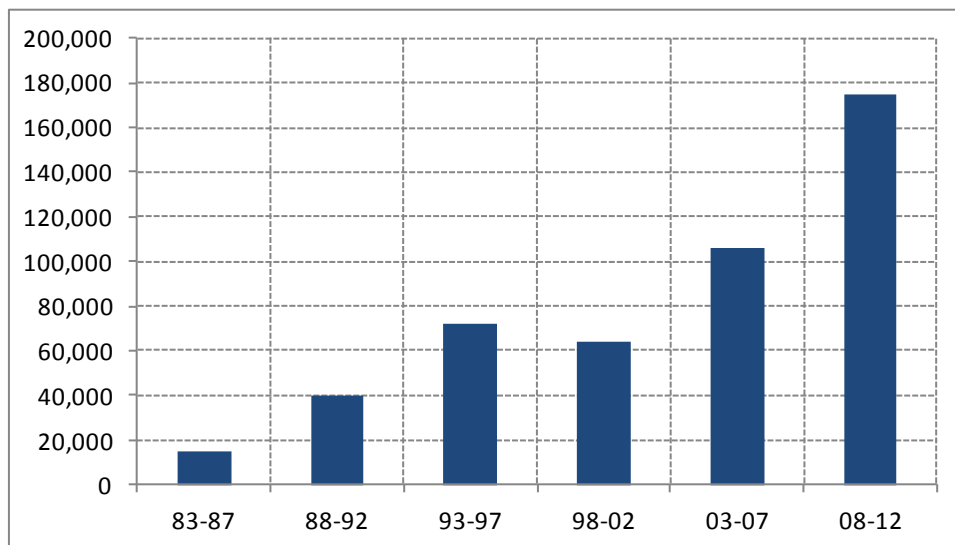


Figure 4-8: Economic Damage (Average of 5-year period), 1983-2012

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, 1983-2012

For the period 1983-2012, Asia dominates and ranks first in all natural disaster's impact categories across regions of the world, especially in terms of the number of killed and affected.

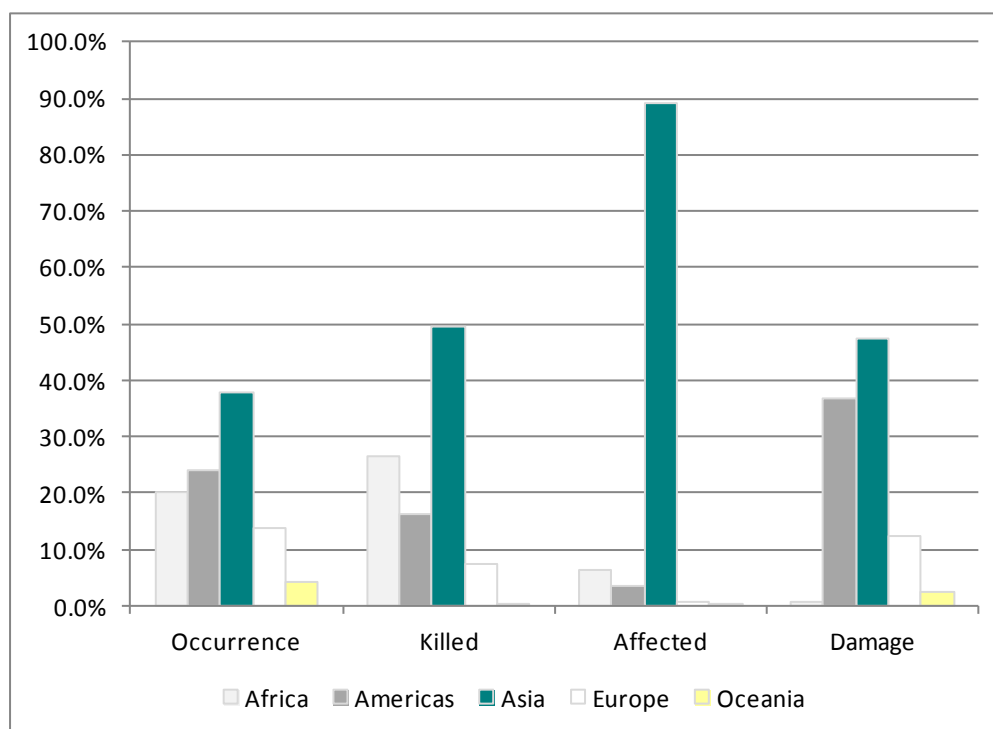


Figure 5: Impacts of World Natural Disasters by Region, 1983-2012

Table 5: Impacts of Natural Disasters by Region, 1983-2012

Region	Impact						
	Occurrence (share in %)	Killed (share in %)	Affected (share in %)	Damage (US\$ million) (share in %)			
Africa	2,004 (20.1%)	622,124 (26.4%)	378,851,666 (6.5%)	18,899 (0.3%)			
Americas	2,396 (24.1%)	387,618 (16.4%)	201,017,624 (3.5%)	866,027 (7.6%)			
Asia	3,762 (37.8%)	1,166,487 (49.5%)	5,180,751,885 (89.0%)	1,116,229 (88.7%)			
Europe	1,364 (13.7%)	175,569 (7.4%)	39,198,719 (0.7%)	292,620 (0.0%)			
Oceania	420 (4.2%)	5,729 (0.2%)	20,346,511 (0.3%)	61,756 (3.5%)			
Total	9,946 (100.0%)	2,357,527 (100.0%)	5,820,166,405 (100.0%)	2,355,531 (100.0%)			

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

6. THE 25 WORST DISASTERS IN ASIA 2012

6-1 THE 25 WORST DISASTERS IN ASIA BY NUMBER OF PEOPLE KILLED, 2012

The death toll by Typhoon Bopha in Philippines tops in Asia, and the world in 2012. There are 13 disaster events in Asia found in the list which claimed more than 100 lives. The Philippines and China occupy five and six ranks in the list respectively.

Disaster Type	Country	Date	Killed	Affected	Economic Damage (US\$ Million)
1 Storm	Philippines	31/08/2012	1,901	6,246,664	1,692.96
2 Flood	Pakistan	23/08/2012	480	5,049,364	2,640.00
3 Earthquake	Iran Islam Rep	05/12/2012	306	61,546	900.00
4 Flood	Korea Dem P Rep	00/04/2012	169	212,348	11.40
5 Flood	China P Rep	07/12/2012	151		8,000.00
6 Mass movement	Pakistan	04/09/2012	135		
7 Storm	Japan	12/07/2012	134	7,766	171.00
8 Extreme temperature	India	21/08/2012	133		
9 Flood	China P Rep	29/06/2012	132	13,119,000	2,680.00
10 Flood	India	16/09/2012	120	2,200,000	
11 Flood	Philippines	04/09/2012	116	4,451,725	72.33
12 Earthquake	Philippines	00/01/2012	113	320,277	8.90
13 Flood	Bangladesh	00/12/2012	110	416,000	
14 Flood	China P Rep	11/07/2012	91	17,440,000	269.69
15 Earthquake	China P Rep	07/09/2012	81	744,821	552.00
16 Storm	Bangladesh	24/06/2012	77	172,859	
17 Flood	China P Rep	27/07/2012	76	180,000	1,690.00
18 Mass movement	Philippines	31/07/2012	75	23	
19 Flood	Afghanistan	11/06/2012	74	27,769	
20 Earthquake	Afghanistan	12/05/2012	73	237	
21 Extreme temperature	Bangladesh	10/10/2012	72	75,000	
22 Storm	Korea Dem P Rep	28/08/2012	59	44,461	
23 Storm	Philippines	06/02/2012	58	949,086	9.82
24 Flood	China P Rep	02/08/2012	58	140,000	
25 Mass movement	Afghanistan	12/03/2012	56	6	

Table 6-1: The 25 Worst Disasters in Asia by Number of People Killed, 2012

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

6-2 THE 25 WORST DISASTERS IN ASIA BY NUMBER OF PEOPLE KILLED PER MILLION POPULATION, 2012

Using the index of the ratio of the number of people killed to total country population, Typhoon Bopha in Philippines still takes the first place with 20 persons killed per one million. By country, as many as eight ranks are occupied by Afghanistan from a variety of disaster types. Floods have great impact on the countries in many parts of Asia in 2012, with 12 disaster events listed in the list.

Table 6-2: The 25 Worst Disasters in Asia by Number of People Killed per Million Population, 2012

Disaster Type	Country	Date	Killed per million	Killed	Population*
1 Storm	Philippines	31/08/2012	20.00	1,901	95,053,437
2 Flood	Korea Dem P Rep	00/04/2012	6.86	169	24,631,291
3 Earthquake	Iran Islam Rep	05/12/2012	4.06	306	75,424,285
4 Flood	Pakistan	23/08/2012	2.72	480	176,166,353
5 Flood	Afghanistan	11/06/2012	2.54	74	29,105,480
6 Earthquake	Afghanistan	12/05/2012	2.51	73	29,105,480
7 Storm	Korea Dem P Rep	28/08/2012	2.40	59	24,631,291
8 Flood	Sri Lanka	17/12/2012	2.20	46	20,869,000
9 Mass movement	Afghanistan	12/03/2012	1.92	56	29,105,480
10 Extreme temperature	Afghanistan	18/05/2012	1.55	45	29,105,480
11 Mass movement	Afghanistan	05/03/2012	1.55	45	29,105,480
12 Flood	Philippines	04/09/2012	1.22	116	95,053,437
13 Earthquake	Philippines	00/01/2012	1.19	113	95,053,437
14 Flood	Georgia	12/05/2012	1.12	5	4,483,400
15 Storm	Japan	12/07/2012	1.05	134	127,817,277
16 Mass movement	Afghanistan	10/04/2012	1.00	29	29,105,480
17 Flood	Cambodia	17/09/2012	0.96	14	14,605,862
18 Mass movement	Philippines	31/07/2012	0.79	75	95,053,437
19 Mass movement	Pakistan	04/09/2012	0.77	135	176,166,353
20 Earthquake	Myanmar	11/11/2012	0.73	38	52,350,763
21 Flood	Bangladesh	00/12/2012	0.72	110	152,862,431
22 Flood	Afghanistan	22/04/2012	0.69	20	29,105,480
23 Flood	Afghanistan	18/01/2012	0.69	20	29,105,480
24 Flood	Saudi Arabia	14/04/2012	0.68	19	27,761,728
25 Flood	Nepal	05/05/2012	0.63	17	27,156,367

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
*Data from World Bank 2011

6-3 THE 25 WORST DISASTERS IN ASIA BY TOTAL NUMBER OF PEOPLE AFFECTED, 2012

In terms of total number of people affected, the flood in China that occurred in July ranks first with over 17 million people affected. China has ten disaster events ranked in the list, totaling more than 42 million people affected. By disaster type, 14 floods rank in the list with over 49 million people affected followed by 7 storms with about 14 million people affected.

Table 6-3: The 25 Worst Disasters in Asia by Total Number of People Affected, 2012

	Disaster Type	Country	Date	Killed	Affected	Economic Damage (US\$ Million)
1	Flood	China P Rep	11/07/2012	91	17,440,000	270
2	Flood	China P Rep	29/06/2012	132	13,119,000	2,680
3	Storm	Philippines	31/08/2012	1,901	6,246,664	1,693
4	Storm	China P Rep	24/06/2012	3	6,000,007	2,040
5	Flood	Pakistan	23/08/2012	480	5,049,364	2,640
6	Flood	Philippines	04/09/2012	116	4,451,725	72
7	Flood	China P Rep	09/07/2012	15	3,790,000	370
8	Drought	Korea Dem P Rep	18/07/2012		3,000,000	
9	Flood	India	16/09/2012	120	2,200,000	
10	Flood	India	15/01/2012	21	2,000,000	98
11	Drought	Sri Lanka	29/10/2012		1,800,000	
12	Storm	Philippines	06/02/2012	58	949,086	10
13	Earthquake	China P Rep	07/09/2012	81	744,821	552
14	Flood	Bangladesh	00/12/2012	110	416,000	
15	Earthquake	Philippines	00/01/2012	113	320,277	9
16	Storm	Viet Nam	02/09/2012	11	278,490	336
17	Storm	China P Rep	07/09/2012	14	268,825	3,280
18	Flood	Bangladesh	21/09/2012		250,000	
19	Storm	Philippines	27/03/2012	24	241,606	6
20	Flood	Thailand	15/08/2012		235,545	
21	Storm	China P Rep	08/05/2012	34	232,170	124
22	Flood	China P Rep	17/08/2012		220,000	
23	Flood	Korea Dem P Rep	00/04/2012	169	212,348	11
24	Flood	China P Rep	00/08/2012	53	185,000	316
25	Flood	China P Rep	27/07/2012	76	180,000	1,690

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

6-4 THE 25 WORST DISASTERS IN ASIA BY TOTAL AFFECTED PEOPLE PER THOUSAND POPULATION, 2012

Using the index of total affected people per thousand population, drought in Democratic People's Republic of Korea results in 122 affected person per thousand population followed by 86 of Sri Lanka's drought. Among top 25 countries, Flood disasters occupy as many as 13 ranks in the list.

Table 6-4: The 25 Worst Disasters in Asia by Total Number of People Affected per Thousand Population, 2012

	Disaster Type	Country	Date	Affected per thousand	Affected	Population*
1	Drought	Korea Dem P Rep	18/07/2012	121.80	3,000,000	24,631,291
2	Drought	Sri Lanka	29/10/2012	86.25	1,800,000	20,869,000
3	Storm	Philippines	31/08/2012	65.72	6,246,664	95,053,437
4	Flood	Philippines	04/09/2012	46.83	4,451,725	95,053,437
5	Flood	Pakistan	23/08/2012	28.66	5,049,364	176,166,353
6	Flood	Georgia	12/05/2012	22.31	100,018	4,483,400
7	Flood	China P Rep	11/07/2012	12.97	17,440,000	1,344,130,000
8	Storm	Philippines	06/02/2012	9.98	949,086	95,053,437
9	Flood	China P Rep	29/06/2012	9.76	13,119,000	1,344,130,000
10	Flood	Korea Dem P Rep	00/04/2012	8.62	212,348	24,631,291
11	Flood	Sri Lanka	17/12/2012	7.03	146,626	20,869,000
12	Flood	Cambodia	17/09/2012	4.90	71,500	14,605,862
13	Storm	China P Rep	24/06/2012	4.46	6,000,007	1,344,130,000
14	Flood	Thailand	15/08/2012	3.54	235,545	66,576,332
15	Earthquake	Philippines	00/01/2012	3.37	320,277	95,053,437
16	Storm	Sri Lanka	00/01/2012	3.31	69,000	20,869,000
17	Storm	Viet Nam	02/09/2012	3.17	278,490	87,840,000
18	Flood	China P Rep	09/07/2012	2.82	3,790,000	1,344,130,000
19	Flood	Bangladesh	00/12/2012	2.72	416,000	152,862,431
20	Storm	Philippines	27/03/2012	2.54	241,606	95,053,437
21	Flood	Kyrgyzstan	23/04/2012	1.99	11,000	5,514,600
22	Storm	Korea Dem P Rep	28/08/2012	1.81	44,461	24,631,291
23	Flood	India	16/09/2012	1.80	2,200,000	1,221,156,319
24	Earthquake	Azerbaijan	07/05/2012	1.70	15,550	9,173,082
25	Flood	India	15/01/2012	1.64	2,000,000	1,221,156,319

Source:
EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,
Université Catholique de Louvain, Brussels (Belgium)
*Data from World Bank 2011

6-5 THE 25 WORST DISASTERS IN ASIA BY ECONOMIC DAMAGE, 2012

According to the EM-DAT database, storm, flood and earthquake are the disasters that brought about economic damage in Asia in 2012, occupying 11, 10 and 4 ranks respectively. A flood in December in China tops at 8 billion USD. By country, 8 countries are ranked in the worst 25 disasters in Asia by economic damage. Among them, China has as many as 16 disaster events in the list.

Table 6-5: The 25 Worst Disasters in Asia by Economic Damage, 2012

Disaster Type	Country	Date	Killed	Affected	Economic Damage (US\$ Million)
1 Flood	China P Rep	07/12/2012	151		8,000
2 Flood	China P Rep	20/07/2012	21		4,920
3 Storm	China P Rep	07/09/2012	14	268,825	3,280
4 Flood	China P Rep	29/06/2012	132	13,119,000	2,680
5 Flood	Pakistan	23/08/2012	480	5,049,364	2,640
6 Storm	China P Rep	24/06/2012	3	6,000,007	2,040
7 Storm	Philippines	31/08/2012	1,901	6,246,664	1,693
8 Flood	China P Rep	27/07/2012	76	180,000	1,690
9 Earthquake	Iran Islam Rep	05/12/2012	306	61,546	900
10 Earthquake	China P Rep	07/09/2012	81	744,821	552
11 Storm	Korea Rep	15/09/2012	20		450
12 Flood	China P Rep	09/07/2012	15	3,790,000	370
13 Storm	Korea Rep	24/08/2012		3,120	349
14 Storm	Viet Nam	02/09/2012	11	278,490	336
15 Storm	China P Rep	21/07/2012	8	58,500	329
16 Flood	China P Rep	00/08/2012	53	185,000	316
17 Earthquake	China P Rep	00/07/2012	4	34,234	300
18 Flood	China P Rep	11/07/2012	91	17,440,000	270
19 Storm	China P Rep	28/04/2012	2	107,500	262
20 Storm	China P Rep	22/06/2012	1	126,000	197
21 Storm	Japan	12/07/2012	134	7,766	171
22 Storm	China P Rep	08/05/2012	34	232,170	124
23 Flood	India	22/12/2012	30	1,200	110
24 Flood	India	15/01/2012	21	2,000,000	98
25 Earthquake	China P Rep	05/10/2012		5,500	96

Source:

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

6-6 THE 25 WORST DISASTERS IN ASIA BY RATIO OF ECONOMIC DAMAGE TO GDP, 2012

In terms of economic damage incurred relative to gross domestic product (GDP), flood in Pakistan results in damage with 1.25 percent of its GDP, tops the list while the remaining figures are below one percent. Eleven countries and regions are listed in highest ratios of economic damages to their economies.

Table 6-6: The 25 Worst Disasters in Asia by Ratio of Economic Damage to GDP, 2012

	Disaster Type	Country	Date	Economic Damage (as percent)	Economic Damage (US\$ Million)	GDP (US\$ Million)*
1	Flood	Pakistan	23/08/2012	1.2527	2,640	210,741
2	Storm	Philippines	31/08/2012	0.7532	1,693	224,771
3	Storm	Viet Nam	02/09/2012	0.2717	336	123,679
4	Earthquake	Iran Islam Rep	05/12/2012	0.1751	900	514,060
5	Flood	China P Rep	07/12/2012	0.1093	8,000	7,321,935
6	Storm	Sri Lanka	00/01/2012	0.0963	57	59,187
7	Flood	China P Rep	20/07/2012	0.0672	4,920	7,321,935
8	Storm	China P Rep	07/09/2012	0.0448	3,280	7,321,935
9	Storm	Korea Rep	15/09/2012	0.0404	450	1,114,472
10	Flood	China P Rep	29/06/2012	0.0366	2,680	7,321,935
11	Flood	Georgia	12/05/2012	0.0339	5	14,435
12	Flood	Philippines	04/09/2012	0.0322	72	224,771
13	Storm	Korea Rep	24/08/2012	0.0313	349	1,114,472
14	Storm	China P Rep	24/06/2012	0.0279	2,040	7,321,935
15	Flood	China P Rep	27/07/2012	0.0231	1,690	7,321,935
16	Flood	Viet Nam	28/10/2012	0.0178	22	123,679
17	Flood	Tajikistan	13/05/2012	0.0117	1	6,522
18	Earthquake	China P Rep	07/09/2012	0.0075	552	7,321,935
19	Flood	India	22/12/2012	0.0059	110	1,872,845
20	Storm	Taiwan (China)	09/06/2012	0.0058	27**	464,026
21	Storm	Viet Nam	17/08/2012	0.0055	7	123,679
22	Flood	India	15/01/2012	0.0052	98	1,872,845
23	Flood	China P Rep	09/07/2012	0.0051	370	7,321,935
24	Storm	China P Rep	21/07/2012	0.0045	329	7,321,935
25	Storm	Philippines	06/02/2012	0.0044	10	224,771

Source:

EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be,

Université Catholique de Louvain, Brussels (Belgium)

*Data from World Bank 2011; **Data from IMF World Economy Outlook Database 2011

7. DISASTERS IN ASIA BY COUNTRY, 2012

Country	Disaster Type	Occurrence	Killed	Affected	Damage (US\$ Million)
Afghanistan	Earthquake	1	73	237	
	Extreme temperature	1	45	68	
	Flood	6	124	51,150	
	Mass movement	3	130	46	
Azerbaijan	Earthquake	1		15,550	
	Extreme temperature	1	5		
Bangladesh	Extreme temperature	1	72	75,000	
	Flood	2	110	666,000	
	Storm	2	102	227,980	
Cambodia	Flood	1	14	71,500	
China P Rep	Earthquake	5	86	942,217	1,016
	Flood	10	597	35,127,000	18,246
	Mass movement	1	19		
	Storm	6	62	6,793,002	6,232
Georgia	Flood	1	5	100,018	5
India	Extreme temperature	2	148		
	Flood	6	279	4,210,860	244
	Mass movement	1	16		
	Storm	1	40	70,000	
Indonesia	Earthquake	4	13	8,326	
	Flood	5	33	21,800	
	Mass movement	2	20	115	
	Storm	1	16	10,060	1
Iran Islam Rep	Earthquake	2	312	67,069	900
Iraq	Flood	1	4		
Japan	Flood	1	30	48,135	
	Storm	5	140	51,613	315
Kazakhstan	Extreme temperature	1		5,000	
	Flood	1		9,400	
Korea Dem P Rep	Drought	1		3,000,000	
	Flood	1	169	212,348	11
	Storm	1	59	44,461	
Korea Rep	Storm	3	22	3,120	799
Kyrgyzstan	Flood	1		11,000	
Myanmar	Earthquake	1	38	1,486	1
	Flood	1	2	85,000	
Nepal	Flood	1	17		
	Mass movement	1	14		
Pakistan	Flood	3	518	5,050,564	2,640
	Mass movement	2	153		
Palestine (West Bank)	Flood	1		1,500	
Philippines	Earthquake	3	114	353,157	12
	Epidemic	1	30	3,158	
	Flood	7	132	4,628,864	74
	Mass movement	1	75	23	
	Storm	9	2,039	7,560,480	1,713
Saudi Arabia	Flood	1	19		
	Drought	1		1,800,000	
	Flood	1	46	146,626	1
Sri Lanka	Storm	1		69,000	57
	Flood	1			
Taiwan (China)	Flood	1	6	35,000	17
	Storm	2	14		35
Tajikistan	Earthquake	1	2	2,531	
	Extreme temperature	1	1		
	Flood	1		5,556	1
Thailand	Flood	1		235,545	
Turkey	Flood	1	13		
	Storm	1			
Viet Nam	Flood	1	16	17,798	22
	Storm	3	38	338,972	343
Grand Total		129	6,032	72,178,335	32,687

In 2012, China accounts for 22 occurrences, 17 percent of the total number of disasters that hit Asia, followed by Philippines' 21 events, 16 percent and 12 events 9 percent of Indonesia.

Philippines has largest number of people killed, 2,390, 40 percent in Asia, due mainly to storms, floods and earthquakes.

With regards to number of people affected, China ranks first with more than 42 million people (59 percent), followed by Philippines 12.5 million (17 percent).

Similarly, economic damage is made up of China (80 percent), Philippines (5.5 percent).

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

8. DISASTERS IN ASIA BY DISASTER TYPE, 2012

Disaster Type	Country	Occurrence	Killed	Affected	Damage (US\$ Million)
Drought	Korea Dem P Rep	1		3,000,000	
	Sri Lanka	1		1,800,000	
Earthquake	Afghanistan	1	73	237	
	Azerbaijan	1		15,550	
	China P Rep	5	86	942,217	1,016
	Indonesia	4	13	8,326	
	Iran Islam Rep	2	312	67,069	900
	Myanmar	1	38	1,486	1
	Philippines	3	114	353,157	12
	Tajikistan	1	2	2,531	
Epidemic	Philippines	1	30	3,158	
Extreme temperature	Afghanistan	1	45	68	
	Azerbaijan	1	5		
	Bangladesh	1	72	75,000	
	India	2	148		
	Kazakhstan	1		5,000	
	Tajikistan	1	1		
Flood	Afghanistan	6	124	51,150	
	Bangladesh	2	110	666,000	
	Cambodia	1	14	71,500	
	China P Rep	10	597	35,127,000	18,246
	Georgia	1	5	100,018	5
	India	6	279	4,210,860	244
	Indonesia	5	33	21,800	
	Iraq	1	4		
	Japan	1	30	48,135	
	Kazakhstan	1		9,400	
	Korea Dem P Rep	1	169	212,348	11
	Kyrgyzstan	1		11,000	
	Myanmar	1	2	85,000	
	Nepal	1	17		
	Pakistan	3	518	5,050,564	2,640
	Palestine (West Bank)	1		1,500	
	Philippines	7	132	4,628,864	74
	Saudi Arabia	1	19		
	Sri Lanka	1	46	146,626	1
	Taiwan (China)	1	6	35,000	17
Tajikistan	1		5,556	1	
Thailand	1		235,545		
Turkey	1	13			
Viet Nam	1	16	17,798	22	
Mass movement	Afghanistan	3	130	46	
	China P Rep	1	19		
	India	1	16		
	Indonesia	2	20	115	
	Nepal	1	14		
	Pakistan	2	153		
	Philippines	1	75	23	
Storm	Bangladesh	2	102	227,980	
	China P Rep	6	62	6,793,002	6,232
	India	1	40	70,000	
	Indonesia	1	16	10,060	1
	Japan	5	140	51,613	315
	Korea Dem P Rep	1	59	44,461	
	Korea Rep	3	22	3,120	799
	Philippines	9	2,039	7,560,480	1,713
	Sri Lanka	1		69,000	57
	Taiwan (China)	2	14		35
	Viet Nam	3	38	338,972	343
Grand Total		129	6,032	72,178,335	32,687

This table shows disasters in Asia in 2012 by disaster type.

Flood has largest share in occurrences (43 percent) and number of people affected (70 percent) and economic damage (65 percent) in 24 countries.

On the other hand, storm tops in number of people killed, 42 percent. In the other indices, namely occurrence, number of people affected and economic damage, storm is ranked second 26 percent, 21 percent and 29 percent respectively in 11 countries.

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

The Asian Disaster Reduction Center was established in Kobe, Japan in 1998 with the mission to enhance disaster resilience of its member-countries, to build safe communities, and to create a society where sustainable development is possible. The Center works to build disaster resilient communities and to establish networks among countries through many programs including personnel exchanges in this field.



Asian Disaster Reduction Center