

2009

# Philippine Disaster Report

Disaster Statistics 2009

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CDRC  
Citizens' Disaster Response Center  
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## Introduction

The **2009 Philippine Disaster Report** concisely presents information on disasters that occurred in the Philippines in 2009. Through graphs, tables, and charts, it provides an overview of the type of disasters that occurred, the frequency of occurrence, as well as the effects of these disasters on communities. Where available, direct economic costs to agriculture and infrastructure are reported. A review of the major disasters that occurred in the Philippine islands within the past decade is also presented.

A substantial portion of the data in this report were gathered through CDRC's disaster monitoring system, which relies on reports from the Citizens' Disaster Response Network (CDRN), a network of 16 regional centers all over the country. Overview and supporting data were taken from the Disaster Response Operations Monitoring and Information Center of the Department of Social Welfare and Development (DROMIC-DSWD), the National Disaster Coordinating Council of the Office of the Civil Defense (NDCC-OCD), and articles in major newspapers. CDRC verified the data in this report through various sources to ensure accuracy. The triangulation method of comparing and contrasting credible sources of data was used.

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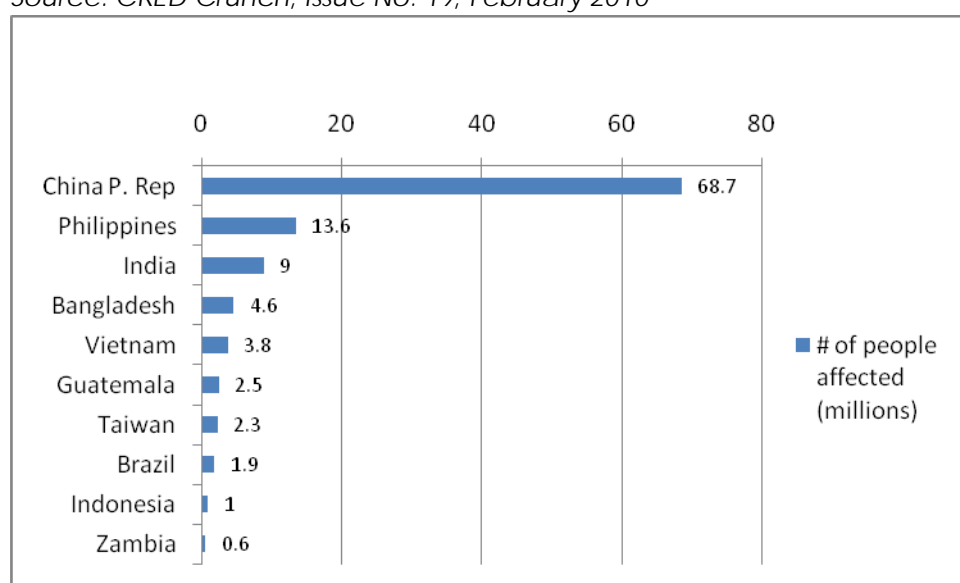
## 1. How did the Philippines fare in 2009?

In 2009, a total of 191 natural and human-induced disasters were reported in the Philippines. These killed 903 persons, and affected more than 2.8 million families or 13.6 million people.

These figures placed the Philippines 2<sup>nd</sup> in the list of countries most affected by natural disasters in 2009 (see Figure 1). Previously, the country was only fifth on the top ten list.

**Figure 1. Human Impact in 2009 (10 most affected countries)**

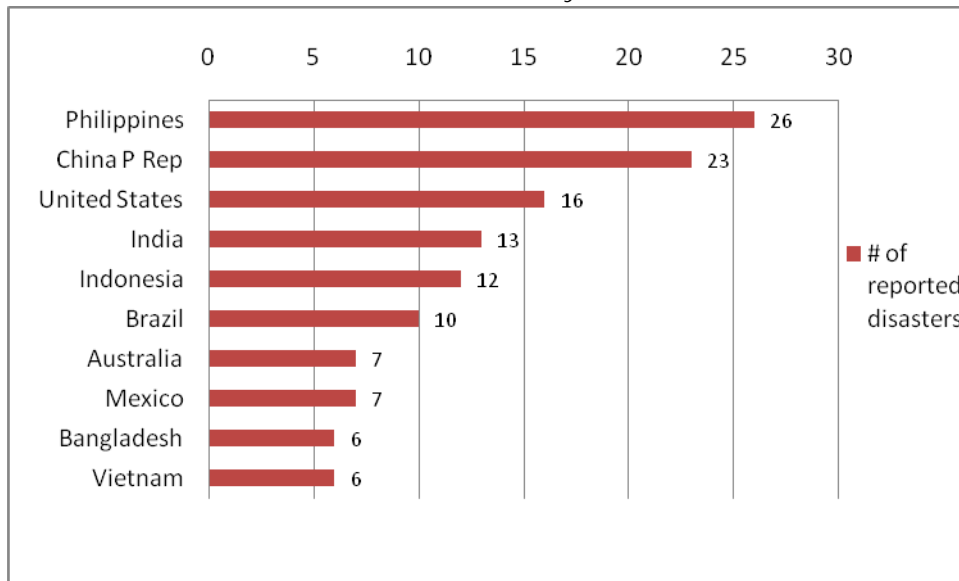
Source: CRED Crunch, Issue No. 19, February 2010



According to the EM-DAT: The OFDA/CRED International Disaster Database, the Philippines was also the country with the most number of reported natural disasters in 2009, topping China, the US, India and Indonesia (see Figure 2). Previously, the country placed only third on that list.

**Figure 2. Number of Reported Disasters per Country in 2009**

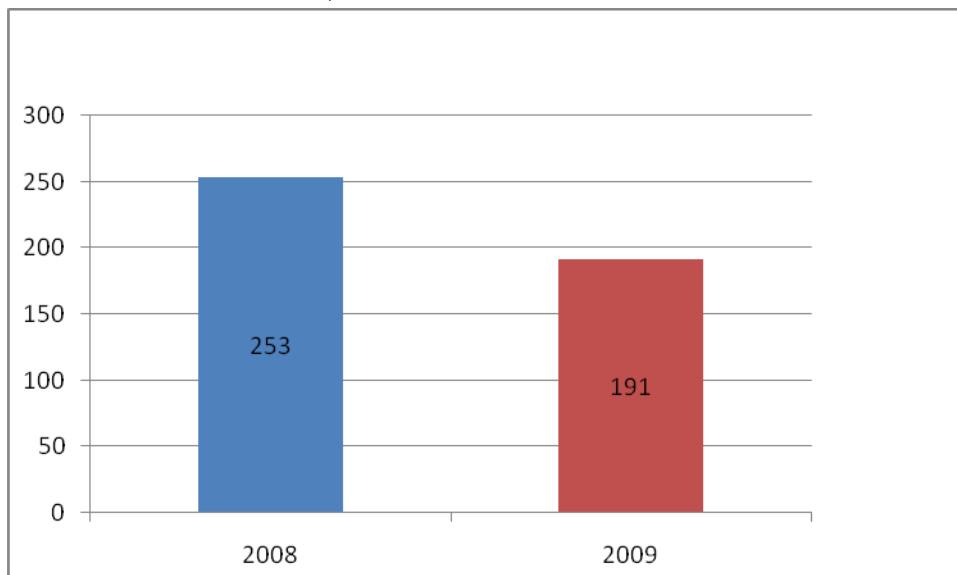
Source: CRED Crunch, Issue No. 19, February 2010



Despite the higher placement in world statistics, last year's reported number of both natural and human-induced disasters (191) was lower than the 2008 figure of 253 (see Figure 3).

**Figure 3. Frequency of Disaster Occurrence 2008 and 2009**

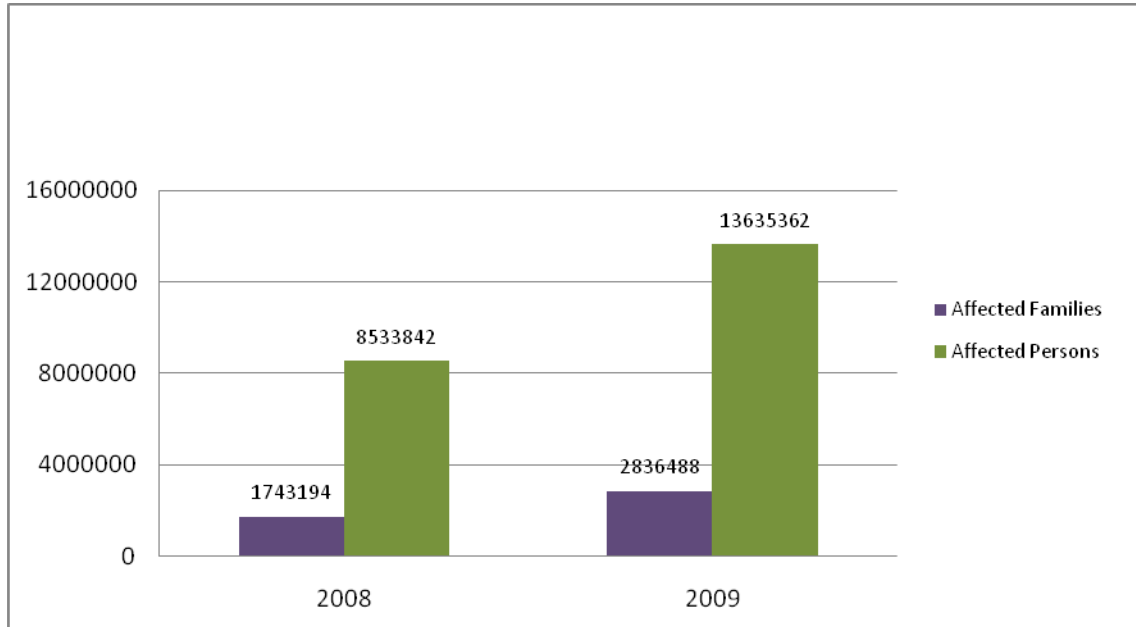
Source: CDRC Database, 2009



However, human impact was higher, with 13.6 million persons affected compared to the 8.5 million in 2008 (see Figure 4).

**Figure 4. Disaster Affected Population 2008 and 2009**

Source: CDRC Database, 2009



This increase in the number of affected persons can be attributed to the two major typhoons that happened towards the end of 2009 – Typhoons Ondoy (Ketsana) and Pepeng (Parma).

### **Typhoon Ondoy (International name: Ketsana)**

People killed: 298

People affected: 4 million

Economic Losses: 8.3 billion

In September 2009, the Philippines was struck by typhoon Ondoy (internationally known as Ketsana), the worst typhoon since 1967. It entered PAR Sept. 24 and brought devastation to 829,498 families in Metro Manila, Bulacan, Pampanga, Batangas, Laguna and Rizal and some areas in Regions VI, IX, XII and ARMM on September 26. It exited on September 27.

Ondoy poured more than a month's worth of rain in just 24 hours. According to Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA), the 455 millimeters of rain on September 26 is one and a half times the historical average of 364 mm for the month of September from 1993 to 2008. Ondoy rainfall even exceeded all averages for a whole month, except July.

Moreover, the heavy flooding was compounded by improper garbage disposal, poor drainage system, high tide, and the release of water in dams without warning.

In Metro Manila, over 100,000 people from over 900 barangays were evacuated after incessant rains caused heavy flooding that submerged Manila, Marikina, Malabon, Muntinlupa, Makati, Pasay, Pasig, Valenzuela, San Juan and Quezon City. In some areas, floodwater rose to second and third floors of buildings, forcing residents to seek refuge on the roof of their houses. Others were completely swept away by the strong current along the flooded streets. Landslides also occurred in some areas in CAR, Region III, Region IV and Region V.

With its geo-physical location and socio-economic condition, the Philippines is unquestionably prone to disasters, but deaths, devastation to thousands of families and Php 8.3 billion worth of damage to infrastructure and agriculture caused by Ondoy could have been reduced if more emphasis had been placed on disaster prevention and risk reduction. Hopefully, with the passage of Disaster Risk Reduction and Management bill the government will give emphasis on strengthening the capacity of communities to mitigate, prepare for, respond to, and recover from disasters, as an integral part of its development plans and programs.

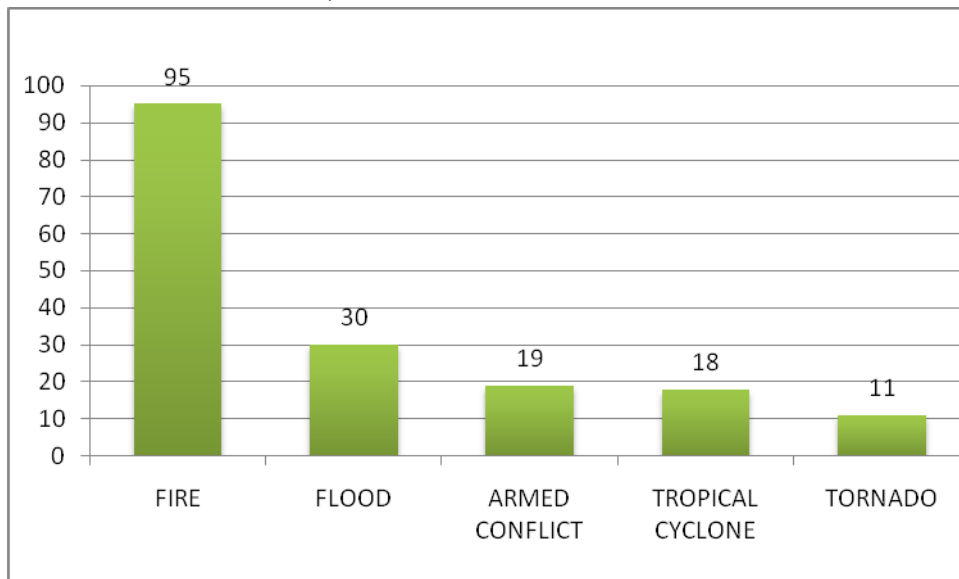
Ondoy is a very extreme case and could not be predicted just by looking at historical averages. With weather abnormality as the norm, it is hard not to expect any more Ondoy. Even experts say that there is a very likely scenario that there would be typhoons that are stronger and that would last longer due to climate change. While there is nothing that we can do to prevent such typhoons and other hazards from happening, we can always prepare for them to minimize loss of life and property.

## 2. What were the top 5 disasters in 2009?

As in previous years, fire incidents outnumbered other disasters in 2009 (see Figure 5). The total number of fire incidents for 2009 account for 95 or 50% of the 191 disaster events monitored. This was followed by flood, armed conflict, tropical cyclone and tornado.

**Figure 5. Top 5 Disasters in 2009 in Terms of Frequency**

Source: CDRC Database, 2009

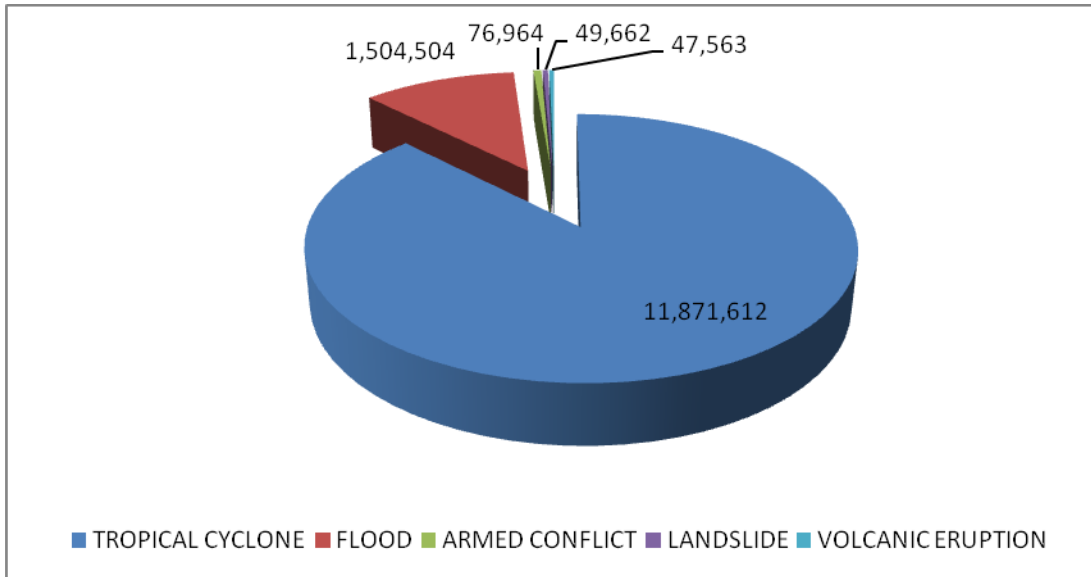


In contrast, fire did not even make it to the top 5 disasters with the most number of affected persons. Tropical cyclones, the same as last year, topped the list (see Figure 6). This was followed by flood, armed conflict, landslide and volcanic eruption.

Tropical cyclones may only be 4<sup>th</sup> in terms of the number of disaster occurrence, and yet more people were affected.

**Figure 6. Top 5 Disasters in 2009 in Terms of Affected Population**

Source: CDRC Database, 2009





### 3. What types of hazards were dominant in 2009?

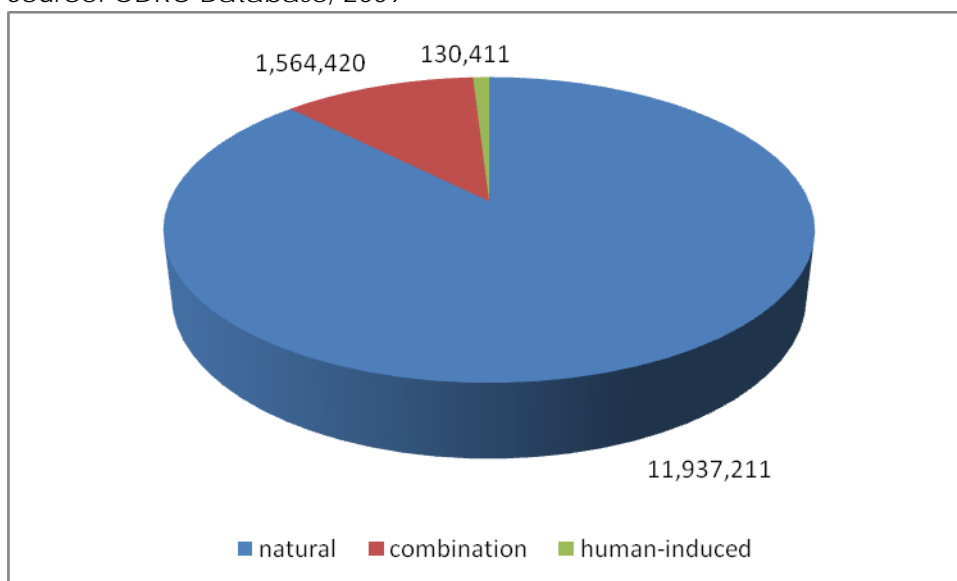
Natural hazards remained the leading cause of massive disasters in the Philippines in 2009. There were 11,937,211 people affected by natural disasters, or 88% of the total number of people affected (see Figure 7). Natural disasters include drought, lahar, storm surge, tornado, tropical cyclone, earthquake and volcanic eruption.

Disasters caused by both humans and natural hazards (combination) affected 1,564,420 people or 11% of the disaster-affected population. These disasters include fishkill, floods, landslide, epidemic, infestation, and redtide.

Human-made disasters, namely armed conflict, fire, and development aggression affected 130,411 people or only 1% of the total disaster-affected population in 2009.

**Figure 7. Affected Population by Types of Hazards**

Source: CDRC Database, 2009

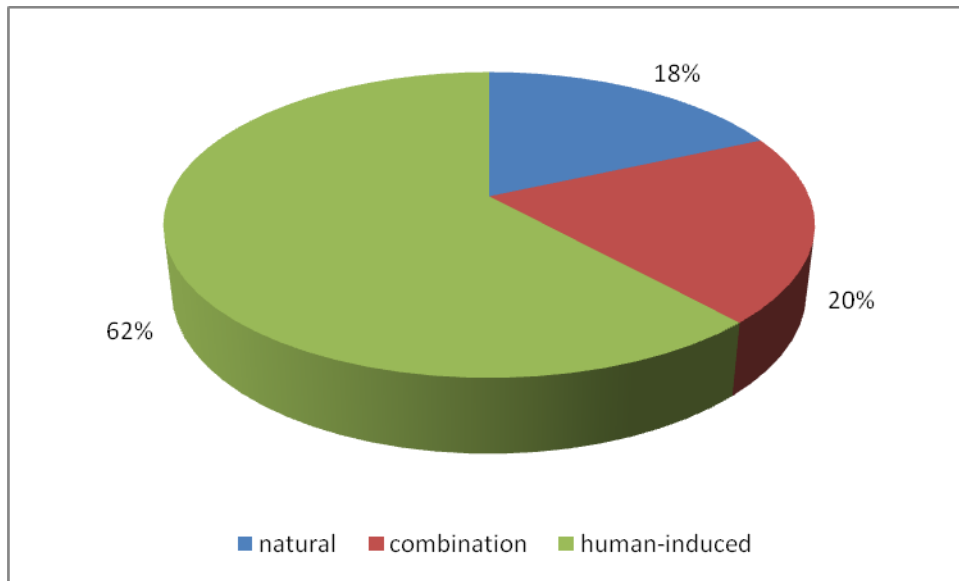


In terms of frequency however, 62% were human-induced disasters (see Figure 8). This was fueled by the high number of fire incidents which happened mostly in Metro Manila where many slum areas were located. Houses in these urban poor communities were built close to each other and were made of light materials highly prone to fire.

The occurrence of natural disasters on the other hand was a mere 18%, and yet it affected the most number of people (see Figure 7).

**Figure 8. Frequency of Disasters by Types of Hazards**

Source: CDRC Database, 2009

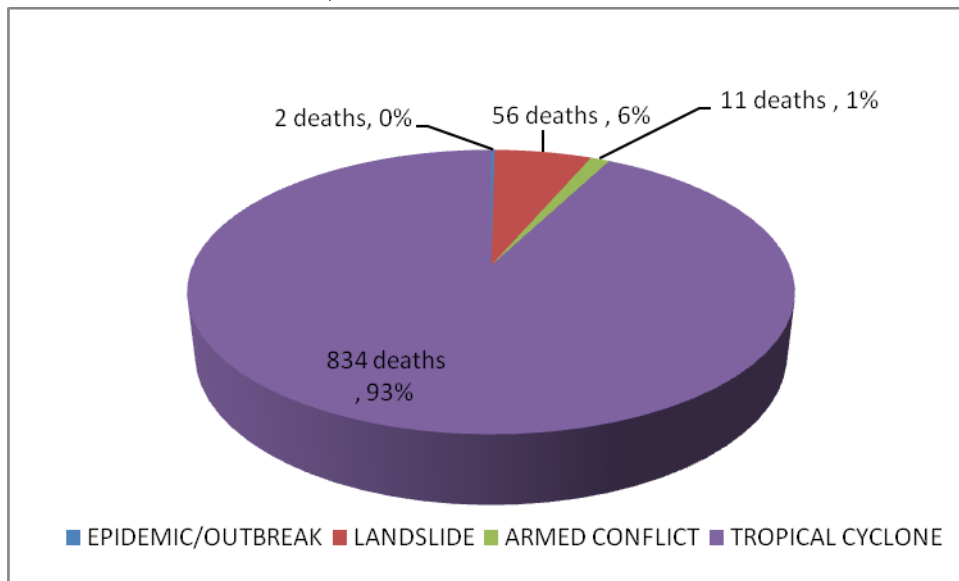


#### 4. What disasters had the highest mortality rate?

The major source of mortality rate last year was tropical cyclones, landslides and armed conflicts. Tropical cyclones alone affected more than 11.8 million people, and killed 834 (93%) in 2009 (see Figure 9). Typhoons Ondoy and Pepeng were last year's biggest disasters. It affected a total of 8.4 million people combined, and killed 763 people out of the 834 deaths recorded under tropical cyclones.

**Figure 9. Top 5 Disasters in Terms of Casualties**

Source: CDRC Database, 2009



### **Typhoon Pepeng (International name: Parma)**

People killed: 465

People affected: 4.4 million

Economic Losses: 19.6 billion



Barely had the country recovered from Typhoon Ondoy when Typhoon Pepeng (international codename Parma) hit Northern Luzon. Pepeng overstayed in the country for 10 days and brought more rains and very strong winds, causing further devastation in the country.

Pepeng made its first landfall over Cagayan just 8 days after Ondoy exited the country. It made its 2nd landfall three days later. Unexpectedly, it made another landfall, its third one, over the same area. It caused massive floodings and landslides in Regions I, II, and CAR which isolated major cities and blocked major highways including Kennon Road, Naguilian Road and Marcos Highway.

The number of casualties reached 719, majority of which came from the landslide-hit areas of Cordillera Region, and the flooded province of Pangasinan. Of this, 465 were killed, 207 were injured, and 47 remain missing. In Cordillera alone, 346 people were confirmed dead.

The total cost of damage which amounted to P19.6 Billion is by far one of the worst. This, could have been reduced if proper measures were taken.

Pepeng, together with Ondoy, are two clear manifestations of what climate change can do to Filipinos. Climate change, or the accelerated warming of the earth's surface is primarily the result of years of destructive practices of many nations. Climate change-induced natural hazards are felt globally but it is the poor countries and the poor people who suffer the most from its devastating consequences.

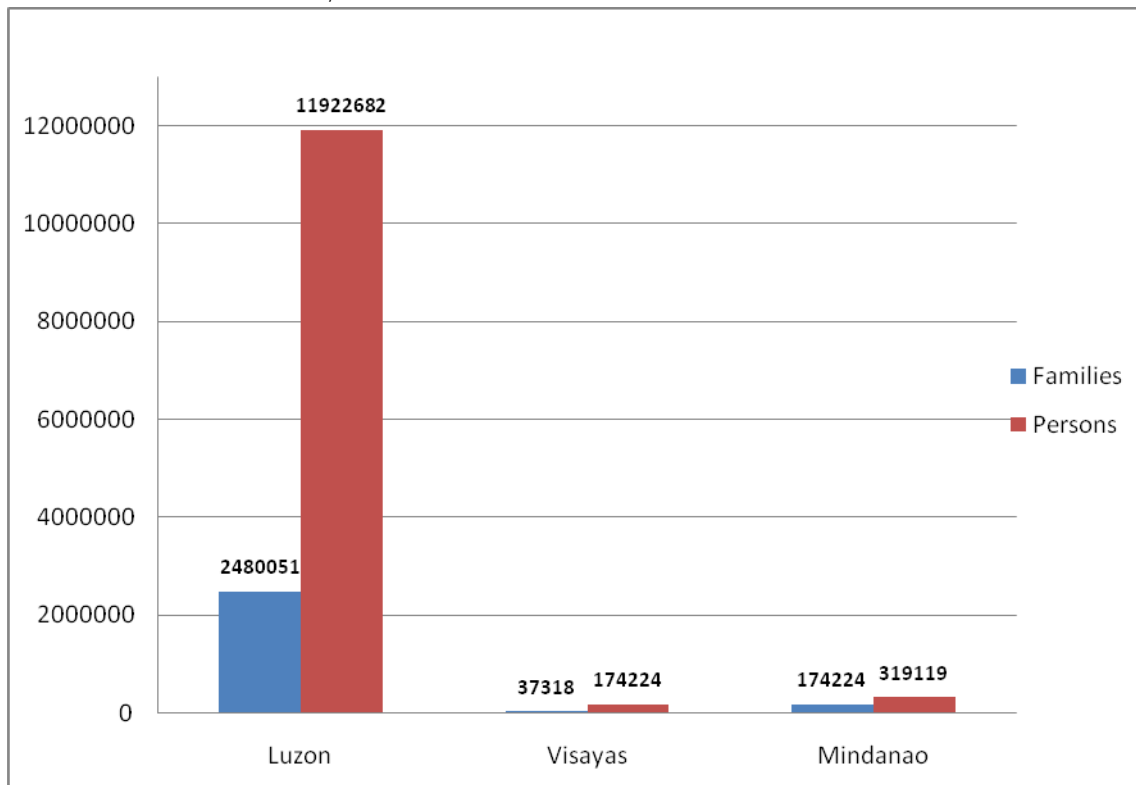
Immediately after Typhoons Pepeng (and Ondoy) devastated millions, donations and help poured in. For all these, the survivors are forever thankful, but more actions should be taken urgently. First, the issue of climate change should be promptly addressed not just by the Philippines but by all nations. Second, because disasters have been hitting the country ever since, it is imperative that more emphasis is placed on disaster prevention and risk reduction. Disaster Risk Reduction and Management bill, which currently awaits presidential signature, will be a valuable tool in strengthening the capacity of communities to mitigate, prepare for, respond to, and recover from disasters.

## 5. What regions were most affected by disasters?

The 191 disaster incidents were spread out all over the country, with Luzon having the greatest number of people affected by disasters, followed by Mindanao and then by the Visayas (see Figure 10). This was expected since the two most devastating typhoons (Ondoy and Pepeng) mainly ravaged Luzon.

**Figure 10. Geographical Distribution of Affected Population**

Source: CDRC Database, 2009

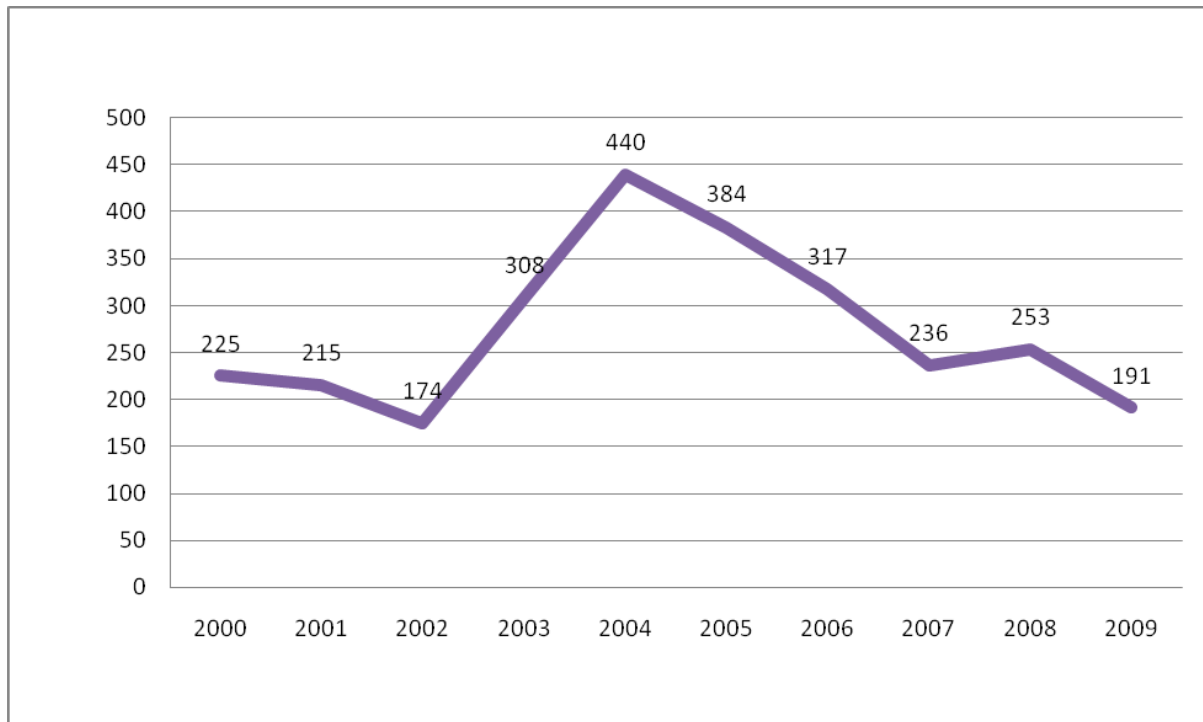


## 6. What were the trends in the last 10 years?

Since 2005, disaster data showed a downward trend in the frequency of disaster occurrence (see Figure 11).

**Figure 11. Frequency of Disasters, 2000-2009 (10-year period)**

Source: CDRC Database, 2009

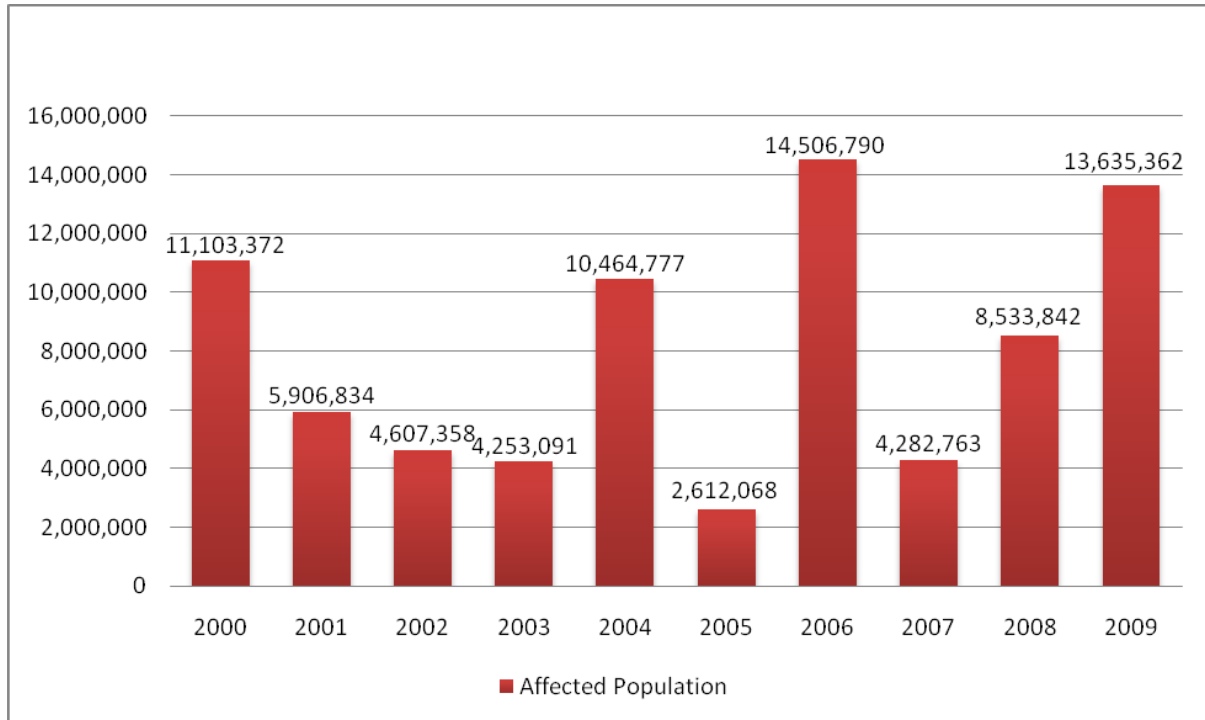


However, in terms of the number of persons affected, it showed a continuing increase since 2008 (see Figure 12).

Therefore, despite the lesser number of disasters this year, the impact of these disasters is getting worse. It almost broke the record-high 14.5 million people affected by disasters in 2006.

**Figure 12. Number of Affected Persons, 2000-2009 (10-year period)**

Source: CDRC Database, 2009



**Table 1. Disasters in the Philippines (2000-2009)**

TYPE OF DISASTER	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		GRAND TOTAL	
	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FR EQ	PERS ONS	FREQ	PERSONS
Armed Conflict	17	743,035	9	303,253	28	100,082	80	585,107	12	63,036	23	180,503	27	114,045	26	209,652	42	684,626	19	76,964	283	3,060,303
Development Aggression	39	32,815	9	26,846	22	49,487	40	87,895		1165	11	131,313	18	91,342	1	42,000	5	122,500	4	11,100	149	596,463
Drought				653	1	185,385	1	55,212			6	280			2	197827					10	439,357
Earthquake	33	15,769			1	71,757	1	7,965	4	1500					2	27675	1	1361	1	620	43	126,647
Epidemic	12	4,770	44	8,152	19	2,685	32	17,108	11	10,062	24	91,244	12	88,686	5	3,197	3	2,328	1	10,254	163	238,486
Fire	32	58,787	49	95,555	53	96,138	69	111,160	295	102,468	254	97,349	169	87,876	138	112,716	97	46,681	95	42,347	1,251	851,077
Fishkill	2	8,568	1		2	128	1				7	248	13	4,359	1	300	4	900			31	14,503
Flood	13	1,115,344	14	714,204	6	3,285,749	39	1,426,318	41	3,166,915	28	964,927	31	1,916,187	24	504,365	39	1,844,563	30	1,504,504	265	16,443,076
Industry Related	4	93	11	235	5	25,370															20	25,698
Infestation	26	317,890	11	18,579	7	4,233	3	575	5	69,276			3	11,981			3	29,370			58	451,904
Lahar			1	36,760	1	1,521							1	55							3	38,336
Landslide	23	9,516	41	3,890	17	83	12	19,563	17	25,948	15	116,747	15	24,144	7	6,256	32	8,961	7	49,662	186	264,770
Redtide	2	13,221	4		2	17	1	3,853					1				1	222			11	17,313
Storm Surge	3	4,003	7	22,796	3	488	6	357	1	220	1	8,535	7	69,396	7	76,895	2	3,414	4	17,416	41	203,520
Tornado	8	4,764	7	6,479	4	630	3	882	29	58,051	9	1,276	7	1,106	7	8,324	13	2,694	11	3,320	98	87,526
Toxic Waste	1	1,014					1	423													2	1,437
Tropical Cyclones	9	8,681,040	6	4,612,624	3	783,605	19	3,362,991	25	6,966,136	6	1,019,646	11	12,030,904	13	3,027,226	11	5,786,222	18	11,871,612	121	58,142,006
Volcanic Eruption	1	92,743	1	56,808	0								2	66,709	3	66,330			1	47,563	8	330,153
<b>TOTAL</b>	<b>225</b>	<b>11,103,372</b>	<b>215</b>	<b>5,906,834</b>	<b>174</b>	<b>4,607,358</b>	<b>308</b>	<b>5,679,409</b>	<b>440</b>	<b>10,464,777</b>	<b>384</b>	<b>2,612,068</b>	<b>317</b>	<b>14,506,790</b>	<b>236</b>	<b>4,282,763</b>	<b>253</b>	<b>8,533,842</b>	<b>191</b>	<b>13,635,362</b>	<b>2,743</b>	<b>81,332,575</b>

**Sources:** CDRC Database 2009, CDRC Disaster Alerts 2009, DROMIC-DSWD 2009 Annual Disaster Occurrences Statistical Consolidation, CDRN and PO Reports, NDCC-OCD Summary of Man-made and Natural Incidents, January-December 2009 News clippings from the following broadsheets: The Philippine Star and Philippine Daily Inquirer.



## References

1. CDRC databank 2009
2. *2009 Disaster Alerts*, Citizens' Disaster Response Center, Inc.
3. Reports from Citizens' Disaster Response Network (CDRN) member-organizations
4. *2008 Annual Report*, Citizens' Disaster Response Center, Inc.
5. *2009: Annual Disaster Occurrences Statistical Consolidation by Region*, Department of Social Welfare and Development, Disaster Response Operations Monitoring and Information Center
6. *Incidents Monitored from January 1 - December 31, 2009*, Department of National Defense, Office of Civil Defense, Camp General Emilio Aguinaldo, Quezon City
7. 2009 Reports and news clippings from The Philippine Star and Philippine Daily Inquirer
8. CRED Crunch, Issue No. 19, February 2010.
9. [www.dswd.gov.ph](http://www.dswd.gov.ph)
10. [www.ndcc.gov.ph](http://www.ndcc.gov.ph)