#### THE PHILIPPINE DISASTER SITUATION IN 2020

# I. 2020 was an extraordinary disaster year for the Philippines

The year 2020 was an extraordinary disaster year for the Philippines. It began with a volcanic eruption and ended with two magnitude 6 earthquakes, one shaking Luzon on Christmas Day. In between came Typhoon Goni, a super typhoon that was the strongest in the world last year.

And then there were the biological disasters brought about by the COVID-19 pandemic, the reemergence of vaccine-preventable diseases namely polio, measles, and dengue, an outbreak of African swine fever, and crop infestation due to fall armyworm.

Man-made disasters worsened the negative impacts of these natural catastrophes as armed conflict, crime and violence, clan feud, police operations, terrorist activity, extrajudicial killings and other forms of human rights violations, fires, and an oil spill contributed to fatalities and drove people away from their homes and livelihood. Thousands of families were even rendered homeless when demolitions of communities perpetrated by the state forces continued at the height of the pandemic.

A combination of both natural and man-made hazards that resulted in severe flooding, flash floods, and landslides likewise worsened the already dejected plight of the Filipino people.

The unscientific and militarist approach through lengthy and hard lockdowns imposed nationwide by the Duterte government to curb the spread of the COVID-19 virus exposed its incompetence and eventual failure in containing the pandemic's negative impacts. Its policies exacerbated the continuing crisis and had worse impacts than the pandemic itself. Among Southeast Asians, Filipinos were most disapproving of the government's response to the pandemic (308). The country even had the worst outbreak in August 2020 among Southeast Asia, despite the imposition of the longest and strictest lockdown among Southeast Asia (309) and in the world. Ironically, the Duterte administration failed to impose immediate border controls considering that the Philippines is an island country and is geographically isolated from other countries. It was sorely remiss in early rapid detection. Rather than reducing deaths, it contributed to the growing number of fatalities. Thus, the people's plight is ever miserable – more people are jobless, poorer, hungrier, and more desperate.

## II. Disasters and Impacts

#### A. Natural hazards and disasters

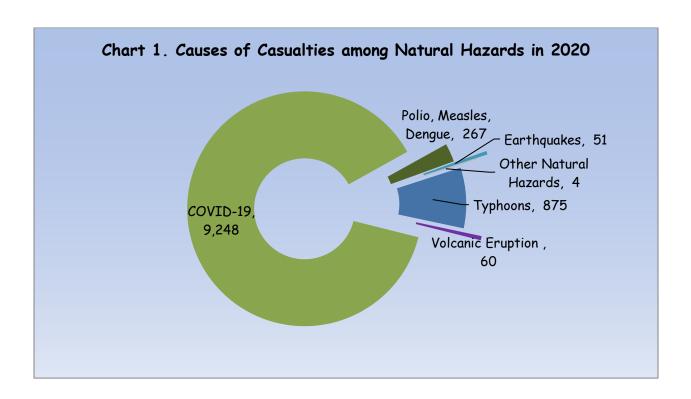
The Philippines is among the topmost vulnerable countries in the world to natural disasters and climate impacts. Around 74% of the population of more than 100 million is subject to different impacts from these disasters and the country routinely ranks among the top 10 natural disaster-prone countries in the world, according to the World Risk Index.

Table 1. Natural Hazards, 2020

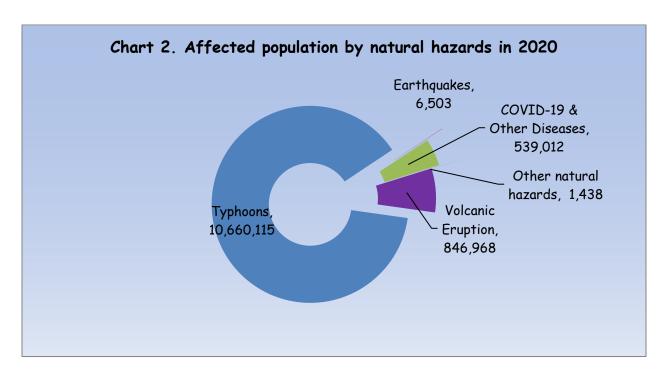
Hazard/Disaster Subgroup		Meteorological and Geological	Biological (Animals and Crops)	Biological (Humans)
Incident Type/Event	Natural Hazards 2020	Typhoons, Earthquakes, Volcanic Eruption, Lightning, Storm Surge, Strong Wind, Whirlwind, Tornado	African swine fever, fall armyworm on corn	COVID-19, dengue, measles, polio
Number of Incidents	54	54	No data	
Island Groups Hit			Inc data	
Luzon	25	25		
Visayas	1	1		
Mindanao	20	20		
Luzon and Visayas	7	7		
Luzon, Visayas, Minda	1	1		
Casualties				
Deaths	9,688	173		9,515
Injured	793	793		
Missing	24	24		
Affected		-		
Barangays	17,980	17,980		
Provinces	-		82-95	
Families	2,783,260	2,783,260		
Persons	12,054,036	11,515,024		539,012
Active cases	26,677			26,677
Recovered cases	439,895			439,895
Animals	350,000		350,000	
Displacements		-		
Families	178,074	178,074		
People	4,200,587	3,200,587		1,000,000
Damaged Houses, Total	788,774	788,774		
Totally	118,768	118,768		
Partially	670,006	670,006		

Damage to Properties,				
Total	160,023,621,654	104,023,321,654	56,000,300,000	
Agriculture	131,343,201,642	75,342,901,642	56,000,300,000	
Infrastructure	28,680,420,011	28,680,420,011		
Total Areas Affected (Ha)	11,000		11,000	
Cost of Assistance, Total	897,998,786	747,055,456	150,943,330	
DSWD	340,042,306	339,285,976	756,330	
LGUs	238,636,703	238,449,703	187,000	
DA	302,708,000	152,708,000	150,000,000	
NGOs	13,911,732	13,911,732	1	
Others	2,700,044	2,700,044	-	
Total Cost of				
Government Assistance	577,735,680	577,735,680	•	
% of Government				
Assistance to Total				
Estimated Damages	0.36%	0.56%		

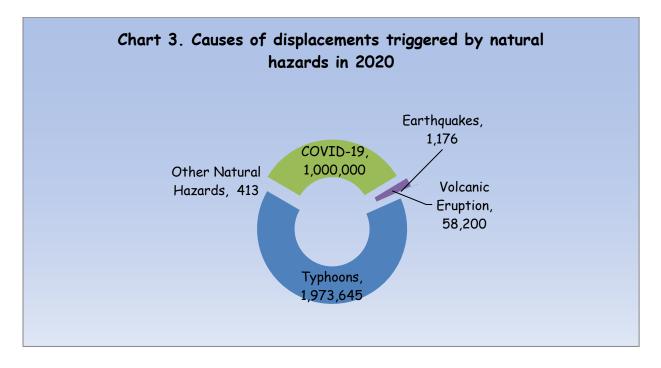
There were 54 recorded incidents of natural hazards in 2020, 25 of which struck Luzon, 20 in Mindanao, one in the Visayas, seven hitting both Luzon and the Visayas, and one affecting Luzon, Visayas, Mindanao. These natural events left 9,688 dead, 793 injured, and 24 missing. These affected 17,980 barangays, 2,783,260 families or 12,054,036 people. Displacements reached 178,074 families or 4,200,587 individuals. A total of 788,774 houses were either damaged or destroyed. Damage to properties peaked at P160 billion, of which P131.3 billion was in agriculture while P28.7 billion was in infrastructure. Government assistance of almost P898 million was a mere 0.36% of the total recorded damage to properties.



Among the natural hazards in 2020, the number of casualties (deaths, injured, and missing) of COVID-19 was highest at 9,248, followed by typhoons at 875, the outbreak of polio, measles, and dengue at 267, volcanic eruption at 60, earthquakes at 51, and other natural hazards at four casualties. (Chart 1)



In terms of the affected population, 10,660,115 people were adversely affected by typhoons while 846,968 people by the Taal Volcano eruption. COVID-19 inflicted 475,820 people while vaccine-preventable diseases such as polio, measles, and dengue affected 63,192 children. Earthquakes negatively affected 6,503 people while other natural hazards 1,438 people.

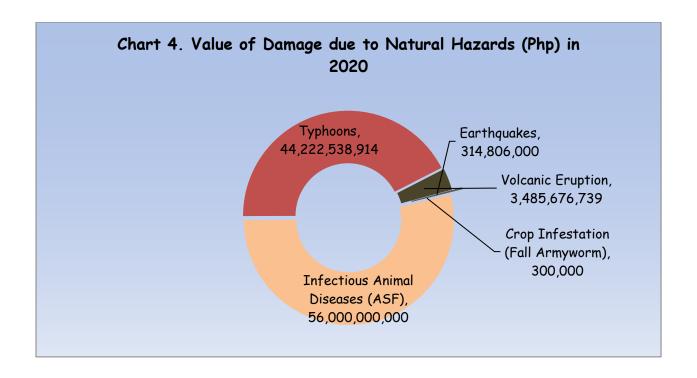


The eight typhoons that made landfall triggered the displacements of 3,140,798 people, followed by COVID-19 with more than 1,000,000 people who were forced to go back to the provinces, Taal Volcano eruption with 58,200 people fleeing their homes, earthquakes at 1,176 people evacuating to safer grounds, and other natural hazards at 413 forced to take shelter in evacuation centers, relatives and/or friends.

However, the United Nations High Commissioner for Refugees (UNHCR) reported in December 2020 that 123,959 people from 29,223 families are still taking shelter in the community facilities, an abandoned poultry house, and 34 evacuation centers at various times since December 2017 due to typhoons in December 2017 and July 2019 and earthquakes in October and December 2019 which all occurred in Mindanao. **(Table 2)** 

Table 2. People who remain displaced and have been protractedly displaced for more than 180 days due to natural hazards

Location and Cause of	Displaced			
Displacement	since	<b>Families</b>	Individuals	Taking shelter in
Northern Mindanao due				the community facilities like
to STS Vinta (Temblin)	Dec-17	29	145	primary school and rice mill
Northern Mindanao due				
to Typhoon Falcon	Jul-19	14	62	in an abandoned poultry house
Davao del Sur due to				
earthquake	Dec-19	27,400	114,852	22 evacuation centers
Cotabato province due to				
earthquake	Oct-19	1,780	8,900	12 evacuation centers
Total		29,223	123,959	



The African swine fever that had its first outbreak in September 2019 caused the highest losses valued at P56 billion, followed by the eight destructive typhoons at P44.2 billion, Taal volcano eruption at P3.5 billion, earthquakes at P314 million, and the fall armyworm infestation on corn at P300,000.

# 1. Typhoons

The year 2020 recorded one super typhoon, six typhoons, three severe tropical storms, seven tropical storms, and five tropical depressions, totaling 22, exceeding the annual average of 19 to 20 tropical cyclones that visit the Philippines each year.

Table 3. Eight of the 22 typhoons that inflicted casualties and damage

Typhoon		TOTAL	TY "Ambo" (Vongfong)	TS "Leon" (Noul)	TD "Ofel"	TY "Pepito" (Saudel)
				Sept-		
Date			May 10	15	Oct-13	Oct-19
Casualtie	S	875	169	0	0	0
	Deaths	162	0	0	0	0
	Injured	692	169	0	0	0
	Missing	21	0	0	0	0
Affected						
	Barangays	17,665	563	1	95	265
	Families	2,560,567	141,478	6	6,261	34,980
	Persons	10,660,115	583,884	29	22,627	165,763
Displaced	1					
_	Families	162,094	1,079	6	1,425	7,010
	People	3,140,798	3,811	29	5,092	31,358
Damaged	l Houses	769,659	60,294	-	20	6
	Totally	113,023	8,073		20	1
	Partially	656,636	52,221			5
Damage t	to Properties	44,222,538,914	1,574,512,997		1,346,097.9	105,817,126
	Agriculture	16,077,359,903	960,187,997		1,346,097.9	76,577,126.00
	Infrastructure	28,145,179,011	614,325,000			29,240,000
		34 in Luzon, 9 in			2 in Luzon	
	of Affected	Visayas, 2 in	6 in Luzon and	1 in	and 1 in	
Regional	Areas	Mindanao	2 in Visayas	Luzon	Visayas	4 in Luzon

**Table 3 continued** 

		TY "Quinta"	STY "Rolly"	TY "Ulysses"	TS "Vicky"
Typhoon		(Molave)	(Goni)	(Vamco	(Krovanh
Date		Oct-23	Oct-29	Nov-11	Dec-18
Casualtie	es	71	430	193	12
	Deaths	27	25	101	9
	Injured	40	399	82	2
	Missing	4	6	10	1
Affected					
	Barangays	3,092	5,991	7,287	371
	Families	239,580	802,990	1,268,170	67,102
	Persons	1,041,679	3,353,414	5,205,724	286,995
Displaced	d				
	Families	1,424	139,122		12,028
	People	302,800	1,250,133	1,500,000	47,575
Damaged	d Houses	100,191	398,266	209,170	1,712
	Totally	8,324	69,576	26,510	519
	Partially	91,867	328,690	182,660	1,193
Damage to Properties		4,222,666,305.72	17,875,444,873.78	20,229,128,825.17	213,622,688.75
	Agriculture	2,660,730,962.00	5,008,430,180.00	7,318,946,822.00	51,140,718.00
	Infrastructure	1,561,935,343.72	12,867,014,693.78	12,910,182,003.17	162,481,970.75
					2 in Luzon, 2
Island Gr	oups Affected	4 in Luzon and	7 in Luzon and 1 in		in Visayas, 2 in
		3 in Visayas	Visayas	8 in Luzon	Mindanao

Sources: <sup>12</sup> (2), (3), (4), (5), (7), (8), (9), (10), (13), (16), (17), (18), (19), (20), (21), (22), (25), (152), (162), (270), (271), (272), (273), (274), (300)

The changing climate makes disasters more intense, making storms more devastating and more frequent. In the Philippines, eight of the 22 typhoons caused overwhelming impacts on the population across the nation. Luzon was the worst hit, followed by the Visayas, and then Mindanao at the end of the year. These were TY "Ambo" (Vongfong) in May; TS "Leon" in September; TD "Ofel", TY "Pepito", TY "Quinta", and STY "Rolly" all in October; TY "Ulysses" in November, and TS "Vicky" in December. Fatalities brought by these typhoons reached 162, with 692 injured and 21 missing. They affected 17,665 barangays, 2,560,567 families or 10,660,115 individuals and displaced 162,094 families or 3,140,798 people. About 113,023 houses were either damaged or destroyed. Recorded damages to agriculture and infrastructure reached P16.077 billion and P28.145 billion respectively or a total of P44.2 billion. **(Table 3)** 

In various reports by the Department of Agriculture, these typhoons affected 367,717 farmers and fisherfolk, damaged about 614,489 hectares of agricultural lands that caused a total volume loss of 625,908 metric tons valued at P16.737 billion. However, the total cost of government assistance as sourced in DSWD DROMIC reports was only about P443.5 million, of which P312.95 million was provided by the DSWD and P130.55 by the local government units. (2), (3), (4), (5), (6), (8), (13), (16) This translates to only 1% of the total estimated damage of P44.2 billion.

## a. TY "Ambo" (Vongfong)

It was at the height of the pandemic in May that the first typhoon of the year struck the country. Named typhoon "Ambo" (Vongfong), the first cyclone of 2020 was also one of the most



Residents try to salvage belongings amongst their houses destroyed at the height of Typhoon Vongfong in San Policarpio town, Eastern Sam ar province on May 15, 2020, a da after the typhoon hit the town. (Photo by Alman BERONIO / AFP / MANILA BULLETIM)

remarkable cyclones of the year after injuring 169 people (3), affecting 563 barangays. 141,478 families or 583,884 individuals and displacing 1,079 families or 3,811 people (272). About 70,533 farmers and fisherfolk were severely affected (3). It destroyed and damaged 60,294 houses (272) and left at least P1.574 billion worth of damages to infrastructure and agriculture (3) in Regions 1, 2, 3, 6, 8, CAR, CALABARZON, and MIMAROPA.

## b. TS "Leon" (Noul)

In September, the effects of Southwest Monsoon enhanced by TS "Leon" (Noul) displaced six families or 29 persons in Occidental Mindoro. (162)

## c. TD "Ofel"

TD "Ofel" entered PAR on October 13 and left on October 15, affecting 6,261 families or 22,627 persons in 95 barangays in CALABARZON, Regions 5, and 7. It flooded 22 areas, displacing 1,425 families or 5,092 individuals. It destroyed 20 houses and caused almost P1.35 million damages to agriculture. (270)

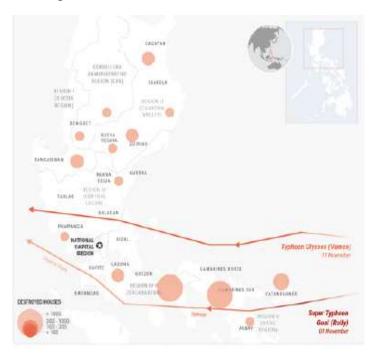
## d. TY "Pepito" (Saudel)

Four days after, another typhoon named "Pepito" (Saudel) struck the country for three days and caused a major impact in 265 barangays in Regions 2, 3, CALABARZON, 12, and CAR.<sup>2</sup> A total of 34,980 families of 165,763 were affected and six houses were damaged.<sup>2</sup> (18) Twenty flooding and 12 landslide incidents were recorded that caused the displacement of 7,010 and 31,358 individuals. (18) Damage to properties was estimated at P105.82 million, of which, P76.58 million in agriculture and P29.24 million in infrastructure.<sup>2</sup> (18)

## e. TY "Quinta" (Molave)

As soon as TY "Pepito" (Saudel) exited the PAR, another typhoon named "Quinta" (Molave) entered the country and left four days after, leaving 27 people dead, 40 injured, and four missing.<sup>2</sup> (19) It affected 3,092 barangays, 239,580 families or 1,041,679 individuals (273) and displaced 1,424 families (19) or 302,800 people (9). It left a trail of destruction that damaged

and shattered 100,191 houses (273). It destroyed crops and farmlands, registering agricultural damage worth P1.56 billion and infrastructure damage worth P1.56 billion.<sup>2</sup> (7)



## f. STY "Rolly" (Goni)

Supertyphoon "Rolly" (Goni), the world's most powerful tropical cyclone in 2020, caused a massive impact across southern Luzon from October 31 to November 1. It brought torrential rains, violent winds, mudslides, and storm surges to Luzon that caused severe destruction and damage affecting 5,991 barangays, 802,990 families or 3.35 million people (152). It caused the displacement of 162,094 families or 3,140,798 people in eight regions. (20) (300) It recorded the highest number of casualties at 430, with 25 deaths, 399 injured, and 6 missing persons. <sup>2</sup> (10) (20)

Typhoon Goni and Vamco Sitrep 2 inset

Fig. 2. (12)

# g. TY "Ulysses" (Vamco)

Just 10 days after, Typhoon "Ulysses" (Vamco) smashed Luzon on November 11-12, whipping destructive winds and dumping torrential rainfall triggering the worst flooding since TS "Ondoy" (Ketsana) in 2009. It killed 101 people, injured 82 people, and left 10 people missing. (21) It affected 7,287 barangays, 1.27 million families or 5.2 million people (274), and displaced 1.5 million people (09). It wrecked a total of 209,170 houses. (21) The agriculture sector sustained damages amounting to P7.3 billion and infrastructure P12.9 billion, totaling P20.2 billion worth of destruction. (21)

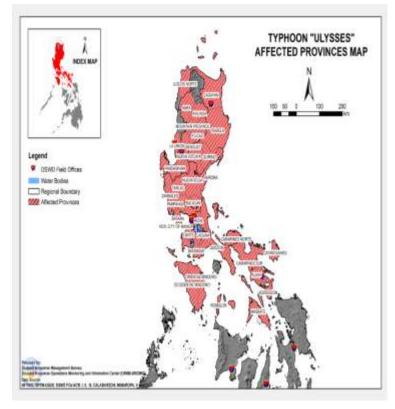


Fig. 3. (274)

## h. TS "Vicky" (Krovanh)

The combined effects of Tropical Depression "Vicky", which made landfall on December 18, and tail-end of a cold front submerged anew towns in Cagayan and Isabela provinces that have yet to recover from floods caused by Typhoon "Ulysses" (Vamco) in November. Nine people were killed, two injured and one missing. (22) The storm affected 371 barangays, 67,102 families or 286,995 individuals, and destroyed 519 houses. (271) About 12,028 families or 47,575 people (271) sought refuge in evacuation centers as continuous rains submerged a number of communities and cities not only in Luzon and the Visayas but also in Mindanao. The Cagayan River, in particular, swelled from continuous rains and the release of water from Magat Dam thus causing floods in low-lying communities. Damage to properties was recorded at P213.6 million, of which, P51.1 million was in agriculture and P162 million in infrastructure. (22)

Table 4. Comparative Data on Typhoon Incidents, 2020 and 2019

Year	2000	2019
Number of Typhoon Incidents	22	21
Island Groups Hit		
Luzon	11	
Visayas	6	
Mindanao	1	
Casualties		
Deaths	162	71
Injured	692	695
Missing	21	19
Affected		
Barangays	17,665	
Families	2,560,567	1,758,636
Persons	10,660,115	7,312,908
Displacements		
Families	162,094	82,524
People	3,140,798	348,379
Damaged Houses, Total	769,659	1,264,678
Totally	113,023	149,549
Partially	656,636	1,115,129
Damage to Properties, Total	44,222,538,914	11,236,490,204
Agriculture	16,077,359,903	9,159,810,117
Infrastructure	28,145,179,011	2,076,680,087
Summary of Damage and Losses (Agri)		
Farmers and Fisherfolk Affected	368,247	
Total Areas Affected	615,024	
Total Volume Loss (MT)	626,317	

	Total Value Loss	16,745,490,000	
Cost of As	ssistance, Total	454,487,194	
	DSWD	312,951,419	
	LGUs	130,547,819	
DA			
	NGOs	8,287,912	
	Others	2,700,044	
Total Cost of Government Assistance		443,499,238	
% of Government Assistance to Total			
Estimated	Damages	1%	

**Table 4** shows the comparative data of typhoon incidents in the last two years. There were more typhoons that hit the country in 2020 than in 2019.<sup>3</sup> The economic and social impacts were more devastating in 2020 than in 2019, where 162 deaths, 692 injured, and 21 persons gone missing were recorded in 2020 compared to 71 deaths, 695 injured, and 19 missing in 2019. Affected families in 2020 reached 2,560,567 or 10,660,115 people compared to 1,758,636 families or 7,312,908 people in 2019. Displacements in 2020 were higher at 3,140,798 people from 162,092 families compared with 348,379 people from 82,524 families the previous year. However, shattered houses were higher in 2019 with 1,264,678 houses ruined or damaged compared to 769,659 in 2000. But, the total damage to properties in 2020 was more overwhelming at P44 billion compared to the previous year's P11.2 billion. With a staggering P44 billion worth of damage in agriculture and infrastructure, the government was only able to release P443.5 million or a measly 1% of the total estimated damage in the year 2020.

# 2. Volcanic Eruption

The Taal Volcano eruption on January 12, which reached Alert Level 4, left seven people dead, 50 injured, and three missing.<sup>4</sup> It affected 220,705 families or 846,968 individuals in 228 surrounding barangays in CALABARZON, NCR, Region 1, 3, and MIMAROPA. (126) About 15,614 families or 58,200 were forced to flee their homes as the eruption damaged 17,644 houses, blocked roads, interrupted the power and water supply, and halted air flights. (32) Agricultural damage reached P3.26 billion while damage to infrastructure hit P220.43 million.<sup>4</sup> The Department of Agriculture reported that the damage to agriculture is estimated to be P3.22 billion for 43,772 metric tons of total volume losses, covering 16,998 hectares. (01)

## 3. Earthquakes

If all typhoons and the Taal volcano eruption hit Luzon and the Visayas except for one cyclone in December, a total of 16 of 20 earthquakes with magnitudes ranging from 5.5 to 6.9 rocked Mindanao in 2020. Three earthquakes caused damage to communities, resulting in the loss of one life and injury to 50 persons. A total of 61 barangays were affected, with 1,661 families or 6,503 persons. Some 282 families or 1,176 persons were forced to flee their homes and take shelter in evacuation centers, relatives, and friends. Recorded damage to homes totaled 1,054 and infrastructure at P314,806,000.

Table 5. Earthquakes that caused economic and social impact

Magnitue	de and Location	Total	6.6 in Masbate	6.4 in Surigao del Sur	6.2 in Sarangani, Davao Occidental	6.3 in Batangas
Date			18/08/2020	16/11/2020	16/12/2020	25/12/2020
Casualti	es					
	Deaths	1	1	0	0	0
	Injured	50	50	0	0	0
	Missing	0	0	0	0	0
Affected						
	Barangays	61	56	2	3	0
	Families	1,661	1,522	113	26	0
	Persons	6,503	6,223	150	130	0
Displace	ed .					
-	Families	282	282	0	0	0
	People	1,176	1,176	0	0	0
Damage	d Houses	1,054	1,014	5	26	9
	Totally	137	137		0	0
	Partially	912	877		26	9
Damage	to Properties	314,806,000	309,000,000	5,481,000		325,000
	Agriculture					
	Infrastructure		309,000,000			
	Other Structures		86 schools and other structures	10 schools, 3 brgy halls, 1 church, 5 govt buildings, 1 other infra)		
Island G	roups Affected		Luzon	Mindanao	Mindanao	Luzon

## a. Magnitude 6.6 earthquake in Masbate on August 18

The 6.6-magnitude earthquake that struck the province of Masbate on August 18 was felt in the entire Bicol Region and in several provinces in the Visayas. It was followed by over 210 aftershocks with a maximum of 5.1-magnitude the following day. It left one person dead and injured 50 others. A total of 1,522 families or 6,223 individuals were affected in 56 barangays. Some 282 families or 1,176 people took temporary shelter in evacuation centers and with their relatives or friends. There were 1,014 damaged houses while damage to infrastructure reached P309 million. (69) (29) (70)

## b. Magnitude 6.4 earthquake in Surigao del Sur on November 16

The magnitude 6.4 earthquake that shook Surigao del Sur on November 16 affected two barangays, 113 families or 150 individuals. It damaged five houses, 10 schools, three barangay halls, one church, five government buildings, and one other infrastructure. The total cost of damage was estimated at P5,481,000. <sup>5</sup>

c. Magnitude 6.2 earthquake in Sarangani, Davao Occidental on December 16

The Sarangani earthquake on December 16 with magnitude 6.2 affected three barangays, 26 families or 130 people, and partially damaged 26 houses. (112)

d. Magnitude 6.3 earthquake in Batangas on December 25

An earthquake of magnitude 6.3 rocked Batangas on December 25, damaging nine houses and leaving P325,000 worth of damage to properties.<sup>6</sup>

Table 6. Comparative Data of Earthquake Incidents, 2020 and 2019

Year	2000	2019
Number of Earthquake Incidents	20	15
Island Groups Hit		
Luzon	4	
Visayas	-	
Mindanao	16	
Casualties		
Deaths	1	88
Injured	50	1,690
Missing	-	15
Affected		
Barangays	63	
Families	1,661	177,096
Persons	6,503	835,703
Displacements		
Families	282	75,410
People	1,176	372,761
Damaged Houses, Total	1,054	109,692
Totally	137	37,099
Partially	912	72,593
Damage to Properties, Total	314,806,000	882,271,737
Agriculture	-	32,418,840
Infrastructure	314,806,000	849,852,897
Cost of Assistance, Total	590,478	

DSWD	590,478	
LGUs	-	
DA		
NGOs		
Others		
Total Cost of Government Assistance	590,478	
% of Government Assistance to Total		
Estimated Damages	0.19%	

Sources: <sup>5, 6</sup> (11), (29), (69), (112), (24)

The year in total recorded 20 earthquakes that shook the Philippines compared with 15 earthquakes the previous year. However, damage to lives and properties was more severe in 2019 than in 2020. The previous year had 88 people dead, 1,690 injured, and 15 missing persons. Affected families totaled 177,096 or 835,703 people compared with this year's 1,661 families or 6,503 people. Displacements in 2019 recorded 75,410 families or 372,761 people against 282 families or 1,176 people in 2019. Earthquakes in 2019 damaged or destroyed 109,692 houses compared with 1,054 in 2020. Total damage to properties was estimated at P882,271,737 in 2019 compared with P314,806,000 in 2000. However, the cost of government assistance in 2020 was only 0.19% of the value of the total estimated damage.

4. Other natural hazards (Lighting, Storm Surge, Strong Winds, Whirlwind, Tornado)

Table 7. Incidents of Lightning, Storm Surge, Strong Wind/Heavy Rainfall, Whirlwind Incident, and Tornadoes in 2020

				Storm	Strong Wind/Heavy	Whirlwind	
Type of Inci	dent	Total	Lightning	Surge	Rainfall	Incident	Tornado
Number of I	Incidents	11	1	1	1	1	7
Island Grou	ps Hit						
	Luzon	6	1				5
	Visayas	1		1			
	Mindanao	4			1	1	2
Casualties							
	Deaths	3	3				
	Injured	1	1				
	Missing	-					
Affected							
	Barangays	22		2	4	6	10
	Provinces	-					
	Families	327		48	75	109	95
	Persons	1,438		149	375	461	453
Displaceme	ents						
•	Families	84		15	4	11	54
	People	413		75	20	55	263
Damaged F	louses, Total	422		41	75	109	197
	Totally	119		13	53	11	42
	Partially	303		28	22	98	155

Cost of Assistance, Total	795,800				
DSWD	427,865			17,667.68	310,197.52
LGUs	367,934	1	1,250	120,845.31	235,839.11
DA	-				

Sources:7 (111) (148) (267) (146) (268) (266) (147) (259)

The combined effects of incidents of lightning, storm surge, heavy rainfall with strong wind, and seven incidents of tornados resulted in three deaths and one injured. A total of 22 barangays were affected, along with 327 families or 1,438 persons. These natural hazards displaced 84 families or 413 people and damaged 422 houses. The island of Luzon was struck six times – one incident of lightning that left three dead and injured another, and five tornado events. The Visayas was submerged by a storm surge while Mindanao experienced one incident of strong wind with heavy rainfall, one whirlwind event, and two incidents of tornados.

## 5. Infectious Animal Disease (African Swine Fever)

Outbreaks of African swine fever (ASF) have been reported in 25 out of 81 provinces since September 2019 with almost 350,000 pigs culled. The Department of Agriculture estimated a total loss of P56 billion to ASF that caused a shortage in pork supply (23) and retail prices of pork to spike.

## 6. Infestation (Fall Armyworm on corn)

The Bureau of Plant Industry in December 2020 reported incidents of fall armyworm inflicting 34 provinces in Luzon with 12,463.76 hectares infested, 14 provinces in the Visayas with 663.97 hectares infested, and 22 provinces in Mindanao with 7,329.81 hectares infested. (279) Earlier in October 2020, the economic losses reached P300 million according to the Department of Agriculture. Aside from corn, the pest attacks other important crops such as rice, sugarcane, sorghum, beet, tomato, potato, cotton, and pasture grasses. (280)

- 7. COVID-19 Pandemic and Re-emergence of Vaccine-preventable Diseases (Polio, Measles, Dengue)
- a. COVID-19 Pandemic

From March to December, a total of 475,820 confirmed COVID-19 cases including 9,248 deaths have been reported. Of the total confirmed cases, 26,677 were active while 439,895 were recoveries. (33) The "COVID-19 virus not identified" was the seventh leading cause of death in the country in 2020. Five regions reported over one thousand COVID-19 deaths. (289) The pandemic also resulted in displacements of about 1 million people in the "Balik Probinsya, Bagong Pag-asa" program of the government. (277)

["COVID virus identified is used when the virus is confirmed by a laboratory test, while "COVID-19 virus not identified" refers to suspected or probable cases as well as clinically-epidemiologically diagnosed COVID-19 cases where testing was not completed or inconclusive.] (289)

The outbreak of COVID-19 has impacted the economic activities of the people especially the marginalized sectors. Farmers and fisherfolk, for instance, could not deliver their crops in the markets because of the imposed community quarantine. The workers and employees have been on and off jobs. A significant number of overseas Filipino workers have been returning to

the country, contributing to the growing number of unemployed. The government's militarist response to the pandemic resulted in an increasing number of people losing their jobs, homes, getting bankrupt, and becoming hungrier. The extent and value of damage as a result of the hard lockdowns can only be measured by the rising number of people living below the poverty line. Worse, the pandemic affected the usual deployment and mobilization of resources due to the imposition of quarantine measures and varied local entry requirements and protocols.

#### b. Diseases Outbreak

The Department of Health reported the outbreaks of vaccine-preventable diseases such as polio, measles, and dengue in 2020. The resurgence of these diseases came as the country was struggling to contain the rapid spread of the coronavirus disease.

## b.1. Polio

On September 19, 2019, the Department of Health confirmed the re-emergence of polio, almost 20 years after the Philippines was declared polio-free in 2000 and the last case of wild poliovirus was recorded in 1993. (282)

As of June 2020, a total of 16 polio cases remained in the country. Fortunately, there have been no new polio cases reported after 15 February 2020. On 3 June 2021, the DOH official concluded the polio outbreak response as no new detection has been reported in the past 16 months. (281) (287)

## b.2. Measles

In 2020, pockets of measles outbreaks were reported in the Philippines. As of August 2020, there were about 3,500 reported measles cases with 36 deaths. Most of the cases were among children under five years old (285).

## b.3. Dengue

One year after the national dengue epidemic was announced in August 2019, reported dengue cases dropped from 430,282 to 59,675 in 2020. Dengue mortalities have also significantly dropped from 2019 with 1,612 deaths versus 231 in 2020. (286)

**Table 8. Comparative, Diseases Outbreak, 2020 and 2019** *Polio, Measles, Dengue* 

	2020	2019
Number of Incidents		4
Fatalities	267	2,265
Affected people	63,192	478,125

In total, fatalities due to polio, measles, and dengue decreased from 2,265 in 2019 to 267 in 2020, while the number of people afflicted declined from 478,125 in 2019 to 63,192 in 2020.

## c. 10 Leading Causes of Death in 2020

# Ischaemic heart diseases, neoplasms, and cerebrovascular diseases are still the three leading causes of death in the Philippines

The countless lockdowns, quarantines, and required isolation which have been forcibly imposed on most of the population at various times since March 2020 resulted in too much physical inactivity and even deaths. Many preventive measures that were implemented to control the spread of the COVID-19 virus may have actually killed more people than the virus itself — especially as physical inactivity is a leading cause of death worldwide.

Table 9. Leading Causes of Death from 2013 to 2020

Year	2020	2019	2018	2017
Ischaemic heart diseases	99,680	97,475	88,433	84,120
Neoplasms	62,289	68,657	67,138	64,125
Cerebrovascular diseases	59,736	63,548	61,959	59,774
Diabetes Mellitus	37,265	34,570	32,106	30,932
Pneumonia	32,574	62,719	56,815	57,210
Hypertensive diseases	29,511	27,764	26,836	26,471
COVID-19 virus not identified	19,758			
Chronic lower respiratory infections	19,463	26,576	24,820	24,818
Other heart diseases	19,298	20,416	20,042	22,134
Respiratory tuberculosis	17,433	22,568	22,103	22,523
Remainder of diseases of the				•
genitourinary system	17,241	17,215	19,227	15,717
All other external causes	9,799		10,902	
Diseases of the liver	9,225		9,968	
Certain conditions originating in the	0.464		44.700	
perinatal period	9,161		11,768	
Remainder of diseases of the digestive	0.000		0.445	
system COVID 10 virus Identified	8,990		9,115	
COVID-19 virus Identified	8,209		40.500	
Transport accidents	8,017		12,536	
Remainder endocrine, nutritional and	7.000		0.000	
metabolic diseases	7,206		6,903	
Remainder diseases of the nervous	0.007		7.054	
system	6,327		7,351	
Assault	6,008		9,916	
Other causes of death	88,685			

#### **Table 9 continued**

Year	2016	2015	2014	2013
Ischaemic heart diseases	74,134	68,572	65,551	65,378
Neoplasms	60,470	58,715	55,588	53,601
Cerebrovascular diseases	56,938	58,310	52,894	54,578
Diabetes Mellitus	33,295	34,050	31,539	27,064
Pneumonia	57,809	49,595	53,689	53,101
Hypertensive diseases	33,452	34,506	34,902	29,067
COVID-19 virus not identified				
Chronic lower respiratory infections	24,365	23,760	24,686	23,867
Other heart diseases	28,641	31,729	34,141	33,027
Respiratory tuberculosis	24,462	24,644	23,157	22,013
Remainder of diseases of the				
genitourinary system	19,759	18,061	17,220	16,785

## 10 Leading Causes of Death in 2020 (290)

- 1. Ischaemic heart disease # 1 since 2013 or for 8 years
- 2. Neoplasms (cancer) # 2 since 2014 or for 7 years
- 3. Cerebrovascular diseases # 3 for 5 years
- 4. Diabetes mellitus now rank 4 from being rank 5 from 2017 to 2019 (or 3 years)
- 5. Pneumonia now rank 5 after being dislodged by diabetes
- 6. Hypertensive diseases rank 6 for 5 years and rank 5 for 3 years
- 7. Covid-19 virus not identified
- 8. Chronic lower respiratory infections
- 9. Other heart diseases
- 10. Respiratory tuberculosis

Ischaemic heart diseases, neoplasms or cancer, and cerebrovascular diseases were still the three leading causes of death in 2020. Ischaemic heart diseases were consistently on top for eight consecutive years since 2013, while neoplasms or better known as cancer, on the other hand, were on top 2 for seven years since 2014. Cerebrovascular diseases were the third leading cause of death for five years. Disturbingly, diabetes mellitus has advanced to rank 4, from being in rank 5 for three consecutive years from 2017 to 2019. (289) (290) (291) (292) (293) (294)

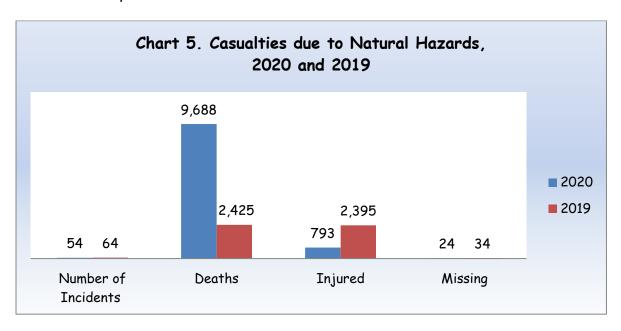
Patient access to healthcare was already very poor even before COVID. Hence, the poor majority were already at a bigger disadvantage since their health needs have never been met even before COVID-19. Only six out of ten deaths in 2019 were attended by health care providers, while the remaining four were unattended. In particular, five regions, namely, Eastern Visayas (56 for every 100), Davao (55 for every 100), Central Visayas (52 for every 100), MIMAROPA (52 for every 100), and SOCCSKSARGEN (50 for every 100), had more unattended than attended deaths. In addition, about 52% or half of the total deaths recorded occurred at home. (292)

Table 10. Natural Hazards, Comparative Data, 2020 and 2019

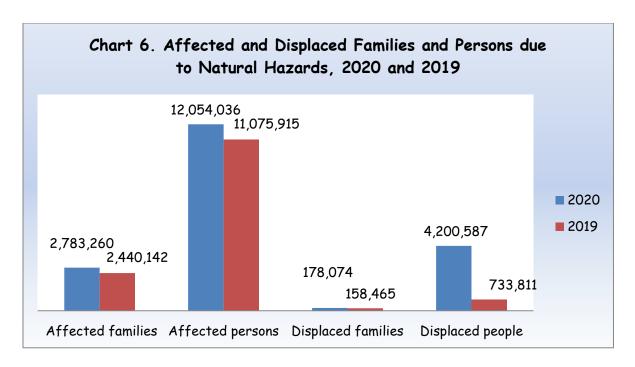
Year		2020	2019
Number of	Incidents	54	64
Island Group	os Hit		
	Luzon	25	
	Visayas	1	
	Mindanao	21	
	Luzon and Visayas	7	
	Luzon, Visayas, Mindanao	1	
Casualties			
	Deaths	9,688	2,425
	Injured	793	2,395
	Missing	24	34
Affected			
	Barangays	17,980	
	Provinces		
	Families	2,783,260	2,440,142
	Persons	12,054,036	11,075,915
	Active cases (COVID-19)	26,677	
	Recovered cases (COVID-19)	439,895	
	Animals	350,000	
Displaceme	nts		
	Families	178,074	158,465
	People	4,200,587	733,811
Damaged F	Houses, Total	788,774	1,375,191
	Totally	118,768	186,783
	Partially	670,006	1,188,408
Damage to	Properties, Total	104,023,321,654	20,282,310,094
	Agriculture	75,342,901,642	17,355,777,110
	Infrastructure	28,680,420,011	2,926,532,984
	Private		-
	Agri and Infra		
	Total Areas Affected (Ha)		
Summary o	f Damage and Losses (Agri)	-	
·	Farmers and Fisherfolk Affected	368,247	
	Total Areas Affected	632,022	
	Total Volume Loss (MT)	670,089	
	Total Value Loss	19,965,490,000	
Cost of Ass	sistance, Total *	747,055,456	

DSWD	339,285,976	
LGUs	238,449,703	
DA	152,708,000	
NGOs	13,911,732	
Others	2,700,044	
Total Cost of Government Assistance *	730,443,680	
% of Government Assistance to Total Estimated		
Damages	0.70%	

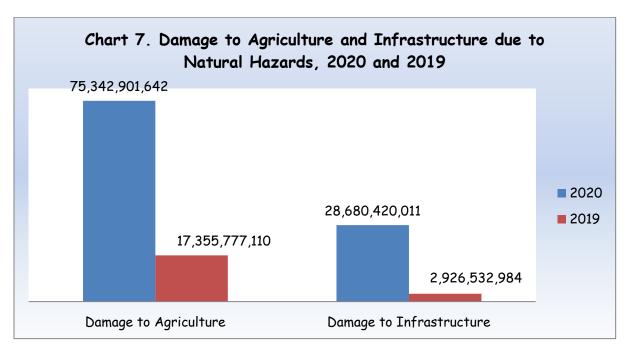
<sup>\*</sup>does not include expenses on COVID-19



The number of casualties recorded in 2020 was comparatively high at 9,688 as COVI9-19 continued to claim lives since its outbreak in March 2020. More people were injured in 2019 with 2,395 people recorded compared with 793 in 2020. Missing persons, on the other hand, totaled 34 in 2019 compared with 24 in 2020.



There were more affected and displaced people by natural hazards in 2020 than in 2019. Natural hazards affected 2,783,260 families or 12,054,036 people in 2020 compared with 2,440,142 families or 11,075,915 people in 2019. The adverse impacts of meteorological, geological, environmental, and biological disasters forced millions of people to flee their homes and seek refuge in safer grounds. In 2020, displacements reached 4,200,587 people from 178,074 families against 733,811 people from 158,465 families in 2019.



Damage to agriculture and infrastructure was more severe in 2020, with P75.34 billion lost in agriculture and P26.68 billion worth of damage in infrastructure. In comparison, damage to agriculture in 2019 reached P17.36 billion, while destruction to infrastructure was estimated at almost P2.9 billion.

## **B.** Man-made Hazards and Disasters

Human-induced disasters in the form of armed conflict, extrajudicial killings, various human rights violations, clan feud, crime and violence, violations of quarantine protocol, police operations, terrorism, fires, and oil spill have taken their toll on the population.

Table 11. Man-made Hazards, 2020

Hazard/Disas	ster Subgroup	TOTAL	Armed Conflict	EJK (activists & critics)	EJKs (drug- related)	Rest of the HRVs	Clan Feud
Number of In	cidents	174	32				8
Island Group	s Affected			Nationwide	Nationwide	Nationwide	Mindanao
	Luzon	69	1				
	Visayas	37	4				
	Mindanao	68	27				8
Casualties		562					-
	Deaths	478	ī	83	377		
	Injured	84	-				
Affected							
	Families	30,718	3,462				553
	Persons	136,027	12,568			13,432	2,827
Displacement	rs es						
	Families	39,339	17,278				485
	People	213,342	90,203				32,010
Damaged Ho	ouses, Total	7,070	13				-
	Totally	6,757	13				
	Partially	313	-				
Damage to F	Properties, Total	32,167,200	-				-
	Agriculture	-	-				
	Infrastructure	32,167,200					

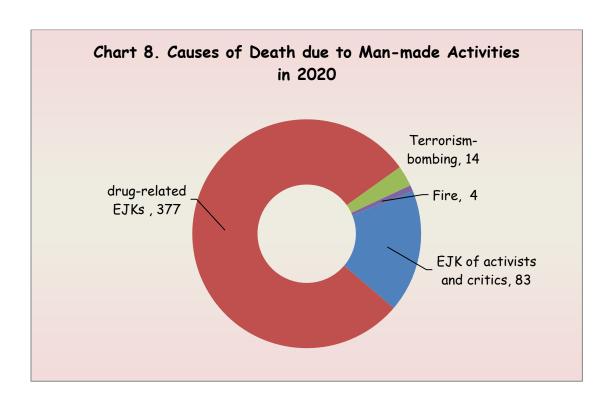
**Table 11 continued** 

Hazard/Disast	er Subgroup	Crime and Violence	Violation of quarantine protocol	Police operations	Terrorism- bombing	Fire	Oil Spill
Number of Inc	cidents	13	1	1	1	117	1
Island Groups	Affected	Mindanao	Mindanao	Visayas	Mindanao		Visayas
	Luzon					68	
	Visayas			1		31	1
	Mindanao	13	1		1	18	
Casualties			-	-	89	13	-
	Deaths				14	4	

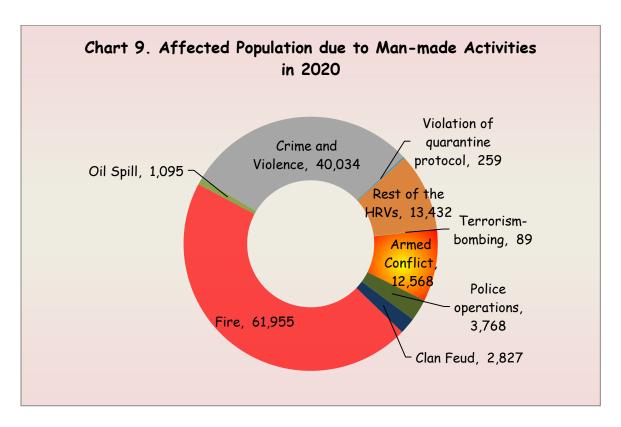
Injured				75	9	
Affected						
Families	9,378	55	796		16,366	308
Persons	40,034	259	3,768	89	61,955	1,095
Displacements						
Families	8,137		796		12,335	308
People	39,414		3768		46,856	1,091
Damaged Houses, Total	265	-	-	ı	6,792	-
Totally	194				6,550	
Partially	71				242	
Damage to Properties, Total	-	-	ı	1	32,167,200	-
Agriculture					-	
Infrastructur	е				32,167,200	

#### Notes:

- (1) Data here is not comprehensive. Government reports tend to be understated.
- (2) Classification by armed conflict, clan feud, crime, and violence was patterned after the UNHCR report.
- (3) Data from UNCHR may have more than one incident per province.
- (4) Number of family members from UNCHR data was assumed at 5 members per family
- (5) Data on bombings by Karapatan does not have details, so duplication may occur. All Karapatan data used were extracted from 2020 and 2019 reports. The incidents may have occurred before 2020, but were only reported in 2020.
- (6) Various HRVs include frustrated extrajudicial killings, enforced disappearances; torture; illegal arrests with and without detention; illegal search and seizures; physical assaults and injuries; violations of domicile; destruction of properties; divestment of properties; forced evacuations; threats/harassments/intimidation; indiscriminate firing; forced/fake surrenders; use of schools, medical, religious and other public places for military purpose; restrictions or violent dispersals of mass actions, public assemblies and gatherings
- (7) Drug-related EJKs may be grossly understated. Various human rights groups' estimates suggest that the actual number of victims may be triple than the data reported by the PNP.



For 2020, deaths recorded due to man-made hazards reached 562, of which deaths accounted for 478 persons and injured 84 persons. Most of these were drug-related extra-judicial killings at 377, followed by killings of activists and critics at 83. One incident of suicide bombing in Mindanao killed 14 people while fire incidents claimed four lives. These figures are not comprehensive since government sources tend to understate.



Among the causes of man-made hazards, a total of 61,955 people were affected as fires blazed houses and structures across the nation. It was followed by crime and violence that left 40,034 people affected, various human rights violations with 13,432 affected, armed conflict with 12,568 affected, drug-related police operations with 3,768 affected, clan feuds with 2,827, an oil spill incident with 1,095 affected, one recorded incident of violation of quarantine protocol with 259 affected, and one terrorist bombing incident in Mindanao with 89 people affected.

Table 12. Man-made Hazards by Island Group, 2020

Hazard/Disaster Subgroup	TOTAL	Luzon	Visayas	Mindanao	Nationwide
Number of Incidents	174	69	37	68	
Island Groups Affected					
Luzon	69	69	-	-	
Visayas	37	1	37		
Mindanao	68			68	
Casualties	562	5	8	89	
Deaths	478	1	3	14	460
Injured	84	4	5	75	-

Missing	-	-	-	-	-
Affected					
Barangays	159	75	46	38	-
Provinces	20	1	4	15	-
Families	30,718	10,240	5,176	15,302	-
Persons	136,027	38,629	19,310	64,656	13,432
Displacements					
Families	39,339	6,743	4,792	27,804	-
People	213,342	25,297	17,780	167,822	2,443
Damagad Hayana Tatal	7.070	4 120	1 701	1 151	
Damaged Houses, Total	7,070	4,128	1,791	1,151	
Totally	6,757	4,098	1,615	1,044	-
Partially	313	30	176	107	-
Damage to Properties,					
Total	32,167,200	21,040,000	11,127,200	-	
Agriculture	-	-	-	-	-
Infrastructure	32,167,200	21,040,000	11,127,200	-	-
Cost of Assistance, Total	54,341,960	18,454,992	8,782,834	27,104,134	
DSWD	33,614,250	13,195,836	7,021,176	13,397,238	
LGUs	11,220,595	4,102,541	1,564,158	5,553,896	
DA	-	-	-	-	
NGOs	9,316,175	1,153,175	10,000	8,153,000	
Others	190,940	3,440	187,500		
Total Cost of Government					
Assistance	44,834,845	17,298,377	8,585,334	18,951,134	

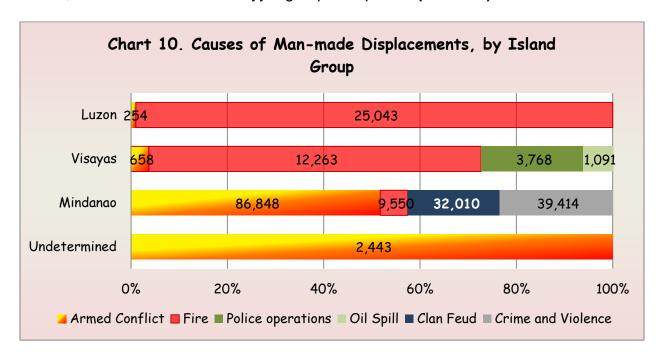
Mindanao has the highest number of affected people at 64,656 from approximately 15,302 families and displaced people at 167,822 from approximately 27,804 families mainly due to crime and violence, armed conflict, and clan feud. Meanwhile, Luzon registered the second highest number of affected people at 38,629 from 10,240 families and displaced people at 25,297 from 6,743 families principally due to fires wherein 25,043 people from 6,653 families were either temporarily or permanently rendered homeless. The Visayas came in third with 19,310 affected people from 5,176 families and 17,780 displaced persons from 4,792 families, mainly due to fires and drug-related police operations.

Recorded damage to houses reached 7,070 units where most homes were burned down by fires. The total worth of economic costs cannot be determined due to insufficient data as destruction to agriculture, structures, and houses were mostly unrecorded.

# 1. Internal displacements

Displacements were overwhelmingly high at 213,342 people from approximately 39,339 families forced to leave their homes, the majority in Mindanao, where most crime and violence occurred

between unidentified armed groups and most clashes between the AFP/PNP and the NPA, AFP/PNP and the BIFF, and AFP and the Abu Sayyaf group took place. **(Table 12)** 



In Luzon, the number one cause of displacement was fire incidents which forced some 25,043 people to evacuate to safer places and armed conflict which displaced 254 people. In the Visayas, fire incidents were the main cause of displacements with 12,263 people fleeing their homes to safety, followed by one incident of simultaneous raids by the CIDG in Tapaz, Capiz and Calinog, Iloilo on December 30, 2020, wherein said operation posed danger to the residents and forced them to seek safety somewhere else, and one incident of an oil spill caused by an explosion at AC Energy's Power Barge 102 in Brgy. Obrero, Lapuz, Iloilo City on July 3, 2020, resulting in the displacement of 1,091 people. In Mindanao, the highest number of displacement was due to armed conflict with 86,848 people forced to flee, followed by crime and violence which displaced 39,414 people, clan feud which displaced 32,010 people, and fire incidents which forced 9,550 people to evacuate. Human rights group *Karapatan* reported, on the other hand, that there were 2,443 people displaced due to bombings.

However, the UNHCR reported that in Mindanao alone, displacements reached a total of 274,327 as classified into three categories:

Table 13. Current Displacements in Mindanao due to Man-Made Hazards

	Definition	Families	Individuals
	Remain displaced out of 957 families displaced within		
Group A	the month	1,753	8,657
	Remain displaced and have been protractedly		
Group B	displaced for more than 30 days but less than 180 days	101	505
	Remain displaced and have been protractedly		
Group C	displaced for more than 180 days	28,549	141,206
Five areas of	group C		
	Zamboanga City: still displaced due to Zamboanga	1,362	6,810

siege in September 2013		
Lanao del Sur & Lanao del Norte: still displaced due to		
Marawi siege in May 2017	25,367	126,835
Northern Mindanao due to AFP vs. NPA armed conflict		
in Iligan City in June 2020	96	480
Eastern Mindanao due to armed conflict between AFP		
and NPA	430	1,937
BARMM Provinces due to armed conflict and crime and		
violence since August 2017	1,294	5,144

Source: (288)

The International Displacement Monitoring Centre (IDMC), on the other hand, reported 111,000 new displacements and 153,000 total internally displaced persons (IDPs) by end of 2020 as a result of conflict and violence. (288)

## 2. Murderous war on drugs

The human rights situation in the Philippines deteriorated in 2020. (297)

Local human rights groups estimated that 27,000 have been killed in police operations from July 2016 to June 30, 2019. The Philippine National Police reported only 5,526 suspects killed. (296)

According to official government figures, members of the Philippine National Police and the Philippine Drug Enforcement Agency killed 5,903 individuals during anti-drug operations from July 1, 2016 to September 30, 2020. (297) This translates to 377 new killings from July 1, 2019 to September 30, 2020. This number does not include the deaths of those killed by unidentified gunmen whom Human Rights Watch and other rights monitors believe operate in cooperation with local police and officials. Other sources, such as the UN Office of the High Commissioner for Human Rights (OHCHR) put the death toll at 8,663, although domestic human rights groups, including the government's Commission on Human Rights, believe the real figure could be triple the number reported in the OHCHR report. Moreover, based on statistics released by the government through its #RealNumbersPH, "drug war" killings increased by over 50 percent during the lockdown months from April to July 2020. (297)

## 3. Armed conflict

The armed conflict resulted in massive displacements of communities, topping the cause of manmade displacements in 2020. Most displacements occurred in Mindanao wherein firefights between AFP and NPA, AFP and BIFF, and other armed groups took place. This figure does not include clan feuds, police operations, crime and violence, and terrorist activities. **(Table 14)** 

Table 14. Armed Conflicts in 2020, by Island Group

	Total	Luzon	Visayas	Mindanao	Bombings (Karapatan report)
Number of Incidents	32	1	4	27	

Affected					
Provinces	20	1	4	15	
Families	3,262	90	248	2,924	
Persons	12,568	254	1,045	11,269	
Displacements					
Families	17,278	90	145	17,043	
People	90,203	254	658	86,848	2,443
Damaged Houses, Total	13	-	13	-	
Totally	13		13		
Partially	-				

Table 15. Armed Conflict, Comparative, 2020 and 2019

	2020	2019
Number of Incidents	32	35
Island Groups Affected		
Luzon	1	
Visayas	4	
Mindanao	27	
Casualties	-	
Deaths	-	23
Injured	-	
Affected		
Families	3,262	23,262
Persons	12,568	151,540
Displacements		
Families	17,278	19,803
People	90,203	142,767
Damaged Houses, Total	13	
Totally	13	
Partially	-	
Cost of Assistance	42,134,016	
DSWD	24,845,054	
LGUs	7,844,347	
DA	-	
NGOs	9,261,175	
Others	183,440	
Total Cost of Government Assistance	32,689,401	

There were more recorded incidents of armed confrontations between the AFP/PNP and the NPA and AFP/PNP and the BIFF in 2019 with 35 firefights compared with 32 in 2020. These armed conflicts were in the form of firefights, land and aerial bombings, among others. In 2020, one firefight was monitored in Luzon, four in the Visayas, and 27 in Mindanao. There were more affected people in 2019 with 23,262 families or 151,540 people compared with 3,262 families or 12,568 people in 2020. Displaced families fleeing for safety reached 19,803 or 142,767 people in 2019 compared with 17,278 families or 90,203 people in 2020. There were 13 houses wrecked in 2020. The total cost of government assistance in 2020 was Php32,689,401. However, these figures from government sources are believed to be underestimated. There was no record of even a single casualty among the clashes recorded in 2020.

#### 4. Fire Incidents

Fire incidents were the second major cause of displacements in 2020 with 46,856 persons from 12,335 families forced to flee their homes to safety either in evacuation centers or with relatives or friends. The affected population due to fires reached 61,955 from 16,366 families. **(Table 15)** 

Table 16. Fire Incidents, by Island Group, 2020

		Total	Luzon	Visayas	Mindanao
Number of Incidents		117	68	31	18
Casualties		13	5	8	-
	Deaths	4	1	3	
	Injured	9	4	5	
	Missing	-			
Affected					
	Barangays	126	74	32	20
	Families	16,366	10,150	3,824	2,392
	Persons	61,955	38,375	13,402	10,178
Displacements					
	Families	12,335	6,653	3,543	2,139
	People	46,856	25,043	12,263	9,550
Damaged Hous	es, Total	6,792	4,128	1,778	886
	Totally	6,550	4,098	1,602	850
	Partially	242	30	176	36
Damage to Properties, Total		32,167,200	21,040,000	11,127,200	-
	Agriculture	-			
	Infrastructure	32,167,200	21,040,000	11,127,200	

In comparison to 2019, there fewer less fire incidents recorded in 2020 with only 117 incidents compared with the previous year's 209. Total casualties reached 13 in 2020 compared with 76 the previous year. The affected people were more than twice as many in 2019 compared with 2020 and so were the displacements at 102,171 people in 2019 versus 46,856 in 2020. Damaged houses more

than doubled as well, with 14,140 houses either partially or entirely burned down, triggering temporary or long-term homelessness among the survivors of fire incidents. **(Table 16)** 

Table 17. Fire Incidents, Comparative, 2020 and 2019

		2020	2019
Number of Incidents		117	209
Casualties		13	76
	Deaths	4	23
	Injured	9	53
	Missing	-	
Affected			
	Barangays	126	
	Families	16,366	29,834
	Persons	61,955	124,200
Displacements			
	Families	12,335	24,609
	People	46,856	102,171
Damaged Houses, Total		6,792	14,140
	Totally	6,550	13,371
	Partially	242	769
Damage to Properties, To	tal	32,167,200	41,185
	Agriculture	-	9,000
	Infrastructure	32,167,200	
	Private		32,185
Cost of Assistance, Total		42,134,016	
	DSWD	24,845,054	
	LGUs	7,844,347	
	NGOs	9,261,175	
	Others	183,440	
Total Cost of Government	Assistance	32,689,401	

## 5. Development aggression

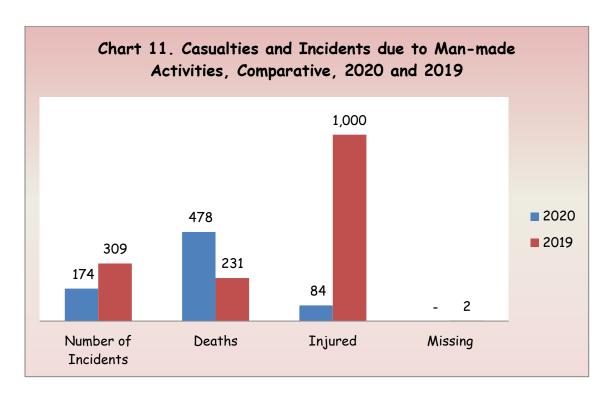
Evictions in slum communities steadily increased in 2020 even as the country continued to enforce quarantine measures to contain the spread of COVID-19. Thousands of families were feared to be displaced and affected by road expansion projects, mining operations, quarrying, Chinese incursions in the West Philippine Sea, encroachments and land grabbing of ancestral communities due to the National Greening Program of the DENR, adverse effects of the Amended Fisheries Code, Rice Tariffication Law, among many others, but actual data is sorely lacking.

## Build, Build, Build demolishes people's homes

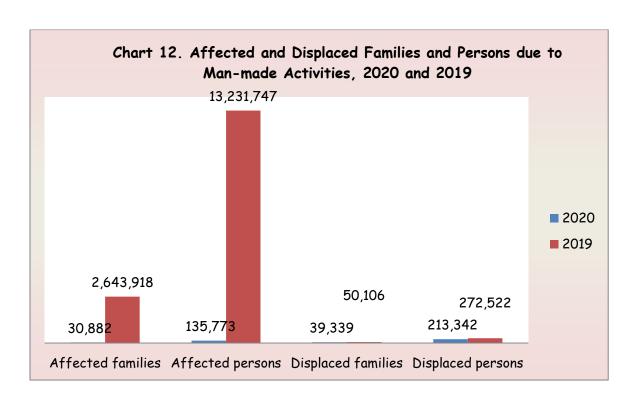
More than 300,000 families are believed to be affected in the right of way of several big-ticket infrastructure projects in Metro Manila. Under two projects in the Duterte administration's Build, Build, Build program alone, 180,000 families will be possibly displaced across 38 Manila communities to pave the way for the P23 billion North Luzon Expressway-South Luzon Expressway (NLEX-SLEX) Connector Road and the P171 billion North-South Commuter Railway. (298)

Table 18. Man-Made Hazards, Comparative, 2020 and 2019

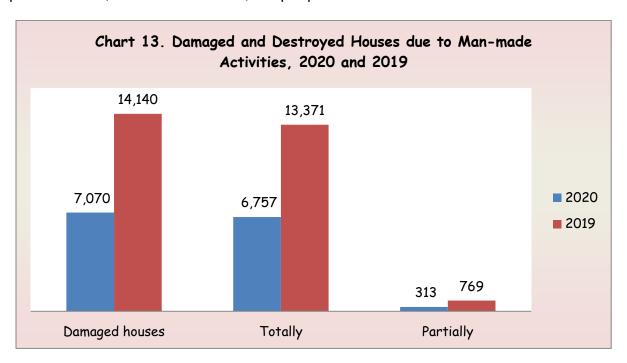
		2020	2019
Number of Inc	idents	174	309
Island Groups	Affected		
	Luzon	69	
	Visayas	37	
	Mindanao	68	
Casualties		562	
	Deaths	478	231
	Injured	84	1,000
	Missing	-	2
Affected	-		
	Barangays	159	
	Provinces	20	
	Families	30,882	2,643,918
	Persons	135,773	13,231,747
Displacements	5		
•	Families	39,339	50,106
	People	213,342	272,522
Damaged Hou	ıses, Total	7,070	14,140
	Totally	6,757	13,371
	Partially	313	769
Damage to Pr	operties, Total	32,167,200	32,194,000
<u> </u>	Agriculture	-	9,000
	Infrastructure	32,167,200	,
	Private	-	32,185,000
Cost of Assist	ance. Total	54,341,960	
	DSWD	33,614,250	
	LGUs	11,220,595	
	NGOs	9,316,175	
	Others	190,940	
Total Cost of 0	Government Assistance	44,834,845	



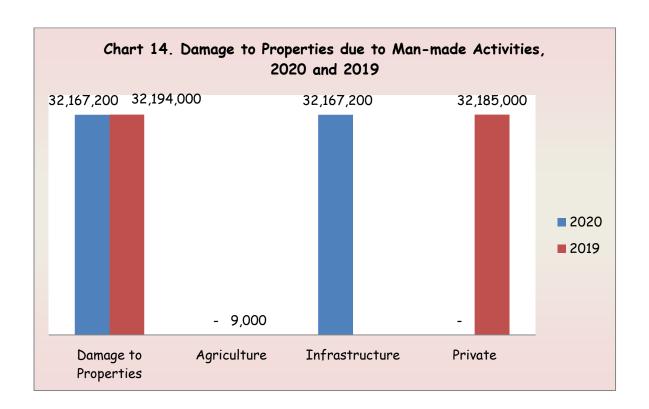
There were more recorded incidents of man-made hazards in 2019 at 309 than in 2020 at 174 incidents. More deaths occurred in 2020 at 478 compared with 231 in 2019. The number of injured people in 2019 reached 1,000 versus 84 in 2020.



More people were affected and displaced by man-made hazards in 2019 than in 2020. Affected families of human-induced hazards in 2019 reached 2,643,918 families or 13,231,747 people compared with 30,882 families or 135,773 people in 2020. Meanwhile, displacements were higher in 2019, with 50,106 families or 272,522 people forced to take shelter elsewhere compared with 39,339 families or 213,342 people in 2020.



Damage and destroyed houses due to man-made hazards were higher in 2019 at 14,140 homes ruined against 7,070 in 2020.



Damage to properties in 2019 and 2020 both reached P32.1 billion, with infrastructure accounting for all damages incurred in 2020 while private property damages account for almost all damage recorded in 2019.

#### C. Combination of Natural and Man-made Hazards

The Philippines has been constantly battling with the perennial problem of flooding, flash floods, landslides, and soil erosion as a result of both the country's geographic attributes and human-induced factors.

In 2020, there were 158 recorded incidents of combination of both natural and man-made hazards, the majority occurring in Luzon with 84 events, followed by 44 incidents both in Luzon and Visayas, Mindanao with 23 incidents, and the Visayas with seven incidents.

Mindanao was worst hit on October 14, 2020, in terms of the affected population where 152,770 people from 30,554 families residing in 68 barangays in North Cotabato and Maguindanao were submerged in flash floods due to heavy rains brought by the trough of Tropical Depression "Ofel." (253)

Table 19. Flash floods and Flooding Incidents, Comparative

		2020	2019
Number of I	ncidents	103	38
Island Grou	ps Hit		
	Luzon	32	
	Visayas	6	
	Mindanao	21	
	Luzon and Visayas	44	
Casualties			
	Deaths	12	6
	Injured	0	4
	Missing	6	4
Affected			
	Barangays	1,129	
	Provinces	66	
	Families	170,908	534,008
	Persons	618,480	2,284,004
Displaceme	nts		
	Families	13,686	251,606
	People	57,547	1,139,338
Damaged H	louses, Total	2,125	3,080
	Totally	202	1,245
	Partially	1,923	1,835

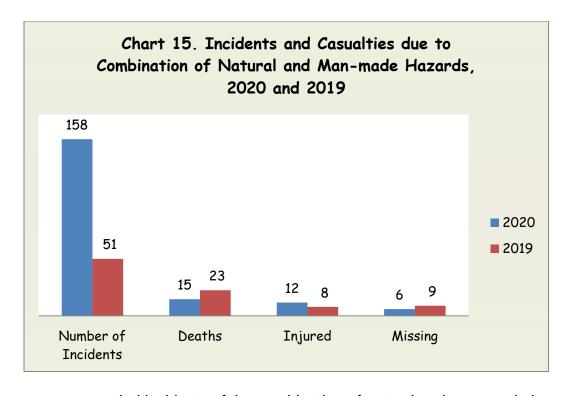
Damage to Properties, Total		164,217,939	6,201,784
	Agriculture	134,217,939	1,285,684
	Infrastructure		1,190,000
	Other Structures/Private	30,000,000	3,726,100
Cost of Assistance, Total		31,285,783	
	DSWD	19,731,698	
	LGUs	11,530,585	
	DA		
	NGOs	3,000	
	Others	20,500	
Total Cost of Government Assistance		31,262,283	
% of Government Assistance to Total			
Estimated Dar	mages	19%	

A total of 103 flash floods and flooding incidents were recorded in 2020, wherein 32 occurred in Luzon, 21 in Mindanao, 6 in the Visayas, and 44 both in Luzon and the Visayas compared to 38 incidents in 2019. These incidents claimed 12 lives in 2020 and six in 2019. More people were affected in 2019 with 534,008 families or 2,284,004 people, while there were 170,908 affected families with 618,480 people in 2020. Displaced families in 2019 reached 251,606 or 1,139,338 people. The flash floods and flooding destroyed 3,080 houses in 2019 compared to 2,125 in 2020. Damage to properties reached Php 164,217,939 in 2020 compared to Php 6,201,784 in 2019.

Table 20. Combination of Natural and Man-made Hazards, Comparative, 2020 and 2019

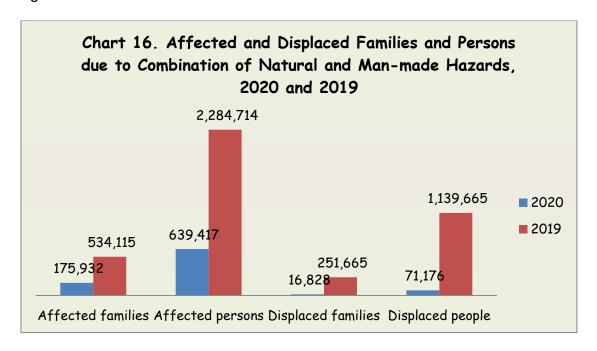
		2020	2019
Number of Incid	dents	158	51
Island Groups I	Hit		
	Luzon	84	
	Visayas	7	
	Luzon and Visayas	44	
	Mindanao	23	
Casualties			
	Deaths	15	23
	Injured	12	8
	Missing	6	9
Affected			
	Barangays	1,229	
	Provinces	77	
	Families	175,932	534,115
	Persons	639,417	2,284,714
Displacements			

	Families	16,828	251,665
	People	71,176	1,139,665
Damaged Hou	ses, Total	2,187	
	Totally	219	1,248
	Partially	1,968	1,836
Damage to Pro	pperties, Total	165,026,539	6,201,784
	Agriculture	134,217,939	1,285,684
	Infrastructure	808,600	1,190,000
	Agri and Infra	30,000,000	
	Private		3,726,100
	Total Areas Affected (Ha)	6,965 (incomplete)	
Cost of Assista	nce, Total	31,946,765	
	DSWD	20,083,548	
	LGUs	11,649,017	
	DA		
	NGOs	193,700	
	Others	20,500	
Total Cost of G	Sovernment Assistance	31,732,565	
% of Governme Estimated Dam	ent Assistance to Total ages	19%	



There were more recorded incidents of the combination of natural and man-made hazards, namely, incidents of flash floods, flooding, landslides, and soil erosion in 2020 compared with

the previous year. The death toll in 2019 reached 23 compared with 15 in 2020, while injured people reached 12 people in 2020 compared with eight in 2019, and nine people went missing in 2019 against six in 2020.



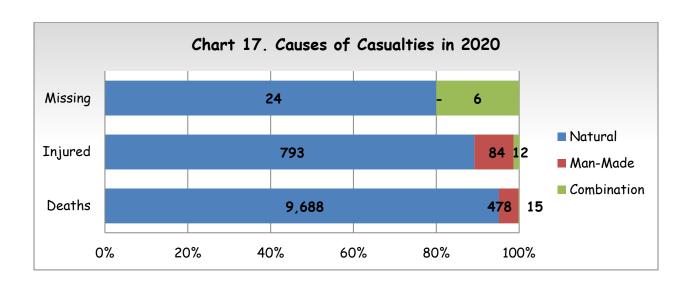
The typhoons and monsoons that brought intense rainfalls combined with human activities that triggered widespread flooding, landslides, and flash floods affected an estimated total of 175,932 families or 534,008 people in 2020. These figures are much lower than the previous year, with 534,115 families and 2,284,714 affected. Recorded displacements, on the other hand, reached 16,828 families or 71,176 persons compared with the previous year's 251,665 families or 1,139,665 people.

#### D. Summary of disaster impacts in 2020

Table 21. Summary of Philippine Disasters and Impacts in 2020

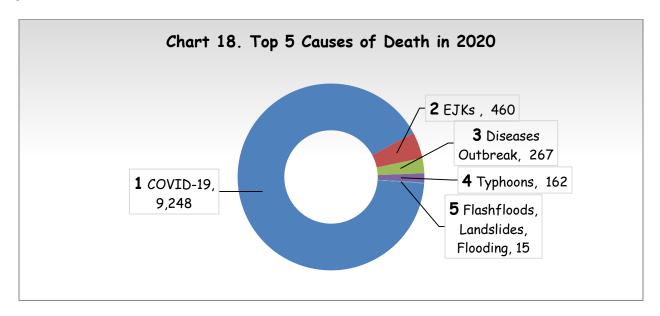
	Total	Natural	Man-Made	Combination
Number of Incidents	386	54	174	158
Island Groups Affected				
Luzon	178	25	69	84
Visayas	45	1	37	7
Mindanao	112	21	68	23
Luzon and Visayas	51	7		44
Luzon, Visayas, Minda	1	1		
Casualties				
Deaths	10,181	9,688	478	15
Injured	889	793	84	12
Missing	30	24	-	6
Affected				
Barangays	19,368	17,980	159	1,229

Provinces			20	77
Families	2,989,855	2,783,260	30,663	175,932
Persons	12,829,226	12,054,036	135,773	639,417
Active cases	26,677	26,677		
Recovered cases	439,895	439,895		
Animals	350,000 (incomplete)	350,000		
Displacements				
Families	234,241	178,074	39,339	16,828
People	4,485,105	4,200,587	213,342	71,176
Damaged Houses, Total	798,031	788,774	7,070	2,187
Totally	125,744	118,768	6,757	219
Partially	672,287	670,006	313	1,968
Damage to Properties, Total	104,188,348,193	104,023,321,654	-	165,026,539
Agriculture	75,477,119,581	75,342,901,642	no data	134,217,939
Infrastructure	28,681,228,611	28,680,420,011	32,167,200 (incomplete)	808,600
Private	-			
Agri and Infra	30,000,000			30,000,000
Total Areas Affected (Ha)				6,965 (incomplete)
Cost of Assistance, Total	833,344,181	747,055,456	54,341,960.74	31,946,765
DSWD	392,983,775	339,285,976	33,614,250.69	20,083,548
LGUs	261,319,315	238,449,703	11,220,595.05	11,649,017
DA	152,708,000	152,708,000	-	
NGOs	23,421,607	13,911,732	9,316,175.00	193,700
Others	2,911,484	2,700,044	190,940.00	20,500
Total Cost of Government	007.044.000	700 440 000	44 004 045 74	24 722 525
Assistance % of Government Assistance to	807,011,090	730,443,680	44,834,845.74	31,732,565
Total Estimated Damages	0.77%	0.70%		19%

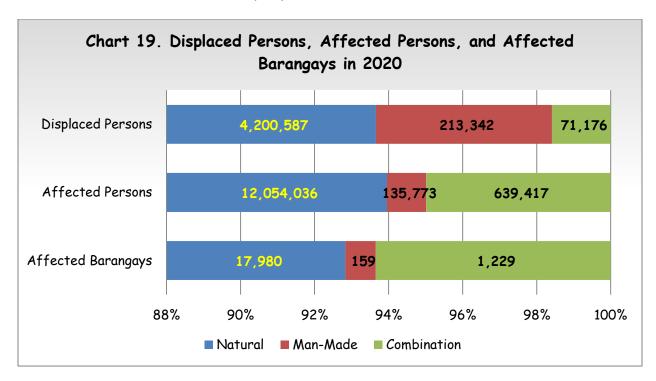


In summary, of the 10,181 recorded deaths in 2020, the majority was attributed to natural hazards, in particular, due to biological disasters brought about by the COVID-19 pandemic and the outbreak of diseases. It was followed by 478 killed people as a result of human factors, and lastly, 15 people due to the combination of natural and human causes. The same pattern can be observed among injured and missing people.

**Top 5 Causes of Death** 



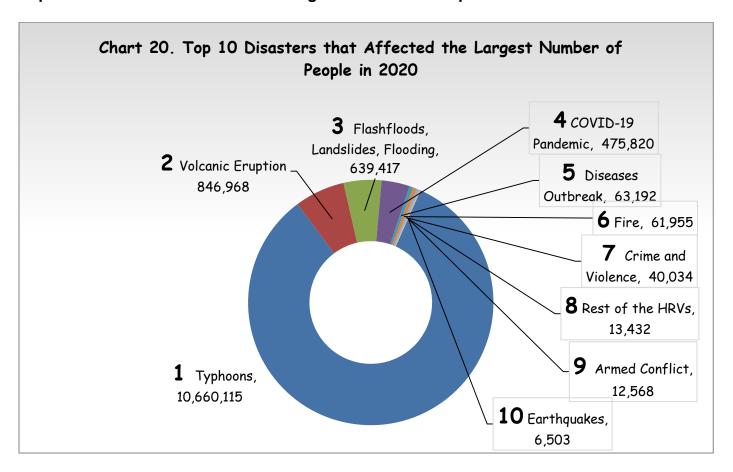
The top 5 disasters in terms are death are the COVID-19 pandemic which killed a total of 9,248 in 2020, followed by extra-judicial killings of activists, critics, and drug suspects with 460 people executed, the outbreak of vaccine-preventable diseases that left 267 children dead, typhoon incidents with 162 victims, and then flash floods, flooding, and landslides that either drowned or buried alive a total of 15 people.



Some 4,485,105 million new people became internally displaced by natural, man-made, and combination of both during the course of 2020. Of these people, 4.2 million were displaced by natural disasters, 213,342 by man-made disasters, and 71,176 due to the combination of both. This placed the Philippines in the second rank among the three countries in the East Asia and Pacific region in 2020 with the highest figures of new displacements, with China ranking first, and Bangladesh ranking third. (300)

The number of affected people reached 12.8 million, wherein natural causes accounted for 12 million, the combination of natural disasters and human activities for 639,417, and 135,773 due solely to man-made causes. The total number of 19,368 affected barangays in 2020 reached 19,368, of which, 17,980 barangays were hit by natural hazards, 1,229 barangays by a combination of both, and 159 barangays by human-induced hazards.

Top 10 Disasters that Affected the Largest Number of People



**Top 10 Disasters that Caused Massive Displacements** 

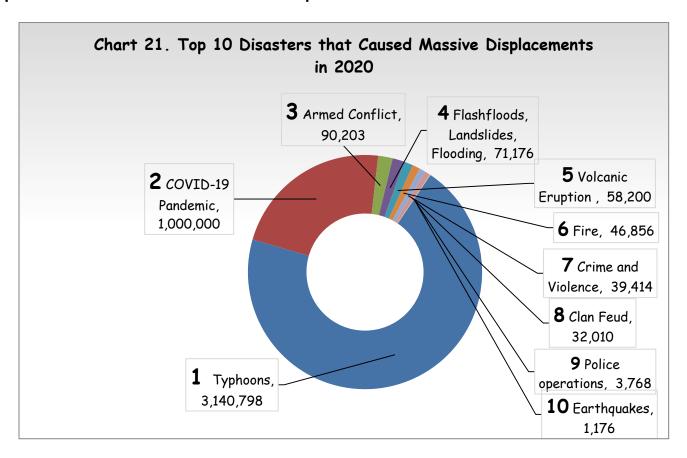
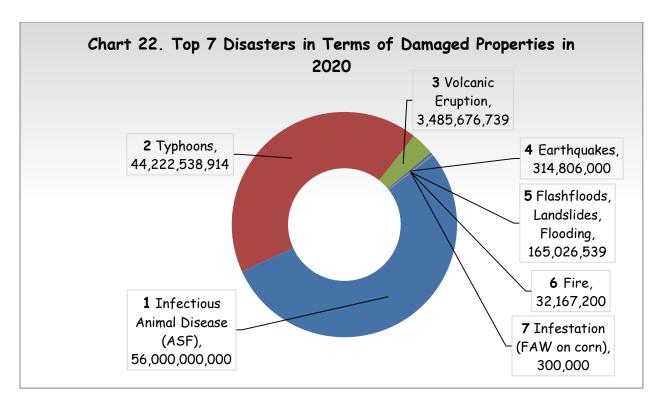
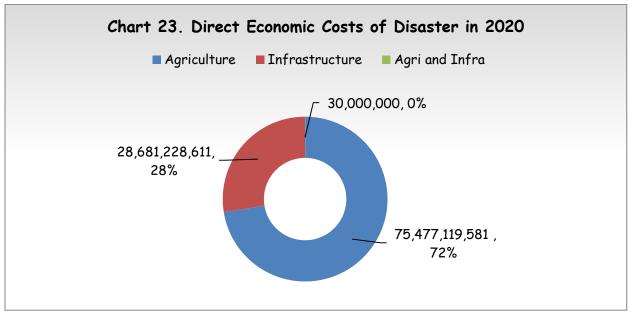


Table 22. Damage to Houses and Properties, 2020

	Natural	Man-Made	Combination
Damaged Houses, Total	788,774	7,070	2,187
Totally	118,768	6,757	219
Partially	670,006	313	1,968
Damage to Properties, Total	104,023,321,654	32,167,200	165,026,539
Agriculture	75,342,901,642		134,217,939
Infrastructure	28,680,420,011	32,167,200	808,600
Agri and Infra			30,000,000

About 798,031 houses were either partially or completely ruined, principally due to natural causes, which destroyed 788,774 houses. Human-induced factors also contributed to the destruction of 7,070 houses while 2,187 houses were damaged due to a combination of both human and natural disasters. Estimated damage to properties totaled P104.19 billion, with natural disasters contributing to economic losses worth P104 billion, the combination of both natural and man-made hazards at P165 million, and man-made hazards at P32.1 million. The agriculture sector was the worst hit, incurring losses amounting to P75.47 billion, mainly due to the African swine fever, followed by infrastructure destruction at P28.68 billion. Agricultural and infrastructure damages due to natural disasters account for 72% and 28%, respectively, of the total estimated worth of destruction in 2020.





The direct economic impacts of natural, man-made, and combination of natural and man-made disasters in 2020 amounted to P75.5 billion to agriculture which constitutes 72% of the total losses while infrastructure suffered P28.7 billion worth of damage or 28% of the total value of destruction. These data, however, are not comprehensive as significant number of hazards and disasters had no recorded damage.

### The Philippines is a disaster-prone country on a global scale.

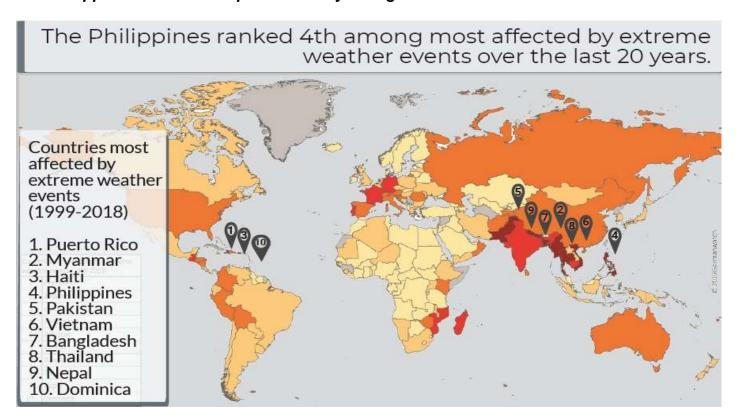
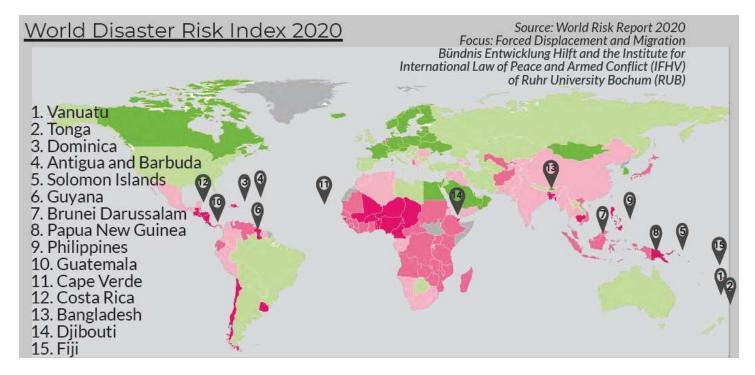


Fig. 4. (304)

According to the Global Climate Risk Index 2020, which monitors countries that suffer most from extreme weather events, Japan, the Philippines, and Germany topped the list of the most affected countries in 2018. Typhoon "Ompong" (Mangkhut) battered the country in September 2018 as a category 5 typhoon – the most powerful typhoon recorded worldwide in 2018. But over the last few years, the Philippines, along with Haiti and Pakistan, continuously ranked as the most affected countries by disasters both in the long-term index and in the index for the respective year. The country's geographical location makes it regularly exposed to tropical cyclones such as "Pablo" (Bopha) in 2012, "Yolanda" (Haiyan) in 2013, and "Ompong" (Mangkhut) 2018. Over the last two decades from 1999-2018, the Philippines ranked 4th among most affected countries by extreme weather events. (304)



The World Risk Report 2020, which focuses on forced displacement and migration, ranked the Philippines 9<sup>th</sup> in the world as one of the most affected countries from extreme weather events in 2020. It was severely devastated in November 2020, by Super Typhoon Goni (Rolly), the world's most powerful tropical cyclone that year, which brought torrential rains, violent winds, storm surges, and massive flooding all over Luzon. (305)

# III. The Philippines's susceptibility to disasters

The country's vulnerability to disasters is due to its geographical and physical characteristics, its socio-economic and political situation, and environmental destruction and climate change as factors in more frequent and worsening disasters.<sup>8</sup>

# A. Geographical and physical characteristics

First, the Philippines lies in the *Western Pacific Basic* where an average of 20 typhoons enters the country, five of which are typically destructive. Second, it is situated on the Pacific "Ring of Fire," an arc of intense seismic activity that stretches from Japan through Southeast Asia and across the Pacific basin, where many of the world's earthquakes and volcanic eruptions occur. Third, it lies between two major tectonic plates – the Pacific Plate and the Eurasian Plate that shake beneath the surface of the earth and oceans resulting in earthquakes. Fourth, it has 300 volcanoes, of which 22 are active. Finally, the country experiences El Niño that causes droughts and water shortage that adversely impacts agriculture.<sup>8</sup>

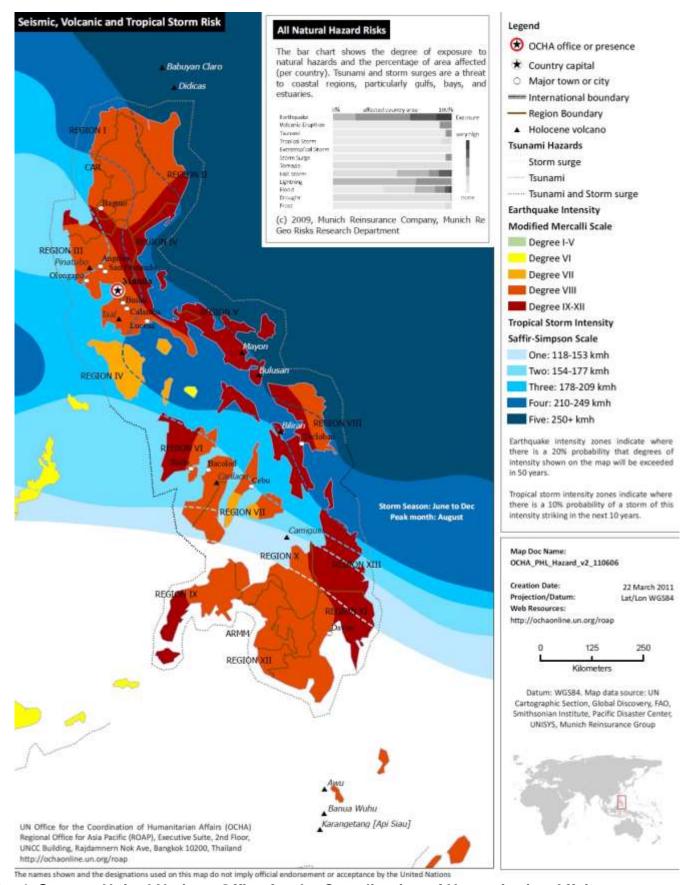


Fig. 4. Source: United Nations Office for the Coordination of Humanitarian Affairs

### B. Worsening socio-economic conditions

The Duterte administration's repressive, anti-poor, unscientific, and inhumane policies imposed in COVID's name only worsen the root causes of the people's vulnerability to disasters. (IBON) The Duterte government shows gross incompetence in handling the crisis and negligence in addressing the people's needs.

The Filipino people, the majority from the poor and low-income families, bear the brunt of these repeated lockdowns, loss of livelihood, and lack of adequate healthcare services.

State neglect for agriculture continues. Before COVID, the agriculture sector lost 1.4 million jobs in 2017-2019, the highest number in three years in the last two decades. Worse, the Duterte government even removed restrictions on imported rice through the Rice Liberalization Law, which he signed on February 14 and took effect on March 5, 2019, pushing rice farmers further to bankruptcy. Compared to figures in 2018, rice farmers' net income per hectare decreased by 32% in the dry season, 47% in the wet season, and 38% on the average post-Rice Liberazation Law. This meant lower returns for farmers. The average annual growth of agriculture fell from 2.9% (2001-2016) to 2.2% (2017-2019) under Duterte. (312) Farmers and fisherfolk have been reeling from hunger and rural poverty even before COVID and their conditions have worsened under the Duterte administration. In 2020, there were 23.7 million additional hungry Filipinos. (311)

Employment fell by 2.6 million from 2019 to 39.4 million in 2020, which is even less than the 41 million employed in 2016. In effect, four years of employment growth were wiped out. As of October 2020, IBON estimates that there is a total of 5.8 million unemployed Filipinos, of which, 2.7 million were additional unemployed. (311) (313)

Joblessness worsened as overseas Filipino workers returned home after losing their jobs overseas. Others who returned home to the Philippines find themselves unemployed and stranded outside domestic airports, at the height of one of the longest and most stringent COVID-19 lockdowns in the world. The Department of Foreign Affairs reported that a total of 327,511 overseas Filipinos were repatriated in 2020. (314)

With a total population of approximately <u>106 million people</u>, <u>4.5 million people are homeless</u> and three million of those homeless people reside in the capital of Manila. **(316) (317)** 

In terms of health services, the UP COVID-19 Pandemic Response Team of the University of the Philippines reported that on the average, there are only 3.7 doctors per 10,000 population in the Philippines, which is way below the World Health Organization-prescribed ratio of 10 doctors for 10,000 persons. There is even a wide discrepancy across regions of the country. For instance, the ratio is 10 per 10,000 in the National Capital Region while it is 0.8 per 10,000 in the Bangsamoro Autonomous Region in Muslim Mindanao. Furthermore, there are 8.2 nurses per 10,000 nationwide compared to the WHO-prescribed ratio of 10 nurses per 10,000 population. (318) By December 2020, of the 13,000 health workers infected with COVID-19, 76 of them succumbed to the disease. (323)

In addition, the Philippines is the only Southeast Asian country with declining literacy. (319) Functional literacy rate is estimated at 91.6 percent in 2019. The Philippine Statistics Authority on December 11, 2020 reported that 8 in every 100 Filipinos among the population 10 to 64 years old are illiterate, with BARMM registering the highest illiteracy at 28 in every 100 Filipinos, while NCR having the lowest illiteracy of 4 in every 100 Filipinos. (320)

Prices of basic commodities continue to increase amid the lack of substantial wage hikes. In January 2021, inflation continued to increase to 4.2%, the fastest recorded in 11 months. Prices reportedly increased the most in food and non-alcoholic beverages to 6.2% in January. The hardest hit were the poorest Filipino households. With the eroding value of the peso, the real value of the minimum wage of P537 in the country's capital was only P434 as of December 2020. (315) The poor majority especially the peasants and workers couldn't cope with the rising prices of basic goods and services as countless lost their sources of income. Those with jobs, on the other hand, make do with their meager incomes, wage and salary freeze, or worse, take wage cuts in desperation.

In 2020, there were 4.5 million additional poor Filipinos. (311) The Philippine Institute for Development Studies (PIDS) meanwhile estimates that the number of poor Filipinos may rise from 17.6 million living on P71/person/day to 29.7 million. (313)

There were 23.7 million additional hungry Filipinos in 2020. About <u>7.6 million</u> households did not have enough to eat at least once in the previous three months, according to SWS September 2020 survey. Among them were 2.2 million families who have been experiencing "severe hunger" – the highest ever recorded. According to the Food and Agriculture Organization of the United Nations, 59 million people were "moderately or severely food insecure" between 2017 and 2019, the highest in Southeast Asia. **(322)** 

Emergency relief for millions of poor families and production support has either been slow-paced, inadequate, undisbursed, misappropriated, or worse, embezzled. As of January 2, 2021, only 417,650 out of 1.57 million target beneficiaries have reportedly been given cash assistance amounting to P2.36 billion. About 1.97 million of around 3.4 million formal and informal workers and OFWs, meanwhile, have been given assistance worth P10.3 billion. As of December 23, 2020, only 5,324 loans for medium and small enterprises were in the pipeline for processing and release. (311)

Instead of spending the budget to give more emergency cash subsidies, help small enterprises support job creation, and expand social services, support agriculture to increase productivity and help lower food prices, the Duterte administration chose creditworthiness versus the welfare of poor and low-income households. The largest part of the 2021 budget is allocated to Build, Build, Build infrastructure projects which promise 1.7 million jobs but IBON contests that otherwise. In fact, from 2016 to 2019, construction jobs only increased by an average of 258,000 annually. (311)

The national budget also prioritizes debt servicing and military modernization, instead of decisively addressing the welfare of the poor majority.

Government policies should be people-centered, which puts the people's welfare and rights to food, life, health, among basic rights, on top. The Duterte administration has abused the term "resilience" as a lame excuse for its criminal negligence, ineptness, and misprioritization.

The Philippines' high vulnerability to disasters is the overall result of these given factors. Beyond the geophysical characteristics of the Philippines, these factors exacerbate the poor majority's already miserable plight which is the severe expression of their vulnerability.<sup>8</sup>

<sup>&</sup>lt;sup>1</sup> "Philippines Situation Report," OCHA, February 5, 2021.

<sup>&</sup>lt;sup>2</sup> "Tropical Cyclones 2020 (with effects)," NDRRMC-OCD, February 28, 2021.

<sup>&</sup>lt;sup>3</sup> "2019 Philippine Disaster Situation," CDRC, 2019.

<sup>&</sup>lt;sup>4</sup> "Other Major Incidents in 2020," NDRRMC-OCD, 2021.

<sup>&</sup>lt;sup>5</sup> "Progress Report re Magnitude 6.4 Earthquake in San Agustin, Surigao del Sur (CARAGA)," NDRRMC Monitoring Report, November 16, 2020.

<sup>&</sup>lt;sup>6</sup> "Progress Report re Magnitude 6.3 Earthquake in Calatagan, Batangas (MIMAROPA, CALABARZON)," NDRRMC Monitoring Report, December 25, 2020.

<sup>&</sup>lt;sup>7</sup> "Initial Report re Effects of Strong Winds in Maguindanao (BARMM)," NDRRMC Monitoring Report, November 21, 2020.

<sup>&</sup>lt;sup>8</sup> CBDM Manual, CDRC, 2021.