



## Philippines' Country Profile

### I. General Information

The Republic of the Philippines (RP) is an archipelagic nation located in Southeast Asia. Its length measures 1,850 kilometers, starting from the point near the southern tip of Taiwan and ending close to northern Borneo. Three prominent bodies of water surround the archipelago: the Philippine Sea and the Pacific Ocean on the east, the South China Sea on the west and north, and the Celebes Sea and the coastal waters of Borneo on the south. The Philippines constitutes an archipelago of 7,107 islands and has a total land area of approximately 299,764 square kilometers.

The country's capital is Manila. The population is 88.57 million as of August 2007. Eighty-three percent (83%) of the Filipinos are predominantly Roman Catholics.

The country is divided into three major island groups. Luzon is the largest island group with an area of 141,000 square kilometers, followed by Mindanao covering 102,000 square kilometers, and the Visayas with 57,000 square kilometers. The rest are small islets that emerge and disappear with ebbing and rising of tides.

The Philippines has a tropical and maritime climate. Using temperature and rainfall as bases, its climate can be divided into two major seasons: (1) the rainy season, from June to November; and (2) the dry season, from December to May. The dry season may be subdivided further into (a) the cool dry season, from December to February; and (b) the hot dry season, from March to May.

### II. Natural Hazards in the Philippines

#### A. Natural Hazards Likely to Affect the Country

The Philippines is susceptible to various types of natural hazards due to its geographical location and physical environment; being situated in the "Pacific Ring of Fire", between two Tectonic plates (Eurasian and Pacific), an area encircling the Pacific Ocean where frequent earthquakes and volcanic activity result from the movements of said tectonic plates. In fact, the country experiences an average of 20 earthquakes per day (most are too weak to be felt). There are also about 300 volcanoes, of which 22 are active and have been recorded in history to have erupted; while 5 are considered to be the most active namely: Taal, Mayon, Bulusan, Kanlaon and Hibok-Hibok. Also, being located along the typhoon belt/superhighway in the Pacific makes it vulnerable to extreme weather events. An average of 20 typhoons/tropical cyclones visit the country every year, with 5 of them considered the most destructive. Its 36,289 kms. of coastline is also vulnerable to tsunami, making the country also highly-susceptible to sea level rise

and storm surges. Accompanying or resulting from these tropical cyclone events are secondary phenomena such as landslides, floods/flashfloods/flooding, tornadoes, drought, and heavy/monsoon rains.

Aside from the natural hazards, the Philippines also experiences human-induced incidents such as urban/structural fires, air, land and sea mishaps, drowning, collapsed structure, epidemic/disease outbreak, food poisoning, vehicular accidents, gas explosion, chemical poisoning, oil spillage, grenade/bomb explosion/bombings, civil disturbance, and complex emergencies, particularly those internally displaced citizens as a result of armed conflicts mostly in Southern Philippines.

## B. Recent Major Disasters (2005 to 2008)

### 1. January to December 2005

No. of Occurrence	Disaster Type	No. of People Affected	No. of People Dead	Cost of Damage in Million PHP	Cost of Damage in Million US\$
17	Tropical Cyclones (4 Destructive)	210,011 families / 1,109,646 persons	54	2,552.659	46.412
28	Flooding / Flashfloods	53,973 families / 273,405 persons	27	317.094	5.765
15	Landslides	23,254 families / 116,747 persons	11	59.540	1.083
1	Tornadoes	37 families / 185 persons	-	-	-
2	Lightning	-	6	-	-
1	Drought	56 families / 280 persons	-	0.490	0.009
307	Human-Made Incidents	38,939 families / 212,768 persons	515	437.511	7.955

## 2. January to December 2006

No. of Occurrence	Disaster Type	No. of People Affected	No. of People Dead	Cost of Damage in Million PHP	Cost of Damage in Million US\$
17	Tropical Cyclones (10 Destructive)	2,397,012 families / 11,253,211 persons	1,155	19,681.693	393.634
1	Mt. Mayon Activity	9,557 families / 44,779 persons	-	-	-
1	Mt. Bulusan Activity	414 families / 2,027 persons	-	-	-
1	Northeast Monsoon Rains (3-12 Feb) (caused landslides & flooding)	70,645 families / 353,235 persons	21	510.390	10.008
1	Continuous Heavy Rains (August) (caused big/strong waves, flashflood, tornado, storm surge)	48,891 families / 200,224 persons	28	84.724	1.661
1	Ultra Stampede Incident	722 (injured)	71	-	-
123	Other Natural Incidents (landslides, flooding/ flashfloods, etc.)	25,979 families / 124,111 persons	73	21.278	0.426
235	Human-Made Incidents	26,929 families / 128,345 persons	367	691.836	13.837

\* (For other major disasters of 2006, please see details below on Other Recent Major Disaster Events in the Philippines)

## 3. January to December 2007

No. of Occurrence	Disaster Type	No. of People Affected	No. of People Dead	Cost of Damage in Million PHP	Cost of Damage in Million US\$
13	Tropical Cyclones (9 Destructive)	627,765 families / 2,998,885 persons	124	2,787.526	61.945
43	Flashfloods / Flooding	67,247 families / 329,191 persons	23	75.452	1.677
20	Landslides	367 families / 2,185 persons	31	39.331	0.874
13	Tornado	1,504 families / 7,425 persons	-	38.133	0.847
4	Heavy Rains	108,848 families / 503,728 persons	31	398.559	8.857
6	Big Waves	145 families / 634 persons	4	-	-
1	Mudflow (Lahar)	277 families / 1,596 persons	-	20.080	0.446
114	Earthquakes (mostly are minor ones)	6 (injured)	-	24.180	0.537
7	Volcanic Activity	3,267 families / 16,697 persons	-	-	-
3	Lightning	-	3	-	-
1	Thunderstorm	-	2	-	-
1	Dry Spell	28,400 families / 142,000 persons	-	891.127	19.803
1	Strong Winds	15 families / 75 persons	-	0.030	0.0007
3	Whirlwind	146 families / 730 persons	-	0.290	0.006
1	Storm Surge	1,497 families / 7,883 persons	-	-	-
1	Frost	-	-	10.000	0.222
1	Rockfall	-	1	-	-

338	Human-Made Incidents	52,216 families / 276,734 persons	452	247.535	5.501
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#### 4. January to December 2008

No. of Occurrence	Disaster Type	No. of People Affected	No. of People Dead	Cost of Damage in Billion PHP	Cost of Damage in Million US\$
13	Tropical Cyclones (8 Destructive)	1,414,130 families / 5,519,462 persons	653	19,954.638	475.110
11 Feb to 5 March	Flooding and Landslides	202,694 families / 975,713 persons	55	1,572.377	37.438
6 & 7 Sept	Compostella Valley Landslides	615 families / 2,643 persons	24	-	-
10 August to the Present	Complex Emergencies in Mindanao	110,951 families / 531,686 persons	83	180.395	4.295

#### 5. Quezon Landslide Due to Typhoons Muifa (*“Unding”*) TC-2004-000122-PHL, Merbok (*“Violeta”*) TC-2004-000128-PHL, *“Winnie”* (TC-2004-000159-PHL), and Nanmadol (*“Yoyong”*) TC-2004-000137-PHL (14 November to 3 December 2004)

Towards the tail end of the 2004 November monsoon, Aurora (Region IV-A) and Quezon (Central Luzon) Provinces suffered the onslaught of 4 typhoons (locally named *“Unding”*, *“Violeta”*, *“Winnie”*, and *“Yoyong”*) that unleashed torrential rains and floodwaters throughout the 3-week period. Due to the huge amount of rainfall and high floodwaters, a series of landslides and flashfloods occurred particularly in Aurora Province and in the municipalities of Real, Infanta, and General Nakar in Quezon Province causing devastation of great proportion in terms of the number of casualties recorded and identified, the population affected and those rendered homeless, and the damages incurred to properties and major facilities, infrastructure, and basic services. The health and education of the children suffered the most because health and school facilities were heavily devastated. The affected areas encountered problems in water and sanitation as most of the toilets were clogged with mud and water facilities were badly affected and damaged. Transport and commerce within the provinces were also paralyzed because of damaged roads and

bridges. Around 5.50 kms. of access road were rendered impassable due to 31 landslides.

Casualties:

- 1,068 dead
- 1,163 injured persons
- 553 missing

Affected population/areas: 728,724 families / 3,643,770 persons in 8 regions in the Philippines

Estimated cost of damage: PhP7,615.980M (US\$136M) (properties, agriculture, infrastructure, schools, health and transmission facilities)

Damaged houses:

- 56,591 - totally destroyed
- 160,285 - partially damaged

## **6. Guinsaugon Southern Leyte Landslide**

**GLIDE No: LS-2006-000026-PHL**

**(17 February 2006, 10:36 AM)**

These massive and tragic landslide/mudslides occurred in Barangay Guinsaugon, St. Bernard, Southern Leyte. Said barangay lies along the Philippine Fault Zone (PFZ), a known active generator. Continuous heavy rains for the last two weeks resulted in the highly saturated ground materials and was the dominant factor that triggered the landslide/mudslides. Entire villages and an elementary school full of children were buried in the area. A 2.6 magnitude earthquake was also felt at the time of the landslide. Based on the findings of Mines and Geosciences Bureau of the Department of Environment and Natural Resources (MGB-DENR) prior to the occurrence of the landslide, there were already reported cracks at the slope which might have caused ground movements during the 1994 earthquake. The high steep slope enhanced the speed down moving mass of earth.

Casualties:

- 154 dead
- 968 persons missing

Affected population: 3,850 families / 18,862 persons (including families from other nearby barangays)

Estimated cost of damage to properties (infrastructure and agriculture): PhP114.800M (US\$ 2.251M)

## 7. Guimaras Motor Tanker (M/T) Solar I Oil Spill

**GLIDE No: OS-2006-000140-PHL**

**(11 August 2006)**

On 11 August 2006, Motor Tanker (M/T) Solar I with a crew of 20 on board capsized due to weather and sea conditions, approximately 16 nautical miles southwest of Guimaras Island. It is chartered by Petron Oil Company to transport 13,000 barrels or 2,067,000 liters of industrial fuel oil (IFO) or bunker oil from Lamao, Bataan to Zamboanga City. The ship sunk somewhere from 300-500 fathoms and the cargo tanks spilled more than 200,000 liters of bunker oil. Affected areas are 36 barangays in 5 municipalities of Guimaras (Nueva Valencia, Sibunag, San Lorenzo, Buenavista, and Jordan); 29 barangays in 2 municipalities of Iloilo (Ajuy and Concepcion); and 1 barangay in Pulupandan Municipality in Negros Occidental.

Affected population/areas: 7,870 families / 39,004 persons

Casualties - 18 of the 20 crew members were rescued, while 2 others were reported missing

Ecosystems affected:

- 1,143.45 hectares of marine reserves of the Department of Environment and Natural Resources (DENR)
- 233.84 kms. coastlines
- 15.80 sq. kms. coral reef
- 478.48 hectares mangrove
- 58.00 hectares seaweeds
- 806.29 hectares fishponds
  - PhP1.069M (US\$0.021M) estimated cost of damage to fishponds

## 8. Typhoon Durian (“Reming”)

**GLIDE No: TC-2006-000175-PHL**

**(28 November – 03 December 2006)**

On 30 November and 1 December 2006, Typhoon “Reming” (Durian) entered the Philippine Area of Responsibility (PAR) passing thru Southern Catanduanes and Tabaco City and exited through Camarines Sur. In its path, it left billions of pesos worth of damage to infrastructure and agriculture throughout the Bicol Region and its neighboring Provinces notably Camarines Sur and Catanduanes. Its torrential rains and mudslides killed hundreds of individuals in the Province of Albay, particularly in the area around Mount Mayon Volcano, where it triggered a large-scale mudflow over the wide portion between the eastern and southern slopes of said volcano. It also wreaked havoc in Sorsogon, Mindoro, parts of Camarines Norte, Marinduque, Batangas, and Laguna. It toppled power and

communication lines and caused heavy damages to an unreported number of school buildings in the affected provinces. Due to flooding, fallen trees and electric posts, landslides and mudflow, many roads were rendered impassable.

Casualties:

- 734 dead
- 2,360 injured
- 762 missing

Affected population/areas: 707,966 families / 3,536,342 persons in 3,507 barangays of 163 municipalities and 13 cities in 14 provinces of regions IV-A, IV-B and V.

Estimated cost of damage to properties (agriculture and infrastructure): PhP5,448,609,476.00 (US\$ 111.2M)

Damaged houses:

- 228,436 - totally destroyed
- 359,601 - partially damaged

## 9. Typhoon Fengshen ("*Frank*")

**GLIDE No: TC-2008-000093-PHL**

**(18-23 June 2008)**

Typhoon Fengshen (locally named "*Frank*") initially affected Eastern Samar in the Philippines on 18 June 2008 as a tropical depression. It then moved west northwest and affected 37 more provinces, with winds of 140 kph and gusts of up to 170 kph. As it made a landfall in the Eastern Visayas region, it intensified into a typhoon. Fengshen was the sixth and the worst typhoon to hit the disaster-prone country in 2008. Its effect was compounded by pre-existing bad weather as a result of the southwest monsoon season. It brought torrential rains, triggered landslides, vast flooding, and significant storm surges along the eastern and western seaboards, causing severe damages to infrastructure and basic facilities. Large numbers of individuals/families were directly affected, mainly in the provinces of Iloilo, Capiz, Aklan, Antique, and Negros Occidental on Panay Island and, to a lesser extent, in the provinces of Leyte, and Eastern and Western Samar. On the southern island of Mindanao, the provinces of Maguidanao and Shariff Kabunsuan in the Autonomous Region of Muslim Mindanao (ARMM), Cotabato City, and North Cotabato also experienced flooding. Typhoon Fengshen has left a trail of destruction during its 48 hours passage of the Philippines and required immediate provision of necessities among poverty-stricken communities. It also defied all prediction models and weather forecast organizations as it changed paths and crossed areas, which are usually not affected by typhoons, causing shock and astonishment to many communities and authorities. Moreover, many people were



forced to stay on roofs and trees until water subsided only to discover severe damage to roads and other public infrastructure including the water system.

Casualties:

- 557 dead
- 826 injured
- 87 missing

Affected population/areas: 958,515 families / 4,776,778 persons in 6,642 barangays of 569 municipalities and 57 cities in 50 provinces of 15 regions

Estimated cost of damage to properties (agriculture and infrastructure): PhP13.525B (US\$307.4M)

Damaged houses:

- 82,734 - totally destroyed
- 345,475 - partially damaged

#### **10. M/V Princess of the Stars Tragedy/Sinking**

**GLIDE No: AC-2008-000108-PHL**

**(21 June 2008)**

Considered as the worst sea tragedy in 20 years, the M/V Princess of the Stars ferry boat capsized and sank off a few miles off Sibuyan Island in the central province of Romblon, at 6:00PM on 21 June 2008, at the height of Typhoon Fengshen. Big waves, encountered by the ship on its way, were believed to have caused the vessel to run aground in the seawaters. A large amount of toxic pesticides called "Endosulfan" was also loaded in the cargo. The situation could result in major ecological disasters impacting on health and livelihood of the local population and rescuers if rescue/retrieval and salvage operations were not handled and undertaken properly. It carried at least 872 people (724 passengers, 121 crew members, and 27 contractors). The tragedy left most of the passengers, including the ship captain, dead. Only 60 people survived, and 545 bodies were recovered from the wreckage and from other nearby areas.

#### **11. Typhoon Ketsana ("Ondoy")**

**GLIDE No: TC-2009-000205-PHIL**

**(26 September 2009)**

On 26 September 2009, Typhoon Ketsana (locally named "Ondoy"), the 15<sup>th</sup> tropical cyclone to enter the Philippine Area of Responsibility (PAR), battered Central Luzon causing the worst flooding in the Philippines, with floodwaters reaching up to a height of 6 meters in 40 years. According to the local weather bureau, the amount of heavy rainfall it brought in only 6 hours which was 341 mm.

was recorded as the highest since 1947, even surpassing the 334 mm. recorded highest 24-hour rainfall 42 years ago. It was also almost equal to the average monthly rainfall in Metro Manila, which was pegged at 392 mm. Towns east of Manila were submerged, with landslides in other parts of Luzon. Excessive flooding was experienced particularly in cities in the National Capital Region and in the provinces in Calabarzon areas, which were also heavily-affected by the wrath of Ketsana. Most number of deaths was due to drowning and the water-borne infectious disease called Leptospirosis.

Casualties:

- 464 dead
- 529 injured
- 37 missing

Affected population/areas: 997,983 families / 4,929,382 persons in Regions I, II, III, IV-A, IV-B, V, VI, IX, XII, NCR, ARMM, and CAR

Estimated cost of damage to properties (infrastructure and agriculture): PhP11.106 Billion (US\$236.3M)

Damaged houses:

- 27,808 totally destroyed
- 130,736 partially damaged

## 12. Typhoon Parma ("*Pepeng*")

**GLIDE No: TC-2009-000214-PHL**

**(3-10 October 2009)**

Barely a week has passed, another powerful cyclone, Typhoon Parma (locally named "*Pepeng*"), entered the Philippine territory and made its landfall in Northern Luzon. It dumped massive amounts of rain into the already saturated lands on the northern part of the country. It remained stationary for a while, weakened, looped back to Northern Luzon, and made a landfall thrice. The huge amount of rainfall it brought triggered massive landslides, isolating and burying entire villages, communities and people in mud in Benguet, Mountain Province and in the City of Baguio. Scenes of the killer floods spawned by Ketsana in Metro Manila were replicated in the Province of Pangasinan, northwest of Manila, as well as the other provinces in the neighboring regions, with raging waters forcing residents to clamber to their rooftops to save themselves. The amount of rainfall caused by Parma has been recorded the highest in Baguio City in the Cordillera Administrative Region. Killer landslides, which occurred in most parts of the Cordillera Region, have caused the huge number of deaths and also those who were drowned in raging floodwaters.

Casualties:

- 465 dead
- 207 injured
- 47 missing

Affected population/areas: 954,087 families/4,478,284 persons in Regions I, II, III, IV-A, V, VI, CAR, and NCR

Estimated cost of damage to properties (infrastructure, agriculture, and personal properties): PhP25.195 Billion (US\$536M)

Damaged houses:

- 6,253 totally destroyed
- 48,120 partially damaged

\* A nationwide state of calamity has been declared.

### III. Disaster Management System

#### A. Legal Authority (PD 1566)

##### 1. The National Disaster Coordinating Council (NDCC)

Leading the collaborative efforts in disaster preparedness planning and mitigation, as well as disaster response operations and rehabilitation both in the government and private sector is the **National Disaster Coordinating Council (NDCC)**. The NDCC is the highest policy-making, coordinating and supervising body at the national level for disaster risk management in the country chaired by the Secretary of National Defense with the Office of Civil Defense (OCD), and has the heads of seventeen (17) other departments and agencies as members.

The NDCC is also responsible for advising the President of the Republic of the Philippines on the status of the national disaster preparedness programs and management plans, disaster operations, and rehabilitation efforts of all stakeholders; and it also recommends to the President the declaration of the state of calamity and the release of the national calamity fund as needed. NDCC's legal authority is Presidential Decree (PD) 1566 issued on 11 June 1978, entitled, "Strengthening the Philippine Disaster Control Capability and Establishing the National Program on Community Disaster Preparedness".



*Figure III-A-1: The NDCC Members*

## 2. The Office of Civil Defense (OCD)

One of the five (5) bureaus of the Department of National Defense (DND) (per PD No. 1 as implemented by Letter of Intent (LOI) No. 19, s-1972, and DND Order Nos. 737 and 737-A, s-1973), the **Office of Civil Defense (OCD)**, officially established on 1 July 1973, serves as the executive arm and secretariat of the National Disaster Coordinating Council per PD 1566.

As the nerve center for alert and monitoring, resource mobilization, response coordination, and information management, it has the primary task of coordinating the activities and functions of various government agencies and instrumentalities, private institutions and civic organizations for the protection and preservation of life and property during emergencies. It has in its vision a service-oriented organization, prepared population and a safe nation. Its mission is to basically administer a comprehensive national civil defense and civil assistance program by providing leadership in the continuous development of measures to reduce risk to communities and manage the consequence of disasters.



**Figure III-A-2: The National Disaster Management Center  
(Camp General Emilio Aguinaldo, Quezon City, Philippines)**

Presently, OCD is maintaining 17 fully-operational regional centers which provide secretariat services and serve as executive arm to 17 regional disaster coordinating councils.

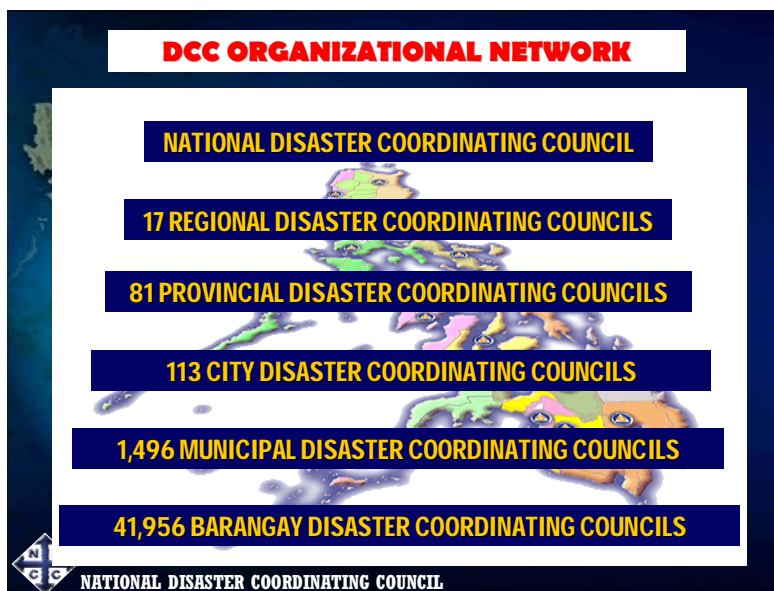
OCD and its Regional Centers operates on a 24/7 basis, manned by OCD personnel round-the-clock, with complementation from selected NDCC member-agencies, such as, DSWD, DOH, AFP, DPWH, PNRC during emergency situations.



**Figure III-A-2-a: The OCD-NDCC Operations Center**

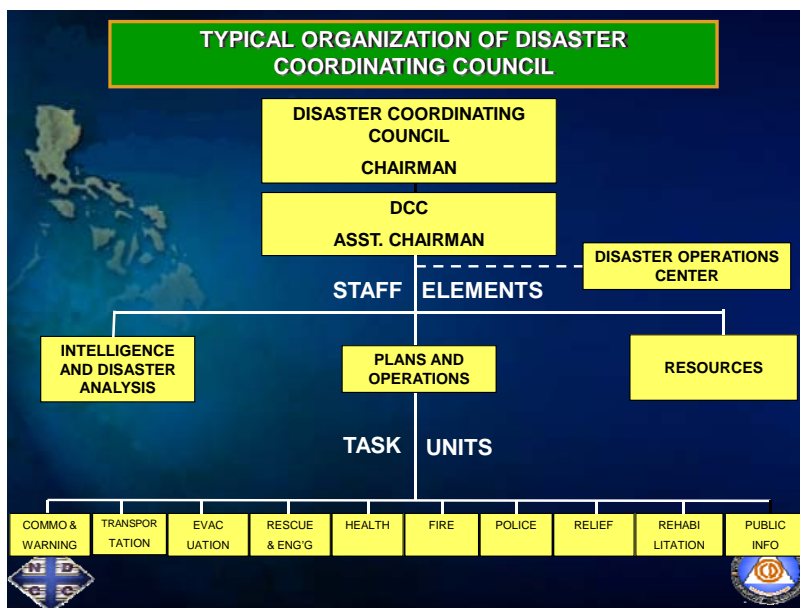
### 3. Disaster Coordinating Councils (DCCs) Organizational Network

The NDCC establishes the priorities in the allocation of funds, services, and relief supplies and plays an advisory role to lower DCCs through the Office of Civil Defense by issuing guidelines on emergency preparedness and disaster operations.



*Figure III-A-3: The DCC Organizational Network*

The National Calamities and Disaster Preparedness Plan (NCDPP) specifies that disaster coordinating councils be established for national, regional, Metro Manila, provincial, city or municipal, and barangay levels. All implementing plans shall be documented and copies furnished to NDCC through the OCD. Each disaster coordinating council shall maintain a disaster operations center.



**Figure III-A-3-a: Typical Organization of a DCC**

In each local government unit (province, city or municipality, barangay), the local DCC is headed by the elected chief executive, such as governor or mayor. Thus, disaster management is imbedded deeply into the democratic governance in the Philippines.

**B. The NDCC Comprehensive Disaster Risk Management Framework**

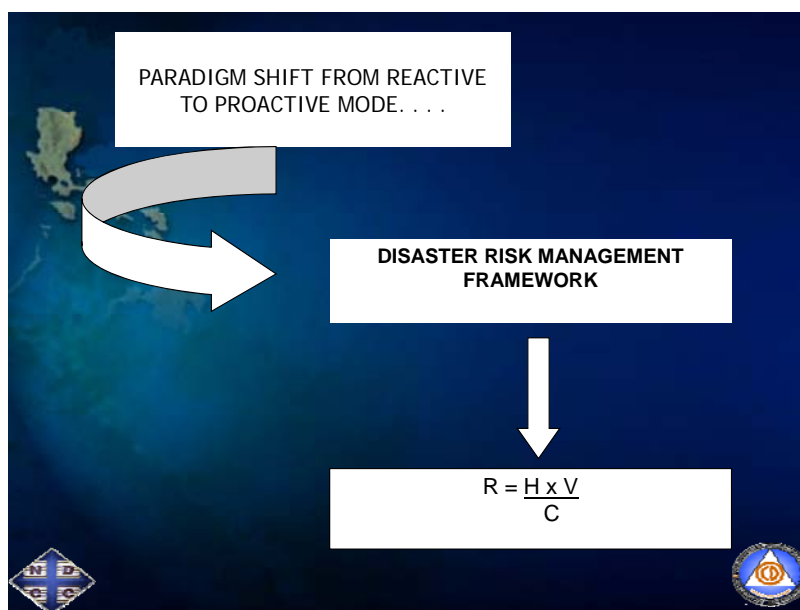
**1. Paradigm Shift**

Since the OCD and NDCC's creation, PD 1566 has been the basic law that guides the disaster management programs, projects and strategies implementation in the country. However, it has been observed and noted from past experiences, combined with lessons learned and gaps examination, that the law that creates the Council is more leaning and gives more emphasis on response action, thus, making the implementers reactive to possible disasters rather than taking a proactive stance in disaster risk management.

In early 2005, the OCD-NDCC took a bold step in embracing a paradigm shift of disaster management approaches and strategies from reactive to proactive (from disaster response and preparedness to disaster risk reduction/management (DRR/M)). To pursue the DRM Framework, the Government of the Republic of the Philippines, through the NDCC, adopts the following approaches and strategies:

- Multi-hazards approach, which includes both natural and human-induced hazards

- Comprehensive, as it encompasses the four (4) phases of DRM, i.e. mitigation/prevention and preparedness in the pre-disaster phase, and response and rehabilitation/recovery in the post-disaster phase
- Inter-agency/multi-sectoral, multi-stakeholder action and cooperation is needed especially for major disaster events
- Community-based, as the nation strongly pushes that the community is the first line of defense in any emergency situation
- Adheres to nationally and internationally-accepted principles/agreements on disaster management and emergency response (e.g. International Humanitarian Assistance Network (IHAN), ASEAN Agreement on Disaster Management and Emergency Response (AADMER), Oslo Guidelines, UNGPID, etc.)
- Pre-arranged protocols for damage assessment, SAR, emergency relief, early warning thru forging of Memorandum of Understanding (MOUs) with government and non-government organizations



**Figure III-B-1: The NDCC Paradigm Shift**

## 2. Comprehensive Disaster Risk Management Framework

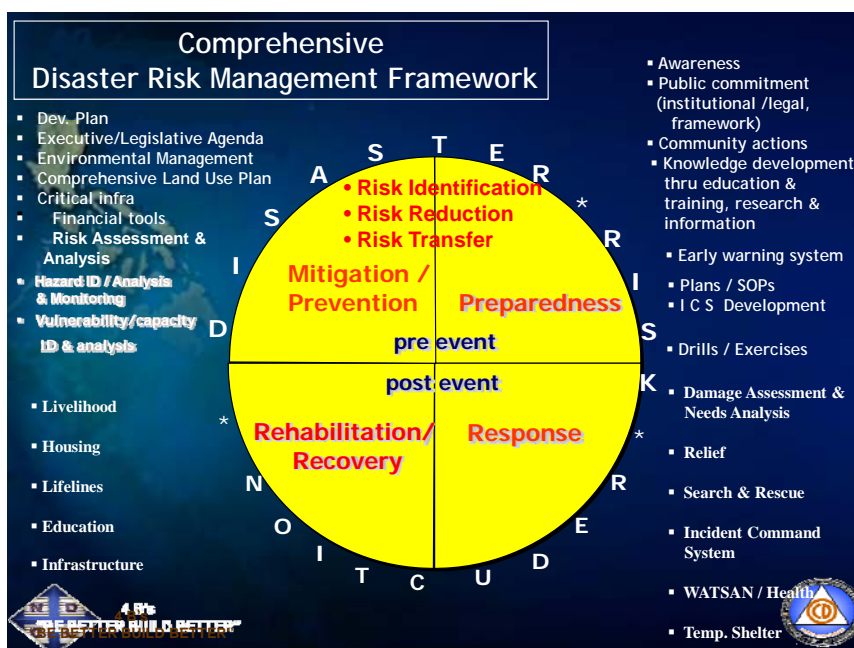
Further to this paradigm shift, the government pursues a comprehensive disaster management framework that encompasses disaster risk reduction, mitigation and preparedness in the pre-event; and disaster response, rehabilitation and recovery in the post-event. A framework that has evolved and adapted to lessons of past disaster events as well as emerging concerns, and anchored on the national authority's program thrusts, aimed to, among others, implement the Hyogo



Framework for Action 2005 – 2015: Building the Resilience of Nations and Communities to Disasters with the five (5) Thematic Areas/Priorities for Action, as follows:

- a. **Governance:** Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation
- b. **Risk Assessment and Early Warning:** Identify, assess and monitor disaster risks and enhance early warning
- c. **Knowledge Management and Education:** Use knowledge, innovation and education to build a culture of safety and resilience at all levels
- d. **Risk Management and Vulnerability Reduction:** Reduce the underlying factors
- e. **Disaster Preparedness:** Strengthen disaster preparedness for effective response at all levels

This framework also aims to contribute to the attainment of the UN Millennium Development Goals (UNMDGs), such as poverty eradication and environmental sustainability. This was enhanced and further linked together at the national level in the year 2006 by Gen. Glenn J. Rabonza (Ret), OCD Administrator and NDCC Executive Officer and was further favorably indorsed and followed in words and in action by the national as well as the local governments in the country. The framework is aptly put into a diagram which is easier to understand and comprehensible even to a village level disaster risk management advocate and doer.



**Figure III-B-2: DRM Framework as conceptualized by Gen. Glenn J. Rabonza (Ret.)**

#### **IV. Disaster Management Strategy, Management, and Plan**

##### **A. National Calamities and Disaster Preparedness Plan (NCDPP)**

Since year 1988 when the National Calamities and Disaster Preparedness Plan (NCDPP), which has reference to PD 1566, was created and implemented, the NDCC has been guided by the primary objectives and concept of said Plan, which are to save lives, prevent needless suffering, protect property, and minimize damages during disasters and calamities. The NCDPP spells out the functions of each NDCC member agency in times of disasters. It keeps with the vision of the NDCC to be a “Council that is responsive to the policy making requirements of emergency management that utilizes the nation’s resources as called for during emergency situations”.

##### **B. The need for a new Disaster Risk Reduction and Management (DRR/M) Bill**

We have been made aware that the existing framework for disaster management in the Philippines has been the traditional, reactive or dominant approach, which focuses more on relief and emergency response. Since OCD-NDCC initiated a few years back the paradigm shift on disaster management approaches and strategies from reactive to proactive (from disaster response and preparedness to disaster risk reduction/management (DRR/M), various stakeholders have started adopting to it and are now taking the lead in supporting the current advocacy initiatives for the enactment of a new and improved Disaster Risk Reduction and Management (DRRM) Bill before the end of 2009.

##### **C. The Proposed DRR/M Bill/Act**

The proposed DRRM Bill/DRM Act shall be known as the “*Philippine Disaster Risk Reduction, Management and Recovery Act of 2009*”. The Senate of the Philippines has passed its own version of the Bill (Senate Bill No. 3086 entitled: “*An Act Strengthening the Philippine Disaster Risk Reduction, Management and Recovery Capability by Institutionalizing the National Disaster Risk Reduction, Management and Recovery Framework, Appropriating Funds Therefor and For Other Purposes*”). Said Bill can still be taken up for interpolation and deliberation in the House of Representatives.

This Bill/Act provides for the development of policies and plans and the implementation of actions and measures pertaining to all aspects of disaster risk reduction, management and recovery, including good governance, risk assessment and early warning, knowledge building and awareness raising, reducing underlying risk factors, and preparedness for effective response and early recovery. More emphasis and focus will be given to reducing the communities’ and people’s vulnerability to disasters;

strengthening the National Government and Local Government Units' institutional capacity for disaster risk reduction, management and recovery; enhancing disaster preparedness and response capabilities at all levels; and building the resilience of local communities to disasters including climate change impacts.

A disaster risk reduction, management and recovery approach that is holistic, comprehensive, integrated, and proactive in lessening the socio-economic and environmental impacts of disasters, including climate change will be adopted; and the involvement and participation of all sectors and all stakeholders concerned, at all levels, especially the community-based organizations, non-governmental organizations, humanitarian organizations, private business groups, financial institutions, health facilities, academic and research institutions, religious groups, media, local leaders and individual members of the community, among others, in developing and implementing disaster risk reduction programs and activities at the national, regional, and local levels, will be encouraged and promoted.

Disaster risk reduction and climate change adaptation will also be mainstreamed and integrated into the development processes at all levels from the provincial, city, municipal, and barangay, such as, on policy formulation, socio-economic development planning, budgeting, and governance, particularly in the areas of environment, agriculture, water, energy, health, education, poverty reduction, land-use and urban planning, and public infrastructure and housing, among others, which will serve as a strategy in sustainable development and poverty reduction.

Once enacted, the new law shall adopt and adhere to principles and strategies consistent with the international standards set by the Hyogo Framework for Action (HFA), which is a comprehensive, action-oriented response to international concern about the growing impacts of disasters on individuals, communities and national development.

A National Disaster Risk Reduction, Management and Recovery Framework and Plan will also be developed, formulated, and implemented once the new DRM Act is ratified. The Framework shall provide for a comprehensive, all-hazards, multi-sectoral, inter-agency and community-based approach to disaster risk reduction, management and recovery. It shall serve as the principal guide to disaster risk reduction, management and recovery efforts in the country and shall be reviewed on a five-year interval, or as may be deemed necessary, in order to ensure its relevance to the times.

Said Framework shall also lead to the development and formulation of the National Disaster Risk Reduction, Management and Recovery Plan (NDRMRP). The Plan shall provide for the identification of hazards, vulnerabilities and risks to be managed at the national level; disaster risk reduction, management and recovery approaches and strategies to be applied in managing said hazards and risks; agency roles and responsibilities at all government levels; and vertical and horizontal

coordination of disaster risk reduction, management and recovery in the pre-disaster and post-disaster phases. It shall be in conformity with the National Disaster Risk Reduction, Management and Recovery Framework (NDRRMRF).

#### **D. Strategic National Action Plan (SNAP)**

The Strategic National Action Plan (SNAP) on Disaster Risk Reduction (2009-2019) is a “road map” indicating the vision and strategic objectives of the Philippines for the next 10 years while pursuing the strategic goals of the Hyogo Framework for Action (HFA). It is a by-product of actors and stakeholders who participated in the conduct of dialogues, consultations and discussions - sharing their experiences and good practices on DRR as well as their expectations from the national government, especially from the NDCC. With this “road map”, mainstreaming of DRR with plans and policies of national and local agencies, communities, and other sectors will be intensified. The SNAP is an integral part of the nation’s commitment to the HFA and other relevant global agreements, as well as support to the achievement of the United Nations Millennium Development Goals (UNMDG).

Consistent with the global commitment, the Philippine SNAP aims to build the resilience of communities to disasters, reduce disaster losses in lives, in the social, economic and environmental assets of communities and countries. The SNAP objectives provide support to strengthen cooperation and coordination mechanisms among various sectors and stakeholders. It will sustain disaster risk reduction initiatives in the country and promote good practices of individuals, organizations, local government units, and the private sector.

The SNAP takes off from the Four-Point Plan of Action on Disaster Preparedness (4PPADP) of the NDCC and contains 18 priority programs and projects from 2009 to 2019 based on 150 strategic actions gathered after several consultations with stakeholder groups. The SNAP utilizes the multi-hazards approach in managing the impact of natural and human-induced disasters especially the threat of climate change. Another principle of SNAP is that DRR is directly linked to poverty alleviation and sustainable development. The SNAP is also consistent with parallel effort to design the Philippine Comprehensive Disaster Risk Management Framework.

To better implement SNAP, the Philippine legislature must enact a progressive bill to amend the reactive stance that PD 1566 posits. The SNAP rightfully fits into a national disaster risk management framework which emphasizes the mainstreaming of DRR into national plans and budgets. Approval of SNAP is in progress.



**Figure IV-D-1: SNAP Strategic Objectives**

The figure above presents the five strategic objectives under which the 18 priority SNAP programs/projects are classified. [\(Please see link of SNAP document in pdf file, attached\)](#)

#### **E. Update on the Implementation of the NDCC Four-Point Plan of Action on Disaster Preparedness**

In early 2005, the NDCC implemented the Four Point Plan of Action on Disaster Preparedness which strengthens the DRM stance of the country and enhances its disaster prevention strategies. This aims to increase public awareness and involvement in measures put in place by the government to minimize the impact of disasters in the future. This plan of action also provides direction to all NDCC member-agencies in terms of the allocation of capacities, capabilities and resources. It has so far achieved the following:

##### **1. Upgrading of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the Philippine Institute of Volcanology and Seismology (PHIVOLCS) Forecasting Capability**

PAGASA and PHIVOLCS are the warning agencies for meteorological-hydrological and geological hazards, respectively. The capability upgrade focused on improving forecasting capability of natural hazards such as typhoons, earthquakes, volcanic eruptions and tsunamis through the acquisition of equipment and personnel development. The capability upgrade is geared towards strengthening linkages with foreign forecasting institutions to make forecasting, not

only a domestic, but a regional concern. Geo-hazard mapping in identified areas is designed to serve as scientific reference for land-use planning, formulation of disaster management plans, and establishment of an effective early warning system to include real-time information dissemination.

### **PAGASA's Forecasting Capability**

The PAGASA has undertaken several projects to upgrade and improve its climate and weather forecasting capability through the acquisition of modern equipment and technologies. The capability upgrade focused on improved forecasting of typhoons and other weather-related hazards monitoring and warning services. In July 2005, PAGASA completed the rehabilitation of five (5) weather surveillance radars funded under the Department of Science and Technology (DOST) grant. Weather surveillance radars play a vital role in the observation systems of PAGASA-DOST in support to climate and weather forecasting and typhoon warning operations. Aside from typhoon tracking, these radars are also useful for identifying rain-bearing cloud clusters for flood warning.

Aside from the surveillance radars, PAGASA was also able to secure funds from the Office of the President (OP) and DOST for the establishment of Doppler Weather Radar Network for disaster prevention and preparedness in the country. The radar sites covered are Tagaytay, Subic, Cebu, Tampakan, and Hinatuan. PAGASA was also able to get funding through grant aid from Japan International Cooperation Agency (JICA) for the upgrading of Guian, Virac and Aparri radar stations. Doppler radars can provide timely and accurate observation of atmospheric parameters such as rainfall intensity, wind speed and direction that are useful in typhoon and flood warning.

Also included in the improvement of PAGASA forecasting capabilities is the upgrade of Laoag, Mactan, and Legaspi Upper Air stations which was funded by DOST, and Tanay Upper Air station funded by the Taiwan Economic Cooperation Office (TECO). Upper Air stations conduct observation on the state of the weather at different heights in the atmosphere. Detailed information in the upper layers of the atmosphere is very important in order to get a completed data representation with respect to the vertical layers of the atmosphere and not only at the ground or surface layer. It is useful in climate modeling as well as in formulating weather forecast for aviation. Together with all the other data, the use of upper air observations will result in an increased accuracy of forecasts.

To address the issues on safe and efficient air navigation through improvement of the quality and timeliness of weather forecasts intended for aviation, PAGASA-DOST acquired and installed at the Ninoy Aquino International Airport

(NAIA) the Aviation Information System (AVIS) that can access the World Area Forecast System (WAFS) products. The WAFS is a system developed by the World Meteorological Organization (WMO) and International Civil Aviation Organization (ICAO) to improve the quality of en-route guidance weather forecast provided to international aircraft operations including local aviation.

In its thrust to further enhance its climate and weather monitoring capability, forecasting, and warning, the DOST-PAGASA acquired various satellite receiving systems. Tracking the location of a weather system in oceanic areas where other types of observational data are scarce or not available makes satellite data important if not indispensable. The available data from the MTSAT, NOAA, MODIS and FY2D receiving system will complement the other data and forecasting tools and enhance the accuracy of climate and weather forecasts.

To address the concern on disastrous floods, PAGASA-DOST implemented the JICA Technical Cooperation Project (TCP) entitled "Enhancement of Flood Forecasting and Warning Administration". The project aimed to address the issues on the issuance of timely and accurate flood forecasts in the major river basins monitoring system in Pampanga, Agno, Bicol, and Cagayan (PABC). As an offshoot of this TCP, the JICA grant project "Upgrading of the Flood Forecasting and Warning System in the Pampanga and Agno River Basin" was implemented and is expected to be completed by March 2010.

Data transmission and dissemination of warnings is also enhanced utilizing Short Messaging System (SMS) Technology. In collaboration with the local government units (LGUs), community-based early warning system on floods was undertaken in areas not covered by PAGASA-DOST existing flood monitoring network.

The establishment of automatic weather station (AWS) is also underway. The AWS is an automated version of the traditional weather station equipped with instruments and equipment to make manual readings of the atmospheric conditions, to provide information to make climate and weather forecasts, and to study the climate patterns. The measurements taken include temperature, barometric pressure, humidity, wind speed, wind direction, and precipitation amounts. AWS observations can be taken more frequently and can provide detailed data in time.

The PAGASA- DOST also established the Community-Based Flood Early Warning System (CBFEWS) in areas with no existing flood forecasting system. The CBFEWS undertakes monitoring and registering rain data and river behavior upstream in order to provide timely warnings to downstream communities from a possible flood. Its main objective is to save human lives by enabling local authorities and the community to take timely mitigation measures to minimize the impacts of

floods.

In support to the flood forecasting system of DOST-PAGASA, it also undertakes hazard mapping for floods and storm surge in order to develop a systematic approach to community based disaster risk management by mapping and identifying the communities that are prone to flood and storm surge that can cause coastal inundation.

### **PAGASA's New/Upgraded Equipment and Facilities**

- a. Radar Stations (rainfall detection, movement of tropical cyclones)
  - 5 radars rehabilitated (DOST-GIA):
    - ✓ 2 - upgraded to Doppler (DOST-GIA)
      - Baler (Aurora) and Baguio (Benguet)
    - ✓ 3 - to be replaced by new sets (JICA Grant)
      - Aparri (Cagayan), Virac (Catanduanes), Guiuan (Eastern Samar)
  - 5 more Doppler radar stations for installation (Office of the President (OP) Calamity Fund-3, GAA-2):
    - (Tagaytay, Subic, Cebu City, Hinatuan (Surigao del Sur), and Tampakan (South Cotabato)
  
- b. Upper Air Stations (necessary for thunderstorm prediction and aviation – meteorological forecasts, volcanic ashfall monitoring)
  - 4 Stations rehabilitated by different funding institutions:
    - Laoag (Ilocos Norte) - World Meteorological Organization (WMO) - Voluntary Cooperation Programmme (VCP)
    - Legaspi City - DOST-GIA (Grant-in-Aid)
    - Cebu City - DOST-GIA
    - Tanay (Rizal) - Taiwan Economic Cooperation Office (TECO)
  - 2 stations for rehabilitaiton/installation (OP Calamity Fund)
    - Davao City and Puerto Princesa City
  
- c. Automatic Weather Stations (for continuous and automatic monitoring of selected weather elements)
  - 6 stations installed in selected areas of Lanao, Iloilo and Aurora – Korea International Cooperation Agency (KOICA)
  - 2 stations for installation in Angat-Umiray watershed – Metropolitan Waterworks and Sewerage System (MWSS)
  - 52 stations for installation all over the country – General Appropriations



## Act (GAA)

- 2 stations: Tanay – installed; Basco - for installation (TECO)

- d. Surface synoptic, agro-meteorological and rainfall stations facilities (repaired and rehabilitated)
  - 27 stations were repaired and rehabilitated (DOST-GIA)
  - On-going repair and rehabilitation of other synoptic stations
  - 1 additional station in Sorsogon (OP Calamity Fund)
  
- e. Satellite Receiving Facilities
  - Weather and Flood Forecasting Office (WFFC)
  - NOAA and MODIS (USA), MTSAT (Japan) and FY (China)
  - Cebu Complex station
  - MTSAT
  
- f. Aviation Facilities
  - World Area Forecast System – WFFC, NAIA and Cebu station
  
- g. Background Air Pollution Monitoring Equipment
  - Baguio Radar Station
  
- h. Flood Forecasting and Warning Facilities
  - Telemetered (Automatic) - Pampanga, Agno, Bicol and Cagayan River Basins
  - Telemetered (Automatic) - Major dams of Angat (Bulacan), Pantabangan (Nueva Ecija), Magat (Isabela), Ambuklao/Binga (Begueta), and San Roque (Pangasinan)
  - Telemetered – other dams – Caliraya, Botocan, and Kalayaan (Laguna) – soon to be operational
  - Telemetered (Automatic and Community based) – Aurora and allied river basin (Aurora), Jalaur River basin (Iloilo) and Agus-Lake Lanao watershed (Lanao provinces)
  - Non-telemetered (community based) – river basins in Surigao Del Sur, Surigao Del Norte, Southern Leyte, Leyte Province, Laguna, and Zambales – operational
  - Non-telemetered (community based) CBRON – Cagayan, Isabela, Aurora, Quezon, Nueva Ecija, Nueva Viscaya, Albay, and Northern Samar
  - Non-telemetered (community based) – river basins in Ilocos Sur and

## Cavite – on-going

**2. Public Information Campaign on Disaster Preparedness** - development, promotion, and implementation of an integrated and coherent public information campaign and strategic communications plan to increase awareness of the public on natural hazards and communicate effectively preparedness measures that can be undertaken by the community in case these hazards translate into emergencies. The increasing trend and momentum on awareness needs to be sustained and complemented by programs focusing also on other aspects of preparedness.

- The regular conduct of nationwide synchronized Building Emergency Evacuation Plan (B.E.E.P.) drills; tsunami and earthquake drills; distribution of posters and flyers on natural hazards; and other information education campaigns (IEC) activities through the tri-media, has substantially increased awareness of communities, including the various sectors of society.
- The airing of “Safe Ka Ba?” (Are you safe?) public awareness program and the Disaster Management School-on-Air has reached the consciousness of the general public.
- The organization of the Private Sector Disaster Management Network (PSDMN) composed of private organizations, INGOs, and NGOs was a positive step forward. This network can make available rapid technical assessment capacities when the need arises utilizing expertise of the Philippine Institute of Civil Engineers (PICE), the Philippine Mines Safety and Environmental Association, and the PHK9 SAR, among others.

**3. Capacity Building for Local Government Units in Identified Vulnerable Areas**

Local Chief Executives (LCEs) have to take leadership role in all phases of disaster management. So, disaster management skills training and contingency planning formulation seminars/workshops have been conducted giving priority to high-risk areas to capacitate the local government units (LGUs). The warning agencies of the country, such as, PHIVOLCS, PAGASA, and the Mines and Geosciences Bureau (MGB-DENR); including the Local Disaster Coordinating Councils (LDCCs); League of Municipalities of the Philippines (LMP); and local, national, international, and non-government organizations are the major proponents. Technical assistance is also provided to LGUs of identified vulnerable communities in their formulation and development of plans/programs particularly in the area of mitigation and preparedness.

#### 4. Mechanisms for Government and Private Sector Partnership in Relief and Rehabilitation

To come up with a mechanism that will promote government-private sector-community participation synergy, and improve coordination to achieve a seamless interface of local and national interventions through effective logistics management, information management, and redundant communications systems. One is through the forging of Memorandum of Agreement (MOA) and Memorandum of Understanding (MOU) with NGOs, IOs, other government and private institutions (foreign and local) covering response, relief and rehabilitation aspects of disaster management, such as:

- Development of a web-based, GLIDE system associated with CALAMIDAT.PH – a national disaster event database for OCD, NDCC member agencies, development stakeholders, local government units concerned, and international government organizations with Asian Disaster Reduction Center (ADRC)
- Program for Hydrological-Meteorological Risk Mitigation in Secondary Cities in Asia PROMISE Project with Center for Disaster Preparedness Foundation, Inc. (CDP)
- The NDCC and its member-agencies also entered into various engagements and partnerships with several agencies, such as, the Philippine Institute of Civil Engineers (PICE) and the Association of Structural Engineers of the Philippines, Inc. (ASEP) on provision for the organization of a National Response Action Program (NERAP) teams in various chapters of the country to undertake rapid and detailed evaluation of structures in disaster stricken areas.
- Association of Contractors and Equipment Lessors (ACEL) to assist in the emergency rescue operations like demolition of buildings, disposal of debris and provision of construction heavy equipment with operator, free rental charge.
- Philippine Canine SAR Association, Inc. (PHK9SAR)
- National Society for Earthquake Technology (NSET) on the Program for the Enhancement of Emergency Response (PEER)
- World Bank Institute (WBI) on Web-based Natural Disaster Risk Management Courses
- PHapCares Foundation, Inc., for the “*Gamot-Agad*” Program which is aimed to provide immediate dispatch of essential quality medicines to disaster victims and other victims of prevalent emergencies.

- The Philippine College of Surgeons and the Philippine Society for the Surgery of Trauma (PSST) to implement the Disaster Injury/ Trauma Management (DITM) Project. The DITM project consists of the development of a training module on proper medical response to disaster-related injuries and conduct of training on trauma management for rural/municipal health personnel.
- Private Radio Clubs (REACT, TCAG, KABALIKAT CIVICOM of Philippine Mine Safety and Environment Association (PHIMSEA)

#### **F. Institutionalization of the Cluster Approach**

In September 2005, the Inter-Agency Standing Committee (IASC) (the primary mechanism for inter-agency coordination of humanitarian assistance; a unique forum involving the key UN and non-UN humanitarian partners), agreed to designate global “cluster leads” - specifically for humanitarian emergencies – in nine sectors or areas of activity. In December 2005, the IASC welcomed the “Cluster Approach” as a mechanism that can help address identified gaps in response and enhance the quality of humanitarian action. It is part of a wider reform process aimed at improving the effectiveness of humanitarian response by ensuring greater predictability and accountability, and at the same time strengthening partnerships between NGOs, international organizations, the International Red Cross and Red Crescent Movement, and UN agencies. In the process, partners are fully involved in decision-making and planning and they have access to global resources, stockpiles, technical expertise, tools, and standards.

The Cluster Approach operates at two levels. At the global level, which aims to strengthen system-wide preparedness and technical capacity to respond to humanitarian emergencies by designating global Cluster Leads. At the country level, the aim is to ensure a more coherent and effective response by mobilizing groups of agencies, organizations, and NGOs to respond in a strategic manner across all key sectors or areas of activity, each sector having a clearly designated lead, as agreed by the UN Humanitarian Coordinator and the Country Team, with specific Terms of Reference (ToR), and in support of existing government coordination structure and emergency response mechanisms. This will ensure operational synergy and optimization of deliverable benefits to the affected areas.

The Cluster Approach clearly defines leadership roles among government cluster leads that are expected to craft cluster operational strategies covering phases before, during, and after disasters, which will provide a clear direction for cluster partners and other stakeholders on how, what, when, and where to contribute; facilitate a process aimed at ensuring well-coordinated and effective humanitarian responses in the sector or area of activity concerned; and, ensure continuous improvement in the implementation of

the Cluster Approach in the country by identifying best practices and carrying out lessons learned and activities either individually or in collaboration with other clusters. These arrangements will all redound to more benefits that are timely delivered and wider areas covered.

The Terms of Reference (ToR) sets the standard for a coordinated response and accountability with the: 1) inclusion of key humanitarian partners; 2) appropriate coordination mechanisms; 3) coordination with national/local authorities, local civil society etc.; 4) participatory and community-based approaches; 5) attention to priority cross-cutting issues (age, environment, gender, HIV/AIDS, etc.); 6) needs assessment and analysis; 7) emergency preparedness; 8) planning and strategy development; 9) application of standards; 10) monitoring and reporting; 11) advocacy and resource mobilization; 12) training and capacity building of national authorities and civil society; and, 13) provider of last resort.

The following are the designated Cluster Leads in conjunction with agency mandates (amended, as per NDCC Memorandum No. 12, series of 2008, dated 6 October 2008), merging several clusters and designating government leads:

<b>Cluster</b>	<b>Government Lead</b>	<b>IASC Country Team Counterpart</b>
Food and Non-Food Items (NFI)	Department of Social Welfare and Development (DSWD)	World Food Programme (WFP), United Nations Children's Fund (UNICEF)
Camp/IDP Management, Emergency Shelter and Protection	-do-	International Federation of the Red Cross (IFRC)/UN Habitat, United Nations High Commission for Refugees (UNHCR), International Organization for Migration (IOM)
Permanent Shelter and Livelihood	-do-	International Labor Organization (ILO), UN Habitat
WASH, Health, Nutrition, and Psychosocial Services	Department of Health (DOH)	UNICEF, World Health Organization (WHO), WFP
Logistics and Emergency Telecommunications	Office of Civil Defense/NDCC Operations Center	WFP, UNICEF, United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA)
Education	Department of Education (DepED)	UNICEF and Save the Children
Agriculture	Department of Agriculture (DA)	Food and Agriculture Organization (FAO)
Early Recovery	Office of Civil Defense (OCD)	United Nations Development

		Programme (UNDP)
Water	Metropolitan Waterworks and Sewerage System (MWSS)	

During major emergencies and disasters in the Philippines, when the government would request for international assistance, the UN Country Team would implement the Cluster Approach to address the emergency needs of the affected population/areas in close coordination with government counterparts and other humanitarian partners.

During the recent major typhoon disasters in the Philippines (Ketsana, Parma, Lupit, Mirinae), a joint rapid needs assessment was conducted immediately by the NDCC and the UN System in the Philippines to identify and prioritize urgent needs of victims and evacuees on food, shelter, water, sanitation, health and nutrition, among others; providing findings, recommendations, gaps, challenges to improve response and relief efforts. The clusters are incessantly in operation until this time, conducting post-disaster needs assessment, holding regular meetings, undertaking and participating in recovery, rehabilitation, reconstruction initiatives/plans/programs which also focus, aside from those mentioned above, on health and disease surveillance, the environment, agriculture, education, and early recovery.

During Cluster Coordination Meetings, UN agencies, NGOs, IOs, and other partners gather together and discuss, give updates on their assessments, highlighting the need for food, water, medicines, psychosocial support, health, disease surveillance, etc., with each cluster raising their own concerns on their areas of coordination and activities.

In the present institutional set-up, it has been observed that the cluster approach has been working so well in terms of putting together the stakeholders which share the same DRR functions.

### **Creation of the Water Cluster**

The President of the Republic of the Philippines instructed the creation of the Water Cluster, as per NDCC Memorandum Order No. 20, series of 2009, dated 4 October 2009. The Metropolitan Waterworks and Sewerage System (MWSS) was tasked to take the lead in the supply of all water requirements in the conduct of relief operations in response to Typhoon “*Ondoy*” (Ketsana), whether it be for drinking water, clean-up, sanitation, and other related purposes. The Water Cluster shall ensure the effective coordination and prompt delivery of all water requirements of Typhoon “*Ondoy*” relief operations to alleviate the plight of the disaster victims.

This is an amendment to NDCC Circular No. 05 s-2007 as amended on NDCC

Memorandum No. 4, s-2008 and Memorandum No. 12 s-2008 on the “Institutionalization of the Cluster Approach in the Philippine Disaster Management System, Designation of Cluster Leads and their Terms of Reference at the National, Regional, and Provincial Level”.

#### **V. Budget Size on National Level**

"Under the General Appropriations Act for CY 2009, Two Billion Pesos (PhP2,000,000,000.00) was allocated as National Calamity Fund (NCF) for aid, relief, and rehabilitation services to communities/areas affected by man-made and natural calamities; repair and reconstruction of permanent structures, including other capital expenditures for disaster operation and rehabilitation activities. Release from this Fund shall be made directly by the Department of Budget and Management (DBM) to the appropriate implementing agencies and or Local Government Units (LGUs) upon approval of the President of the Republic of the Philippines in accordance with the recommendation of the National Disaster Coordinating Council (NDCC)."

Maintenance and Other Operating Expenses (MOOE) - for aid, relief, and rehabilitation services to communities/areas affected, including training of personnel, and other pre-disaster activities - PhP1,150,000,000.00

Capital Outlay (CO) - for repair and reconstruction of permanent structures, including capital expenditures for pre-disaster operations, rehabilitation, and other related activities - P850,000,000.00

#### **Special Provision:**

1. Use and Release of Fund - the amount appropriated herein may be made available for relief, rehabilitation, reconstruction, and other works or services in connection with natural calamities, epidemics, as declared by the Department of Health (DOH); crises resulting from armed conflict; insurgency; terrorism; and other catastrophe, which may occur during the budget year of those that occurred in prior years, including pre-disaster activities such as preparation of relocation sites/facilities, and training of personnel engaged in direct disaster management: Provided, that the beneficiaries of relief, rehabilitation, reconstruction, and other works or services in connection with specific calamities, epidemics, crises, and catastrophe already covered by special laws shall not be entitled to support or assistance from this fund until the appropriation that have originally availed of shall have been fully expended. Releases from this fund shall be made directly by DBM to the appropriate implementing agencies and/or LGUs upon approval of the President of the Republic of the Philippines in accordance with the

favorable recommendation of the NDCC for local disaster or the appropriate agency for international crises.

2. Quick Response Fund (QRF)

25% x PhP1.150B = Department of Social Welfare and Development (DSWD)

20% x PhP1.150B = Office of Civil Defense (OCD)

20% x PhP800M = Department of Public Works and Highways (DPWH)

15% x PhP800M = Department of National Defense (DND)

Provided, that other government agencies concerned may be allocated their QRFs on a need basis upon the favorable recommendation of the NDCC or the appropriate agency: Provided further, that the QRF shall be released immediately by the DBM and shall serve as a stand-by fund to be used for relief and rehabilitation programs in order that the situation and living conditions of the people living in communities or areas stricken by calamities, epidemics, crises, and catastrophe occurring during the year may be normalized as quickly as possible. Provided, finally, that the agencies availing of their QRFs shall not pre-allocate the same to their subordinate agencies and shall report to the NDCC or the concerned government agency the status of the utilization of such fund on a quarterly basis, copy furnished the DBM.

As of the present, CY 2009 Calamity Fund is already exhausted.

3. Requirements in Granting Calamity Fund to the Local Government Units (LGUs):

- a. Local Disaster Coordinating Council (DCC) Damage Report/Calamity Impact Assessment Report/Work and Financial Plan (to include pictures)
- b. Sangguniang Resolution declaring the area under a State of Calamity/Imminent Danger and appropriating local counterpart for the project
- c. Due to limited CY 2009 Calamity Fund, the Local Chief Executives (LCEs) concerned shall certify thru a Sangguniang Resolution, assuring the NDCC that whatever amount be provided by NDCC, the project shall be completed/finished
- d. Endorsement of Regional Disaster Coordinating Council (RDCC) Chairman and OCD Regional Director
- e. Specific and reasonable recommended amount for the project
- f. Any other justification to grant request, and Implementing Agency for the project

**VI. Progress on the Implementation of the Hyogo Framework for Action (HFA)**

(Please click on the link below on the Government of the Philippines' National Progress Report on the Implementation of the Hyogo Framework for Action (HFA), as of 29 May 2009.



\* [http://www.preventionweb.net/files/7495\\_Philippines%5B1%5D.pdf](http://www.preventionweb.net/files/7495_Philippines%5B1%5D.pdf)

## VII. Current Major Disaster Risk Reduction Strategies/Initiatives

### A. Tools that We Use

1. NDCC short messaging service (SMS) Alert and Warning System (SAWS) - <http://saws.ndcc.gov.ph>
2. NDCC Website - <http://ndcc.gov.ph/home/>
3. NDCC-OCD Geographic Information System (GIS)

### B. Governance

1. Development of Policies and Guidelines
  - a. Forging of national and regional agreements (e.g. ASEAN Agreement on Disaster Management and Emergency Response (AADMER), International Humanitarian Assistance Network (IHAN), Standard Operating Procedures for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP), Cluster Approach) to define the detailed procedures and mechanism in facilitating accommodation of international humanitarian assistance
  - b. Advocacy for the passage of the proposed DRRM Bill/DRM Act which shall be known as the *“Philippine Disaster Risk Reduction, Management and Recovery Act of 2009”* (Senate Bill No. 3086 entitled: *“An Act Strengthening the Philippine Disaster Risk Reduction, Management and Recovery Capability by Institutionalizing the National Disaster Risk Reduction, Management and Recovery Framework, Appropriating Funds Therefor and For Other Purposes”*)
2. National Assessment of the State of DRM in the Philippines (Asian Development Bank (ADB)/UNDP) – to assess the state of DRM in the Philippines, augment the Hazards Mapping and Assessment for Effective Community-based Disaster Management (READY Project's) community awareness raising and mobilization towards preparedness, and to assess the country's other needs towards development of a holistic DRM framework.
  - a. Assessment of DRM Issues in the Philippines
  - b. Formulation of 50 Community Contingency Plans
  - c. Documentation and Dissemination of Lessons Learned
  - d. Preparation of DRM Framework
3. Strategic National Action Plan (SNAP) Project (European Union (EU)/UNISDR/UNDP)
  - a. Establishment of a Multi-stakeholder Consultative Mechanism on DRR
  - b. Formulation of a Strategic National Action Plan in the Philippines

- c. Development of DRR Capacity Building Programme for Selected Sectors
- d. Support to Mainstreaming of DRR in Selected Sectors
- 4. Supporting Local Government Capacity to Manage Natural Disaster Risks in the Philippines (World Bank/Department of the Interior and Local Government (DILG))
- 5. Mainstreaming Disaster Risk Reduction in Local Governance (German Technical Cooperation (GTZ)/DILG/European Commission on Humanitarian Aid Organization for Disaster Preparedness (ECHO))
- 6. Partnership for Disaster Reduction in Southeast Asia (PDRSEA) Phase 4 Project (ECHO/Asian Disaster Preparedness Center (ADPC))
  - a. National Strategic Plan on Community-Based Disaster Risk Management (CBDRM)
  - b. CBDRM Pilot Project in Albay Province
  - c. CBDRM Training for Local Authorities
  - d. Integration of CBDRM Recognition Scheme in the Gawad KALASAG (*"Kalamidad at Sakuna ay Labanan, Sariling Galing ang Kaligtasan"*) Awarding
- 7. Learning from Good Practices in DRM (ECHO/Oxford Committee for Famine Relief – Great Britain (OXFAM GB))
  - a. CBDRM Case Studies Development and Publication
  - b. Promotion and replication of CBDRM Good Practices and Institutionalization of DRM Office

### **C. Risk Assessment and Early Warning**

- 1. Hazards Mapping and Assessment for Effective Community-based Disaster Management (READY Project) (UNDP/AusAID/ADB/Department of Science and Technology (DOST)/Department of Environment and Natural Resources (DENR)/National Mapping and Resource Information Authority (NAMRIA) (June 2006 to May 2011) - covers 27 high-risk provinces to natural hazards, with three main components:
  - a. Multi-hazard identification and assessment
  - b. Community-Based Disaster Preparedness
  - c. Initiate the mainstreaming of risk reduction into the local development planning process
- 2. National Disaster Coordinating Council – Collective Strengthening of Community Awareness to Natural Disasters (NDCC-CSCAND) (AusAID–DFAT/Philippine Institute of Volcanology and Seismology (PHIVOLCS)/Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)/NAMRIA/Mines and Geosciences Bureau (MGB-DENR))
- 3. Government of the Philippines (GoP) Harmonization and Prioritization of Hazard

Mapping to complement the efforts of READY Project - covers additional 16 provinces

4. Climate Change Adaptation Project (Spanish Government/World Bank/DENR) – a study to establish the impact of climate change in the agriculture sector in two pilot areas (Bicol Region and Region 2).

#### **D. Knowledge Management and Education**

1. Development of a web-based GLIDE associated national disaster event database under the CALAMIDAT.ph – a collaborative project with the ADRC
2. NDCC–WBI web-based DRM Courses
3. Priority Implementation Project on “Mainstreaming Disaster Risk Reduction into the Education Sector and Development in the Philippines” (MDRD-EDU) (ADPC/UNDP/ECHO)

Phase I: January 2007 - April 2008

Accomplishments: 1) Development of DRM modules for secondary school curriculum, 2) Training of teachers (ToT) on the use of the modules, 3) Pilot-testing of the DRM module in six (6) schools in the Philippines, and, 4) Revision of the DRM module according to the findings in the pilot-testing.

A total of 1,020 students and 75 teachers, regional educational supervisors, and officers have benefited from the project.

Phase II: November 2008 - December 2009

The second phase of the MDRD-EDU Project aims to provide “Support to the Implementation of the HFA through MDRD into Development Planning and Implementation: Advocacy and Pilot Project Implementation in the Education Sector in Three Southeast Asian Regional Consultative Committee (RCC) Member Countries”.

Phase II also intends to institutionalize the DRR modules and the ToT module (developed in Phase I) in the national curriculum and in the teachers training system.

4. Stepping up of Department of Education’s (DepED’s) efforts on production and distribution of educational multi-media on natural and man-made hazards
5. Continuous conduct of hazard-specific multi-sectoral Contingency Planning Workshops
6. Enhancing effective incident management through conduct of trainings on Incident Command System (ICS)
7. Introduction of the ASEAN Rapid Damage Assessment and Needs Analysis (RDANA) Training for effective response
8. Continuous conduct of Collapsed Structure Search and Rescue (CSSR) and Medical First Responders (MFR) trainings under the Program for Enhancement of

Emergency Response (PEER) Project (National Society for Earthquake Technology (NSET)/USAID)

9. Conduct of Nationwide Water Search and Rescue (WASAR) Training for local government and volunteer rescue groups in order to enhance their response capacity for flooding and landslide incidents
10. Capacity-building of health personnel through skills development courses (e.g. Basic Life Support) and management courses (e.g. Hospital Preparedness for Emergency (HOPE) Course)
11. PHIVOLCS, PAGASA, and DENR continue to hold Seminars/Trainings on Seismic and Hydrological-Meteorological Hazards Awareness and Preparedness

#### **E. Risk Management and Vulnerability Reduction**

1. Mainstreaming Disaster Risk Management in Sub-National Development and Land Use/Physical Planning in the Philippines (ECHO/UNDP/National Economic and Development Authority (NEDA)
  - a. Formulation of Guidelines
  - b. Formulation of DRR-enhanced plans (Region 1 and Surigao Del Norte)
  - c. Documentation of the application of the risk assessment methodology (Leyte, Southern Leyte, Surigao Del Sur, and Real, Infanta, and General Nakar Municipalities in Quezon Province (REINA areas)
  - d. Training of 400 regional and provincial land-use planners nationwide
2. Priority Implementation Project on Mainstreaming DRR in the Infrastructure Sector (ADPC/Department of Public Works and Highways (DPWH) by incorporating Risk Impact Assessment procedures into planning process before construction of new roads and bridges
3. Mines and Geosciences Bureau - Department of Environment and Natural Resources (MGB-DENR) carries out the National Geo-hazards Mapping; Suitability Assessment of Relocation Sites; and Environmental Impact Assessment
4. Implementation of the “Be Better, Build Better” program that envisions the construction of innovative school buildings that are not only conducive for learning but also safe from disasters

#### **F. Disaster Preparedness**

1. Update on the Implementation of the NDCC Four-Point Plan of Action on Disaster Preparedness (Please refer to page 25 of this document)
2. Annual Observance of the National Disaster Consciousness Month (NDCM) (July) – as per Executive Order No. 137 declaration, dated 10 August 1999
3. Search for Excellence in Disaster Management and Humanitarian Assistance

(Gawad KALASAG) – this search aims to recognize outstanding performance of Local Disaster Coordinating Councils (DCCs) (Provincial, Cities, Municipalities, and Barangays), private/volunteer organizations, local and national non-government organizations (NGOs) providing humanitarian assistance, and government responders (GOERs), as major stakeholders and partners in the implementation of disaster management programs and activities. It also aims to recognize individuals, groups, or institutions that have shown extraordinary courage, heroism, self-sacrifice, and bravery against all odds in times of natural and human-made disasters and emergencies.

4. National campaign to “Keep the Philippines Bird Flu Free” through the National Avian Influenza Task Force (NAITF) and the civil society organizations led “AI/PI Network”.
5. Institutionalization of the Cluster Approach in the Philippine Disaster Management System

## VIII. ADRC Counterpart

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**References:**

<http://www.gov.ph> - The Official Government Portal of the Republic of the Philippines

<http://www.pagasa.dost.gov.ph/> - official website of PAGASA

<http://ndcc.gov.ph/home/> - official website of the NDCC

<http://www.ifrc.org/> - International Federation of the Red Cross and Red Crescent Societies (IFRC) website

<http://www.reliefweb.int/rw/dbc.nsf/doc100?OpenForm> – ReliefWeb site

<http://www.humanitarianinfo.org/iasc/> - IASC website

<http://www.glidenumbers.net/glide/public/search/search.jsp> - GLIDE website

<http://www.cdp.org.ph/wp-content/uploads/2009/10/drrmbill-primer.pdf> - Center for Disaster Preparedness (CDP) document

Country Paper on DRM in the Philippines by Ms. Lenie D. Alegre, OCD

3CD City Profiles Series - Current Working Document- **Metropolitan Manila, The Philippines**  
Metropolitan Manila, The Philippines Disaster Risk Management Profile

PAGASA's Update on the 4-Point Plan of Action on Capabilities by Dr. Prisco D. Nilo, Administrator, PAGASA

Draft Bill/Act "Philippine Disaster Risk Reduction, Management and Recovery Act of 2009"

World Bank Report of Mr. Murallos

NDCC Circular No. 05 s-2007 as amended on NDCC Memorandum No. 4, s-2008 and Memorandum No. 12 s-2008 on the "Institutionalization of the Cluster Approach in the Philippine Disaster Management System, Designation of Cluster Leads and their Terms of Reference at the National, Regional, and Provincial Level"