End of Course Project-
Philippines

Submitted by:
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1. Background Information on Philippines

Population and size:

The 2001 estimates show the Philippine population is 77.2 million, of which 59.3 % is urban population. With an annual population growth rate of around 1.6%, the population is expected to reach 96.3 million by 2015. (The last census was done in May 2000)

Source: UNDP Human Development Report 2003.

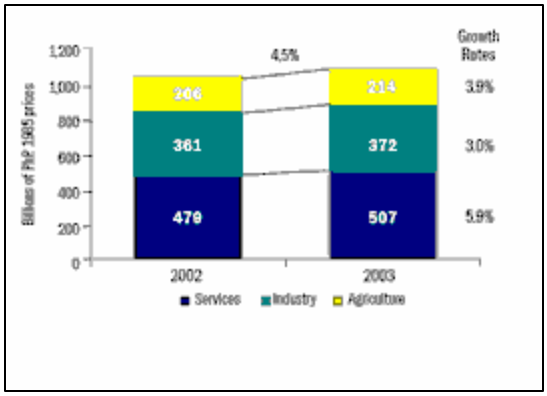
Geography and Climate:

The Philippines is an archipelago of 7,107 islands with a total land area of 300,000 square kilometers, lying between the South China Sea and the Philippine Sea in Southeast Asia.. The geographical coordinates of this Southeast Asian country are 13 00 North, 122 00 East. The terrain is mostly mountains with narrow to extensive coastal lowlands. The Philippines has a tropical marine climate dominated by a rainy season and a dry season. The southwest monsoon brings heavy rains to most of the archipelago from May to October, whereas the northeast monsoon brings cooler and drier air from December to February. Temperatures vary from 25°C to 35 °C.

Source: CIA World Fact Book 2003

Economic and social characteristics:

The Philippines is a developing economy with per capita GDP (PPP) of US dollars 5000. The 2001 GDP (gross domestic product) was 71.4 billion US dollars and PPP(purchasing power parity) was 301.1 billion US dollars. In 2004, the economy is said to have grown at 6.2% with a breakdown for agriculture, industry and services as 5.1, 5.5 and 7.1 percent respectively. Though growth has been good, some of the negative factors influencing the Philippine economy include: high budget deficit and high foreign debt.



Source: National economic development board & National Statistical Coordination Board

Vulnerabilities to natural disasters:

The Philippines is a highly disaster prone country, as it is situated in the Pacific Ring of fire. The country is mainly subjected to typhoons, landslides, active volcanoes, earthquakes and tsunamis. The table below summarizes information on the main natural disasters affecting the Philippines in the past 100 years (1905-2004).

	# of Events	Killed	Injured	Homeless	Affected	Total Affected	DamageUS (000's)
Drought	7	8	0	0	4,185,050	4,185,050	64,453
Ave. per event		1	0	0	597,864	597,864	9,208
Earthquake	21	9,580	13,051	3,985	2,205,841	2,222,877	843,091
Ave. per event		456	622	190	105,040	105,851	40,147
Epidemic	12	488	0	0	13,957	13,957	0
Ave. per event		41	0	0	1,163	1,163	0
Flood	63	2,661	570	500,841	9,930,999	10,432,410	431,231
Ave. per event		42	9	7,950	157,635	165,594	6,845
Insect Infestation	2	0	0	0	200	200	925
Ave. per event		0	0	0	100	100	463
Slides	22	1,461	299	23,012	272,663	295,974	31,000
Ave. per event		66	14	1,046	12,394	13,453	1,409
Volcano	19	2,996	1,188	79,300	1,461,030	1,541,518	227,959
Ave. per event		158	63	4,174	76,896	81,133	11,998
Wave / Surge	6	69	0	5,250	1,012	6,262	2,330
Ave. per event		12	0	875	169	1,044	388
Wild Fires	1	2	0	0	300	300	0
Ave. per event		2	0	0	300	300	0
Wind Storm	218	33,563	26,451	8,170,412	62,255,186	70,452,049	5,770,739
Ave. per event		154	121	37,479	285,574	323,175	26,471

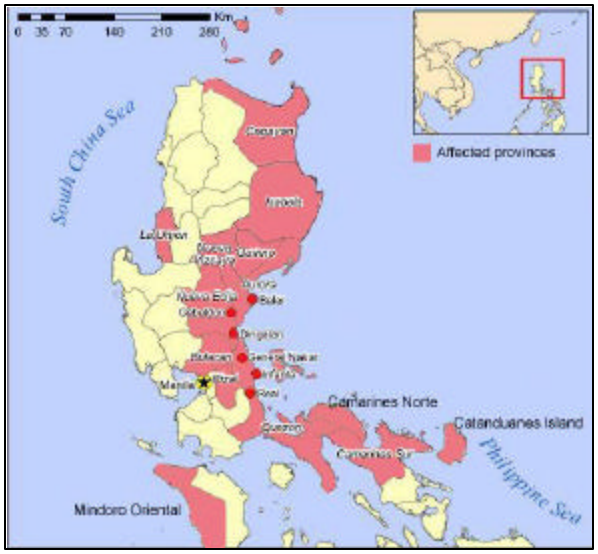
Source:"EM-DAT: The OFDA/CRED International Disaster Database,
www.em-dat.net - Université catholique de Louvain - Brussels - Belgium"

Typhoons/windstorms are the most common hazard as well as disaster, in terms of people killed, affected and economic losses, in the Philippines. These strong winds affect the coastlines during the rainy season, from May to December.

2) Brief Description of the November 2004 typhoon disaster[1]

During November-December 2004, a series of storms in the Philippines provoked floods and landslides in northern and eastern provinces. The development of the storms was as follows:

- Typhoon "Unding" entered the Philippines on 14 November 2004 and remained stationary over the country for a week with sustained winds up to 140 km/h, which



[1] Map courtesy OCHA.

affected the northern and southern portions of Luzon. The worst hit area of this typhoon was the province of Mindoro Oriental where over 2,000 houses were destroyed. There were 45 sea mishaps recorded, series of landslides, flooding, and power interruptions.

- Between 22 to 30 November, tropical storm "Violeta" and tropical depression "Winnie" brought torrential rains in eastern Luzon which caused hundreds of landslides in the upland areas and brought cascading mud and debris to the towns of Infanta, Real, and Nakar, province of Quezon. Almost 80 percent of the infrastructure of these three towns was damaged, which were also cut off from Manila by landslides and collapsed bridges. In the adjacent Aurora province, remote villages were isolated by floods and landslides. Other provinces affected were Camarines Sur, Camarines Norte and Catanduanes.
- The fourth weather disturbance in the series, typhoon "Yoyong", with 220-240 kilometer per hour winds brought comparatively little further damage and passed swiftly through the Philippines.

The latest official figures that the National Disaster Coordinating Committee released 17 January 2005 gives a picture of:

a) The extent of damage:

Dead	1,068
Injured	1,163
Missing	553
Families affected	731,730
People affected	3,717,499
People displaced	265,003
Houses totally destroyed	42,119
Houses partially destroyed	146,142
Road networks disrupted	11[2]
Bridges rendered impassable	25[3]

b) The cost of damage to properties:

Agriculture (Palay, corn, vegetables, mango, banana, abaca, coconut, fisheries, livestock, irrigation, & agri facilities): Pesos 5,359.410 Million

Infrastructure (buildings, roads, bridges, and flood control projects): Pesos 1,687.526 Million

School facilities (buildings, desks, textbooks and equipment): Pesos 461.846 Million

Health facilities: Pesos 72.900 Million

Transmission lines: Pesos 34.3 Million

The National Disaster Coordinating Council and the Department of Social Welfare and Development have accounted for a total donation of over Pesos 186 Million from international and local donors.

3) National Disaster Management System

[2] NDCC Report of 9 December 2004

[3] NDCC Report of 9 December 2004

Overview

Presidential decree (PD) 1566, which was issued in June1978, is the basis for the country's disaster management system. It provided for the creation of the National Disaster Coordinating Council (NDCC), the highest policy making, coordinating and supervising body at the national level for disaster management in the country. The NDCC advises the president on the status of national disaster preparedness and management plans, and recommends the declaration of state of calamity and the release of the national calamity fund. Its members are secretaries of the main ministries, and the chairman is the secretary of national defense. The Office of Civil Defense is the operating arm and secretariat of the NDCC, and maintains and operates its disaster management center. Below the national DCC, there are also 17 regional DCCs, one for each political subdivision, also 80 provincial DCCs, 113 city DCCs, and 1,496 municipal ones. The national DM system focuses primarily on emergency response. The entire DM system is integrated within the different administrative levels, centralized and decentralized for different functions, and is multi-sectored. Different agencies represented in the DCCs (at all levels):

Department of National Defense	Chairs NDCC, convenes members & calls on government and private sector when need arises
Dept. of Public Works and Highways	restores destroyed public structures, such as water networks, roads, & bridges, provides equipment for rescue, relief and recovery
Dept of Interior & Local Government	Oversees organization of local DCCs, establishment of disaster operations center {DOCs} of all local governments, & training of DCC members
Dept of Transportation & Communication	restores destroyed communication & transportation facilities such as railroads & vertical structures, organizes national transport services
Philippine Atmospheric, Geophysical & Astronomical Administration {PAGASA}	watches on environmental conditions to prepare daily weather forecasts, typhoon watches and flood outlooks.
Philippine Institute of Volcanology and Seismology (PHIVOLCS)	Issues advisories on earthquakes, volcanic activity and tsunamis; identify appropriate evacuation sites and disaster response groups
Philippine Nuclear Research Institute	Issues advisories on radioactive fallout, contamination and radiation incidents; organizes disaster control groups and reaction teams
Dept. of Social Welfare & Development	extends relief assistance and social services to victims and provides rehabilitation
Dept of Agriculture	undertakes surveys in disaster prone areas and disaster areas to determine extent of damage of agricultural crops, livestock and fisheries; technical assistance to disaster victims
Department of Education, Culture and Sports	provides assistance in public education and campaigns regarding disaster preparedness, prevention and mitigation through integration of relevant subjects in school curriculum; make school buildings available as evacuation centers; train teachers in disaster preparedness
Department of Finance	Issues rules & regulations regarding funding by local governments of DCC requirements; with DBM issues rules and regulations on preparation of local government budgets and the utilization of the 5% reserve for disaster operations
Dept of Labor & Employment	organizes and trains Disaster Control Groups in factories and industrial complexes; provides emergency employment opportunities to disaster victims and implement industrial civil defense programs and measures
Dept of Trade and Industry	maintains level of commodity prices during emergencies and organize disaster response teams in large commercial and recreational premises

Dept of Health	provides health services during emergencies and organize response teams; also issue public health warning notices
Dept of Environment and Natural Resources	Responsible for reforestation and control of areas prone to flood, landslide, mudflow and ground subsidence; also technical assistance on environmental pollution
Dept of Tourism	organizes and trains disaster management teams in hotels, pension houses, restaurants and other tourist-oriented facilities
Dept of Budget and Management	Releases funds required by departments for disaster operations
Philippine Information Agency	provides public information service through dissemination of mitigation and preparedness measures
Philippine National Red Cross	conducts disaster leadership training courses, assist in DCC training at all levels; help with emergency relief
National Housing Authority	assessments of housing requirements of displaced persons; provision of temporary housing and rebuilding of destroyed areas
Armed Forces of the Philippines	Responsible for provision of security in disaster areas and assistance in reconstruction; provides transportation for relief supplies and personnel
National Economic Development Authority	Responsible for determination and analysis of effects of disasters on socio-economic programs, and the development of damage assessment schemes
Office of Civil Defense	Coordinates all NDCC member agencies activities, acts as Secretariat to the NDCC

Though the Philippine National Red Cross is the only non-governmental member of the DCCs, the DCCs invite other NGOs and private organizations to forge partnerships, though primarily on response and rehabilitation activities.

The National Calamities and Preparedness Plan (NCDPP) or Strategy, prepared by the Office of Civil Defense (OCD), outlines the organization and division of responsibilities of the local and central government.

Organisation:

The central government with its two-tiers – national and regional (covering 17 regions) – has its National and Regional disaster coordinating councils, chaired by the Secretary of National Defense and Regional Director of Philippine National Police respectively. Local governments, starting from the smallest administrative unit- the village or *barangay*, to municipality, to province, all have DCCs. The head of the local government is the chairman of the DCCs, thus, local chief executives are finally responsible for the DM system of their government.

Responsibilities:

For all preparedness activities, the DM system is more bottom-up. The local government in the municipalities organizes its training activities, drills etc with non-government and private counterparts. As per the NCDPP "While emergency preparedness is a joint responsibility of the national and local governments, its effectiveness will depend largely on the skills and resources and the involvement of private organizations and the general public in the area of disasters. Regular exercises and drills will be conducted at all levels to enhance the people's reaction capability and ensure precision and spontaneity in responding to emergencies."

During emergencies, the center takes charge of releasing the national calamity funds, sending in additional services/assistance, coordinating the operations and meetings (a coercive approach). The lower level DCCs course their official communications on the situation through the next higher DCCs. However, when immediate action is needed, communications may be sent directly to the NDCC, keeping the next higher DCC informed. During NDCC or RDCC meetings, a representative of the local administrative unit, usually the chief executive, is invited to present issues and report on the situation. (See Annex 1 for flowchart)

With regards risk transfer, some government facilities include:
Government Service Insurance System (GSIS)- It provides a facility for local governments to avail low insurance premiums for its major facility and equipment for preparation of unforeseen events. It also provides loans and other low premium insurance packages for its members from the government sector.
Social Security System- This is the counterpart of the GSIS for the private sector companies and employees.
National Calamity Fund and Local Calamity Fund- The National Calamity Fund (NCF) is the center's primary fund for responding to disasters. It is intended to supplement and complement local calamity funds {5% of the local government's annual income}. Priority is given: firstly for urgent and emergency relief operations and emergency rehabilitation of vital public infrastructure and lifelines damaged by calamities; secondly, for the rehabilitation and reconstruction of other damaged public infrastructures; and thirdly, for pre-disaster activities outside the regular budgets of line agencies and proposed capital expenditures for pre-disaster operation. Most of the applications for NCF go to the relatively low income local governments for their response operations. (For flowchart of release of funds see Annex 2)
According to PD 477, two percent of the budgetary reserve should be allocated to the NCF. In reality, appropriations to the NCF have been far lower and, moreover, have gradually declined in recent years.

The risk identification, prevention and mitigation efforts take place by local agencies and specialized national agencies (cooperative approach). For activities such as hazard and risk mapping, assistance of national resources, such as PHILVOLCs and PAGASA, are requested by local agencies, such as community based organizations and other NGOs. Some local governments are also involved in these initiatives.

4) Strengths and Weaknesses of the National Disaster Management System

Strengths

1. Decentralised DM system – The presence of Disaster Coordinating Councils at the national, regional, provincial, city/municipal to village *(barangay)* level helps with initiating activities at different levels. There is greater ownership at the local government and community level. Following the typhoons, some community based organizations in

Infanta municipality, teamed up with the local government and NGOs in participating in a risk assessment.

2. Multisectoral DM system- The disaster coordinating committees include in their membership ministries that have a role to play in all phases of disaster management, from risk reduction to disaster recovery.

3. Strong early warning system – The government early warning agencies, PHILVOLCS and PAGASA are in close communication with the local disaster operation centers, communities and government and non-government agencies. The disaster bulletins are regularly shared, by email, fax, SMS, and phone. Alerts aired on a local radio-club and other broadcasting networks. In November 2004, the agencies were warned about the imminent typhoons. Yet, the disaster toll was high. This could be due to insufficient response, poor influence on local government legislation, the large number of landslides triggered, and inaccessibility.

Weaknesses

1. The Presidential Decree 1556 does not sufficiently encompass risk reduction and prevention aspects of the disaster risk management framework. This has an impact on the priorities and activities of the local government. In some poorer municipalities, such as General Nakkar, which was badly affected by landslides, the government does not see disaster prevention a means of poverty reduction. Immediate needs in the municipalities are given more importance, versus activities that promote of a culture of prevention.

2. The National Calamity Fund is mostly used for post-disaster activities, rather than risk reduction activities. Thus, the onus of risk reduction lies more with local governments, as they have to make special budgetary provisions for prevention activities.

3. Despite significant exposure to natural disasters, risk transfer instruments and insurance penetration in the Philippines is low. When disaster strikes, the cost of natural disasters is largely borne by government and homeowners when disaster strikes.

4. Poor coordination within the DM system- In many provinces and municipalities, the DCCs do not meet regularly, and agencies have poor communication, therefore, there is poor follow up system on ongoing activities. Delays in the repairs of public water sources and some roads are due to this poor coordination between departments.

5. Law enforcement is also another problem seen in the Philippines. A disaster prone country, laws relating to environmental preservation should be strongly enacted. The total log-ban prevents any private players/individuals from logging activities without an agreement with the dept. of agriculture. However, due to poor enforcement, and denudation of the slopes of hills in Quezon, the typhoons lead to many landslides and huge amounts of mud and debris in the cities below.

Clearing of mud from the landslides one month after

5) Recommendations for Improvement

1. Revision to the legislation on Disaster management- In order to have a more proactive outlook on disaster risk management, there is a need for updating the existing laws. The current Presidential Decree 1556 does not incorporate the risk management framework. Therefore, in many cases, as during the typhoons, the approach is reactive. Risk reduction initiatives are taken up by interested private and civil society agencies and some proactive local governments.

2. Funds for prevention and preparedness- The existing government provisions, the National and Local Calamity Funds, do not adequately cover the pre-disaster phase activities. Due to the lack of funds, local governments do not invest in the prevention of future disasters.

3. Integration of disaster management to economic development – The national disaster system should be integrated with overall development goals, in order to maintain political interest in the system. When the national government strategy ties disaster reduction to long-term economic development, problems of funding for risk reduction would be addressed.

4. Risk analysis for disaster prone provinces- There is a need to have hazard, vulnerability and capacity assessments for disaster prone provinces. Where such assessments are available, they should be used by the local government and other local actors for contingency planning, prevention, risk reduction and preparedness activities. The typhoon affected provinces were known to be hazard prone. If the risk analyses were available and utilized through community based disaster risk management, the losses would have been much lesser.

5. Close coordination between different agencies of the disaster coordinating councils- Information should be shared between agencies, and it should lead to necessary action. For example, results of hazard mapping exercises by PAGASA should result in necessary

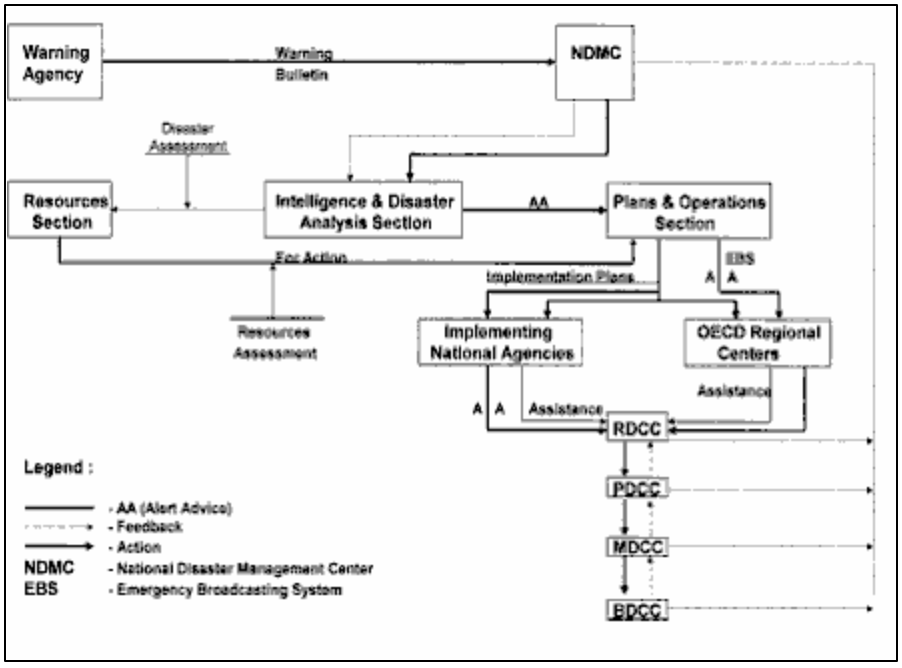
action by the local chief executive and counterparts of the department of environment and natural resources (for enforcement on land use), department of public works and highways (for site selection/planning), department of interior (coordinating the DCC), department of national defense (for preparedness), the private sector and the communities (for risk reduction and education).

Annexes

Annex 1

Lines of communication from the OCD in the event of a disaster

Source: Office of Civil Defense



Annex 2

Flow of National calamity funds