LESSONS LEART ON TYPHOONS IN THE PHILIPPINES

(METRO MANILA, CAGAYAN DE ORO AND ILIGAN)
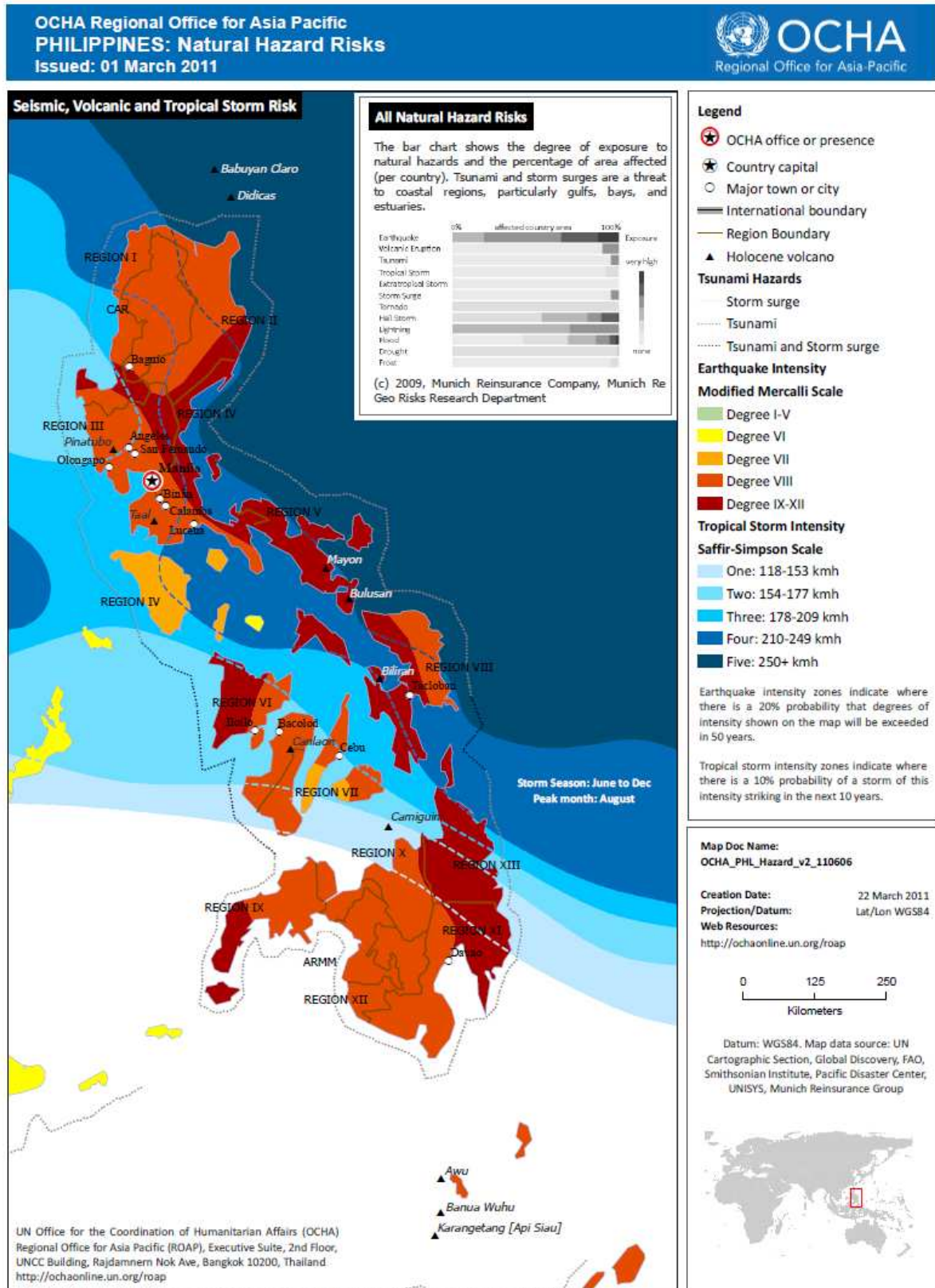
François Grünewald, team leader

Béatrice Boyer, urban specialist and architect

Hazard Map of the Philippines

CHAPTER 1

KEY LESSONS LEARNT FROM EVALUATIONS AFTER TYPHOONS IN THE PHILIPPINES

As part of the post disaster Teal Time Evaluation in urban settings, the disasters that affected Northern Mindanao in 201, a series of key lessons were identified. They were supported by a review of the impact of the floods that it Manila in 2009 and consecutive aid mobilization that followed. This conducted to an two prong analysis in order to take into account the variety of situations potentially affecting the Filipino Archipelago.

- Floods in Megapolis, especially these long lasting floods which challenge urban planning as much as the emergency response capacity;

- Floods in smaller urban contexts, where small to medium scale funds are required but when speed is the essence of the matter. The utilization of DG ECHO's Small Scale disaster instrument could there be observed.

Philippines: a land of risks

With its double exposure to geosismic events (the Philippines are located on the Belt of Fire of the Pacific) and hydro-climatic hazards –the Philippines are part of the Typhoon belt), the Philippines is one of the areas on earth the most exposed to natural and man-made disasters. As an archipelago, with a high speed urbanization in most of its coastal areas, it is in addition high exposed to the consequences of climate change.

Tropical Cyclones, monsoon rains, and fires are those hazards that extol heavy damage yearly. Earthquakes, while lesser in frequency, have also caused damages and loss of lives in the city over the past 50 years. The magnitude scale = 7.8 Luzon earthquake in July 16, 1990 devastated northern Luzon and created major ground shaking, minor damage to buildings and induce changes in altitude (subsidence) in reclaimed areas in Metro Manila. The regular occurrence of volcano eruptions keeps the Philippines on the forefront of areas at risk.

Between 15 and 25 tropical cyclones or storms enter the Philippine Area Of Responsibility in a typical year and of these usually 6 to 9 make landfall. The Northern part of the archipelago is by far the most exposed. Typhoons are less common in the southern part. The magnitude of the disaster is attributed to the above normal volume of rainfall brought by Typhoons Ketsana in 2009 and Washi (respectively known locally as Ondoi and Sendong), degradation of the environment due to logging and plantation activities in upstream areas (Luzon province for Ondoi, upland areas for Sendong), urban expansion in wetland areas and along river courses, and the lack of preparedness among the people and local government units. Local governments units, national government agencies, private organizations, local and international NGOs and UN agencies have mobilized to respond to the disaster. The magnitude of the disaster has overwhelmed local capacity and the Philippine Government's appeal for international assistance for the two instances.

A whole society involvement

Faced by this high diversity of disaster and their high frequency, the Philippines have developed a sophisticated mechanism to deal with them and a vivid involvement of the civil society in disaster preparedness and response.

The system to respond to disaster in the Philippines is first of all strongly incorporated with the legal system. The Republic Act 101211 of 27 July, 2009 is last version of the disaster law which allocates roles and responsibility to all levels of the response pyramid. It promotes an holistic disaster risk reduction and management which should be comprehensive and proactive, rather than focusing only on response (reactive approach). The Republic Act 101211 also articulates the respective roles of the central, regional, municipal/city levels.

The disaster management responsibilities at all level always comprise:

- **Disaster Preparedness** through Public Awareness, Education, Planning, and Drills and Demonstrations

- **Emergency Response Capacity-Building** through organization and training of disaster control groups, response planning and rehearsals, institutionalization of emergency response network, and development of protocols and standards

- **Disaster Control** through the provision of essential services to affected communities, mobilization of emergency resource and coordination to evacuation, search, rescue, recovery, and relief operations **Disaster Prevention and Mitigation** through studies, researches and hazards and disaster information dissemination; Warning; evacuation of people from risk areas, formulation of policies, standards, rules and regulations; and structures inspections and retrofitting

- **Rehabilitation and Recovery Assistance** through financial support and technical assistance.

A specific issue is alert: Tropical cyclones entering the Philippines are given a local name by the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), which is in charge of dispatching public storm signal warnings through the medias, the LGU (especially office of mayors) as deemed necessary.

Public Storm Warning Signals

Signal #1 *winds of 30–60 km/h (20-35 mph) are expected to occur within 36 hours*
Signal #2 *winds of 60–100 km/h (40-65 mph) are expected to occur within 24 hours*
Signal #3 *winds of 100–185 km/h, (65-115 mph) are expected to occur within 18 hours.*
Signal #4 *winds of at least 185 km/h, (115 mph) are expected to occur within 12 hours.*

In addition to PAGASA, weather related risks are monitored by different other mechanisms:

The devolution of a high responsibility in disaster management to Local Government Units (LGU) is one area where politicization of resource allocations hinders most the development of balanced and even locally centered disaster prevention and response operations.

The critical role of the Municipal/city authority is to be reemphased. If in Iligan, the City disaster management team was mobilized at the alert stage even before the typhoon made its landfall, it was by far not the case in CDP, leading to delays and inconsistency in the response. The barangay is the lowest political organization in the Philippines and is primarily tasked with addressing management concerns within their geographical jurisdiction as stipulated in the national strategy. Each city or municipalities is composed of several barangays.

In cases wherein the magnitude of disasters goes beyond the capacity of the community resources, the LGU takes over their responsibility or provides the necessary support. Politics is never very far in the Philippines. Political siding, being with the right party, makes all the difference in resource allocation and political support. It can also affect aid distribution at the sub area level. Training of Mayors and municipal councils on humanitarian principles still is to be done. When a disaster triggered by extreme or even less extreme natural event takes place in an area where conflict is either just below the surface or happening fully fledged in nearby areas, specific attention has to be paid so humanitarian aid does not fuel the conflict, but , if possible, contribute to alleviate it.

Civil Society groups such as Citizen Disaster Response Centre (CDRC) and many National or local NGO are as well very involved in disaster prevention (for instance through the "stop illegal logging" campaign) or in the response through very dynamic networks of volunteers.

The Philippino Red Cross is also a key actor both because of its strong decentralized capacity but also thanks to the international support it can receive rapidly from the International Red Cross and Red Crescent movement.

Improved coordinations

Two institutions play a vital role in the response coordination.

DSWD-DROMIC

- The DSWD's Disaster Response Operations Monitoring and information Center (DROMIC) monitors the affected areas, populations and displacement in the flood-affected municipalities.

NDRRMC

- The National Disaster Risk Reduction and Management Council (NDRRMC) monitors the impact of the flooding as a result of the heavy rains brought about by climatic events (see: www.ndcc.gov.ph)

There have been considerable progresses in the way the international and the Filipino systems collaborate to respond to the frequent occurrence of disasters in the Philippines. From the relatively chaotic Ondoi response to the more orderly Sendong one, some key features have emerged. In the most part of Metro Manila, there are now alert systems, based on a 3 phase mechanisms (alert, early warning and evacuation warning). Part f the coastal area is becoming more protected. There is a clear understanding at the highest level of the Authorities that an insufficiently efficient and badly coordinated response is always paid cash on the political front. There are still opportunities to improve it during the early days of the operations, when the request from the government for international help is still in the pipeline. Inefficient mechanisms are still in place, such as the not yet merged food and livelihoods clusters.

The importance of the civil society networks to support the national and local disaster management institutions is essential and has proved absolutely critical in the period ranging from a few hours into the disaster to a month after it.

Key recommadations

On the international side there are a few issues to raise:

Pre disaster alert is a must. In Metro Manila, the residents were caught unaware by Typhoon Ondoi. The alert system did not function much for Sendong, even if in Iligan, rescue teams were in position since the end of the afternoon.

> ➔ **Alert systems should be in place and evacuation exercises should be practice regularly**

Evacuees in evacuation centres are not IDP. They are often living a few hundred meters from their former houses and all their networks and pull of attraction are still there. Their urban culture makes them specific. Treating them and calling them IDP triggers a "assistance reflex" which can be quite detrimental to their own resilience and capacities.

Managing evacuation centres in urban settings is not managing camps. The whole CCCM system, including the DTM is by and large irrelevant due to the fluidity of the situations, the mobility of the populations and temporary nature of these EC.

> ➔ **The use of the classical IDP category in urban settings induces fault situation analysis and inappropriate response mechanisms. Evacuees should be treated as urban residents having sough safe event fro a temporary short period.**

Priority should be given to reconstruction and rehabilitation. The clarification on the potentialities offered by this area, clearly uncovered by the ECHO supported REACH-ACTED study underlines that this should get a high priority, rather than having all the attention and resources drawn into the relocation process and its temporary site/transitional shelter paradigm.

Legal issues linked to forensic medicine and management o dead bodies, but also on people's registration and reproduction of identity papers, land, property and housing documents are crucial issues to manage properly. The initiative of the Protection cluster to field in a person to look into this issue should be commended.

Relocation of affected people outside of their areas of origin should be the last option, when all the others have been explored. In case it is deemed necessary, enough space inside and outside the houses should be ensured. Specific attention should be given to livelihood opportunities. Otherwise, as proved in many other contexts and as already ongoing in post Ondoi relocation sites in Laguna and Antipolo areas, the relocation process will not be sustainable and people will move back to the city system.

> ➔ **All the measures that could limit the need to relocate people far from their areas and their livelihood should be given top priority.**

DRR measures are necessary, as long as proper risk analysis is carried out. It was not the typhoon, nor the rain which killed most; it was the high speed wave of water carrying heavy logs. It was more a man made than a natural disaster and root causes have to be treated by DRR measures, not only the symptoms.

No build zone is as good as it does not create more complicated problems. In fact, in both Cagayan de Oro and Iligan, its size can be reduced to a minimum if proper river course management and embankment protection work would be done. This would be much more efficient and socially accepted than a full size NBZ which is likely not to function well and to create ma y social and livelihood problems.

➤ **Proper DRR measures are always the results of indepth situation and risk analysis. These analyses should be given enough weight in the decision making process, rather than the emotions.**

The future ?

In discussion with the head of the Office of Civil Defense (OCD), the "worth case scenario" was discussed: A large scale earthquake touching Metro Manila, inducing a tsunami in the middle of the Typhoon season. It was clear in the discussions that this scenario has been discussed in length within the concerned high level circles of the Filipino stakeholders. Yet neither the Command center of the OCD, nor even the premises where the OCD work and live are ready to stand a magnitude 7 earthquake. The only structure capacitated to subsist is the operation center of the Military Headquarter. This should be a source of concerns.

In many areas, the initial response (search and rescue, distribution of basic survival goods for the first few days) seems to have improved with the development of preparedness and alert systems. It however requires an clear involvement of the national and local institutions. When this is missing, as seen in Cagayan de Oro after Sendong, the situation remains chaotic for a longer period as urban set ups tend to demultiply the magnitude and complexity of problems.

Metro Manila and the Ondoi/Ketsana Typhoon

Metropolitan Manila is a Special Administrative Region in the Philippines. It is situated in the Island of Luzon and has a land areas of 636 square kilometers. Its population is approximately 10 million by the end of 2011. The population density is very high (around 15, 000 persons/km2) and growing by the day.

Metro Manila, the seat of political and economic activities of the country. is a unique government agency created by virtue of Republic Act No. 7924 and is attached to the office of the President of the Republic of Philippines. There are twelve (12) cities and five (5) municipalities or town comprising Metro Manila. Their respective Local Government Units (LGUs) headed by an elected Mayor, administer the affairs of these cities and municipalities. The Metropolitan Manila Development Authority (MMDA), on the other hand, formulates, coordinates, and implements programs that have metro-wide application and significance. For instance, Metro Manila invested in huge infrastructures like the Skyway and Metro Rail

Transit projects The MMDA With the rapidly growing population, high intensity economic activities and uncontrolled developments, environmental concerns specially, solid waste management and air population control has become major priorities. Yet there is a lot of diversity between the different cities of Metro Manila. While investments concentrated in the Makati and Ortigas financial centers, other parts of Metropolis suffer from poverty, joblessness and inadequate housing (including slums) and high risks due to the present of low laying areas along river courses.

In Metro-Manila, The MMDA is mandated to acts as the government's arm in coordinating disaster management activities in Metro Manila It is the lead agency of The Metropolitan Manila Disaster Coordinating Council (MMDCC). This is embodied in Presidential Decree 1566 that was promulgated on June 11, 1978 defining the Philippines Strategy to cope with disasters. The MMDCC, which is composed of representatives from various National Government Agencies and some of the private organizations operating in NCR, serves as the

conduit between the National Disaster Coordinating Council (NDCC) and Metro Manila LGUs insofar as management is concerned. This is in line with the principles of : (1) self-reliance, (2) mutual assistance, (3) resource complementation, and (4) multi-disciplinary approach.

Metro Manila is situated in the most at risk areas of the Philippines. It is straight in the most frequently used trajectory of typhoons and tropical storms. With the nearby internal lake (Laguna) and its river network, it frequently plays the role of

drainage plain for neighboring Luzon province. As a very flat and low laying area, it is subject to typhoon surge and tsunami. In addition, it seats right on one of the potentially active fault-line of the Filipino plaque on the Arc of Fire.

The Mines and Geosciences Bureau (MGB) is in charge of mapping risk. It produced a map locating the flood prone areas in Metro Manila (see map below). Areas shaded in blue will be affected by 50-100 year flood cycle while those in yellow will be affected by 2-5 year flood cycle.

In 2009, the Philippines were hit by an unprecedented series of typhoons. One of them, tropical Storm Ketsana, locally known as "Ondoy," swept across Metro Manila and parts of Central Luzon Saturday, 26 September 2009. Water coming from Luzon reached Manila rapidly and in the low lying areas close to the main river courses in the eastern part of the city, where slums were erected on the riverbanks, the waters rose so fast that large part of the slums were washed away.

In other parts of the main affected districts, the water rapidly invaded most of the street and made evacuation very difficult and many people had to stay on the roofs of their houses to avoid being swept away by the floods. About 80% of Manila was left underwater by the storm.
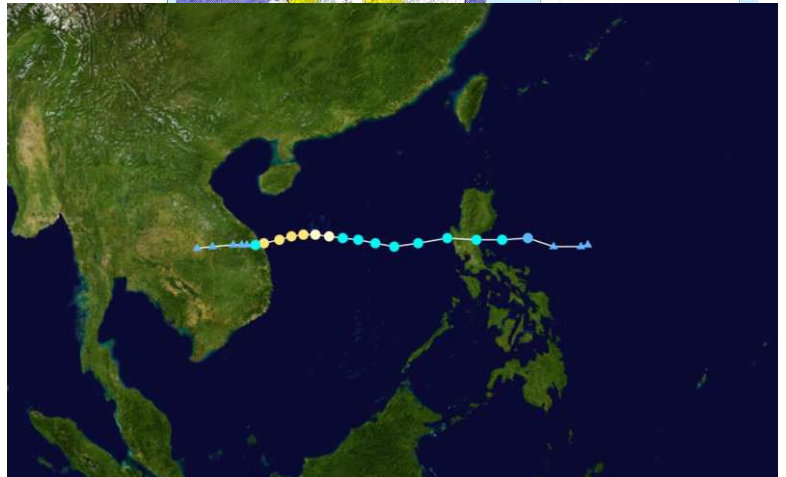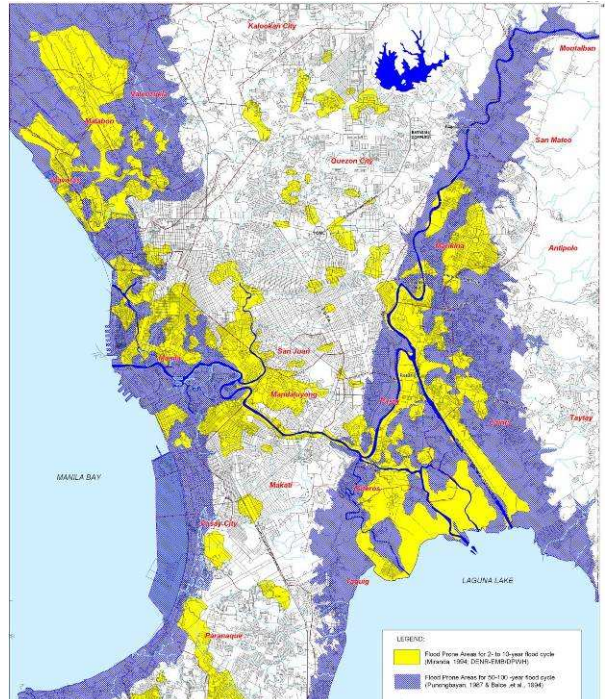
According to the Philippine National Disaster Coordinating Council (NDCC), as of 1 October, 277 people have been reported killed, and over two and a half million have been affected by Ketsana (1/6 of the overall population of the megapolis). The numbers of people affected, and of people displaced, have continued to rise as information has come in from previously inaccessible areas.

Cagayan de Oro, Iligan and the Washi/ Sendong typhoon

The City's history dates back many centuries before the Spaniards came to Cagayan when the territory was called Kalambagohan. Its main town, Himologan, was a hill-top fortress situated some eight kilometers south of the present Poblacion. At the time when the first Spanish missionaries came in 1622, the people of Cagayan had tributary relation to the Muslim Sultan of Maguindanao empire in Cotabato. However, the people had not embraced Islam and instead, many became Christians after sometime. The religious issue remains an extremely sensitive one in the area. When the Misamis area gained status of province in 1818, one of its four districts was the Partidos de Cagayan, which became in 1871 a town and was made permanent capital of Misamis. In 1883, the town became seat of the Spanish government in Mindanao for the provinces of Misamis Oriental, Misamis Occidental, Bukidnon, Lanao del Norte. Consequently, from a purely farming-fishing area, Cagayan emerged into a booming commerce and trade center. The war years in Cagayan were prompted by the presence of the Americans in 1898. The Americans were initially and successfully repulsed by the local forces led by Major Apolinar Velez at the historic battle of Macahambus in June 4, 1900. After the troubled years, peace finally brought back the economic activities to normal under the guidance of Americans. St. Augustine School, the forerunner of the present Xavier University and of Lourdes College, was inaugurated in 1928. On June 15, 1950 President Elpidio Quirino signed Republic Act No. 521, which granted the status of a chartered city to the municipality of Cagayan de Oro. Following these events, the socio-economic order underwent some far-reaching changes. Activities grew in scale and importance until it developed as the administrative center for the entire Northern Mindanao (Region X and XIII). Today, Cagayan de Oro is one of the fastest growing cities in the country and was declared a "Highly Urbanized City" by the Ministry of Local Government last November 22, 1983.

For long time this Southern part of the Philippines was believed to be immune from typhoon and large scale disaster. Tropical.Storm Washi, named Sendong by PAGASA entered the Philippine Area of Responsibility on December 15, 2011 and struck Mindanao's southeast coast (passing through Regions VI, VII, VIII, IX, X, XI and CARAGA) with winds gusting at 90 kilometers (55 miles) an hour. At least 20 provinces were placed under Typhoon Signal No. 2 and 16 areas under Signal No. 1. The worst hit areas are Regions IX (Zamboanga del Norte) and X (Cagayan de Oro City & Iligan City), where massive flooding occurred affecting several barangays located along major river systems.

TS Sendong was the 20th typhoon to hit the Philippines in 2011 and is considered one of the most devastating typhoons this year. In a period of 10 hours, about one month worth of rainfall poured down resulting to overflowing of rivers and flash floods in communities. The aftermath left 957 casualties and over 50,000 displaced at the height of the disaster in six regions. The worst hit areas are Cagayan De Oro City and Iligan City has an estimated 471,000 affected persons.

The analysis of the causes of the disaster is however important. Not that much a strong typhoon, but a lot of rain entering an area largely deforested by illegal and legal logging. With the practice of all actors f the logging sector is to bring the logs to the rivers so they could be easily transported, the river courses were full of trunks and logs when t he rain arrived. These logs created some dams which allow the river level to rise until the informal dam breaking point is reached.

When the dams broke down, the rain water was transformed into a high kinetic wave full of heavy logs which were transported at high speed downstream. When crossing inhabited areas, this phenomenon had an effect similar to the one of a tsunami.

The Geoscience division of the Mine and Geology Bureau had a map of the areas at risk of

flooding in the Cagayan de Oro area and the whole Misamis Oriental region. Areas at risk were clearly delineated on this map.
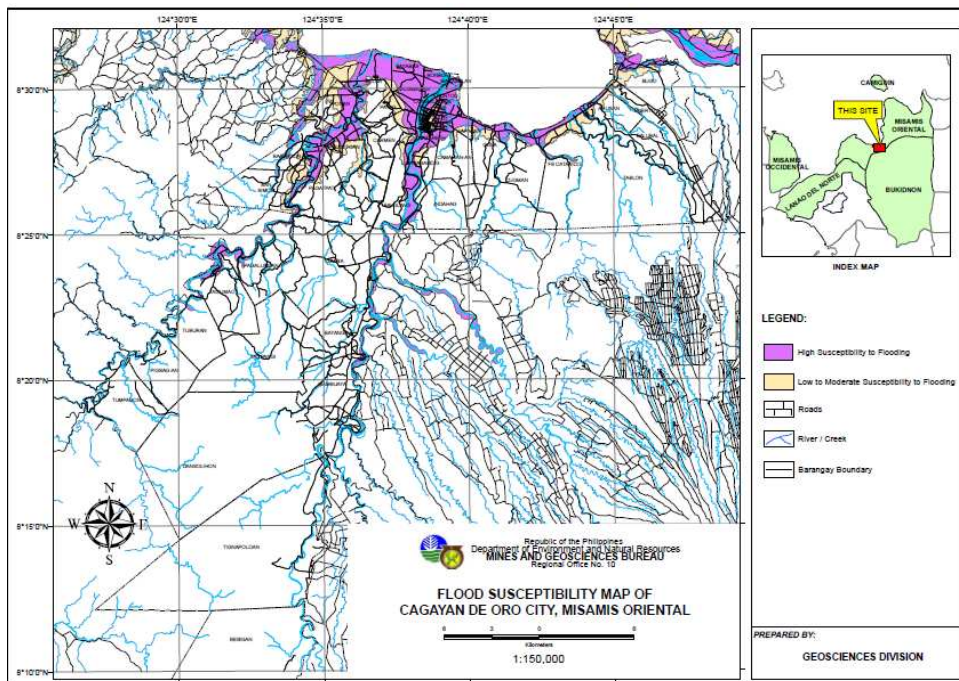
CHAPTER 2

DETAILLED ANALYSIS OF THE RESPONSES

---

1. Response to Ketsana/Ondoi

1.1. Immediate response

a) Local population and National Authorities

The fact that typhoon Ketsana/Ondoi impacted Metro Manila induced that the highest level of the State and of the National system were both respondent and victim. Government agencies responded swiftly to the storm, launching extensive search and rescue operations and releasing emergency relief stocks. However, the extensive damage caused by the floods meant that capacities of many local and national agencies have been exhausted. Rapidly, solidarity between neighbors became often a life line. Rescuers came with boats and ropes to evacuated people stranded on roofs to Evacuation centers (schools, gymnasiums, covered public and private places). Nearly 700.000 people were sheltered in 726 evacuation centres, with another 350,000 people receiving Government assistance outside them. A strong involvement of volunteers of all kinds (Philippino Red Cross, but also civil society networks) but also of the private sector resulted into the mobilization and distribution of essential relief goods: bottled water, food, blankets. Relief operations were slowed down by the magnitude of the area and the logistical difficulties to bring goods in a large part of the cities which remain under water for a few weeks. Many difficulties were encountered in the assessments, as data were lost with the destruction of the archives of many local institutions whose offices were under water.

b) United Nations system

Immediately after the request for international aid from the National Authorities was received by the UN Resident Coordinator, an UNDAC team was deployed to assist with the first phase of the assessments (Primary Scenario Definition), support the launch of the flash appeal (which was quite well funded) and support the initial coordination. At the time of the event, there was no OCHA office in country and the operations were initially managed by the regional office for Asia and the Pacific in Bangkok. Although funding was received promptly, OCHA was only able to establish an office two month and half after the disaster. It was understaffed, and therefore not very effective in managing the cluster system and the development of the revised flash appeal (by far less supported).

c) NGO

A lot of development NGO was present in the Philippines, working in agricultural projects in the provinces or on child issues, especially in Manila. The few humanitarian agencies were involved in dealing with the consequences of the armed conflict in Mindanao, although with more and more difficulties. The humanitarian agencies who deployed teams after the disaster functioned in a largely disconnected way from the local authorities.

d) Red cross movement

The Philippino Red Cross Society has a lot of experience in responding to disaster and has received over the years a lot of support from the International Committee of the Red Cross (ICRC) for the conflict area in the South and from the International Federation of the Red Cross and red Crescent Societies (IFRC) for disaster response. Its volunteers were on the frontline in almost all areas of Manila, in the establishment of the Evacuations centers (EC) and in the first distribution of relief items.

1.2. Post emergency: the difficulties linked to relocation and no build zone

While the initial response was done relatively well, despite all odds, the most complex issue is the post disaster phase. The government decided that people should not go back to the areas at risk on the riverine areas. Thousands of people were offered as only option to settle in relocation sites hours from Manila and their jobs such in B arangay San Jose and Gawad Calina in nearby Antipolo and Laguna provinces.

The consequences of this choice, even if it has certain legitimacy (do not send people back to at risk areas) are significant socially and economically. The population leaving in these relocation sites is either completely dependent of aid provided, or has to organize itself to return to their jobs (by renting a room or a house overthere).

Some of these sites are supported by the International Federation of the Red Cross, other by NGO such as Handicap International. In all of them situation is largely inadequate. These sites have been set up without much initial planning for services, drainage or management of waste water. Latrines had to be made with septic tanks at the request of the government. These sites are set up as temporary camps with high density while the idea behind was to create something that can become a bit durable and contribute to the decongestion of Metro Manila. In the HI supported camp, the design of the house is duplex, which raises issues on intimacy. The low quality of the wood and the active attacks of termites are raising question on the durability of the houses. The reality of these sites is that they either play the role of "fall back position", for people who try to reestablish themselves in Manila and fail, or become week end estates for some poor inhabitants of Manila. These sites are neither connected to any job market, nor able to produce their own income generating activities.

A few health issues have to be discussed here. Urban way of life induces a lot of urban chronicle diseases: diabetes, heart problems, etc. After a large scale disaster, when the urban population has been displaced or dispersed, it is very difficult for the patients to find again access to treatment. Handicap International tried to develop local solidarity networks to provide some assistance to the sick people.

1.3. Coordination

In Manila, as frequently observed in capital cities, pre-disaster anticipation of response coordination between international organizations in case of disaster was quasi-existent prior to the disaster. During the pre-disaster situation, the main urban issue at stake was urban development and humanitarian coordination was largely devoted to the Mindanao situation. There was no OCHA office in country and the UN country team was reluctant to get on OCHA office on board and preferred to humanitarian coordination in the hands of a far away located region OCHA office. The cluster system was not rolled out. It took some time to get the OCHA office fully operational. In the relocation sites, negotiation, if not coordination, with the Local Government Units (LGU) is a prerequisite.

2. Response to Washi/Sendong

2.1. The stakeholders in the response

The post-disaster situation in Cagayan De Oro and Iligan cities was such that immediate and targeted humanitarian assistance was necessary to respond to the needs of the 471,000 people affected by the typhoon.

<u>National and local Authorities</u>

The first response was the alert and propositioning of teams. It worked relatively well in Iligan, where rescue teams were positions in different parts of the cities early in the evening as a response to the typhoon alter from PAGASA. In work by far less effectively in Cagayan de Oro where the indications from PAGASA was not followed by effects.

During the night and in the early hours of Sunday, people were rescued and send to evacuation centers, mainly schools, colleges, covered gymnasium, where people could be registered and catered for. As of 18 December 37 Evacuation centers were established housing 44,311 individuals with most of whom completely lost their houses from the massive flooding. Displaced families remained in these congested Evacuation centers from a few days to more than 6 weeks.

The central Civil Defense send immediately very strong teams (including several UNDAC trained high ranking staff) the days after to support the local levels of the Civil defense and of the DSWSD, the national and local institution in charge of the delivery of relief and the coordination of the humanitarian assistance. DSWD kept receiving and distribution relief goods to the EC and has an office in all of them.

An update of the National Disaster Risk Reduction and Management Council (NDRRMC) date 19/12/2011 states that the Defence Secretary/Chairman of the NDRRMC has "accepted the offer of assistance from the international humanitarian community thru the United Nations Resident Coordinator and Humanitarian Coordination in the Philippines to the Philippine government for the victims of Tropical Storm Sendong."

The President of the Philippines came rapidly in the affected area to display the national solidarity to this local disaster. One should always be reminded that in the Philippines, politics is never far from the surface. This is in addition especially sensitive in these areas of Northern Mindanao which are just located at the fringe of the area affected by the independentist /muslim insurgency.

United Nations system

UNDAC team was no deployed for couple of reasons. First of all, it took some time for the government to officially request international assistance (day 3). OCHA and NDMA were on site very rapidly (one day for the team working in Mindanao, and a day and half after the drama, for the Manila team, before even they had secured the request for international aid. IN addition, since Ketsana, there is in the Philippines a relatively strong in-country cluster system within the government and a rapidly activated aid cluster within the aid system. It was initially perceived as a relatively small event. In a country where there is a strong disaster Management institution, an UNCT and an HCT very used to respond to typhoon, including several UNDAC trained staff both within OCHA and within the NDMA. At the end of the day, although they did not deploy an OSOCC, the agencies present they could work through the coordination system of the cities Disaster Operational Centres. No V-OSOCC was set up. Yet no international civil protection team was dispatched. OCHA and the agencies present after Sendong managed to carry out a meaningful PSD and launched a flash appeal in a short time.

This early OCHA/NDRRMC Joint Assessment Mission reported humanitarian needs as NFI, Shelter, WASH and Food sectors for the population either in the EC or still in the affected areas. The international response to the flash appeal itself was lukewarm (28 % funded at the time of the mission) although a lot of donations of all kinds were channeled directly through national and international NGO as well as through bilateral channels with the government.

A Multi sector Rapid Initial assessment (MIRA) was carried out in order to feed into a revised flash appeal. The later was launched to be finalized 6 weeks after the disaster. This assessment underlined the fact that appart of the cities themsel ves, the needs are also quite large in surroundng rural barangays. This MIRA was complemented by a thorough assessment of the damaged building done by the REACH project/ IMPACT Initiative supported by DG ECHO. This assessment allows for a relatively comprehensive understanding of the challenges in reconstruction and shelter. This REACH report confirmed earlier reports of some villages that were completely washed away by the flash floods while in other areas there are more partially-damaged houses than totally-damaged.

NGO

The presence of International NGO to respond tho the dramas has been far less a circus that in other disasters. Local NGO were extremely active and present in the field. Very significant was the large mobilization of Filipino NGO and civil society networks. For instance, the Citizen Response and DC center, together with its local partners and networks of Volunteers from other parts of Mindanao, was very active in ensuring distribution of NFI in many parts of the affected areas in both Cagayan de Oro and Iligan.

A consortium bringing together Accion Contra El Hambre, Spain (ACF-Spain) – Lead, Consortium Partners: Save the Children (SC), Plan International (PLAN), CARE Netherlands managed to receive a large grant from DG ECHO as contribution from donors such as AESCI. OXFAM is n part of the HRC Consortium with a handful of local NGO. Representatives of the Caritas family, in particular CRS and other faith based organizations (ADRA, World Vision) are also present

Red Cross movement

The operations centre of the Philippines Red Cross (PRC) society has been monitoring the

situation since Typhoon Washi/Sendong entered Philippine territory, and has issued advisories and regular updates to its chapters in the projected typhoon path. At the onset of the disaster, PRC swiftly deployed emergency response units and Red Cross 143 volunteers in Cagayan de Oro and nearby chapters. At the moment, there are more than 600 Red Cross staff and volunteers on the ground assessing the situation and providing relief assistance.

Alongside rescue operations, the Cagayan de Oro, Dumaguete and Iligan chapters provided hot meals to 2,333 persons and food items to 828 persons. PRC has also set up first aid and welfare desks at the evacuation centres to provide necessary services to those affected.

IFRC initially dispatched 2,000 pre-positioned stocks of non-food items from Manila. More items will be dispatched for distribution in the days to come.

In addition, ICRC dispatched 3,000 hygiene kits, food items and non-food items from its warehouse in Davao. Plans have advanced to distribute food packages and relief supplies such as blankets and sleeping mats. The national headquarters is coordinating response efforts while continuing to monitor the situation.

The mobilization of the open street map producers

immediately after the 17 december drama, several mapping portals based on crowd-sourcing were immediately initiated on various fronts by a government agency, academe and local bloggers in Iligan city. In the first few days after the disaster, the demand to provide updated OSM dataset and maps was somewhat limited because the primary focus is on relief and donation (and rightly so). However, rapidly, it became indispensable for both coordination and urban planning.
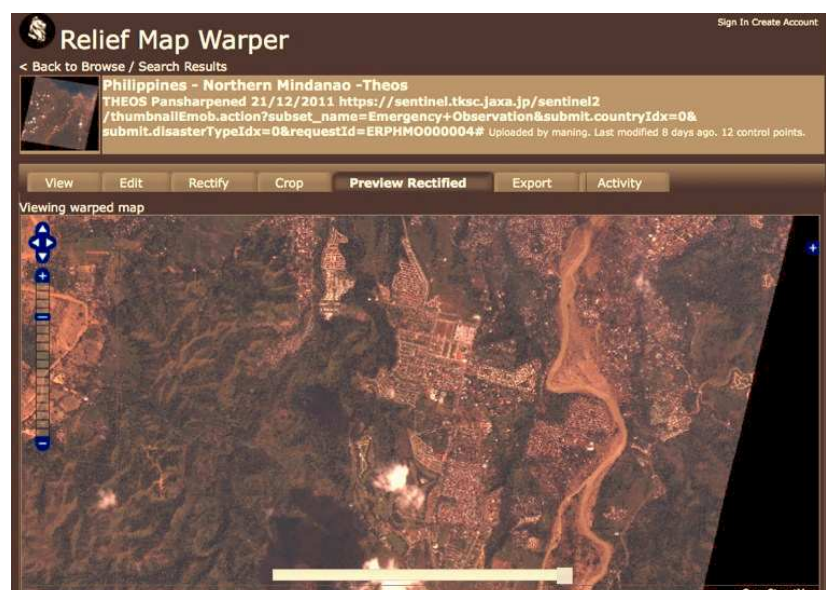
Data sets and maps which were already comprehensive prior to the disaster where shared with several humanitarian groups involved in the disaster areas. The UN-OCHA Philippine division responded and took interest in using Open Street Maps data in their situational maps. It became an indispensable tool for road data and a good resource for geo-referencing the location of evacuation centers as provided by responders on the ground.

More and more humanitarian groups (MapAction, UN OCHA, International Organization for Migration). are now using the data created both OSM and satellite imagery as well as all the basic geographic data provided by local networks of mappers, bloggers and other specialized individuals who want to help the ground responders.

One should note the very promising work done by the REACH project in identifying and mapping all destroyed houses for the Shelter Cluster. Deployed rapidly after the disaster, REACH managed to provide data and maps on destructions in a very effective way in less than a month.

2.2. Managing the Evacuation centres

The first priority was to ensure that proper conditions could be established in the evacuation centres. Crowded conditions inside many camps pose risks to the health, safety and security of resident. For example, Linuab evacuation centre in Iligan City was accommodating up to

30 families in one room. Many of the evacuation centres are overcrowded, with limited facilities for sleeping, cooking and eating, and poor sanitation. For instance, an Evacuation center in Santa. Filomina in Cagayan De Oro accommodated about 9,500 persons at their peak of occupancy. In Iligan City, Linuab evacuation center accommodated up to 30 families in one single room. Specifically, facilities currently being used as evacuation centers are not equipped to handle the amount of people that have sought refuge in these areas. There is a need to carry out repair and upgrading of facilities as well as support the care and maintenance of these facilities to promote safe and humane living conditions within the sites. In addition to this, these repairs will contribute to efficient decommissioning of sites as Evacuation centers and will facilitate a fluid transition to its former function after all evacuees have left.

Although some evacuation centres had already been closed at the time of the RTE, some of them, especially the gymnasiums, were still utilized. The key issues concerned the schools that had to be used as EC. Indeed, there was a conflict between the needs of a roof for affected family and the needs of the kids requiring a return to school.

Affected communities which did not move to EC or whish remained ther have displacement are likewise in need of humanitarian assistance.

2.3. Water, Sanitation and Hygiene (WASH)

During the first few days, the only available option was the distribution of bottled water. Local institutions (NGO and private sector), the Filipino army and local teams of OCD and DSWD distributed these bottles by thousands. The lack of sustained access to clean water for drinking and washing was more crucial in evacuation centres. Indeed, these evacuation centres were rapidly over-crowded; the number of toilets and showers was inadequate and the garbage disposal irregular. Sanitation became therefore a serious concern. All kinds of reservoirs, bladders were set up to be filled up thanks to a rapidly set water trucking system and when feasible connection with the city water. Water stocking at the individual and family level is often in jerricans and water treatment tablets were distributed to facilitate home base water treatment. Yet, it is interesting to note that part of the "urban culture" here takes the form of "drinking bottled water". People did not trust not consumed the water from the bladders as they do not like the heavy chloridrin smell and test.

The water supply in some barangays the city is currently cut off with local authorities estimating that repair work will take about a month. In Iligan, a third of water sources were reported as damaged and water had to be rationed in affected barangays. Many people are forced to bathe on the street using the town water supply.

As they were initially designed to be schools; markets or gymnasium, the sanitation and drainage systems in the evacuation centres are not adapted to the needs of hundreds of people. Used water is not draining away and is flooding parts of the EC. While garbage collection throughout the city is regular, the evacuation centres have no system of garbage collection in place and thus garbage is overflowing from the on-site bins. Consequently flies are swarming in the area and this could potentially spread disease. Broken bottles and pieces of glass can also be seen around the centres. Some evacuees brought with them their dogs, pigs and other animals and there is no system in place for animal defecation. Many of the affected barangays have piles of debris including carcasses, submerged vehicles and household items. The areas have to be cleared of debris that is starting to smell.

2.4. Shelter

In Cagayan de Oro, most of the houses and community facilities along the riverbank were destroyed or damaged. In Iligan, displaced families have setup temporary roadside shelters.

With almost 30,000 houses damaged or destroyed, housing repair and reconstruction is a priority, both to allow affected families to rebuild their lives but also to relieve overcrowding at the evacuation centres. Not all affected individuals have sought shelter in the evacuation centers.   Other families have started returning to their homes. Many have reported that their homes have been washed away or so damaged that they have been rendered uninhabitable. Similarly, school structures have also been damaged and flooded so equipment, furniture and books were washed away.

 In most instances, the affected population does not have the tools or materials to clean up or repair their homes.

In these areas, there is an urgent need to provide IDPs with materials to repair their damaged homes and promote safe and voluntary return to their places of origin or movement to alternative transitional sites.

Provision of emergency shelter materials has already started in order to enable affected populations to

- either build temporary shelter in sites identified in the city (for instance contructed in bamboo close to the San Xavier Universisy on the adjacent photo)

- or to return to their places of origin andf build some shelter to promote a sense of normalcy and return to their way of life before the disaster struck. In several areas, indeed, return has been made possible as streets were already cleaned up by a combination of heavy equipment belonging to the City or to private owners and Cash or Food for work programmes. Others have been cleaned up by the population on its own, with its own resources and capacities. As time required to negotiate land allocation and construction of the relocation sites, a temporary solution used was tented sites with ad-hoc WASH infrastructures

2.5. Health

Floods damaged health facilities situated on the riverine areas. The large reference hospitals in both Gagayan de Oro and Iligan have not been touched by the floods and have been able to care for the wounded people brought by either family members or Red Cross ambulances. Local authorities, International agencies (especially MSF) and Civil Society Organisations in most of the evacuation centres are providing health services. A number of evacuation centres have no dedicated health facilities. Initial reports indicated primary health concerns as diarrheal and respiratory diseases, with the potential for outbreaks, all health issues typically linked to temporary displacement in congested conditions in ill equipped centres. Yet, the culture of hygiene and cleanliness of the Philippines was strong enough to keep a relatively high level of hygiene in the centres

It is a peak of Listosporiasis epidemic which created most worries. This disease can indeed be lethal. The displaced populations are also in need of psychosocial support because of the massive destruction and unexpected number of lives lost. Adults who lost children, in particular, have to be under surveillance.

2.6. Nutrition, Food and Livelihood

Philippines is a middle income country and located in humid Asia, it is also a "food plenty context". If malnutrition is to become a problem in the Philippines, it is more for "bad consumption urban habits" than due to lack of food. Yet, as people evacuated at night with no resources and many have lost their source of income, many of those in evacuation centres are dependent on food assistance, lacking funds to buy food themselves. In earlier Need Assessments carried out by the aid agencies, affected populations cited food as one of their major concerns, including supply but also problems with distribution. Food was distributed initially on a basis of the "supply" rather than a full strategic plan. In evacuation centres, sustained food distribution lasted at least one month. As there is a strong campaign in favour of breath feeding in the Philippines, breastfeeding tents were set up in different EC.

Affected populations have identified restoration of livelihoods as an urgent concern. At least 25% of families residing along the river banks are informal settlers, generally engaged in irregular ambulant vending, pedicab service and other similar livelihood activities. Majority lost their livelihoods in the flood and now have no source of income.

The use of cash to deliver assistance in case of humanitarian emergency remains a relatively new approach in the Philippines and aid agencies are at the early stages of developing guidelines, policies and organizational capacity to implement cash projects. Project managers lack support, guidance about the practicalities of how most efficiently and effectively to deliver cash to people. Although most stakeholders increased their capacities in 2011, supported by the CaLP activities (training, sharing information, researches, etc.), their experiences are still limited and they still need to increase both organization and technical knowledge. On another side, as cash transfers are used across a broad spectrum of sectors, it is necessary to coordinate between all actors involved in the response to disaster. Indeed, the risks associated with cash transfer program often stem from the lack of technical coordination on specific issues, such as the setting of the value of the transfers, the development of different modalities in the same areas and the use of different mechanisms. This gap in communication across the sectors may reduce also reduce the efficiency of the humanitarian response, the set-up of specific assessment (i.e. market) being not coordinate, outputs being not shared. The main problem is that the coordination structures, based on clusters and sectors of activities, do not yet integrate mechanisms to capture well information about Cash Transfer Programming and coordination is missing.

At the time of the mission, the Nutrition cluster was disseminating extremely worrying alarms on degradation of SAM and GAM, reaching Emergency thresholds. Discussion with the source of the information, mainly ACF nutritionist, showed that there was a misinterpretation of the information. This shows that badly managed information, even unintentionally, can spray rapidly rumours and create a sense of urgency when it is not necessary.

2.7. Cross cutting issues

Protection

In this type of disasters, when populations are mixed and moved, children can be at risk. There were some reported cases of unaccompanied children, but those identified by assessment teams were being cared for by relatives. While it s not a frequent phenomenon in the Philippines, there is a need to keep an eye on the fate of young women in EC, but also in the devastated areas. One of the key protection issue identified was related to land and housing rights. UNHCR field in a very experienced PROCAP adviser to look into this matter and support the protection cluster in that area.

Gender, children, elderly and minority groups

The Philippines is a country where there is a very strong civil society movement. It is involved in children rights, minority protection s well as well as women issues. It is interesting to note that this potential is largely unused by the international aid system to address some of its key challenges: ensuring that we understand the complexity and diversity of the situation we face and the population we aim at assisting. The aid community tends to respond to protection needs without looking at what is happening and how issues are addressed by the local actors. This is even more critical in protection issues in an area where a conflict is rampant since centuries, where ethnic minority and religious contentions exist.

2.7.1. Post emergency: the difficulties linked to relocation and no build zone

The real difficulties come with the post-emergency response: What to do for people who lost every thing? Where to rebuild? What should be the extend of the No Build zone" ? How to understand the complex land law, utilization-rights systems in order to facilitate access to all to an acceptable shelter solution?

While a fully fledged Post Disaster Need Assessment (PDNA) and a Damage And Losses Assessment (DALA) are expected to be carried out, three possible options at the time of the mission, were identified:

Return to zone of origin, only if it is not in the No Build Zone.

The work done by REACH allows to indentify the construction and rehabilitation needs of the populations concerned. This has a large potential as it represent more than 40 % of the population at stake. One can already observe that many people are already moving back, as these are areas where they generate their incomes, and even where they invested in land and property (some indeed have either land and houses, or houses built on rented land). Being back to the area of origin is often seen as a better choice than been relocated in faraway places.

Find place with families and relatives or flats or house to rent or buy in other areas of the cities.

This will only be possible for the richer segments of the affected populations, especially the ones who have connection with the very large Filipino overseas community which can support their relatives with remittances.

Relocation in new sites: Indeed, as areas close to rivers will remain exposed to future flash floods, No Build Zones have been announced during the visit of the President of the Philippines during its visit in the area on January 25th. Therefore, permanent relocation of the families originating from the areas declared "NBZ" will be necessary. The feasibility of this process raises some issues: The sites identified in Cagayan de Oro (Lumbia and Cahanan are far from ideal: far from work place and schooling locations, these sites will impose important transport daily expenditures. In addition, the permanent sites are far from being ready. This could potentially mean that the concerned population will have to stay for an extended period of time in temporary or transitional shelters. The process of establishing the permanent sites will be probably lengthy (despite promises) and agencies have been asked to established temporary sites with Transitional shelters. Visited sites in CDO have underlined some difficulties to be expected (compared with similar situations after Hurricane Mitch in Central America and the earthquake of January 12, 2010 in Haiti).

Disaster risk reduction

After a large scale disaster, it is often seen as a urgency to look at Disaster Risk Reduction. The danger (is when it is done in a hurry, without proper analysis of the root causes f the disaster and what really causes the destructions. In that part of Northern Mindanao, the local government units (LGU) and populations at large lack proper appreciation of the risks, and did not develop proper DRR or Risk management strategy. There was a strong perception that the area was a low risk one, because they have no prior comparable experience. At the time of the disaster, some local government officials were reportedly not even aware of the Philippine Disaster Risk Reduction and Management Law.

The immediate jump on the No Build Zone as a solution to the problem is probably only answering to one part of the risk equation and will induce, in view of its reported size, a lot of housing and land rights difficulties. A mix of real NBZ, proper river course management and riverbank protection is probably necessary and will require additional study and courageous decision.

Conflict prevention

The tensions of the conflict in Mindanao South are not far and in areas like Iligan, especially in the remote rural areas affected by the typhoon, they could be sensed significantly.

The post-typhoon helicopter borne relief operation carried out by UNHCR with the Philippines' Armed Forces was an interesting attempt to demonstrate that even in a situation of high tensions, the application f the principle of impartiality could be used, even if, to do that military shoppers had to be used.

2.8. Coordination

2.8.1. <u>Strengths and weaknesses of the national and local coordination systems</u>

In the Philippines, the decentralization went so far that coordination passes necessarily through national institutions at the different levels:

- National;
- Provincial
- Municipal or city (these are different types of status)
- Barangay

The staff send by the central level OCD to support local institutions proved a very important factor to dynamize the coordination and the LGU levels. These highly trained staff (often UNDAC trainees) were able to set up operation centres rapidly and impose coordination to LGU sometimes not "up to the job".

At all levels, the government has institutionalized its own internal "cluster system". This National system brings all the line departments under the authority of the Mayor, who is assisted by the DSWD and local head of the Civil Defense.

To improve the coordination of relief goods, the DWSD established a system named "One stop shop' (OSS) (see below) which should receive and redispatch the relief goods to the agencies. Neither national, local or international NGO seem to optimally use this system, although it could be of great help to manage custom problems. There is a "confidence issue" from the side of the Filipino civil society and a "visibility issue" from the donor community which is afraid to see its bilateral donations fading away in the warehouses of the DWSD.

The internal top down system from the OCD onwards is supposed to be matched by a bottom up system to request funds to support preparedness and response based on the responsibility of the mayors and region governors. The politicization of the Filipino system is a serious hindrance for the proper functioning of the system. Lines of allegiance, party links and other political components of the Filipino political life are seriously affecting the resources allocation for risk management and therefore the credibility of the chain of command, control and coordination.

2.8.2. <u>The international mechanisms at stake</u>

Coordination in the Philippines has improved significantly since Typhoon Ondoi stroke in Manila in 2009. The UN cluster system, where national and local institutions are in the lead position, with the cluster lead agencies in a support position, is now rapidly rolled out when there is an emergency. The mission noticed that many actors, including in the UN system, are not really clear of how still dual the system is and how still disconnected the government and the International coordination systems are. Some interviews often do not even know that the "internal cluster system within the government exists. It is interesting for instance to see that the project proposal made by some aid actors to DG ECHO single form mention the local authorities only in terms of information sharing.

OCHA set up is strong in Cagayan de Oro, with dedicated staff and a good interpersonal dynamic. The cluster system functioned relatively well with some clusters better managed or more meaningful than others.

The Shelter Cluster

In the field of Shelter, IFRC was asked to support the shelter cluster in place of IOM and UNHABITAT. The government is preparing its own shelter guidelines, but it is not clear how much the aid agencies are aware of it and are ready to take it on board. In fact, shelter initiatives of all kinds are already moving ahead. It is important to restate that as coordination has to be as much as possible based on needs and quality assessment, the information produced by the mission sent by the REAC initiative will be invaluable for the coordination of the Shelter response.

From Camp Management to area based coordination

If Evacuation Centres (EC) have some common characteristics of camps (special spaces where people come in a search of a safe even), they also have some characteristics that make them radically different from camps. This means that a "camps like management system might rapidly prove inadequate. In both Cagayan de Oro and Iligan, evacuation centres are areas of very fluid movements of populations. The Displacement Tracking Matrix is very rapidly out of date and the energy to keep it up to date is important, thus making the whole process questionable. People come and go, as the EC are often just a few hundred meters from their areas of origin. EC management committees (rather than CCCM) are of course needed to monitor needs and gaps and coordinate the delivery of relief goods. Information on the numbers and profiles of displaced persons will continue to change by the day.
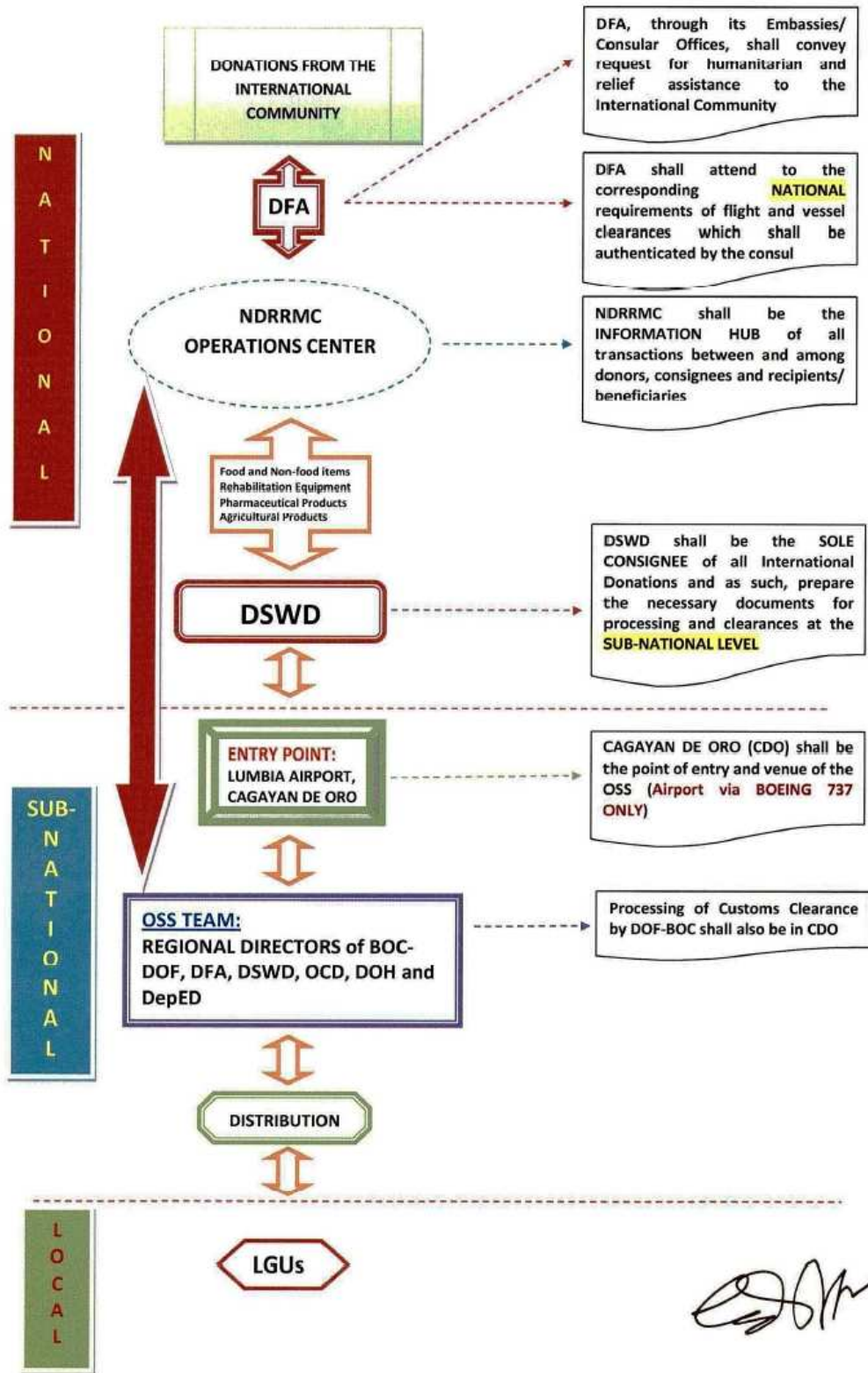
Coordination of nutrition, food aid and livelihood

It was surprising to find a situation where there are separate Nutrition, Food and Livelihood clusters as such type of situation in the contrary would require a high level of conceptual and operation integration between the three sectors. In addition, the coordination structures set-up and used by the humanitarian community, based on clusters and sectors of activities, do not yet integrate a mechanism to capture well information about Cash Transfer Programming. Formal communication and exchange on CTP, which was previously supported by the CaLP doesn't exist anymore. Indeed, with the departure of the CaLP Focal point by the end of 2011, all exchanges and information sharing have been reduced significantly.

Coordination with local institutions and civil society networks

Once again, the local networks of NGO and civil society organizations have been working by and large outside of the coordination mechanisms. On the one hand, one of the reasons of that situation is the distrust that can exist between them and either National or local political institutions or the international agencies. On the other hand, they represent an incredible potential that would be so useful to tape and support.

"ONE-STOP SHOP" (OSS) FLOWCHART FOR INTERNATIONAL DONATIONS re TS SENDONG (WASHI)

NATIONAL

DONATIONS FROM THE INTERNATIONAL COMMUNITY

DFA

DFA, through its Embassies/Consular Offices, shall convey request for humanitarian and relief assistance to the International Community

DFA shall attend to the corresponding **NATIONAL** requirements of flight and vessel clearances which shall be authenticated by the consul

NDRRMC OPERATIONS CENTER

NDRRMC shall be the INFORMATION HUB of all transactions between and among donors, consignees and recipients/beneficiaries

Food and Non-food items
Rehabilitation Equipment
Pharmaceutical Products
Agricultural Products

DSWD

DSWD shall be the SOLE CONSIGNEE of all International Donations and as such, prepare the necessary documents for processing and clearances at the **SUB-NATIONAL LEVEL**

SUB-NATIONAL

ENTRY POINT:
LUMBIA AIRPORT, CAGAYAN DE ORO

CAGAYAN DE ORO (CDO) shall be the point of entry and venue of the OSS (Airport via BOEING 737 ONLY)

OSS TEAM:
REGIONAL DIRECTORS of BOC-DOF, DFA, DSWD, OCD, DOH and DepED

Processing of Customs Clearance by DOF-BOC shall also be in CDO

DISTRIBUTION

LOCAL

LGUs

Communication

Communication with affected populations

It seems that communication with the affected and non affected populations was far from optimal (something already identified after Ketsana). Communication to affected populations was not seen as a strategic issue from the onset of the response and the issues reached the surface only 6 weeks into the operations. A working group on this matter was just being set up at the time of the mission. Here again, proper consultation with local civil society groups would go a long way to facilitate the dialogue and uncover lines of communications between the aid agencies and the affected populations.

Managing the media

In a country with an active public media sector and in cities where everybody reads the newspapers, listen at the radio and look at TV, overlooking the role of the medias can be a strategic error, or at least can lead to lost opportunities.

With the attraction of aid systems to some areas, largely under media pressure, there are always areas which get missed out. In a sensitive area, this can create difficulties. The UNHCR initiative to try to look out of the "media loop" and go, assess and assist in non visible rural remote areas is in that case exemplary. Military shoppers were greeted with warm welcome by villagers in the insurgent areas and Soldiers from the National Army were working side by side with the insurgents to unload and distribute relief goods.

ANNEX N 1. Bibliography

ACF, *Philippines Bulletin*, ACF-Philippines, Vol. 2, Issue 1, January-March 2012, 8 P.

Citizens' Disaster Response Center, *Community-based Damage and Rights Accounting and Monitoring: Taking Roots again: A Vulnerability Reduction Program for the Internally Displaced People of Mindanao,* CDRC, 2007, 49 P.

Citizens' Disaster Response Center, *Disasters: The Philippine Experience*, CDRC, 1992, 127 P.

Citizens' Disaster Response Center, *Wellspring of Hope: Emerging Good Practice on Disaster Preparedness and Mitigation in Typhoon-Prone Philippine Region,* CDRC, 2010, 26 P.

College of Social Work and Community Development, *Building Disaster-Resilient Communities: Stories and lessons from the Philippines,* University of the Philippines, 2010, 245 P.

Congress of the Philippines, *An act strenghthening the Philippine disaster risk reduction and management system*, Republic of the Philippines, July 2009, 27 P.

DOH, *Key Health Messages for Emergencies: Philippines*, UNFPA, WHO, République des Philippines, Coopération Espagnole, 2007, 101 P.

Heijmans, A., Victoria, L.P., *Citizenry-based and Development-Oriented Disaster Response: Experiences and Practices in Disaster Management of the Citizens' Disaster Response Network in the Philippines*, Center for Disaster Preparedness, 2001, 118 P.

Microdis, *Integrated health, social and economic impacts of extreme events: evidence, methods and tools*, Microdis, 2011, 128 P.

National Economic and Development Authority, National Commission on the Role of Filipino Women, Official Development Assistance Gender and Development Network, Harmonized Gender and Development Guidelines for Project Development, Implementation, Monitoring and Evaluation, NEDA, NCRFW, June 2009, 40 P.

Nepal Risk Reduction Consortium (The), *Disaster Risk Reduction in Nepal: Flagship Programmes*, April 2011, 62 P.

OCHA, *Philippines (Mindanao): Humanitarian Action Plan 2012*, UN, November 2011, 120 P.

Oxfam, *Climate Change Adaptation in Practice: Yuha Tu Banwa: A women-led community food and health bank*, Oxfam, 4 P.

Oxfam, *Integrating Disaster Risk Reduction and Climate Change Adaptation in the Philippines*, Oxfam, 2010.

Oxfam, *Rising to the Call: Good Practices in Disaster Risk Reduction and Climate Change Adaptation in the Philippines,* Oxfam, 2011, 147 P.

Oxfam GB, *Building Resilient Communities: Good Practices in Disaster Risk Management in the Philippines*, Oxfam Great Britain Philippines Programme, 2008, 91 P.

Periurban Vegetable Project, *Philippine Allotment Garden Manual with an introduction to Ecological Sanitation*, Xavier University Research and Social Outreach: Philippines, 2008, 103 P.

Poisson, Gregoire, 2011, Cash transfer programmes in Emergencies: Cash transfer mechanisms and disaster preparedness in the Philippines, CaLP, OXFAM House, , Oxford, 92 p.

Polastro, R., Roa, B., Steen, N., *Inter-Agency Real Time Evaluation (IA-RTE) of the Humanitarian Response to Typhoons Ketsana and Parma in the Philippines*, DARA, April 2010, 83 P.

Save The Children Sweden, *Annual Report 2010: Southeast Asia and the Pacific*, STC, 2011, 23 P.

Shelter Cluster, *Terms of reference: Temporary Shelter and Material Supplies Technical Working Group*, January 2012, 15 P.

United Nations, *Emergency Revision: Philippines (Mindanao), Response to Tropical Storm Washi, 2012 Humanitarian Action Plan,* UN, 2011, 36 P.

United Nations, *2011 Global Assessment Report on Disaster Risk Reduction: Revealing Risk, Redefining Development,* UN, 2011, 178 P.

United Nations, *Philippines: Midterm Progress Report on the Millennium Development Goals*, République des Philippines, UN, 2007, 96 P.

United Nations, *Supporting inclusive, sustainable and resilient development: The United Nations Development Assistance Framework for the Philippines 2012-2018*, UN, 2011, 83 P.

UNDAC, *End of Mission Report, Philippines: Tropical Storm Ketsana and Typhoon Parma*, October 2009, UN, 4 P.

UNDAC, *Typhoon Ramil (Lupit), Philippines: Mission Report 21-27 October 2009*, UN, 2009, 9 P.

UN-Habitat, *Climate Change Assessment for Sorsogon, Philippines : A Summary*, UN, 2008, 28 P.

UN-Habitat, *Global Report on Human Settlements 2011, Cities and Climate Change : Policy Directions*, UN, 2011, 51 P.

UN-Habitat Philippines, *Mainstreaming climate change mitigation and adaptation in development and land use plans,* UN, 4 P.

UN-Habitat Philippines, *Making houses resilient to climate change*, UN, 4 P.

UN-Habitat Philippines, *Strategizing towards sustainable settlements through local shelter planning*, UN, 4 P.

UN-Habitat Philippines, *Strengthening livelihoods and income-generating capacities for climate change adaptation,* UN, 4 P.

UN-Habitat Philippines, *Climate change and local shelter planning national workshop caps 2010 activities, Urban Phillipines: Monthly electronic bulletin,* UN, January 2011, 4 P.

UN-Habitat Philippines, *Philippine urban consortium initiates the Philippine urban observatory, Urban Phillipines: Monthly electronic bulletin,* UN, March 2011, 4 P.

UN-Habitat Philippines, Stakeholders map out urban agenda for climate change*, Urban Phillipines: Monthly electronic bulletin,* UN, October 2011, 4 P.

UNHCR, *Emergency operations: Supporting internally displaced persons (IDPs) affected by Tropical Storm Washi, UNHCR Mindanao: Philippines*, January 2012, 11 P.

UNHCR, *National Disaster Coordinating Council, Contingency Planning for Emergencies: a manual for local governments units,* UNHCR, NDCC, October 2007, 106 P.

United Tourist Promotions, *Philippines Travel Atlas 3rd edition*, , 2009, 356 P.

Disaster Management in Metropolitan Mania, Philippines: A Summary of the Presentation Paper for the First Shanghai, Manila and Kobe Tri-Cities Meeting on Disaster Prevention, 26-27 January 2000, Kobe, Japan

Webliography:

This webliography consists of articles, researches, web pages, and web resources on disaster management in the Philippines. Disaster management is the the "actions taken by an organization in response to unexpected events that are adversely affecting people or resources and threatening the continued operation of the organization".

Disaster management "includes the development of disaster recovery plans, for minimizing the risk of disasters and for handling them when they do occur, and the implementation of such plans. Disaster management usually refers to the management of natural catastrophes such as fire, flooding, or earthquakes".
[Quoted from: http://dictionary.bnet.com/definition/disaster+management.html]

Activities of Volunteers in Disaster management in the Philippines and their problems
[Retrieved October 23, 2009]

"Here are presented the varied activities and problems of volunteers in the various phases of disaster management in the Philippines".

Centre for Disaster Preparedness
[Retrieved October 23, 2009]

This website of the Center for Disaster Preparedness "promotes Community Based Disaster Risk Management (CBDRM), facilitates interactive learning and discourse on disaster risk management, and advocates for policies and programs that protect the environment and mitigate disaster risk through its various programs and services in training, consultancies, interactive fora, research and publication, networking and advocacy, through developmental and participatory principles and methodologies".

Community Based Disaster Management in the Philippines : Making a Difference in People's Lives
[Retrieved October 23, 2009]

This paper highlights the "features, processes, components, and gains of a community based disaster management (CBDM) as showcased by good practices in community based preparedness and mitigation of key organizations involved in the Philippine Disaster Management Forum".

Disaster Management in Southeast Asia
[Retrieved October 23, 2009]

This publication on the "Overview of Disaster Management in Selected Southeast Asian Countries shares with key stakeholders the current state of disaster management in the DIPECHO (Disaster Preparedness Echo) target countries of Cambodia, Indonesia, Lao PDR, Philippines and Vietnam. Examples of good practice from these countries are cited. Selected innovative community-based initiatives are also presented to demonstrate the benefits of mitigation and preparedness to development. The country section presents a broad overview of the hazards that threaten these countries, their vulnerabilities, and their capacities to reduce these vulnerabilities".

Disaster Management Service
[Retrieved October 23, 2009]

This site contains information on how to prepare for disasters and how to respond to them in terms of relief and rescue operations.

Disaster Preparedness and Management innovations in the Philippines
[Retrieved October 23, 2009]

This document deals with how a "Philippine disaster response center focuses its efforts in preparing both "less vulnerable" and "most vulnerable" sectors in coping with and getting over disasters via education. The "experience also shows the efficiency of relying more on community folk's own talents, skills and resources in disaster preparation, mitigation and rehabilitation".

Emergency Disaster Hotlines
[Retrieved October 23, 2009]

This webpage lists "hotlines that you can call for disaster emergency situations in the Philippines, especially urgent rescue and relief needs".

Help for Typhoon Ondoy Victims in the Philippines
[Retrieved October 24, 2009]

This site "compiles relevant information about the disaster caused by typhoon Ondoy, including a volunteer-maintained map of persons needing rescue and a list of relief organizations accepting donations".

History of Disaster Management in the Philippines
[Retrieved October 24, 2009]

This webpage presents the history of Disaster Management in the Philippines from the Commonwealth era to 1978.

The National Disaster Management Program
[Retrieved October 23, 2009]

This publication on the Philippine disaster management program focuses on "disaster preparedness, organization and training, construction of disaster reduction facilities, disaster response and rehabilitation, public information, and research and development".

Natural Disaster Risk Management in the Philippines : Enhancing Poverty Alleviation Through Disaster Reduction
[Retrieved October 23, 2009]

The primary audience of this report is the Government, at all levels, the donor community and stakeholders involved in disaster management. The paper "document the impacts of natural disasters on the social and economic development of the Philippines; assesses the country's current capacity to reduce and manage disaster risk; and identify options for a more effective management of that risk.

Philippines: Disaster Risk Management Act, 2009
[Retrieved October 23, 2009]

This website presents the "Philippine Disaster Risk Management Act", introduced by the Committee on National Defense and Security at the Fourteenth Congress of the Republic of the Philippines Second Regular Session". The act is "intended to strengthen Philippine disaster management capability by institutionalizing the national disaster risk management framework to decrease disaster vulnerability, increase capability for recovery, and enhance over-all resilience to disasters".

Philippines: Natural Disaster Risk Management in the Philippines
[Retrieved October 23, 2009]

This report of the World Bank "seeks to document the impacts of natural disasters on the social and economic development of the Philippines; assess the country's current capacity to reduce and manage disaster risk; and identify options for more effective management of that risk".