

# Challenges in Coordinating Response and Rehabilitation Activities during the Guimaras Oil Spill: Implications to the Philippine Disaster Management System

Jorge S. Ebay<sup>1</sup> and Joy C. Lizada<sup>2</sup>

<sup>1</sup> Division of Social Sciences, College of Arts and Sciences  
University of the Philippines Visayas, Miagao, Iloilo

<sup>2</sup> College of Management, University of the Philippines Visayas  
Iloilo City

## ABSTRACT

This paper describes the response and rehabilitation activities during the August 11, 2006 oil spill in Guimaras. It outlines the implications of oil spill to the existing disaster management system, which provided for the strengthening of the Philippine disaster control capability and the establishment of the national program on community preparedness.

This paper argues that the current disaster management system in the country is constrained by operational factors that affect the overall management of both natural and human induced disasters. It presents evidences of actual response and rehabilitation activities carried out during the oil spill derived from agency reports and supplemented by findings during focus group discussions and key informant interviews. The paper outlines important insights that can be useful in improving the overall system for disaster management in the country.

### Keywords:

*Oil spill disaster, institutional response mechanisms, coordination, local community responses*

---

## Philippines and Disasters

From 1990 to 2000, the period marked as the International Decade for Natural Disaster Reduction (IDNDR), the Philippines was listed as one of the most disaster prone countries in the world. The eruption of Mt. Pinatubo in 1991, the war in Mindanao, the Payatas garbage slide and the massive scouring of the mountainside that covered the whole village of Guinsaugon in Leyte were just few of the debilitating disasters events that beset the country for the past years. The country's susceptibility to disasters was noted in reports compiled by the Center for Research and Epidemiology of Disasters (CRED) in Belgium. Based on the CRED's findings, the country was hit by an average of 10 disasters a year since 1991 (Heijmans and Victoria, 2001:1). If reports from the National Disaster Coordinating Council (NDCC) were to be reviewed, the country's condition is even worse. The Council's records revealed that from 1987 to 2000, the country experienced a total of 523 disasters, or at least 37 disaster episodes annually, resulting to more than PhP 150 billion in damages (ADPC, 2001: 1).

The country's vulnerability to natural disasters is largely an outcome of its geologic, geographic and tectonic settings (Punongbayan 2003: 318). It is one of the largest archipelagic nations composed of more than 7,000 islands, occupying the western segment of what many geologists call as the "Pacific Ring of Fire." An ocean-encircling belt of active volcanoes and earthquake generators characterizes this location. The same location also lies along the path of turbulent typhoons (Bankoff 2003; Brown, Amadore and Torrente, 1991: 195). Volcanic eruptions, earthquakes and typhoons are just some of the natural hazards that put the country and its people at risk.

Of the more than 200 volcanoes dotting the archipelago, 22 are classified as active (NDCC 2004) and the Philippine Institute of Volcanology and Seismology (PHILVOCS) has the capacity to monitor only six out of 22 for possible eruptions (Laigo 1996). Earthquakes, according to the PHILVOCS occur in the Philippines at least five times daily (Punongbayan 2003). The archipelago is also vulnerable to tropical cyclones. About 20 cyclones enter

the Philippine area of responsibility annually and eight of these are expected to make landfall and become destructive (Capistrano and Tomazar, 1999: 1; ADPC 2001).

There are also instances when human actions intensify the impacts of natural hazards. Demographic factors and poor land use planning practices also contribute to the increasing vulnerability of human populations to many natural hazards, most especially in urban settings (ADPC 2001). Human-induced disasters have also increased frequency in recent years. Oil spills, maritime accidents, fire, terrorist attacks and complex disasters like the war in Mindanao took heavy toll on existing capacities for survival and coping mechanisms of people and communities (ADPC 2001; Luna 2005).

Oil spills, like the August 11, 2006 episode in Guimaras, are becoming pressing concerns because of their potential to inflict mass destruction to marine life, wreak havoc to water quality and imperil livelihoods of people and communities dependent on coastal and marine resources. In 1999, the Maritime Environmental Protection Office (MEPO) under the Philippine Coast Guard (PCG) was involved in three major oil spill response activities in Manila Bay alone (Montealto, 2003: 3). Five years later, the PCG counted 137 cases of oil spill. This means an average of 27 oil spill incidents per year – far greater than the number of typhoons that come into the Philippine area of responsibility annually. Year 2002 had the highest number of incidents at 49. Transnational oil spills are also considered emergent threats as Philippine waters have become an important link for energy material transportation between West Asia, East Asia and the United States (Montealto, 2003: 6). The increasing density of maritime traffic especially of oil tankers heightens the possibility of accidental oil spills.

## Focus and Objectives

This study forms part of the broader research program being undertaken by the University of the Philippines Visayas (UPV) in relation to Guimaras oil spill. UP Visayas leads the assessment and valuation studies that seek to ascertain the impacts of the oil spill to the bio-physical resources of the island as well as to people's livelihood and social and community relations.

In particular, this paper describes the response and rehabilitation activities that transpired during the August 11, 2006 oil spill in Guimaras. It also outlines the implications of oil spill to the existing disaster management system as mandated by the Presidential Decree 1566, which provided for the strengthening of the Philippine disaster control capability and the establishment of the national program on community preparedness. Studies have been conducted in the past assessing the relevance and timeliness of the system (which focuses mainly on response and rehabilitation

for natural disasters) to the prevailing conditions and vulnerabilities of many Philippine communities (see for example Heijmans and Victoria 2001; Luna 1999; Lupig-Alcid, et al. 2003; PDMF 2003). These studies argued for the necessity of updating the system to go from response to preparedness and risk reduction. They also suggest the need of incorporating multi-hazard perspectives to the existing system so that the so that the vulnerability of many communities to disasters can be reduced.

This paper endeavors to:

1. identify response and rehabilitation activities carried out during the oil spill;
2. examine the flow of these activities and identify attendant challenges in the process; and
3. determine the implications of these activities to the prevailing disaster management system in the country.

This paper begins with the assumption that the current system for disaster management in the country, particularly its response and rehabilitation components, is constrained by specific operational factors that impinged on the overall management of both natural and human induced disasters. To support this assumption, this paper presents evidences of actual response and rehabilitation activities carried out during the oil spill. These are derived mainly from reports of agencies that responded to the spill and supplemented by findings during focus group discussions and key informant interviews. Accordingly, it will outline important insights that can be useful in improving the overall system for disaster management in the country.

## Methodology

Data and information presented in this study were culled mainly from reports of national agencies and task forces created to respond to the oil spill disaster in Guimaras. Additional pieces of information were also generated through focus group discussions (FGD), which included resource mapping and institutional diagramming, and supplemented by data generated through key informant interviews and literature review. Fieldwork for data gathering was conducted from October to November 2006.

Nine FGD sessions were conducted, which involved participants from "directly affected" (mainly coastal and island communities in Nueva Valencia) and "indirectly affected" (composed primarily of coastal villages in Sibunag and San Lorenzo) areas. Overall, 27 affected barangays were covered with 124 participants. The females constituted majority of FGD participants at 70 (56.45%) and the rest, 54, (53.55%) were males.

Participants to the FGD were chosen purposively (like the Barangay Health Workers and the Bureau of Fisheries

and Aquatic Resources Management Council chairs) while others were invited as sectoral representatives of their respective communities. Most of the time, one of the participants could either be an evacuee, a youth representative or a barangay official.

The focus groups also became venues for resource mapping and institutional diagramming. Resource mapping is a method for collating and plotting information on the occurrence, distribution, access and use of resources within the economic and cultural domain of the community before and after the oil spill. The resource maps provided valuable insights for in depth assessments of oil spill impact to resources especially from the perspective of local communities

Institutional diagramming also known as the Venn diagram is a tool for illustrating relationships and relative influence of responding organizations and issues or problems emanating from oil spill. It shows groups, organizations or institutions, both internal and external to affected communities that provided response and rehabilitation assistance (Khotze and Holloway 1996). It helps reveal how the system of oil spill response or rehabilitation at the level of affected communities were carried out.

Supplementary pieces of information were derived from a survey, which involved a sample size of 615 from the 27 affected communities. Key informant interviews with barangay officials and reports from local governments concerned enriched the findings of the FGD and the PRA. The review of relevant literature was important to situate oil spill disaster within the socio-economic backdrop of Guimaras. As supplementary materials, they provide additional information which could validate or serve as counterpoints for arguments and findings generated during the process of data gathering and analysis.

## The Philippine Disaster Management Framework

An overview of the approach being used by the NDCC (as the highest policy making body for disaster management in the country) would be helpful in analyzing the challenges of coordinating response and rehabilitation

activities during the Guimaras oil spill. What follows is a brief description of this approach and definition of key terms.

Disasters are commonly understood as a serious disruption of the functioning of a society that can cause widespread human, material, or environmental losses (PNRC 1994). They can either be natural (like earthquakes, volcanic eruption or tropical cyclones) or human-induced (like flooding worsened by deforestation or urban congestion, terrorism or oil spill). Natural disasters occur when natural hazards interact with vulnerable populations, like poor communities or informal settlements (Wilches-Chaux 1995; Blaikie et al. 1994) while human-induced disasters result from human actions. Disasters are defined as such because the destruction wrought exceeds the ability of the affected society or community to cope with or manage within its own resources (PNRC 1994).

In the Philippines, the system for the management of natural disasters had been in place since 1978 by virtue of Presidential Decree 1566. It also created the National Disaster Coordinating Council (NDCC) as the highest policy making body on disaster management.<sup>1</sup> The NDCC possesses the legal mandate and authority to spearhead efforts to develop capacities of various administrative units from the national down to the local level for natural disaster management. At the national level, the Council advises the President on efforts in disaster management undertaken by the government and the private sector, thereby serving as the highest policy-making body on disaster management. The Office of Civil Defense (OCD) serves as its operating arm, supporting the discharge of its functions. The structure of the NDCC is replicated at the regional and local levels, and these bodies function substantially like the NDCC, operating and utilizing resources at their respective levels. For instance, there are also Barangay Disaster Coordinating Councils (BDCCs) organized at the level of the barangay composed of the Barangay Captain as Chairperson, members of the Barangay Development Council, the Barangay Tanod and other civilian support groups.

The approach being used by the NDCC for disaster management has a broad scope covering pre-disaster (mitigation and preparedness) and post disaster (response

---

<sup>1</sup> The NDCC member-agencies are responsible for carrying out their respective tasks and responsibilities in disaster management including mitigation, preparedness, response and rehabilitation. Unlike other departmental coordinating bodies, the NDCC does not have its own regular budget. It operates through the member-agencies and its local networks, which are the regional and local disaster coordinating councils. Other members which complete the composition of the Council are: Secretary of National Defense (Chairman); Secretary of Public Works and Highways; Secretary of Transportation and Communications; Secretary of Science and Technology; Secretary of Social Welfare and Development; Secretary of Agriculture; Secretary of Education, Culture and Sports; Secretary of Finance; Secretary of Labor and Employment; Secretary of Trade and Industry; Secretary of Interior and Local Government; Secretary of Health; Secretary of Environment and Natural Resources; Secretary of Tourism; Secretary of Budget and Management; Secretary of Justice; Director, Philippine Information Agency; Secretary-General, Philippine National Red Cross; National Housing Authority; Chief of Staff, Armed Forces of the Philippines; Director-General, National Economic Development Authority (NEDA); Presidential Executive Secretary; and Administrator, Office of Civil Defense (Member and Executive Officer).

---

and rehabilitation) activities. Mitigation measures are aimed at averting or minimizing loss of lives and properties when disasters strike. This may include community organizing, disaster management planning, stockpiling or hazard and vulnerability identification. Preparedness includes measures/programs aimed to minimize the impact of a natural or human-induced hazard in terms of casualties and damages. Examples of preparedness activities are disaster education and awareness programs, drills and exercises and establishment of early warning system. Response activities refer to efforts of government agencies or of private organizations, including NGOs, to provide emergency assistance or relief to disaster victims. These activities are important in the process of reestablishing public facilities and services to help victims return to normalcy. Rehabilitation efforts aim to help victims recover from the calamity by restoring their actual condition prior to the occurrence of the disaster or calamity.

### Brief Profile of Guimaras Province

The Province of Guimaras is the youngest member of the 6th administrative region of the Philippines, also known as Western Visayas. Formerly a sub-province of Iloilo, it gained full-fledged provincial status through a plebiscite in 1992. Guimaras is sandwiched by two larger islands in Western Visayas, Panay and Negros. It is separated from Panay by the 1.5 nautical mile long Iloilo Strait and the six nautical miles Guimaras Strait separates the province from the island Negros. The province has a total land area of 60,457 hectares (BFAR 2006). Guimaras is divided into five municipalities, two of which, San Lorenzo and Sibunag, were created only in 1995. The municipality of Buenavista was established during the Spanish times and stands as the oldest settlement within the province. The municipality of Jordan evolved from Barrio Nagaba of Buenavista in 1918 while the town of Nueva Valencia was created in 1941.

Mainly an agricultural province, it grows rice, coconut and mango. The total land area devoted to agriculture constitutes more than 90% of the provincial land area. Of its agricultural land, 67.6 percent are planted with rice, followed by coconuts (BFAR 2006). Other important crops include *kalamansi*, cashew, sweet potatoes, vegetables, corn, cassava and legumes. There are about 1,312 *kalamansi* farms in the province, with a total of 555,302 trees producing 1,924.63 metric tons in 2003. At least 434 hectares of land in the island is also planted with cashew, which yielded 851 metric tons in 1991 (Province of Guimaras n.d.). Mango, however, is the trademark commercial crop of the province. The Guimaras mango is known across the globe for its superior taste and quality. In 1995, there were 3,996 mango growers, attending to 155,860 trees, 61 percent of them were fruit

bearing. Guimaras mangoes have been certified by the US Department of Agriculture as free from mango pulp-weevil (BFAR 2006).

While agriculture stands as the mainstay of the provincial economy, more than half of the provincial population depends on fisheries resources for survival. With a coastline of 239 kilometers, more than half of its total population live in coastal villages and knows no other means of livelihood but fishing (BFAR 2006). The average annual production of the island is 144,705 metric tons, with Nueva Valencia registering the highest catch. Bangus and tilapia culture nets an average of 360 and 3 metric tons a year, respectively. Seaweeds are harvested at an average of 5 metric tons (BFAR 2006). The breeding ground of fishes within the province has remained unspoiled, and preservation efforts have been implemented to encourage growth of stocks. The wide variety of fish and crustaceans that can be fished off from its waters including exotic faunal species is a testament to the rich bounties of the province that need sustained care.

The rich environmental resources of Guimaras does not only provide food for its people but also gave the island-province an industry that served as its economic backbone – tourism (BFAR 2006). The coastline of Guimaras is fringed with beautiful white sand beaches that draw thousands of local and foreign tourists. Tourism and resort management provides promising employment opportunities for many people in the island. Other than resort owners, a number of locals have gained income by becoming tour guides and service providers. Tourism also offers strong potentials for handicraft (of local products for sale to tourists), food processing and transport operation. In 2004, tourism arrivals in the island were recorded at 133,638, while tourism receipts reached PHP 159.1 million (BFAR 2006).

Since its creation as an independent province, the local government units of Guimaras have carefully laid down development plans and programs that served as boons to provincial and local development without being inimical to the environment. The agri-tourism path to development has gradually and effectively allowed the province to forge ahead in the race against poverty and away from the infamous club of 20 poorest provinces in the Philippines (Arias et al., 2006). All of these development gains, however, were placed under severe peril because of the sinking of M/T Solar 1 that blanketed a large portion of the province's coastlines and coastal resources with bunker sludge and oil slick.

### The M/T Solar 1 Oil Spill in Guimaras

On August 11, 2006, Friday, M/T Solar 1 owned by Sunshine Maritime Development Corporation capsized in rough seas twelve miles off the southern tip of Guimaras Island. The vessel was chartered by Petron Corporation

to transport 2 million liters of industrial fuel oil or bunker oil, from Lamao, Bataan to Zamboanga City (BFAR 2006). In a matter of hours two hundred to three hundred thousand liters of thick bunker sludge, driven by monsoon winds and natural currents, blanketed the coasts of 28 villages in the municipalities of Nueva Valencia, San Lorenzo and Sibunag (BFAR 2006). It was the worst oil spill incident recorded in the Philippines. The Department of Social Welfare and Development (DSWD) pegged the number of affected families at 4,727 (BFAR 2006). The province also estimated the affected shorelines in Guimaras to a total of 220 kilometers. Seaweed farms and fishponds were not spared. The province also reported contamination of 454 hectares of mangroves (BFAR 2006). This threatened spawning grounds of marine species thereby arousing fears of long-term decline or decimation of fishery resources and supplies. Still recovering from the reeling effects of poverty a little more than a decade ago, the spill took a heavy toll on Guimaras. When it occurred, the province is well on the road of carving its own economic niche via agricultural, fisheries and tourism development (Arias and Gabinete 2005). The spill put all this into detriment. In the municipality of Nueva Valencia, people witnessed first hand how their shores were blackened by the thick sludge of bunker fuel. In Tando, in the wee hours of the morning of August 11, as fishers set sail to start their day, they were puzzled by the sluggish movement of their boats and soon discovered that they were amidst a sea of foul smelling black mass. Another fisher in Cabalagnan who was about to begin his afternoon trip smelled the fume from the spilled bunker oil and thought that a fisherman might have accidentally dumped his fuel. He realized that he was in the middle of a catastrophe when he saw the thick sludge of bunker oil afloat around him. News from local radio stations affirmed the existence of massive oil spill and identified its source. The first LGU to receive the bad news was the municipality of Nueva Valencia. The surviving crew of M/T Solar 1 landed in Sitio Comian in Tando and confirmed the sinking of the ship and the subsequent oil spill to local authorities. As the authorities grappled with the magnitude and nature of the catastrophe, losses and destruction escalated across affected areas.

The consequences of the spill were especially troubling for the island barangays of Guiwanon and Panobolon. As narrated during the focus group discussion, the thick sludge that blanketed their shores prevented barangay officials from reporting the damages and losses they incurred to municipal and provincial authorities. This resulted to further delays in the arrival of external aid. Their location and distance from the town and provincial centers proved cumbersome as assistance, relief and advisories took time to reach their communities. Without immediate external support, barangay officials took the responsibility of immediate response, like evacuation of households near the shores and the survey of damages and losses in their respective communities.

Reports of contamination of fish stocks within Guimaras waters prompted the government to declare a ban on all fishing activities. This directly affected 20,000 small and artisanal fishers dependent on the sea for income and survival (BFAR 2006). Women and children engaged in shell gathering were also affected. The livelihoods of people dependent on fishing were seriously compromised, creating a chain of problems that deducted from their capacities for coping and survival. The spill instigated fear among consumers that fisheries products from Guimaras were not safe for consumption. Fishers who were able to catch fish in areas they deemed free from contamination found it difficult to market their products. Frequently, they were forced to lower their prices just to earn income. The situation was even direr for those who were not able to go out to fish. Many fishing gears were damaged by the thick sludge as they clung to boats, paddles and nets. Salt manufacturers, seaweed dryers and fishpond workers also experienced setbacks.

Women and children who actively contributed to the pool of household income through shell gathering likewise suffered. As a result, income levels plummeted, creating severe setbacks in people's capacities to meet the daily household sustenance requirements. Health and education needs took the backseat as priority was directed towards securing the basic need for food. For example, there were cases of students dropping out from school because their parents could hardly guarantee their allowances. Others were forced to get loans. How will they pay for these loans was another source of concern. Many victims were thankful for the cash for work schemes instituted by Petron Corporation as these helped them make both ends meet, no matter how short lived.

For many victims, the poisoned sea was not only a source of income but also a source of food and nutrition. Many fishers would usually allot a portion of their catch for household consumption to help defray expenses for food and ensure source of protein. Without this, many households were hard up in securing a square meal every day. This explains the dependence of many victims to relief assistance. The kind and frequency of relief assistance, however, was another matter that they have to contend with. The oil spill also threatened people's health. Many victims complained of difficulties of breathing especially after prolonged exposure to fumes. Others complained of coughs, respiratory illnesses and skin irritations. In some barangays, oil spill leached to the sources of drinking water making their condition doubly challenging.

Beach resorts that once attract droves of tourists were destroyed, making them inhospitable to many visitors. Bookings were cancelled even on frequently visited vacation islands almost rendering them abandoned. Millions of investments for tourism development were simply lost (BFAR 2006). Families and individuals who depend on tourism services for livelihood also suffered. Given that their primary source of income was crippled,

many fishers turned to upland resources for survival. Charcoal making was identified as one of the options that the victims explored but some encountered legal prohibitions. Others tried their hands on farming but encountered limitations since it requires a bit of investment (for seeds and inputs) and has a lag time while waiting for harvest. Moreover, they do not have complete control since they do not own the farm lots. Some pursued copra making while others took on odd jobs including flower induction for mangoes. It was desired by many victims that a thorough survey of their skills should have been conducted so that they can explore a variety of options for them to earn income outside fishing.

The enormity of the situation and unfamiliarity with the problem inhibited the timely response from concerned LGUs. This hampered immediate efforts for clean up and containment. Accordingly, this delayed responses from concerned external agencies including the national government and Petron Corporation. The affected population took the initial steps for clean up and containment to protect local population and resources. Most of the time, however, they did this without adequate advisories or safety precautions as to how they should go about the process. This is true most especially in cases of Cabalagnan, La Paz, Tando and the island barangays.

### Oil Spill Response and Rehabilitation Initiatives

The oil spill presents an interesting and unique case for disaster management given that it was construed as a confluence of natural and human induced factors. The sinking of the oil tanker and the subsequent oil spill stemmed from technological and human factors. The accelerated spread of spilled oil, consequently affecting coastal communities, livelihoods and resources resulted from turbulent seas due to monsoon season. On the other hand, the crew vessel's decision to push through despite the typhoon warning led to the tragedy.

Response and rehabilitation initiatives based on the current framework for disaster management in the country refer to immediate or emergency, post-disaster activities aimed at alleviating human suffering and assisting victims in rebuilding their lives by way of restoration of important lifelines and services. These activities take the form of relief, technical, institutional and even financial assistance. The manner of implementing these varies from one locality to the next depending on local conditions and exigencies. The Philippine Coast Guard (PCG), the National Disaster Coordinating Council (NDCC) and the regional and local networks of DCCs, Task Force SOS, Task Force Sunrise, non-governmental institutions, and international or

multilateral institutions have contributed in various ways to relief and rehabilitation efforts in Guimaras.

### Response Initiatives

A declaration of the state of calamity was made immediately after the oil spill was confirmed. This declaration gave local officials and local disaster coordinating councils the authority to utilize the five percent calamity fund allocation. In the main, these funds were used to purchase materials for spill booms which were used as mitigating devices to avert the further spread of oil. Unspent portions of calamity funds were funneled to purchase relief good for the victims.

Relief assistance came in a form of food packages distributed to victims in varying amounts and timing. These normally contain rice, canned goods (sardines, corned beef, beef loaf) and noodles. Some items included clothing and basic necessities for hygiene like toothpaste, shampoo, bath soap or detergent. It was quite difficult to ascertain the exact volume of relief goods that reached the victims and the type of goods they received.<sup>2</sup> Participants also related that relief distribution across affected communities was not uniform; some communities received several batches while others received only one. They also mentioned that the quantity and type of relief goods varied. This was so for the island barangays of Guiwanon and Panobolon. Their relative isolation and inaccessibility prevented many relief giving organizations from providing them aid commensurate to what other mainland barangays were receiving. The people also worried about the indeterminate and unsustainable nature of relief giving. In some barangays, distribution was terminated unceremoniously while other barangays were still receiving more assistance. The volume and type of relief goods also became an issue. Most of the time, victims were oversupplied with canned goods and food packs while other goods like detergent and articles for hygiene were very limited. Relief assistance also came in the form of health or medical check ups especially for residents of coastal barangays who were exposed or who made direct contact with spilled oil. The Department of Health took the lead in this regard although there are some private institutions and medical groups that initiated medical missions in select affected areas. UP Visayas, for example, constituted a UPV-Relief Action Team to facilitate medical missions. Skin irritation and respiratory related illnesses were noted to have been aggravated by the stench issuing from the fumes (NDCC 2006). Health monitoring of clean up workers was done to ensure that prolonged exposure to bunker oil would not direly affect their health conditions.

---

<sup>2</sup> In some areas of Nueva Valencia, San Lorenzo and Sibunag, relief distribution was still ongoing when the study was being undertaken.

---

Households located near the shoreline were evacuated. Evacuation became mandatory when local authorities declared that the 50-meter distance from the shoreline inland was unsafe for habitation unless declared otherwise by proper authorities. While some evacuees moved in with relatives located in safe zones, many were temporarily sheltered in local chapels, churches, schools and barangay centers. In the case of Tando, where the identified evacuation center was also damaged by the spill, evacuees were forced to set up camp in tents at the barangay plaza. However, the tents were highly inhospitable for occupancy because of heat. Evacuees in Cabalagnan complained of mosquitoes and other insect bites as well heat from a classroom devoid of ceiling.

Evacuees described their conditions in the evacuation centers stressful. Most of the time, they were crammed in a small and confined space, limiting freedom of movement. They also lack privacy. It was hard for them to laugh, cough or make conversations without other evacuees hearing. The women's experiences in the evacuation centers appeared even more strenuous. Many centers were not provided with kitchens where they can prepare their meals and the supply of clean and potable water is hard to come by. Childcare became more demanding as infants and small children have lesser tolerance for heat and congestion.

One of the most basic technical responses was rendered by the Philippine Coast Guard (PCG), which took the lead in the containment, recovery, dispersal and clean up activities to collect spilled oil and prevent further contamination. This is part of its mandate as the agency tasked to preserve and protect the marine environment including control of marine pollutants like oil spill. The PCG also conducted daily aerial surveys and monitoring not just within affected places but also in identified threatened areas. Its efforts were complemented by initiatives from private responders who provided similar equipment where government based assets fall short (NDCC 2006). Technical assistance from foreign institutions was also of primary importance. The extent of the oil spill was initially determined through radar satellite by the International Charter Space and Major Disasters and made available to UNOSAT (UNITAR Operational Satellite Applications Programme). The latter provided valuable assistance in monitoring the movement of the oil slick and in producing updated satellite maps. Equipment for clean up and containment operations were provided by the Japanese Coast Guard and the United States Coast Guard. Meanwhile, agencies like the Food and Agriculture Organization (FAO), International Maritime Organization (IMO) and United Nations Development Program (UNDP) extended support for needs assessment, studied options for livelihood of affected

fishers and assisted in the processing of compensatory and reparation claims (NDCC 2006).

Locally, the following agencies under the NDCC provided the following (NDCC 2006):

#### *Department of Health*

- Assisted local health personnel in the assessment and massive information drive and put up a command post in Nueva Valencia;
- Issued health advisories and placement of streamers in strategic places in Guimaras, Iloilo and Negros Occidental;
- Tapped expertise to conduct assessment of toxicity of bunker oil including its short and long term effects.

#### *Department of Environment and Natural Resources*

- Through the National Mapping Resource Information Agency (NAMRIA) deployed vessels to survey and monitor oil spill affected sites to provide up to date bathymetric and oceanographic data and give out navigational warning and notices;
- Assisted LGUs in coming up with improvised oil spill booms and other materials to restrain the spread of bunker oil;
- Conducted environmental and geological assessment of temporary disposal sites for oil contaminated debris and materials collected;
- Assessed status of mangroves.

#### *Department of Agriculture*

- Through the Bureau of Fisheries and Aquatic Resources augmented the conduct of assessment;
- Conducted sampling of landed fish catch in all municipalities for quality analysis;
- Issued certificate system for safe fish to bring back consumer confidence on fish caught in Guimaras.

#### *Department of Social Welfare and Development*

- Augmented relief assistance to PDCC from the Presidential Development Assistance Fund of a congressman;
- Activated and mobilized the five-person Quick Response Team to provide technical assistance to affected LGUs and Petron Foundation for the Cash for Work Scheme;
- Provided technical assistance to affected LGUs in relief distribution, profiling of effected families, and implementation of cash for work projects.
- Prepositioned more than P3 million worth of standby resources for augmentation purposes;

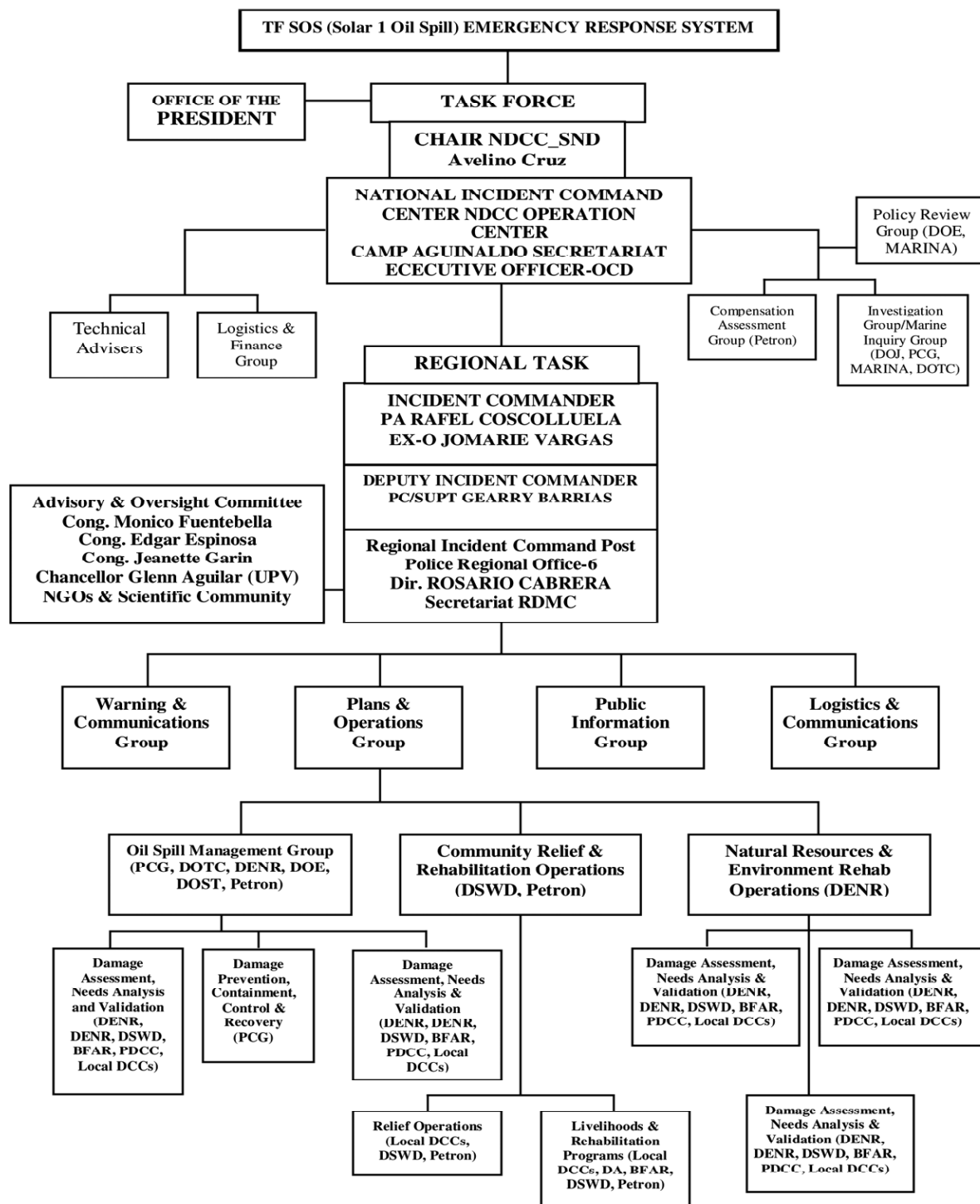


Figure 1. Organizational Structure, Task Force Guimaras



- Facilitated networking with local and international donors to finance alternative livelihood projects;
- Monitored potentially vulnerable communities and families in threatened areas.

Part of the institutional response mechanism from the national government was the creation of the Task Force Guimaras by virtue of Memorandum No. 10 series of 2006 issued by the Secretary of National Defense.<sup>3</sup> Its creation was in accordance with a directive from the Philippine President. Lodged under the Office of the President, the Task Force (see Figure 1) is an ad hoc structure, which operates mainly on the basis of inter-

agency committees formed to look after specific oil spill-related concerns. The Memorandum also indicated agency assignments under the Task Force as shown in the Table 1.

Furthermore, Secretary Cruz issued a Memorandum dated August 31, 2006 establishing the On-Site Incident Command Post (ICP) in Jordan, Guimaras which served as central hub for coordination, operations and information at the local level. It was manned by representatives of Regional Task Force Guimaras (RTFG) member-agencies and provided their own resources to sustain their own activities related to the oil spill disaster

**Table 1. Agency tasking to address the oil spill incident in the Province of Guimaras, 2006.**

<b>Tasking</b>	<b>Lead Agency/Support Agencies</b>
1. Strategic Communications Plan	<b>NDCC</b>
• Public Awareness	Concerned LGUs
• Health Advisories	DOH
• Establishment of Reporting Lines (from national to local and vice versa)	
• Media Updates/Press Briefings	
2. Oil Spill Response Operations (Offshore and Shorelines)	<b>DOTC-PCG</b>
• Containment	DENR
• Dispersal	DSWD
• Clean UP	DOST
• Waste Management of Spilled Oil	DOE
• Cash for Work	Petron
3. Retrieval/Recovery Operation of Bunker Oil and Sunken Vessel	<b>DOTC-PCG</b>
	Petron
4. Investigation of Oil Spill Incident	<b>DOTC</b>
	MARINA
	PCG
	Marine Board Inquiry
5. Policy Review/Recommendation to Prevent Future Oil Spills	<b>DOTC</b>
	MARINA
	PCG
	Petron
6. Mitigating further Damage and Restoration of Environment (mangrove, ground water, aquatic resources, etc.)	<b>DENR</b>
	EMB
	BFAR-DA
	Concerned LGUs
7. Early Recovery Progress/Alternative Livelihood	<b>BFAR-DA</b>
	Petron
	DSWD
8. Reparation/Compensation due to Economic Loss	<b>NDCC</b>
	Petron
9. Request for International Technical Assistance	<b>NDCC</b>

<sup>3</sup> Laigo (1996) notes that "high impact" disasters, like the eruption of Mt. Pinatubo, usually necessitate the creation of Task Forces to provide more backbone on the existing system for disaster response (which is usually reliant upon the coordinative mechanisms set by the NDCC) and to directly access/utilize funds. While the NDCC can easily be activated immediately after or even during the wake of an emergency event, it can only coordinate response and rehabilitation activities. Having no funds at its disposal, the Council cannot directly engage communities for disaster response or emergency management efforts. It has to rely on existing expertise or resources of its member agencies who are in turn bound their respective mandates.

management. The Regional Task Force Incident Commander subsequently issued a memorandum on September 12, 2006 creating TF Solar 1 Oil Spill composed of Petron Corporation, Sunshine Maritime Development Corporation, Office of Civil Defense, Philippine Coast Guard, Bureau of Fisheries and Aquatic Resources, Department of Health, Department of Environment and Natural Resources, Department of Agriculture, Philippine National Police, Provincial Disaster Coordinating Council Guimaras and members of the Oversight Committee (NDCC 2006). The task of each agency is based on their respective mandates. The multi-agency composition of the Task Force necessitates speedy and decisive mobilization of efforts especially because oil spill is a fast onset disaster. At the provincial level, Guimaras Governor JC Rahman Nava initiated an institutional response effort when he issued Executive Order No. 23 on August 14, 2006 creating Task Force Sunrise<sup>4</sup> as a “joint PDCC, MDCC, BDCC response to the oil spill crisis that hit the coastal areas of the province after the ill-fated M/T Solar 1 loaded with 2.1 million liters of industrial fuel oil (bunker fuel) sunk approximately 12 miles off the coast of Guimaras on August 11, 2006.” Its primary mandate is to harmonize efforts in information dissemination, assessment and evaluation, welfare and rehabilitation, transportation, rescue and engineering, relief services, evacuation and medical services, and legal services. Headed by the Governor, the Task Force consisted of seven committees, namely: (1) Plans, Operations and Information; (2) Resource Management; (3) Assessment Welfare Rehabilitation; (4) Relief and Evacuation; (5) Medical Services; (6) Rescue Transportation and Engineering; and (7) Legal Services. The provincial government issued three calls regarding oil spill: (1) immediate removal of the sunken tanker that continues to bring threats to the island’s fragile ecosystem, (2) provision of relief assistance to affected families experiencing food and water shortage, and (3) restoration of the environment that sustains people’s livelihood and well-being (EO 23 of 2006). Through Task Force Sunrise, the Guimaras provincial government was able to sustain its effort in monitoring and clean up operations in specific localities with the supervision of the PCG. Information campaign, free consultation and water sampling have been accomplished in several areas in coordination with the DENR. Information and education campaign materials have also been developed using the local dialect to reach out effectively to the wider audience. Moreover, the province also organized a team composed of Technical Education and Skills Development Authority (TESDA), Provincial Planning and Development Office (PPDO)

and the Department of Trade and Industry (DTI) to conduct a study to determine appropriate interventions and alternative livelihoods for the affected population (BFAR 2006). Another form of institutional response was the activation of the DCCs from the regional down to the barangay level. In spite of their known limitations in terms of funding or technical skills in handling the oil spill, their activation was instrumental in emphasizing the exigency of pooling available local resources (including financial and human resources) for clean up, containment and relief purposes.

### Rehabilitation Initiatives

Rehabilitation initiatives refer to the process by which the affected communities/areas are restored to their normal level. Central to this effort was the containment and recovery operations of oil spill offshore led by the PCG. Corollary to this effort was the dispatch of four oil spill response teams within affected areas. Tugboats aided by small sea crafts were deployed, equipped with booms, skimmers, jet sprayers, dispersants, and sorbent pads (BFAR 2006).

On land, manual clean-up operations were organized in coordination with the disaster coordination councils at the national, regional, provincial and local levels. The “cash for work” system was launched to give affected fisherfolks an alternative source of income, as sludge and sheen are being removed or contained. Residents in affected barangays were given PhP 200 a day to participate in the clean up. Protective gears like gloves, masks and boots were also provided (NDCC 2006). Clean up operations were supervised by the Petron Corporation. The collected oil was to be treated in a disposal site to speed up biodegradation. The remediation of affected areas including mangrove areas and seaweed farms started when clean up was completed. Alternative livelihood for affected families were likewise developed to help them cope in the meantime that they cannot pursue their normal livelihood, mainly in the form of “cash for work” schemes.

Many issues concerning the cash-for-work and the clean up process surfaced during the focus group discussions. The selection of beneficiaries for the cash-for-work schemes was marred by complaints of favoritism and nepotism. It appeared that the criteria drawn for selecting beneficiaries were not clear to many community members. Local barangay municipal officials were accused of favoring their relatives and those who supported them in the previous elections. There seemed to be the need to explain to victims how the damages

<sup>4</sup> The said executive order was amended in September 1, 2006 through Executive Order 26, Series of 2006, issued by Governor Nava by virtue of the powers vested by law, rules, regulations and decrees particularly Sections 16 and 465 of the Local Government Code of 1991 or RA 7160 and the Resolution passed by Sangguniang Panlalawigan. Notably, EO 26 provides that the Task Force shall remain to be coordinating body with the NDCC, RDCC Task Force Guimaras and shall supervise, coordinate and control disaster operations in the Island Province.

and losses had been assessed to assure that the process of selecting beneficiaries was fair and objective.

Objections against the limited livelihood options available for victims also came to light. Clean up operations, representing one option where the cash-for-work schemes were employed, had specified time frames and the incomes they received for the services they rendered could only briefly cover their short term need for an income source to ensure sustenance. Another option was for identified beneficiaries to develop a communal garden for the community. This option also had limited time frame and required local communities to identify an area or space for cultivation. In some barangays, this option did not prosper for other requisites for gardening were not satisfied like adequate land area and seeds. Other livelihoods ancillary to the skills, capacities and existing land-based community resources had been identified by the victims during focus group discussions but these were not pursued by agencies concerned. For example, in Tando, a suggestion to train them for shell craft was made; while victims in San Roque suggested weaving because of the abundance of raw materials in the community. Poultry raising and hog raising were also identified. In Poblacion, Nueva Valencia, participants mentioned that the Technical Education, Skills and Development Authority (TESDA) had trained them in reflexology, but no post-training follow up was made. In Santo Domingo, some victims were trained how to process nata de coco but this also was not pursued. When asked for measures that should be taken into consideration to ensure that the livelihood projects when implemented will not be spoiled by problems, participants in the focus group discussions mentioned that these projects should be predicated by adequate consultation. They also mentioned that the process should be participatory so that the beneficiaries can develop accountability to project outcomes. They also underlined the importance of an objective selection process, based on actual needs of victims, rather than on their relative access to authorities or agencies mandated to implement these projects. Caution should be taken in implementing livelihoods so that they would not engender discord and division within communities particularly if the process of implementation is tinged with favoritism or partisanship. It is also important to suffuse proposed livelihood projects with principles of sustainability so that the beneficiaries can enjoy its net results in the long term. Long-term rehabilitation plans have been drawn up but this was mostly lodged at the agency levels, that is, of NDCC member agencies. They were further given instructions to continue with rehabilitation programs in accordance with their respective mandates. Meanwhile, UP Visayas took the task of monitoring the effects of oil spill to the biological environment and physico-chemical characteristics of

affected areas in Guimaras as well as its socio-economic impacts. Rehabilitation programs were not the monopoly of government agencies alone. A number of local NGOs and private firms also initiated rehabilitation programs especially in their areas or communities affected by the spill. For example, in La Paz, the Lopez Group Foundation in coordination with the Iloilo Code of Development NGOs organized an agro-forestry project and a cooperative for oil spill victims. The project hopes to resuscitate the declining watershed in the barangay while at the same time give victims the opportunity to generate income through fruit and vegetable production.

## Challenges to Response and Rehabilitation

### Coordination issues

The magnitude of the oil spill disaster in Guimaras necessitated the mobilization and involvement of various government agencies and instrumentalities especially those with mandated functions for disaster management like the disaster coordinating councils, the Philippine Coast Guard and the local government units. It also called for the active involvement of affected communities, non-government organizations and even international organizations.

The disaster also prompted the creation of task forces like the Task Force Solar 1 Oil Spill and Task Force Sunrise. All task forces were anchored on their respective disaster operations center. As entities capable of expediting decision-making and disbursement of funds, their creation had both tactical and strategic significance. With their multi-agency composition, they were designed ideally to orchestrate a coordinated and integrated effort for relief and rehabilitation purposes. Their actual operations, however, appear far from ideal.

Most apparent was the creation of two task forces with more or less similar function and composition. Furthermore, the multi-agency composition was impaired by overlaps in mandatory functions. No mechanism was developed that spells out how these task forces should coordinate response and rehabilitation initiatives. Community response and rehabilitation initiatives for example were conducted separately by agencies and most of the time they did not cohere with one another. For instance, vegetable gardening in some barangays, which involved the Department of Social Welfare and Development (DSWD) (as disburser of funds) and the Department of Agriculture (DA) (for seeds) were plagued with setbacks due to uncoordinated efforts. Although the former released the budget for the preparation of plot, planting got delayed or did not push through altogether because of problems with the dispersal of

seeds. As observed by the victims, other agencies within the task force perform their mandated functions separately. Moreover, when they conducted assessment within affected communities, they did not consult with the barangay leaders and proceeded with their assessment without local participation. Information on what they examined and their findings were not readily shared to the locals concerned. Thus, for many victims they appeared as if they were pursuing separate programs and activities. The presence of two task forces also created some kind of structural or institutional confusion due to their similarities and overlapping functions particularly in the clean-up and relief operations. Division of tasks and expected functions between the two were not specified or clearly defined. Their relationship with one another is also clouded by indeterminacy. At the level of communities, FGD participants noted some gaps in the flow of information and support from the higher levels of governance down to the barangay level. They were quick to point out the conflicting roles of agencies and other players involved from the national down to the municipal level, which oftentimes resulted to confusion and delay of programs, actions and information dissemination. Also, they could not see clearly how the Municipal Disaster Coordinating Council (MDCC), Provincial Disaster Coordinating Council (PDCC), Regional Disaster Coordinating Council (RDCC) and National Disaster Coordinating Council (NDCC) work together. In situations like this, they suggested the importance of well-coordinated work and operations between local stakeholders, the national government and other private organizations that manifested willingness to extend help. Attention should be given in providing people an idea of their roles and responsibilities so that they would also know what agency to approach for specific concerns and issues that they wanted to be addressed.

The participants also emphasized the need for a properly orchestrated system of efforts in responding to the crisis. They were not in agreement, however, when asked as to who should lead in the efforts. Some pointed out the crucial role of the municipal government from systematizing relief operations to facilitating financial assistance. Others underlined the role of the provincial government because the oil spill affected not only one municipality but the whole province of Guimaras. Still others pointed to the national government because it has the necessary resources to contend with the immense repercussions of the spill.

### Response and rehabilitation protocols

The nature of the oil spill created a dilemma as to what agency or organization will take the lead in response and management activities. From the perspective of environmental protection, the PCG has the leadership role given its statutory duty as the watchdog of pollution in coastal and marine environments. From the point of view of disaster management, and given the magnitude of the calamity which overwhelmed the capacities of local DCCs to manage, the NDCC should assume the lead role as the oil spill that hit land have implications to people's welfare. From the angle of local governance, the province of Guimaras and other local government units under its jurisdiction should take the lead because the oil spill (and the areas it threatened) is within its territory. The PCG was confronted with a daunting task of managing and containing the oil spill most especially because its training and experience to handle oil spills were limited only to situations when the oil slick is still on water (Rimando 2007). The speed of onset of the spill did not give the PCG sufficient time to contain the slick. When it hit land, the existing resources including equipment of the agency were no longer adequate. It was then necessary to mobilize resources from other government agencies. The National Disaster Coordinating Council (NDCC) was then tapped to help the process of coordinating government activities for oil spill response and rehabilitation. However, the Council was used to handling natural disasters, like typhoons, floods or landslides, not oil spills. As an interagency body, nonetheless, the NDCC was key in mobilizing other government agencies to provide the necessary assistance to the province.

The magnitude and the unfamiliarity of oil spill, sadly, became an arena of conflict and finger pointing. Protocols or guidelines as to what agency should lead in the process of clean up and containment marred emergency response efforts. It also surfaced cases of political bias especially in terms of distribution of relief and rehabilitation funds (Burgos 2007). Frequently, the utilization of rehabilitation funds and use of dispersants became bones of contention among agencies involved. Anecdotal evidences gathered during FGDs and informal talks with affected residents uncovered instances of political bickering between local government officials, and regional and national officials due to partisanship. For example, the sidelining of the provincial authority in Task Force Solar 1 Oil Spill is construed as a clear indication that the provincial leadership does not receive favorable reception from

---

<sup>5</sup> Currently there is an ongoing advocacy efforts led by a network of non-government organizations (Disaster Risk Reduction Network, Philippines) campaigning for the passage of the DRRM bill in both houses of legislature to supplant the age old PD 1566 of 1978. Among many other things, the proposed bill hopes to reorient the approach currently being used for disaster management to disaster risk reduction and management. This is in accordance with the current efforts in the international arena that aim to increase the preparedness and resiliency of nations all over the world to disasters.

---

the higher authorities (who has different party affiliation). Thus, the Task Force would usually go directly to affected communities when delivering aid, sometimes bypassing the authority of the provincial and municipal governments. The creation of a provincial task force (Task Force Sunrise), which predated the Task Force Solar 1 Oil Spill, is an indication of the provincial leadership's effort to be on top of response and rehabilitation initiatives. The primary limitation of this Task Force, however, rests on the fact that it has limited sources of assistance and aid from external agencies, most especially from the regional and national level, which are more inclined to channel their humanitarian assistance through the Regional Task Force.

### **Reactive rather than proactive system**

While changes are currently underway in the approach used by the NDCC to disaster management,<sup>5</sup> there is no denying the fact that the present system remains reactive in orientation. For example, DCCs meet after a disaster has transpired and then plan for specific interventions from thereon. Consequently, plans produced are palliative, aimed mainly at recovery and rehabilitation. This, in effect, makes the process of disaster management cyclical, which, more often than not, brings people back to the state where their vulnerabilities to disaster are never reduced.

The creation of Task Force Solar 1 Oil Spill can be interpreted as a very timely response to oil spill given the structural and functional limitations of the Philippine Coast Guard and the NDCC. The Task Force has specific funding allocations, which it can directly use for purposes of oil spill response and can therefore dispose of these funds as need arises in disaster stricken areas. It must be emphasized, however, that the structure of the Task Force does not deviate from the structural set up of the NDCC other than the fact that it has a more streamlined composition with oil spill specific function. The structure still maintains the vertical and the overly hierarchical mode that relegates the importance of the involvement of the LGUs from the province down to the barangay and their respective DCCs to the lower tiers of the structure. The set up does not seek for their participation in decision making much less in the design and implementation of oil spill response initiatives when in fact they are at the receiving end of the disaster.

Moreover, disaster management or disaster preparedness concerns have not permeated the development planning process from the national down to the barangay levels. Risk reduction strategies, vulnerability analysis, gender mainstreaming,

sustainability, linkage of delivery of services to policy change through advocacy, integration of disaster risk reduction to development planning also have to be systematically laid down with the current system. This could improve the capacity to deliver a range of services effectively and efficiently, even in adverse conditions. More importantly, this could instill a culture of preparedness and safety to communities that are in constant threats of calamities. Although there is an observable trend indicating increasing awareness on disasters (see Lupig-Alcid et al. 2003; NDCC 2004) this seems to be focused only on understanding the nature and effects of common natural hazards. There is little awareness on the other hazard types, like oil spill, and on the need to institute risk and vulnerability reduction strategies while using integrated and multi-hazard perspectives with emphasis on what the public can do to prepare, mitigate and prevent disasters.

### **The role of local communities**

The oil spill also brings to the fore the serious limitations of DCCs especially at the local level. Reflective of the prevailing practice and orientation at the national level, the system disaster management in these localities is focused mainly on natural disasters. Thus, when a different type of disasters befalls on these localities, the existing systems break down and human suffering ensues.

Based on information gathered through the FGDs, clean up and oil spill containment in the affected barangays were initiated by the barangay officials through the activation of the Barangay Disaster Coordinating Committee (BDCC) with the active participation of the members of the Barangay Fisheries and Aquatic Resources Management Council (BFARMC), the Barangay Tanod and the Barangay Health Workers (BHWs). The BHWs played key roles in providing precautionary health measures through advisories provided by the municipal and provincial health office. Members of the Sangguniang Kabataan also took active part in the clean up process. The Barangay Councils of barangays declared as calamity area earmarked some amounts of the local calamity fund for spill boom and clean up while the provincial government provided additional PhP 5,000.00. In some communities like in Barangay Cabalagnan, Nueva Valencia, the start of clean up activities was delayed for several days for lack of information about the nature and characteristics of the oil spill. The barangay officials began with clean up activities one and half days before the clean up activity headed by Petron officially commenced. By then, the barangay has already been declared as calamity area and the Barangay Council has earmarked PhP 36,000.00 of the local calamity fund for

spill boom and clean up. Other than health advisories, no other information about the bunker fuel was provided to residents. They, however, found it most urgent to proceed with the clean up and containment operation to salvage whatever was left of the coastal resources where many of them depend for subsistence and survival. Residents wallowed through the thick sludge without protective gears. As a result, many complained of skin irritation, and respiratory problems. The Barangay Fisheries and Aquatic Resources Management Council took the lead in oil spill containment in close coordination with the Barangay Development Council. The primary role played by the fisher folks is predicated by the fact that they received the heaviest blow of the oil sheen that crept into their fishing grounds.

### Analysis and Conclusions

The oil spill in Guimaras generated issues that are directly related to the relevance of the prevailing disaster management system in the Philippines. At the policy level, the calls for the revision or updating of current legislative frameworks for oil spill management and natural disaster management should be strongly endorsed. Such revision should clarify roles of different agencies to minimize overlapping and conflict of functions. Revisions should also consider the complexity of the nature and characteristics of hazards and the disasters that might ensue from these especially when these meet people's vulnerabilities.

With documented experiences against large scale disasters, and the suffering and damages they wrought to the human population and development gains, it is also important for the Government of the Philippines to be vigilant of existing and potential hazards that could bring more hardships to the Philippine society and economy. It needs to be cognizant of existing international norms on risk reduction, and it must take initiatives how these efforts can be set into practice in the Philippines (see UN/ISDR 2002). In the local scene, efforts done previously to institutionalize disaster management capabilities (albeit weakly) can be reinforced by upgrading local capabilities through various capacity building initiatives for risk and vulnerability reduction and disaster management. Training and education campaigns that emphasize integrated and multi-hazard approaches can help bring these concerns to the fore. There is also a need to strengthen the existing capabilities of local government units for disaster management; after all they stand the constant threats of disasters. And while the impact of disasters like the oil spill can be debilitating, it must also be seen as an occasion where unity and concerted efforts can reign over social, economic and political divisions.

It is imperative that all programs and activities must be integrated for efficient and effective coordination between and among the key players and stakeholders. All plans and policies at all levels must be firmly anchored on the overall Solar I Oil Spill (SOS) Rehabilitation Framework formulated by the Provincial Government. This is to lead the way for a more efficient delivery of assistance and services and avoid the pitfalls of fragmented coordination.

Certain questions had been raised as to the methods of selecting and targeting beneficiaries, especially during relief delivery and distribution. Criteria must therefore, be firmed up to serve as basis for identifying and prioritizing beneficiaries. Needless to say, this move can possibly address political and administrative issues in the identification of beneficiaries as well as in the provision of assistance to the recipients.

On a wider scale, community participation should be continuously stressed both in addressing the current disaster management problems, and in sustaining initiatives already made. Information needed to firm up community participation, e.g., technical aspects of disasters that only technical experts and scientists from external agencies, including the government, can provide must be periodically made accessible and comprehensible at the community level. Through this, the affected groups will have a better understanding of the disaster that befalls on them as its attendant hazards and risks. Accordingly, the affected groups/communities can formulate commensurate plans and actions.

### REFERENCES

- Arias, E.A. and A. Gabinete. (2005). "Local Economic Development: The Guimaras Experience." Balanghai Summit, Butuan City. October 12-14, 2005. Retrieved on April 20, 2008 from <http://philippines.canurb.com/publications/guimarasledppt.pdf>.
- Arias, E.A., N. de la Cruz, N. Guillergan and J. Presaldo. (2006). "Responding to an Oil Spill Disaster: Data Management Support for the Rehabilitation of Guimaras Island, Philippines." Retrieved on April 20, 2009 from <http://www.philippines.canurb.com/projectsunrise/files/pdf/guimarasrapidassessment.pdf>.
- Asian Disaster Preparedness Center (ADPC). (2001). *The Philippine Disaster Management Story: Issues and Challenges*. Bangkok: Asian Disaster Preparedness Center.
- Bureau of Fisheries and Aquatic Resources. (2006). "Guimaras, Philippines: Rapid Assessment Report on the Damages of the August 11, 2006 Petron Oil Spill." Iloilo City: BFAR Region VI.

- Blaikie, P., T. Cannon, I. Davis, B. Wisner. (1994). *At Risk: Natural Hazards, People's Vulnerability and Disasters*. London and New York: Routledge.
- Brown, N., L. Amadore, and E. Torrente. (1991). *The Philippine Country Study: Asian Development Bank, Disaster Mitigation in Asia and the Pacific*. Manila: Asian Development Bank.
- Burgos, N. (2007). "P800M for Guimaras rehab held back." Retrieved on April 24, 2009 from <http://projectsunrise.org/rehabilitation/>.
- Capistrano, M. and V. Tomazar. (1999). "Disaster Mitigation – The Philippine Experience". Paper Presented at the International Workshop on Natural Disaster Management. Beijing, China. June 10-12, 1999.
- Heijmans, A. and L. Victoria. (2001). *Citizenry-based and Development-Oriented Disaster Response: Experiences and Practices in Disaster Management of the Citizen's Disaster Response Network in the Philippines*. Quezon City: Center for Disaster Preparedness Foundation, Inc.
- Kotze, A. and A. Holloway. (1996). *Reducing Risk: Participatory Learning Activities for Disaster Mitigation in Southern Africa*. Oxford: International Federation of Red Cross and Red Crescent Societies & Department of Adult and Community Education, University of Natal.
- Laigo, Lina. (1996). *GO Disaster Preparedness and Response: Strengths and Problems: The Philippine Reader on Disaster Management*. Quezon City: Citizens' Disaster Response Center.
- Luna, E. (1999). "Community Disaster Management as an Area of Study and Practice in Community Development." *CSWCD Development Journal* 4, 1.
- Luna, E. (2005). "The Concept and Practice of Community-Based Disaster Risk Management in the Philippines." Paper presented at the Seminar-Workshop on Mainstreaming Disaster Risk Reduction in Metropolitan Planning, Quezon City. December 1, 2005.
- Lupig-Alcid, M., M.J. Arcilla, C. Duque, T. Bonpin and E. Delgado. (2003). "A Study on the Current Disaster Management Practice and Opportunities for Strengthening Local Capacities." Pasay City: CARE Philippines.
- Montealto, D. (2003). "A Concept Paper on the Preparation of a National Oil Spill Contingency Doctrine." Naval Command and Staff College, Naval Station, San Miguel, San Antonio, Zambales.
- National Disaster Coordinating Council. (2006). *NDCC Media Update: Situation Report on the M/T Solar 1 Oil Spill Incident, September 8, 2006*. Quezon City: NDCC-Office of Civil Defense.
- Philippine Disaster Management Forum (PDMF). (2003). "Disaster Risk Reduction through Advocacy and Coalition Building." Proceedings of the Philippine Disaster Management Forum Conference. San Mateo, Rizal.
- Philippine National Red Cross (PNRC). (1994). *Concepts, Objectives and Concepts of Disaster Management: Disaster Preparedness Training Manual*. Manila: Philippine National Red Cross.
- Punongbayan, R. (2003). *Philippine Disaster Preparedness Systems for Natural Hazards: An Assessment*. *Philippine Journal of Public Administration* 36, 4:
- Rimando, L. (2007). "8/11, One Year After: Lessons from the Petron Oil Spill and What Steps are being taken to Prepare the Country for Similar Disasters." Retrieved on April 20, 2009 from <http://projectsunrise.org/2007/09/12/811-one-year-after/>.
- United Nations/International Strategy for Disaster Reduction (UN/ISDR). (2002). *Living with Risk: A Global Review of Disaster Risk Reduction*. Geneva: International Strategy for Disaster Risk Reduction.
- Focus Group Discussions:**
- Cluster 1. Poblacion, Nueva Valencia; Igang, Nueva Valencia; and Santo Domingo, Nueva Valencia. October 25, 2006.
- Cluster 2. Dolores, Nueva Valencia; Pandaraonan, Nueva Valencia; Magamay, Nueva Valencia; and Tando, Nueva Valencia. October 25, 2006.
- Cluster 3. San Roque, Nueva Valencia; La Paz, Nueva Valencia; and Lucmayan, Nueva Valencia. October 30, 2006.
- Cluster 4. Cabalagnan, Nueva Valencia; Panobolon, Nueva Valencia; and Guiwanon, Nueva Valencia. November 4, 2006.
- Cluster 5. San Antonio, Nueva Valencia; Igdarapdap, Nueva Valencia; and Canhawan, Nueva Valencia. November 4, 2006.
- Cluster 6. Alegria, Sinunag; San Isidro, Sinunag; Sabang, Sinunag. November 3, 2006.
- Cluster 7. Bubog, Sinunag and Sebaste, Sinunag. November 3, 2006.
- Cluster 8. M. Chavez, San Lorenzo; Suclaran, San Lorenzo; and San Enrique, San Lorenzo. October 24, 2006.
- Cluster 9. Sebario, San Lorenzo; Igawayan, San Lorenzo; and Cabano, San Lorenzo. October 24, 2010.
- Key Informants:**
- Alonzo, Ofelia. Barangay Captain, Sabang, Sibunag. November 3, 2006.

Evangelista, Olivia. Barangay Captain, Tando, Nueva Valencia. October 25, 2006.

Gacho, German. Barangay Captain, Salvacion, Nueva Valencia. October 25, 2006.

Gamuza Jr., Mammerto. Barangay Captain, Igang, Nueva Valencia. October 25, 2006.

Geonanga, Escolastico. Barangay Captain, Cabalagnan, Nueva Valencia. November 4, 2006.

Mojedo, Julie. Barangay Captain, Magamay, Nueva Valencia. October 25, 2006.

Quezon Wilfredo. Barangay Captain, Suclaran, San Lorenzo. October 24, 2010.

Segovia, Romeo. Barangay Captain, San Roque, Nueva Valencia. October 30, 2006.

---