



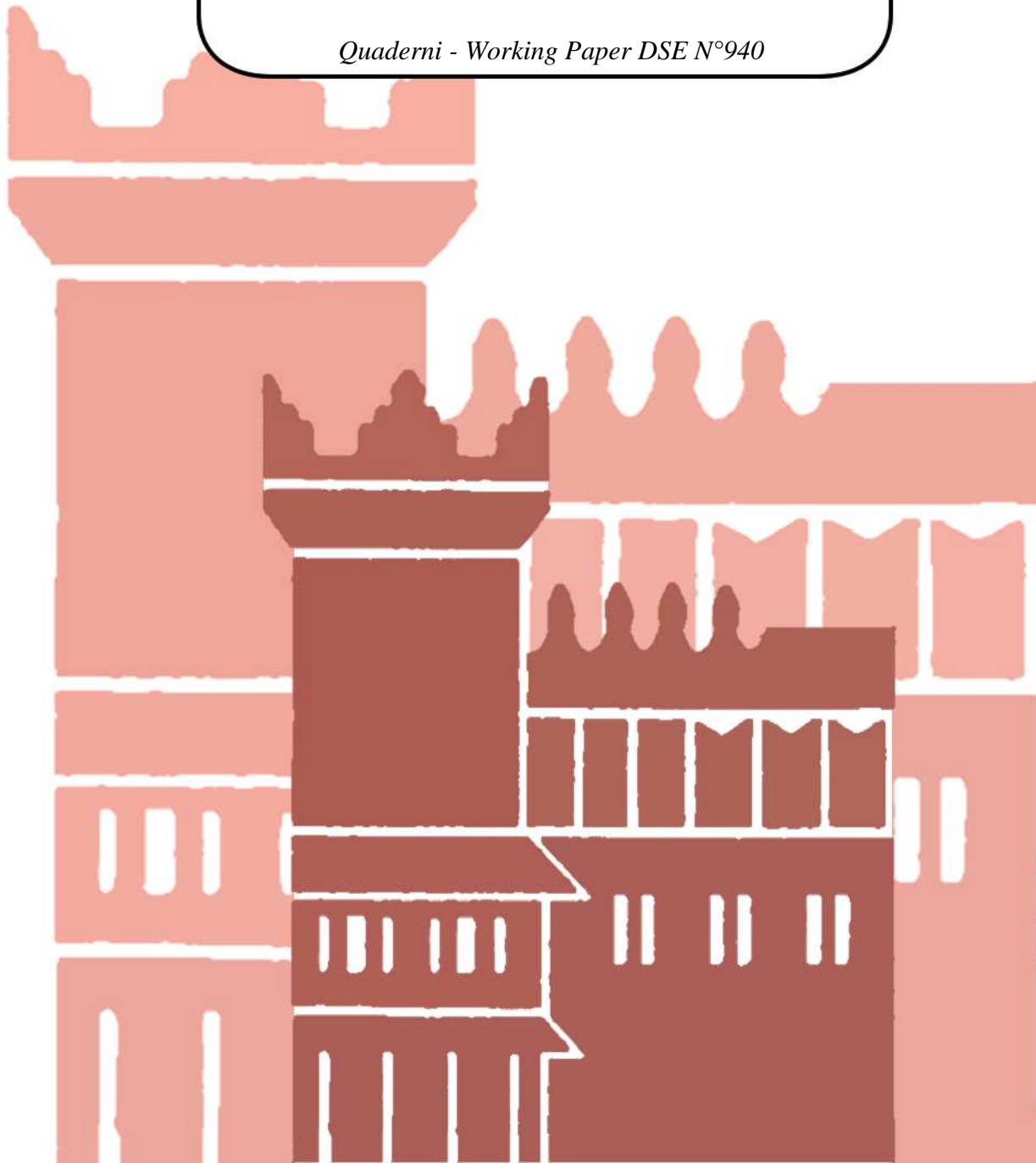
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**Climate Change and Natural
Disasters: Responding to the
Philippines' Haiyan tragedy**

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Climate Change and Natural Disasters: Responding to the Philippines' Haiyan tragedy

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Abstract

The powerful typhoon Haiyan that swept across the Philippines is one of the strongest storms ever to make landfall, cut a path of destruction through several central islands, causing scores of people dead. The disaster's full impact is still revealing as the entire country has been caught in a state of shock and desperation. The devastation is really horrific with human tragedy. Responding to the disaster of such magnitude calls for both national and international hands to come forward for the affected people.

Key words: *Climate Change, Natural Disasters, Typhoon, Government Policy, Philippines*

JEL Classification: *Q54 , Q56, Q58, Q59*

The Philippines' is an archipelago nation of more than 7,000 islands annually buffeted by tropical storms and typhoons. The geographical location of Philippines 800 kilometers (500 miles) from the Asian mainland between Taiwan and Borneo right in the heart of the South China Sea exposes the country to fearsome typhoons. Philippines is said to be the most exposed country in the world to tropical storms. Haiyan is one of the most powerful storms on record to make land fall-swept through six central Philippines' islands. Haiyan is a catastrophe of epic proportions. Haiyan is the largest typhoon in the world since Typhoon Tip in October 1979. The Typhoon brought sustained winds of 235 km/h (147 mph), with gusts of 275 km/h (170 mph), with waves as high as 15m (45ft), bringing up to 400 mm (15.75 inches) of rain in places. It is one of the most powerful storms even recorded with huge waves sweeping away entire coastal villages and devastating the region's main city. Its

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intensity is recorded as category 5 classification on the scale for tropical storms and 8.0 (Maximum) on the Dvorak scale of intensity. The surface water as well as deeper water, temperatures of western pacific has provided huge amounts of energy for the storm to absorb, helping Haiyan's intensification. (The Guardian, 8th November, 2013).

Trail of devastation and human tragedy

Haiyan is one of the most powerful typhoons causing a wide swath of destruction and scores of people dead. Tacloban is near the Red Beach on Leyte Island. The major part of Tacloban is surrounded by three sides of waters between Leyte and Samar islands. Tacloban, the capital of Leyte province, is one of utter devastation. The Typhoon flattened home, school and airport. The storm was so powerful that it washed large ships in the city of Tacloban. There are remote areas hampered by debris and damaged roads. Communication is still limited in many areas. About 70 to 80 percent of the houses and structures along the Typhon's path were destroyed. There were cars thrown like tumbleweed and the streets are strewn with debris (The Times of India, 10th November 2013). The popular tourist islands of Malapascua appeared to be in ruins. There is the huge destruction in phone service in many areas. In this way the storm caused high casualties in Tacloban.

The ocean water was found to rush through the streets of the city. The Social Welfare and Development Department said that the storm affected 4.28 million people in about 270 towns and cities spread across 36 provinces in the Central Philippines. There were areas out of contact in Northern Cebu and on the island of Panay, as well as parts of Palawan and Mindoro (Slotnik, 2013). The extent of massive devastation was apparent. The number of deaths also found increased gradually mostly by drowning and from collapsed buildings. The storm wiped away buildings and leveling seaside homes with ferocious winds. "The water was as high as a coconut tree" said old Sandy Torotoro, a taxi driver (The Times of India, 11th November 2013). At least 175,400 acres of farmland were gravely affected. Damage to infrastructure is estimated at \$4.6 million. The airport in Tacloban was looked like a muddy wasteland of debris, with crumbled tin roofs and upturned cars. The airport tower's glass windows were shattered. The residential homes were washed away. The devastation was really horrific with human tragedy. All vestiges of modern living were all down. Media was also down. There was no way to communicate with people.

Ferocious winds felled large branches and snapped coconut trees. The 315 Kilometer per hour winds of super Typhoon Haiyan left a series of destruction across the central part of the country, which is made of dozen of islands. Haiyan, one of strongest storms ever to hit land left the Philippines having flatter houses, triggered landslides and floods. The dense clouds and heavy rains made the day almost dark. Flooding from heavy rain is the main cause

of deaths from typhoon (The Guardian, 9th November, 2013). The typhoon had uprooted trees and affected businesses. The bridges and ports were washed away. The cars and trucks were swept out to the sea. The fierce winds ripped the tin roofs off homes. The wooden buildings were splintered under the force. The seaside airport terminal was ruined by storm surges. The large ships were tossed on the shore. The vehicles were shown piled up on the top of one another. The jeeps and bikes were swept away in the rolling water. The roads were lined with trees that had fallen to the ground. A large number of people were drowned in the storm surge and others were missing. In this way, the Philippines spared high casualties due to a serious storm surge.

The eastern Samar province's Guiuan Township showed a trail of devastation. Many houses were flattened. "The Devastation is.....I do not have the words for it," Interior Secretary Mar Roxas said (BBC, 2013). It is really horrific. 10, 000 people are reported to have died in Tacloban city. In some areas, the dead are being buried in mass graves. Hundreds of thousands of people are displaced. Four million people are affected. Many are now struggling to survive without food, shelter and drinking water. A lot of people are dead all over the place. Some 600,000 people were evacuated in the northern provinces of the country. Many people have become homeless. People are found to lose their mental stability. They were looting business establishments, the malls just to find food, rice and milk. Many communities were still yet to be contacted. The number of people dead is unaccounted so far. The exact number of casualties will be definitely more than official count. In the aftermath of the Typhoon, people were seen weeping while recovering bodies of loved ones inside buildings and on a street that was littered with fallen trees, roofing materials and other building parts turn off in storm's fury. UNICEF (United Nations International Children's Emergency Fund) estimated that about 1.7 million children were living in areas impacted by the Typhoon, according to the agency's representative in the Philippines. The people remaining in the isolated areas were at the risk of malnutrition, bad weather, and unsafe drinking water.

The Typhoon showed a trail of devastation. The streets were full with dead bodies and the dead bodies were covered with tarpaulin, roofing sheets and cardboard. Tacloban's two largest malls and grocery stores were looted. Many people were raising their hands in a floating conditions and yelling for help. Many corpses hung on tree branches, buildings and sidewalks. "Please tell me my family I 'm alive" said Erika Mae Karakot, a survivor on Leyte island, as she lined up for aid. The schools, churches and government buildings could not withstand the winds and water surges. The people stayed in the buildings were either drowned or swept away (Gomez, 2013). Desperation had been building across the disaster zones. Survivors were desperate for food and clamoring to be evacuated. The doctors were desperate for medicines to treat the wounded. It is a great human tragedy. This violent storm was more ferocious and deadliest than the previous storm Thelma in 1991. It appeared to

have killed more people than the previous one. The scale of tragedy happened in the wake of the typhoon is indeed difficult to handle.

Relief and Rescue operations

The National Disaster and Risk Reduction Management Council said the Typhoon had affected more than 4.5 million people in 36 provinces of the central Philippines and in the Southern part of main island of Luzon. The head of The United Nations Disaster Team assessed the damage of the typhoon as furious on a massive scale. The relief efforts were challenging because the roads between the airport and the central city were completely blocked. The roads were impassable. The blocking of roads made difficult for delaying the relief operations. Power was knocked out. There was no cell phone signal. There was communication possible only by radio (The Hindu, 10th November 2013). The weather forecasters said that the country could still see more storms before the year is over (Cuneta, Josephine and Criss Larano, 2013). The affected persons were found resorting to robbing grocery stores and other building in a pure survivalist state. The need of the hour is the pressing one. Improved preparedness and efficient coordination mechanisms constitute hallmark for effective response (Moroney, Jennifer and Stephanie Pezard, 2013).

State response

The Philippines' government is launching the largest logistical operations in the country to provide relief to the areas affected by ferocious storm. The Manila International Airport, Cebu International Airport and Guiuan Airport were identified as primary hub of goods and service employment (Gagalac, 2013). The government of Philippines deployed several hundred soldiers to show the strength of the state and deter further looting. The government prioritized for restoration of power and communication in isolated areas to follow for the delivery of relief and medical assistance to victims. However, Philippine Interior Minister Mar Roxas told the BBC (British Broadcasting Corporation) that relief efforts were on track and "Our first priorities were, number one, to establish law and order; number two, to bring food and water to the people; and, number three, to recover the cadaver bags" (BBC, 2013). The Philippines Red Cross deployed teams to distribute hot meals, blankets and medical supplies in addition to search and rescue teams. To respond the disaster of such magnitude, the Philippines government also accepted help from abroad. The Philippines military was ferrying relief supplies, medicine, medical teams and rescue workers to the devastated areas via C- 130 transport planes and Navy ships. The president of Philippines Benigno Aquino ordered over a 100 Army soldiers to be deployed in the city to prevent looting. He also said to impose state of emergency to ensure security. The government officials' and aid organizations were devising ways to deliver food, water and other supplies to untouched areas. More than 450,000 troops have been deployed, as well as 12 planes, 356 ships and

thousand of vehicles to mobilize supplies .3000, 000 people were evacuated in Da Nang and Quang Ngai provinces (The Guardian 10th November, 2013). The Dept. of Health had deployed teams in the affected areas during the typhoon surge. The Dept. of Pubic Works and Highways had dispatched teams to clear the national roads having fallen electric posts, trees and other debris brought about by the typhoon in order to facilitate quick rescue operations (Official Gazette Philippines, 11th November 2013).

The Armed Forces of Philippines (AFP) had started its working to open up major supply routes for faster delivery of goods and aid to the victims. Their mission was to support ongoing evacuations and restore peace and order in the affected areas. The military choppers were utilized to deliver aid and relief goods to the worst-hit zones. The government crafted a master plan to ensure a swift and well coordinated rescue plan in typhoon hit areas. The government created a one-stop processing shop for local and international relief aid in Cebu. There was establishment of more relief goods repacking centers in strategic areas. The government was moving the relief goods to Tacloban city by air, land and sea transportation. C-130 planes were deployed to bring relief goods to the disaster-hit areas. DSWD Personnel (Dept. of Social Welfare and development) were mobilized for swift and smooth distribution of relief goods (Kabiling, 2013). The government was trying to send as many resources (relief supplies, medicines and medical teams and rescue workers) as possible to hard hit areas.

It was known from the report of National Disaster Risk Reduction and Management Council (NDRRMC) that more than 80,000 houses were destroyed totally. The National Housing Authority will provide P5000 worth of building materials to those whose houses were partially damaged. The Home Development Mutual Fund (HDMF) will also offer assistance to members in insurance claims against typhoon. The state run agency has also allotted P5 billion for the calamity loans of its members in typhoon-hit-areas (Ruiz, 2013).

Global Response

The disaster's full impact is still revealing as the entire country has been caught in a state of shock and desperation. It is a pretty grim situation. The people lined up at the airport for food. The resources proved no match for massive needs of people. Many people were struggling to flee those hard –hit areas because fresh water and food were non-existent. The deliveries were slow due to airport destruction and closed roads. Jaime Casilan who works as a cook in Walkintown Dublin told that “if the house is gone you can rebuild the house; if the human being is gone it is very sad.” Most of the cities were ruined and it was a tangled mess of destroyed houses, cars and trees (The Statesman, 12 November 2013)

The international organizations are gearing up their relief efforts. Thousand of troops have been deployed to the disaster zones. International aid is on the more. The U.S and other governments are mounting their efforts for relief purposes. The US provides significant humanitarian assistance for reliefs and recovery efforts. The US government had deployed ships and aircrafts to support rescue, search operations and emergency supplies. The US has sent a team of about 90 marines and sailors. The US Agency for International Development (USAID) has sent emergency shelter and hygiene materials. The US embassy is sending \$ 100, 000 for water and sanitation support.

UN Secretary General Ban Ki Moon offered his condolences maintaining his view that the UN humanitarian Agencies were working closely with the government to support its efforts in order to assess the situation and respond rapidly to help people in need. "There is utter devastation. People are desperate for food, water, shelter, supplies and information about their loved ones. We are doing everything possible to rush assistance to those who need it. Now is the time for the international community to stand with the people of the Philippines", U.N. Secretary-General Ban Ki-moon told reporters during a visit to Latvia. UN Humanitarian Chief Valeri Amos launched an appeal for \$ 301 million to help 11 million affected people in the ravaged areas .To recover from a traumatic devastation, a number of agencies like WFP (The World Food Programme), Red Cross, UNICEF; World Vision etc were trying to contribute their best. UNICEF was also sending 60 metric tons of relief supplies to the Philippines. The World Food Programme had mobilized some \$ 2m (E 1.25m) in aid aims to deliver 40 tones of fortified biscuits to victims within the next few days. The European Commission released 3m Euros in emergency funds and sent a team of humanitarian experts. The victims were trying to climb out from under rubble to find assistance. Ireland provided E1 M in funding to Philippines through Irish NGOs for shelter, food water and health. Ireland's Rapid Response Corps is also on standby to provide expert help to UN agencies operating on the ground.

The relief workers were busy to get through the roads blocked by downed trees and power lines. The UK announced \$ 9.6 millions packages for up to 5000,000 people including temporary shelter, water, plastic sheeting and households items. Australia announced a \$ 10 million packages, including medical personnel and non-food items. Further it pledged to give Aus\$20 million (RM60 mil) for relief efforts in the battered Philippines and said it will deploy extra defense staff to help deal with the disaster (The Sun Daily, 16th November 2013).

New Zealand has committed to give \$ 1.8 million in aid. Japan has promised to send a 25 strong emergency medical relief team. Indonesia has assured to dispatch aircraft and logistical aid. China has also pledged 1 to give a total of \$200,000 in cash in aid. The international Rescue Committee has launched a \$ 10 millions appeal for aid. The World Food Programme is airlifting 40 tones of high energy biscuits, emergency supplies and communication equipments. UNICEF is airlifting \$ 1.3 million worth of supplies including water purification tablets, soaps, medical kits and micro-nutrient supplements. In response to massive human tragedies, the group of 14 NGOs declared to offer E1.1 billion to the Philippines. Canada had pledged \$ 5 million for aid. The Vietnam authorities left no stone unturned in evacuating more than 50,000 people from high risk areas to government buildings, and schools. But due to blocked roads and damaged airports, emergency workers were facing a lot of difficulties to deliver tents, foods, medicines to eastern Leyte province (The Guardian, 11th November 2013).

Some lapses

The depth of the scope of the Typhon's damage was shocking. The expanding urban population, poor construction and poverty worsened the vulnerability of low-lying coastal cities (The N.Y Times, 12 November 2013). Magina Fernandez, one survivor in the monster typhoon described the situation as worse than hell and required the international help to come here now, not tomorrow. The residents of the city reported that very little assistance had reached the city. "I have no house, I have no clothes, I do not know how I will restart my life, I am so confused", an unidentified woman said crying. The government of Philippines was criticized for slow process of relief works. "We need help. We have not eaten since yesterday afternoon", pleaded a weeping Aristone Balute, an 81 year old woman of Tacloban". It was also reported for the people that there was no evidence of any organized delivery of foods, water and medical supplies (Statesman.com, 12 November, 2013).

Medical supplies were scarce. Minimal amounts of water, food and medical supplies reached to the desperate survivors in the Haiyan hit areas. The relief officials could not able to go the worst-hit region thanks to debris and blocked roads and ruined airports. The Filipinos received little warning of the coming storm. The Philippines had witnessed about 1250 typhoons between 1948 and 2012. But Typhoon Haiyan was unprecedented. Locals were unprepared for such a storm. The typhoon came in three hours earlier than the warnings suggested. The local government units failed to mobilize officials for forced evacuation to higher and safer ground. The inhabitants were not given sufficient information and logistical support. The risk reduction initiatives were not put in place and implemented (Nantes, 2013). Winnie Villamarga, 32 years old, said she and her family survived by lashing themselves together when the storm surge swept through their home."It was terrible, the worst I've ever seen and we get a lot of storms here," she said, holding one of her twin nephews. "We had

prepared food but it ran out yesterday. We were getting very worried about what would happen next” (Wall Street Journal).

The Philippines government has failed to come up with guidelines for allocating adaption funding, which could prevent future disasters like Typhoon Haiyan. The poorly constructed roads made it difficult to bring food, water medical supplies to where it is needed. Anxiety and competition for resources could foster tensions and even conflict. The condition of survivors was dismal .Most of them were without food and water. The government was delivering aid very slowly. Who is in charge here? , ran a headline in *The Philippines Daily Inquirer*. The evacuation measures were poorly enforced. Mr Aquino was criticized for Zero-casualties in the catastrophe and misuse of public funds (Francisco, 2013). . The government was criticized for funneling away the money which should be utilized for building flood protection in coastal communities. The central government in Manila was condemned as slow, incompetent and corrupt (The Sun daily, 2013).The Global Media also deplored over Aquino’s administration in respect of inadequate response and disorganized aid operations following the typhoon. “The government's distribution system is not enough. They are handing out small food packets to each household. But when you have three families inside one home, one little packet is not enough," said Renee Patron, 33, an American citizen of Filipino descent who was in Guiuan city on eastern Samar province when the typhoon struck (The Standard, 15th November 2013)

In a country where 20 tropical storms are found to occur, it is natural to expect some form of planning to withstand the storm impact. A neglectful government distracted by political chaos paid little emphasis on it. The political disaster contributed to the neglect of disaster risk reduction. Millions of Filipinos live in poor housing which is vulnerable to disaster. The Philippines government has failed to address between poverty and vulnerability to natural disasters. The leadership of Aquino was questioned as desperation grew. The comments of Aquino regarding overstating of death tolls have been a point of contention. The challenge before the government is to speed up the flow of aid to the victims and rebuild the confidence of people.

Need of Hour

The current catastrophe is an indication that the future storms will not be less violent. It is a warning to the Govt of Philippines to reduce the impact of these storms on coastal sides. Otherwise the financial impact will be great and the cost of life will be even worse. Protective dykes need to be erected along coastal water fronts to reduce storm impact and protect

people. The absence of coastal defense systems enabled monster storm to wreck havoc without hindrance (The Rainbow, 2013). Haiyan is strong reminder for continued improvement in forecasting accuracy, warning response and community resilience to save life on the ground.

The government is to broaden its role by fulfilling the demands of water, sanitation and housing for containing the public health crisis in the coming days. Due to public health issues, priority should be on burial of dead bodies'. The administration needs to work with the relief efforts. For maintaining public order and getting supplies into right hands, a security role is needed to play by the global community. Faster evacuation may be the only way to save more lives in this kind of calamity. The national and international country should lend a hand for the people of affected areas in humanly ways, without stealing the fund appropriated to help the victims. What is missing is expedient distribution of relief materials to the sick and injured ones. The defect lies in the absence of clear and decisive leadership to orchestrate the amelioration efforts. The media must be alert that the relief materials should go to calamity victims, not in the pockets of government officials.

The Philippines disaster requires a massive global response. It is very critically important regarding for use of aid funding to the needy and victims. The key role of highly organized and self sufficient organizations must be supported. Hasty and ill-conceived aid can turn people against each other. Many people can be left without social networks. The local community should have a leading role for ensuring order in the society, physiological recovery and reestablishing social networks within the fragmented communities. The immediate priority for relief response is search and rescue of survivors, treatment of injured, provision of shelter and a thorough needs assessment. Key prevention services such as child immunization, malaria, dengue fever are required to prevent the outbreak of diseases. The establishment of a public health surveillance system will promptly detect the outbreak of diseases. The scientists have confirmed that Haiyan was influenced by climate change. Keeping this thing in view, what people need is a more responsive government, more from international community than a short-lived burst of sympathy and donation (Webb, 2013).

The huge logistical problems need to be resolved to carry out relief effort successful. The public buildings, homes, infrastructure, tents, blankets, hospitals and generators are desperately needed to rebuild communications networks. The urgent need is to feed, cloth and shelter for those who have lost anything. The challenge ahead is to give and to care. We should have a shared sense of fairness, empathy for others and ethical stance (The National, 14th November 2013) we can assist the survivors in the national rebuilding process. It is the duty of mankind to make a personal donation to any of accredited International aid agencies working for the Philippine recovery effort. Continuing bad weather is hampering the relief

operation. But the needs of traumatized victims should soon be met. It is very important that aid for recovery has to be well coordinated and fairly and effectively delivered.

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