

**Building Community Resilience to Natural Hazards:  
Corporate Disaster Planning as a Form of Corporate Social Responsibility and Social  
Capital in Metro Manila, Philippines**

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Pelemarie Buika

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On my honor  
I have neither given nor received  
Unauthorized aid on this thesis

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Pelemarie Buika

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## **Abstract**

This study examines a fairly new corporate emphasis on using disaster management planning as a form of corporate social responsibility and as a vehicle for further strengthening social capital at the community level with the goal of creating community resilience to natural hazards. This corporate effort is very strong in the Metro Manila, Philippines. Through literature research and expert-opinion interview data collected, analysis of my data suggests that disaster management planning strengthens community resilience through three types of social capital: 1) bonding social capital at the family and community level; 2) bridging social capital that horizontally engages many sectors of society in common disaster planning activities, to include corporate-to-community partnerships; and 3) linking social capital that has empowered individuals and local barangay communities through the authority and funding vested in them by the strong national disaster risk reduction and management law. My research and findings suggest that corporate involvement in disaster management planning is an effective form of corporate social responsibility and that corporate disaster planning does lead to improved social capital that strengthens community resilience.

**Keywords:** (disaster management planning, Corporate Disaster Planning (CDP), Corporate Social Responsibility (CSR), social capital, bonding social capital, bridging social capital, linking social capital, community resilience, natural hazards, barangay)

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## Table of Contents

Building Community Resilience to Natural Hazards: .....	1
Corporate Disaster Planning as a Form of Corporate Social Responsibility and Social Capital in Metro Manila, Philippines .....	1
Acknowledgements .....	3
Abstract .....	<b>Error! Bookmark not defined.</b>
LITERATURE REVIEW .....	7
Natural Disasters in the Philippines.....	7
Focus on community resilience.....	9
Roles of authority figures in disaster planning and disaster risk management .....	11
Governmental and policy role in natural disasters.....	12
Corporate social responsibility in natural disasters.....	13
METHODS .....	13
FINDINGS .....	16
Government Policy Framework towards Disaster Management in the Philippines .....	16
Methods for Enforcement of Disaster Management Planning.....	17
Policy change in focus from response to preparedness and resilience .....	18
Attitudes towards corporate disaster planning as a form of social capital, which improves community resilience.....	19
Disaster planning as bonding social capital .....	20
Disaster planning as bridging social capital.....	22
Disaster planning as linking social capital.....	23
Testimonies on how disaster management planning through actions creates community resilience .....	24
Attitudes towards Corporate Disaster Planning as a Form of Corporate Social Responsibility .....	26
DISCUSSION .....	29
Corporate Disaster Planning as a Form of Corporate Social Responsibility.....	29
Corporate Disaster Planning as a Form of Social Capital, Building Community Resilience.....	31
CONCLUSIONS.....	33
REFERENCES.....	35

The Philippines is a developing country which “on average, 18 to 20 tropical storms enter Philippine waters each year, with 8 to 9 of those storms making landfall” (Lagbrague 2015). As a result, these storms and disasters increase population shifts that create vulnerable living situations and economic instability for these communities. In addition, the Philippines is located in the Pacific Oceans ring of fire, where many of Earth’s volcanic eruptions and earthquakes occur, making the population even more prone to natural disasters. Based on location and development, the Philippines has a need to focus on social capital in generating benefits beyond individuals and the community level.

Broadly defined, Aldrich and Meyer (2015) defined social capital as the features of social organizations, such as networks, norms, and trust that facilitate action and cooperation for mutual benefit. Disaster planning is a form of social capital, intending to organize communities of people to respond to and recover from natural disasters so that communities remain intact and sustainable into the future. Despite the evidence about social capitals efficacy, resilience research and disaster management practice have yet to fully embrace social capital as a critical component, especially at the corporate level. Perhaps this is because scholars have agreed on fewer metrics for social capital than other economic or demo- graphic factors (Aldrich and Meyer 2015). There seems to be an inevitable link between disaster focus between social solidarity and the vulnerability by disasters.

I wanted to further explore disaster planning with the impacts of dramatic events in the Philippines, a disaster-prone country, to understand the changing nature of social order in community resilience through physical and sociological factors in natural hazards. Disaster planning intends to organize communities to be able to respond to and recover from natural disasters in a timely manner so that communities remain intact and

sustainable into the future. Adding corporate disaster planning is a lens into social capital, reducing social vulnerability and increasing community resilience. Actions of firms provide assistance to individuals and families, beyond what is required for profit maximization, are classified as corporate social responsibility. This planning process is an essential part of enhancing community resilience to natural disasters. Without a strong social network within a community, it remains unnecessarily vulnerable to disaster shocks.

In my literature review, I draw upon other scholars' claims that even though natural disasters are inevitable, there is an awareness of importance for social strategies, through disaster management planning, to create community resilience, leading to community sustainability. In this study, I interviewed 17 participants, who are involved in disaster management through involvement with Non-governmental Organizations (NGOs), corporations, city governments, local barangay (i. e., village) governments, and academia.

This study focuses on emphasis to understand if corporate involvement in disaster management planning could become a form of corporate social responsibility, and if corporate disaster planning could lead to improved social capital that strengthens community resilience. My findings based on the questions suggest that both communities and corporations are using social capital and corporate social responsibility as part of the preparedness stage of disaster risk management to strengthen community resilience to natural hazards.

## **LITERATURE REVIEW**

### ***Natural Disasters in the Philippines***

Studies show that natural disasters are inevitable to cause disruption, leading to potential physical, social, environmental, political, and economic losses in nature. A "disaster" is defined as any occurrence upsetting the normal conditions of existence and

causing a level of suffering that exceeds the capacity of adjustment of the affected community (Labrague et al., 2015). Manmade disasters are those caused by human actions such negligence and problems or failure of a system (Labrague et al., 2015), whereas natural disasters can range from floods, earthquakes, earthquakes, cyclones (hurricanes and typhoons) volcanic eruptions, tsunamis, forest fires, drought and even famine (Whybark, 2007). The twentieth century saw 30 events with more than 10,000 dead. In only the first 11 years of the twenty-first century, seven earthquakes have occurred killing more than 700,000 in total (Crowley, Nee, Donovan, and Elliott, 2011). This suggests that with the rise in megacities and further population increases, natural disasters should be considered a red flag when it comes to future risks -- requiring the growing need for coordinated regional efforts at disaster risk management. With Hurricane Katrina, New Orleans, in 2005 as an example, a weakness was lack of well-coordinated preparedness (Mathbor, 2007). This lack of preparedness included the human service professionals, proving that a vehicle for effective service delivery is with social networks that are established before, during and after disasters. In addition, there is a lack of awareness and preparedness seen in the focus of disaster risk management. This gap creates growing risk that emphasizes the importance for increasing the effectiveness of disaster planning to strengthen communities and societies through government and corporate social responsibility.

As cities become megacities, with populations over 20 million people, such as the Philippines, living situations become highly vulnerable to several hazards and failures. Available resources can be inadequate to sustain the number of people, and harmful wastes are produced in numbers that cannot be absorbed in the given space, increasing the potential for hunger and disease (Anderson N.d.). The Philippines is one of the top five high-risk countries in the world that experiences natural disasters such as earthquakes,



flash floods, mudslides, typhoons, and volcanic eruptions, together with China, the United States, and Indonesia (Labrague et al., 2015). Having the knowledge of the social, environmental, political and economic risk that the megacities in the Philippines face further emphasizes the importance to involve corporate social responsibility in disaster preparedness planning. Different strategies to attain these set goals may include emergency response planning, designing and creating resilient hospitals, and implementing national policies and programs for safer hospitals and healthcare facilities (Labrague et al. 2015). Thus, knowing that natural disasters are inevitable, there is an importance in creating and carrying out strategies of disaster preparedness planning to create resilient communities physically and socially.

Cutter, Boruff, and Shirley (2003) define social vulnerability as a multidimensional concept that helps to identify those characteristics and experiences of communities (and individuals) that enable them to respond to and recover from environmental hazards. Social vulnerability depends on the individual level and in part, the product of social inequalities, such as “level of urbanization, growth rates, and economic vitality.” With decreasing vulnerability and reaching sustainability as the end goal, there needs to be a forward effort in creating social capital from governments, organizations, corporations, educational institutions, the private sector, and individuals of the community. Vulnerability may be enhanced by lack of resources, and lack of social capital, including social networks and connections (Cutter, Boruff and Shirley 2003). All of these factors play a large role in social vulnerability in similar ways to economic losses, injuries, and fatalities because of the dependence of the individual.

### ***Focus on community resilience***

Individuals need to understand the hazard potential of their location, which relates to the community’s ability to respond to, cope with, recover from, and adapt to hazards, in

order to work towards community resilience. “Resilience” is a buzzword that is defined differently depending on various sources. In this context, Crowley, Nee, Donovan, and Elliott (2011) consider resilience as a complex web of social interactions, characteristics and capacities that enable a community to live with and minimize the hazards they face. To mitigate the effects of a disaster, collaboration is needed between communities and local governments in order to explore both the physical and social factors that influence community resilience. Aldrich and Meyer (2015) describe “community resilience” as the collective ability of a neighborhood or geographically defined area to deal with stressors and efficiently resume the rhythms of daily life through cooperation following shocks. As stated, previous literature has specifically highlighted frameworks for improving the operation resilience and sustainability performance on physical infrastructure, such as implementing fire hazard codes, electrical codes, and building codes, along with strengthening bridges, roads, schools and buildings.

Anderson (N.d.) points out that creating only a plan for infrastructure in the community can produce further preparedness of long-term economic sustainability, but overlooks the importance of the resilience with the networking of the individuals’ resilience. Although, in the extremes, certain disasters will remain unpredictable and unpreventable, the growing awareness of human responsibility for vulnerability opens a vast range of choices and actions that can be undertaken to reduce vulnerability. Decreasing social vulnerability through networking of individuals’ in disaster planning and disaster risk management results in increased community social resilience, leading to the goal of community sustainability.

Aldrich and Meyer (2015) highlight the critical role of social capital and social networking in disaster survival and recovery, and lays out recent literature and evidence on the topic. In this context, Aldrich and Meyer (2015) separate social capital into three types:

bonding social capital, bridging social capital, and linking social capital. The authors look at definitions of social capital, measurement and proxies, types of social capital, and mechanisms and application. Further, recognized by Aldrich and Meyer (2015), Lin (1999) tied social capital to networks of relationships, defining it as resources embedded in one's social networks, resources that can be accessed or mobilized through ties in the networks. In the existing literature, researchers have created a platform to assess individuals' sense of belonging in community and friend groups, but with multiple indicators, more research is needed to understand how different forms of social capital contribute to disaster resilience.

Aldrich and Meyer (2015) also researched how strengthening social infrastructure influences the recovery process, like social capital, that affects community resilience. Their research shows that being part of the community in a natural disaster, individuals in communities work together to survive and recover from impacts with informal ties, leading to neighbors regularly serving as first responders. Social cohesion and social networks have been underutilized in disaster planning and management.

After opening conversation toward the importance of disaster preparedness, the goal is adapt to natural disasters, creating an environment that reaches sustainability. Sustainability is the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs (Farrell and Hart, 1998). Sustainability is interplay between the environment and society that ultimately contributes positively to indefinite human development and wellbeing while not overdrawing natural resources. In this manner, a culture and community survives over time intact.

### ***Roles of authority figures in disaster planning and disaster risk management***

Aldrich and Meyer (2015) recognized that disasters involve phases, typically identified as preparedness, response, recovery, and mitigation. Over the past two decades, regional organizations have come to understand that disaster planning must involve

communities first to reduce underlying risks in buildings, and second, to provide educational opportunities for individuals in the community. This allows individuals to gain legitimacy, social recognition, and authority in helping the community prepare and respond to natural disasters. There is a need of building a culture of protection through education and knowledge sharing to strengthen the preparedness and effective response of individuals in the community.

Regional disaster risk management is the process by which an association of states agrees to cooperate on reducing the vulnerability of its regional community to natural hazards. There are multiple players in disaster risk management that can communicate at the community level such as governments, corporations, and non-governmental organizations (NGOs), who all possess significant authority in attempting to reach the goal of creating a resilient and sustainable community. This can include the full disaster cycle spectrum-- preparedness, prevention, response, and recovery--or only some parts of it (Aldrich and Meyer 2015).

### ***Governmental and policy role in natural disasters***

For the past generation, most disaster risk management has been the responsibility of the government, supported by nongovernmental organizations. In the Philippines, the Disaster Management Law, the “Philippine Disaster Risk Reduction and Management Act of 2010” (Anon. 2009) is the Philippines framework for setting policies for including corporate representatives in disaster management planning at the local level on disaster management councils prescribed in the law. This law and policy open the door to establishing corporate social responsibility, and community resilience through national policies mandating funding, organization (Disaster Risk Reduction and Management Officers and staff), planning, building codes, and formal participation by all sectors of society. This law also

includes corporations, down to the most local government unit, the Barangay, or village council.

### ***Corporate social responsibility in natural disasters***

For the next decade, through 2030, world governments are emphasizing the need to collaborate with businesses and industries to strengthen disaster risk management in hopes to achieve lower social vulnerability and more community resilience (UNISDR 2005). This emphasis is to help populations and societies sustain themselves against the shocks of natural disasters. Corporate social responsibility (CSR) aims to better integrate social and environmental concerns into business routines on a voluntary basis. A social concern of the community is disaster preparedness, which is an important phase in the disaster cycle. Better-prepared communities are more able to respond effectively to catastrophic events. This principle is true for corporate preparedness with disasters. Without a doubt, the international humanitarian community needs to accord a higher priority to understanding the socio-cultural context of the people it is trying to assist, and enlist the help of national civil society to do so (Hicks and Pappas, 2006). This is an important role for corporations to help manage disasters because focused operations can adjust to understand the socio-cultural context of its people that they are trying to assist. Corporations also create networks between individuals in the communities, as well as connecting to the governments by abiding by the policies.

### **METHODS**

My literature review focused on understanding disaster risk management, a vast growing field of academic and practical literature, from the social aspect. I looked at how decreasing social vulnerability through disaster planning and disaster risk management results in increased community resilience, leading to the goal of community sustainability. I

used my literature research to understand and link these terms. Based on my literature research, I further sought to understand if corporate involvement in disaster management planning could become a form of corporate social responsibility and if corporate disaster planning lead to improved social capital that strengthens community resilience.

The data collected in this study was produced through a series of 17 qualitative in-depth interviews in Metro Manila, Philippines, collectively with participants of businesses representing the Philippine Disaster Resilience Foundation as well as professionals, professors, government officials, non-governmental organizations, and community leaders experienced in disaster management in Metro Manila, Philippines. I conducted nine interviews, four of which were open interviews, consisting of two or three participants. I traveled to three different Barangays in Metro Manila, including San Lorenzo, San Antonio, Pinagbuhatan, and visited Pasig City, Makati City, and Quezon City. The overarching goal of using qualitative methods is to gain an in-depth understanding of the experiences of a small group of research participants—including gathering rich contextual details and exploring related and contradictory themes, rather than a breadth of knowledge that can only be attained through surveying large, representative samples. I decided not to use observations or field notes because this research was not needed for my thesis. I felt that the personal narratives of those who are involved in the disaster risk management planning's' could highlight each social responsibility within the role of governments and corporate businesses at the community level. I wanted to understand why and how corporations were involved in corporate social responsibility, and how actions of corporations could positively affect community resilience, with an emphasis on strengthening social capital. This study looked for specific patterns of positive actions within the businesses and or actions out in the field, and how they are attempting to bridge the gap between infrastructure and

individuals' connections, to create a more durable and resilient community before, during, and after a natural disaster.

Upon arrival, I had a previous arrangement with EMI for them to be my resources to corporations who are involved in corporate social responsibility in Metro Manila, PI. With that, I had sent emails, request letters, and called possible interviewee subjects to participate in my thesis research. I arranged meetings with my interviewees over the course of three and a half weeks. I used snowballing sampling to collect our sample of participants. The snowballing sampling, or "chain-referral," is a "sampling method for generating a field sample of individuals possessing the characteristics of interest by asking initial contacts if they could name a few individuals with similar characteristics who might agree to be interviewed" (Anderson N.d Using the snowballing sampling technique, I gained access to people through contacts I have previously established relationships with. My role in the field was to gain access to personal stories that could speak to different advantages and disadvantages of attitudes toward Corporate Social Responsibility.

While in the Philippines, I filled out and submitted the IRB, form that was revised, and reviewed by Colorado College to allow the research to be conducted. Before coordinating the interviews, I created a consent form with information about my study, the length of the interview, how taking part in this research is voluntary, and how the records will be kept in confidentiality. The interviewees were given two approved consent forms, one for them to keep and one for them to sign for me to hold records of approval to continue research. Each interview occurred at a time and place of personal choice, and the interviews were 60-90 minutes each. Each interview was recorded with the consent of the interviewee. I traveled to the locations of choice of the interviewee to conduct interviews.

After each interview, I transcribed the interviews using the program QuickTime Player 7 on Microsoft word and Google Docs. I coded the interviews in works to find

common patterns or themes between the collected responses. I found patterns such as government policy towards disaster management and strengths and existing gaps, attitudes towards corporate disaster planning as a form of social capital and resilience, and attitudes towards corporate disaster planning as a form of corporate social responsibility.

## **FINDINGS**

The following findings, gathered through interviews, support my overarching theme of social capital integration.

### ***Government Policy Framework towards Disaster Management in the Philippines***

Understanding the Disaster Management Law, Republic Act 10121, the “Philippine Disaster Risk Reduction and Management Act of 2010”, individuals further explained frameworks that were enforced. “The law requires that we have a national framework... the government created the national plan... its required... local governments regional governments also have their own plans.. also, agencies. They must have their own plan that corresponds to the framework in the national index plan. (A leading NGO in Manila)”. This law and policy open the door to establishing corporate social responsibility and community resilience through national policies mandating funding, organization (Disaster Risk Reduction and Management Officers and staff), planning, building codes, and formal participation by all sectors of society, including corporations, down to the most local government unit, the Barangay, or village council. A Barangay in Manila is a neighborhood or village.

Each neighborhood has disaster risk management funds and creates a disaster risk management council to spend the money. “In [the Barangay] budget, we are given a percentage of the budget, 5% for the Barangay disaster risk management. And the 5%, 70% of that is allocated to purchasing everything that is needed for the preparation for the



disaster. (San Antonio wife)” Corporations are represented on the Barangay disaster risk management council. Thus, through law, policy, and practice, corporations can formally sit on Barangay disaster risk management councils through the disaster management planning process. Through this disaster management planning process, corporations can help to build social capital and to make communities resilient to disasters. At the city level, the Disaster Risk Management Act funds an office. Though it is not required, community members think that businesses should be participating in the local councils to put their consideration in the input of the representative. Also, abiding by the law in place, each private sector should be able to take into consideration the concerns for each city.

### ***Methods for enforcement of disaster management planning***

Local governments enforce disaster management practices on corporations by requiring them to complete fire drills and evacuation drills to occupy a building and to set up business. If corporations do not comply, “... [businesses] will not be given a permit by the fire department if they will not have the fire drill and evacuation drill and all. It is a requirement for every business and establishment (Barangay Chairman).” Even at the Barangay level a business as small as 30 employees have disaster management consultant and develop a disaster management plan. City government also enforces disaster management practices to the local governments, so Barangay councils will be involved in drills, seminars, and enforcing the policies down to the Barangay level. As noted from a Barangay Chairman, “Us Barangay, we are the implementer of the policies and programs of the city. So, we implement that and there are laws from the national republic acts.”

Although the government engages businesses and corporations in disaster management planning to enforce these policies, it was found through a series of interviews that there is a lack of modern building codes. Modern building codes are not adopted in the Philippines. The National Building Code of the Philippines was enacted in 1972 and has not

been updated. Interviewees recall during an earthquake, "I mean [the building code] has been implemented to the new structures, but not the old ones when the building code was revised, so... older Philippines is much more at risk. They are not checked for the building codes required (Non-Governmental Organization expert)." Further stating that buildings have building codes that's adequate but the city doesn't have enough time to oversee each house. In addition, it was noted that not all households have that system, and or were built with light materials like wood, so in a case of fire or disaster, they would not be protected. So instead of lack of disaster reduction laws, it's more lack of oversight and enforcement. Many interviewees stated that the Philippines have very good laws but the problem really is the implementation, which is lacking.

***Policy change in focus from response to preparedness and resilience***

Having disaster risk management policies creates an opening for conversation from a focus on response shifted to preparation or prevention in disaster management. There is an eagerness, "...and the city government tries its best to lessen the impact for the people to be able to at least survive and train them and teach them of things that could save their lives (Disaster Risk Reduction Management Officer)." But the road to adjust mindsets and lenses is a long road. It is easier said than done to switch over to focusing on preparedness because,

It's a cost-per-impact for corporations and... for governments and bilateral donors...although all the studies are out there, that 1\$ spent in disaster prevention saves \$5, \$10 in disaster response... governments... traditionally have done more to respond more and fill that space and so making that shift is tough (Non-Governmental Organization expert)."

From the interviews, the shift to preparedness is a timely issue. For example, it is easier to train 500 people and have a major attendance at one seminar than do smaller seminars where the linking is limited to the outer sources. There is a gap to prepare the shift to preparation form response is in the policies that are implemented. There are specific

requirements that should be attainable according to the law in place. There are still good initiatives to continue having response training, drills and scenarios, “they are all good and important activities to practice and to be prepared. I think it's just to go a step beyond preparedness, but starting before with prevention (Kate Landry).” The mitigation stage has been pushed to the background, which could champion more awareness and preparedness because it was said that, “response is 3% of DM cycle, the rest of it is being prepared (Jon)”.

### ***Attitudes Towards Corporate Disaster Planning as a Form of Social Capital, Which Improves Community Resilience***

In "Building a Network Theory of Social Capital", Lin (1999) defines social capital as, “Resources embedded in one’s social networks, resources that can be accessed or mobilized through ties in the networks”. Findings regarding three types of social capital are examined below -- bonding, bridging, and linking social capital -- with examples from interviewees representing five sectors of society – academics, corporations, government, non-governmental organizations, and communities. Further, in depth opinions on findings about the concept of “community resilience” as it relates to disaster planning as a form of social capital.

Throughout various interviews, I first finding is that “community resilience” is a common term that I undertook and has a common understanding amongst academics, corporations, non-governmental agencies, and local governments and communities. “Community resilience” is also a common term in disaster management planning. From this common understanding of “community resilience” all interviewees agreed that corporate disaster planning could be a form of social capital with the end goal or vision to create more community resilience and sustainability following a disaster. An interviewee explained that the Philippines should not be aiming to “bounce back to the previous state”, but aspiring to be “inching forward. To me, resilience is a process. The goal

is sustainability. Quality of life is still the goal. So... yes you can be resilient, but at the end of the day it has to lead you to something of improvement for the future generations.” As related to social capital, this mindset involves social networks linking corporations with communities through disaster management planning. In addition, social capital emphasizes the importance of the individuals’ lives before a disaster strikes, and the attempt in survival strategies affect the “during” and “after” a disaster stages. This mindset also forces individuals involved in disaster planning to rethink and recreate their definition of community resilience from a social perspective. “I don’t even define it as bounce back after a disaster, I define it as a point where you are able to encounter a disaster and not be adversely affected in the way that you have been before (Non-Governmental Organization expert).” “Community resilience” is also reinforced through national authorities of government by the National Disaster Risk Reduction and Management Act of 2010 law as a “linking social capital” concept which “links’ individuals and groups to a higher authority, as explained below.

### ***Disaster planning as bonding social capital***

A second finding is that disaster management planning, as well as training, can be considered a form of bonding social capital. To be able to gain access to prepare individuals in communities and corporations, you have to start at the smallest social circle -- bonding social capital. Bonding social capital is described as, “the connections between individuals, such as friends or family, where there is prevalent strength of relationships” (Aldrich and Meyer 2015). The focus of trainings is to provide awareness and knowledge into the smallest social network of individuals’ lives, usually the level of family.

Our first response would be building community awareness. The first is the family. Disaster planning is basically... we start it through families, types of awareness... And strengthen them in terms of relationships...because everything will depend on trust. Trust coordinates the members in the family, the neighbors, and the organizations before it can even link them. Because we believe that everyone should be involved in being aware and

not just one person, the whole family should be involved (Community Barangay representative).

The goal of building community awareness brings importance to preparedness towards individuals so they can further help educate their families, and others in their social networks. "It's not just admitted to whomever is present here (corporate representative Ayala)." This way, individuals have the choice of taking responsibility of having a voice in their community resilience. Those who do attend the trainings and seminars are connecting to larger networks.

The third finding is that the bonding social capital does build community resilience through disaster training of individuals and their social circles. At the individual level, education of survival begins with awareness, which leads to knowledge of preparedness:

There are going to be the victims. They want to survive then... they have to do it by themselves. That's why we are organizing first responders because we will not be able to be there at the beginning of the disaster because we have to save ourselves, our families, so they have to be prepared for the first 3 days... Before the people will arrive to help them, they have to learn how to help each other first (Community Barangay representative).

Although there are trainings that are put forward to educate individuals, the effort should not stop there. The intention is that the government, the Barangay, and even the first responders will be attentive to themselves first. These trainings are in hope to educate individuals to first help themselves, disseminating the need to depend on others in the first stages of a disaster. It is said that it is "about empowering the people to have the knowledge". The trainings are mainly to create communication, coordination, cooperation and commitment of everyone in the community. Below are examples of bonding social capital that lead to community resilience during and after disasters:

Maybe first and foremost they wouldn't be called a community if they weren't connected, and to have resilience you have to build that... not just individually, but you have to build that with another person because you know you always have to take into consideration... The relationships and the dynamics and relationships of people around you since you are facing risks like them or you may be facing risks

that may be an effect of the relationship with them (Non-governmental organization disaster expert).

Although the government and Barangays do not conduct trainings in each individual household across Metro Manila, a way that they do attempt to touch families is through networking.

### ***Disaster planning as bridging social capital***

Creating connections broader than bonding social capital is called “bridging social capital.” Bridging social capital “...often comes from involvement in organizations, describing acquaintances or individuals who can loosely be connected (Aldrich and Meyer 2015).” A fourth finding is that disaster management planning and training at the corporate and community level can be considered a form of “bridging social capital”, as well as bonding social capital, as described above. Bridging social capital creates an opportunity of collaboration and communication between corporations, communities, Barangays, and city governments through the lens of disaster planning.

Through seminars and trainings, which are available in Barangays at the business level, community leaders, government council and Barangay captains (community leader) encourage those who attend to educate those in their household. Because authority figures are outside of individuals’ bonding social capital, this is a way where authority figures can use individuals who are accepted in family trust circles to educate each other, strengthening the community resilience:

I think the Philippine Disaster Resilience Foundation [80 corporations] thrust is to bring resilience to small businesses as well because at the end of the day, when an earthquake strikes, if it's very devastating and people don't have access to food. They're going to want the “sorry sorry” store owners [a type of ubiquitous, very small, family run grocery store] to need to be able to be running. They are starting to build resilience to the subject matter trainers, which feed into the larger value chain. (Non-governmental Organization expert).

### ***Disaster planning as linking social capital***

Linking social capital describes “the connections of regular citizens with those in power, creating networks of trusting relationships between people who are interacting across power or authority positions (Aldrich and Meyer 2015).” As previously stated, the Philippines National Law (Republic Act NO. 10121) creates a form of linking social capital. The law emphasizes disaster risk management and community resilience, mandating linkage between individuals and authorities, allowing networks and relationships to form. It was stated that, “Aside from being into something, which is ‘uso’ (Popular), Filipinos put so much weight into authorities... people who seem to be credible or people they trust in the community. So if they can get an endorsement to support the project would be good (Non-governmental organization trainer).” This shows the weight in the credibility of higher power positions, and the good faith and attentiveness of individuals in the community.” Further, that corporations can collaborate with authorities around them, further widening their networks as well. These networks also open opportunities for Barangay to Barangay help in pre-disaster relationships, as well as during or after disasters. Even on a smaller scale, NGOs are confident with connecting to corporate and governments as well. In addition, there are conversations between authority figures that have solidified linking social capital between NGOs, corporates, and Barangays:

So, for corporate involvement, for example Earthquakes and Megacities Initiative (EMI) has been helping Philippine Disaster Resilience Foundation (PDRF) into building its own concept of operations, and in the concept of operations, a big part of it is how PDRF helps out the government... So, EMI is a big part of that by providing guidance... this is how they build their contracts, make their agreements, how the private sector participates, brings the resilience there (Non-Governmental Organization Risk expert).

Other examples found through interviews were NGOs working with government officials of policies and practices to form relationships before disasters, and corporations coordinating

with the government, pushing forth “championing more awareness and preparedness” in the disaster management cycle.

***Testimonies on how disaster management planning through actions creates community resilience***

Based on the governmental policy, which requires businesses to be active in DMP to create community resilience, interviewees expressed tangible works that are solidified within DRP actions. Starting at the highest authority level of DRRM, community resilience is strengthened by city governments (specifically Makati City & Pasig City in these cases) training each community and businesses within each Barangay:

In the first place, it is just like, staging a play. When you stage a play, you need to rehearse. So um, if the class is well rehearsed, they go through rehearsal, then definitely expected to deliver the show. Same thing with disaster management planning. When we provide a venue for them to have an evacuation drill and it is done consistently, then definitely if and when the big one or less than that happens, at least part of the resilience is the fact that there is already an expectation of how people will react. That is part of the resiliency (Barangay Chairman).

Being an example to smaller social circles, there is also visible involvement with the city and local governments within the lower levels of the Barangay, and even into the community with DRRM. Based on the disaster risk management policies, there are relationships that are formed through levels of government involvement. Attending meetings, attending trainings, and having communication with the Barangay, corporations, involve governments and NGOs so there is no duplication on the grassroots scale:

After the training, we met with Makati city government... we invited the community leaders and we met in Makati City Hall to discuss what happened so far in the project and what we will be doing moving forward. So Makati City government is very supportive of the project since they think it is kind of important especially in the area of Makati City (Corporation representative).

Further, the disaster risk management law allows corporations to purchase equipment and allows for training personnel in disaster management planning. For example, Barangays own, closed-circuit televisions (CCTV) which signals are not publicly distributed but are



monitored, primarily for surveillance and security purposes, fire trucks, and other medical equipment's. Moreover, Barangays and corporations expressed measures of touching individual lives through material resources such as, "the GoBag... basically what you can have for 72 hours provided [for] us all. So the employees were asked to bring it home and use it and have your family prepared in the household (Corporation representative)." An automatic response from CSRs was based around the importance of material significance to help the community. For example, the corporation SM Malls, "after Yolanda... SM Care [Largest mall in the PI] had put out lunches and housing projects on certain communities (University of Philippines professor)." Providing resources depends on the type of company. For example, one major company in the Philippines is "Manila Water... incase there is problem with the drinking water, tanks of water and storage facility for evacuation center (Disaster Risk Reduction Officer)." Other common resources are sanitary materials and providing food in terms of a major hazards, brochures, websites, and social media accounts to spread awareness as well.

Moving to the smaller scale of impact toward community resilience, it was seen that the Role of NGOs in community resilience, CSR, and social capital is to provide technical assistance and training to communities. NGOs are the smaller scale movers, who may not have the platform to easily connect to larger networks, so the participants who worked for an NGO expressed that, "...it's more on promoting at the city governments and inviting them recommendations on how DISASTER RISK MANAGEMENT can better be implemented at the local level (Non-Governmental Organization expert)." Their goal is to invite a platform to speak to the city government to help educate, advocate and promote disaster management. "At the same time, we work with local governments coordinating closely with the local Barangay and the city government with Makati. (Non-Governmental Organization expert)." They communicate within governmental policies because they are powerless in the

authority ladder of networks; opening doors of conversation to further strengthen the community resilience.

On the opposite end of the communication with networks trickling down to the individual level of the community:

Like in the event of what happened in Yolanda, no energy and electricity. But for example, the gasoline stations there, if there was a prior arrangement with the municipalities, they could have provided gasoline for free. Because one of the problems was they have a generator but they don't actually have fuel, and practically, there was looting all over. (University of Philippines professor).

This example shows the panic of individuals with no previous relationship regarding disaster circumstances with the Barangay or government. Because there was no coordination, individuals adjusted to the circumstances of limited resources and start to commit crimes just to survive.

### ***Attitudes Towards Corporate Disaster Planning as a Form of Corporate Social Responsibility***

A principal finding from my interviews is that attitudes about corporate social responsibility are positive. Disaster planning by corporations sets the platform for businesses to create connections. Interviewees state that disaster planning "creates a give and take relationship." Through various interviews, it was recorded that disaster planning by corporations positively affects community resilience by establishing pre-existing relationships to share corporate assets, personnel, and knowledge with communities in time of need:

...when corporations do, disaster planning it actually works both ways. It's not just them helping the community, it's actually—they also get something from it. At the same time, it benefits the corporations. At the end of the day the CSR supports positively to... it's like an extension to help the community. Other than that, there is also the other side, maintaining important relationships with the community; this is the same people who will sustain your business (University of Philippines professor).

During other interviews, experiences with corporations exuded the importance of how if a “business is in disaster planning they are already improving the social capital” by improving relationships that do not exist, or were weak previously. A second finding about a benefitting attitude that was shown through interviews was the suggestion to continue communicating with community and local government so that each business is part of the greater disaster planning process. This attitude stems from corporate understanding that corporate disaster management plans should be invested under the larger plan of government that adjusts to the community, or else it won’t be adopted:

...for example, the key is really to work with the community and the local government because their business continuity plan should be fully aligned with the larger plan of the local government and fit into that process. So they have to be able to...for them to be marketed as Corporate social responsibility, they have to be able to make it part of the larger planning process. It cannot be just a planning process on their own. (University of Philippines professor).

Reinforcing this attitude between corporations and community, a Barangay captain stated that the community needs “to move together”, emphasizing the importance of cooperation between individuals.

Second, in interviews with two corporate representatives participating in PDRF, a consortium of 80 large corporations, the relationship with communities was described as a “responsibility” to “help” from the corporate social responsibility side. “For me, it’s something like, big companies showing the communities around them that they care. It’s not just that we are here, we are a big company; it’s saying that we can help you as much as we can.” This foundation is meant to create corporate relationships with communities in the field of disaster management to enable the sharing of resources, and to ensure that “it’s not just profit that’s why they are there. They are there basically to provide jobs first and foremost for the community around. They are part of the community.” Attitudes toward this relationship are looked upon as positive with the individuals in the community. At the same time, through this foundation, the corporations gain a perceived attitude that this

community relationship is a requirement, setting a strong foundation for corporate social responsibility using disaster management planning.

Third, the community in relation to a natural disaster event expressed one skeptical or negative attitude towards corporate social responsibility without disaster planning attached as skepticism. Corporations were “greedily” using tragic events to sell their business to the community. “It’s sort of like they [corporations] use it [corporate social responsibility] as a tool for intervention...So they use that opportunity, to build back the tourism. It’s tied to the aid that they are providing as part of the corporate social responsibility...” In the past corporations have seen to come in during or after disasters “sending emergency responders... But it [the relationship] might not last long. If they really want to be part of the social factors, it has to be done before. And you have to invest in [disaster planning with the community].”

Fourth, Barangays compete with other Barangays in city, province, and national levels that Government puts on which gives each Barangay something to reach for in disaster management planning. One non-governmental agency reflected, “I guess one thing is that there are many corporations already implementing different projects, it would be nice if they could coordinate among themselves of duplication of services so they can get projects complementing the programs being implemented by the government as well.” (Maribel) “...Sometimes [corporate response] creates problems with... the government because... some people would say... is it really (unnamed major media outlet) goods... but it's really coming from the people... they [TV company] are just keeping the donations and repackage it and redistribute it.”

Fifth, based on professional opinions, is that although corporate disaster planning must coordinate with communities, corporate disaster planning should be in coordination with the government as well. This corporate-to-government relationship is needed because

“[corporate disaster planning] cannot just be at the level of the community whatever agreement they have. [Corporations] have to get the support of the local government when it breaks down.” This is key so that communications are transparent between the policies from the government and the authority from the community.

## **DISCUSSION**

### ***Corporate Disaster Planning as a Form of Corporate Social Responsibility***

Attitudes show that having corporations involved in disaster planning create networks that might not have been there previously – important networks to their local community leaders and governments as well as to other businesses. As in the case of Metro Manila, 80 businesses have networked around disaster planning as the Philippine Disaster Resilience Foundation, promoting corporate social responsibility through disaster planning and community resilience. Further, extending an arm through social responsibility, these corporations create relationships for assistance with disasters that is not a matter of pulling teeth, but is approached with eagerness to help and restore communities within a timely manner. Corporations realize that they gain trust by being involved in communities before disaster strikes, instead of corporations only showing up on the scene of disasters. Disaster planning expresses to individuals in the community their intentions of building a relationship. This overpowering attitude towards social responsibility is a positive benefit and reinforcement for businesses and individuals in a community. There is also a sense of corporate responsibility to communities because they have resources. If their business is in the community, then it is part of their responsibility to help and to become involved with disaster planning. Through Corporate social responsibility and the relationships, it forms with communities; communities know that corporations are at their side and a partner in times when disasters strike.

With disaster planning, corporations are learning that they too would be as greatly affected as the communities because of building damage and the possibility of their business shut down, including employee's affected and unable to work. Interviewees who work for corporations spoke on how employees are part of the community and businesses, so it is integral that these corporations attend disaster management trainings to teach themselves to be able to react when a disaster strikes. Only when members of the community, who work for these corporations, can return to work, can businesses get back on their feet.

Through disaster planning within communities, as well as with local government unit authorities, corporations can build trust over a matter of time, which is gained through communications and actions. If there is no communication, there is suspicion created within the actual works of any relationship, in this case, corporate branding in the name of CSR. Interviewees clearly communicated that corporations should put time and effort into networking with disaster planning. Branding, described as advertising in this context, can also be cost effective with other corporations because of competition between businesses with similar disaster response activities. Understandably corporations focus on their practice in engaging core business motives, but there is a need of coordination with other corporations on complementing works in the community. In addition, disaster planning demonstrates that corporations are flexible to adjust to the community needs, as well as coordinate and communicate at that grassroots level to be able to affect the community and not just be a token of assistance.

Although there is deep interest in relationships and responsibility, there is a visible gap in communication between medical aid, grocery store owners, doctors, and the Barangay officials. The Barangays account for where each individual lives within the community, but there is no requirement with those of specific aid skills and knowledge who

can give aid when a disaster hits. These agreements should be previous to a disaster and not dependent on “spur of the moment” actions based on the attitude of storeowner’s responsibility to provide with food or medical aid to provide with ambulance and doctors. It is seen that there are no established relationships between the hospitals and grocery stores with the government, because the attitudes of the community are of expectance out of good will.

***Corporate disaster planning as a form of social capital, building community resilience***

Clearly, very strong linking social capital, established through the National disaster risk management law and risk analyses studies, and supported by government scientific organizations, promote the concepts and actions towards creating disaster resilient communities. Linking social capital, through authorities, sets the stage for promoting community resilience throughout the government and private industry in the Philippines. Through mandates as espoused in the Philippine Disaster Risk Reduction and Management Act of 2010, disaster planning has shifted from a long-time focus on disaster response to a new emphasis on resilience through disaster risk reduction and management. Community disaster resilience can be defined as being able to bounce back stronger and more quickly after a disaster. Disaster planning, through the three forms of social capital – bonding, bridging, and linking -- communities can help enhance community resilience in disaster management. More forms of disaster planning are now attempting to focus on preparedness rather than response. This shift in policy and philosophy is a shift towards resilience. Opinions of interviewees were in cahoots on having an urgency to focus on social capital, which could positively result in community resilience. Focusing on social capital entails the awareness of individual responsibility, leading to accountability in the situations of disasters, and ultimately a support system of close networks within the community.

Disaster management planning and training is a strong form of social capital that represents bonding, bridging and linking social capital. The awareness of the interviewees from planning and training is that the individuals who make up the government, the Barangay councils, and even the first responders, will be attentive to themselves first in situations of natural disasters. These forms of social capital create a platform for individuals in each community to have awareness and learn how help themselves first, minimizing the need to depend on others in the first stages of a disaster. Thus, the intention of having seminars, trainings, brochures, and websites is about empowering the people to have this knowledge to help themselves, and oversee their own impact in the community. The trainings are mainly to create communication, coordination, cooperation and commitment of everyone in the community from the authority figures, enhancing bridging social capital. Trainings also benefit the Barangay leaders and government officials by reducing impacts to clean up and families back on their feet and back to work post-disaster. Beyond building relationships, continuous training is needed because there are constant changes in the corporate setting, such as change in components of employment, retirement, and even with bosses. First, the need to assess what needs revision is the key to closer reaching community resilience. In preparation for disasters, situations are constantly changing. Training should be continuous because there are always moving parts and it is an evolving process – there is no one solution to every problem, or else there would be no need for disaster management.

The gap to prepare the shift to preparation from response is found in the policies that are implemented. Governments have national laws mandating a specific percentage is needed toward disaster risk reduction, but Barangays get percentage for disaster risk reduction and don't put it towards prevention. In the past, the money has been toward other instances in budget, like response materials. Therefore, preparation is a part of DRRM



from the highest form of government, but the focus is on response, inevitably pushing emphasis on preparation to the backstage. Although it may look like a long road ahead, interviewees voiced that this was a step that was going to be crucial to adjusting mindsets from response and repair stages to disasters, to prevention and preparation.

## **CONCLUSIONS**

This study examines a fairly new corporate emphasis on using disaster management planning as a form of corporate social responsibility and as a vehicle for further strengthening social capital at the community level with the goal of creating community resilience to natural hazards. Through literature research and expert-opinion interview data collected, analysis of my data suggests that disaster management planning strengthens community resilience through three types of social capital: 1) bonding social capital at the family and community level through disaster training and preparedness drills, to include corporations in their respective communities; 2) bridging social capital that horizontally engages many sectors of society in common disaster planning activities, to include corporate-to-community partnerships; and 3) linking social capital that has empowered individuals and local barangay communities through the authority and funding vested in them by the strong national disaster risk reduction and management law mandating disaster risk reduction councils at every level of government. Multiple quotation examples from interviews are included that substantiate these findings.

Everyone I interviewed was familiar and comfortable with the concept of “community resilience to natural hazards”, indicating that corporations, as well as other sectors of society, are becoming socially responsible through disaster management planning to achieve community resilience in the Philippines.

My research and findings also suggest that corporate involvement in disaster management planning is an effective form of corporate social responsibility and that

corporate disaster planning does lead to improved social capital that strengthens community resilience. This corporate effort is very strong in the Metro Manila, Philippines, due to the metropolis' known vulnerability to natural hazards and through the Philippines Disaster Resilience Foundation, a consortium of 80 corporations working on disaster management planning together. At the community level, the disaster management law empowers society to engage in disaster management planning. At the corporate level, corporate social responsibility drives employees to engage in disaster management planning. The three forms of social capital, summarized above, create corporate engagement with their communities to strengthen community resilience.

A common theme expressed in interviews is that one essential action that can develop community resilience is the importance of previously established relationships with disaster planning, prior to a disaster occurring. These established relationships between corporations and communities, through various forms of social capital, build community resilience by having transparent coordination beforehand of how to help prevent fatalities, instead of waiting for the disaster and responding from there. The non-governmental organizations, corporations, barangay leaders, and government officials should continue reaching out to communities to create awareness of disaster management preparedness stages.

All interviewees stated that focusing on disaster planning will save lives in the long run. Networking in the community, business, and the government brings about expectations for individual's actions if a disaster does occur. Planning also brings an element of control over the event. This element of control provides the best chances to save lives and protect property. Disaster management planning is a turning point that can positively change the destiny of an individual, a community, a company, and the government, with guidance on how to maintain survival in this evolution of natural disasters.

## REFERENCES

- Aldrich, D. & Meyer, M., 2015, Social Capital and Community Resilience, *American Behavioral Scientist*, Vol. 59, Issue 2
- Anderson, Mary B. (N. d), *Vulnerability to Disaster and Sustainable Development: A General Framework for Assessing Vulnerability*.
- Anon. 2009. *Republic of the Philippines Congress Of The Philippines Metro Manila*. 1st ed.
- Burnside-Lawry, Judy. 2016. *Sendai Framework For Disaster Risk Reduction 2015-2030*. Emerald Group Publishing Limited.
- Clay Whybark, D. (2007). Issues in managing disaster relief inventories. *International Journal Of Production Economics*, 108(1-2), 228-235.
- Crowley, Nee, Donovan, K. & Elliott, J. (2011). Earthquake disasters and resilience in the global North: lessons from New Zealand and Japan. *The Geographical Journal*, 178(3), 208-215.
- Cutter, Susan L., Bryan J. Boruff, and W. Lynn Shirley. "Social Vulnerability To Environmental Hazards". *Social Science Quarterly* 84.2 (2003): 242-261. Web. 29 Nov. 2016.
- Drabek, Thomas E. "Disciplines, Disasters and Emergency Management: The Convergence and Divergence of Concepts, Issues and Trends in the Research Literature." Pp. 2-20, edited by David A. McEntire, Emmitsburg, Maryland: Emergency Management Institute, Federal Emergency Management Agency (2005).
- Farrell, A. & Hart, M. (1998). What Does Sustainability Really Mean?: The Search for Useful Indicators. *Environment: Science And Policy For Sustainable Development*, 40(9), 4-31.

- Hicks, E. & Pappas, G. (2006). Coordinating disaster relief after the South Asia earthquake. *Society*, 43(5), 42-50.
- Hollis, S. (2014). The global standardization of regional disaster risk management. *Cambridge Review Of International Affairs*, 27(2), 319-338.
- Labrague, L., Yboa, B., McEnroe-Petitte, D., Lobrino, L., & Brennan, M. (2015). Disaster Preparedness in Philippine Nurses. *Journal of Nursing Scholarship*, 48(1), 98-105.
- Mathbor, G. (2007). Enhancement of community preparedness for natural disasters: The role of social work in building social capital for sustainable disaster relief and management. *International Social Work*, 50(3), 357-369.
- "Philippine Disaster Risk Reduction and Management Act of 2010" .*Republic of the Philippines Department of National Defense*. (Accessed on 24 November 2016).
- Sheu, J. (2007). An emergency logistics distribution approach for quick response to urgent relief demand in disasters. *Transportation Research Part E: Logistics and Transportation Review*, 43(6), 687-709.
- UNISDR. (2005). *Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters*. Washington, DC: United Nations International Strategy for Disaster Reduction.