Improving Coordination Between Disaster Relief Agencies: The Cluster Approach in

The Philippines

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the qualification of any other degree or diploma at a university or other institution of higher learning, except where due acknowledgement is made in the acknowledgements.

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Acknowledgements

Abstract

Coordination between government and non-government agencies is key to providing effective disaster response. Coordination must take place at international, national and local levels. Thus, the United Nations introduced a multi-agency cluster system for coordination. The Philippine Government institutionalised the system to address identified gaps and to improve leadership before, during and after disasters. Current literature focuses on international analyses of the cluster approach and whether it contributes to improved coordination, but its efficacy at a domestic level remains unexplored. Herein, I analyse developments in the Philippines in using the cluster approach as a mechanism for disaster relief coordination. I use a qualitative, descriptive case study methodology to identify opportunities, barriers and gaps experienced by Philippine authorities during and after the super typhoon "Haiyan", and I show how the Philippine cluster response system has evolved. I gather data from government policy reviews and semi-structured interviews conducted with government officials and stakeholders. Key findings indicate that the cluster approach has helped the Philippine Government to provide an improved, coordinated response. However, the same challenges that exist at the global level also exist in the Philippines. My findings also show that the Philippine Government has improved best practices as it continues evolve its disaster response systems. This research is significant to emergency and disaster managers because it shows how interagency coordination can be improved using the cluster approach.

Chapter 1: Disaster Management

A Brief History

Natural hazard-related disasters are an ever-increasing occurrence in the world (International Federation of the Red Cross [IFRC], 2016). The Asian Development Bank (ADB) (2015) has noted that among natural hazard-related disasters, hydrometeorological events such as typhoons and floods have increased worldwide, compared to geophysical disasters. Moreover, the ADB (2015) has stated that the frequency of all categories of natural hazard-related disasters has increased: the number of disasters has risen from 1,300 events in 1975–1984 to >3,900 events in 2005–2014. Increasing frequency is compounded by the growing world population, because resultant increased poverty, urbanisation and environmental degradation intensify the vulnerability of large populations to disasters (IFRC, 2016). Thus, the number of people affected and the amount of damage caused by disaster events has also increased: >100 million people were affected in 2014, and costs of property damage reached US$142 billion per annum in 2005–2014 (ADB, 2015).

These figures do not even begin to reflect small-scale disasters that are seldom reported by international humanitarian agencies (IFRC, 2006). Furthermore, the IFRC (2016) has stated that the United Nations' (UNs') annual appeal for aid target increased from US$3.7 billion in 2004 to US$20.1 billion in 2016. The increase was attributed to massively destructive events such as the Asian Boxing Day tsunami in 2004, the Pakistan floods, the Haiti earthquake in 2010 and super typhoon Haiyan in 2013, which affected hundreds of thousands of people and brought about billions of dollars in damage (IFRC, 2006; IFRC, 2016).

During and after a disaster, emergency managers of international, regional and national/local agencies often address questions such as, "Who oversees this operation?", "Who

will address the needs of this town?", "What information on the ground do we have?", and, "How can we deliver the needed supplies to help this village?" to provide effective humanitarian response. Answering these questions requires coordination, an important pillar in humanitarian responses to both natural hazard-related and man-made disasters (Reindorp & Wiles, 2001). Agencies involved, such as the Red Cross, the UN, international non-governmental organisations (INGOs) and national government agencies (NGAs), often debate how to coordinate their responses (Reindorp & Wiles, 2001). From both the strategic and operational standpoints, coordination focusing on the assignment of roles and responsibilities that agencies and actors will take is essential for providing efficient humanitarian relief to the victims of any disaster (Reindorp & Wiles, 2001).

Over recent years, the context of humanitarian response has changed due to the rapidly changing circumstances of disasters (Office for the Coordination of Humanitarian Affairs [OCHA], 2012; Reindorp & Wiles, 2001). The increasing magnitude of disasters, the growing vulnerability of population centres and the swelling number of displaced persons presents a greater challenge in providing a coordinated and efficient response (OCHA, 2012; Reindorp & Wiles, 2001; Saavedra & Knox-Clarke, 2015). While disasters are often managed locally, rapid changes in the crisis situation due to shifting realities brought on by the disaster, impacts that overlap jurisdictional boundaries of local governments and the overwhelming of resources such as manpower and equipment contribute to the growing complexity of disaster management (McConnell & Drennan, 2006; O'Sullivan, 2013). Consequently, the size of humanitarian agencies at both the international and national levels has grown to address the increasing need for effective management (Saavedra & Knox-Clarke, 2015). Actors involved in humanitarian response today not only include NGAs, INGOs and other international players, but also include national and local civil society organisations (CSOs) and non-traditional actors such as private sector organisations and the military (Saavedra & Knox-Clarke, 2015). Examples of such

agencies are Save the Children and Mercy Corps, which are INGOs, and UN agencies like the World Food Program and the UN Children's Fund (UNICEF). Even agencies that represent government interests abroad, such as the US Agency of International Development (USAID) and the Australian Agency for International Development (AUSAID), have become involved.

With such diversity of actors and agencies involved, coordination requires communication and a timely flow of information; the bringing together of organisations of different sizes, roles, mandates and approaches to response; reconciling competing interests and political agendas; and investing resources to provide efficient humanitarian response in the shortest time possible (Chen, Sharman, Rao, & Upadhyaya, 2008; Saavedra & Knox-Clarke, 2015; Tait Communications, 2012).

The cluster approach is a coordination mechanism implemented at all levels of governance as a means of strengthening both preparedness and partnership across all sectors, and includes the INGOs, NGAs and CSOs (Inter-Agency Standing Committee [IASC], 2006). The cluster approach was a new element introduced by the OCHA Humanitarian Response Review (HRR) which was introduced in 2005 to address predictability, accountability and leadership issues commonly encountered in humanitarian responses (Scott, 2012). Mandated by involved agencies, the cluster approach plays an important role in providing efficient coordination during responses to humanitarian disasters (Steets et al., 2010). Central to the cluster approach is the use of "clusters", or groups of UN and NGO organisations involved in specific sectors, such as protection, shelter and emergency telecommunications (ETC/ET) (IASC, 2006; Scott, 2012;).

The cluster approach has been implemented at an international level by the UN and at a domestic level by OCHA. Ten years since its implementation, the approach has been utilised in more than 43 countries, including the Philippines (Boon, 2013), but research investigating its effectiveness in achieving coordination and efficient response, particularly at the national

government level, is limited. Therefore, I chose the Philippines, my home country, as a case study to shed light on how national governments use and benefit from the UN cluster approach. I selected the Philippines because the government there adopted the cluster approach early on, which means historic data on how the approach has worked are available. Furthermore, the large amount of historic data available from the Philippines has allowed me to investigate issues, challenges and opportunities in implementing the cluster approach in depth. This study is primarily concerned with how the Philippines' national government has utilised the cluster approach to strengthen inter-agency coordination. Furthermore, I examine future opportunities and challenges to improve coordination at the national government level.

The Cluster Approach as a New Coordination System

In recent years, interest in developing efficient coordination to respond to humanitarian disasters has grown apace (Adinolfi et al., 2005; McNamara, 2006). Indeed, larger-scale disasters and more vulnerable populations require more resources and effort, and thus, a higher level of coordination (IFRC, 2016; McNamara, 2006). Events such as the 2004 humanitarian crisis in Darfur highlighted the need for increased coordination between agencies and actors at both the international and national/local levels (OCHA, 2006). In its first report on the Darfur crisis, OCHA (2006) highlighted several gaps, such as the slow mobilisation of resources by agencies during the early phases of the crisis; the lack of a larger and more coordinated presence of UN agencies in the field; and the absence of accountability and monitoring.

Furthermore, responses to these large-scale humanitarian disasters have revealed other weaknesses agencies have when responding to complex disasters (Bennet, Bertrand, Harkin, Samarasinghe, & Wickramatillake, 2006). Problems include a lack of understanding about local contexts, which often delays or even undermines national and local government efforts to effectively kickstart recovery and capacity-strengthening initiatives (Bennet et al., 2006).

Leadership gaps can also cause problems and delays in providing effective disaster responses (Adinolfi et al., 2005; McNamarra, 2006; OCHA, 2006).

A major shortcoming agencies have is a lack of sufficient technical and specialist capacity, which contributes to an overall low level of preparedness (Adinolfi et al., 2005). Indeed, in dealing with large-scale emergencies such as the 2004 tsunami and the 2010 Haiti earthquake, it is clear that coordination between agencies could allow more effective utilisation of specialists and technically skilled people in responding to the situation (Bennet et al., 2006; Patrick, 2011). The UN has tried to address the issue: UN organisers oversee implementation of collaborative responses between UN agencies, including other INGOs and NGAs (McNamarra, 2006). Unfortunately, these efforts have caused concerns about collaboration with national and local agencies, because UN coordination mechanisms often lead to alienation and tensions between local counterparts and the UN; this friction is primarily due to lack of information about and knowledge of the UN (O'Connor, 2011).

In 2002, the UN-sponsored IASC established the OCHA to improve the coordination of humanitarian aid (McNamarra, 2006; Stumpenhorst, Stumpenhorst & Razum, 2011). In 2005, the IASC (2006) instituted wider reforms to improve the effectiveness of disaster responses, and the committee saw the cluster approach as a mechanism they could use to address miscommunications between agencies. The IASC reforms were in response to the earlier HRR, a reform report that was tabled in 2005 as an assessment of current capacities, gaps and weaknesses. A key finding of the HRR was that effective working links between international agencies (e.g., INGOs, the Red Cross, Red Crescent and the UN) were very limited, thus severely weakening coordination during disasters (Adinolfi et al., 2005).

In addition, the HRR report suggested increasing the responsibilities borne by Emergency Relief Coordinators (ERCs) and Humanitarian Coordinators (HCs), and the clear

assignment of responsibilities to lead organisations in their respective sectoral group/cluster[1] roles at the global, regional and local levels (Adinolfi et al., 2005). To give credence to the institutionalisation of the cluster approach, the IASC authors agreed that some flexibility should be applied to implementing it (IASC, 2006).

The strengths and weaknesses of the cluster approach in improving interagency coordination rest on several points. First, the cluster approach offers a relatively new means for coordinating multiple agencies (IASC, 2006). Second, some national governments have recognised the value of integrating the cluster approach as a mechanism within their own response plans to improve coordination between government agencies and local actors (National Disaster Coordinating Council [NDCC], 2007). Third, the cluster approach has been critiqued by actors who have experienced the recurring issues of disaster response, i.e. weak inter-cluster coordination and poor consultation with local practitioners. Fourth, formal studies exploring the benefits and difficulties associated with the UN cluster approach and whether it provides national governments with a good system are limited in number and scope (Ulelland, 2013).

Based on these four points, it seems important to determine if the cluster approach can be adapted at a local/domestic level. Therefore, I aim to address this knowledge gap by investigating how the cluster approach works in the Philippines. Specifically, I examine the cluster approach as it was implemented in the Philippines during and after Super Typhoon Haiyan. During the disaster, the cluster approach was an integral part of the country's disaster risk reduction and management (DRRM) system.

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[1] A sector or cluster are interchangeable words and its use is up to the discretion of the UN Humanitarian Country Team.

The Philippines: Risk and Disaster Management Profile

Hazards profile of the Philippines. The Philippines is a lower–middle-income country with a gross domestic product (GDP) of $US284 billion and a projected population of 102,250,000 by 2016 (United Nations Data, 2016; United Nations Development Program [UNDP], 2009). The country experiences a high occurrence of disasters, with over 74% of the population vulnerable to natural hazards (Bankoff, 2007; Brassard, Giles & Howitt, 2015). Located on the Pacific Rim of Fire, the Philippines is often exposed to hydrometeorological and geophysical hazards such as typhoons, flooding, volcanic activity and earthquakes (Figures 1 and 2).

Figure 1. Political map of the Philippines.

Note. Figure reproduced from Maps of the World (2015).

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Figure 2. Philippine risk map for climate disasters.

Note. Figure adapted from Manila Observatory (n.d.).

The country experiences an average of 20 typhoons a year and ranks third for natural disaster risk, according to the "World Risk Report 2016" (Garschagen et al., 2016; National Disaster Risk Reduction and Management Council [NDRRMC], 2013). Furthermore, the NDRRMC (2013) has noted that recent damage from hydrometeorological disasters has been substantial in the Philippines, with over 17,119 reported fatalities, 51,068 injuries and 5,198 reported missing in the past 20 years. Frequent typhoons have affected over 24.8 million families and have caused over US$8.23 billion in damage to agriculture, infrastructure and private property (NDRRMC, 2013b). These disasters have affected the livelihoods of all Filipinos, but particularly the urban poor (Israel &d Briones, 2014).

Disasters also badly affect rural Filipinos whose livelihoods are reliant on agricultural outputs, such as farmers and fishermen, because their sources of income are damaged or destroyed (Israel & Briones, 2014). Earthquakes and volcanic eruptions also pose significant risk to the Philippines (NDRRMC, 2013a). One such event happened in 2013, when a 7.2 magnitude earthquake occurred in Sagbayan, Bohol and caused 227 deaths, affected 3,219,970 persons and wreaked US$53 million in damage (NDRRMC, 2013a).

The cultural and societal norms of Filipinos have been directly influenced by recent disasters. Bankoff (2007) has noted that Filipinos have adapted their architecture to better withstand disasters; for example, they have developed the novel "nipa" hut design, which consists of bamboo houses built in baroque designs based on Spanish colonial period construction, which resist tremors better.

Filipinos have also developed various coping mechanisms, which provide individual and community resiliency to overcoming disasters. For example, the concept of "bayanihan", wherein less affected Filipinos help their neighbours who have been more affected by a disaster, has become common (Alcayna, Bollettino, Dy, & Vinck, 2016; Bankoff, 2002; Bankoff, 2007). Bayanihan emphasises how people can harness social capital, which shows that victims are not helpless, but are proactive in disasters (Alcayna, et al., 2016; Bankoff, 2002; Bankoff, 2007; Hanley et al., 2014).

Philippine disaster management systems. The ongoing risks posed by disasters have had a major influence on the way the Philippine Government has developed their disaster management systems (NDRRMC, 2017b). The foundations of Philippine disaster management were initiated in 1954, when the National Civil Defense Administration (NCDA) was formed under the auspices of the Civil Defense Act (1954). The role of disaster management was subsequently transferred to the Office of Civil Defense (OCD) in 1972, which led to the development of measures to reduce risk and vulnerabilities in local communities (NDRRMC, 2017b). The OCD managed the consequences of disasters through national civil defence and assistance programmes (NDRRMC, 2014). The organisation served as the Secretariat of the National Disaster Coordinating Council (NDCC) by Presidential Decree No. 1566, signed into effect on June 11th, 1978. Institutionalised in 2007, the NDCC had the aim of defining leadership roles, improving coordination and managing communication between the all levels of government (NDCC, 2007).

Since its institutionalisation, the NDCC and its most recent successor, the NDRRMC, have streamlined the UN's standard cluster approach to better fit domestic needs (NDCC, 2008). This reorganisation is reflected the 2011 National Disaster Risk Reduction and Management (NDRRM) framework; the framework focuses on a "whole of society" approach and encompasses four key areas, which are prevention and mitigation; preparedness; response;

rehabilitation and recovery; and also addresses climate change adaptation (NDRRMC, 2014). The NDRRM framework is based on a continuous improvement model, which is actively applied to coordination strategies (NDRRMC, 2011). The main principle of the framework is the need to build good, responsive governance and mutually reinforcing partnerships (NDRRMC, 2011). As such, the framework highlights the need for effective coordination of humanitarian assistance during disasters (NDRRMC, 2011). Table 1 is a summary of the evolution of disaster management agencies in the Philippines.

Table 1

Evolution of Philippine Disaster Management Systems

Organisation	Legislation/Year of Creation	Function/Role
National Civil Defense Administration (NCDA)	Created under the Civil Defense Act of 1954	Tasked to provide protection to civilians during war or other national emergencies of equally grave character
Office of Civil Defense (OCD)	Replaced the NCDA in 1972 through Presidential Decree No. 1	Leads in continuous development of measures to reduce risks to communities and to manage the consequences of disasters. Serves as the implementing arm of the NDCC and its successor, the NDRRMC
National Disaster Coordination Council (NDCC)	Created through Presidential Decree No. 1566 in 1978	Served as highest policy-making body, coordinating and supervisory body in disaster response. Replaced by the NDRRMC in 2010
National Disaster Risk Reduction and Management	Replaced the NDCC in 2010 through the Republic Act 10121	Serves as the highest policy-making body, coordinating and supervisory body for disaster risk reduction and management

Council

(NDRRMC)

Note. Adapted from "Y it happened: Learning from typhoon Yolanda" (NDRRMC, 2017b).

The Philippines was one of the first countries in the world to study the UN cluster approach model and to create their own country-specific version, which they dubbed the "Philippine cluster system" (Brassard, et al., 2015; NDCC, 2007; OCHA, n.d.-b). The Philippines has a well-coordinated, government-led humanitarian assistance package and serves as a valuable example for other governments to follow (Brassard et al., 2015). It appears they have mostly overcome the challenges of coordinating response efforts between the national government and the UN Humanitarian Country Team (HCT) (Brassard et al., 2015). Therefore, I chose the Philippines as a good case for studying how the UN cluster approach model can benefit national governments who are struggling with natural disaster management.

The History of Typhoon Haiyan

The Philippine cluster approach was restructured following super typhoon Haiyan, which struck the country in November 2013. The 2013 year was marked by 25 typhoons and three major humanitarian emergencies in the region. First, the Zamboanga siege crisis occurred during September 2013: Moro rebels entered Zamboanga City and tried to raise their flag in the city hall, which led to violence and prompted a military response (NDRRMC, 2014). The conflict resulted in 240 deaths, 118,000 residents displaced and ₱3.2 billion in infrastructure damage (NDRRMC, 2014). In October, the Philippines was struck by typhoon Santi, and a 7.2 magnitude earthquake in Sagbayan, Bohol Island, put further strain on the national government (NDRRMC, 2014). The super typhoon (Haiyan) struck a few months after both the siege and the earthquake, which strained the already stretched capacities of the Philippine Government (NDRRMC, 2014). Typhoon Haiyan, locally known as "Yolanda", made landfall in the Eastern Visayan Islands on November 8th, 2013 and remained active in the country for a day (NDRRMC, 2013a). Because this was the third major humanitarian emergency to strike in a year, it was the most damaging (NDRRMC, 2014). Experiences, criticisms and lessons learned from typhoon Haiyan/Yolanda led to improvements being made to the Philippine NDRRM

framework and to the cluster approach: new clusters, knowledge management systems and command mechanisms were added to the response network (Domingo, 2016; Legaspi, 2013; NDRRMC, 2014; NDRRMC, 2017a).

Initially started as a series of workshops, the National Disaster Response Plan (NDRP) was a joint project between the Japan International Cooperation Agency (JICA) and the Philippine OCD, and was drafted to serve as a mechanism to improve interagency coordination after Haiyan/Yolanda. The NDRP is under continuous improvement by the NDRRMC, and is currently being redeveloped for specific manmade (such as terrorist attacks), geographical hazard-related (such as earthquakes and tsunamis) and hydrometeorological disasters (NDRRMC, 2017a). The NDRP serves as a national-level strategic plan and works in conjunction with regional and local contingency plans to provide clear direction to disaster relief operations managers (NDRRMC, 2017a).

The current setup of the Philippine cluster approach, the Philippine cluster system (PCS), contains 11 clusters; three of the clusters are new and deal with the sectoral issues of law and order (LAO), Philippine international humanitarian assistance (PIHA) and management of the dead and missing (Figure 3) (NDRRMC, 2017a). These new clusters were mandated by the Vice-Chairperson for Response, and they follow operational protocols found in the NDRP (NDRRMC, 2017a). Finally, the PCS serves as the legal force provider when the national government needs to commandeer resources and manpower during response operations (NDRRMC, 2017a).
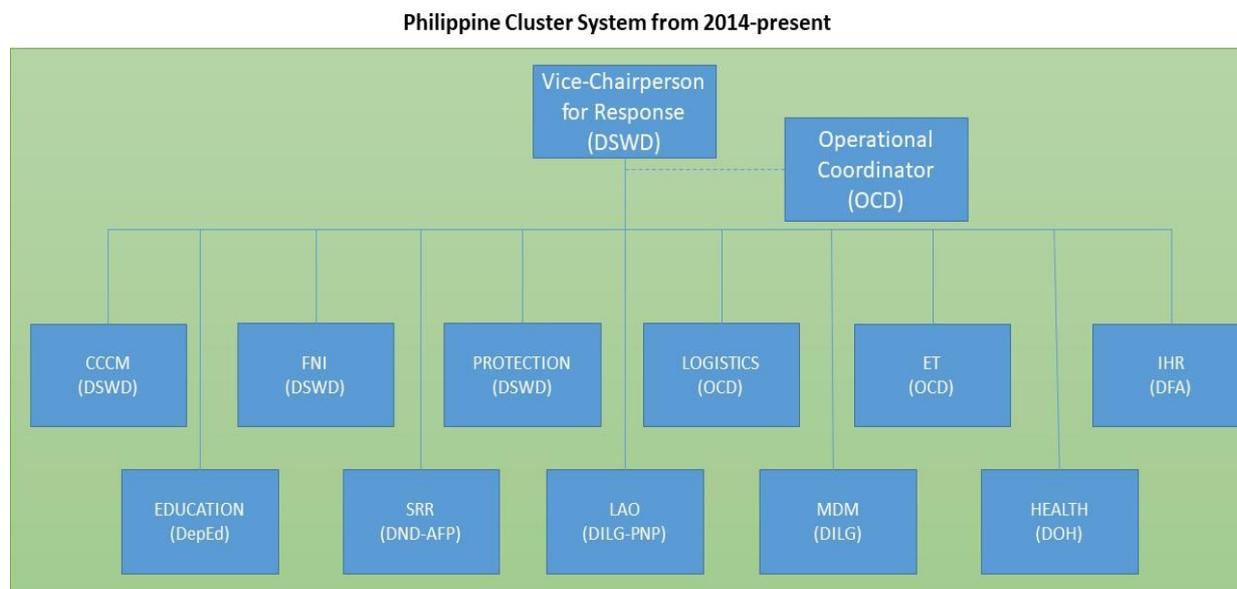
Figure 3. Organisational structure of the PCS.

Note. Figure adapted from NDRRMC (2017), p. 29.

Abbreviations. CCCM, Camp Coordination and Camp Management; DepEd, Department of Education; DFA, Department of Foreign Affairs; DILG, Department of the Interior and Local Government; DND-AFP, Department of National Defense–Armed Forces of the Philippines; DOH, Department of Health; DSWD, Department of Social Welfare and Development; ET, Emergency Telecommunications; FNI Food and Non-Food Items, ; IHR, International Humanitarian Relations; OCD, Office of Civil Defense; LAO Law and Order, ; PCS, Philippine cluster system; PNP, The Philippine National Police; SRR, Search, Rescue and Retrieval.

Research Objectives

In this study, I investigate to what extent the UN cluster approach contributes to providing the Philippines with a more effective humanitarian response. To address the research question, I am guided by the following three objectives:

1. To investigate the role of the UN cluster approach in improving the effectiveness of agency coordination during humanitarian responses in the Philippines.

2. To explore the challenges, barriers and gaps encountered in the implementation of the cluster approach in the Philippines.

3. To identify opportunities to improve how the cluster approach is implemented in the Philippines.

Significance of the Study

The purpose of this study is to investigate how interagency coordination between national government agencies can be improved through utilising a localised cluster approach, based on the UN model. While ample academic literature exploring the use of the cluster approach at the global level exists, these studies' focus is narrow, concentrating on its use as part of the UN response (Boon, 2012; Steets et al., 2010; Stoddard et al, 2007; Ulleland, 2013). Few, if any, studies explore the use of the cluster approach to improve coordination mechanisms for internal, national government agencies. Thus, a distinct knowledge gap about how the cluster approach may benefit domestic response agencies exists. My research addresses this knowledge gap; I hope to expand the existing knowledge base by providing a fresh perspective. My aim is to explore the challenges, issues, recurring gaps and identified opportunities the Philippine Government has experienced in its implementation of the cluster approach.

This study is also significant for policy and decision makers working in disaster risk reduction and management (DRRM) in the Philippines. This study will provide disaster managers at local levels knowledge about how the cluster approach works at the national government level, and how best local operatives can interact with national response teams. My overarching goal is to aid local government units in creating their own cluster systems based on an enhanced understanding of the national government framework. Furthermore, this study is relevant to emergency and disaster management students worldwide, because it shows how the cluster approach can be adapted to specific countries and cultures to improve coordination and response. As such, the results of this study can serve as a basis for future studies on agency coordination and the cluster approach.

Dissertation Outline

Chapter One briefly introduces the concepts of coordination, the use of the cluster approach in improving coordination between agencies and how this concept is implemented at the national level. I explore research objectives and the background behind my choice of the Philippines as a case country. In Chapter Two, I critically review academic and policy literature on coordination in the field of humanitarian response; I also provide an in-depth discussion on the UN cluster approach and how it has been implemented at both international and country levels. In Chapter Three, I present the qualitative methods I use in this study, and I outline the methodology, data collection and analyses methods I employ to support my research objectives. Chapter Four is a detailed description of my findings. In Chapter Five, I discuss the significance of the results in relation to the existing literature. I also explore the implications and limitations of my research, and I identify opportunities for further research.

Chapter 2: Literature Review

Chapter Outline

To understand how the cluster approach can be used to improve interagency coordination, the concepts of coordination, the history of the UN cluster approach and its functions must first be examined. In this chapter, I explore existing literature about coordination in disaster management and humanitarian responses. In addition, I examine the inner workings of the UN cluster approach. First, I review previously published literature about coordination in the context of humanitarian response. The factors that affect coordination quality during humanitarian responses are discussed in the following section. Next, I illustrate principles that make up the framework for cluster coordination. In the subsequent section, I analyse events and reasons for improving coordination, which serve as the foundation for the original cluster approach. I then describe international and country levels of the UN organisation and how it functions to improve coordination. I debate the strengths and weaknesses of the cluster approach. The next section is a detailed description of the Philippine cluster system and how it operates. Finally, I summarise key points in the "Chapter Summary".

Interagency Coordination During Disasters

Disasters triggered by natural or man-made hazards often disrupt communities, leading to impacts such as displacement of families, food scarcities and major health risks (Child Fund International, 2013; Perry, 2007). Humanitarian organisations strive to provide comprehensive response and recovery operations to restore society (Nolte, Martin, & Boenigk, 2012). Effective coordination between organisations and agencies is therefore essential in ensuring effective outcomes (Chen, et al., 2008). The Advanced Training Program on Humanitarian Action (ATHA) (2008) has noted that effective coordination predicates efficient disaster

mitigation. Furthermore, effective coordination also predicates better preventive measures and a more proactive approach in dealing with disasters, thus allowing for better preparedness, which minimises the scale of response (ATHA, 2008).   Indeed, providing effective coordination has been a constantly evolving process, which builds upon previous approaches (Saavedra & Knox-Clarke, 2015).

However, many factors, such as the chaotic nature of a post-disaster environment; the lack of sufficient resources such as relief aid for individuals affected; a general dearth of response equipment needed for search and rescue; and the large number of actors ranging from international aid agencies to local non-governmental organisations (NGOs), continue to contribute to difficulties in coordinating responses (Balcik, Beamon, Krejci, Muramatsu, & Ramirez, 2009). This was made apparent during the 2005 Darfur crisis, when the lack of clear partnership and support, the lack of accountability to affected communities and inadequate planning led to poor performance (OCHA, 2006). Agencies and organisations involved were unable to quickly mobilise appropriate manpower, and thus, initial response was hampered by unrealistic demands and high turnover of personnel (OCHA, 2006). Furthermore, the Darfur response was hampered by limited leadership and a lack of presence in the field by UN agencies at forward coordination hubs. Consequently, ineffective technical support and coordination at the local level meant response was less than adequate (OCHA, 2006). The Darfur response serves as a stark example of the importance of interagency coordination across all levels of governance.

The UN Office for the Coordination of Humanitarian Affairs (UNOCHA) (2012) defines coordination as "an interlinked partnership among different actors and networks with different mandates and capacities and share a responsibility to provide timely, demand-driven humanitarian action" (p. 9). Nolte, et al. (2012) define coordination as "strategic thinking to align, organize, and differentiate participating organisations' activities between beneficiaries,

tasks, regions, or tactics" (p. 709). Balcik, et al. (2009) describe coordination as the relationship and interaction between different agencies operating within the humanitarian response environment. Coordination has also been described as "a systemic utilization of policy instruments to deliver humanitarian assistance in a cohesive and effective manner" (ATHA, 2008, p. 4).

Balcik et al. (2009) further specify coordination as being either vertical or horizontal. Vertical coordination (command) refers to the upstream or downstream synchronisation of operations between agencies (Balcik et al., 2009). Horizontal coordination (control) refers to the extent of harmonisation between organisations operating on the same level of management (Balcik, et al., 2009). For the purposes of this dissertation, I favour the more practical description provided by Reindrop and Wiles (2001): interagency coordination is "a systemic partnership of different actors and agencies that have different mandates and capacities but [who] share … responsibility to provide cohesive and effective humanitarian assistance to the victims of a disaster" (p. 5).

I favour the "hands-on" description because many different actors working towards the goal of helping disaster-affected people through the provision of goods and the restoration of services is a reality (Saavedra & Knox-Clarke, 2015). These actors include providers from all walks of life and all levels, including the private and military sectors (Saavedra & Knox-Clarke, 2015). Given the multifaceted nature of the humanitarian community, ensuring effective interagency coordination is an integral challenge, and requires harnessing the vital capacity of people with differing viewpoints, training and ideas (ATHA, 2008). The greater strategic direction effective coordination provides allows a response effort to be predictable, timely and coherent (UNOCHA, 2012).

Coordination also allows for the effective utilisation of resources by reducing duplication and competition between agencies (UNOCHA, 2012). Examples of resources

critical to the provision of humanitarian aid can take the form of manpower for search, rescue and retrieval (SRR), ETC/ET, food items and hygiene kits (NDRRMC, 2017a). In fact, the seminal Philippine document on coordination, the HRR, has identified the need for strong coordination mechanisms to as a prerequisite to providing the things disaster victims need (Adinolfi et al., 2005).

Factors that Affect Coordination

Several key factors affect coordination. One factor is the number and diversity of actors involved, as seen in the 2004 Indian Ocean tsunami, when organisations responding ranged from the military, NGOs and the private sector, and spanned all levels from international to the local community (Scheper, Parakrama, & Patel, 2006). Despite sharing the same goal of providing effective disaster management, each actor's primary motives, missions and operating constraints may differ; for example, UN agency priorities can be different from the priorities of the national government (USAID, n.d.; Balcik et al., 2010). This leads to actors taking very different approaches to humanitarian response, which occurred in the 2004 Indian Ocean tsunami (Saavedra & Knox-Clarke, 2015).

Indeed, an increasingly large number of actors engaged in humanitarian responses has increased operational complexity (Saavedra & Knox-Clarke, 2015). This complexity was evident during typhoon Haiyan/Yolanda, which involved actors from UN agencies, local government units (LGUs), INGOs, NGOs, NGAs and other countries (NDRRMC, 2014; OCHA, 2014). If coordination and communication are not handled correctly and sensitively across agencies, complications can arise due to overlapping of resources (IASC, 2006; NDRRMC, 2017b; OCHA, 2006). The need to adapt systems and networks to assure interoperability between the global system and local actors is clearly an imperative (United Nations General Assembly, 2013). In fact, interoperability is a prerequisite for clear accountability and effective cross-agency leadership (Adinolfi et al., 2005; IASC, 2006). The

importance of predictable leadership was illustrated during typhoon Haiyan/Yolanda, when despite the use of the cluster system, the lack of clearly defined leadership roles led to a less effective initial response (OCHA, 2014).

Another factor that can affect the quality of coordination is the cost of coordination and different funding structures across agencies. This aspect greatly constrains the operations of smaller players such as LGUs and NGOs, whose local knowledge and expertise in their areas can greatly improve the effectiveness of the response, because bigger players are unfamiliar with local contexts (Saavedra & Knox-Clarke, 2015; Street & Parihar, 20017). Coordination initiatives require time and money, which cuts out smaller organisations that do not have the financial capacity to allocate personnel to coordination meetings and operations (Balcik et al., 2010). Thus, stable, reliable funding mechanisms for local humanitarian actors serve to enhance predictability, flexibility and rapid response efforts (UNOCHA, 2012). Furthermore, additional recurrent funding for local actors is needed to maintain the quality of coordination required by any humanitarian response (HRR, 2005).

Finally, the uncertainty, or "fog of war" during disasters comprises another factor that affects quality of coordination. Disaster location, timing and intensity can all affect coordination efforts (Balcik et al., 2010). For example, the large and far-reaching 2004 Indian Ocean tsunami spanned multiple countries, affected millions of people and placed considerable strain on the capacity of international, national and local organisations (Williams, 2005; Scheper, et al., 2006). The 2015 Nepal earthquake also exemplifies how the "fog of war" affects coordination quality, because the remote location of the earthquake and tough local terrain directly impacted relief efforts (Wendelbo, et al., 2016). In this instance, the remoteness of affected villages and the lack of understanding of local context by international actors negatively affected the response and services provided to victims (Wendelbo et al., 2016). Furthermore, other factors, such as the availability of information on populations and

infrastructure affected, and the political environment, all contributed to the chaos in Nepal (Balcik et al., 2010).

Recent emerging trends and challenges, such as growing populations and rapid urbanisation, reinforce the uncertainties inherent in humanitarian responses (Balcik et al., 2010). Indeed, the impact of disaster events disproportionally affects developing or low-income countries (UNOCHA, 2012). The ADB (2015) has noted that lower-income countries are vulnerable, because most of their populations live in poor, urban areas with poorly maintained infrastructures. Furthermore, a large number of megacities, such as Manila, Shanghai and Mumbai, are built near coastal regions, and thus populations are exposed to more natural hazard-related disasters (ADB, 2015). Indeed, the predicted acceleration in the number, intensity and frequency of disasters is further exacerbated by massive, rapid development in areas vulnerable to natural hazards (UNOCHA, 2012).

Because of these trends, existing capacities to deal with disasters, both in governments and even individuals, have improved over time. Recently, national disaster management bodies have started to assert more control over humanitarian responses in their own countries (Ramalingam & Mitchell, 2014). Furthermore, increasing individual and social capacities, exemplified by the Bayanihan concept promulgated by communities in the Philippines, shows that individuals have the capacity to respond on their own (Alcayna, et al., 2016; Bankoff, 2002; Bankoff, 2007; Hanley et al., 2014). However, rescue efforts that address people's needs are vital to an effective response and require coordination, even if individuals can cope better (Eyre, 2006). Addressing arising issues, such as the number and diversity of actors, the cost of coordination, and the fog of war, can result in improved decision-making capacity at the strategic level (Adinolfi et al., 2005; McNamara, 2006; UNOCHA, 2012).

A Framework for Coordinated Response

Coordination in largescale emergencies requires the use of a framework to define broad concepts that can aid in identifying important practical aspects of coordination (OCHA, 2011). Thus, the IASC has prioritised strengthening five key areas: leadership and coordination; accountability for performance; accountability to affected people; building national capacity for preparedness; and advocacy and communications (IASC Secretariat, 2012). In defining a framework for cluster coordination, OCHA (2011) has outlined concepts appropriate to the country level. First, accountability and leadership are vital components of the decision-making and task delegation processes (OCHA, 2011). Indeed, leadership and accountability are considered as important aspects in providing effective cluster coordination (Ulleland, 2013).

Furthermore, leadership needs to be supported by organisations involved in response. The WHO (2013) defines leadership as a critical function when supporting a response to international-level emergencies. The need for coordinated leadership was given even greater credence by the UN General Assembly (1991), when it passed Resolution 46/182 and called for the greater strengthening of leadership and coordination. Clearly, leadership commitment is essential to ensuring successful coordination of joint agency activities (New Zealand State Services Commission [SSC], 2008).

Cluster coordination should be tailored to scale based on country capacity (OCHA, 2011). Cluster coordination is thus tailored per country and per emergency based on variables such as scale, timing, duration, typology and logistical challenges (OCHA, 2011). Coordination also requires broad engagement from all stakeholders, and thus, leaders must ensure that all partners in the cluster are fully supported (OCHA, 2011). Despite a clear mandate for support, however, inter-cluster coordination between the cluster leads has been a recurring challenge that has affected the quality of responses worldwide (Steets et al., 2010; Ulleland, 2013).

Furthermore, cross-cutting issues such as gender, sexual health, environment and age must also be identified and addressed by the clusters (OCHA, 2011). Clearly, cluster coordination must be professionalised, with cluster leads assigning fulltime individuals to fulfil coordination responsibilities, thus improving accountability (OCHA, 2011). These principles are supported by the literature. For example, the New Zealand SSC (2008) notes that buy-in from stakeholders[2], which can consist of groups or individuals, is an important aspect for ensuring success. Furthermore, knowledge and information sharing, which can only happen when everyone is equally supported, are important factors that increase effectiveness and improve accountability (McKing, 2008; OCHA, 2011; SSC, 2008; WHO, 2013). Finally, providing clear role descriptors for agencies contributes to improving response effectiveness of the response by minimising task redundancy (McKing 2008; OCHA 2011; SSC, 2008).

Coordination in the UN

The cluster approach takes its roots from the guiding principles of humanity, neutrality, impartiality and independence (Bagshaw, 2012). These principles promote and ensure the essential elements of effective coordination are complied with and carried out (Bagshaw, 2012). They were enshrined in UN General Assembly Resolutions 46/182 and 58/114, which guide humanitarian organisations in their work (Bagshaw, 2012). The key objective is to support national efforts in protecting the lives, livelihoods and dignity of peoples in need (UNOCHA, n.d.-a). To cement its principles, General Assembly Resolution 46/182 established the IASC as the primary forum for inter-agency coordination, decision making and policy making for humanitarian issues at all levels (IASC Secretariat, 2012).

In accordance with the guiding humanitarian principles, there is a clear obligation for disaster response actors to develop a mechanism of coordination. This need was highlighted

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[2] This means ensuring stakeholders support the coordination effort. Support ensures ownership by and participation from stakeholders.

by the 2004 Darfur crisis and the Boxing Day tsunami of the same year, in which humanitarian principles were potentially compromised by lack of coordination (McNamara, 2006). These lapses prompted the ERC of the IASC to assess response capacities of humanitarian actors such as the UN, NGOs, Red Cross/Crescent and the International Organization for Migration (IOM) (Adinolfi et al., 2005). The IASC-initiated review — the HRR — further emphasised the need to address coordination gaps during humanitarian responses, especially the need to mobilise resources within a timeframe appropriate to the disaster (McNamara, 2006).

In its assessment of the humanitarian relief system, the HRR identified gaps in the system and developed recommendations. A low level of preparedness, both in terms of resources and sectoral capacities, was evident at Darfur and during the Boxing Day tsunami (Adinolfi et al., 2005). The need for strengthening organisational capacities was clear, according to HRR analyses (Adinolfi et al., 2005). Nine sectoral clusters were identified as essential, the relevant changes were made to response structures and these clusters are now operational. The nine clusters identified were camp coordination and management, emergency shelter, telecommunications, health, logistics, nutrition, protection, early recovery, and water and sanitation (McNamara, 2006). Furthermore, the HRR exposed the limited linkages and collaboration between humanitarian actors, and further marked the need for an inclusive, system-wide coordination mechanism to be implemented (Adinolfi et al., 2005).

The UN cluster approach was adopted by the IASC as a system to address the need for effective and coordinated response systems (Boon, 2012). Mandates revolved around the goals of ensuring concentration of resources and rapid deployment of humanitarian efforts at the national, regional and global levels (Stumpenhorst et al., 2011). This approach sought to address existing problems by assigning lead humanitarian agencies and corresponding partner agencies. A visual representation of the "new" UN approach can be seen in Figure 4.

Coordination Architecture in the Cluster Approach

ERC   IASC

GCLA

UN OCHA   HC
           HCT   Government

CLA
Chief of Mission

Cluster
Coordinator

ERC   Emergency Relief Coordinator
(G)CLA   (Global) Cluster Lead Agency
HC   Humanitarian Coordinator
HCT   Humanitarian Country Team
IASC   Inter-Agency Standing Committee
UN OCHA   Office for the Coordination of Humanitarian Affairs
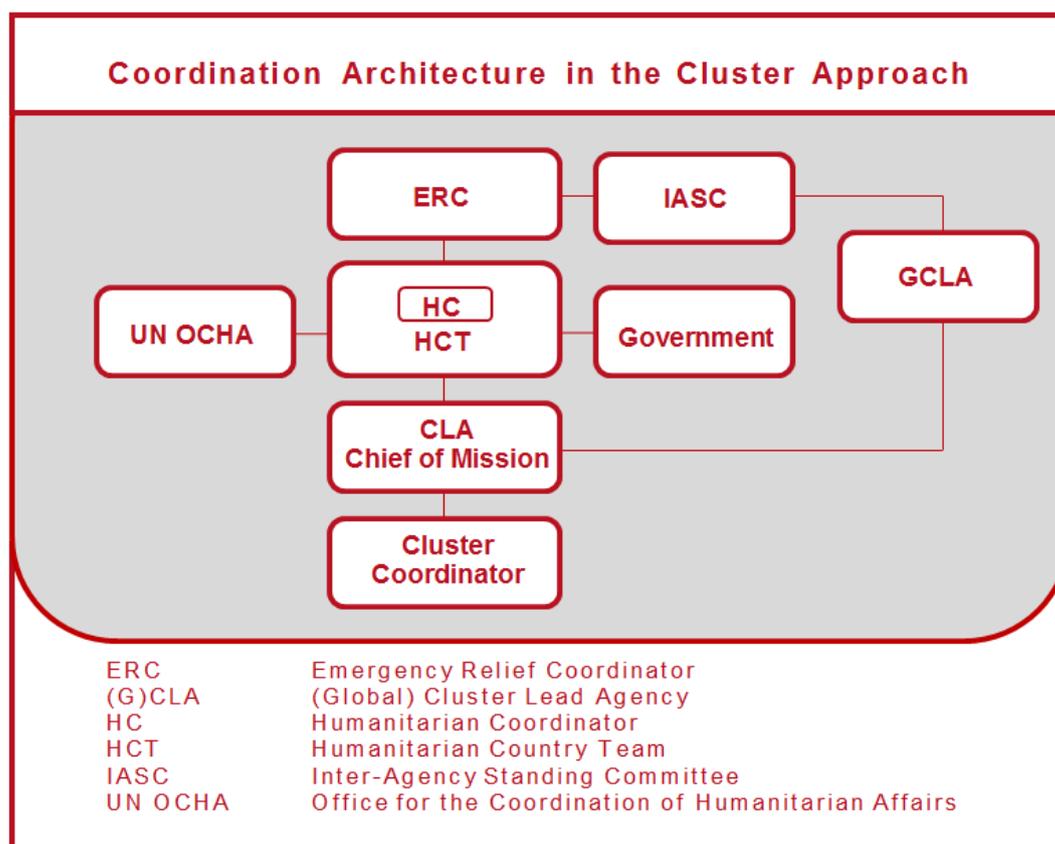
Figure 4. Coordination architecture of the UN cluster approach.

Note. Figure reproduced from Humanitarian Response (n.d.).

Abbreviation. UN, United Nations.

In 2005, the cluster approach was "used in anger" for the first time following

the earthquakes in Pakistan, wherein nine clusters were quickly established within 24 hours,

which supported the efforts of the Pakistani Government in responding to growing

humanitarian needs (Scott, 2012). Results suggest that the use of the cluster approach provided

the Pakistani Government a clear and predictable interface with the humanitarian community,

supported by opportunities for information sharing (Scott, 2012). This positive example saw

the cluster approach adopted by over 43 countries within the next 7 years (Boon, 2012).

In improving coordination, the IASC has identified sectoral issues and has thus clarified

a division of labour between organisations (IASC, 2006; UNOCHA, n.d.-a). According to the

clarification, clusters are groups of humanitarian organisations, both UN and non-UN, involved

in humanitarian actions (Scott, 2012). This division of labour allows the cluster approach to be used to coordinate immediate relief efforts, and assigns a central contact point for NGOs (Stumpenhorst et al., 2011). In addition, clusters lead work in conjunction with relevant NGA counterparts to provide technical and resource support (OCHA Philippines, n.d.; UNOCHA, n.d.-b).

In 2005, IASC directors[3] established nine clusters and designated cluster lead organisations (IASC, 2006). Currently, there are 11 clusters established at the global level (WHO, n.d.). These eleven sectors or clusters are logistics, nutrition, emergency shelter, camp management & coordination, health, protection, agriculture, ET, early recovery, education and sanitation, water and hygiene (UNOCHA, n.d.-a). Four key issues, age, environment, gender and HIV/AIDS, were identified as issues faced by all the clusters (Steets et al., 2010; Stumpenhorst et al., 2011). The use of lead organisations was recommended by the HRR to facilitate clustering and to address these issues in a cohesive way (Adinolfi et al., 2005). An outline of each sector, their corresponding lead organisation and the four cross-cutting issues affecting human relations during responses are illustrated in Table 2.

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[3] IASC Principals are the heads of organisations who are members of the joint IASC (UNDP, UNICEF, UNHCR, WFP, FAO, WHO, UN-HABITAT, OCHA and IOM).

Table 2

Clusters and Their Corresponding Lead Organisations

Classification	Cluster	Cluster lead agency
Clusters for response areas	Agriculture cluster	• Food and Agriculture Organization (FAO)
	Camp coordination and camp management cluster	• United Nations High Commissioner for Refugees • International Organization for Migration (IOM)
	Early recovery cluster	• United Nations Development Programme (UNDP)
	Education cluster	• United Nations Children's Fund (UNICEF) • Save the Children
	Emergency shelter cluster	• United Nations High Commissioner for Refugees • International Federation of the Red Cross (IFRC)
	Health cluster	• World Health Organization (WHO)
	Nutrition cluster	• United Nations Children's Fund (UNICEF)
	Protection cluster	• United Nations High Commissioner for Refugees
	Water, sanitation, and hygiene (WASH) cluster	• United Nations Children's Fund (UNICEF)
Service clusters	Emergency telecommunications cluster	• Office for the Coordination of Humanitarian Affairs (OCHA) • World Food Programme (WFP) • United Nations Children's Fund (UNICEF)
	Logistics cluster	• World Food Programme (WFP)

Classification	Cluster	Cluster lead agency
Cross-cutting issues	Age	• HelpAge International
	Environment	• United Nations Environment Programme (UNEP)
	Gender	• Co-chairs of IASC sub-working group on gender
	HIV/AIDS	• United Nations Programme on HIV/AIDS

Note. Adapted from Steets et al. (2010).

Abbreviations. AIDS, acquired immune deficiency syndrome; HIV, human immunodeficiency virus; IASC, Inter-agency Standing Committee.

Cluster Functions

The cluster approach is useful both at the global and country levels (Steets et al., 2010). At the international level, clusters are IASC-managed organisational groups and are responsible for

- strengthening system-wide preparedness,

- coordinating and enhancing technical capacity,

- ensuring the availability of expertise and materials in the event of a disaster,

- developing and disseminating guidelines, and

- providing training and operational support to their domestic counterparts (IASC, 2006, Steets et al., 2010; UNOCHA, n.d.-a).

The IASC (2006) further describes responsibilities of lead organisations as "best practices". These best practices are about addressing system weaknesses and maintaining available manpower (IASC, 2006). The IASC (2006) guidelines outline what support global cluster lead organisations should provide to their regional and country counterparts, such as providing needs assessments, emergency preparedness and planning advice, and ensuring resources are pooled via enhanced partnerships. However, because they specialise in resolving sector-specific issues, cluster lead agencies can develop a "silo effect[4]", which presents a challenge to inter-cluster coordination (Krueger, Derzsi-Horvath, & Steets, 2016; Ulleland, 2013).

At the country level, the cluster approach places overall leadership under the HC (IASC, 2006). Cluster lead organisations, together with the Humanitarian Country Team (HCT), are assigned by the HC, who chooses clusters for a country based on specific needs, gaps and

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[4] The silo effect occurs when clusters focus only within their own sector. It therefore presents a challenge to inter-cluster coordination. It also refers to agencies acting only within their thematic mandates (prevention and mitigation, preparedness, response, recovery and rehabilitation).

capacities (IASC, 2006). Once country-specific cluster leads are selected, the HC and HCT are responsible for securing operating agreements between cluster lead organisations (IASC 2006). Country-level cluster conformations may not necessarily mirror the same global-level organisational structures (IASC, 2006, Steets et al., 2010; UNOCHA, n.d.-a), because selection of country clusters is based on local context and capacity (UNOCHA, n.d.-a). To support their global counterparts, country-level leaders ensure in-country humanitarian actors coordinate with their HC (Figure 4) (UNOCHA, n.d.-b).

At the global level, the ERC is the senior official (designated by the UN General Assembly) who oversees humanitarian responses (UNOCHA, n.d.-b). The ERC serves as the chair of the IASC and coordinates humanitarian assistance; the ERC ensures that information is disseminated to support early warnings and responses, and the ERC also mobilises resources (IASC Secretariat, 2012; UNOCHA, n.d.-b). Under the IASC, OCHA chairs the IASC working group, hosts the IASC Secretariat and provides institutional support to the ERC (IASC Secretariat, 2012; UNOCHA, n.d.-b). Furthermore, OCHA monitors the implementation of IASC decisions (IASC Secretariat, 2012). Finally, OCHA (through the HC) serves as the first point of contact for national governments (UNOCHA, n.d.-b) (Figure 5).
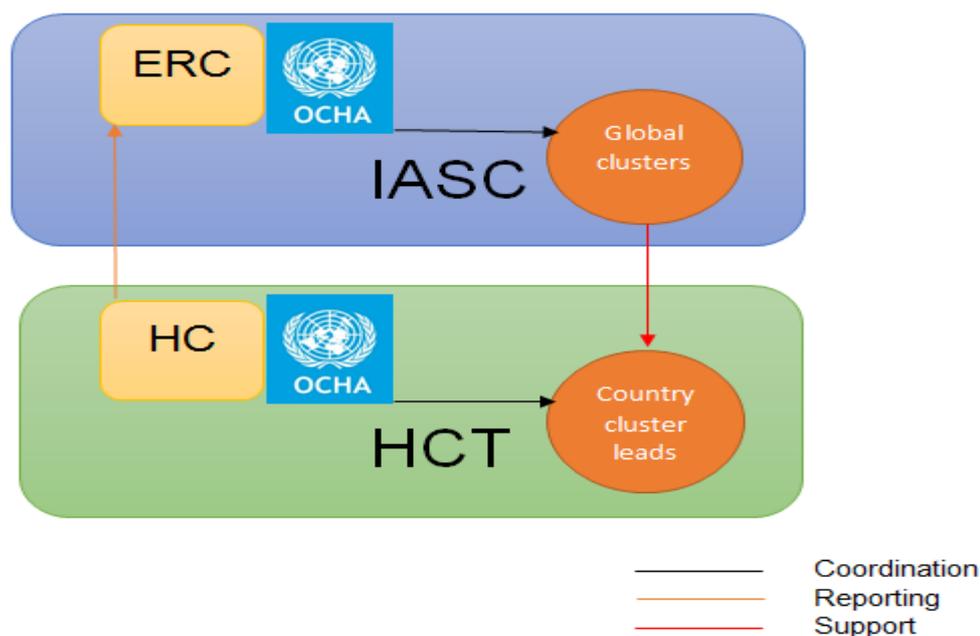
Figure 5. Cluster coordination architecture.

Note. Figure adapted from OCHA (n.d.)and USAID (2016).

Abbreviations. ERC, Emergency Relief Coordinator; HC, Humanitarian Coordinator; HCT, Humanitarian Country Team; IASC, Inter-agency Standing Committee; OCHA, Office for the Coordination of Humanitarian Affairs.

At the country level, the HCT fulfils similar functions as the IASC (UNOCHA, n.d.-b). The HCT serves as a domestic strategic and policy guide on issues related to humanitarian action (UNOCHA, n.d.-b; Steets et al., 2010). Inter-cluster coordination is thus facilitated by the HCT by the in-country clusters, whose lead agencies are part of the HCT (Steets et al., 2010; UNOCHA, n.d.-a). The relationship between global- and country-level clusters can be seen in Figure 5.

At present, making UN clusters work at a country level still presents challenges. Inter-cluster coordination at a country level is weak, because coordination relies solely on information sharing, while identifying gaps in capability and multi-disciplinary issues are often overlooked (Steets et al., 2010; Ulleland. 2013). Therefore, leadership within domestic clusters

still greatly depends on the skills of the HC and HCT to impose authority (Ulleland, 2013). Furthermore, the cluster system is often implemented in parallel with existing government coordination structures, which is problematic because linking mechanisms are often weak (Steets et al., 2010; Ulleland, 2013). This weak link has also been noted by OCHA (2014), when the weak relationship affected response efforts during typhoon Haiyan/Yolanda in the Philippines.

Strengths and Weaknesses of the Cluster Approach

Strengths and contributions to effective coordination. Since its implementation in 2004, the cluster approach has been officially evaluated twice, once in 2007 and again in 2010 (Boon, 2012). These evaluations were carried out by joint research teams invited by the IASC to determine if the cluster approach had made an impact and had improved the capacity, coverage and predictability of humanitarian responses (Stoddard et al., 2007; Steets et al., 2010). The first report noted that despite a troubled rollout, the cluster approach brought improvements to various aspects of humanitarian responses (Stoddard et al., 2007). The authors of the report, Stoddard, et al. (2007), identified that the cluster approach had aided efforts to find and rectify sectoral gaps. In addition, the resultant improved leadership helped increase agency capacity and allowed for better coordination in the field (Stoddard et al., 2007). Furthermore, the authors found the cluster approach could be used to improve preparedness and surge capacities at a country level (Stoddard et al., 2007).

The 2010 report, a review of operational effectiveness, was carried out by a joint evaluation team from the Global Public Policy Institute and the Groupe Urgence–Réhabilitation–Développement. The authors, Steets et al. (2010), touted improvements in three areas: the coverage of humanitarian needs, the identification of gaps and the strengthening of agency partnerships. The authors based their findings on how clusters functioned as platforms for coordination. The second report vindicated the cluster approach, which brought

improvements to collaborative efforts during responses (Boon, 2012, Humphries, 2013). Furthermore, the review found that improved communications and information management had led to reduced duplication and aid abuse, such as relief package rebranding (Steets et al., 2010). Finally, the cluster approach was deemed a success because it had been adapted to fit the needs of specific countries (Boon, 2012). This was accomplished through dialogue between national and international actors (Boon, 2012).

   Weaknesses and challenges faced by the cluster approach. Weaknesses are also features of the cluster approach. For example, partnerships between UN cluster leads and INGOs have only marginally improved, with almost no significant gains realised by domestic NGOs (Stoddard et al., 2007). This viewpoint is reinforced by Mercy Corps (2006) research, which identified uncertainty and general confusion on a local level, especially in NGOs. Unfortunately, clarity for local organisations had been a primary UN goal, and the confusion local agencies experienced was traced back to uncertainties contained in the cluster process at the international level (Mercy Crops, 2006). Thus, early implementation efforts have had mixed results (Stoddard et al, 2007).

   Mercy Corps (2006) had also reported that poor planning for responses is a problem, because as there had been insufficient consultation with NGOs NGAs, CSOs and affected populations. Both historic and recent humanitarian responses (Pakistan in 2007 and Haiti in 2010) were plagued by tensions between agencies due to poor or insufficient consultation (O'Connor, 2011). In Haiti, local NGOs and the Haitian Government described the implementation of the cluster approach as "incomprehensible and dysfunctional", citing the exclusion of local NGOs in particular (O'Connor, 2011). In Pakistan, the exclusion of local actors by NGOs and local government agencies during disasters was also raised as an issue (Street & Parihar, 2007).

Financial issues, such as insufficient resources and no independent budgets for clusters have been cited as problems in disaster response; some cluster members have felt that lead agencies tended to prioritise "pet projects" dear to their own organisations (Humphries, 2013; Mercy Corps, 2006). Interestingly, it seems that individuals' leadership often makes a difference to cluster performance at both the global and country levels, rather than systems or best practices (Mercy Corps, 2006; Stoddard et al., 2007). This has meant that cluster structures have tended to be inflexible, as meetings focus on peripheral issues such as administrative and process issues such as funding, instead of immediately addressing relief needs, and in this way, local actors have been alienated (Humphries, 2013).

The 2010 report on the cluster approach emphasised the need for further strengthening of coordination between clusters and support for domestic operations (Steets et al., 2010). This second report also highlighted issues that had not been resolved since the initial review in 2004: minimal integration on cross-cutting issues (age, gender, etc.), and weak leadership in clusters at the country level (Steets et al., 2010; Humphries, 2013). Concerns raised by NGOs about how real the perceived impacts of improved effectiveness in emergency responses were also mooted in the second report (Humphries, 2013). The NGOs voiced concerns about how the cluster approach would "force" coordination with government entities via diverted funding streams, a type of "cooperation" avoided by some NGOs (Humphries, 2013). Indeed, it is known that clusters often fail to consider the perspectives of NGOs, which results in NGOs feeling that they play a passive or minor role within the cluster structure (Humphries, 2013). This distancing effect is further emphasised by the focus of cluster meetings on processes that are both time consuming and are badly positioned to address deeply rooted political or institutional challenges, especially at the country and local levels (Steets et al., 2010; Humphries, 2013). Finally, challenges to stronger leadership include trying to retain

institutional memory in lead agencies, as leadership comes from experience (Steets et al., 2010; Humphries, 2013).

The Philippine Cluster System

Since its implementation in 2006, the UN cluster approach has been accepted by many countries (NDCC, 2007; New Zealand Ministry of Civil Defence and Emergency Management [MCDEM], n.d.; OCHA, 2013). The cluster approach offers national governments a structured way of providing integrated planning (MCDEM, n.d.). Furthermore, the cluster approach allows for the improved understanding of roles and responsibilities, strengthened internal cohesion and coherent, coordinated strategic responses (NDCC, 2007; MCDEM, n.d.).

The Philippines was one of the first countries to adopt the cluster approach. Upon its implementation, the UN cluster approach was quickly recognised as a coordination mechanism that could complement and support the current response architecture (NDCC, 2007). This realisation was reinforced during typhoon Durian in 2006, locally known as Reming, when several mudslides caused by the storm buried villages along the periphery of the Mayon Volcano, sparking large-scale humanitarian response action (Gotink et al., 2006; NDCC, 2007). Thus, the Philippine Government was quick to fully embrace the cluster approach (NDCC, 2007). The NDCC (2007) described the cluster approach on three levels: the national, regional and provincial levels; the aims were to clearly define leadership roles between government cluster leads, improve coordination, identify deliverables and manage disaster responses well. The NDCC technical working group liaised with the Philippine HCT to develop a national cluster approach that would be able to fit perfectly into existing government architecture (NDCC, 2007). In its initial post-NDCC rollout, Philippine clusters were patterned after the 11 clusters used by the Philippine HCT, and national government agencies were assigned as cluster leads (NDCC, 2007), depicted in Table 3.

Table 3

The 2007 Philippine Cluster System

Cluster	Government Lead	HCT Counterpart
Nutrition	Department of Health (DOH)	United Nations Children's Fund (UNICEF)
Water, sanitation and hygiene (WASH)	Department of Health (DOH)	United Nations Children's Fund (UNICEF)
Health	Department of Health (DOH)	World Health Organization (WHO)
Emergency shelters	Department of Social Welfare and Development (DSWD)	International Federation of the Red Cross (IFRC)/UN Habitat
Camp coordination and management	Office of Civil Defense — Provincial Disaster Coordinating Council (OCD-PDCC)	International Organization for Migration (IOM)
Protection	Department of Social Welfare and Development (DSWD)	United Nations Children's Fund (UNICEF)
Early recovery	Office of Civil Defense (OCD)	United Nations Development Programme (UNDP)
Logistics	Office of Civil Defense (OCD)	World Food Programme (WFP)
Food	Department of Social Welfare and Development (DSWD)	World Food Programme (WFP)
Agriculture	Department of Agriculture	Food and Agriculture Organization (FAO)
Livelihoods	Department of Social Welfare and Development (DSWD)	International Labor Organization (ILO)

Note. Adapted from NDCC (2007).

The reforms in 2008 focused on merging and streamlining clusters pursuant to the directive of the President in the wake a disaster leaving many internally displaced persons (IDPs) on the island of Mindanao (NDCC, 2008). These reforms streamlined the number of clusters from the original 11 to just eight clusters (NDCC, 2008). The streamlined clusters and their lead agencies are depicted in Figure 6.
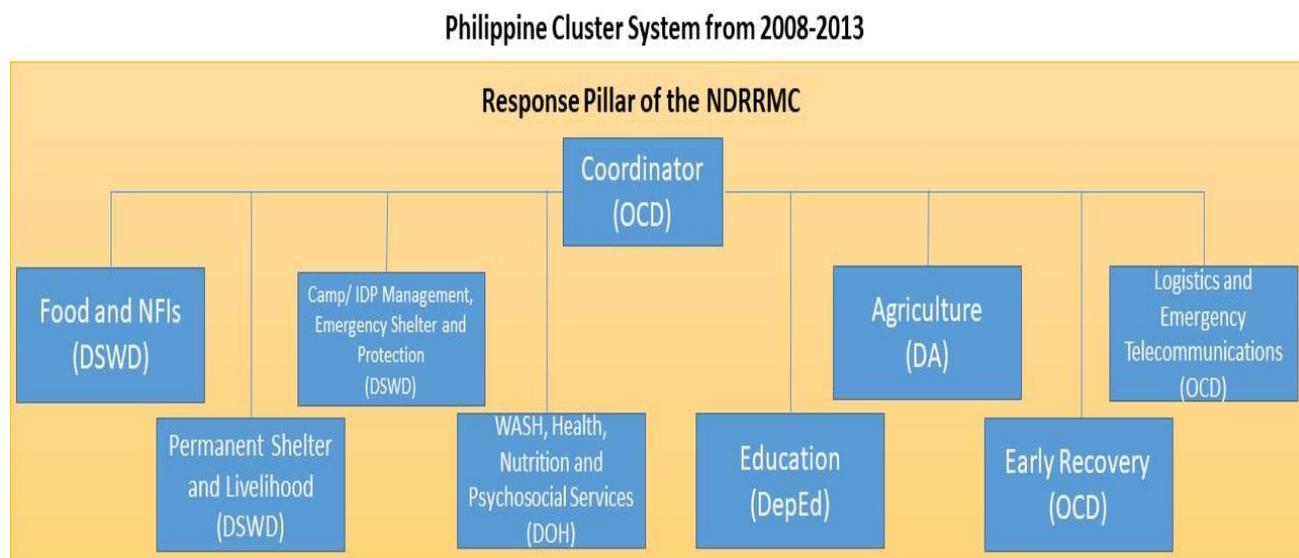
Figure 6. The 2008 reformed Philippine cluster system.

Note. Figure adapted from NDCC (2008), p. 1.

Abbreviations. DA, Department of Agriculture; DepEd, Department of Education; DOH, Department of Health; DSWD, Department of Social Welfare and Development; NFIs, non-food items; IDP, internally displaced person; NDRRMC, National Disaster Risk Reduction and Management Council; OCD, Office of Civil Defense; WASH, water, sanitation and hygiene.

Chapter Summary

Coordination between agencies is important in ensuring effective responses to humanitarian disasters. However, factors such as the diversity of actors involved, funding and a multitude of sectoral issues can affect coordination. To address these issues, the UN has

introduced the cluster approach, which has been adopted by associated global organisations. The cluster approach has been utilised in various forms by many countries, including the Philippines, as a means of improving their own coordination mechanisms. The cluster approach allows its users to improve leadership, accountability and information management to provide effective disaster response operations. However, the literature suggests that the cluster approach marginalises small and local actors. Furthermore, the cluster system may not be as well-accepted and embedded within government functioning as expected; cluster mechanisms may only run parallel to existing coordination mechanisms. Furthermore, disparity between national governments and UN agencies exist.

Chapter 3: Research Methods

Chapter Outline

In Chapter Three, I describe the methods I have used to complete this research. I opted for a qualitative approach and interpretive paradigm, which are proven methods for developing knowledge about actors' interactions in a political arena such as the cluster system. This chapter is divided into nine sections. The first section is about the research paradigm. In the next section, research design is discussed. Subsequently, I describe the location of this study. Next, I discuss data collection methods. I then explain data analysis methods, followed by ethics considerations and study limitations, respectively. Finally, a chapter summary is provided in the final section.

Research Paradigm

Selection of a paradigm provides a researcher with a framework, which functions as a guide in a field of study (Grant & Giddings, 2002). A paradigm is also a view that researchers use to see certain aspects of the world (Crotty, 1998). I use a qualitative methodology because it allows for deeper analysis of data via interpretation of context and study participants (Tracy, 2013). Furthermore, using qualitative methods allows for a degree of flexibility in terms of the methods used and provides rich, rather than superficial, data (Ritchie, Lewis, Nichols, & Ormston, 2014).

I used the interpretive paradigm to provide knowledge through understanding and interpreting the actions of actors and their institutions (Bryman, 2012; Tracy, 2013). Using this paradigm allowed me to interact and relate with study participants to understand their experiences and to derive greater meaning from data (Grant & Giddings, 2002). By working to this paradigm, I was able to use existing theory and literature to design my research approach

(Ritchie et al., 2014). Design was supported by data gathered on participants' views, which yielded detailed information supporting existing theory and literature (Ritchie et al., 2014).

However, one flaw in using the interpretive paradigm for qualitative research is that assimilated viewpoints may only reflect a partial dataset, which may affect accuracy and reliability of conclusions (Bryman, 2012; Phothongsunan, 2015). Indeed, my potential interpretive bias may have affected data gathered, because I did not just observe, but also interpreted data (Grant & Giddings, 2002; Bryman, 2012).

Research Design

Research design followed general qualitative descriptive research. This stepwise method is founded on existing knowledge and linkages to the work of others in the field, thus providing a rich description of an experience or an event (Neergaard, Olesen, Andersen & Sondergaard, 2009). It is best used when a description of a phenomenon is desired, as in the case of this study (Neergaard et al., 2009).

The advantage of using a qualitative descriptive approach is that it allows analysis to remain close to the data and the views of the persons interviewed (Neergaard et al., 2009). Although less interpretive than other qualitative designs, a qualitative descriptive approach reduces potential researcher bias, a potential issue in my research (Sandelowski, 2009). Any reduction in bias partially addresses the interpretive paradigm's inherent weakness. However, some interpretation must be allowed, as the interpretation of data by the researcher is an important positive aspect of qualitative research (Sandelowski, 2009). Overall, I chose this research design because my research is an initial exploratory study that can be used to illuminate findings from other explorations of the topic (Magilvy & Thomas, 2009).

I also utilised case study design as part of my project. Berg (2009) has defined case study as a method involving systematically gathering information about a subject to permit the researcher to effectively understand how the subject operates or functions. As such, case

studies allow the researcher to understand different perspectives about a complex topic (Ritchie et al., 2014). Using the Philippines as a case study, I searched for ideas and concepts that formed identified opportunities to improve the PCS based on data gathered from government documents and interviews. I also examined the case of typhoon Haiyan/Yolanda and how the cluster approach worked to affect quality of response coordination.

Location of Study

My study was conducted in the Philippines. The nation has experienced pivotal events such as the Bohol earthquake, the Zamboanga siege crisis and super typhoon Haiyan (aka typhoon Yolanda). These disasters resulted in major changes to response management systems (NDRRMC, 2014).

I selected the Philippines for study because of its suitability as a research subject: 1) an active cluster system has been institutionalised; 2) the country has a relatively long history of using the cluster approach; 3) the government has enacted reforms to the cluster system; 4) frequent natural and manmade disasters require regular implementation of the cluster system; 5) the cluster approach is used independently by the national government, separate from the UN HCT; and 6) information such as policy documents and reports are readily available. The long history the cluster approach has in the Philippines allows for a detailed analysis of the challenges and best practices that its practitioners have experienced.

Data Collection

The choice of data collection methodology is important in ensuring that study objectives are fully realised. I modelled this research on qualitative, descriptive concepts and the interpretive paradigm to ensure that data and experiences of selected key officials in the Philippine Government provided a rich and detailed dataset. I combined document and policy research with semi-structured interviews to make data robust. The complementary use of these

methods ensured a richer understanding of perspectives and contexts, and I used the combination as a means of validating findings (Ritchie et al., 2014). By combining methods, I was able to triangulate data to identify opportunities, challenges and recurring gaps that the Philippine Government has experienced, thus fulfilling the objectives of this study. A summary of data requirements, data sources and the methods used to answer research questions appears in Table 4.

Table 4

Summary of Data Collection Requirements and Methods

Research objective	Data requirements	Data sources	Methods
To investigate the role of the UN cluster approach in improving the effectiveness of agency coordination during humanitarian responses in the Philippines	• Policies	• Government policy and related documents	• Document review and analysis
To explore the difficulties, barriers and gaps encountered in the implementation of the cluster approach in the Philippines	• Experiences, perspectives, viewpoints of involved actors	• Senior government officials • NGOs • LGUs	• Semi-structured interviews
To identify opportunities that have been used improve the use of the cluster approach in the Philippines	• Policies • Experiences, perspectives, viewpoints	• Senior government officials • NGOs • LGUs • Policy documents	• Semi-structured interviews • Document review and analysis

Semi-structured interviews. I conducted semi-structured interviews to gather qualitative data about the experiences and perspectives of officials and key stakeholders. Because the study's primary focus was on national government, senior officials and relevant stakeholders were selected as participants. I also invited some participants from NGOs and LGUs to obtain a broader view about the use of the cluster approach in the Philippines.

The flexibility inherent in this methodology allowed me to uncover issues and provided a rich and detailed description of the topic (Bryman, 2014; Ritchie et al., 2014). Furthermore, interview data largely supported document reviews of government policies and plans. By examining verbal and written accounts together, I gained a greater understanding from persons directly involved in running the cluster system (Berg, 2009; Neergaard et al., 2009). The combination of data sources allowed me to clearly define how the government identified opportunities for improvement and how they dealt with challenges to implementing the cluster approach.

Semi-structured interviews were carried out in the Philippines from December 2016 to February 2017. Eight interviews were conducted with former and current public officials and subject matter experts who were experienced practitioners of the PCS. I chose organisations based on the depth of their participation in the cluster approach. I selected the four national government agencies that were the cluster lead agencies. In addition, I invited the local UN office, one NGO and one LGU to share their perspectives on the cluster approach. The majority of the interviews were conducted in the capital of the Philippines, Metro Manila, because most government and UN offices are located there.

Participants were selected based on their positions and length of service within their respective agencies (Table 5). The chosen participants held senior-level positions in their organisations and had served a minimum of 4 years in their roles, which ensured familiarity with the cluster approach during and after Typhoon Haiyan/Yolanda.

Table 5

List of Study Participants (Interviewees)

Participant number (n = 8)	Organisation type	Participant role	Organisation name (agency)
1	National government agency	Senior Military Assistant for Operations	Office of Civil Defense (OCD)
2		Officer-in-Charge-Director	Department of Social Welfare and Development (DSWD)
3		Chief	Department of Interior and Local Government (DILG)
4		Former Assistant Secretary/Ambassador	Philippine Embassy, New Zealand
5	UN agency	*Confidential/ OCHA Participant 1	United Nations Office for the Coordination of Humanitarian Affairs
6		OCHA Participant 2	
7	Non-governmental organisation (NGO)	Senior Programme Associate	Center for Disaster Preparedness
8	Local government unit (LGU)	Officer-in-Charge	Mandaluyong City Disaster Risk Reduction and Management Office

Note. *Job title withheld.

I contacted participants and provided them with an information sheet and consent form, which were approved by the Auckland University of Technology Ethics Committee (AUTEC). The information sheet provided information about methodology, rationale, procedures, benefits and confidentiality. Participants then provided voluntary consent for an interview. I allowed participants 2 weeks to decide whether they would like to participate in the study. Interviews were conducted in English, as this language is recognised as one of the official languages of the Philippines. Interviews were conducted in the respective offices of the participants and averaged 30 minutes per interview. Participants were asked if they would like to have their names and positions included in the study and were given an option to refuse. If name and/or position information was withheld, only the name of their organisation was used in this report.

Document research. I reviewed all documents by using thematic analysis to discover patterns that could be considered best practices, difficulties or gaps in cluster approach systems. Policy documents analysed were collected from official document caches belonging to the selected organisations; no unofficial versions were examined. Document currency spanned from 2007 until the present. The timespan analysed provided a progressive view of cluster approach implementation. Official documents and policies were a significant source of data (Bryman, 2012).

Documents sourced from private organisations, NGOs, mass media and the Internet, such as reports, policy primers and mission statements, provided a different point of view to government or state manuscripts (Bryman, 2014). Secondary data analysis of academic articles, journals and dissertations also proved to be beneficial in complementing primary data sources, because the mixture of sources provided a well-rounded platform of viewpoints from which to answer research questions (Ritchie et al., 2014).

Data Analysis

Because semi-structured interviews were carried out in the English language, no translations were needed prior to analysis. Data analysis was conducted during and after data collection. I used commonly accepted practices of thematic content analysis to categorise data collected from documents and interviews. Using this method, I identified common threads that extended across interviews and documents (DeSantis & Ugarizza, 2000; Vaismoradi, Turunen & Bondas, 2013). Therefore, I was able to make sense of interviewees' collective shared meanings and experiences (Braun & Clarke, 2012). These themes were directly related to the research question and encompassed criteria such as efficiency of coordination, communication, knowledge management and cluster localisation/adaptability.

To ensure that my examination was rigorous, I followed commonly accepted strategies in conducting thematic analysis. Raw data from documents and interviews were examined, and themes were identified and coded using repeated words or phrases found within the data (Neergaard et al., 2009). To code data, I organised repeated words into specific themes that addressed the research question (Ritchie et al., 2014). These themes were then organised into a framework to allow easier identification of themes and subthemes relevant to the research question (Ritche et al., 2014).

When codifying interviews, I indicated where the coded word came from in the transcript for easier reference during analysis (Ritchie et al., 2014). I also retained the language of the participant and used abbreviations to ensure easier referencing of themes analysed (Ritche et al., 2014). After codifying data and organising themes, I proceeded to analyse and correlate the coded data with themes gleaned from my literature review. These themes related to the cluster approach framework and how it performed in improving coordination in key areas such as leadership, information and knowledge management.

Reflexivity

Because my research was interpretivist and utilised a qualitative approach, this meant that close interactions between me and the participants played a role in influencing the process and results of the study. Thus, it was important for me to exercise the discipline of reflexivity, especially during the process of analysing data. Reflexivity is described as awareness by the researcher of his or her influence on the persons or the topic and how the research itself affects the researcher (Probst, 2015). By exercising reflexivity, the researcher can better identify their subjective viewpoints about the study topic, and can thus reduce potential bias (Probst, 2015).

By practicing reflexivity, I was able to better approach the study by taking advantage of my experience in the field. I am a Filipino, and I was a former Civil Defense Officer in the central office of the OCD. I was a part of the Philippine National Response Cluster and have had had experience in its operations during disasters and major national events, such as the Asia-Pacific Economic Cooperation (APEC) meetings held in the Philippines in 2015. I was therefore aware that potential biases may arise due to my prior involvement. To minimise bias, I included perspectives from agencies other than the national government, such as NGOs and LGUs.

Ethics Considerations

In addition to reflexivity, research ethics guided my development of a credible study that can contribute to the body of academic knowledge in a way that respects and does no harm to participants (Orb, Eisenhauer, & Wynaden, 2000; Alexander, 2014). By following proper ethics procedures, the safety of both participants and the researcher was ensured (Orb et al., 2000). I followed the guidelines and procedures outlined by AUTEC (2015) strictly. I sought

ethics approval from AUT via submission of an application to AUTEC, which was granted[5].

Ethics approval was not required by the Philippine Government.

As mentioned in the "Semi-structured interview" section, informed consent forms were presented to the participants prior to interview. Participants were given a choice to provide or withhold their names and positions to retain confidentiality. Only I and my supervisor have access to data. Recorded data will be kept for 6 years after the study is published to allow for further examination in accordance with AUTEC (2015) procedures. Handwritten notes are kept in a secure, locked filling cabinet. Digital files were transferred to a data stick and were protected with a password. All information about these procedures was relayed to the participants in writing prior to the interview.

Limitations of the Study

Some general limitations apply to this study. First, the small number of participants may have an impact on generalisations or conclusions garnered from the study. Due to time limitations, not all cluster lead agencies involved in the PCS could be interviewed. Moreover, as the study was focused on the national government, limited insights into how local NGOs and LGUs have experienced implementation of the cluster approach could be gathered in the time available.

Second, the short timeframe itself functioned as another limitation. The lack of adequate time to complete the study meant that not all cluster leads could be interviewed during the offshore data gathering process. Furthermore, interviews with local NGOs and LGUs were constrained due to difficulties in scheduling interviews within narrow timeframes. I attempted to address this issue by selecting agencies that had the largest roles in the PCS, such as the Department of Social Welfare and Development (DSWD), the Department of the Interior

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[5] AUTEC Reference Number 16/393

(DOI), local government and the OCD. Finally, the limited time available constrained data analysis, because thorough thematic content analysis is a time-consuming process.

Third, due to its recent implementation in 2005, academic papers about the use of the UN cluster approach are limited. I relied on a narrow range of documents, policy papers and reports from organisation such as INGOS and UN agencies to provide data. The small number of written records available added to the difficulty in locating appropriate sources. Furthermore, the latest iteration of the PCS was only recently implemented in 2014. Documents about the PCS were all drawn from a pool of memorandums, reports and plans available in the public domain, with no access to classified material.

Chapter Summary

In determining if the UN cluster approach has provided a means of improving interagency coordination in the Philippines, I employed a qualitative approach and an interpretive paradigm as a research framework. This approach allowed me to interpret and understand the actions and experiences of participants and institutions, which provided valuable context and data on the use of the cluster approach in the Philippine system. Furthermore, the qualitative descriptive research design I chose allowed me to garner a rich and varied description of the PCS, including its implementation, challenges, current gaps and present use. I chose the Philippines as my case country based on its early adoption of the cluster approach system, its frequency of natural disasters and its long history of using the cluster approach.

I selected data collection and data analysis methods to best suit the design and paradigm used. To collect data, I combined two qualitative methods: a case study with semi-structured interviews, focused on the PCS post typhoon Haiyan/Yolanda; and semi-structured interviews with key stakeholders and officials, which provided a rich perspective on the Philippine cluster and how it relates to its UN HCT counterpart. To enrich data, I performed policy document

research on official documents, reports and policy papers from the national government, INGOs and UN agencies. I included academic papers as secondary data sources to provide critical perspectives on the cluster approach. I subsequently performed thematic content analysis as a means of determining themes linked to interagency coordination. These themes were directly related to the research question and objectives. Finally, I actively practiced reflexivity to improve study credibility and to reduce potential bias.

Chapter 4: Findings

Chapter Outline

Chapter Four presents the findings from this research, which will answer the question of whether using the cluster approach can improve interagency coordination during disasters. This chapter is divided into three main sections. First, the response to typhoon Haiyan/Yolanda and the results of using the cluster approach by both the Philippine Government and UN agencies are analysed. Next, I analyse the post typhoon reforms carried out by the Philippine Government in improving the cluster approach. I also explore new mechanisms established through the NDRP and how these improved the PCS. Finally, I summarise main points.

Using the Cluster Approach in Haiyan

Preparedness and initial challenges experienced. Prior to the landfall of super typhoon Haiyan/Yolanda, Philippine Government agencies had begun preparations in areas where the typhoon was predicted to make landfall; the government activated its response system, pre-deployed advance teams in Tacloban City and initiated major relief efforts (Hanley, Binas, Murray, & Tribunalo, 2014; NDRRMC, 2014). Pre-emptive evacuations were conducted on the highest risk coastal areas where landfall was expected (NDRRMC, 2014). The cluster approach was activated by the government and was utilised as the main mechanism for coordination (Hanley et al., 2014).

Coordination challenges between international and national systems. Strained systems affected the performance of Philippine Government department cluster leads early in the response; UN co-leads began assuming leadership roles in several clusters to improve response to communities affected by the typhoon (Hanley et al., 2014). This assumption of leadership by the UN co-leads caused tensions in government agencies and local NGOs,

because local officials felt overwhelmed by international staff, who were new to the country and who lacked established relationships with their local counterparts (Hanley et al., 2014). Indeed, the large influx of foreign staff started to threaten national agency ownership of operations. A comparison between the number of international and national staff active during the Haiyan/Yolanda response can be seen in Figure 7. Figure 7 highlights the initial surge of international staff, which outweighed national staff by as much as 207% at the outset, but slowly tapered off as more manpower was deployed by national actors.

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Figure 7. Number of international and national staff deployed to Yolanda over time.

Note. Figure reproduced from Hanley et al. (2014), p. 47.

The HCT and members of the international community engaged with national CSOs during Haiyan/Yolanda; however, data gathered from one interviewee shows that tensions between INGOs and local NGOs affected the response.

> I also think that this is a great problem because the response phase also creates
> a divide between INGOs and national NGOs. Because once the INGOs are in
> the picture, the (national) NGOs are relocated … Because during Haiyan, it
> was actually disappointing how the INGOs employed a lot of expats, a lot
> international practitioners when we have a lot of national disaster practitioners
> who are more capable and more familiar with the Philippine context. (NGO
> Senior Programme Associate, personal communication, March 1st, 2017)

The lack of trust from local NGOs towards INGOs further exacerbated the tension that was generated by the large influx of foreign workers, who had little to no understanding of local contexts. One interviewee mentioned that international NGOs were more favoured, were often deployed or even replaced local NGOs. This "favouritism" was practiced by the Philippine Government, as it felt that INGOs had better funding and capacity to carry out

operations (NGO Senior Programme Associate, personal communication, March 1st, 2017). This choice presented a problem of accountability, as the there was no means to ensuring that INGOs remained accountable for their actions in the field, as compared to local actors such as NGOs, who were constrained in their actions by long-standing local relationships (NGO Senior Programme Associate, personal communication, March 1st, 2017).

In addition to the tension between national and international staff, a divergence in strategy and goals of the international community under the UN cluster and the national agencies under the PCS was noted in the IASC post-event evaluation (Hanley et al., 2014) (Figure 8). The misunderstanding stemmed from the UN's lack of clarity about the functions of national mechanisms, such as response triggers, which accounted for a large divergence between the government and UN operations (Dpartment of Foreign Affairs [DFA] former Assistant Secretary, personal communication, April 1st, 2017).

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Figure 8. Philippine Government and interagency assessment and planning timeline.

Note. Figure reproduced from Hanley et al. (2014), p. 45.

Abbreviations. ARC, ; CRRP, Comprehensive Recovery and Rehabilitation Plan; DSWD, Department of Social Welfare and Development; Govt, government; HAP, Humanitarian Accountability Project; HCT, Humanitarian Country Team; ICC, ; L3, ; LGU, local government unit; MIRA, Multi-cluster/Sector Integrated Rapid Assessment; NDRRMC, National Disaster Risk Reduction and Management Council; OPAR, ; PMR 1/2, ; PDNA, Post-disaster Needs Assessment; PMR, Periodic Monitoring Report; RAY, Reconstruction Assistance for Yolanda; SRP, Strategic Response Plan; UNCT, .

Furthermore, the lack of reference documents added to UN confusion, particularly because roles and responsibilities between clusters and their UN co-leads were not properly defined. As such, coordination between clusters and agencies on the Philippine Government side was relatively disorganised during the initial response phase. This chaos was described by two participants.

> So during the typhoon response during that year, as we did not have a specific document or reference on how we would do our respective jobs and it was a very challenging activity during that time when the three major disasters struck. So it was pretty disorganised and to make the long story short, the results were not that good in terms of disaster management. (OCD Senior Military Assistant, personal communication, December 15th, 2016)

Indeed, national counterparts felt that the lack of understanding of local context and the urgent push for operations manned by international partners was "arrogant and disrespectful" (DFA former Assistant Secretary, personal communication, April 1st, 2017).

This case of "disaster tourists[6]" was also experienced by national government agencies: some international actors used already stretched national government resources to operate, thus adding to negative perceptions of international practitioners (DFA former Assistant Secretary, personal communication, April 1st, 2017). For example, interviewees described international responders arriving and asking the government to deploy them to disaster-stricken towns despite a lack of adequate equipment (DFA former Assistant Secretary, personal communication, April 1st, 2017). Furthermore, there were instances where international agencies set up coordination structures in locations away from government centres of authority to achieve improved operations (Hanley at al., 2014). This geographic

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Disaster tourists are responders or volunteers who travel to a disaster zone with no organised plan or equipment to carry out effective operations, who must therefore rely on the government for their transportation and equipment.

removal posed a problem, because response coordination was split between the government centre of coordination and that of the international agencies, thus affecting the quality of coordination due to parallel mechanisms (Figure 8).

In addition, local complications during the initial Haiyan/Yolanda response, such as a lack of clarity about who made decisions, politicisation and the absence of regional and local contingency plans, led to divergences between the international and government response (DFA former Assistant Secretary, personal communication, April 1st, 2017; Hanley et al., 2014).

Cluster approach performance. Previously published literature has suggested that a well-performing cluster provides predictable leadership, efficient coordination and accountability. Overall, based on these criteria, the cluster approach performed well during the Haiyan/Yolanda response. Despite initial tension, coordination between clusters within the Philippine HCT and with their counterparts in the PCT was adequate. Interviewees noted that the established relationship between national government agencies and the Philippine HCT allowed for decent coordination between the two major actors (OCD Senior Military Assistant, personal communication, December 15th, 2016) . This perspective was validated by news reports and the IASC post-event evaluation (Hanley et al., 2014; Tran, 2014).

Despite the vast scale of the Haiyan/Yolanda response, which encompassed Regions IV-B, VI, VII and VIII (Figure 9) and comprised responders drawn from international, national, CSO and the private sectors, the cluster approach functioned properly as planned (Hanley et al., 2014). Inter-agency coordination was perceived as a vital means of collecting information through reports from LGUs and field offices, and allowed for more effective utilisation of limited resources (NDRRMC, 2014). The positive team environment fostered by the cluster approach was noticeable enough to be reported by media agencies (Tran, 2014).

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Figure 9. Map showing scale of Typhoon Haiyan response.

Note. Figure reproduced from MapAction (2013).

During Typhoon Haiyan/Yolanda, the HCT cluster coordination system also worked well with stakeholders who were not part of the clusters. These stakeholders were the private sector and the military, who both played significant response roles (OCHA Participant 1, personal communication, January 30th, 2017). The military provided airlift capability, ground-based transport, communications equipment and assisted the national police in providing LAO to disaster-stricken areas. Military helicopters of the Philippine Air Force flew relief supplies to far-flung and isolated towns (NDRRMC, 2017b) .

Interviewees also noted that the private sector provided responders, technical assistance and financial donations. In recognition of the private sector, OCHA deployed a private sector advisor, who provided information and guidance to responders (Hanley et al., 2014). The interviewees also noted that civil–military coordination between clusters and the military was effective during the response (OCD Senior Military Assistant, personal communication, December 16th, 2016; DFA former Assistant Secretary, April 1st, 2017). This was in part due to the established relationship fostered by bilateral joint exercises, which allowed the military and members of the cluster to develop a close relationship prior to the disaster. Substantiating this claim, data from one interview (DFA former Assistant Secretary, personal communication, April 1st, 2017) aligned with the positive evaluations of Hanley et al. (2014) and the NDRRMC (2014) report. Moreover, both the Philippine Military and their foreign partners provided access and logistics to remote locations (Hanley et al., 2014; NDRRMC, 2014).

Much like its international counterpart, the PCS was also heavily involved in response operations during the aftermath of typhoon Haiyan/Yolanda. The NDRRMC was responsible

for coordination between national, local and international contemporaries (NDRRMC, 2014).

During its response to Haiyan/Yolanda, the Philippines used the 2008 cluster structure, which

was a different setup compared to their international UN HCT counterparts[7]. According to the

interviewees, while this presented a slight challenge to coordination between national (PCS)

and international clusters (UN HCT), the international clusters had the flexibility to adjust to

PCS norms (OCHA Participant 1 personal communication, January 30th, 2017; OCHA

Participant 2, personal communication, January 30th, 2017). The Philippine add-on PCS

clusters performed differently than PCS clusters that aligned with and had close relationship

with their UN counterparts (Table 6). Data collected from the participants also showed that

individual performance of clusters varied considerably from cluster to cluster due to differences

in their capacities, as well as individual leadership.

> The quality of the clusters was not consistent. Here is the tendency, there were
>
> some clusters that were not convened such as emergency telecommunications
>
> and logistics. So, that caused a lot of challenges but [other clusters] such as
>
> health, WASH, those that were led by other agencies did very well. (DFA
>
> former Assistant Secretary, personal communication, April 1st, 2017)

Notably, the participants described how clusters under the leadership of the DSWD and

DOH performed quite well. This was validated by the IASC post-event evaluation, which

described health, agriculture and education clusters as maintaining their leadership capacity,

while other cluster leads struggled (Hanley et al., 2014).

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[7] The PCS was changed in 2008 to better adapt the cluster approach to the Philippine conditions. These changes affected the number and composition of the clusters. Clusters were reduced to eight from the original eleven. The emergency shelter, protection and camp coordination and management clusters were merged into one cluster. Likewise, the nutrition, WASH and health clusters were merged together.

Table 6

Comparison of UN and Philippine Clusters (2008–2014)

UN HCT clusters (n = 11)	Philippine clusters (n = 8)
Food security	Food and non-food items (FNFI) cluster
Camp coordination and camp management	Camp/IDP management, emergency shelter and protection
Shelter	Permanent shelter and livelihood
Protection	WASH, health, nutrition and psychosocial services
Water sanitation and hygiene (WASH)	Logistics and emergency telecommunications (ETC/ET)
Nutrition	Education
Health	Agriculture
Logistics	Early recovery
Emergency telecommunications (ECT/ET)	-
Education	-
Early recovery	

Abbreviations. HCT, Humanitarian Country Team; IDP, internally displaced person; UN, United Nations.

It was clear from typhoon events that a Philippine Government cluster was needed to coordinate all international responders to gain some control. This need was the basis for forming a specialised cluster focused on coordination of international actors (Domingo, personal communication, April 1st, 2017). Philippine clusters also struggled with issues that emerged due to the large scale of destruction left by typhoon Haiyan/Yolanda. One issue that emerged from the response and that influenced future changes to the PCS was the need for more specialised clusters to tackle sectors of response that were not present in the 2008 PCS, such as management of the dead, LAO and SRR (NDRRMC, 2017a). The large death toll and the need to identify thousands of bodies spread across multiple locations strained government resources, because there was no specific cluster assigned to the task of victim identification (DILG Director, personal communication, February 13th, 2017). Private and CSOs with technical specialists trained in victim identification were turned away by the military, further highlighting a lack of coordination between government agencies and non-government groups.

> The Philippine Mortuary Association and Philippine Mortician's Association
>
> … were two major groups that during part of typhoon Haiyan wanted to
>
> become part of the response system but were not allowed to perform where
>
> they could have been useful, because during the response operations in Haiyan,
>
> there was no management of the dead and missing cluster, there were no
>
> coordination mechanisms in place. The military and police who were tasked
>
> to make sure that the dead bodies were not stolen did their job, which is why
>
> the volunteers from the Philippine Mortuary Association were not able to help,
>
> because they were not allowed to take those bodies for proper disposition.
>
> (DILG Director, personal communication, February 13th, 2017)

The typhoon situation deteriorated rapidly with no cluster dedicated to LAO, resulting in looting and unlawful behaviour that was subsequently reported by the media (Yap, 2013).

This prompted the NDRRMC to deploy police and military units to prevent looting of buildings and bodies. With no clear direction, the need to enforce order clashed disaster victim identification, and experts could not perform their jobs. Furthermore, the SRR effort carried out by multiple local, national and international agencies required an agency to be in charge of these activities. In the aftermath, the Armed Forces of the Philippines (AFP) was chosen to lead SRR (NDRRMC, 2014; NDRRMC, 2017a). These imbroglios were described by two interviewees.

> So after Yolanda [Haiyan], here is the big thing as we assessed. Clearly, the Department of Social Welfare and Development could not cope with everything, so you had to have sub-clusters, so Department of Foreign Affairs clearly would handle what would be the international humanitarian assistance cluster, the search, rescue, and retrieval would be handled by the Armed Forces of the Philippines, management of the dead and missing would be handled by the Department of Interior and local government. (DFA former Assistant Secretary, personal communication, April 1st, 2017)

> After Typhoon Haiyan, we learned thousands of lessons and among the lessons that we learned, there were not enough response clusters in the UN system that would help us in situations like Haiyan. (DILG Director, personal communication, February 13th, 2017)

After Haiyan/Yolanda, the UN (through OCHA) and the Philippine Government started to incorporate lessons learned during the response. Improvements to the PCS, such as the inclusion of new clusters and the drafting of operations protocols, were incorporated into the first NDRP. This improvement process was validated by the interviewees; they described how UN co-leads assisted national government in developing guidelines and protocols(DILG Director, February 13th, 2017; OCHA Participant 1, personal communication, January 30th,

2017; OCHA Participant 2, personal communication, January 30th, 2017). Furthermore, an OCHA interviewee noted that UN bilaterally engaged with LGUs when requested, to improve local preparedness and response capacities (OCHA Participant 1, personal communication, January 30th, 2017).

Interagency Coordination and the NDRP

   Addressing national coordination mechanisms. To further improve the quality of responses to disasters in the Philippines, the 2014 NDRP was created to demarcate roles and responsibilities of agencies, and to improve inter-cluster and intra-cluster coordination (NDRRMC, 2014). The NDRP was created as a "living document", a strategic "multi-hazard" response plan amalgamated from disparate plans regulating hydrometeorological, earthquake and tsunami and terrorism-related incidents (NDRRMC, 2014; NDRRMC, 2017a). The first version of the NDRP, released in June 2014, took into consideration initial lessons learned from Haiyan/Yolanda; four new clusters, namely LAO, SRR, Philippine international humanitarian assistance (PIHA), and management of the dead and missing were added to the PCS. This initiative addressed needs noted in the "Cluster approach performance" section. The modified structure is illustrated in Table 7.

Table 7

Philippine Cluster System (PCS), 2014–Present

Cluster	Government cluster lead
Food and non-food items (FNFI) cluster	Department of Social Welfare and Development (DSWD)
Camp coordination and camp management (CCCM) cluster	
Internally displaced population (IDP) cluster	
Health cluster with WASH, nutrition and mental health and psychosocial services (MHPSS) sub-clusters	Department of Health (DOH)
Emergency telecommunications cluster	Office of Civil Defense (OCD)
Logistics with warehousing, transportation and services sub-clusters	
Education cluster	Department of Education (DepEd)
Law and order (LAO) cluster	Philippine National Police (PNP)
Search, rescue and retrieval (SRR) cluster	Armed Forces of the Philippines (AFP)
Management of the dead and missing (MDM) cluster	Department of Interior and Local Government (DILG)
Philippine international humanitarian assistance (PIHA) cluster	Department of Foreign Affairs (DFA)

As can be seen in Table 7, the PCS was adapted (based on lessons learned) to fit previously unfulfilled needs, which were mooted at post-typhoon workshops and in post-action reports. Most notably, clusters were combined to form two big groups in charge of food and non-food items, camp management/coordination and IDPs; and health, including WASH, nutrition, mental health and psychosocial services (MHPSS), under the leadership of the DSWD and DOH, respectively (NDRRMC, 2017; OCHA Participants 1 & 2, personal communication, January 30th, 2017). Furthermore, agriculture, livelihood and early recovery clusters were moved to the recovery cluster, which is now headed by the National Economic and Development Authority (NEDA) (NDRRMC, 2017b) (Table 8). The NDRP supports these changes, because it aims to ensure the "timely, effective, and coordinated response by the National Government including its instrumentalities by providing support assistance to the areas that will be affected by the disaster" (NDRRMC, 2017a, p. 3).

Table 8

Changes to the Philippine Cluster System (PCS), 2007–Present

2008–2014	2014–present
Food and non-food items (FNFIs)	Food and non-food items (FNFIs)
Camp/IDP management, emergency shelter and protection	Camp coordination/camp management
Permanent shelter and livelihood	Renamed as Internally displaced population (IDP); livelihood moved to recovery phase
WASH, health, nutrition and psychosocial services	Changed to health cluster with WASH, nutrition, and mental health and psychosocial services (MHPSS) sub-clusters
Logistics and emergency telecommunications (ETC/ET)	Logistics and emergency telecommunications (ETC/ET)
Education	Education
Agriculture	Agriculture moved to recovery
Early recovery	Early recovery changed to recovery, including agriculture/livelihood
-	Search, rescue, and retrieval (SRR) — added cluster
-	Law and order (LAO) — added cluster
-	Management of the dead and missing — added cluster
-	Philippine international humanitarian assistance (PIHA) — added cluster

Note. -, no cluster.

Abbreviation. WASH, water, sanitation and hygiene.

The NDRP is based on the following assumptions. First, it addresses a "worst-case scenario" for each type of disaster (NDRRMC, 2014). Second, through the NDRP, the national government provides a tiered response with LGUs via the augmentation of operations, or assumes response functions of LGUs in disaster-affected areas (NDRRMC, 2014). Thus, the NDRP fills gaps that were witnessed at Haiyan/Yolanda by working to strengthen leadership capacities at all levels. The plan also works to improve communication, information and knowledge management and stakeholder partnerships.

Analysing coordination leadership and accountability. Experiences/lessons learned from Haiyan/Yolanda emphasised a renewed need for improving response capacities at all levels (NDRRMC, 2014), which was echoed by interviewees who participated in this research. During Haiyan, some agencies and LGUs lacked sufficient capacity to carry out and coordinate effective response measures (Hanley et al., 2014; NDRRMC, 2014). One participant remarked that "some agencies that are not part of the cluster had not been capacitated to perform exactly what is expected of them as agencies/members of the cluster" (DILG Director, personal communication, February 13th, 2017).

The post-typhoon NDRP sought to improve on predictable leadership capacities of both national agencies and LGUs (NDRRMC, 2017a). The 2014 plan was based on a "whole of nation"[8] approach that the Philippine Government had been advocating since its ratification of the DRRM Law of 2010 (Congress of the Philippines, 2010; DSWD Director, personal communication, February 9th, 2017; OCD Senior Military Assistant, personal communication, December 15th, 2016). Now, the NDRP provides agencies a frame of reference to define their roles (OCD Senior Military Assistant, personal communication, December 15th, 2016).

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[8] The "whole of nation" approach involves cooperation and participation between all actors involved in disaster risk reduction and management. Vertical cooperation and participation involves the national down to the community level. Horizontal cooperation and participation involves all actors from government, CSOs and the private sector.

Core to the NDRP is the use of two bridging mechanisms, the PCS response clusters and the incident command system (ICS), which act as the "force provider"[9] and "force employer"[10], respectively (NDRRMC, 2017a). Resources are now pre-positioned ahead of hydrometeorological disasters in forward staging areas to ensure that responses are coordinated and rapid. This setup is now expected at local levels of government and should be integrated with the NDRP via local contingency plans (NDRRMC, 2017a). "But through the establishment of the regional, provincial, and municipal response plans wherein you're highlighting the cluster approach as a strategy, that is our way of ensuring that response is prompt, there are adequate preparedness by all responders" (DSWD Director, personal communication, February 9th, 2017).

One interview participant acknowledged that with the NDRP, cluster leads are better able to enforce mandates and operational concepts with member agencies inside the cluster (OCD Senior Military Assistant, personal communication, December 15th, 2016). Accountability has also been improved through the implementation of report and feedback mechanisms, under clear direction of the NDRRMC Vice-Chairperson of Response (NDRRMC, 2017a). Improved leadership has allowed better performance of agencies during response, a point made by the same interviewee: "In the Philippine cluster system, when the DSWD [Vice-chairperson for Response] sits in the cluster meeting, the guidance, the guidelines, when they distribute it, everybody will follow" (OCD Senior Military Assistant, personal communication, December 15th, 2016).

Furthermore, the PCS now operates through defined levels of response, which determines the use of manpower and resources per agency (NDRRMC, 2017a; OCD Senior Military Assistant, personal communication, December 15th, 2016). There are three levels of

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[9] The "force provider" is the response cluster. It provides strategic allocation of manpower and equipment for support of operations or inception of operations and supports LGUs.

[10] The "force employer" is the incident management team (IMT). The IMT provides control of resources/forces provided by the response cluster when deployed at the operations level.

response indicated in the NDRP, which are classified as "agency", "cluster" and "inter-cluster" (Figure 10). Each level defines leadership roles. The first level focuses on the individual agency and the plans and arrangements within that specific agency (NDRRMC, 2017a). The second level is cluster-specific, and focuses on cluster lead coordination of its member agencies (NDRRMC, 2017a). The third level focuses on inter-cluster coordination between all 11 clusters (NDRRMC, 2017a).

> So the benefit of having the response clusters is that we are resolving a disaster event with all the resources coming from the government. It basically practices the "all agencies approach". So there was response leadership and governance for our needs. (DSWD Director, personal communication, February 9th, 2017)
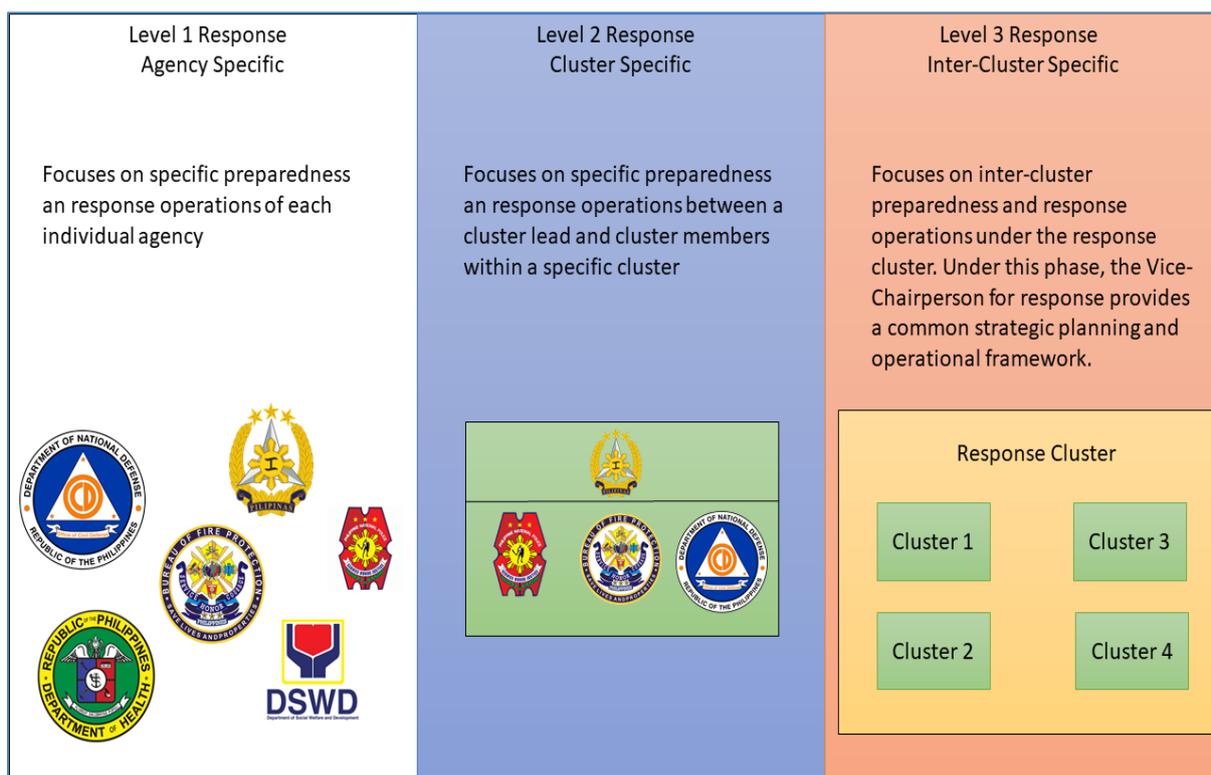
Figure 10. National Disaster Response Plan (NDRP) levels of response.

Note. Figure adapted from NDRRMC (2017), p. 22.

The new NDRP processes were put to test during the response operation for super typhoon Haima, locally known as "Lawin", which made landfall in the northern Philippines in 2016. The NDRP was put into effect, and clusters were activated (NDRRMC, 2017a). With NDRP improvements in place, the national response was successful, with no requests for international assistance declared by the Philippines (NDRRMC, 2017a; DSWD Director, personal communication, February, 9th, 2017). Interviewees stressed that the lessons learned from Haiyan/Yolanda had a big impact on Haima/Lawin operations.

> It [Haima/Lawin] established a sense of sufficiency of resources, thus not forcing issues of international call for assistance because we can muster all resources in the government. This unlike before, if there is a single agency only handling that, the tendency/knee-jerk reaction was if you don't have enough resources, you call for international aid. This time, we made sure that everything is available if there are limitations, that is the time that we, as a country, call for international aid. So, I think that was one of the major breakthroughs in the application of the Philippine Cluster System. (DSWD Director, personal communication, February 9th, 2017)

This sentiment was supported by the Senior Military Assistant of the OCD:

> If you remember during Typhoon Ruby [Typhoon Hagupit in 2014], the Philippines did not request for international humanitarian assistance. We stood on our own two feet, and it was a success when comparing the characteristics to the statistics of the casualties and injuries, [which] were minimal since [we] used the NDRP and the clusters. (OCD Senior Military Assistant, personal communication, December 15th, 2016)

The PCS has been cascaded down to local levels of government successfully. Through their respective contingency plans, LGUs at the provincial, city/municipal and barangay

(community) levels have now implemented both the cluster approach and the ICS (NDRRMC, 2017a). Data gathered from LGU participants shows that the cluster approach has improved predictable leadership because local agencies have a clearer mandate to act, supported a more organised and systemic response:

> The system [cluster] is now fully implemented. It is being practiced for two
> years. Additionally, each member of the [city] council can fully cooperate and
> with the system established and implemented, so regardless of the scenario, the
> city can easily provide needs and services. (Mandaluyong City DRRMO
> Research and Planning Division Officer-in-Charge, personal communication,
> February 15th, 2017)

However, leadership challenges persist in the implementation of the improved PCS. At the national level, the challenge of capacitating agencies and gaining acceptance from agency executives has not yet been overcome (DILG Director, personal communication, February 13th, 2017). As noted by four interview participants, a recurring issue is the matter of individual leadership and agency culture, which hampers or negatively affects leadership and coordination efforts in certain clusters (OCD Senior Military Assistant, personal communication, December 15th, 2016; DILG Director, personal communication, February, 13th, 2017; DSWD Director, personal communication, February 9th, 2017; DFA former Assistant Secretary, April 1st, 2017). Introducing the new-look NDRP and PCS to LGUs is still a concern for the national government (DSWD Director, personal communication, February 9th, 2017). Most interviewees agreed that some LGUs remain limited in their understanding of the NDRP, particularly in how the PCS and ICS interact (DILG Director, personal communication, February, 13th, 2017; DSWD Director, personal communication, February 9th, 2017; DFA former Assistant Secretary, April 1st, 2017; OCHA Participant 1,

January 30th, 2017). In addition, it appears that individual leadership of LGU chief executives
still determines the pace of implementation for local contingency plans.

Enhancing communication, information and knowledge management. To improve
interagency coordination, the NDRP introduces mechanisms that allow the clusters and IMTs
access to better communication, information and knowledge management systems (NDRRMC,
2017a). These mechanisms were established to improve the flow of information, especially
important in emergencies. The first mechanism established by the NDRP is the Pre-Disaster
Risk Assessment (PDRA), which is conducted by members of the NDRRMC and cluster leads
involved in the response cluster (NDRRMC, 2017a). The aim of any PDRA is to optimise
preparedness measures and to improve response times to disaster-affected areas (NDRRMC,
2017a). The PDRA task ensures that information from science agencies is communicated to
response cluster members by formalising the knowledge transfer. This constitutes best practice
because the PDRA improves interagency coordination.

> Just to put on record, one of the best practice during that time [Typhoon
> Hagupit] was using the emergency response preparedness. In fact, 5–7 days
> prior to landfall, there were a series of meetings conducted, one of which is the
> civilian equivalent of "mission analysis", which we use in the military, which
> is the Pre-Disaster Risk Assessment [PDRA], and of course the continuation
> of the PDRA, which is emergency response preparedness. (OCD Senior
> Military Assistant, personal communication, December 15th, 2016)

This sentiment was also shared by the Director from the Disaster Response and Emergency
Management Bureau of the DSWD.

> This is happening in the response clusters. For early warning, we do predictive
> analytics for disaster response. So, what is that? It is imagining what will
> happen if this typhoon hits, and given your resources, what will be your

requirements. So we have that capability and we are applying that during

disasters. We coordinate with our science agencies and member clusters, and

we come up with a risk map. So, given Lawin [Haima], and given the risk of

flooding, landslides and damaged households, we were able to ramp up figures.

(DSWD Director, personal communication, February 9th, 2017)

In addition to the PDRA, co-location was another best practice adopted by the

government following Haiyan/Yolanda, and the concept was incorporated into the NDRP. Co-

location is the juxtaposition of local, national and international agencies, as well as the military,

CSOs and the private sector, which is effected by the NDRRMC; "headquarters" are located at

the NDRRMC Operations Centre to ensure the most efficient flow of information for the

response cluster and IMTs (DSWD Director, personal communication, February 9th,2017;

NDRRMC, 2017a). Co-location ensures that effective operational planning, efficient task

division and comprehensive information sharing among agencies are attained (NDRRMC,

2017a). Effective coordination between actors involved allows for development of common

understanding and efficient pooling of resources (NDRRMC, 2017a).

The effectiveness of the co-location strategy was proven during the response to

Haima/Lawin in 2016, when the activation of the response cluster, and the subsequent

contingency planning and pooling of resources prior to landfall, was conducted in a cooperative

atmosphere by members of the military, CSOs and the private sector (NDRRMC, 2017a).

Positive feedback about co-location was provided by one interviewee.

Once we have activated the response clusters, we have a co-location strategy

in Camp Aguinaldo. That is where the eleven clusters converge. We also

invite UN HCT there because [we] believe that is the best point of coordination

with any interface with other international organisations. (DSWD Director,

personal communication, February 9th, 2017)

To improve information and knowledge management, the NDRP introduced the Response Cluster Information Management System (RCIMS) that aggregates information from all available sources during response operations and converts it into action points, such as bulletins and reports, which aid decision making by emergency managers and provide verifiable information to responders, volunteers and the affected population (NDRRMC, 2017a). Three components comprise the RCIMS. The first is the incident monitoring system, which is used to collect, document and route requests for aid, complaints or inquiries to the response cluster sector concerned (NDRRMC, 2017a). The second component is the situation report system, which is used at incidents to make needs assessments, to record actions taken and to analyse gaps in resourcing (NDRRMC, 2017a). The third component is data upload of situation reports and related information to a standardised system, responseOps.ph, which is managed by the PIHA cluster and serves as a bulletin for informing foreign governments and the international community (NDRRMC, 2017a).

Encouraging stakeholder participation. The Philippine Government recognises the need to engage stakeholders to participate during humanitarian responses. The concept of stakeholder solidarity has been acknowledged in the NDRP because it formally allows for the participation of CSO and private sector actors in the cluster mechanism (NDRRMC, 2017a). This has allowed for closer coordination between private sector actors and government agencies, fostering closer partnerships and knowledge sharing (DILG Director, personal communication, February 13th, 2017; NGO Senior Program Associate, personal communication, March 1st,2017). Response cluster leads and IMTs are recognised as leaders who focus on engaging and retaining stakeholders. "Apart from the UN, we also welcome, so long as they check-in at the coordination center, CSOs and even private sector organisations are also welcome to be part of the response clusters" (DSWD Director, personal communication, February 9th, 2017). An NGO sector interviewee welcomed the inclusion.

I think the best practice is actually having the network itself. Having a wide

network through the cluster approach, you get to know a lot of donors, a lot of

local actors, you get to engage more people in the process and this is a really

good practice because it enables us to have force multipliers in the labour force

and manpower. (NGO Senior Programme Associate, personal communication,

March 1st, 2017)

This viewpoint was supported by a national government interviewee.

Now I can report to you that among many things … we were able to now

organise support from the private sector. We are now partners with the

Philippine Mortuary Association and Philippine Mortician's Association.

Today we have them as partners and we have conducted several meetings and

workshops to develop our protocols. (DILG Director, personal

communication, February 13th, 2017)

The statement by the DILG Director highlights the need to strengthen partnerships with

actors outside the cluster structure. Interviewees' comments validate the importance of

maintaining relationships and engaging new partners, who can provide technical expertise and

improve the capacity of the cluster to accomplish its mandate. Moreover, the NDRP also

includes other important stakeholders identified by post-Haiyan/Yolanda evaluations, which

are the military (AFP) and international community (NDRRMC, 2017a). The AFP plays a key

role as the cluster lead for SRR and is a significant contributing member to the logistics, LAO,

ETC/ET and PIHA clusters (NDRRMC, 2017a). The AFP uses the co-located Multi-National

Coordination Center to coordinate multilateral efforts of military units and the Civilian–

Military Coordination Center to facilitate cooperation between foreign and local military and

civilian agencies. Figure 11 illustrates the extent of the AFP's integration into the PCS.

Involvement and Integration of the Armed Forces of the Philippines in the Philippine Cluster System
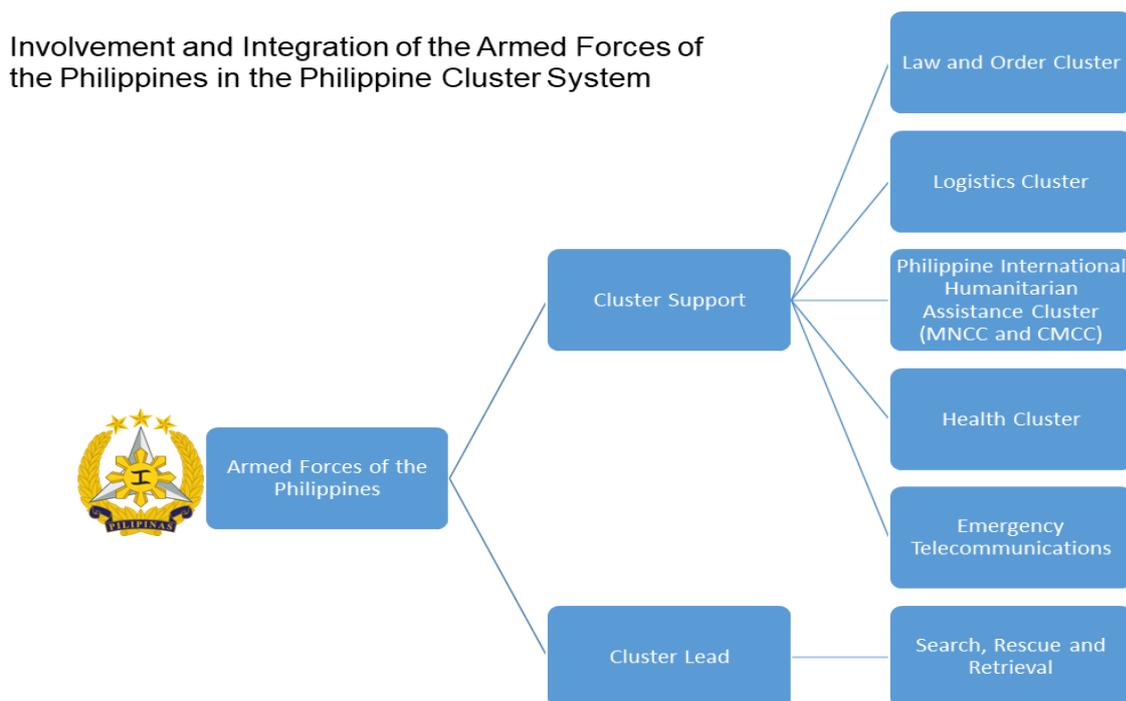
Figure 11. Integration of the AFP into the PCS.

Note. Figure adapted from NDRRMC (2017a), p. 34.

Abbreviations. AFP, Armed Forces of the Philippines; PCS, Philippine cluster system.

The NDRRMC (through PIHA) also coordinates with ASEAN member states (NDRRMC, 2017a). To further enhance cooperation, stakeholder engagement occurs between clusters, as each government cluster lead engages with their UN cluster co-lead (Figure 12). Close coordination during a disaster is also carried out between the response cluster and OCHA, using co-location to ensure synchronicity of effort.

> That is very specific to a disaster event ... So, it is through that facility that we
>
> hold our coordination meetings … in fact, the OCHA has been coordinating
>
> with us every time there is a disaster event, through that response cluster
>
> activation. (DSWD Director, personal communication, February 9th, 2017)
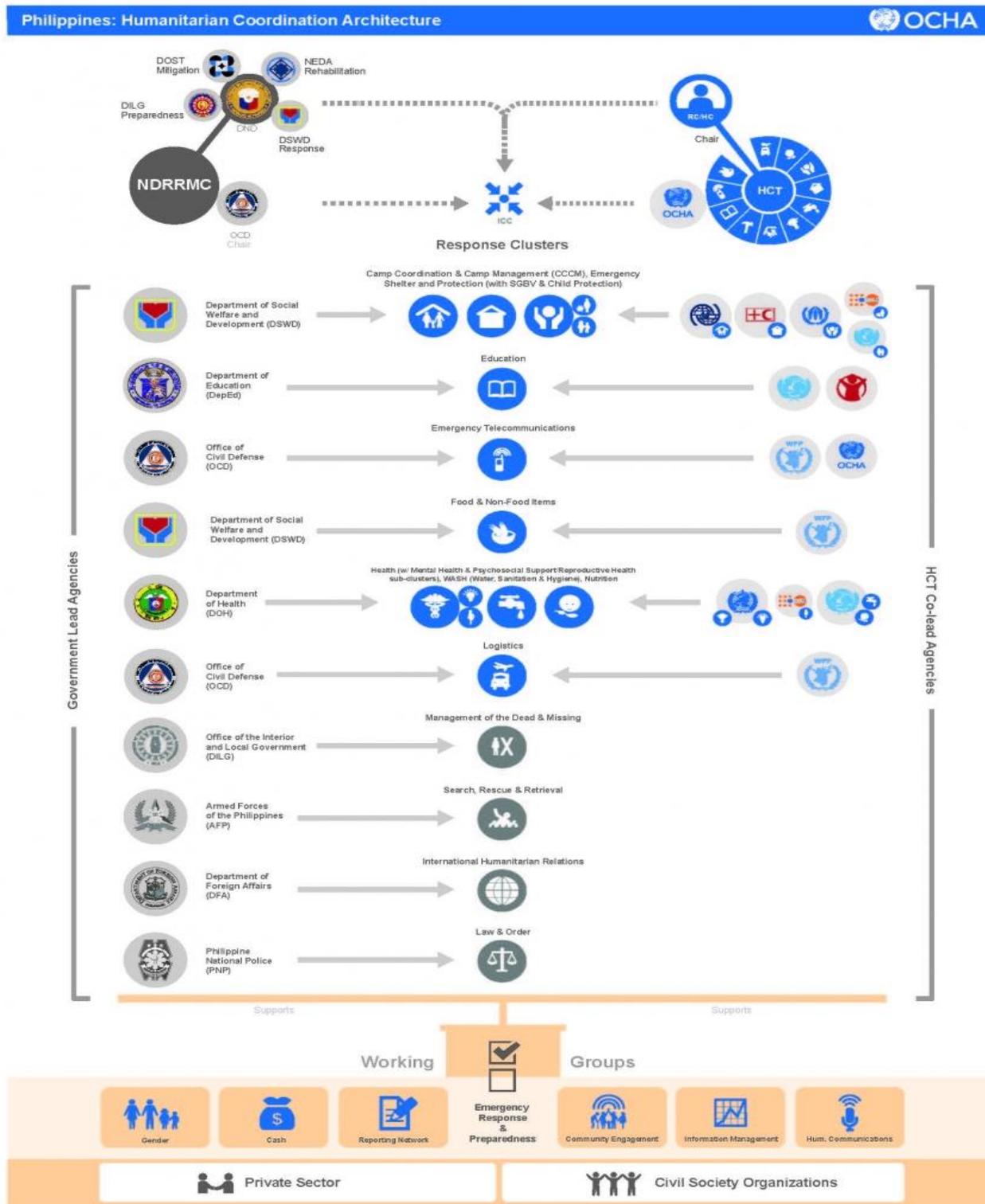
Figure 12. Relationship between PCS and UN HCT clusters.

Note. Figure reproduced from OCHA Philippines (n.d.).

Abbreviations. DILG, Department of Interior and Local Government; DND, Department of

National Defense ; DOST, Department of Science and Technology; DSWD, Department of

Social Welfare and Development; NDRRMC, National Disaster Risk Reduction management Committee; NEDA, National Economic and Development Authority; OCD, Office of Civil Defense; OCHA, Office for the Coordination of Humanitarian Affairs.

However, there are still issues surrounding stakeholder engagement. Based on data gathered from participants, it is still difficult for small actors, such as local NGOs, to directly engage with the cluster (NGO Senior Program Associate, personal communication, March 1st, 2017). Indeed, small actors are not seen as key players by the government, and thus, they are not invited to participate. The exclusion creates a knowledge gap (NGO Senior Program Associate, personal communication, March 1st, 2017). This leads to implications such as lack of local context, which affects the quality of responses.

> I still think there is a lot of room for improvement. For example, the cluster
> system is very limiting. There are only certain organisations who are invited,
> who are seen as key actors, so these create division. It divides because there
> are some local actors or some CSO who are not that big in their coverage in a
> particular disaster event and they don't really get to be engaged in the cluster
> because it also selects particular actors only. (NGO Senior Programme
> Associate, personal communication, March 1st, 2017)

Furthermore, UN cluster co-leads face difficulties in engaging their Philippine Government counterparts during normal circumstances, as the government cluster leads only come together as a cluster during response operations (OCHA Participants 1 & 2, personal communications, January 30th, 2017). "That is the most common complaint that we get from the clusters, the want to engage their government counterparts but somehow if there is no response, they go back to their old agency mandate" (OCHA Participant 1, personal communication, January 30th, 2017).

Defining roles and responsibilities. A finding that emerged from the response to Haiyan/Yolanda was a lack of proper protocols and mandates, which significantly contributed to initial disorganisation. Prior to Haiyan/Yolanda, roles, responsibilities and jurisdictional boundaries were not compiled in a singular reference document. This piecemeal approach led to individual agency mandates being followed and consequent redundant deployments. The Haiyan/Yolanda event showed a clear need for a single reference document listing all roles and responsibilities. To resolve this, the NDRP now empowers cluster leads to convene their clusters and to draft operational mandates for intra- and inter-cluster coordination (NDRRMC, 2017a). Furthermore, a singular and binding reference document detailing responsibilities is now in force (OCD Senior Military Assistant, personal communication, December 15th, 2016).

We (now) have a pre-defined protocol already for the eleven (clusters). So before, we adopted the Philippine cluster system, it would be very, I would say, disorganised because in fact, it was realised during Yolanda [Haiyan] that you really have to have coordinated mechanism with different clusters, both internally and externally. (DSWD Director, personal communication, February 9th, 2017)

Another means for improving coordination is through the marriage of the PCS and ICS (Figure 13). Figure 13 illustrates interoperability, where the PCS functions as a strategic body and has the role of providing resource support to IMTs. The NDRP defines roles and interoperability of the response cluster and IMT, as well as the role national assets play when supporting LGUs (NDRRMC, 2017a). This directive has helped improve coordination of member agencies within clusters.

Before, according to the NBI [National Bureau of Investigation] and PNP [Philippine National Police] Crime Lab, they were used to working alone, when the NBI DVI [Disaster Victim Identification] team was dispatched to

work on different cases, in disaster in the past, they were used to working

within themselves. Together now as a cluster, according to the NBI and PNP,

their work has become more effective and efficient, because they don't have to

stay in a particular area longer than they should, because there are already

people on the ground providing the cluster the information that is necessary for

us to know when exactly do we need to deploy teams on the field. (DILG

Director, personal communication, February 13th, 2017)
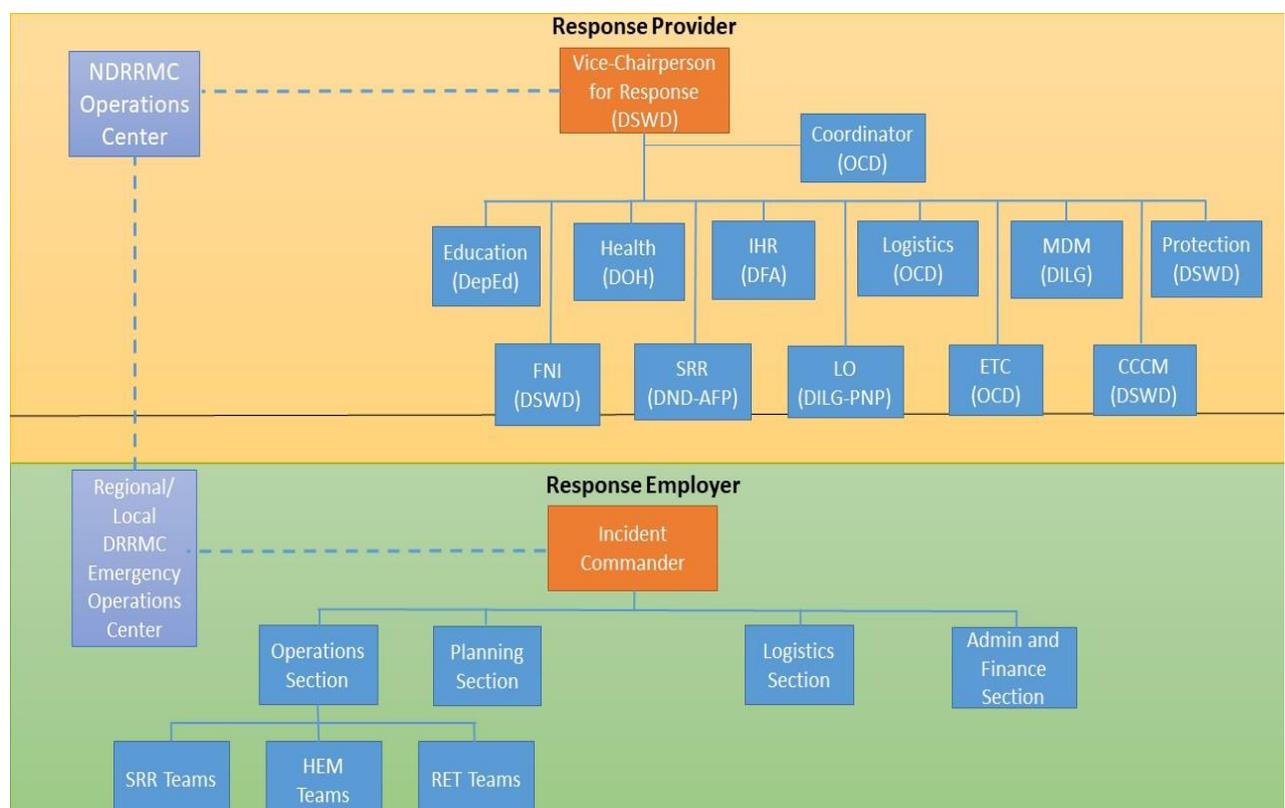
Figure 13. Interoperability of the response cluster and IMS.

Note. Figure adapted from NDRRMC (2017), p. 32.

Abbreviations. Admin, administration; AFP, Armed Forces of the Philippines; CCCM, camp

coordination and camp management; DND, Department of National Defense; DFA,

Department of Foreign Affairs; DILG, Department of the Interior and Local Government;

DOH, Department of Health; DRRMC, Disaster Risk Reduction and Management Council;

DSWD, Department of Social Welfare and Development; ETC, emergency telecommunications; HEM, health emergency medicine; IHR, International Humanitarian Relations; IMS, Incident Management System; LO, Law and Order; MDM, Management of the Dead and Missing; OCD, Office of Civil Defense; PNP, Philippine National Police; RET, rapid emergency telecommunications; SRR, search, rescue and retrieval.

There has also been a noticeable benefit to LGUs in using the cluster approach; LGUs have become better aware of their respective roles during disasters, which include SRR, traffic management and evacuation/camp management (Mandaluyong City DRRMO Research and Planning Division Officer-in-Charge, personal communication, February 15th, 2017).

A summary of the operational differences between Haiyan and a post-Haiyan event (Haima) can be seen in Table 9. Cluster approach improvements at all levels, from international to local, were clearly beneficial to response efficacy at the Haima/Lawin typhoon.

Table 9

Operational Differences Between Cluster Approaches at Haiyan and Haima

Cluster group	Haiyan event	Post-Haiyan event (Super Typhoon Haima)
UN HCT	• Clusters were well-funded and rapidly established • Multi-cluster meetings were carried out November 7th, 2016 • Clusters acted as support for government cluster leads • Established coordination hubs separate from government command posts • Requested Surge personnel to deal with response operations • Formed good relationship with government counterparts • UN co-leads assisted government partners in running clusters • Limited understanding of Surge staff fit with national systems	• UN clusters were invited to participate in NDRRMC cluster meetings • OCHA teams deployed to forward command post to serve as liaison • Humanitarian coordinator (HC) offered assistance but was formally declined by Philippine government • OCHA and other cluster co-leads took part in daily response cluster meetings

Cluster group	Haiyan event	Post-Haiyan event (Super Typhoon Haima)
	• Engaged with civil society organisations (CSOs) and private sector • Established inter-cluster coordinators to address cross-sectoral issues	
Philippine cluster	• NDRRMC conducted emergency meeting November 6th, 2016 together with UN partners • Philippine cluster under NDRRMC was primary lead for response • Pre-positioning of responders ahead of landfall • Established forward command posts and air hub to improve on-the-ground agency coordination • Accepted the offer of assistance from the RC/HC • Established the one-stop-shop to facilitate relief donations	• Response clusters activated and PDRA conducted • Emergency telecommunications (ETC/ET) established at response cluster operations centre • Inter-cluster meetings conducted together with CSOs, UN and private sector to develop response strategy • Pre-positioning of resources and responders. All national assets placed on stand-by alert • Created OPLAN Eagle Claw strategic response plan • Did not request international assistance • Rapid damage analysis and needs assessment conducted • Mercy and relief flights launched • Aerial and land reconnaissance carried out

Cluster group	Haiyan event	Post-Haiyan event (Super Typhoon Haima)
	• Initial disorganisation due to scale of disaster • Resources stretched thin due to previous large-scale disasters in 2013 • Difficulty in managing dead and missing • Politicisation of disaster response • Established, good inter-cluster coordination meetings	• Deactivation of response cluster and transition to early recovery • Smooth transition from response to recovery actions

Abbreviations. HC, Humanitarian Coordinator; HCT, Humanitarian Country Team; NDRRMC, National Disaster Risk Reduction Management Council; OCHA, Office for the Coordination of Humanitarian Affairs; PDRA, pre-disaster risk assessment; UN, United Nations.

Information I gathered from interviews shows that challenges in defining roles and responsibilities still exist, particularly in regards to the interoperability of the response cluster and ICS as bridging mechanisms. One involved actor expressed concern that the implementation of both mechanisms together requires more definition, especially in how they transition from one to another at the local level (OCHA Participant 1, personal communication, January 30th, 2017). The protocols for transition between thematic areas[11] formed another issue raised by the same OCHA participant, who was concerned about the silo effect.

> Another thing is if you look at the NDRP, it would talk about, there is also, they have the pillars, the preparedness, response, recovery, and they have mitigation. What I am saying is that somehow they are all silos, I am not criticising government pillars but maybe as an improvement there must be a relationship amongst the four. (OCHA Participant 1, personal communication, January 30th, 2017)

This OCHA concern was paramount for the period of transition from response to recovery and rehabilitation. In the current version of the NDRP, cluster leads in the response cluster are expected to conduct early recovery activities to support recovery and rehabilitation agencies, who are activated following the demobilisation of the response phase (NDRRMC, 2017a). A summary of challenges described by interviewees and noted in official documents can be found in Table 10.

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[11] The four thematic areas are: prevention and mitigation, preparedness, response, and rehabilitation and recovery.

Table 10

Summary of Challenge, Opportunities and Gaps in the PCS

	Super typhoon Haiyan	Post-Haiyan
Challenges	1. Overwhelmed government resources 2. Lack of proper reference document for roles and responsibilities 3. Tension between international and government staff 4. Divergence of strategy and goals between the United Nations Humanitarian Country Team (UN HCT) and the Philippine cluster system (PCS) 5. Need for specialised clusters 6. Non-governmental organisations (NGOs) and other small actors not invited to participate in the cluster system 7. Some clusters lacked good relationships	1. Acceptance from agency executives of the National Disaster Response Plan (NDRP) 2. Cascading of NDRP to local government units (LGUs) 3. Lack of understanding by some LGUs 4. Small actors and NGOs still face difficulty in participating
Identified opportunities	1. Some clusters had established and good working relationship with UN co-leads 2. Use of co-location	1. Creation of NDRP to act as central reference for cluster roles, responsibilities and jurisdiction 2. Marriage of the response cluster and incident command system (ICS) mechanisms

Super typhoon Haiyan	Post-Haiyan
3. Use of Armed Forces of the Philippines (AFP) to liaise with other foreign militaries	3. Incorporation of civil society organisations (CSOs) and private sector into clusters
4. Need for cluster approach and incident command system (ICS) to be used at the community level	4. Use of Pre-Disaster Risk Assessment (PDRA) and pre-positioning of resources
	5. Defined levels of response for clusters
	6. Establishing direct link with military coordination centres
	7. Use of information management systems (IMS) to improve information/communication flows

Remaining gaps post-Haiyan	1. Cluster leads need to strengthen partnerships with actors found outside the cluster structure of government agencies
	2. There are still some residing challenges in defining roles and responsibilities
	3. Some UN cluster leads have difficulty in engaging their government counterparts
	4. More clarity is needed in how the response cluster and incident command system (ICS), transition especially at the local level
	5. Silo effect for some Philippine clusters isolates them

Abbreviation. PCS, Philippine cluster system.

Chapter Summary

In Chapter Four, I presented study results based on thematic analysis of documents and semi-structured interviews conducted with participants involved in the cluster system. Based on my findings, the implementation of the cluster approach in the Philippines offers a good insight into how the approach can be used to improve a country's interagency coordination. The UN cluster approach has been well integrated within the existing disaster risk reduction and management system. The sheer magnitude of the Haiyan/Yolanda response provided initial challenges due to the scale of the disaster, which stretched the capacities of government line ministries. Furthermore, tensions arose, as noted in debrief documents, because foreign personnel took over leadership roles from the overstretched government line ministries. Interview participants also commented on initial disorganisation due to the lack of clarity in agency mandates. Stakeholder participation was also identified as an issue, because actors from the private sector and CSOs were not incorporated into clusters at any level.

Using lessons learned from Haiyan/Yolanda, the Philippine Government incorporated amendments into the NDRP. Through the NDRP, improvements were introduced to define roles and to enhance leadership, communication and stakeholder participation. Best practices learned from Haiyan, such as co-location and naming one point of contact (PIHA) to coordinate the international community, were included in the plan. Data gathered from the participants and government reports indicate that in recent typhoons, such as typhoon Haima/Lawin in 2016, operational clusters had a considerable effect in improving response efficacy. However, challenges remain as the country continues to fine tune the cluster approach. Issues such as the implementation of the cluster approach at the local level and the integration of small but important local actors (with local knowledge that could save lives) remain.

Chapter 5: Discussion

Chapter Outline

Chapter Five is an analysis of study results as they relate to existing literature on the UN cluster approach. It also serves as a discussion of the findings in relation to the objectives set out in Chapter One. This chapter is divided into five sections. First, I discuss the PCS as it relates to cluster theory and practices at the international UN level. Next, I analyse current best practices and challenges faced during cluster approach implementation in the Philippines. The focus of the final section revolves around key points and recommendations for future actions.

Clusters and Interagency Coordination

It is clear that coordination is a pillar of the cluster approach (Ulleland, 2013). My research has generated multiple viewpoints from both document reviews and interviews. First, perceptions are that the cluster approach has allowed for improved coordination between agencies. Second, the use of the cluster has allowed for strengthening of cooperation between the Philippine Government and UN HCT counterparts. Indeed, since ratifying the cluster approach in 2007, the relationship between UN HCT and Philippine cluster leads had developed positively. This improvement is corroborated by the IASC evaluation, which noted strong cooperation during the Haiyan/Yolanda response (Hanley et al, 2014). Strengthened ties between the UN HCT and the NDRRMC have also been noted by Steets et al. (2010).

Improved leadership has also benefited the Philippine disaster response community. Document reviews show that the need for better leadership motivated the government to adopt the UN cluster approach (NDCC, 2007). Furthermore, interviewees indicated that response times and methods have improved since the introduction of cluster lead agencies, which

cemented the predictable leadership model. Philippine results mirror outcomes on the international level, where predictable leadership was a core objectives driving cluster approach implementation following the 2005 HRR (IASC, 2012). In fact, the latest iteration of the cluster approach appears to have provided the strong leadership needed during the Haiyan/Yolanda response, a result of a close working relationship fostered pre-disaster with the UN HCT. Furthermore, the ability of the UN HCT to be flexible with their cluster structure to align with existing Philippine clusters contributed to the Haiyan success. In fact, UN flexibility contributed significantly to Iraq cluster success as well (Boon, 2012). Adaptable co-leadership between the UN national government, personal commitment by cluster leads and strong commitment of cluster members have all been cited as factors of success (Ulelland 2013). Thus, my study aligns with conclusions drawn in previously published literature, especially in regards to leadership and accountability. Data gathered from interview participants and the IASC evaluation of the Haiyan response indicates that predictable leadership, managed by feedback between international and government agencies, has improved accountability in the Philippines to not only actors, but also victims of disaster and the general public (Hanley et al., 2014).

The results of this study have shown that while challenges in implementing the cluster approach are multiple, the overall response to the Typhoon Haiyan/Yolanda was successful. Ongoing issues aside, for the most part, the Philippines is a good example of how the cluster approach can work. This success is due in part due to how the cluster approach enables agencies to act with authority, yet coordination. Despite being initially overwhelmed, the Philippine Government, with the support of the UN HCT, managed to still carry out a good response at Haiyan.

Results also show that the close relationship between the two primary actors, the UN HCT and the Philippine Government, allowed communications to flow smoothly between the

two major actors during the Haiyan/Yolanda response. This was recorded by the IASC post-event evaluation (Hanley et al., 2014), which notes that despite divergences in planning and coordination, the response saw close cooperation between government and international actors (Hanley et al., 2014).

Furthermore, results from my document review and from participant interviews indicate that the support given to the Philippine Government by the UN HCT allowed for many improvements. Academic literature validates this conclusion, citing joint learning initiatives between OCHA and other government leads that used after-action reports to craft new cluster models (Hanley et al., 2017). Indeed, the Philippine HCT cluster was able to use the UN model to improve the preparedness of its cluster partners (IASC, 2012). Furthermore, joint learning initiatives have addressed the recurring issue of UN HCT cluster leads, who are unfamiliar with local contexts, and UN HCT staff now work together with their Philippine Government counterparts with improved understanding of local conditions (Steets et al., 2010; Ulelland, 2013). In summary, after Haiyan, mechanisms already in place allowed for lessons learned to be incorporated into disaster relief structures. These lessons were treated as opportunities, precisely because the cluster approach provided a mechanism for learning. All improvements were made in close coordination with UN HCT cluster co-leads to ensure their viability.

Finally, this research has indicated the cluster approach as it was used during Typhoon Haiyan overcame previous issues that had plagued disaster relief efforts. For example, both the Philippine Government and the UN HCT were able to quickly allocate funding for their respective clusters. For one, the UN HCT's funding of the strategic response plan contributed greatly to mounting an effective response (Hanley et al., 2014). Other coordination issues were resolved by using special technical advisors, both international and local subject matter experts, to work together as inter-cluster advisory groups (Hanley et al., 2014). This cross-over allowed

clusters to discuss response operations at both the strategic and operational levels (Ulelland, 2013).

The engagement of the military and private sector was also a good approach to improving coordination during Haiyan/Yolanda. In fact, the literature supports the idea of the private sector as a strategic partner and driver during humanitarian responses (Saavedra & Knox-Clarke, 2015). My results highlight the importance of engaging the military in providing much-needed transportation and logistics capacities, and as a bridge between civilian responders and other military responders. The IASC post-disaster evaluation also stressed the importance of the relationship between the armed forces and civilian responders (Hanley et al., 2014). However, this perspective is not unilateral, because the military may at times share a different view on humanitarian action, which can be contradictory of IASC principles other humanitarian organisations adhere to (Knox-Clarke & Campbell, 2015).

My results show that Philippine Government agencies have actively strengthened national ownership of domestic response operations. However, it is important to note that the issue of foreign clusters affecting national ownership was still present during the Haiyan response (Hanley et al., 2014; Steets et al., 2010). My findings further indicate that Philippine Government agencies are aware of the parallelism that occurs between the national government system and that of the UN HCT. The issue of parallel mechanisms is also recognised by other scholars, who cite its effects on the Haiyan response (Hanley et al., 2014).

The IASC evaluation of Haiyan/Yolanda notes multiple factors that fostered divergence between the Philippine Government cluster and the HCT (Hanley et al., 2014). Indeed, national government agencies expressed concern about ownership of the response vis-à-vis the international co-leads. Exacerbating factors included the scale of the international response overwhelming stretched government resources, compounded by a lack of understanding of competing systems (Hanley et al., 2014). Similar problems were experienced in the response

to a tropical storm in Haiti in 2008 (Steets et al., 2010; Ulleland, 2013). With the inclusion of the PIHA cluster, however, the Philippine Government resolved this recurring issue, a viewpoint expressed by interviewees in this study.

A lack of clear ownership in a response also leads to the relegation of local actors to passive roles, which makes them feel disenfranchised, as mentioned by my NGO interviewee. This issue appears to be a lingering one, as highlighted by the Mercy Corps (2006). In addition, ownership can "swing the other way": close coordination between the government and its armed forces could be detrimental and an impedance to the enactment of IASC humanitarian principles of independence, impartiality and neutrality (Humphries, 2013). To address this issue, the Philippine Government has included local NGOs and private sector organisations to ameliorate military influence. Moreover, the ongoing invitation to LGUs, once fully accepted, will add diversity to the actors involved in disaster response missions.

Agencies' internal agendas may be at odds with mandates for humanitarian responses, and where conflict occurs, may reduce the quality of response, as was seen during Haiyan (Hanley et al., 2014; Steets et al, 2010). My study confirms that the PCS is still beset by this issue, given the multitude of agencies and stakeholders involved. In fact, inter-cluster coordination can be negatively impacted by internal agendas, and the Philippine Government has taken steps to address this issue through the introduction of a binding document enforcing response protocols. Inter-agency coordination will probably continue to be an issue in the Philippines, but my results indicate that setting clear levels of response and organising workable cluster structures mitigates the issue.

Philippine Experiences with the Cluster Approach

Improving leadership and accountability. The present study shows that even during the response to super typhoon Haiyan, multiple cluster leads provided strong leadership, despite the scale of the disaster. Ulelland (2013) has stated that successful cluster leadership

requires clear definition on what the cluster is, the goals of the cluster approach and how it is organised; answers to these questions constitute good leadership. I found the relief efforts were "disorganised" prior to the institutionalisation of the NDRP, which gave power to cluster leaders because, as a single reference document, it could not be argued with. Goals set by the NDRP are also national government goals, an alignment that further supports a unified front and a clear chain of command. In short, the NDRP is the single most powerful tool that has led to improved, effective and well-coordinated responses to hydrometeorological events since Haiyan/Yolanda.

My data also suggest that individual leadership was an important factor during the response to Haiyan. This finding was validated by the report from Hanley et al. (2014), which noted that individual leadership more or less determined the quality of a response. The NDRP builds on this idea by defining the command relationship of the Philippine cluster, which has given direct oversight to one person, the Vice-Chairperson for the NDRRMC.

My results, like Ulelland's (2013) conclusions, suggest that accountability is an essential part of the cluster approach that enforces responsibility. Ulleland (2013) notes that accountability has both horizontal and hierarchical (vertical) applications. In the accountability model introduced by the NDRP, hierarchical accountability has been emphasised by the appointment of the Vice-Chairperson for Response. Horizontal accountability is accomplished by the appointment of cluster leads, whose mandates are provided for by NDRP protocols. Where issues of mistrust and inadequate information sharing from the UN arise, the Philippines model overcomes this issue via binding laws that provide the Vice-Chairperson a means of enforcing accountability, even in the UN arena.   Accountability to affected populations is also emphasised by scholars (Hanley et al., 2014; Ulelland, 2013). Previously published studies have shown that only weak accountability to affected populations during disasters in Myanmar and Haiti was exercised (Ulelland, 2013). My findings show that providing for

victims' needs and gathering feedback from the affected population must be included in future revisions of the PCS to improve accountability. This finding is supported by the IASC evaluation, which praised good accountability reporting between clusters and the HCT, but exposed as a weakness a lack of feedback to the affected population during the Haiyan response. To address this issue, the NDRP introduced the RCIMS to provide a participatory feedback mechanism for the affected population. This system allows the affected population to participate through social media, and thus, to have a means of achieving better information flow.

Enhancing communication and information management. Previous studies have highlighted the importance of improved communications, information sharing and knowledge management as key facets in inter-agency coordination (McKing, 2008; OCHA, 2011; SSC, 2008; WHO, 2013). My findings corroborate the importance of developing and utilising proper channels and means of communication. This concept was reinforced by problems encountered during the Haiyan response and noted in the IASC evaluation, which stated that practical measures such as co-location greatly improved the flow of communication between international and national agencies (Hanley et al., 2014). The establishment of the Multi-National Coordination Center for military-to-military coordination and the operation of the One Stop Shop for international response workers also facilitated information flow. My findings indicate that these opportunities for improvement, identified during the Typhoon Haiyan response, were enacted successfully thereafter. For example, the co-location strategy has now been integrated and has resulted in the establishment of the NDRRMC Operations Center, where information sharing between stakeholders, IMT, CSOs and the private sector can occur unhindered by geographical or technical barriers. Furthermore, the use of PDRAs and pre-deployment of resources allow for adequate dissemination of information to agencies prior to actions being taken, making response efforts more effective. Finally, the recent

introduction of RCIMS allows crucial information from the field to be disseminated to involved clusters in a timely fashion.

Communications can still be problematic, however (Steets et al., 2010). Meetings are still the primary means of facilitating communication (Steets et al., 2010; Ulelland, 2013). Information sharing mechanisms are oftentimes seen as time-consuming due to the frequency of coordination meetings (Hanley et al., 2014). The post-disaster IASC evaluation (Hanley et al., 2014) reveals that there was duplication in response at the local level, as these organisations typically operated outside of the cluster system (Hanley et al., 2014). Results from this study show that the Philippine Government has used the lessons about communications from Haiyan/Yolanda well, and has created dedicated clusters to coordinate information flow between actors from different cultures. In addition, the Philippine government has moved their information sharing mechanisms down to local levels by inviting LGUs to adopt systems modelled on national prototypes. Eventual full adoption of PCS systems by LGUs will hopefully allow seamless communication and information sharing. Finally, pre-disaster preparedness strategies and co-location allows Philippine clusters to share vital information with involved stakeholders, a precedent that will serve future responses well.

Engaging stakeholders. Stakeholder participation has been a recurring issue (Steets et al., 2010). This problem was evident during Typhoon Haiyan, when operations were carried out by actors outside the cluster system, which led to duplication of roles and functions (Hanley et al., 2014). Furthermore, alienation of stakeholders from the cluster system has been a recurring problem worldwide (Mercy Corps, 2006; O'Connor, 2011), and this theme arose during interviews with study participants. Participants in my study called for greater engagement with stakeholders not traditionally part of the cluster system, such as CSOs and private sector actors, a sentiment echoed in the literature (Hanley et al., 2014).

The Philippine Government has sought to provide an all-inclusive approach by promoting an "all of nation" strategy. Non-traditional agencies and actors are now formally invited to participate in response cluster meetings chaired by national and regional disaster risk reduction and management councils. Other players who perform key specialised functions, such as victim identification services, LAO and SRR have been formally invited into the cluster system as well. My findings show that specialised clusters created to accommodate these actors have been relatively successful in incorporating much-needed private sector and national-level CSO practitioners. This inclusion has greatly improved response capacity nationwide. Furthermore, it has allowed NGOs a chance to deepen their partnerships with government agencies and other NGOs in their respective clusters. Scholars support this initiative, because it is important to have stakeholder buy-in from different agencies to facilitate greater coordination (SSC, 2008). In Iraq, similar adaptations afforded a deep sense of ownership by myriad actors, which resulted in many successful response partnerships (Boon, 2012). My study indicates that through increased buy-in, as in Iraq, the promotion of a sense of ownership by NGOs will entice them to work more closely with the national government in the PCS. Such a deepening of relations would also allow for easier access to funding.

The issue of alienation or of being overlooked is not completely resolved, however. I found that local players are still been excluded from the cluster system. This oversight could affect the quality of a response because a lack of local context often hampers effective rescue and leads to duplication of effort at the most basic level of response (Humphries, 2013; Mercy Corps, 2006). This situation has occurred in countries such as Haiti (O'Connor, 2011). Furthermore, some UN co-leads still have a difficult time communicating and engaging with their government counterparts in a non-response setting, due to internal government agency mandates stifling relationships. It seems that engagement only occurs during a response and that dialogue disappears afterwards, as agencies shift their priorities back to "normal"

activities. Indeed, while the Philippines has developed a means of engaging stakeholders, the recurring issue of exclusion remains unsolved. In this context, it is important to note that this study's scope encompasses the cluster approach at a national level, and further research must be conducted at the local level to ascertain if the use of the cluster approach can engage smaller and more local CSOs and NGOs.

Defining roles and responsibilities. Other studies have touted the importance of defined roles and responsibilities to ensure proper coordination among agencies (McKing 2008; SSC, 2008; OCHA 2011). Defined roles lead to organised actions during disaster events (McKing, 2008). According to my results, defining roles is still an issue in the PCS. Previous disaster events have shown that there has been some confusion between agencies about their roles during a crisis (Steets et al., 2010; Ulelland, 2013). Typhoon Haiyan was a classic example of role confusion and consequent duplication and poor initial response times (Hanley et al., 2014). My results also show that the past lack of a single authority on roles has led to initial disorganisation within and between Philippine clusters.

As I discovered in this study, one of the main reasons for the creation of the NDRP was to properly define and delineate roles. The NDRP has potential to reduce redundancy and confusion. However, how the cluster approach and ICS operate together at the local level is still a mystery to some actors. This can cause the issue of parallel mechanisms, which has been problematic elsewhere in the world (Hanley et al., 2014; Steets et al., 2010; Ulelland, 2013). My interviewees noted that parallel mechanisms could bring about tensions, redundancy and misunderstandings between national and local actors. Furthermore, the Philippine Government found that roles and responsibilities must be incorporated into binding legislation to ensure smooth operations and to overcome the "silo effect", which allows agencies to be self-regulated and autonomous during a disaster, rather than part of a team (Ulelland, 2014). My findings suggest that a conscious reduction of the silo effect would improve the transition of member

agencies between their preparedness, response and recovery mandates. Furthermore, removing barriers, aka silos, especially outside of times of crisis, would promote better inter-cluster coordination, thus improving response effectiveness. A summary of the improvements, changes and current challenges to the PCS appears in Table 11.

Table 11

Summary of Improvements and Current Challenges to the PCS

	Improvements	Current Challenges and issues
Leadership and Accountability	• Allows for improved coordination between agencies during response • Strengthens cooperation between Philippine Government and UN counterparts • Provides stronger and more predictable leadership • Improved vertical and horizontal accountability during Haiyan response • Good practice evidenced by use of advisor groups/meetings to resolve issues • Authority provided to Vice-Chairperson for Response to improve accountability and leadership • Pre-Disaster Risk Assessment (PDRA) introduced and pre-positioning of resources managed	• Acceptance from agency executives of the NDRP • Issue of duplication still present between Philippine government and UN HCT

	Improvements	Current Challenges and issues
	• Clusters streamlined/reorganised and added to adapt UN model to Philippine needs • Government cluster leads designated and matched with UN cluster co-leads	
Communication, Information, and Knowledge Management	• Emergency telecommunications (ECT/ET) systems streamlined and used by all	• Cascading of NDRP to LGUs • Lack of understanding by some LGUs
Stakeholder Participation	• Military integrated into cluster system to improve response • Civil society organisations (CSOs) and private sector actors incorporated into clusters • Specialised clusters created to assimilate actors with sought-after skills • UN HCT engaged outside of responses to improve relationship, cooperation and to facilitate joint learning	• Small actors and NGOs still face difficulty in participating • Cluster leads need to strengthen partnerships outside actors • Some UN cluster leads have difficulty in engaging their government counterparts

	Improvements	Current Challenges and issues
Roles and Responsibilities	• Response clusters linked with incident management team (IMT) to facilitate effective response • Providing defined levels of response to facilitate intra-cluster and inter-cluster coordination. • Roles and responsibilities delineated in a single document used by all	• Delineation of roles and responsibilities improved but still not embedded fully • Agency-specific mandates may complicate and reduce quality of response • More clarity required to link response cluster and incident command system, especially at a local level • Silo effect impacts some Philippine clusters

Abbreviation. PCS, Philippine cluster system.

Chapter 6: Conclusion

This study explored how the UN cluster approach can help national governments to improve inter-agency coordination during emergency responses. It was an investigation of how the UN cluster approach can be integrated into the disaster management system of a single country. The objectives of this study were to investigate if the cluster approach has improved interagency coordination in the Philippines, with the aim of exploring the challenges and opportunities an international system presents to national governance.

In this study, I investigated disaster coordination from the time of Typhoon Haiyan/Yolanda up to the recent implementation of the NDRP. I found that the use of the UN cluster approach at the national level improved the quality of coordination and response. These benefits were fourfold: improved leadership, greater accountability, better information sharing and more accurate identification of issues. Thus, the Philippines has benefitted from using the UN cluster approach as an emergency framework. In addition, the country has taken the initiative in adjusting the approach to suit local conditions. Changes made to systems have addressed initial challenges to a large degree. Lessons learned from Haiyan and resultant best practices were combined in a single, country-specific reference document, the NDRP. The NDRP now serves as the Philippine Government's primary mechanism for coordination. Best practices include co-location of relief agency response headquarters, coordinated pre-disaster risk assessment and pre-positioning of resources.

Efforts to engage CSO and private sector stakeholders have also been made. Specialised clusters have also been included in the country-specific PCS to accommodate and coordinate technical specialists, such as private morticians. Furthermore, the NDRP is now being rolled out to LGUs to help them develop local contingency plans and to provide a single coordination mechanism across all levels of government. By including all levels of governance, the Philippine Government has bridged two coordination mechanisms, the cluster

approach for strategic coordination and the ICS for operational coordination. The NDRP also offers clarity about agency roles by introducing binding operations protocols, which improves accountability and reduces confusion and duplication of effort. Since its institutionalisation in 2014, NDRP concepts have been effective in multiple typhoon response situations, most notably Haima in 2016 (NDRRMC, 2017a).

Overall, the cluster approach has provided the Philippines with a means of effective interagency coordination. The Philippine Government's unique approach can be regarded as a model upon which other national governments can build their disaster response systems. Good results in the Philippines have been enhanced by an actively engaged, closer working relationship with the UN HCT, which has allowed for improved links with international actors.

However, the PCS as a system still faces challenges, such as the silo effect of clusters affecting inter-cluster coordination, lack of acceptance by some chief executive officers and the difficulties inherent in achieving buy-in for the NDRP from LGUs. Challenges that still remain also relate to the lack of engagement and participation from domestic NGOs, poor inter-cluster coordination and poor acknowledgement of cross-sectoral issues, e.g. gender, age, HIV/AIDs and environment.

The challenges still faced by the Philippines are leadership issues affecting performance. Based on the findings of this study, it appears that individuals' leadership impacts the performance of clusters in terms of doing their mandated duty. Cluster leads with good leadership performed better than those clusters whose leads lacked proper orientation and training. This finding applies to accountability as well, because strong leadership from the Vice-Chairperson for Response can enforce good accountability practices. The ability of the Vice-Chairperson for Response to enforce vertical and horizontal accountability is key to future success in this area. The typhoon Haiyan response has highlighted these and other issues, which affect key elements of coordination: consistent leadership and transparency, clear

communication, honest and open information sharing, stakeholder participation and role definition. Using these elements as a means of classification, or thematic analysis, I found that these challenges, evident in the Haiyan response, are also recurring issues the UN faces at an international level.

The conclusions arising from this study can be used to improve understanding of how the cluster approach can be better implemented at a national level. These findings are therefore a valuable guide for other governments who are looking for ways to integrate the cluster approach into their national systems. This study adds to the existing body of knowledge on the cluster approach and to the ever-growing field of emergency and disaster management research by filling a knowledge gap about how international systems operate at the domestic, national governance level.

Recommendations for Further Study

This study investigated if and how the cluster approach can improve national government interagency coordination to allow for effective disaster response. The findings illustrate that the cluster approach can be successfully utilised by national governments to improve coordination in order to effectively provide for the needs of affected populations in disasters. Results also highlight the importance of incorporating small actors, such as local agencies and NGOs, into coordination mechanisms to further improve response efficacy.

However, due to time constraints, the small-scale scope of this study has meant that only a limited number of persons were interviewed, which affects the reliability of conclusions gathered from a small dataset. Furthermore, in this study, I focused on of hydrometeorological events, and did not investigate how clusters operate during seismological and terrorism-related events. Further investigation involving more interviews and focus group workshops with stakeholders from all sectors is therefore required to validate the findings of this study.

Because this study's focus was at the national level, it was beyond the scope of this dissertation to investigate how well the cluster system operates in local communities. Yet, this is an important aspect that needs further research. Further study on how the cluster approach operates at the local level could help determine if it is viable at a "grass-roots" level. Another avenue for study would be to investigate how the cluster approach can be used to improve engagement with NGOs and what changes can be made to address the issues that NGOs have raised. To accomplish this objective, a larger-scale study is required.

References

Adinolfi, C., Bassiouni, D., Lauritzsen, H. F., & Williams, H. R. (2005). *Humanitarian response review*. Geneva, Switzerland: Unicef.

Advanced Training Program on Humanitarian Action (ATHA). (2008). *Humanitarian coordination: An overview*. Retrieved from http://hhi.harvard.edu/publications/atha-humanitarian-coordination-overview

Alcayna, T., Bollettino, V., Dy, P., & Vinck, P. (2016). Resilience and disaster trends in the Philippines: Opportunities for national and local capacity building. *PLoS Currents*, 8.

Alexander, M. (2014). Ethics in qualitative research. *International Journal Of Market Research*, *56*(6), 833-835. doi:10.2501/IJMR-2014-053

Asian Development Bank. (2015). *Global increase in climate-related disasters*. Retrieved from http://www.adb.org/sites/default/files/evaluation-document/176771/files/global-increase-climate-related-disasters.pdf

Auckland University of Technology Ethics Committee (AUTEC). (2014). *Guidelines and procedures*. Retrieved March 22, 2017 from http://www.aut.ac.nz/researchethics/guidelines-and-procedures

Auckland University of Technology Ethics Committee (AUTEC). (2015). *Final data and consent forms (18)*. Retrieved November 27, 2016, from http://www.aut.ac.nz/researchethics/guidelines-and-procedures/final-storage-of-data-and-consent-forms-18

Bagshaw, S. (2012). *Humanitarian principles*. Geneva, Switzerland: Office for the Coordination of Humanitarian Affairs.

Balcik, B., Beamon, B. M., Krejci, C. C., Muramatsu, K. M., & Ramirez, M. (2010). Coordination in humanitarian relief chains: Practices, challenges and opportunities. *International Journal of Production Economics*, *126*(1), 22-34.

Bankoff, G. (2002). *Cultures of disaster: Society and natural hazard in the Philippines.*. New

York, N. Y.: Taylor & Francis Group.

Bankoff, G. (2007). Living with risk; coping with disasters. *Education About Asia*, *12*(2), 26-

29.

Bennett, J., Bertrand, W., Harkin, C., Samarasinghe, S., & Wickramatillake, H. (2006).

Coordination of international humanitarian assistance in tsunami-affected countries.

London, England: Tsunami Evaluation Coalition.

Berg, B. L. (2009). *Qualitative research methods for the social sciences* (6th ed.). Boston,

MA: Pearson/Allyn & Bacon.

Boon, L. (2012). *The cluster approach: Working towards best practices in humanitarian

response*. Denver, CO: University of Denver Press.

Brassard, C., Giles, D. W., & Howitt, A. M. (2015). *Natural disaster management in the

Asia-Pacific: Policy and governance*. Tokyo, Japan: Springer.

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long,

A. T. Panter, D. Rindskopf & K. J. Sher (Eds.), *APA handbook of research methods in*

psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological,

and biological (pp. 57-71). Washington, DC: American Psychological Association.

Bryman, A. (2012). *Social research methods*. Oxford; New York: Oxford University Press.

Chen, R., Sharman, R., Rao, H. R., & Upadhyaya, S. J. (2008). Coordination in emergency

response management. *Communications of the ACM*, *51*(5), 66-73.

Child Fund International. (2013). *The devastating impact of natural disasters*. Retrieved from

https://www.childfund.org/Content/NewsDetail/2147489272/

Congress of the Philippines. (2010). *Philippine disaster risk reduction and management act

of 2010*. Manila, Philippines: National Disaster Risk Reduction and Management

Council.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: Sage Publications.

DeSantis, L., & Ugarriza, N. D. (2000). The concept of theme as used in qualitative nursing research. *Western Journal of Nursing Research*, *22*, 351-372.

Domingo, J. (2016). *The Philippines: Partnerships for humanitarian action*.

Eyre, A. (2006). *Literature and best practice review and assessment*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/.../ha_literature_review.pdf

Garschagen, M., Hagenlocher, M., Comes, M., Dubbert, M., Sabelfeld, R., Lee, Y., … Birkmann, J. (2016). *World risk report 2016*. Retrieved from weltrisikobericht.de/wp-content/uploads/2016/08/WorldRiskReport2016.pdf

Grant, B. M., & Giddings, L. S. (2002). Making sense of methodologies: A paradigm framework for the novice researcher. *Contemporary Nurse*, *13*(1), 10-28. doi:10.5172/conu.13.1.10

Hanley, T., Binas, R., Murray, J., & Tribunalo, B. (2014). *IASC inter-agency humanitarian evaluation of the Typhoon Haiyan response*. New York, N. Y.: United Nations Office for Coordination of Humanitarian Affairs.

Humanitarian Response. (n.d.). *Who does what?* Retrieved from https://www.humanitarianresponse.info/en/about-clusters/who-does-what

Humphries, V. (2013). Improving humanitarian coordination: Common challenges and lessons learned from the cluster approach. *The Journal of Humanitarian Assistance*. Retrieved from http://sites.tufts.edu/jha/archives/1976

Inter-Agency Standing Committee (IASC). (2006). *Guidance note on using the cluster approach to strengthen humanitarian response*. Geneva, Switzerland: Author.

Inter-Agency Standing Committee (IASC). (2010). *Handbook for RCs and HCs on emergency preparedness and response*. Geneva, Switzerland: Author.

Inter-Agency Standing Committee (IASC). (2012). *Reference module for cluster coordination at the country level.* Geneva, Switzerland: Author.

Inter-Agency Standing Committee (IASC). (2015). *Reference module for cluster coordination at the country level*. Retrieved from who.int/health-cluster/about/cluster.../cluster-coordination-reference-module-2015.pdf

Inter-Agency Standing Committee (IASC) Secretariat. (2012). *What is the inter-agency standing committee?* Geneva, Switzerland: Office for the Coordination of Humanitarian Affairs [OCHA].

International Federation of the Red Cross (IFRC). (2006). *World disasters report. Focus on neglected disasters.* Retrieved from www.ifrc.org/Global/Publications/disasters/WDR/WDR2006-English-LR.pdf

International Federation of the Red Cross (IFRC). (2016). *World disasters report. Resilience: saving lives today, investing for tomorrow*. Retrieved from www.ifrc.org/Global/Documents/Secretariat/201610/WDR%202016-FINAL_web.pdf

Israel, D. C., & Briones, R. M. (2014). *Disasters, poverty, and coping strategies: The framework and empirical evidence from micro/household data — Philippine case.* Retrieved from https://dirp4.pids.gov.ph/webportal/CDN/PUBLICATIONS/pidsdps1406.pdf

Knox-Clarke, P., & Campbell, L. (2015) *Exploring coordination in humanitarian clusters*. London, England: Overseas Development Institute.

Krueger, S., Derzsi-Horvath, A., & Steets, J. (2016). *IASC transformative agenda: A review of reviews and their follow-up*. Berlin, Germany: Global Public Policy Institute (GPPI).

Legaspi, A. (2013, November 28). Lawmakers call for review of disaster risk reduction and management law. *GMA News Online*. Retrieved from

http://www.gmanetwork.com/news/news/nation/337495/lawmakers-call-for-review-of-disaster-risk-reduction-and-management-law/story/?related

Manila Observatory. (n.d.). *Mapping Philippine vulnerability to environmental disasters*. Manila, The Philippines: Author.

Magilvy, J. K., & Thomas, E. (2009). A first qualitative project: Qualitative descriptive design for novice researchers. *Journal for Specialists in Pediatric Nursing*, *14*(4), 298-300. doi:10.1111/j.1744-6155.2009.00212.x

McConnell, A., & Drennan, L. (2006). Mission Impossible? Planning and preparing for crisis. *Journal of Contingencies & Crisis Management*, *14*(2), 59-70. doi:10.1111/j.1468-5973.2006.00482.x

McKing, A. (2010). *Framework for improving cross-sector coordination for emergency preparedness and response: Action steps for public health, law enforcement, the judiciary and corrections*. Collingdale, PA: Diane Publishing.

McNamarra, D. (2006). Humanitarian reform and new institutional responses. *Forced Migration Review*, 9-10.

Mercy Corps. (2006). *Commentary on the implementation and effectiveness of the cluster approach*. Retrieved from http://reliefweb.int/report/world/mercy-corps-commentary-implementation-and-effectiveness-cluster-approach

Ministry of Civil Defence & Emergency Management. (2009). *The guide to the national civil defence emergency management plan, 2006*. Retrieved from http://www.civildefence.govt.nz/assets/Uploads/publications/the-guide-v1.2-section-11-clusters.pdf

Ministry of Civil Defence & Emergency Management. (2012). *A cluster approach for civil defence emergency management*. Retrieved from www.civildefence.govt.nz

National Disaster Coordinating Council (NDCC). (2007). *Institutionalization of the cluster approach in the Philippine disaster management system, designation of cluster leads and their terms of reference at the national, regional and provincial level*. Manila, Philippines: Office of Civil Defense, Department of National Defense.

National Disaster Coordinating Council (NDCC). (2008). *Amendment of NDCC circular nos. 5, s. 2007 and 4, s. 2008 re the institutionalization of the cluster approach in the Philippine disaster management system, designation of cluster leads and their terms of reference at the national, regional and provincial level*. Manila, Philippines: Office of Civil Defense, Department of National Defense.

National Disaster Risk Reduction and Management Council (NDRRMC). (2011). *The national disaster risk reduction and management framework*. Manila, Philippines: Office of Civil Defense, Department of National Defense.

National Disaster Risk Reduction and Management Council (NDRRMC). (2013a). *Final report re effects of Magnitude 7.2 Sagbayan, Bohol earthquake*. Manila, Philippines: National Disaster Risk Reduction and Management Council.

National Disaster Risk Reduction and Management Council (NDRRMC). (2013b). *Final report re effects of Typhoon "Yolanda" (Haiyan)*. Manila, Philippines: National Disaster Risk Reduction and Management Council.

National Disaster Risk Reduction and Management Council (NDRRMC). (2014). *National disaster response plan (NDRP): Hydro-meteorological hazards*. Manila, Philippines: Office of Civil Defense, Department of National Defense.

National Disaster Risk Reduction and Management Council. (2017a). *National disaster response plan (NDRP): Hydro-meteorological hazards version 2*. Manila, Philippines: Office of Civil Defense, Department of National Defense.

National Disaster Risk Reduction and Management Council (NDRRMC). (2017b). *Y it*

   happened: Learning from typhoon Yolanda. Manila, Philippines: Office of Civil

   Defense, Department of National Defense.

Neergaard, M., Olesen, F., Andersen, R., & Sondergaard, J. (2009). Qualitative description

   — The poor cousin of health research? *BMC Medical Research Methodology, 9*(52).

   doi:10.1186/1471-2288-9-52

Nolte, I. M., Martin, E. C., & Boenigk, S. (2012). Cross-sectoral coordination of disaster

   relief. *Public Management Review*, *14*(6), 707-730.

O'Connor, M. (2011). Does international aid keep Haiti poor? *Slate*. Retrieved from

   http://www.slate.com/articles/news_and_politics/dispatches/features/2011/does_internat

   ional_aid_keep_haiti_poor/the_un_cluster_system_is_as_bad_as_it_sounds.html

Office for the Coordination of Humanitarian Affairs (OCHA). (n.d.-a). *Cluster coordination*.

   Retrieved from http://www.unocha.org/what-we-do/coordination-tools/cluster-

   coordination

Office for the Coordination of Humanitarian Affairs (OCHA). (n.d.-b). *International*

   humanitarian architecture. Retrieved from

   https://www.unocha.org/publications/asiadisasterresponse/InternationalHumanitarianAr

   chitecture.html

Office for the Coordination of Humanitarian Affairs (OCHA). (2006). *Inter-agency real-time*

   evaluation of the humanitarian response to the Darfur Crisis: Report one. Geneva,

   Switzerland: Author.

Office for the Coordination of Humanitarian Affairs (OCHA). (2012). *Coordination to save*

   lives: History and emerging challenges. Geneva, Switzerland: Author.

Office for the Coordination of Humanitarian Affairs Philippines (OCHA Philippines). (n.d.)

   Philippines: Humanitarian coordination architecture. Manila, Philippines: Author.

Orb, A., Eisenhauer, L., & Wynaden, D. (2000). Ethics in qualitative research. *Journal of Nursing Scholarship*, *33*(1), 93-96. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/j.1547-5069.2001.00093.x/pdfO'Sullivan, T. L., Kuziemsky, C. E., Toal-Sullivan, D., & Corneil, W. (2013). Unravelling the complexities of disaster management: A framework for critical social infrastructure to promote population health and resilience. *Social Science & Medicine*, *93*, 238-246.

Patrick, J. (2011). *Evaluation insights: Haiti earthquake response*. Paris, France: Organisation for Economic Co-operation and Development. Retrieved from https://www.oecd.org/countries/haiti/50313700.pdf

Perry, R. W. (2007). What is a *Disaster? In* H. Rodriguez, E. Quarantelli & R. Dynes (Eds.), *Handbook of disaster research* (pp. 1-15). New York, N. Y: Springer.

Phothongsunan, S. (2015). *Interpretive paradigm in educational research. Galaxy*, 2(1), 1-4.

Probst, B. (2015). The eye regards itself: Benefits and challenges of reflexivity in qualitative social work research. *Social Work Research*, *39*(1), 37-48. doi:10.1093.swr/svu028

Ramalingam, B., & Mitchell, J. (2014). *Responding to changing needs? Challenges and opportunities for humanitarian action*. London, England: Overseas Development Institute.

Reindorp, N., & Wiles, P. (2001). *Humanitarian coordination: Lessons from recent field experience*. London, England: Overseas Development Institute.

Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2014). Qualitative research practice: A guide for social science students and researchers (2nd ed.). London, England: Sage Publications.

Saavedra, L., & Knox-Clarke, P. (2015). *Working together in the field for effective humanitarian response*. London, England: Overseas Development Institute.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, *23*(4), 334-340. doi:10.1002/ 1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G

Scheper, B., Parakrama, A., & Patel, S. (2006). *Impact of the tsunami response on local and national capacities*. London, England: Tsunami Evaluation Coalition.

Scott, N. (2012). *The cluster approach*. Geneva, Switzerland: Office for the Coordination of Humanitarian Affairs.

Shahani, L. (2014, April 21). Deadly wait: The problems of identifying Yolanda's victims. *GMA News Online*. Retrieved from http://www.gmanetwork.com/news/news/specialreports/357712/deadly-wait-the-problems-of-identifying-yolanda-s-victims/story/

State Services Commission (SSC). (2008). *The factors for successful coordination*. Retrieved 2017 from http://www.ssc.govt.nz/node/2076

Stoddard, A., Harmer, A., Haver, K., Salomons, D., & Wheeler, A. (2007). *Cluster approach evaluation: Final*. Retrieved from http://www.pacificdisaster.net/pdnadmin/data/original/PHT_2012_ClusterApproach07.pdf

Stumpenhorst, M., Stumpenhorst, R., & Razum, O. (2011). The UN OCHA cluster approach: Gaps between theory and practice. *Journal of Public Health*, *19*(6), 587-592.

Street, A., & Parihar G. (2007). The UN cluster approach in the Pakistan response: An NGO perspective. *Humanitarian Exchange: The Humanitarian Practice Network*, *37*, 32-34.

Tait Communications. (2012). *Race against time: Emergency response — preventing escalating chaos in a disaster*. Christchurch, New Zealand: Author.

Tran, M. (2014, February 7). Typhoon Haiyan disaster response: how the relief effort worked. The Guardian. Retrieved from https://www.theguardian.com/global-

development/poverty-matters/2014/feb/07/typhoon-haiyan-disaster-response-
philippines-relief-effort

Tracy, S. J. (2013). *Qualitative research methods: Collecting evidence, crafting analysis,
communicating impact*. London, England: Wiley-Blackwell.

Ulleland, T. K. (2013). *The cluster approach for organizing emergency response: A case
study of Myanmar and Haiti (2008)* (master's thesis). The University of Bergen, Bergen,
Norway.

United Nations Development Programme (UNDP). (2009). *Assessment of development
results: The Republic of the Philippines*. Geneva, Switzerland: Author.

United Nations General Assembly. (2013). *Strengthening of the coordination of emergency
humanitarian assistance of the United Nations*. Geneva, Switzerland: Author.

United States Agency for International Development (USAID). (2016). *Building a better
response*. Washington, D. C.: Author.

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis:
Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*,
15(3), 398-405. doi: 10.1111/nhs.12048

Wendelbo, M., La China, F., Dekeyser, H., Taccetti, L., Mori, S., Aggarwal, V., … Zielonka,
R. (2016). *The crisis response to the Nepal earthquake: Lessons learned*. European
Institute for Asian Studies. Brussels, Belgium: Author.

Williams, R. H. (2005). Response to the 2004 Tsunami: An international perspective. In
Raising the bar. Berlin, Germany: Global Public Policy Institute.

World Health Organization (WHO). (n.d.). *The cluster approach*. Retrieved from
http://www.who.int/hac/techguidance/tools/manuals/who_field_handbook/annex_7/en/

World Health Organization (WHO). 2013. *Emergency response framework (ERF)*. Geneva,
Switzerland: Author.

Yap, D. (2013, November 10). Days after Yolanda's wrath, looting erupts in Tacloban City. *Inquirer.net*. Retrieved from http://newsinfo.inquirer.net/524731/days-after-yolandas-wrath-looting-erupts-in-tacloban-city

Appendices

Appendix A: Information Sheet

Date Information Sheet Produced:

17 October 2016

Project Title

The UN Cluster Approach: Improving coordination among agencies in humanitarian response using the case of the Philippine National Response Cluster best practices.

An Invitation

Hello Sir/Ma'am,

I am Mikael Abaya, a Masters student from the Auckland University of Technology, New Zealand (AUT). I'm doing a Master's Degree in Emergency Management. This research is a part of my qualification for Master's degree. I would like to invite you to partake as an interviewee in my research regarding the United Nations Cluster Approach and how it improves interagency coordination during humanitarian response. I believe that your experience with the Philippine National Response Cluster and your position in your organisation would really help me in qualifying my data.

Thank you very much! Maraming Salamat po!

What is the purpose of this research?

This research aims to provide a greater understanding on the use of the UN cluster approach for humanitarian response as well as the identification of best practices and possible difficulties and gaps in the implementation Philippine National Response Cluster that can aid policy makers in addressing any identified gaps.

How was I identified and why am I being invited to participate in this research?

I have chosen you based on your position in your organisation and your experience. I want to find out what your views are regarding the use of the cluster approach. You were invited to

participate as a representative of your agency. Cluster lead agencies were chosen as they have heavy involvement with the Philippine National Response Cluster as well as working with their UN agency cluster counterparts. As a senior officer in your organization, I have chosen you as I believe that you have the experience and knowledge which can greatly contribute in this research.

How do I agree to participate in this research?

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. I shall provide you an Informed Consent where you will be provided the choice on whether to participate or not. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

This research will involve collection of information from interviews as well as from policies and documents. The interviews will be used to support the documents.

What are the discomforts and risks?

There are no risks involved in this research project.

What are the benefits?

This research is a component of my Master dissertation which will assist me in finishing my Masters qualification. The findings generated in this research could assist in deepening and expanding the knowledge of the cluster approach and the Philippine National Response Cluster. It can serve as an academic foundation for future researchers. The findings can also aid you and your organisation identify best practices and gaps in the Philippine National Response Cluster mechanism.

How will my privacy be protected?

I intend to identify you in my research and as such your name and position will be credited in the findings. Only I and my supervisor, Dr Loic Le De will have access to the data collected. The transcripts will thus be stored in a secure location. If you prefer not to have your name credited in the research you may to choose that option in the Informed Consent form. However, due to the specialized and narrow field of the research, full confidentiality may not be guaranteed.

What are the costs of participating in this research?

There are no financial costs in participating in this research. The interview would be expected to take about one hour.

What opportunity do I have to consider this invitation?

You will be given two weeks upon receipt of the Participant Information Sheet to consider the invitation. I shall do one follow-up after two weeks to know if you are interested to participate.

Will I receive feedback on the results of this research?

A summary of the findings of the research can be emailed to the participant if requested for in the informed consent form.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor,

Dr. Loic Le De, Loic.le.de@aut.ac.nz.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, Kate O'Connor, *ethics@aut.ac.nz* , 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference.

You are also able to contact the research team as follows:

Researcher Contact Details:

Mikael Raffael Abaya, mikael.abaya@gmail.com, +64-22-390-6005 (New Zealand), +63-917-855-9750 (Philippines)

Project Supervisor Contact Details:

Dr. Loic Le De, Loic.le.de@aut.ac.nz.

Approved by the Auckland University of Technology Ethics Committee on *31 October 2016*, AUTEC Reference number *16/393*.

Appendix B: Interview Questions

1. What is the mandate of your agency under Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act?

2. What are the LGU roles in disaster response and preparedness?

3. How has the implementation of the Philippine National Response Cluster influenced the way the LGU conducts and coordinates disaster preparedness and response operations?

4. How does the Cluster approach align with the current coordination mechanisms like ICS?

5. What are the strengths of using the cluster approach in disaster risk reduction such as preparedness or response?

6. Are there any weaknesses or issues with using the cluster approach? What are some of these issues? Are they being addressed?

7. As an LGU, what areas of improvement that can still be done to improve humanitarian response using the cluster approach?

8. What are some best practices that your LGU has been able to observe with the cluster approach?