Multi-organizational Governance in International Disaster Management: Nargis Cyclone in Myanmar and Sichuan Earthquake in China Cases

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Abstract: Systemic problems have long prevailed in the international disaster relief scene. Despite the reformatory efforts of United Nations (U.N.), the international disaster management system does not have a well-integrated approach to ensure successful coordination of disaster management operations amongst the relief organizations. This paper analyzes the current structure of international disaster management and the U.N. reform initiatives to improve coordination structure and identifies main actors in international disaster management system. Identifying the central actors in the relief scene, this paper studies the issue of disaster relief coordination from the theoretical perspective of the network governance. Comparing the May 2008 cases of Nargis Cyclone in Myanmar and the Chinese earthquake in Sinchuan province, this paper analyzes the issues related to coordination amongst the international relief organizations and proposes solutions by using social network analysis tools. Content analyses of the both cases are conducted with the data from various newspapers and after action reports collected by the Lexis Nexis program. The two cases, the Myanmar cyclone and the Sichuan Earthquake, are characterized by very different response patterns, both within each country and between the international system and the affected nations. The analytical model developed in the literature review section of this paper helps us understand the striking differences in response from the international system (loosely structured as it is) to the two events. A major factor in this response is the dependence of the U.N. system on the invitation of the affected nations for assistance, and secondly, the response of the international community to a U.N. call for funding. This fundamental weakness in the U.N. system for disaster assistance affected the response in both events.

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Introduction

Our planet has become more vulnerable and experienced a number of disasters, both man-made and natural, over the past decades. Be it terrorism, earthquake, fire, tsunami, or hurricane, disasters and catastrophes have increasingly become international, both in scope and consequence, increasing the need for advancement in mitigation and response operations as well as for international coordination and collaboration of response operations. In an attempt to contribute to the knowledge in international emergency management and improve governance of response operations, this study identifies current structure of international disaster management with regard to coordination, collaboration, and networking capacities. In this effort, it closely studies the major actors and the activities of international organizations such as United Nations (U.N.) and its specialized agencies, International Red Cross and Red Crescent Societies (IRCRCS), and international and regional economic and security organizations such as North Atlantic Treaty Organization (NATO) and Association of Southeast Asian Nations (ASEAN) in managing international disasters and coordinating initiatives. Studying two cases of disaster relief in detail, this study attempts to identify problems in the system in terms of coordination and collaboration, and researches the ways of effectively resolving them.

This paper includes a literature review conducted on coordinative mechanisms of international emergency and crisis management drawing on articles from various scholarly journals. The main focus of the paper is first three to four weeks of the disaster relief operations. The study analyzes Myanmar Cyclone and Sichuan Earthquake cases in detail from the network and governance theory perspectives. By just giving brief background information about the disaster and the host government attempts to respond and coordinate the relief operations, the paper concentrates on the coordinative mechanisms solely in the international level. Identifying major problems of coordination in international disaster management operations of various international organizations in the context of these cases, this research will attempt to find ways in which those problems can effectively be resolved.

The research examines the following questions: What is the current structure of international emergency and disaster management coordination? What kind of international organizations are actively involved and what are their roles in coordinating multinational response to regional or local catastrophic events? What are the major problems associated with disaster relief coordination at the international level? How can international disaster management operations be coordinated more effectively? First, a literature review will be conducted on international emergency and disaster management. Second, International organizations with responsibilities in managing disasters and their regional and local/host coordinating agencies will be studied. Third, two cases – Cyclone Nargis in Myanmar and Sichuan Earthquake in China in May are thoroughly examined by using content analysis of news reports and government documents.

Theoretical Review and Conceptual Framework

Effective coordination and communication in response to disasters by international communities are significant factors that affect the success or failure of a relief operation (White 1999; Sylves 2008). This issue can best be captured by the analytical tools provided by network theory and network analysis (Comfort and Haasse 2006; Kapucu 2006; Stephenson 2006), because the structure of coordination shapes the rules of engagement and coordination of partnerships during relief operations (Byman, Lesser, Pirnie, Benard, and Waxman 2003). Is the operating environment of international aid organizations open to communication and cooperation? The following section describes the current elements of the international disaster management system.

The international disaster relief arena is full of independent actors responding to natural and humanitarian crises in their own ways. However, in order for the overall governance of disaster relief operations to be effective, those organizations need to coordinate their activities, sharing information, logistic, staff, and goods amongst one another. Given the importance of coordinative mechanisms for the effectiveness of the disaster relief operations, there is a strong need for assessing the system-wide structure of inter-organizational coordination. An effective evaluation of the coordination system necessitates one to situate disaster relief operations within an inter-organizational network framework, because coordination and collaboration mechanisms not only include working together and sharing information and resources but also are a product of the inter-organizational structure in which those organizations operate. It is therefore important to answer the questions as to how the disaster relief network situates certain organizations to be in better or worse positions to collaborate with other organizations; how an organization's position in the network influence its and other organizations' functions and outcomes; and what kinds of organizations occupy or play key mediating roles during disaster relief operations? The understanding of the influence that the network structure has on inter-organizational coordination and disaster relief outcomes will help emergency managers identify key organizations for specific types of relief or recovery activities (Moore, Trujillo, Stearns, Basurto-Davila, and Evans 2003).

Kent (1987) defines the international disaster relief network as "an amalgam of non-binding contacts, sustained by various channels of communication and by an awareness of who is around" (p.69). Yet, such informal network arrangements which include diverse groups of actors that are tenuously connected by scores of informal contacts and temporary commitments do not have long time span and create merely short-term interdependencies (Kent 1987). In managing complex emergencies and disasters that often involve multiplicity of actors with diverse interests as well as potential technical and organizational failures, informal networks play more important roles than formally established hierarchical structures in ensuring effective system-wide coordination (Chisholm 1989). The high level of uncertainty associated with complex emergencies and disasters actually permits the development of networks thereby enhancing effective coordination. Powell (1990) highlights the network perspective as "[r]eciprocity and mutually supportive actions rather than administrative fiat and resource dependence and win-win situation rather than paternalistic hierarchy are the defining characteristics of networks" (p. 303). Informal networks also play an important role in terms of information exchange and dissemination at time when a crisis breaks out. For instance, international community and the World Health Organization (WHO) officials did not know

about the SARS outbreak in China until after an email was received informally from a doctor in China. As it is seen in this example, informal networks can pass the barriers of political expediency, lack of scientific diagnosis, and delays in reporting (Bryant, Vertinsky, and Smart 2007).

In his research on international peacekeeping in Bosnia, Lipson (2005) demonstrates that network theory provides a rich menu of conceptual tools and frameworks for understanding inter-organizational coordination in complex events. He found that inter-organizational coordination mostly develops through networks and informal arrangements on an ad hoc basis and some of which becomes institutionalized (Lipson 2005). According to Lipson, formal coordination is the rearrangement of organizational charts and structure (hierarchy) of authority and responsibility, and explicitly prescribed procedures. And "informal coordination develops spontaneously through social networks and ad hoc responses to interdependence" (Lipson 2005: 14).

Barriers for effective coordination among the various disaster relief organizations include the environment and structures in which operational relationships of these organizations are embedded. These are competition for scarce resources; attracting donors through excessive use of media; autonomous actors and organizations; and direct and administrative costs of coordination (Stephenson 2005). Effective communication is very crucial for the better coordination of response actions to tame pandemic diseases like SARS. Singapore responded effectively to the outbreak of SARS with its centrally coordinated response system. On the other hand, Canada experienced serious problems in effectively taming the disease because of inter-organizational coordination problems as well as an inter-jurisdictional conflicts (Bryant et al. 2007). To improve the coordination of disaster response operations among multiplicity of international actors, Stephenson (2005) suggests that actors in the disaster relief network develop organizational cultures that actively promote inter-organizational trust. He proposes the adoption and implementation of a collective rationality and sense-making approach by the organizations with respect to their missions and personnel training and development. During the disaster relief in Rostaq, Benini (1999) observes a dissolution of organizational boundaries of the collaborating disaster relief agencies; identity and internal configuration of organizations blurred and became meaningless by the way of sharing authority and flexible exchange of resources. More notably, he observes that decision making patterns do not necessarily centralize under crisis situations; on the contrary, "the networked organizations remained without a clearly recognizable center" (p. 45) and this type of network design provided a greater scope for learning than a centralized arrangement would have (Benini 1999).

In his rather long crisis case study Moynihan (2008) finds out that one needs to take into account the factors contingent upon each crisis in identifying better systems of governance for effectively managing disasters. He studies U.S. practice of Incident Command System in which a diverse network of actors is governed by a hierarchy. This example could be adopted as a "best practice" model for the international disaster management. Moreover, Eberlein and Newman (2008) come up with a similar idea of combining emergent transnational networks with formal institutions in the E.U. context. The authors find out that the incorporation of transgovernmental networks into the arena of authoritative rule-making provide a better framework for E.U. governance. Considering this example in the international disaster relief area, synergizing the

networks of diverse actors with more centralized U.N. governance system would yield better framework for the governance of international disaster response operations.
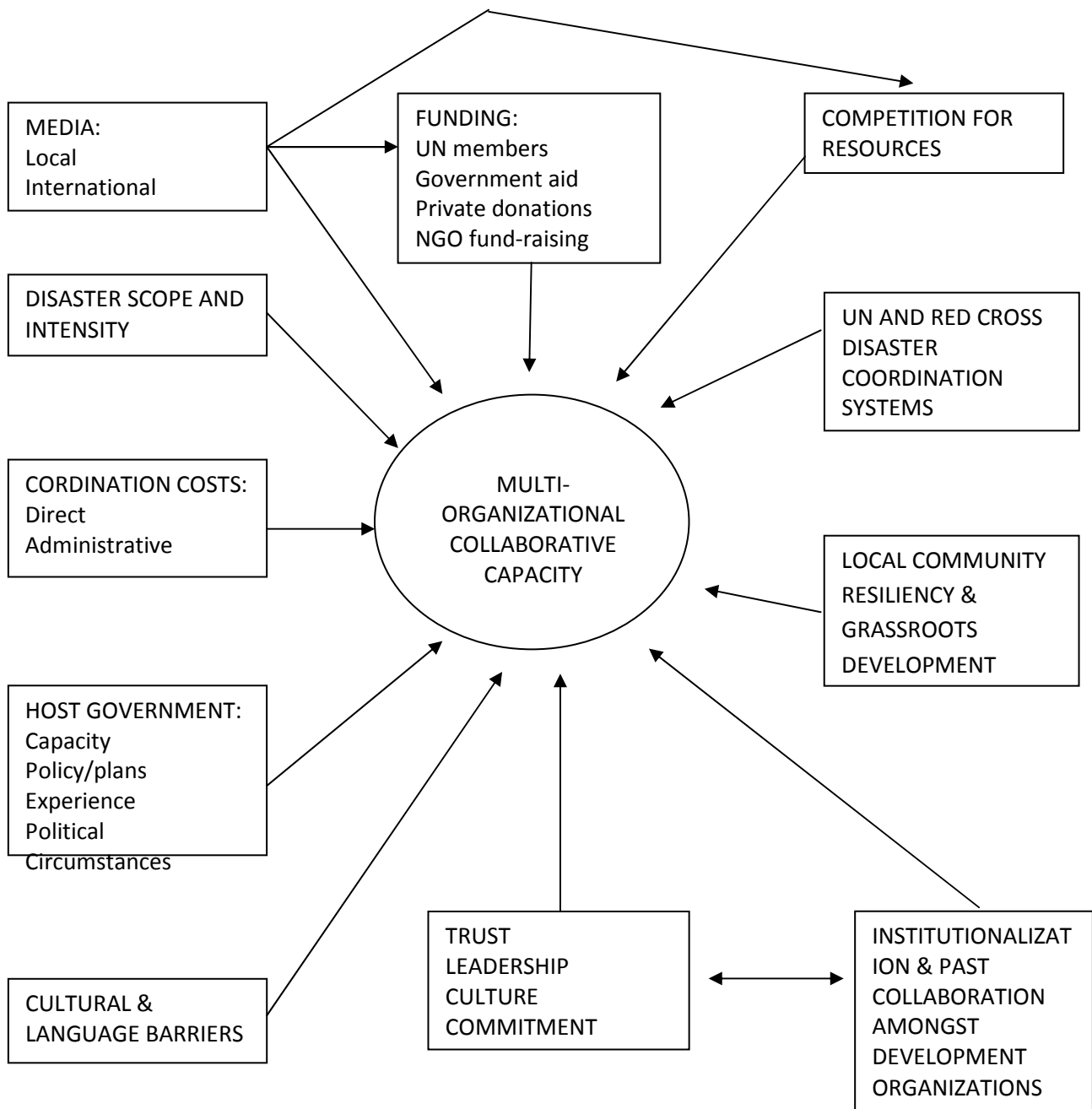
Figure 1 illustrates basic concepts that have significant ramifications in determining the collaborative capacity in international disaster relief. Intensity and scope of disasters determine the level of international involvement and disaster assistance, and disaster relief coordination is set up according to the statistics of lost lives and damaged properties. Capacity of host national governmental and nongovernmental bodies in terms of experience in dealing with disasters, policy and planning improvements resulting from previous incidents is also crucial in determining the level of international involvement and disaster relief coordination. Local and international media is another influential actor that echoes the impact of disaster to the affected communities, affects the level of international public and private donations, and reverberates the disaster relief activities of international organizations mostly impacting the competition for funding and visibility amongst different sets of diverse actors.

International disaster relief coordination is also shaped by the extent of institutionalization and operational capacity of organizations that are already active in affected communities delivering development aid and building capacity. The level of trust between development organizations and host government, the extent of authority granted to development organizations by the host national parliament, and the level of coordination and collaboration amongst those pre-existing development organizations are important in that they shape the functioning of international disaster relief coordination. This is primarily so because most disaster response organizations arrive in the disaster scene with temporary agendas, which is disaster response. Pre-existing facilities of coordination and practices of collaboration catalyze the institutionalization process of emergent networks of disaster responders.

Cultivation of interpersonal relationships and trust among disaster relief partners, development of standards and norms amongst partners, pre-established International Nongovernmental Organizations (INGO) coordination mechanisms due to strong donors (and their requirements for collaboration or division of labor), existence of a lead agency and best practices facilitate the governance of multi-organizational disaster relief coordination at times of power outages, communication problems, and organizational failures. Individual readiness of the citizenry (resilient communities) and grassroots development in affected nations is an important factor in shaping effective collaboration in disaster relief.

Competition for scarce resources, direct and administrative costs of coordination, and cultural and language barriers impede the attainment of successful disaster relief coordination. Some crucial concerns and issues embedded within the U.N. disaster coordination system and International Red Cross networks also obstruct successful partnerships in international disaster response. The U.N. system is embroiled in perennial problems of institutional survival (Kent 2004); interagency rivalries (Natsios 1995); UNOCHA's lack of controlling authority over other U.N. agencies (Byman et al. 2003; Stephenson 2006); nonexistence of secure U.N. budget (Stephenson 2006); dependence of the U.N. on solicitation of help from host nations; and unequal U.N.-INGO relationship in which subcontracting aspect is more stressed rather than partnership (Natsios 1995). International Red Cross network and its coordinative system is not in a position to become an all-inclusive coordinative body of global disaster relief policy because of many factors, its strict political neutrality being one of the primaries, which would restrict their partnership with other political organizations such as the U.N.

Figure 1: Collaborative Capacity for Governance in International Disaster Relief

MEDIA:
Local
International

FUNDING:
UN members
Government aid
Private donations
NGO fund-raising

COMPETITION FOR
RESOURCES

DISASTER SCOPE AND
INTENSITY

UN AND RED CROSS
DISASTER
COORDINATION
SYSTEMS

CORDINATION COSTS:
Direct
Administrative

MULTI-
ORGANIZATIONAL
COLLABORATIVE
CAPACITY

LOCAL COMMUNITY
RESILIENCY &
GRASSROOTS
DEVELOPMENT

HOST GOVERNMENT:
Capacity
Policy/plans
Experience
Political
Circumstances

TRUST
LEADERSHIP
CULTURE
COMMITMENT

INSTITUTIONALIZAT
ION & PAST
COLLABORATION
AMONGST
DEVELOPMENT
ORGANIZATIONS

CULTURAL &
LANGUAGE BARRIERS

Major Actors in International Disaster Management

United Nations and Its Specialized Agencies: When an emergency occurs, the U.N. responds immediately and in a continuing basis by supplying aid in the form of food, shelter, medical assistance and logistical support. The U.N. Emergency Relief Coordinator heads the international U.N. response to crises through a committee of several humanitarian bodies including the U.N. Children's fund (UNICEF), the U.N. Development Program (UNDP), the World Food Program

(WFP), the U.N. High Commissioner for Refugees (UNHCR), World Health Organization (WHO), U.N. Food and Agriculture Organization (FAO), and other specialized agencies as deemed necessary depending on the problems specific to the event (Coppola and Haddow 2007; White 1999).

The World Food Programme (WFP) is a U.N. specialized agency which has a key role in coordinating the provision of food aid through conducting crop production calculations and developing food aid requirements and logistics planning for disaster relief operations (Natsios 1995). It works closely with the U.N. FAO in helping the disaster victims especially of rural areas (Sylves 2008). United Nations International Children's Emergency Fund (UNICEF) mainly targets women and children in providing disaster relief and development operations but also collaborates with other disaster relief organizations to restore food distribution, water and sanitation services fundamental to restore normal living conditions. Primary activities of the agency include emergency medical interventions, mass vaccination campaigns for children, water and sanitation programs, and therapeutic for severely malnourished children in emergencies (Natsios 1995; Sylves 2008).

UNDP not only has development mission but also the resident coordinator of the agency in each country acts as the U.N.'s resident coordinator with pre-eminent executive authority to coordinate other U.N. agencies under the guidelines of General Assembly (Natsios 1995). UNDP ties its response and recovery efforts to long-term and sustainable development and has two operant programs: 1) Emergency Response Division 1) Disaster Reduction and Recovery Program. Moreover, the UNDP runs U.N.'s International Strategy for Disaster Reduction Working Group on Risk, Vulnerability, and Disaster Impact Assessment, which promotes standardization of guidelines for increasing awareness and sensitivity of emergency responders to the social consequences of a disaster (Sylves, 2008).

World Health Organization (WHO) is another U.N. specialized agency - a voluntary organization of a bureaucratic nature which reflects the interests of its members. Dominated by a single profession (medicine), the organization is vulnerable to competency trap in which it is difficult to unlearn. The organization has its own agenda and standard operation procedures to deal with crises. However, it needs to consult multiple parties before issuing travel advisories (Bryant et al. 2007).

The U.N. Office for the Coordination of Humanitarian Affairs (UNOCHA) was established in 1998 by the U.N. General Assembly under the chairmanship of the Emergency Relief Coordinator to build consensus and share best practices among all U.N. partner organizations involved in disaster relief. For each disaster case OCHA collaborates with multiple organizations to formulate a joint and coordinated course of action. OCHA also collects and disseminates information monitoring ongoing disasters and conducting post-disaster assessments through its Disaster Response System unit. OCHA also coordinates the field missions of varieties of U.N. agencies in the assessment of needs, mobilization of resources, management of donations and contributions, and issuance of follow-up reports. OCHA also lends money to disaster-affected communities from its cash reserve fund – Central Emergency Revolving Fund (Sylves 2008).

International Red Cross Movement (IRCM): IRCM is composed of International Committee of Red Cross (ICRC) and the International Federation of Red Cross and Red Crescent

Societies (IFRC). When a disaster strikes and the local capacity is exceeded, an appeal by that country's national chapter of Red Cross is made for support to the Federation's Secretariat. As coordinating body, the Secretariat initiates an international appeal for support to the International Federation and many other outside sources, and provides personnel and humanitarian aid supplies from its own stocks. These supplies, which can be shipped in if not locally available, pertain to needs in the areas health, logistics and water specialists, aid personnel, and relief management (Coppola and Haddow 2007).

IRCM was established after the horrific events of the Solferino battle in 1859 and its mission has been to lessen the suffering during armed conflicts. It has a mandate under the international law (under the Geneva Conventions and Additional Protocols). Its budget is made of block grants by donor governments as well as by fund-raising activities of national chapters. One of the very important inviolate principles of the Red Cross is its political neutrality. According to Natsios (1995) "[t]he age, doctrine, funding mechanism and mandates of the ICRC set it apart from both the UN system and the NGO community" (p, 412).

North Atlantic Treaty Organization (NATO): NATO used to be an important actor in military operations, such as conflicts and wars among the nation-states. However, toward the end of the Cold War, NATO has transformed its mission by incorporating the provision of humanitarian aid, peacekeeping, and natural disaster response as well as well as civil crises and emergencies (NATO, 2004). NATO's assistance in disaster relief during the earthquake in 2005 in Pakistan was an important factor in the success of overall disaster response operations. It also delivered disaster relief assistance to the United States following the Hurricane Katrina as a response to official U.S. request (NATO, 2006). NATO has the logistic capacity and expertise in dealing with emergency relief under the aegis of the United Nations (Hanning 1978).

The Association of the Southeast Asian Nations (ASEAN): ASEAN has set up a disaster assistance agency as the organization evolved and its economic and political influence grew. Its resources and collaborative initiatives have helped its disaster relief agency to assist its members that are mostly disaster-prone countries and developed its logistic capacity and experience in dealing with disasters.

International Nongovernmental Organizations (INGOs): Not all NGOs get involved in international disaster relief; most of them arrive in the affected geography, transfer the resources - gifts, donations, etc., to few operating NGOs and leave the disaster scene. NGOs that have a development mission in addition to disaster relief are advantageous because of their familiarity with the local staff and their social and cultural characteristics gained well before the onset of the disaster (Natsios 1995).

International Development Agencies: Under the guidance of the U.S. State Department, USAID is an organization that has been involved in disaster response and recovery operations since the U.S. Marshall Pan designed to reconstruct Europe after World War II. Within USAID, the Office of US Foreign Disaster Assistance (OFDA) facilitates and coordinates US emergency response and mitigation to natural and manmade disasters overseas (Sylves 2008). European Commission's Humanitarian Aid Office (ECHO), Japan International Cooperation Agency (JICA), German Federal Agency for Technical Relief (THW), Russian Ministry of Emergency Situations (MES), and British Foreign and Commonwealth Office (FCO) deliver considerable funding and services in international disaster relief.

Current Structure and Evolution of International Disaster Management Coordination

Current structure of international disaster relief coordination is made up of U.N. coordinative mechanism and International Red Cross relief system, both of which incorporate activities of other major actors such as International Nongovernmental Organizations and Regional Economic and Security Organizations. The U.N. coordination mechanism is criticized by several authors in the literature on the grounds that the U.N. has spent its energy on alleviating its inter-agency rivalries and continuing its own (institutional) survival instead of running an effective coordination and leadership roles tasked by the General Assembly (Kent, 2004). Moreover, the U.N. and its specialized agencies play a vital role in operating disaster relief; however, none of those agencies were granted a controlling authority over others by the General Assembly to manage or oversee the efforts of their peers (Byman et al. 2003; Stephenson 2006). In addressing humanitarian crises, U.N. is divided organizationally along functional lines (Borton, 1993; Kent 1987) and UNOCHA does not have any authority over the actions and behaviors of any other U.N entity dealing with a crisis (Reindorp 2002; Reindorp and Wiles 2001;). The UN agencies do not also have a secure budget as they depend on contributions from member states and their citizens (Stephenson 2006).

It is also important to note that many U.N. agencies are not operating entities; they do not directly deliver services to disaster-affected communities. Usually, U.N. agencies need to work with international and local NGOs in providing disaster relief (Stephenson, 2006; Kent, 1987). This kind of pluralistic organizational structure with no single entity having controlling authority over the others and made up of somewhat interdependent as well as quasi-autonomous participants (Stephenson 2006), may lead to operational chaos, lengthy delay and inevitable failure in disaster response (Natsios 1995).

Given the infeasibility, both politically and administratively, of complete overhaul of the disaster response structure Natsios proposes that the focus be on incremental reform of the existing system. This kind of reform would include "aggregating relief actors within each organizational sector," (Natsios 1995:417) meaning that the United Nations would centralize its decision making authority to come up with a single strategy in one entity (Department of Humanitarian Affairs) and NGOs similarly would organize themselves under the umbrella of InterAction (American NGO Partnership Association) and ICVA (International Council of Voluntary Agencies), after which representatives from each of these groups as well as from International Red Cross, international financial institutions, NATO and military establishments (if necessary) could meet to design a unified strategy (Natsios 1995). However, the reform at the top may not trickle down to the bottom, and the coordination at the headquarter level may not lead to field-level cooperation. According to Natsios (1995):

> UN agencies have traditionally focused their attention on governments, their primary constituency, while NGOs focus on grassroots development at the village level and cooperate with developing country governments only at the regional or provincial level during emergency operations. Under this traditional paradigm, UN agencies viewed NGOs as subcontractors in a clearly subordinate position - paid for services performed - not as equal partners with unique capacities, particularly in humanitarian relief operations. This has caused the resentment by UN agencies of nongovernmental organizations when they do not act in the expected way and by NGOs when they are treated as contractors rather than equal partners (Natsios 1995: 412).

In complex and dynamic environments of catastrophic disasters U.N. field offices provide "a natural coordination mechanism for nongovernmental organizations and U.N.

organizations that has at least improved the exchange of information among the response agencies" (Natsios 1995: 413). "The defining element for immediate response from the U.N. or INGOs was physical presence prior to the disaster and resultant local knowledge that enabled their staff to respond quickly" (TEC n.d.).

In UN system there is no "clear role definition, control over the allocation of the humanitarian aid resources or a cadre of competent, readily available, technical personnel" von Bernuth 1996: 290). There is a lack of coordination among the U.N. agencies themselves at the headquarter, regional, and host country office levels (TEC n.d., Benini 1999).There are also managerial problems affecting coordination: U.N. staff need to be "adequately supported, equipped and trained" (TEC n.d.). In order to tackle these problems and increase the effectiveness of its coordination activities, the OCHA recently has initiated some reforms. The reforms aim at strengthening the role of Humanitarian Coordinator to better support the field coordination and "strengthening of the response capacity through a system of lead clusters in activity areas where there are clearly defined gaps" (Hicks and Pappas 2006). However, there are problems with this new approach, one of them being the fact that lessons learned from previous disasters were not incorporated into this new approach (Hick and Pappas 2006). Moreover, a lead agency may give a priority to its own interests and goals at the expense of an overall effort (Byman et al. 2003).

Partnerships are seen as a key element in response to disasters internationally. For example, WHO cannot operate without the assistance of other partner agencies in the provision of necessary logistics, equipment and supplies, transport, human resources, and the knowledge of the cultures and languages of the local area (Ritson and Youssef 2006). "*Collegiality* – Rather than command and control, coordination characterized the relationships between the governments, the WHO, and other agencies" (Oyegbite 2005: 472). If organizations want to work independently, it results in repetition and waste of time, resources, and energy. Interpersonal relationships must be fostered in addition to the chemistry of organigrams. Development of standards and norms among partners is crucial; WHO can take the lead and establish 'best practices' (Oyegbite 2005).

Among the major actors in international disaster management scene, the U.N. family of organizations has a formal arrangement for operational-level coordination without successful implementation. The ICRC is fully operational and controls operations through Delegates General. NGOs have no formal arrangements to ensure operational coordination (Byman et al. 2003). NGOs have informal webs that promote coordination. For example, USAID expects that U.S.-funded NGOs consult among themselves (Byman et al. 2003). "Pre-established INGO coordination structures with coherent systems for collaboration" and "capacity mapping in high risk regions" help enhance INGO coordination (Volz 2005: 27).

International Red Cross disaster coordination system is composed of ICRC and IRCRCS both of which quite a large number of branches in countries and provinces throughout the globe. When a disaster strikes and the local capacity is exceeded, an appeal by that country's national chapter of Red Cross is made for support to the Federation's Secretariat. As coordinating body, the Secretariat initiates an international appeal for support to the International Federation and many other outside sources, and provides personnel and humanitarian aid supplies from its own stocks. These supplies, which can be shipped in if not locally available, pertain to needs in the areas health, logistics and water specialists, aid personnel, and relief management (Coppola and

Haddow 2007). Although International Red Cross has well-institutionalized disaster coordination system among their national chapters, international bodies, Western NGOs, and grassroots initiatives in disaster-affected communities, the Red Cross coordinative mechanism is not in a position to serve as a world-wide disaster relief coordination body. Nor it is in good standing in terms of coordinating its disaster relief activities with U.N.

Given the diversity of actors and their sources of funding and authority (accountability, governance) as well as lack of unified global coordinative body that would formulate and govern global disaster relief policy, international disaster relief must be reconceptualized under the name of loosely coupled international disaster relief coordination system in which disaster relief services are provided by multi-organizational networks without a clearly identifiable, dominant network governing body in the center (Benini 1999; Stephenson 2006).Effective international disaster response requires that the actors in the system require developing relationships with other institutional members through boundary spanning networks (through staff) before working together in response to any disaster. Coordination and relationship building cannot be accomplished without good intention and institutional leadership - and encouragement from this institutional leadership (Kapucu 2006; Stephenson and Schnitzer 2006). The relationship cannot be developed without trust (Scott and Davis 2007). "Building these shared understandings among actors at multiple levels of organization among network players can elicit a broader and deeper dialogue on the nature of operations and missions and how best to realize them" (Stephenson and Schnitzer 2006: 53).

Methodology

A literature review is conducted on the scholarly articles published in key public administration, emergency and crisis management, and nonprofit management journals. They are Public Administration Review, Disasters, Voluntas: International Journal of Voluntary and Nonprofit Organizations, Society, Nonprofit Management & Leadership, and Journal of Contingencies and Crisis Management. The articles are located by using Google Scholar and Academic Search Premier. Keywords used in search engines include but not limited to "international disaster coordination," "international disaster management," "U.N. disaster coordination," "NATO disaster relief," and "Red Cross disaster response," "Myanmar Cyclone," and "Sichuan Earthquake." Moreover, information provided on the websites of international organizations such as United Nations, NATO, and International Red Cross Movement as well as field and after action reports these organizations or their members provide are utilized. The two cases are selected because they are the most recent disasters of catastrophic magnitude.

In addition to the review of scholarly articles written in the field, this study utilizes content analyses of news reports, government documents, and after action reports collected using Lexis Nexis Program. Contents of major Anglophone world newspapers were analyzed after four weeks of the time when the disaster struck. And then after action reports, situation reports, and organization documents of disaster relief organizations were analyzed as they become available on the Internet, and a month later, the analysis was updated with more reports of the response period being published online. We acknowledge that an interpretation based only on English language sources available through internet access might miss important aspects of the response operations.

The data obtained by content analysis are analyzed by using UCINET software (Borgatti, Everett, & Freeman, 2002). The interactions of disaster relief agencies were mapped by using NetDraw function in UCINET. NetDraw helps visualize the characteristics and structure of inter-organizational actions, which is useful in finding the positions of each individual organization within a wider disaster relief organization.

Network Form of Governance Cases

Myanmar Cyclone Nargis Case: On May 2 2008 a devastating Cyclone Nargis struck the Ayeyarwady Delta and Yangon in Myanmar and led to the death of over 84,530 people, with a further 53,836 still reported missing. The impact of the disaster was as devastating as the 2004 tsunami in South Asia, especially in terms of community and household impact, and it was the worst disaster in Myanmar's history. The cyclone destroyed about 450,000 homes and damaged 350,000 others. About 75 per cent of health facilities as well as around 4,000 schools in the affected areas were destroyed or severely damaged. The cyclone swept away the livelihoods of people, inundating over 600,000 hectares of agricultural land, taking lives of about 50 per cent of draught animals, destroying fishing boats and agricultural stocks and plants (ASEAN 2008).

The disaster came in an untimely fashion, when the politics of the nation is concerned. As the cyclone hit the Ayeyarwady Delta a few days prior to the scheduled national elections, the ruling regime was left in severe political quagmire since it received pressure from Western governments and pro-democratic Buddhist opposition forces to open up the country and democratize the election process. These political hardships not only inhibited the ruling army from organizing effective disaster response, but also the regime's deep distrust for Western governments and institutions that have advanced capabilities lead the Myanmar government to delay the acceptance of the aid of those who had criticized the regime.

The technical information regarding the intensity and direction of the cyclone could not be clarified until the last moments and the lack of communication and preparedness of the government led to massive loss of lives and properties. However resilient the dwellers of the area are at the individual level, the local community and government entities had lack of capacity to effectively manage the impact of the disaster. The political situation and bureaucratic red tape and inefficiency exacerbated the already high-intensity disaster outcomes.

Even though there were local branches of the U. N. agencies, Red Cross national chapter and some other international NGOs with their staff, the capacity of the organizations were overwhelmed by the huge impact of the disaster. As the Myanmar government did not allow the international experts and cargo ships with aid goods into its territory for several weeks, there was a need to resolve this problem through other means. The international media (the Anglophone) mainly engaged in political discussion and, as it can be seen the visualization of the newspaper content analysis below, did nothing more than denouncing the oppressive regime which portrayed a negative image of Myanmar with potential impacts on the international donations.

At the time when the U.N. members, mostly European ones, knowing that it was unviable, pressed for the military intervention based on the protection of people's lives clause, the neighboring countries, who were trusted by the Myanmar government, were delivering disaster response assistance to save the lives and properties of the Myanmar people. Chinese, Japanese, Russian, Indonesian, and Singapore disaster relief teams were approved by the regime to help in search and rescue, mass care, medical and other operations. The leadership of the

Singapore government led to the effective intervention of the Association of the South East Asian Nations whereby it set up a tripartite ASEAN-U.N.-Myanmar government joint task force to coordinate, facilitate, and monitor international disaster relief assistance (ASEAN 2008).

Figure 2: Interorganizational response to Nargis Cyclone in Myanmar
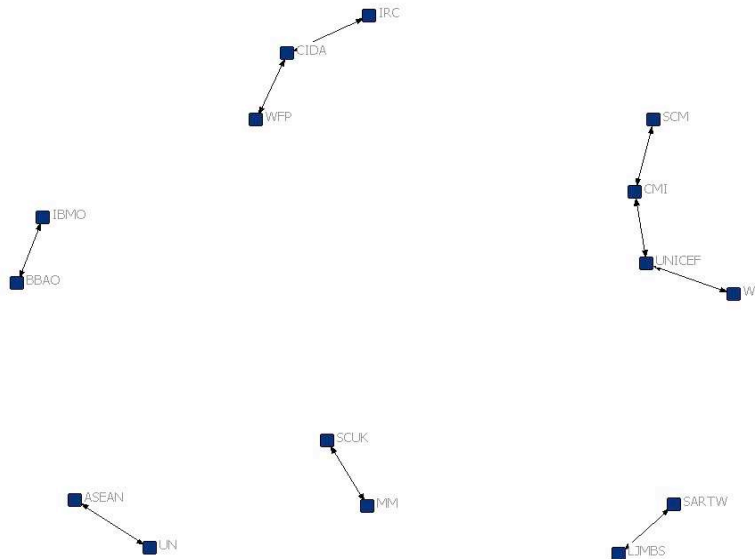
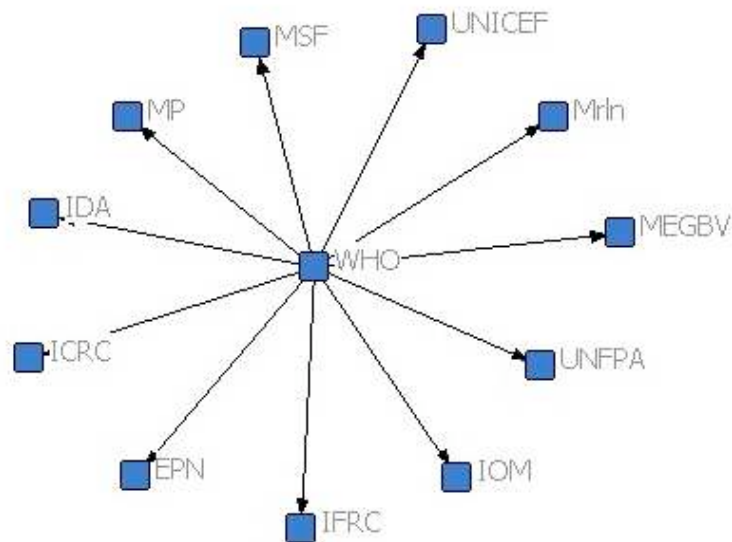*Source*: newspaper content analysis (See Appendix A for the list of abbreviations.)

For a regional organization like ASEAN, joint coordination of international disaster relief assistance with U.N. and Myanmar government was a novel role. Moreover, the role of ASEAN in coordinating disaster relief brought about a new approach to disaster management. Strong trust and positive past experience among the neighboring nations and institutions led to more effective coordination in disaster relief operations (Holmes 2008).

United Nations encompasses a complex bureaucracy with lots of specialized agencies and coordination mechanisms such as HRC, Humanitarian Coordinators, ECHA, OCHA, SCHR, ECPS, UNDG, UNCT, UNDMT, IASC, and so on. In response to Cyclone Nargis disaster, the United Nations agencies have used the lead cluster approach. On May 7th, there were established eight clusters under the leadership of U.N. Emergency Relief Coordinator, John Holmes, at UN Organization for the Coordination of Humanitarian Affairs (UNOCHA). These clusters are WASH, Nutrition, Education, Protection of Children and Women, Emergency Shelter, Food, Logistics, and Emergency telecommunications. Each cluster is composed of one of the U.N. specialized agencies as a lead agency and the rest of U.N. agencies and other NGOs as partners. For example, the lead agency of the Food cluster is World Food Program. There are also subgroups in clusters such as Infant Feeding in Emergencies in Nutrition cluster and the subgroups consisting of partners like World Health Organization, UNICEF, and Save the Children (UNOCHA 2008).

Within the health cluster network, various NGOs, U.N. agencies and the IOM held meetings to minimize overlaps and compose a draft for a joint U.N. Flash Appeal, as the disaster relief progressed. SEARO (WHO's SEA regional office) started to coordinate the response to media. The WHO Regional surveillance officers (RSOs) have coordinated the flow of surveillance information in the health cluster at the township level. The information was received

through formal ways (standardized reports) as well as through informal ones (rumors). The role of the RSOs is vital because usually communicable disease spread faster than human and organizational communication information. Effective communication, exchange, and coordination (collection, analysis, and dissemination) of information is crucial for the success of the disaster relief. U.N. Disaster Assessment and Coordination (UNDAC) team is deployed from a regional office in Thailand. WHO has pre-established protocols with various organizations in the disaster medical response sector to establish standard operational procedures and to coordinate drug donations. It is called interagency emergency health kits. "The term 'emergency' is applied to various situations resulting from natural, political and economic disasters. The Interagency Emergency Health Kit 2006 (IEHK 2006) is designed to meet the initial primary health care needs of a displaced population without medical facilities, or a population with disrupted medical facilities in the immediate aftermath of a natural disaster or during an emergency." The partnership network of this initiative is mapped below in Figure 3. This kind of disaster planning and preparedness is vital for effective response (Kapucu 2005). WHO is a network administrative agency in this initiative with the task of leading and coordinating the actions of partners (WHO 2006).

Figure 3: The map of WHO partnership in response to Cyclone Nargis in Myanmar

Source: WHO website content analysis (See Appendix A for the list of abbreviations).

Although disaster relief was divided into functional clusters in order to increase the effectiveness of the relief operations, the clusters collaborate with one another as well. It is called inter-cluster collaboration. The Health cluster has collaborated with the Logistics, Shelter, Nutrition,WASH and HIV/AIDS clusters both in Myanmar and Thailand, at national and regional levels, respectively. The longstanding presence of international NGOs, such as Merlin, in the affected areas has allowed close collaboration between the health cluster and local and national health officials. There are also other kinds of organizational involvement in disaster

relief apart from participating in clusters. For example, the WHO participates in and leads the health cluster; but also the WHO has also Health Action in Crises program through which A WHO Emergency Public Health specialist is sent to the field to help undertake and coordinate disaster health operations. One organization could be involved in multiple clusters, for instance, the UNFPA is involved in the Health, Logistics, and Protection of Women and Children clusters.

Nearly 50 percent of the rural and township health centers in the cyclone-affected areas of Myanmar are reported to be damaged. Response period has longed more than usual because of the political, bureaucratic, geographic, and climatic impediments. A Civil Society Information Resource Centre was opened on 15 May for local self-help groups at the initiative of INGO Forum.

The cluster networks have been dynamic throughout the three to four weeks of the disaster relief. For example, initially there were around 20 INGOs, U.N. agencies, and the IOM in the health cluster. A week later the number of NGOs reached to 30, another week later to 40, then to 50 in the fourth week of the disaster relief indicating a rapid growth in the number of health cluster participant organizations. However, the number of core groups (cliques) of organizations within the cluster network has been stable. The WHO, UNICEF, IOM, Merlin, MSF are core service providers with their own logistics, staff, and funding.

Red Cross Myanmar (and other sister societies across the world with their donations) undertook an important role in disaster response and recovery. As a neutral agency with its local chapter, Red Cross did its best to save the lives and properties of the Burmese people and help them return to the normal state of life they have led prior to the disaster. Furthermore, the Burmese expatriates throughout the world were active in organizing fund-raising activities and donating to Red Cross and other charity foundations involved in disaster relief in Myanmar. Because these Buddhist expatriates are pro-democratic groups, who are mainly against the current regime, they were not allowed into the country and they did their best far from their country.

The Cyclone Nargis has demonstrated once again that international partnerships and effective coordination mechanisms for delivering disaster aid are important for saving lives and properties of people throughout the world. It also showed the importance of engaging with host government, employing diplomacy, and considering the fact that Western humanitarian agencies are not the only relief actors but there are many relief workers and organizations of Asian countries (Katoch 2008). Moreover, the disaster also showed that capacity building at the local level to organize effective prevention and risk reduction and preparedness activities are important to protect the lives and properties of people (U.N. 2008).

Sichuan Earthquake in China: On May 12, 2008 a major earthquake of 7.9 on the Richter scale struck Wenchuan County, Aba Prefecture in China's Sichuan Province at 14.28 Beijing time. Nearly 70,000 people died, as 375,000 others got injured, according to official government of China (GOC) figures. Immediately after the earthquake struck, the Chinese Prime Minister Wen Jiabao arrived at the disaster scene to lead the coordination of all-out emergency response ordered by the president Hu Jintao. The Chinese PM set up a National Disaster Relief Headquarters in the disaster-affected areas and the National Committee for Disaster Reduction activated the highest level of emergency response according to the National Plan on Emergency

Response for Disaster Relief. The army, armed police and paramilitary forces, rescue and medical teams, and relief supplies have been sent to the region (UNOCHA 2008).

Table 1: Estimated numbers of death and destruction in Sichuan Earthquake in China, May 2008.

Total Dead	69,222	GOC – August 7, 2008
Total Injured	374,638	GOC – August 7, 2008
Total Missing	18,176	GOC – August 7, 2008
Total Homeless (Estimated)	5 million	IFRC[1] – July 29, 2008 IFRC[1] – June 11, 2008
Total Displaced (Estimated)	15 million	IFRC – July 29, 2008 IFRC1 – June 11, 2008
Total Affected (Estimated)	46 million	U.N. – July 16, 2008

Source: http://www.usaid.gov/locations/asia/countries/china/earthquake.

As it can be seen from the above table, 15 million people got displaced and 5 million of them becoming homeless. Therefore, no matter how effective the government was in its emergency response, the affected people needed more tents and temporary housing. Chinese appeal for assistance in the international community ensued and generous help from public, private, and NGO communities throughout the world responded both in cash and in kind. The international media portrayed a positive image of the successful and vigorous centrally coordinated emergency response. As China turned down the disaster assistance teams of the USA, Canada, and Australia, it accepted the disaster relief teams from Russia, Germany, Japan, Taiwan, and Singapore.

The UN Resident Coordinator conveyed his condolences to the Chinese government on behalf of the UN community and readied the U.N. Country Team (UNCT) and set up the UN Disaster management Team (UNDMT) to coordinate the UN agencies' disaster relief operations once the Chinese governments requested. As it can be seen in the below, the U.N. Central Emergency Response Fund (CERF) provided funds for its agencies to undertake, under the coordination of the UNCT, important shelter and mass care disaster relief operations.

The U.N. effort was coordinated by the UNDMT, chaired by the UNICEF director. Because the central government was effective in its response and coordination, there was no need for organizing the U.N. response in lead cluster, as it was the case in Myanmar disaster. As UN agencies coordinated with the Ministry Foreign Affairs, which coordinated the international assistance, to pledge assistance, the U.N. coordinated with the Ministry Civil Affairs, which coordinated the logistics and disaster management, when it comes to delivering aid.

With its solid experience, the Chinese Red Cross is one of the active participants in the disaster management of Sichuan earthquake. By using its capacity and regional and national coordinating networks of IRCRCS, the Red Cross Society of China was effective in receiving donations of various public, private, and nonprofit bodies throughout the world. As it can be seen below in the figure 2, the Chinese Red Cross played an important role in the delivery of aids

from various NGOs, private companies, and governments, especially the Taiwan government and its business/NGO communities. Chinese Red Cross was also granted by the Chinese government the authority to bring in doctors internationally when necessary.

**Table 2: CERF Funding by Country (2008) - Project Detail China** (01/01/2008–21/08/2008)

Agency	Agency Project	Sector	Window*	Approved Amount US$ / Date	Disbursement Date
WHO	Saving Lives and Reducing Suffering for the Affected Population in the Sichuan Earthquake (08-WHO-031)	Health	RR	1,305,445 23-05-2008	03-06-2008
UNICEF	Emergency Assistance to Children and Women Affected by the Wenchuan Earthquake (08-CEF-041)	Water and sanitation	RR	2,076,078 23-05-2008	02-06-2008
UNDP	Sheltering and Living Support to People Affected by Earthquake in Southwest China (08-UDP-015)	Shelter and non-food items	RR	2,058,830 22-05-2008	02-06-2008
UNHCR	Shelter Support to People Affected by Earthquake in Southwest China (08-HCR-023)	Shelter and non-food items	RR	2,000,000 22-05-2008	30-05-2008
WFP	EMERGENCY RESPONSE TO SICHUAN EARTHQUAKE (08-WFP-052)	Food	RR	490,888 22-05-2008	30-05-2008
UNFPA	Distribution of Reproductive Health Kits (08-FPA-022)	Health	RR	114,490 22-05-2008	30-05-2008
Total				**8,045,731**	

*RR - Rapid Response; UFE - Underfunded Emergency
  Source: http://ochaonline.un.org/Default.aspx?tabid=4602 Retrieved: September 20, 2008.

Chinese volunteers were especially very active to help various NGO organizations and Chinese Red Cross in disaster relief and recovery efforts. The grassroots movement of Chinese volunteers established their informal networks to deliver aid to the earthquake victims. Amateur radio clubs played important role in providing redundant communication facilities following the collapse of telecommunication system in Sichuan, and taxi drivers and their hub played an important role in reaching severely hit areas and delivering aid to those places.

Figure 4: Interorganizational response to Sichuan Earthquake in Sichuan, China

Public Organizations   Private Organizations
Nonprofit Organizations   Red Cross Agencies
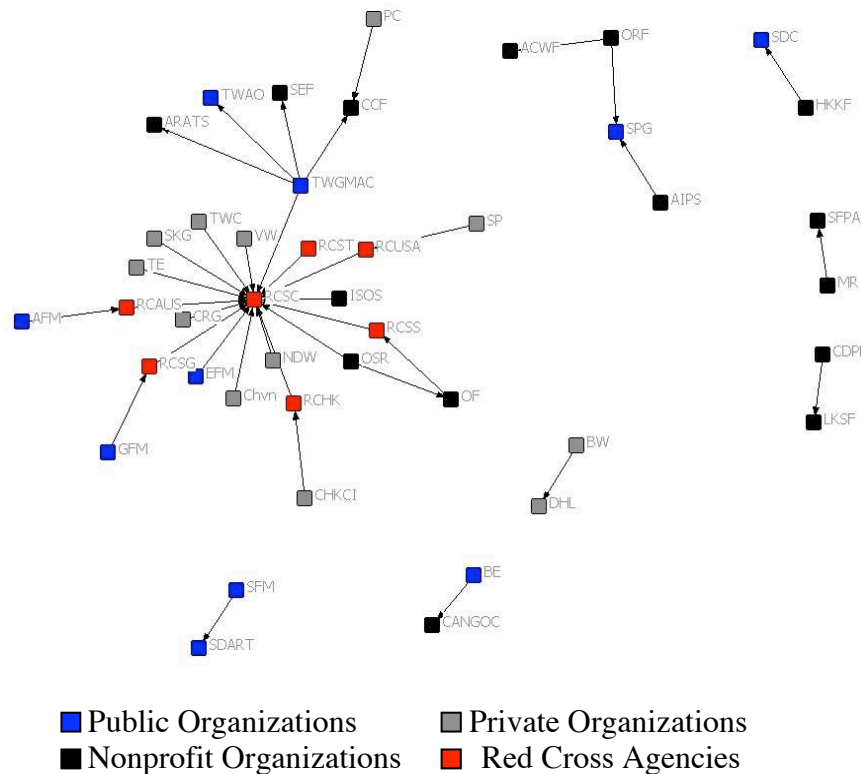
Source: Newspaper news reports content analysis. (Note: See Appendix A for the list of abbreviations.

The World Health Organization was also one of the important agencies in delivering effective medical care to the disaster victims. The following figure summarizes the partnerships that WHO is involved in Sichuan disaster management.

Economic interests of the state and private businesses throughout the world as well as the spirit of preparation for the Olympic Games can be factors influencing the successful organization of the emergency response by the central government. The generous donations from private companies, NGOs, the UN agencies, Chinese Red Cross and other sister societies, and Chinese people as volunteers contributed to a great in extent in the response and recovery operations in Sichuan. No matter how effective were the Red Cross and UN disaster relief, there were not any discussions of their networking and partnership among themselves. In their websites, they just mentioned they were coordinating with each other but they did not put any details.

Figure 5: The map of the WHO partnership in response to Sichuan Earthquake in China, May 2008.

Note: ■ (blue) UN Agencies   ■ (gray) Private Organizations
      ■ (black) Host Government Agencies   ■ (red) Global, Regional, and National WHO Offices
Source: WHO website content analysis (See Appendix A for the list of abbreviations).

Findings and Discussion

The two cases, the Myanmar cyclone and the Sichuan Earthquake are characterized by very different response patterns, both within each country and between the international system and the affected nations. The analytical model developed in the literature review section of this paper helps us understand the striking differences in response from the international system (loosely structured as it is) to the two events. Both disaster cases are of high intensity, scope, impact, and uncertainty, and both occurred at the highly populated areas of the countries. However, while political situation and media had negative effects to the disaster relief coordination process in the Nargis Cyclone case, healthy political climate and positive media contributed a lot to the Sichuan Earthquake relief coordination process.

Bureaucratic inertia and lack of government capacity in the Myanmar case obstructed the disaster response operations and the ruling regime failed to save lives and properties of its citizens. Because of this situation, in the first two weeks of the disaster response, there was distressed and distrustful environment which had negatively affected the disaster relief coordination process. With the involvement of ASEAN, a regional economic organization, inter-actor trust has increased because of the positive past experience of the Myanmar government with the ASEAN and Singaporean government, which was chairing the ASEAN at that time. With the involvement of the ASEAN, the tripartite committee was established between Myanmar-UN-ASEAN to oversee, monitor, and coordinate disaster relief operations. Due to lack

of host government capacity, international involvement in disaster relief was massive, as it increased after the involvement of the ASEAN.

Strong international presence would mean that the U.N. and its partners' response was coordinated in clusters, which are the disaster relief networks divided according to functional lines in which one U.N. specialized agency would be a lead agency and the rest of the UN agencies and other cross-sector organizations would be partners. Development and Disaster Assistance Agencies of major world countries had also increased presence, mostly nonwestern one though, except for German team, primarily due to the distrust of the Burmese government against Western nations as opposed to its positive relationship with its neighbors.

In comparison to the Myanmar case, the Sichuan Earthquake case had less international involvement in disaster relief primarily due to the prompt all-out response of the centralized Chinese government with strong capacity to act. This is the reason why direct involvement by the international disaster relief organizations and their role in disaster response coordination was less, and the U.N. coordinated its disaster relief operations and those of its partners were coordinated, unlike the cluster lead approach in the Myanmar case, under the U.N. Disaster Management Team led by the U.N. Resident Coordinator and constituted by the members of the U.N. Country Team. In the Chinese case, international disaster assistance were realized mostly by donating necessary logistics and money necessary for the affected communities, and the Chinese government delivered the services.

Moreover, Chinese national Red Cross chapter had strong capacity and experience with disasters of many kinds. It also had legal authority granted by the Chinese government to hire international doctors overseas. In addition to having strong capacity, Red Cross had also its East Asian regional headquarter in Beijing, which also facilitated international Red Cross disaster coordination. Increasing commitment of Chinese citizens to help their fellow citizens and improving grassroots development in China were positive factors influencing international disaster relief coordination process in Sichuan case.

In contrast, strong moral and financial support of Burmese expatriates throughout the world by organizing fund-raising activities throughout the world contributed positive to the grassroots involvement in international disaster relief coordination. The U.N. and Red Cross used the regional headquarters in Bangkok, Thailand to facilitate their international coordination and facilitation of delivering necessary logistics and services to Myanmar. The resiliency of the Burmese communities to typhoons, cyclones, and other types of disasters throughout decades was a positive factor in disaster relief coordination of the international and local organizations.

In both cases, the World Health Organizations was strikingly effective in serving the role of lead agency in the health cluster in the Myanmar disaster relief coordination and its active leadership in Sichuan earthquake, primarily because of its strong, pre-established relationships with its partners, and norms, standards, and protocols of information communication and reporting prior to the Myanmar case. Both cases once again demonstrate the strong need for international partnership in disaster relief due to increasingly global effects of disasters, and show urgent necessity for strengthening local capacity and building resilient communities in order to successfully reduce disaster risks and vulnerabilities.

Conclusion

This paper analyzed the structure of disaster management coordination at the international level and found out that there is lack of coordinating mechanisms in traditional disaster relief system as disparate agencies operate independently without a clear command and control structure. However, when reconceptualized within the framework of social network structures (Stephenson 2006), international disaster relief organizations can be seen as actors connected through formal and informal coordination mechanisms (Lipson 2005) in "a network without center" (Benini 1999).

Identifying main actors operating at international disaster scenes – U.N. and its specialized agencies, International Red Cross, NATO, ASEAN, Major Country Development and Disaster Assistance Agencies, and other international nongovernmental organizations, this paper has examined two recent disaster cases from the networked governance background using the literature. These cases are Cyclone Nargis in Myanmar and Sichuan Earthquake in China both happened in May 2008.

The two cases, the Myanmar cyclone and the Sichuan Earthquake are characterized by very different response patterns, both within each country and between the international system and the affected nations. The analytical model developed in the literature review section of this paper helps us understand the striking differences in response from the international system (loosely structured as it is) to the two events. A major factor in this response is the dependence of the U.N. system on the invitation of the affected nations for assistance, and secondly, the response of the international community to a U.N. call for funding. This fundamental weakness in the U.N. system for disaster assistance affected the response in both events.

Further research would be in order to analyze the structure of overlapping subnetworks within a wider disaster relief network. Social network analysis can offer valuable insight into the interconnectedness and other structural characteristics of networks that determine the effectiveness of collaboration and disaster relief across the U.N. functional clusters as well as within the UN Disaster Management Team comprised of the U.N. Country Team members.

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Appendix A. List of Abbreviations

EFM	Estonian Foreign Ministry
RCSC	Red Cross Society of China
ISOS	International SOS
RCUSA	Red Cross USA
TWGMAC	Taiwan Government Mainland Affairs Committee
CCF	China Charity Federation
TWAO	Taiwan Affairs Office (of the State Council)
ARATS	Association for Relations Across the Taiwan Straits
SEF	Straits Exchange Foundation
RCST	Red Cross Society of Taiwan
AFM	Australian Foreign Ministry
RCAUS	Red Cross Australia
PC	PotashCorp
Chvn	Chevron
SFM	Singapore Foreign Ministry
SDART	Singapore Disaster Assistance and Rescue Team
OF	One Foundation
RCSS	Red Cross Society of Singapore
MR	Mercy Relief
SFPA	Sichuan Foundation for Poverty Alleviation
SKG	SK Group
BW	Bookwarm
DHL	DHL
CRG	China Reinsurance Group
HKKF	Hong Kong Kidney Foundation
SDC	Sichuan Dialysis Center
CHKCI	Chamber of Hong Kong Computer Industry
RCHK	Red Cross Hong Kong
VW	Volkswagen
NDW	NetDragon Websoft
TWC	Techwell China
TE	Tyco Electronics
SP	Sagent Pharmaceuticals, Inc.
GFM	German Foreign Ministry
RCSG	Red Cross Society of Germany
ORF	Orphan Relief Fund
ACWF	All-China Women's Federation
SPG	Sichuan Provincial Government
BE	British Embassy (in Beijing)
CANGOC	China Association for NGO Cooperation
CDPF	China Disabled Persons' Federation
LKSF	Li Ka Shing Foundation
AIPS	International Sports Press Association
OSR	Operation Sichuan Relief

CDCS	Center for Disease Control Sichuan
CERF	Central Emergency Response Fund
MOH	Ministry of Health (China)
NCAIDS	National Center for AIDS
NDRCC	National Disaster Reduction Center of China
WHO	World Health Organizations
WHOC	WHO China
WPRO	WHO Pacific Region
UNCT	UN Country Team
UNDMT	UN Disaster Management Team
UNDP	United Nations Development Programme
UNFPA	U.N. Population Fund
UNICEF	U.N. Children's Fund
WB	World Bank
ASEAN	Association of South East Asian Nations
BBAO	Burma Buddhist Association of Ontario
CIDA	Canada International Development Agency
CMI	Care Myanmar International
IBMO	International Burmese Monks Organization
IRC	International Red Cross
LJMBS	Ling Jiou Mountain Buddhist Society
MM	Mercy Myanmar
SARTW	Search and Rescue Taiwan
SCM	Save the Children Myanmar
SCUK	Save the Children United Kingdom
UN	United Nations
WFP	World Food Program
WV	World Vision