Chapter One

Introduction

1.1 Background

On Sept. 11th, 2001, the World Trade Center was attacked by terrorists and more than 3,000 people died. Global anti-terrorism efforts spread worldwide after the crisis. In 2003, a new infectious disease named Severe Acute Respiratory Syndrome (SARS) appeared first in Asia, and then rapidly spread worldwide. On December 26, 2004, a huge tsunami resulting from an earthquake near Indonesia killed more than 200,000 people. In 2005, the Avian Influenza Virus (commonly called Bird Flu) emerged, and also captured global attention. All of these cases from the first few years of the 21st Century show that the management of both natural global disasters and man-made crises is becoming increasingly important.

Addressing the issue of global environmental security, the World Bank has noted “On the order of 25 million square kilometers (about 19 percent of the Earth’s land area) and 3.4 billion people (more than half of the world’s population) are relatively highly exposed to at least one hazard” (Dilley et al., 2005: 2). To reduce the damage caused by natural disasters, the United Nations announced that the 1990s was the first “International Decade for Natural Disaster Reduction (1990-1999),” and the “International Framework of Action for the International Decade for Natural Disaster Reduction” was implemented. From May 23rd to 27th, 1994, the first “World Conference on Natural Disasters” was held in Yokohama, Japan. The main conclusions and the consensus views were published in the reports, The Yokohama Strategy and Plan of Action for a Safer World and Guidelines for Natural Disaster
Prevention, Preparedness and Mitigation and a Plan of Action. One focus was to appeal to states to take disaster management into their national development plans to prevent/mitigate the huge impacts---with both social and economic dimensions---which result from natural disasters. From January 18\textsuperscript{th} to 22\textsuperscript{nd}, 2005, the second “World Conference on Disaster Reduction” (WCDR) was held in Hyogo, Kobe, Japan. “The Hyogo Declaration” and “The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disaster” were announced, to enhance international cooperation in our response to natural disasters.

However, in spite of the international efforts of these two decades, the amount of damage caused by natural disasters and the total number of people affected have continued their gradual increase since the 1960s. Figures 1.1 and 1.2 show these trends. Both the total amount of reported damages and the total number of people affected by disasters have increased rapidly since the 1960s.

![Figure 1.1 Total Amount of Reported Damages from 1900-2005](http://www.em-dat.net)
Figure 1.2 Total Number of People Affected from 1900-2005

On the other hand, as the introduction to WCRD in 2005 notes:

“...Commitment to the reduction of disasters has been growing although actual materialization is still slow. Human and economic losses due to natural disasters continue to rise and remain as a major obstacle to sustainable development and achievement of the Millennium Development Goals (MDGs)...”

It seems that we have thrown much more resources than before into disaster management, however, the economic damages and the number of affected people have remained large. How to enhance effective and efficient international cooperation in disaster reduction has become a critical issue for international development.

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1.2 Problem Statement

Crisis management has been given increasing attention, beginning with the Cuba missile crisis in 1963. During these four decades, most of the literature on crisis management focused on the strategic planning of crisis management (Fink, 1986), crisis and disaster management (Comfort, 1988; Nudell and Antokol, 1988), the organizational framework of crisis management (Jan, Chung-yuang, 1990; 2004a), and crisis case studies (Jan, Chung-yuang, 2004b). Some of the older arguments, however, may be challenged in the age of globalization. First, conventional crisis managers such as governments are faced with domestic crises or local/regional natural disasters more often than crises at the global level. This implies that once there is a public crisis, some solution will be found.

![Diagram](image)

**Figure 1.3** Crisis or disaster and the appearance of solutions

Similarly, with the coming of globalization, global problems become inevitable. Who and how to provide global public goods become the most important issues (Kaul, et al., 1999; Faust, et al., 2001). Conventional international relations theories, such as functionalism, realism, neo-liberalism, and others provide different approaches to international cooperation. The rise of global non-state actors, however, ushers international cooperation into a new assemblage called a “global public policy network” (Reinicke, 1998). How to organize successful international cooperation in disaster management in the globalization age challenges the traditional theory of crisis...
On the other hand, facing the problem of common goods, Olsen (1965) reminds us that a micro approach is necessary to explain the logic of collective action. The major conclusions of Olson include: (1) “unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests (p. 2).” (2) “The larger the group is, the farther it will fall short of providing an optimal supply of any collective good, and the less likely that it will act to obtain even a minimal amount of such a good. In short, the larger the group, the less it will further its common interests (p. 36).” In other words, to avoid free-riders in large groups, selective incentives or punishments will be needed to fashion individual interests into a collective.

Therefore, in order to understand the whys and hows of international cooperation in disaster management, the individual level will be explored first. The process is shown in Figure 1.4.

![Figure 1.4 Four Basic Social Processes](source:
Revised from Coleman, 1990: 8.)
In Figure 1.4, the dotted line, route 4, demonstrates the traditional approach of public issues, which means that when a public problem appears, there will be a solution proposed by a policy network, such as a global disaster management network. According to Coleman (1990), however, we cannot ignore the micro level in such analyses. Therefore, Route 1 in Figure 1.4 represents how the global problem influences global actors’ individual choice. In Route 2, the focus is on how individual actions influence collective actions. Finally, Route 3 indicates how the collective actions form a policy network.
1.3 Research Questions

To explore the phenomenon of high commitment to the reduction of disaster but slow materialization, this research attempts to take a micro approach first, to understand why individual global actors participate in this international cooperative network for disaster reduction. Next this study considers what elements are necessary for the network’s successful operation. The literature on crisis and disaster management and the development of international cooperation will be reviewed in the second section, and an analytical framework of rational choice and social capital will be explored in the third section.

I address two major research questions. Why are various global actors willing to cooperate internationally in disaster reduction? How does the global disaster management network operate? To consider these questions in detail, Figure 4 helps to form the following sub-questions:

1. What are the major factors that influence global actors’ decision making on international cooperation when facing a global crisis or disaster?

2. What are the strategies of these global actors in their interaction? What are the impacts of disaster reduction, rational choice and social capital on the outcomes of this international cooperation?

3. How are the global crisis or disaster management institution and network formed? How does the network operate? How can we make it more successful?

4. The policy implications for Taiwan include: what role can Taiwan play in this international cooperation network in disaster reduction?
1.4 Overall Organization

This study divides the inquiry into six chapters. The first chapter includes the background of the problem, the problem statement, and the research questions. Four major questions will be examined. 1. What are the major factors that influence global actors’ decision making on international cooperation when facing a global crisis or disaster? 2. What are the strategies of these global actors during their interaction? 3. How are the global crisis or disaster management network formed and can be operated better? 4. What are the policy implications for Taiwan’s future efforts? In the second chapter I review the literature related to disaster management and international cooperation. In responding to the emergence of global governance which may influence the scope of disaster management and lead to fundamental changes in international relations, I develop a conceptual framework which is not based on the traditional approach to international relations. To explore the research questions and examine the outcomes of this international cooperation, Chapter Three develops the analytical framework, drawing on many previous approaches. Those approaches include global governance, disaster reduction, rational choice, and social capital. Chapter Four presents the two major approaches to research methodology. One methodology has weaknesses which, in turn, become the strengths of the second one. In terms of the mixed methodology, the research expects to explore more comprehensive results. In other words, each methodology complements the other one in our analysis and interpretation. The context of the case study, Indian Ocean Tsunami Warning System (IOTWS) is also described in this chapter. The major findings are presented in Chapter Five and then discussed. Both of the qualitative and quantitative data are illustrated in the first section. In addition, the outcomes of international cooperation will be examined through several different approaches.
Finally, the study integrates the factors from all of these four approaches and attempts to find suitable models that may influence the outcomes of the international cooperation in disaster reduction. Chapter Seven provides an overview of the research by summarizing the research questions, theoretical background, analytical framework, and the major results and findings. The strengths and weaknesses of this research are outlined, and the implications for theory and policy are considered. Finally, our common future is discussed in the final section.
1.5 Summary

Facing more frequent threats of disasters, common sense dictates that human beings have to cooperate to overcome their most serious challenges. The cross-boundary disasters that occur in the globalization age, however, complicate many issues. To pursue better outcomes from cooperation, on the one hand, we have to recognize the changing roles of global actors, which include states, non-governmental organization (NGOs), multinational corporations (MNCs), mass media, etc. On the other hand, we have to understand what factors will influence those actors’ decision to participate in global disaster management networks. Therefore, in this research, four questions are raised to explore how to fashion better cooperation. What are the major factors influencing individuals’ decision-making in global disaster management? What are the strategies of those global actors in their interaction? How are global disaster management networks formed? What are the implications for Taiwan’s participation in the future? Chapter 2 reviews the literature related to these topics and the analytical framework is developed in Chapter 3. Chapter 4 introduces the methodological approach, and Chapters 5 and 6 present the findings. Finally, in Chapter 7 I discuss the conclusions and the implications for policy and theory.