Chapter Seven

Conclusions

7.1 Introduction

I have investigated why and how global actors cooperate in global disaster management. After reviewing the literature on disaster management and international cooperation, I utilize the approaches of disaster reduction, rational choice, and social capital, while also considering the changes and challenges of global governance. Employing both qualitative and quantitative data, I have discussed several theoretical perspectives and the outcomes of cooperation.

The development of international cooperation theories is reviewed here, and then some responses to the research questions are discussed in the next section. Implications for theory and policy are discussed, and then I comment on the strengths and weaknesses of the study. Finally, I discuss the conclusions.

7.2 The Development of International Cooperation

Global politics, economy, society and their contexts are changing rapidly, and scientific and technological developments have ushered human life into a new realm. At the same time, new problems are generated that can challenge the future of human life. The advent of globalization forces us to face many of these issues simultaneously, e.g. global warming, avian flu and other issues.

In the development of the theory of international cooperation, whether the perspective was functionalism, realism or liberalism, all emphasized that the first
element in any international system is the state of anarchy, when countries interact and pursue their own interests in the absence of any central authority to restrict the pursuit of sovereign national interest (Keohane, 1984; Waltz, 1979). However, over-stressing the importance of anarchy is not especially useful. By stressing the concept of interdependence, we are able to understand the nature of international politics today, and whether international cooperation is feasible (Milner, 1993).

The topic of global disaster management is only beginning to be explored by scholars. For example, environmental safety can be regarded as global public assets (Kaul et al, 1999). To resolve the difficulties brought about by public finance, the origin of cooperation is usually approached via the theory [theories of?] of rational choice or the theory of social capital. The advent of global governance has ushered in a new era of international cooperation. When the country is no longer the only actor with absolute sovereignty in international relations, international relations become more nuanced. The current global actors have become more diverse, e.g. international organizations, non-governmental organizations, the nation-state, multinational corporations, the media and so on, all of which have significant influence in international cooperation. On the other hand, understanding the infrastructure of the global governance network through critical issues such as resource interdependence, actors’ location and relationship, network density and concentration etc., will help us to clarify the interaction modes of the current international actors.

I adopted two strategies to explore the issues of global disaster reduction. First, through the infrastructure constructed via rational choice and social capital, plus the concept of disaster reduction, the important factors that might affect international cooperation were extracted and analyzed. Second, I did not employ the traditional nation-state as the unit of analysis to explore international cooperation, but instead
replaced it with the organization as the unit of analysis. To investigate the possible limitations imposed by using the organization as the unit of analysis, I added questions on organizational autonomy to the questionnaire.
7.3 Response to the Research Questions

In view of the continuous occurrence of global disasters and the current development trend toward international cooperation, this study posed the following research 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 international cooperation?

3. How are the global crisis or disaster management institutions and networks formed? How does the network operate? How can it be made more successful?

4. Considering the policy implications for Taiwan, what can Taiwan do in the international cooperation network for disaster reduction?

Given the multiple actors and infrastructures of current global governance, I have responded to the above research topics on international cooperation through the theoretical framework of rational choice and social capital, and supplemented by considerations of disaster reduction. Employing the qualitative data from interviews and results from our international survey, I addressed several significant issues.

The occurrence of disasters is not entirely predictable. There exists a high degree of globalization and important developments in the international media, thus even disasters that occur in remote areas of Asia can have an impact on the developed countries such as Europe and the United States. Given that current global warming increases the probability of disaster occurrence, we are indeed put in a shared-risk society. Therefore, the only thing we can do is to improve our risk awareness, in order
to place ourselves in a more secure environment. On the other hand, although we already have disaster awareness, because various actors have differing capacities for disaster prevention and relief, there are different levels of dependence, and this enhances the possibility of international cooperation. Our qualitative data has also shown that there are shared (mutual) benefits or shared values, such as humanitarianism, perhaps the major reason for the current international cooperation on disaster reduction which we see. This global cooperation displays the inseparable characteristics of the global governance network under the concept of global governance. The occurrence of increasingly serious disasters has led the world community to recognize that we only have one Earth.

Second, what factors will affect the outcome of cooperation? This study defined a number of different variables related to cooperation, including effectiveness, quality, view broaden, increased interaction, equalization, and patterns, etc. From the initial outcome of global cooperation, our study shows that enhancement of risk awareness and credible commitment will increase the effectiveness of cooperation. In order to achieve effective cooperation, various global actors must require themselves to first raise their awareness of the risks, and then make their own commitment to become more reliable and to avoid becoming a free-rider, so that it will be possible to act on our common interests. Some of our respondents pointed out that in order to make the commitment more reliable, an explicit system must be established for future action.

Regarding the quality of cooperation, the main factors include organization, internal autonomy, and capacity. In other words, the organization also must be able to make commitments and protect its own integrity. On the other hand, actors in the network must also improve their disaster reduction capacity, to guarantee the qualitative results of international cooperation for disaster reduction. Therefore, in
order to improve the quality of mutual cooperation, at this stage education and training on disaster prevention and relief should receive more attention. Regarding our variable broaden (one’s) view, organization, internal autonomy and external constraints all have an impact. Thus in the global disaster reduction governance, if organizations can enhance their internal autonomy, and there are external inducements for cooperation, then more actors will take a global view when they consider an issue. In order to enhance interaction for international disaster reduction, organizations must have a clear view of their own preferences, then they will be able to interact with other actors according to their needs. In addition, if organizations can ensure their internal autonomy, then they will be able to maintain the fairness of interaction with regard to international disaster reduction. Finally, on the type of cooperation, our empirical results suggest that the higher the level of credible commitment, the greater the inclination of organizations to participate in multipolar modes of cooperation. If organizations have a high degree of internal autonomy and clearly know what their own preferences are, then they will tend toward multi-polarity modes of cooperation.

Regarding the third research issue, I concluded that transnational organizations still play an important role in global cooperation on disaster reduction, through their initiatives. For example, for the countries surrounding the Indian Ocean, due to the factors such as culture, politics, economy, religion, or historical background, some countries had little possibility of cooperation in the past. But with respect to the IOTWS, some actors took the initiative to request the intervention of international organizations and became a platform for communication between them. Among them, practices of credible commitment and the establishment of trust relations between them represent an important strategy which will enable the countries bordering the Indian Ocean to develop cooperation relationships on disaster reduction in the future.
Future efforts should concentrate on how to accumulate social capital in this region.

However, due to the varying degrees of dependence on resources, the legacies of hegemony can still be seen in international organizations. I have seen in this case study that transnational organizations often lack resources, and because the United States, Japan and other countries thus must inject replacement resources, this action increases their influence in international affairs. In the process of global governance, non-governmental organizations must increase their influence to ensure the interests of disadvantaged districts, organizations, or even nations. The influential force that these non-governmental organizations possess includes knowledge, the capacity of the advocate (for example, arouse awareness of the importance of disaster prevention), appealing to universal values (for example, humanitarianism and safe world) in order to strengthen the shared and common values in this shared-risk society.

The study also found that in the operation of the IOTWS, governments, international organizations, non-governmental organizations, etc., all have contact with MNCs, and with the media with less frequency. In fact, from the viewpoint of networks of resource interdependence, MNCs’ resources are no less than what governments can provide, including funding, delivery channels, or even strategies of marketing. On the other hand, the function played by the media should be to arouse global citizens to recognize the increasing risk of natural disasters, and conveying the above-mentioned shared and common values. When the majority of global citizens recognize that they inhabit a shared-risk society, there will be an added incentive for MNCs to invest more resources.

With regard to the operation of the global disaster reduction network, both our interview data and our survey results have shown the importance of clarifying organizationally specific preferences and the communication of information. Only if
they clarify their organizational preferences and are willing to share information, will it be possible to enhance mutual interaction. On the other hand, the formation of the system, such as putting oral commitment into an action framework agreement, will be easier for actors who have external constraints, thus enhancing the effectiveness of cooperation. Actors can only enhance mutual interaction in a public, transparent and open system. Through the platform of international or regional organizations, the networks of disaster reduction can be more closely combined, and thus accumulate more social capital and promote better cooperation. Such cooperation results, without taking into account the circumstances of relative gains, will enable all of the actors to share in the benefits.

Regarding the last research issue, in the course of the interviews for this study, I also asked the relevant questions about Taiwan’s participation in the UN/OCHA and the ADRC, ADPC, and other international organizations, and found that it is still difficult for Taiwan to join the formal global disaster reduction network because of Taiwan's current international situation. However, as with the network resource dependence relationship, Taiwan can still contribute. After all, since Taiwan has a certain level of technology and knowledge relevant to disaster reduction, in the future it can enhance its influence by providing education and training opportunities to other developing countries, appealing to shared and common values, reducing the importance of political agendas, and actively participating in the international disaster reduction network.
7.4 Implications of the Study for Theory and Policy

With regard to international cooperation theory, the approach of rational choice has already been discussed in depth, and has been abundantly interpreted. Factors such as resource dependence and trust are of growing importance in international cooperation, and social capital is also used to explain the development of international cooperation (Koniordos, 2005; Kydd, 2007). Through the framework of the rational choice and social capital, I have analyzed the factors impacting international cooperation. I have added the concept of disaster reduction, trying to determine whether the awareness of a shared-risk society and the capacity for disaster reduction will affect the rational choice of the individual, mutual interaction, or the accumulation of social capital. These importance of these factors is highlighted by the advent of the shared risk society and increasingly frequent international cooperation.

I have also clarified the two characteristics of diverse actors and network governance infrastructures in current international relations through our consideration of the concept of global governance. If a single global actor is aware of a disaster risk, is it expedient for him first to protect himself? Or will he strengthen the connection with other actors in the pursuit of greater security?

For example, Axelrod and Keohane (1986: 229) observe, “Now consider a shift in the preferences of both players, so that mutual cooperation is preferred to unilateral defection. This makes the preferences ordering CC>DC>DD>CD, which is a less conflictual game called ‘Stag Hunt’.” In other words, good communication, which includes a bargaining process and coordination, may help shift the preference structure. After these variables were comprehensive analyzed, which is the theoretical contribution of this study, I concluded that factors such as the awareness of living in a
shared risk society and recognition of the importance of capacity building, can indeed increase the effectiveness, quality and results of international cooperation.

The second is on the theoretical implications. The organization was taken as the unit of analysis in this study, which is not common in contemporary research on international cooperation. I did this to respond to the characteristics of the current global governance regime, a strategy which informed our analysis of the data I collected. To remedy any weakness that this strategy might imply, organizational autonomy was also listed as one of the variables. I speculate that when the concept and research on global governance become more mature, and the role of the nation-state in the framework of global governance is transformed and is no longer the single and customary unit of analysis, then using the organization as the unit of analysis may be more widespread.

What are the policy implications of this study? First, in pursuit of better cooperation outcomes, this study concluded that organizations must first enhance risk awareness, improve disaster reduction capacity, to clarify preferences, and foster credible commitment, in order to establish trustworthy relationships. For example, Thailand has excellent experience with the importance of risk awareness after the tsunami disaster. One interviewee said there was very weak awareness in Thailand before the tsunami since they inhabit a low natural disaster risk area. After the tsunami in 2004, however, people noticed that disasters can happen anywhere in the world. With the efforts of governments and NGOs, some projects increasing awareness education and drills were implemented in many communities. When another tsunami hit in 2007, residents in these communities had successful evacuation plans. At the regional level, international and regional organizations can learn lessons from such successful experiences with awareness education or capacity training,
conduct some projects in this area, match different necessary in different community, and cooperate with the government and local NGOs to seek better performance when constructing disaster reduction plans.

Whether the organization is an international organizations, governmental organization, or non-governmental organization, all must have a high degree of internal autonomy to coordinate with the various global actors. For the effective implementation of international cooperation on disaster reduction, it is necessary to plan the system among various actors with credible commitments to it. When facing the challenges of global warming, although the US hasn’t signed the Kyoto Protocol, there are more than 100 state governments or city governments who have themselves voluntarily complied with the regulations of Kyoto Protocol. This example demonstrates that if organization autonomy can be improved, there can be better cooperation outcomes in disaster reduction.

It is worth noting that information accessibility is still an important factor affecting whether global actors can enhance interaction among themselves, therefore how to implement a more open information exchange strategy is still a key factor in the success or failure of cooperation. As our respondents pointed out, we already have too many meetings and consensus, now we need more specific actions by the global actors to enhance risk awareness, increase capacity, and design a coordination mechanism consisting of global policy networks and a mutual co-operation strategy.
7.5 Strengths and Weaknesses of the Study

This study has several strengths. To better understand the operation of the IOTWS and gather relevant research data, I visited four countries and regions while conducting interviews over a one year period. These included interviews with officials from the National Oceanic and Atmospheric Administration (NOAA) and the Department of State in Washington, D.C., and conducting in-depth interviews with several scholars and experts. I also went to the UN / OCHA in New York City to conduct in-depth interviews with its officials. In Kobe and other cities in Japan, I conducted interviews at the Asian Disaster Reduction Center (ADRC), International Recovery Platform (IRP), UN Center for Regional Development (UNCRD), and the Japanese International Cooperation Agency (JICA) as well as other agencies and organizations. In Bangkok, Thailand, interviews were conducted with officials and scholars at the Asian Disaster Prevention Center (ADPC), National Disaster Warning Center (NDWC), US-IOTWS team and the Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior, and other organizations. All these first-hand interviews enhanced the credibility of the data, and during the process, the researcher himself established a good interactive relationship with the interviewees, sowing the seeds for a possible follow-up study.

Secondly, it is not common for a theory of international cooperation to be verified through empirical data. One reason is that in the past, the unit of analysis, the nation-state, was too large. Thus most analysis and verification in the past could only be done through a whole data set, not with the individual or organization as the unit of analysis. With our new unit of analysis, it could more easily increase the reliability and validity of the empirical data through surveys. Questions about whether the answers are the views of the respondents often becomes one of the drawbacks of
mailed questionnaires. In this study, the respondents were asked to fill in their name, organization, department/unit, position, seniority, career experience, sex, year of birth, and education level, and other data, and assured that their personal data would not be revealed, thus increasing the validity of the respondents’ answers. In addition, e-mail addresses are also more confidential than a general organizational mailbox, which also may substantially increase the truthfulness of the responses.

This study abandons the conventional approach, which is to employ the nation-state as the analysis unit in studies of international relations, while trying to adopt organizations as the unit to discuss the interactions between actors in global cooperation on disaster reduction. Does this mean that the influence of the nation-state does not exist any more? In our investigations, I found that government departments were still the most frequent targets of the various actors contacts. Furthermore, nearly half of the respondents from organizations such as NGORI said that in their interaction with government departments, the influence of government departments was greater the influence of governments. On the other hand, as one of the respondents, the Incorporated Research Institutions for Seismology (IRIS), it is a kind of research body which combined from many research units in universities, and formed the so-called Global Policy Network. This example also provides insight into the formation of current global governance networks or global policy networks; such networks are not necessarily operated through the nation-state. Therefore, the position of nation-states in international relations within the current global governance structure is still an interesting topic, and it will continue to be the subject of scholarly discussion in the future.

Finally, this study is broadened through the interactive use of the qualitative and quantitative analysis. By the use of this mixed method, I have attempted to expand
and increase the breadth and depth of the study. During this process, our use of the qualitative analytical software NVivo 7.0 and the quantitative analysis software SPSS 12.0 played a considerable role.

There are also potential weaknesses to this study. How does one select the variables in any analysis based on a theory of international relations? For example, in the past investigators asked whether national security affects the occurrence of cooperation or conflict. Since this study does not adopt the nation-state as the unit of analysis, the concept of national security was not included in our survey questions. An alternative approach might include national security, using the concept of "preference". On the other hand, during the qualitative interviews, I asked some respondents questions about national security, e.g. when do national security and humanitarian relief conflict? The relevant respondents from the United Nations said they have no such problem, because most of time they participate in disaster reduction or relief work, the majority of which are accessed due to the requests of the member states. For a small number of the projects in which they take the initiative, they will be less questioned if no due to its United Nations identity. However, respondents from government units said that the universal value of humanitarianism was one of their primary considerations when their country participated into disaster reduction and relief work, and a smaller number of respondents proposed the concept of mutual benefit. The study concluded about national security issue within cooperation on disaster reduction, but data from higher level of the respondents might be needed. On the other hand, national security is not the core issue this study addressed, so it did not take more strategies to break through.

A second potential criticism concerns the selection of cases. The IOTWS can be deduced to other cases is also one of the limitations of this study. The case selection
and the method of analysis have been previously employed by Berring (2004) and Van Evera (1997), however, generalization of results from case studies remains a shortcoming of any study employing the case study method. Thus international cooperation on Avian Flu (bird flu) and Anti-Terrorism may not conform to the results of this study. Nevertheless, this study provides a new model of International Cooperation in Disaster Reduction, which can be examined further in the future.

A final criticism involves the return rate for our questionnaires. In order to improve the validity of the survey, this study conducted a pre-test in January, 2008. Fifty questionnaires were sent through e-mail, but only 10 were returned. I then made some appropriate modifications prior to the mailing I finally conducted. However, after the questionnaires were returned there were some questions which were not ideal for factor analysis, therefore I excluded them from the analysis. There are at least two reasons for our low response rate. One is that there were not enough returned samples in the pre-test, so some questions still contained ambiguities, leading to problematic answers in the formal questionnaire. The second reason may be that the high non-response rate (10%) introduced systematic error into the study. Some respondents have pointed out that the recipients of the questionnaire in the study are mainly the heads of the organizations, or even the chairman of the committee or head of government, thus data collection is inherently more difficult, since they have less time available to participate in research. Some qualitative interviews and topics may require higher level respondents if the researcher is to obtain valid answers, but the present survey method probably creates a bias toward lower level respondents.
7.6 Conclusions

A central theme of this study is: do we have a common future? With the advent of globalization, the global community comes closer together, becoming a shared-risk society. Will the dramatic development of information technology or more rapid interpersonal communication usher humankind into a new era? Unfortunately, such social developments also have side effects, such as more creating more frequent natural disasters and on a greater scale than in the past. Whether human beings can survive future natural disasters is unknown, and from the current development, humankind indeed must have a humble heart inside toward heaven, Humility should serve as the foundation for sustainable development. Under global governance, various actors may become more sincere, open, and impartial in their cooperation. An old slogan is still relevant: "We have only one Earth". This study of international cooperation for disaster reduction may contribute in small measure to the common goal of global cooperation in the mitigation of the natural disasters of the future.