

Quick Response Report

**Interagency coordination during crisis: experience from flood and landslide
response in northwest China**

Ziqiang Han

Disaster Research Center

School of Public Policy & Administration

University of Delaware

Introduction

The cross-jurisdictional boundaries characteristics and dynamic nature of disasters require multi-organizational response, especially the cooperation between government and the third sector (Abrams, 1989; Comfort & Haase, 2006; Waugh Jr & Streib, 2006). From one aspect, the bureaucratic feature of governmental agencies would hinder the effectiveness and efficiency of disaster response. In the case of Hurricane Katrina, the bureaucracy increased so complex that evacuation period grew longer and the coordination became a challenge. “Not only evacuees but also their service providers were confused by bureaucratic hurdles” (Lein, Angel, Bell, & Beausoleil, 2009). The government agencies have to rely on the voluntary organizations to cope with catastrophes because nongovernmental organizations (NGOs) or faith-based organizations (FBOs) are highly motivated, flexible, and creative to provide basic services (Gajewski, Bell, Lein, & Angel, 2010). Also, the urgent temporal nature of extreme events demand a scope of nonprofit activities (Simo & Bies, 2007). However, NGOs or FBOs’ limitations in resources, accountability and coordination sometimes undermine their effectiveness and efficiency as well as equitable distribution of services though they are agile and less bureaucratic than government agencies (Fremont-Smith, Boris, & Steuerle, 2006; Goldman, 2006; Moore, 2006). So, the voluntary sector alone cannot guarantee a just and effective social response to disaster, and they will inevitably work alongside the government (Moore, 2006).

As Quarantelli points that “very few organizations would disagree that coordination is vital during disasters” (1997). Interagency cooperation is a widely held

ideal shared by many emergency agencies in many societies (Granot, 1997). In the United States, several efforts are done to improve collaboration between different organizations to better disaster response. For example, the National Volunteer Organizations Active in Disaster (NVOAD) and affiliated State/Territory organizations are formed to improve the collaboration between NGOs and FBOs. FEMA Voluntary Agency Liaison, Resource Coordination Committee/Unmet Needs Committee, Donations Coordination Team are created to help NGOs and government do better cooperation and response to disasters. But the decentralized nature of the United States' political system makes the coordination between varied agencies difficult (Waugh Jr, 1993). It will be challenging for some actors to fully recognize other organizations or the need to find out how their agency fits into the overall response efforts (Drabek & McEntire, 2002). Other factors like bad communication (Drabek, 1985), interagency conflicts and ambiguity over jurisdictional responsibility and inadequately defined roles (Paton, Johnston, & Houghton, 1998), the lack of authority, knowledge, and experience among emergency operation center (Der Heide & Irwin, 1989), stress on personnel (Quarantelli, 1980) will also discourage coordination and cooperation among organizations in emergency response.

Therefore, how to coordinate and cooperate effectively among organizations in disaster response are still beyond our thorough understanding, and firsthand observations and evidence would increase our experience and knowledge about interagency coordination in emergency management. This quick response study will provide some observations and primary analysis in three kinds of coordination from an emergency response case in China: 1) How different local government agencies cooperate with each other in emergency situation? 2) How nongovernmental organizations respond to

disasters and cooperate with each other? 3) How government agencies and nongovernmental organizations cooperate with each other?

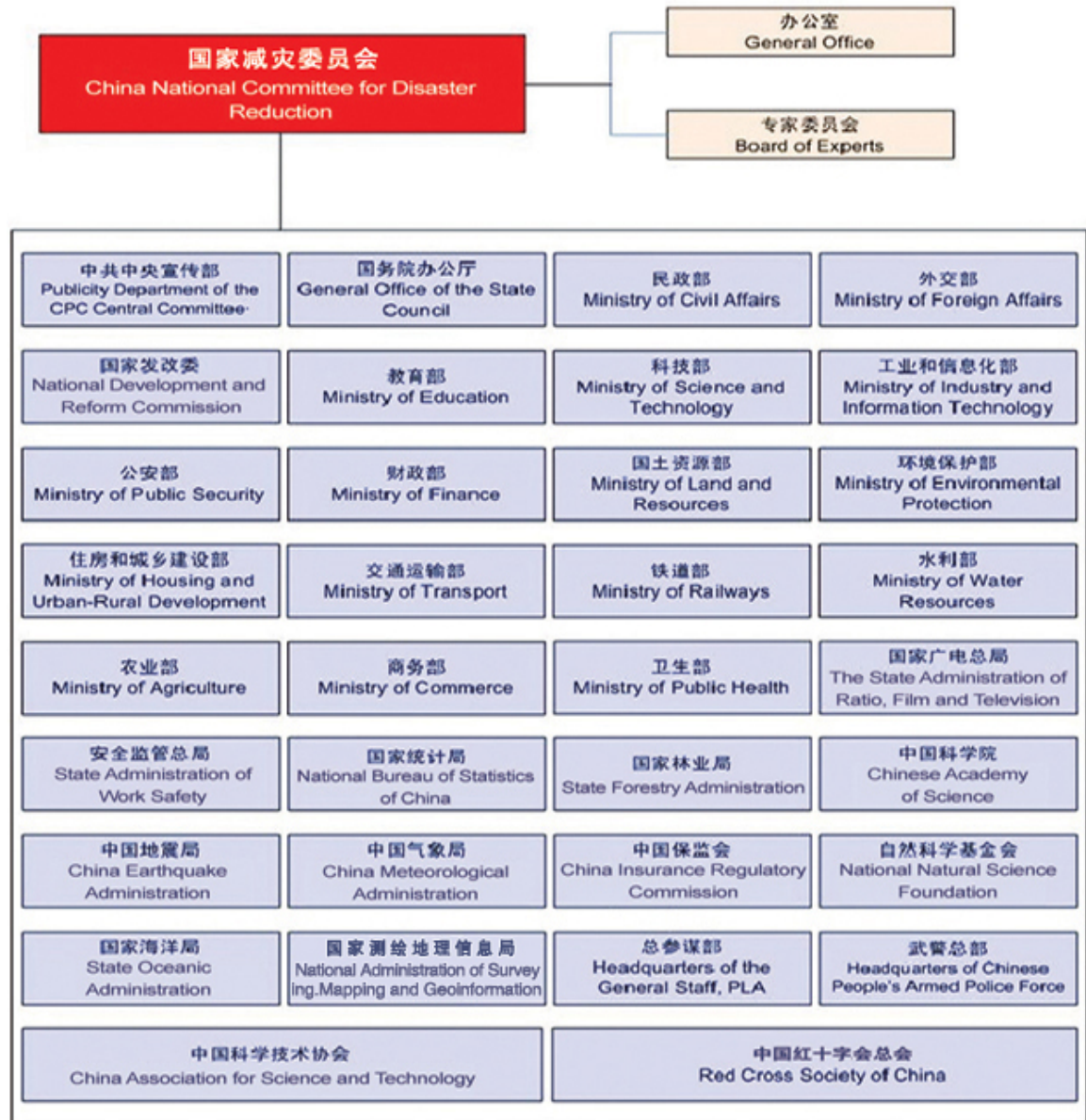
Background

The Disaster Event: On May 10 2012, a terrible storm hit several counties in Gansu Province in northwest China. According to the Province (State) Emergency Management Office, 56 people were killed by the flood and landslide and 15 people were still missing. In total, 47 of the deaths and 12 of the missing people were from Minxian county where we visited, and the direct economic loss in this county was about 1.6 billion, compared a revenue of 0.1 billion in this county.

The Emergency Management System in China: The Chinese government categorizes “emergency events” into four kinds: natural hazards, technical disasters, public health issues, and public safety events. The new established Emergency Management Office (EMO) at each level of government is becoming the coordination hub for all emergency issues, but they are not the directly executive agencies. For natural disasters, the Disaster Reduction Center affiliated with the Department of Civil Affairs takes the main responsibility of response. Once a disaster happened, a temporary disaster response committee with members from all related governmental agencies will be organized by the Emergency Management Office and Disaster Reduction Center. And most of time, the director of this committee will be the mayor (or an important vice mayor) of a city or the governor (or a vice governor). Take the organizational structure at the national level for example, the following chart can explain the coordination capacity of the National Disaster Reduction Committee.

Figure 1 The Organizational Structure of Disaster Reduction in China¹

¹ From the National Disaster Reduction website:
<http://www.jianzai.gov.cn/2c92018234b241340134b2466b2e0011/index.html>



The Third Sector in Disaster Response: The third sector is relatively weak compared with the strong government in China, but developing very fast. Since the 2008 Wenchuan earthquake, NGOs' activity in disaster response has boomed. Many large NGOs expanded their service areas to disaster response, and thousands of new grassroots organizations are established. Though grassroots NGOs would compete for funds and resources, several coordination platform and cooperation network have been established

for emergency response. Also, since the public are more and more familiar with NGOs and voluntary behaviors, the relationships between NGOs and government are improving and the cooperation between them are more and more common.

Methodology

Participant observation, informal interview, and secondary documents collection are the most common methods used for quick response research because quick response research is undertaken during or immediately after a damaging event and time period is critical for perishable data collection (Michaels, 2003). Therefore, these three data collection methods-participant observation, informal interview, and secondary documents collection are mainly adopted in this research. The field travel lasted about ten days, and we visited all the most three damaged towns in Minxian county.

The participant observation mainly included three events. The first one related with the emergency response in public sectors: I spent one day at the local emergency management office (EMO) and worked closely with the director. As the hub of the emergency response at the local level, the EMO was the best place to observe how they respond to emergency and cooperate among different agencies. The second part of my participant observation related with the civic engagement in this disaster response. I encountered with a group of high school students who collected donation for the flood survivors during my stay in the major town. Therefore, I followed them and observed how they collected donation, purchased materials, and delivered these resources to the victims. This process took me about two days. The last observation was an earthquake drill in a middle school which played an important role in this disaster response: the

teachers became the “first responders” at the first time, and many villagers were saved by the staff from the school.

Of course, the method of informal interview was used during my participant observations. Take my observation of the high school students’ behaviors for example, I had a chance to meet and talk with the organizers, the general participants, the “opposers” from the school, and the benefiter. The decision processes of their activity, such as what kinds of strategies they created to motivate the donation, what kinds of materials should be included in the purchase list, and who’re eligible for these materials were paid specially attention.

Except these informal interviews, 18 formal interviews and three focus group discussion were conducted. Memos and notes were used to record these interviews instead of using record machine and transcribing. The interviewees include emergency management officers at the county level, local officials at the town and village level, leaders from nongovernmental organizations, organizers of emergent organizations, disaster survivors, as well as teachers from local schools. Each of these interviews or focus group discussions lasted about thirty minutes to two hours, depending on the situation and availability of the respondents. A list of participants can be found in the table below.

Table 1 Interviews List

Disaster survivors	Six interviews, two focus group discussions.
Local officials	Two interviews with officials from villages, two interviews with officials from town level,

	one interview with emergency management related officials at the county level.
Disaster response leaders/organizers from public	Three interviews with middle school teachers from the school which played an important role in the disaster response; two interviews with individual volunteers active in disaster response; one interview with the leader from a nongovernmental organization active in disasters; one interview with the organizer of an emergent voluntary organization; and an informal focus group discussion with local artists.

Research Findings and Applications

The Reasons of the Impact

Three reasons can contribute to the severely impact of this hazard event. The first one was the storm and heavy rain itself: this was the heaviest rain in recent 20 years in this area. The second one related with geographic factors. There is very limited flat land for human beings in this high-risk mountainous area which has sparse vegetation and serious soil erosion problem. Flood and landslide are common after heavy rain. The third reason was human’s error, which aggravated the impact of the natural event. The only flat land for housing locates along with creeks or rivers. Thus, these communities have a high

risk when flood happens, and residents in these communities have rich experience about flood response: “run from floods”, that’s what they called. These creeks are very small in normal situation, and that makes people forget the risk of flood when they construct their houses. In one of the severely damaged town, a new built market occupied the floodway, and thus the water rushed into the street when the flood came. From the video shot by local resident using their phone, it can be clearly seen that the water level in the street was much higher than the water level in the river: the building blocked the water, and the flood turned to the street.

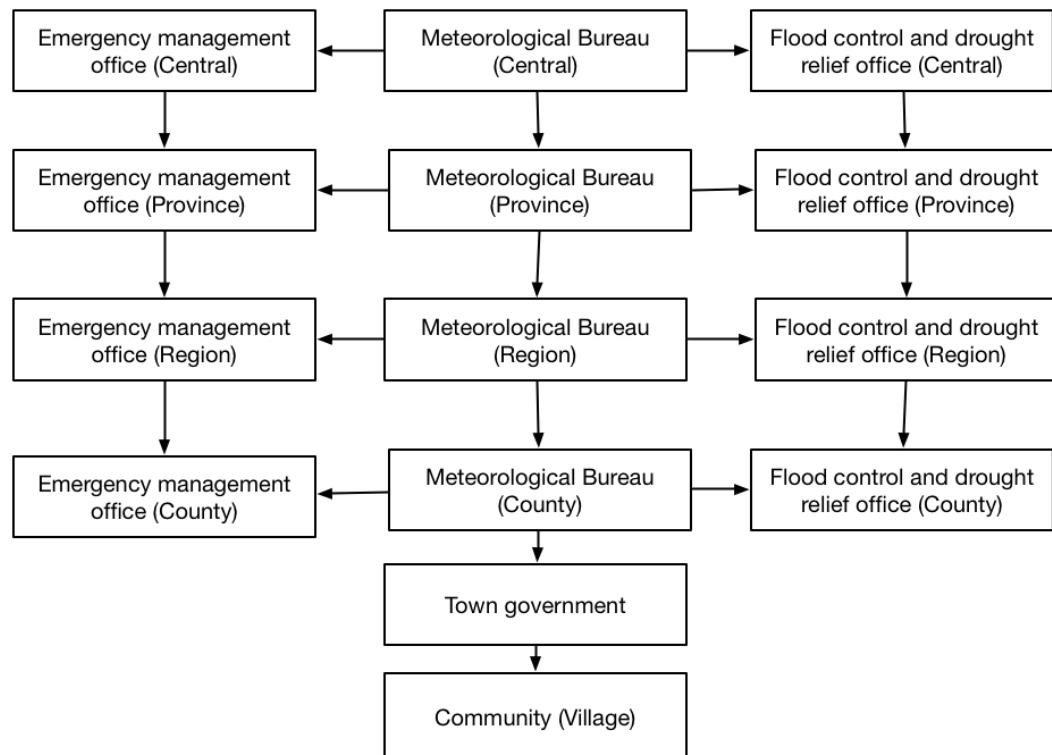
Disaster response and cooperation in public sector

The centralized Chinese government system follows a “top-down” rather than a “bottom-up” model, and thus the emergency management system follows a similar pattern. Since the flood and drought are special disasters, there is special committee named Flood Control and Drought Relief Committee (FCDRC) for these two disasters. Similar with the Disaster Reduction Committee, the director of the FCDRC is generally a vice mayor, a vice governor, or a vice premier according to the level of governments we talk about. But the executive offices are set in the Bureau of Water Resources. Other directly related agencies will include the Meteorological Bureau, the Emergency Management Office, and the Department of Civil Affairs.

Before the flood really happens, the warning information will be passed from the meteorological bureau at the national level to the bottom community through the meteorological system. Meanwhile, such warning information will be sent to the flood control and drought relief office, as well as the emergency management office at

horizontal dimension. These two systems will pass such warning to the bottom community through their system too. At the local level, all these warnings will be passed to town government officials or community leaders. The flood warning flow chart in figure two indicate the warning information pathways.

Figure 2 Flood warning flow chart



Once the disaster really happens, the emergency response plan will be activated, and the emergency management office will take the main role of coordination. The disaster loss information collection will follow a “bottom-up” pattern, and the department of civil affairs will take the main role of execution, and all the related agencies should take and enforce their normal roles during emergency time. Take this flood and landslide response for example, the head of the county took the role of emergency response

director immediately after the emergency response plan activated. With his coordination and command, nine emergency response teams including the headquarters, the search & rescue, public health, disaster loss estimation, emergency assistance, public security, logistics, disaster recovery, public relations & communication were established. The leaders of these teams were all the heads of related agencies, such as the director of civil affairs became the leader of emergency assistance team during the emergency time. Thus, the coordination and cooperation between different agencies at the horizontal level will not be a problem once the emergency plan activated in such a centralized political system.

When the higher-level officials involve in disaster response, they would mainly provide general “guidance” and resource support for most of situations. These “guidance” and support will mainly focus on their special areas. For example, when the water resource management director at the province level came to this area, he brought two million RMB financial supports with him targeting on the repair of water related infrastructures. Meanwhile, these “higher level” officials will provide important help for both material and human resource coordination from neighbor counties.

Overall, the coordination and cooperation between different government agencies within the same level government will not be a problem during disaster response period in this centralized government system because the mayor or the governor would take the role of emergency response director for most of times. The coordination between agencies at the vertical dimension would follow such patterns: the “higher” level officials would come with resources support, or the “lower” government officials would request

support from the ‘higher’ level government and then they would send their support according to their judgment.

Disaster response and cooperation among NGOs

Since the 2008 Wenchuan earthquake, the term “NGOs” and “volunteer” become well known for the public, and many grassroots nongovernmental organizations have been established, though most of them are not “officially” registered. These small grassroots organizations, especially those active in disasters, established several cooperation platforms, such as the “5 • 12 disaster response network” and “one foundation disaster response network”. Only a few of these disaster response networks are supported by larger foundations, or run formally. Most of them are only informal, virtual networks which only exist in the Internet, and all the informal sharing and cooperation activities are organized through the “virtual world”, which can affect the “real world”.

How grassroots NGOs respond to disaster and cooperate with others will be illustrated by one example we observed in this case. Brian (pseudonym) runs a small nongovernmental organization in this region which focuses on education and poverty relief. But recent years, he put a lot of energy on disaster response, and the initial motivation came from the tragedy of the 2008 Sichuan earthquake in China. Since then, he involved in several other major disasters like Yushu earthquake and Zhouqu flood and landslide in 2010 which happened in the northwest of China. And they established an information sharing website for their donation and cooperation partners. Also, the most popular IM (Instant Messaging) software QQ is widely used for communication and information sharing between different members---they established several discussion

groups which contained hundreds of members, some of them are NGOs leaders, some of them are potential donators, some of them are people from media, and some of them are officials who interest in the development of NGOs.

When the flood and landslide happened in the afternoon of May 10th, Brian proposed a disaster response among his network. However, since the communication and transportation were damaged, the outsiders did not know the real situation in the “ground zero” area. So, as a local practitioner in disaster response, he arrived at the area damaged by the flood with 32 other volunteers on May 11th, the next day. They were also the first outside help providers except the military people. They stayed there and helped the local officials set dozens of tents as temporary shelters. Also, they did a quick but comprehensive need assessment, and sent such information back to his network and the people who wanted to provide help. They left the “ground zero” two days later due to the heavy rain and unsafe condition, but with rich information. Meanwhile, donators from the rich areas started collecting resources and arranging logistic needs. Communication and resources deployment were very effective, and several days later, Brian returned to the ground zero area again with tons of clothes and hundreds of study kits for children. In order to make their work more convenient, they only accept material donation this time, and for most of disaster response. As small grassroots organizations, they don't have enough time and human resource for cash donation during disasters, and sometime accepting cash will make their work more complicated. “We're only the mediator between the people who want to help and the people who need help. If we accept cash donation for a specific disaster response, we have to spend human resources on comparing the price, purchasing materials, etc. that will be a challenge for us in such a

short time with so limited people. We have to responsible for our donators, and that's why we prefer materials rather than cash donation. But we only accept new and needed resources. When we know what kinds of materials we need, we'll spread this information among our network, and people would feedback what they can provide for us, and finally we decide which donation are appropriate to meet our needs." Take the disaster response this time for example, when they found the students in this area needed pens and notebooks that were swept away by the flood, they shared this information in their network. Soon, another nongovernmental organization in the east part of China told them that they had some "study kits" which contained a whole package of materials for students, and they had contacted the original donators and asked for more "study kits" already. Meanwhile, some other partners promised to provide logistic assistance, and soon these materials arrived at the schools affected by the flood.

Trust built in the virtual world plays an important role in philanthropy sector in China. Another case of the emergence of an emergent organization in this disaster response can reveal such phenomenon. The biggest search engine BAIDU in China provide free online community service to netizens. People can create their own online communities according to their hobbies, geographic locations, etc. For netizens from small cities, this is the most convenient way to build an online community, and thus, millions of such online communities exist there, and millions of people active in these communities. Of course, for citizens from Minxian, the county affected by this flood and landslide, there is such an online community too. People active in this virtual community are either living in this geographic area or originally from this area, and this online

community become a platform to share local information, discuss hot topics, or organize activities in “real world”.

Kevin (pseudonym) is one of the active members in this online community. When this disaster happened, he was teaching nurses to dance in one major hospital. He noticed that the situation was very serious according to the doctors’ discussion and response. But he thought that’s the government’s responsibility for disaster response, not the common citizens’. When he returned home and checked online, he found some tragic pictures and information that shocked his heart. The idea that “I should do something” tortured him the whole night. “I want to joint some organizations and do something as a volunteer, but I didn’t figure out one such organization throughout the whole night. The government wouldn’t need me, and I don’t know how to contact with them either. Also, I have no idea about voluntary organizations active in disasters, and I don’t know where to find one. Finally, I asked myself, why we cannot organize such organization by ourselves?” When this idea came out, he posted his first call for disaster response online around 9:00 am, May 11th, about 15 hours after the disaster event. Meanwhile, this information was cc to several other members who were active in this online community. Soon, several persons replied his information, and the first responder promised to join was a young guy who runs a restaurant in the real world. Finally, eight people were organized together at noon, and they went to the ground zero area with some water and fast food. “We don’t know the real situation and what the survivors need at that time, but we were really shocked by the tragedy when we arrived in CB (the nearest damaged town). Meanwhile, we heard that the situation in some other remote towns were much worse.” Kevin and his friends arrived without much preparedness, and everything was still in chaos at that time.

Victims were cleaning the debris in their houses, some tents arrived already, but there were not enough people to set the shelters. Therefore, Kevin and his friends helped the local officials to set temporary shelters with soldiers, police and local teachers that day, and finally, they left their materials to the local government and returned home because they didn't know whom to give at that time.

At the night, the eight volunteers had a meeting and summarized the lessons learned from the first day. After a discussion, they had a more clear idea about what they need, and how to provide help. It's not a good idea to leave resources to local officials: from one hand, the bureaucratic characteristic may delay the process, from the other hand, the people most in need may not get the resources. The best way was to give the materials to the victims directly by volunteers, and thus they need more people and resources. Therefore, they decided to call for more volunteers and resources online. And this time, In order to make the call for response more appealing, they posted many miserable pictures with their announcement.

34 people gathered the next day to respond the call for help. Since all these people were from the "virtual world", they actually didn't know each other before, and they preferred using their online ID rather than their real name, it's necessary to have an identity for the group. Therefore, they bought some hats and wrote the name of their online community on these hats as their team identity. "We didn't mean to declaration at the first time, but tried to connect our team members through this way, you know, we're afraid that we would lost someone since we didn't familiar with each other before." When they arrived at CB, the nearest severely damaged town again, they found the

government and military had concentrated there already, thus they turned to another town swept by the flood because they wanted to give their resources to the people most in need.

During the two weeks after the flood, this emergent voluntary team had visited every village affected by the disaster. The general procedure of their work was as following: every night, they posted what they had done and where the resources went that day, what they would do and what kinds of resources they need the next day online. With the experience of their work, this group worked more like a team and an organization: the core members kept constant though the number of volunteers may be varied every day. Also, every core member had a clear role after the initial several days. There was one director in charge of the whole arrangement, one people responsible for donation, one volunteer took the role of materials purchasing, and one person took care of the volunteers involved. After this event, the core team members were thinking of establishing a nongovernmental organization for disasters response and recovery based on their experience and members.

From the two cases above, we can have an idea about how civil society responds to disasters in China. Though grassroots organizations don't attract much attention, they are very active in disaster response recent years. Generally, nongovernmental organizations are good at works that don't need many skills, such as debris remove. Vulnerable groups like the children or olds, or the people who are neglected by government would be their priorities. Also, they prefer to provide basic human needs like food and water service rather than extra needs. Since most of these grassroots organizations are very small, there is a widely cooperation between them, and the Internet

is the main platform for information sharing and communication. Most of time, local NGOs are only agents between donators and people who need help. The work procedures are more “demand” driven: local organizations assess the needs of disaster survivors, and spread these needs to all their partners through their network, and finally collect the resources and deliver them to the people who need. Compared with cash, local organizations prefer unused materials in emergency situation due to their limited capacity. Also, there is a high level of trust between nongovernmental organizations in the virtual world, and the non-routine cooperation during emergency are not difficult to established, but most of these cooperation are informal.

The cooperation between government and civic organizations

The cooperation between government agencies and civic organizations are still weak but changing to a better way. Both government officials and NGOs leaders are learning from past experiences. And both of them take the relationship between government and NGOs as a complementary model: NGOs can help the government to provide public services, and they are more partners than competitors.

From the author’s observation and experience, most of local government officials had little experience to deal with NGOs and volunteers before the 2008 Wenchuan earthquake. After the earthquake, the local officials turned the volunteers and donations away in some areas because they didn’t know how to handle the donations. If they accepted these donations, the donations were not enough for everybody in the community, and that would bring them some trouble: the people who cannot get the resources would blame the local officials because they took this as “government behavior” and they

sought the “absolutely equality”. If the local officials accepted the donations without hand out immediately, rumors of corruption would spread out. Of course, if local government officials turned away the volunteers and donations, they would get blames instead of praises from local resident.

However, our observation from this case indicated that the local government had learned lessons from past experience to work with volunteers and NGOs in last several years. They would take a welcome rather than a resistance attitude. But local officials would not directly involve in NGOs activities and they only provide information and necessary coordination for most situations. If local officials showed on the materials distribution site, they would tell the disaster survivors that these materials were from volunteers or donations, not from government. Sometimes, local officials would also play the role of consultant for NGOs. Take the response of Brian’s organization for example, after his assessment of the victims’ needs, he contacted some local officials and checked that needs information with them. But the voluntary organizations themselves decided where and who would receive these donations. If resources were limited, NGOs would prefer the vulnerable groups or the neglected groups, and thus they need the valuable information from local officials too.

In sum, the cooperation between voluntary organizations and government agencies are improving and much better than before. But both of them work relatively independently, and most of the cooperation is limited within information sharing.

Future Research Agenda and Possibilities

Actually, the most interesting finding from this quick response travel was the civic engagement in disaster response. Media coverage on this disaster only lasted a short time, and volunteer convergence phenomenon was not significant. However, many local residents stood up to provide help and they played an important role in the disaster response. For example, the Muslims in this county established an informal “hot food provide association” (many Muslims run restaurant) soon after the disaster, and they almost arrived each village affected by the flood to provide hot food. In many villages, the teachers from local schools played an important role in the disaster response too. In one village, it’s the middle school teachers warned the public, organized the evacuation, rescued the people isolated by the flood, provided food, water, and shelters to the victims at the first time. Also, students from this middle school organized a response team by themselves, and they helped to distribute resources, establish temporary shelters, etc. In the major town of the county which was not affected by the flood, middle school students organized a volunteer and funds raise team by themselves. After a discussion before their fund-raising, they decided to give these donations to the neglected villagers in remote villages. They developed several strategies to increase the possibility of funds collection. The school uniforms were used to increase their credibility and the whole team was divided into several groups to cover all the regions of the town. After the fund-raising, they worked out a potential living goods list which they would purchase for the victims. They contacted several local bus drivers, and persuaded them to provide transportation service at a very low price. After the distribution of these materials, they made several posters for the public to know how the money was spent. Some of these emergent

organizations would last to the disaster recovery period, and would evolve into organizations active in disasters, and some of them may disappear after the emergency response time. To follow up the involvement of these grassroots organizations in the disaster recovery process may be an interesting topic for me in future.

Several other potential research topics are also very interesting. This quick response travel made me rethink the answers to this question: who're the emergent leaders for disaster response at the first time? Neither the local officials, nor the families severely damaged by the disaster, but the local educated survivors who're not severely impacted by the disaster event. Another interesting research possibility relates an evaluation of the "disaster informant" system which was established in 2011 in this area. Several disaster informants played an important role in flood warning this time, but most of them didn't work as planned.

Three months have passed since the disaster event happened, and a summary workshop including the necessary stakeholders would provide valuable contribution for our understanding of emergency management. I am working on some funding opportunities with my partners in China about this workshop now. Also, I think I will present the findings from this quick response study in one or two conference if possible. I am very grateful to the Natural Hazards Center and NSF for supporting this quick response travel, and look forward to expanding some research topics in future.

References:

- Comfort, L. K., & Haase, T. W. (2006). Communication, coherence, and collective action: The Impact of Hurricane Katrina on Communications Infrastructure. *Public Works management & policy*, 10(4), 328.
- Der Heide, E. A., & Irwin, R. L. (1989). *Disaster response: principles of preparation and coordination*. Mosby.
- Drabek, T. E., & McEntire, D. A. (2002). Emergent phenomena and multiorganizational coordination in disasters: Lessons from the research literature. *International Journal of Mass Emergencies and Disasters*, 20(Aug), 197-224.
- Fremont-Smith, M., Boris, E. T., & Steuerle, C. E. (2006). *Charities' Response to Disasters: Expectations and Realities*.
- Goldman, K. K. (2006). *Nonprofits and disaster: The experience of New York State on September 11, 2001*. Washington DC : The Urban Institute.
- Michaels, S. (2003). Perishable information, enduring insights? Understanding quick response research. *Beyond September 11: An Account of Post-disaster Research*, 15-48.
- Moore, M. H. (2006). *Disasters and the Voluntary Sector: Reflections on the Social Response to Hurricane Katrina*. Washington DC : The Urban Institute.
- Paton, D., Johnston, D., & Houghton, B. F. (1998). Organisational response to a volcanic eruption. *Disaster Prevention and Management*, 7(1), 5-13.
- Quarantelli, E. L. (1980). Evacuation behavior and problems: Findings and implications from the research literature.
- Waugh Jr, W. L. (1993). Co-ordination or control: Organizational design and the emergency management function. *International Journal of Disaster Prevention and Management*, 2(4), 17-31.
- Waugh Jr, W. L., & Streib, G. (2006). Collaboration and leadership for effective emergency management. *Public Administration Review*, 66(s1), 131-140.