

Stakeholders in Natural Disaster Management of China: A Case of Wenchuan Earthquake

En Fang Qiang

Department of Public Administration, Tianjin Normal University, China.

Natural disaster management is one of the important contents of public emergency management system of Chinese government. The whole society must be involved in the process to response the natural disaster efficiently, effectively, and economically. This paper employs the stakeholder theory, and divides the stakeholders in natural disasters into primary stakeholder and secondary stakeholder. Taking the Wenchuan Earthquake for example, the primary stakeholders in natural disaster management in China are classified into central government, local government, army and armed police, NGO, community, private sector, victims, media, and environment, and the roles of them are discussed. This paper also gives political suggestions on study of strengthening the stakeholders system, focusing the primary stakeholder, and expanding the spectrum of stakeholders.

Key Words: stakeholder theory, natural disaster, disaster management, Wenchuan earthquake

1. Introduction

A series of natural disasters from 2008, such as extreme cold weather in Afghanistan and Tajikistan in January, Chinese winter storms of southern and central China from 25 January to 6 February, Tropical Cyclone Nargis on May 2 in Myanmar, Wenchuan Earthquake on May 12 in China, Hurricane Ike on September 14 in the US, Earthquake in Pakistan in October, 17 provinces large-scale drought in the early 2009 in China, had killed more than 200 thousands of people and had caused billions dollars economic loss in the past this year. In the annual report of 2008, Germany Munich Reinsurance argues that although the number of natural disasters of 2008 was less than that of 2007, but the disasters were more deathful and destructive than that of 2007. It is the 2008 that is one of the most destructive years in the history According to the research of Munich Reinsurance, the economic loss caused by natural disasters in 2008 is the third in the history,

following the hurricane season of 2005 and Kobe earthquake in 1995. The Wenchuan earthquake in 2008 caused a direct economic loss by US\$ 85 billion, which was the greatest loss in 2008.

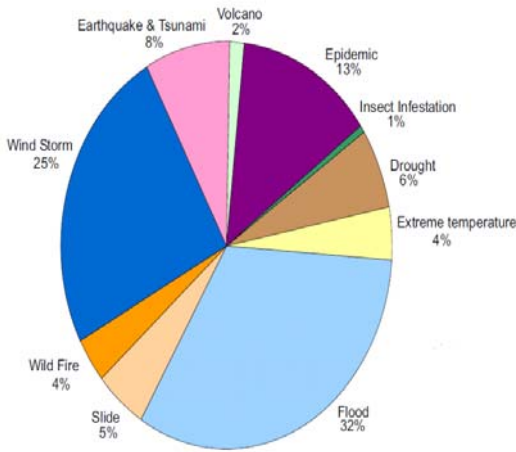
II. Theoretical Background

Natural Disasters

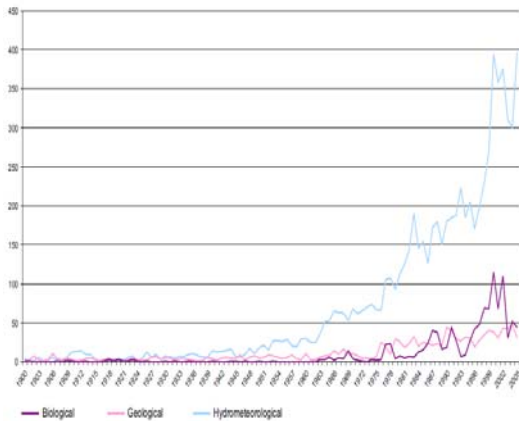
Kunreuther and Roth(1998: 266) defines a natural disaster as an event produced by nature rather than man, i.e., earthquake, flood, hurricane, tornado, volcanic eruption, etc. Natural disaster sometimes referred to as an "act of God" in western countries. "Acts of God" suggests, but quite wrongly, that humans have no part to play in creating disasters, it also implies they have little hope of mitigating them (Smith, 2001: 11). In China and other eastern countries, the disasters, especially big disasters or catastrophes are often regarded as "reprimand of God" (Tian-Qian), which means the punishment from the God and remind the ruler of the country that it is the result of his misgovernment and must to correct his behavior and government. Contrary to the "act of God", Chinese sometimes believe in "Man can conquer nature" (Ren-Ding-Sheng-Tian), which is much more positive to the western countries. But in my opinion, both the over positive and over negative attitude to the natural disasters are correct, the mankind have to learn to how to harmonize the relationship between human and nature.

Take the nature disaster as an example, two characteristics of crises can be draw. First, there is an increasing in number and severity, and in

economic loss of crises. Natural disasters Natural hazards consist of such phenomena as avalanches; earthquakes; expansive soils; forest, field, marsh, and prairie fires of natural origin; hailstorms; hurricane winds; landslide; lightning; riverine flooding; coastal storm flooding; urban headwater flooding; severe rain, snow, and ice storms; land subsidence; tomadoes; tsunamis; and volcanic eruptions. Each has caused much human suffering and economic loss in earlier periods of history and each continues to do so in the modern world (Petak & Atkisson, 1982: 4)., most of them are flood, wind storm, earthquake and tsunami, drought, and slide (see Figure 1), continue to strike the world, and the disaster loss is on the rise with grave consequences for the survival, dignity and livelihood of individuals and hard-won development gains. In the past half century, there is a fast increase in the number of natural disasters, especially in the last three decades (see Figure 2). The total natural disasters reported each year has been steadily increasing from 78 in 1970 to 395 in2006, and beginning from the 1950-1959 decade, the number of hydrometeorological disasters of every decade almost doubled to their past decade. Economic losses from natural disasters were greater in the last ten years than in the previous four decades combined.



<Figure 1: World Distribution of Disasters by Type: 1991-2005>



Source: Disaster Statistics: Occurrence: Trends—century.

<Figure 2: Number of Natural Disasters Registered in EM-DAT:1900-2005>

International Strategy for Disaster Reduction (ISDR) The ISDR (International Strategy for Disaster Reduction), the successor to International Decade for Natural Disaster Reduction (IDNDR), aims at building disaster resilient communities by promoting increased awareness of the importance of disaster reduction as an integral component of sustainable development, with the goal of reducing

human, social, economic and environmental losses due to natural hazards and related technological and environmental disasters. For more information: <http://www.unisdr.org/index.php>, <http://www.unisdr.org/>.

Second, no continent or country can ignore or immune to crises. Asia was still the continent most hit by natural disasters with 187 reported natural disasters (44% of 2006 all natural disasters all over the world). There is a strong increase of the number of disasters of Asia compared to the 2000-05 annual average, and China remained the most affected country in terms of victims, CRED presents numbers of victims (persons killed plus persons affected) rather than separate numbers of people killed and people affected. The reason they chose this option because both developing and developed countries vary significantly in these numbers (Hoyois, *et al.*, 2007: 19). This study agrees their opinion, but will use the three terms according to the concrete occasions. six disasters out of the top ten and 38 disasters reported in 2006. China was the country reporting the highest economic damages due to natural disasters too. A wide range of natural hazards can cause death, damage, and other types of losses in both industrial and developing countries (Dilley, *et al.*, 2005: 23), this shows that even countries with the best early warning systems are still vulnerable (Hoyois, *et al.*, 2007: 13-14).

Stakeholders

The term "stakeholder" was first adopted at Stanford Research Institute in 1963 Metcalfe borrow this view from Wang and Dewhurst, Wang,

Jia, and H. 1992. Boards of Directors and Stakeholder Orientation. *Journal of Business Ethics*, Volume 11, Number 2: 115–123., "[I]t has since become a prominent concept in corporate and academic communities, and in recent times in economic theories and political ideologies" (Metcalf, 1998: 30). "Freeman's (1984) Strategic Management: A Stakeholder Approach brought the stakeholder theory into the mainstream of management literature" (Frooman, 1999: 191), and the "concept of stakeholders has become embedded in management scholarship and in manager's thinking" (Mitchell, *et. al.*, 1997: 853). The stakeholder theory is used to describe, and sometimes to explain, specific organization characteristics and behaviors (Donaldson and Preston, 1995: 70). Freeman's definite stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives (Freeman, 1984: 46) ", which now is the most popular, broad, and "now-classic" (Mitchell, *et. al.*, 1997: 856) one.

As an early scholar on stakeholder, Mitroff (1983) Mitroff published his work, *Stakeholders of the Organizational Mind: Toward a New View of Organizational Policy Making*, which even one year earlier than Freeman's *Strategic Management: A Stakeholder Approach*. Introduce stakeholder theory into crisis management field. Pearson and Mitroff(1993: 50) argue that in crisis management, the manager has to answer three questions about stakeholder: which stakeholders affect crisis management? Which stakeholders are affected by crisis management? And how can the stakeholders be systematically analyzed and anticipated for any

crisis? Stakeholders refer to the "large and complex number of individuals, interest groups, and institutions" which are typically involved in any crisis (Mitroff, 1994: 108; Mitroff, *et. al.*, 2004: 180). "Stakeholders involve the broad range of internal and external parties who have to cooperate, share crises plans, and participate in the training and the development of organizational capabilities in order to respond to a range of crises" (Mitroff and Anagnos, 2001: 48). "Stakeholders can include customers, suppliers, the competition, employees, middle management, top leadership, unions, government agencies, the media, the natural environment, and even future generations" (Mitroff *et. al.*, 2004: 180). Pearson and Mitroff(1993: 58) argue that "the number and diversity of these stakeholders has grown steadily, further complicating the process of crisis management".

Crisis stakeholders are all of the various parties, institutions, and even societies that affect and are affected by a major crisis. The stakeholders in crisis are important elements to treat and appraisals, for their actions not only influence the result of crisis management, but also will influence the potential crisis later. The depth and width of intervention of stakeholders can form and change, and will form and change the crisis management system and mechanisms in different countries.

Attributes of Stakeholder

Stakeholder of all organization needs to identify their statuses with the organization and estimate the relationship with any other stakeholders.

Mitchell *et. al.*, (1997: 854) propose that "classes of stakeholders can be identified by their possession or attributed possession of one, two, or all three of the following attributes: (1) the stakeholder's power to influence the firm, (2) the legitimacy of the stakeholder's relationship with the firm, and (3) the urgency of the stakeholder's claim on the firm." The different various combinations of the attributes, power, legitimacy, and urgency, get the different focus from the manager.

They (Mitchell, *et. al.*, 1997: 865–866) argue that "a party to a relationship has power, to the extent it has or can gain access to coercive, utilitarian, or normative means, to impose its will in the relationship", and they note that "this access to means is a variable, not a steady state, which is one reason why power is transitory: it can be acquired as well as lost."

They (Mitchell, *et. al.*, 1997: 866) argue that legitimacy "loosely referring to socially accepted and expected structures or behaviors, often is coupled implicitly with that of power when people attempt to evaluate the nature of relationship in society." They accept "Weber's proposal that legitimacy and power are distinct attributes that can combine to create authority." They also accept Suchman's definition of legitimacy for he recognizes the evaluative, cognitive, and socially constructed nature of legitimacy. They utilize Suchman's definition of legitimacy, "recognizing that the social system within which legitimacy is attained is a system with multiple levels of analysis, the most common of which are the individual, organizational, and societal."

They (Mitchell, *et. al.*, 1997: 867) propose that adding the stakeholder attribute of urgency with power and legitimacy can help move the analysis model from static to dynamic. They argue that "urgency is based on the following two attributes: (1) time sensitivity—the degree to which managerial delay in attending to the claim or relationship is unacceptable to the stakeholder, and (2) criticality—the importance of the claim or the relationship to the stakeholder." They define urgency "as the degree to which stakeholder claims call for immediate attention." And they note that the "idea of paying attention to various stakeholder relationships in a timely fashion has been a focus of issues management and crisis management scholars for decades."

Classification of Stakeholders

Among the number of classification schemes from different scholars in the literature, Clarkson (1995) typology, primary and secondary stakeholders, is a typical one, for "it has the dual advantage of being both straightforward and comprehensive"(Freble, 2005: 414). A primary stakeholder group is one without whose continuing participation the organization cannot survive as a going concern, and secondary stakeholder groups are those who influence or affected, or are influenced or affected by, the organization, but they are not engaged in transaction with the corporation and are not essential for its survival(Clarkson, 1995: 106–107).

Borrowed his typology, Qiang(2008: 89–90) once classifies the stakeholders in natural disaster management into two groups, which are called

primary and secondary stakeholder too. Among the stakeholders, Central/Federal government, local government, NGOs, communities, private sectors, citizens, the trigger, and media are belong to the primary group, for they can affect and are affected by crisis management directly. The Central Government provides policy and financial budget to crisis management, the local governments are on the first line to crisis management, Nongovernmental organizations and volunteer organizations provide relief service, communities are "problem-solving entities"(Wenger, 1978: 18), private sector organizations support the governments' crisis management, and citizens are usually the victims of crises, sometimes they are innocent, like the passengers on commercial flights on 9/11. Media is an important primary stakeholder too, for it usually involves the whole process of crisis management. In some crisis, mostly in man-made, technology disasters, or terrorism attacks, there is always "someone pulls the trigger" to a crisis.

The other stakeholders, such as workers, suppliers, consumers, competitors, stockholders, and special interest are belonged to secondary group. Environment is another important stakeholder, for it is often the platform of crisis management, especially the natural disasters. In many cases, the crises across the boarder of the countries and influence other countries, and bring the stakeholders of different countries together, an international organization should intervened in coordinate the countries, such the United Nations(UN), the World Health Organization(WHO).

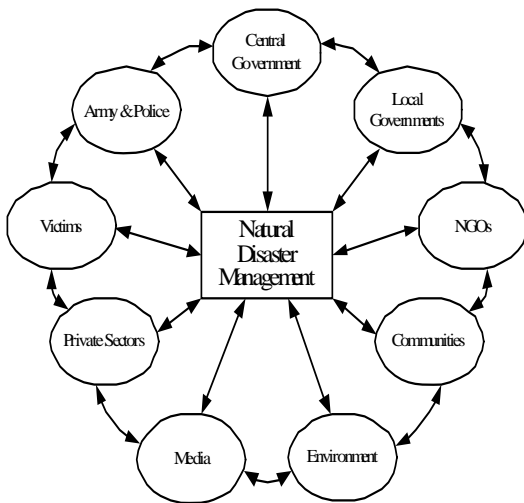
Based on Freeman's definition of stakeholder

that is "any group or individual who can affect or is affected by the achievement of the organization's objectives" Mitchell *et. al.*, argue that the Freeman's definition of stakeholder is the most popular and broad one, and become "now-classic". (1997: 856) (Freeman, 1984: 46), and according to the theory development and practice experience of China's crisis and emergency management, this study tries to definite the stakeholder with distinct Chinese characteristics in the context of Chinese national situation. Stakeholder is any or potential group or individual who can affect or is affected by the by natural disaster, incident, public health incident, and social safety incident which cause or maybe cause serious social crisis. Natural disaster management is the main composition of public emergency management system of China, and therefore the stakeholders in natural disaster management are inevitably the stakeholders in public emergency management. The research on stakeholders in natural disaster not only can improve the whole process of natural disaster management, also can understand and develop the public emergency management of China.

Primary Stakeholders of Natural Disaster Management in China

In order to discuss the process of natural disaster management, I adjust the primary stakeholder's model mentioned above. Firstly, natural environment is used to replace the trigger, for it is not only the place where natural disaster happened and being managed, but also the disaster trigger de facto. Secondly, as a new element, the

"army and police" is added to the primary stakeholder system, for it is the army and police that fight against the natural disasters at the most dangerous places in the front line. The nine primary stakeholders of natural disaster management, central government, local government, PLA and police, NGOs, community, private sector, victims, media, and natural environment, interrelated and interacted closely on natural disasters, and united into one system that can not separated for the successful disaster management. The figure 3 shows the relationship among the primary stakeholders.



<Figure 3: Primary Stakeholders in Natural Disaster Management>

Stakeholders usually suggest changes to the crisis management—mechanisms and systems—both structural and substantive. The suggestions from stakeholders usually turn into pressure to change of crisis management, because of the power, legitimacy, and urgency the stakeholders have, they can put pressure on the government for

better crisis management. If the pressure comes from inside the country, it can be called internal pressure, and if it comes from outside the country, it can be called external pressure. Sometimes, the external pressure is much stronger than internal pressure, although the internal pressure is stronger than external one at the most time. The successful fight SARS of Chinese Government is mostly benefit from the external pressure from international organizations and many other countries.

The power relations of stakeholders present in existing crisis management system determine not only the effect and efficiency of crisis management today, but also the future development direction of crisis management system, and influence the effect and efficiency of crisis management in the end. This study will focus efforts on the primary stakeholders in crisis management to analyses the relationship between stakeholders and institution change in crisis management development process.

The classification of primary stakeholders and secondary stakeholders in the natural disaster management can help to confirm the primary contradiction and secondary contradiction, and the analysis of the contradictions can help to confirm the main aspect of primary contradiction. The classification of stakeholders can not only make certain the stakeholders' roles respectively in the process of disaster management, mitigation, preparedness, response, and recovery, but also strengthen and develop the role of stakeholders' in theory research and practice in the future, based on the goal of maximization of social benefits.

According to Mitchell's three attributions model

of stakeholders, the nine primary stakeholders can attribute possession of one, two, or all three of attributions, power, legitimacy, and urgency. All the stakeholders, Central Government, local government, PLA & police, NGOs, community, private sector, victims, media, natural environment, all have the urgency to claim for natural disaster management. Among them, Central government, local government, PLA and police, media, and natural environment have the power to influence the process, but the NGOs without official background, community, private sector, victims have little influence on natural disaster management. And Central government, local government, PLA and police, community, and victims have legitimacy in natural disaster management, but the NGOs without official background, private sector, media, and natural environment has a loose relationship with the disaster management process. The three attributions of primary stakeholders were listed in Table 1.

<Table 1: Attributions of Primary Stakeholders in Natural Disaster Management>

	Power (Influence)	Legitimacy (Relationship)	Urgency (Claim)
Central Government	√	√	√
Local government	√	√	√
PLA & Police	√	√	√
NGOs	—	—	√
Community	—	√	√
Private sector	—	—	√
Victims	—	√	√
Media	√	—	√
Natural environment	√	—	√

III. Wenchuan Earthquake – A Case Study

A major earthquake measuring 8.0 According to the measure of State Seismological Bureau, China Central Television Station announced that the earthquake was 7.6 on the Richter scale shortly after the earthquake, and then amended to 7.8 on the Richter scale, and again amended to 8.0 on the Richter scale on May 18, 2008. on the Richter scale jolted Wenchuan County, Sichuan Province in Southwest China at 2:28 p.m. on May 12, 2008, and the epicenter of the quake was located 31.0 degrees north latitude and 103.4 degrees east longitude. Tremors were reported in Beijing, Shanghai, and Chongqing municipalities, Ningxia, Qinghai, Gansu, Shanxi, Shaanxi, Shandong, Yunnan, Hunan, Hubei, Guizhou, Henan and Jiangsu provinces, and the Tibet autonomous region, and even in the Hong Kong, Macau, Taiwan, Thailand, Vietnam, and Pakistan. According to statistics of the China Central Government GOV.cn, 69227 People Killed in the Earthquake. http://www.gov.cn/jrzq/2008-09/22/content_1102192.htm, access on 2008.11.13., by September 22, 2008, there were 30825 aftershocks had been detected since the 8.0-magnitude earthquake, and the death toll from the May 12 earthquake had reached 69227, injured 374643, reported missing 17923, and evacuated 1.51 million. More than 5645 middle- and big-size factories had to closed by the quake, and millions people lost their job. The quake made 532,000 houses, made mostly of wood and mud collapsed, left about 1.2 million people in urgent need of shelter, large-scale infrastructures

destroyed, great loss of industry and agriculture happened, and the environment damaged. The quake also damaged 48275.5 kilometers water pipes, 53295kilometers highroad, and a total of 1,363 schools which need reconstruction. The direct economic loss was more than 845.1 billion RMB Yuan. In terms of the intensity and scope of destruction, the Wenchuan earthquake is believed to have surpassed the 7.8-magnitude quake in 1976 in Tangshan, northern Hebei Province, which claimed more than 240,000 people were killed.

In order to save lives and alleviate economic loss from the catastrophic disaster, the whole country was mobilized to fight against the earthquake. The government, private sector, media, international organizations, foreign countries, or even overseas Chinese were all involved in the disaster management process. As the primary stakeholders in the disaster management process, central government, local government, army and police, NGOs, victims, private sectors, communities, media, and environment took an essential role for efficiency and effectiveness disaster management.

1) Central Government

The central government usually refers to the highest level of all the government which has administrative power to execute the policy passed by legislates, no matter a federal country or a unitary country. Because of the special state situation, the Chinese political system is very different with most other countries. Mr. Hu Jintao is the President of China, Chairman of Central Military Committee, and General Secretary of the

Communist Party of China Central Committee, and at the highest level of political power chain, who can reprehensive the State Council namely. When central government is mentioned in this study, the State Council and the President are all included, but the CPC has superiority to other organizations. And because the leaders of other central organizations are all the members of the Standing Committee of the Political Bureau of the Communist Party of China (CPC) Central Committee, all central organizations are parts of extended organs of CPC.

After the great earthquake hit Wenchun, China government immediately took the most large scale natural disaster relief after the establishment of People's Republic of China. One hour and 27 minutes after the quake, the Primary Ministry Wen Jiabao went to the disaster area by helicopter with several ministers of the State Council. On the helicopter, Primary Wen established the Headquarters for Earthquake Disaster Reduction and Relief and appointed himself the Director of it. The headquarters set up eight teams, disaster relief team, forecast monitoring team, and so on for helping with rescue work, medical care, security, information and other tasks. According to the State Relief Plan for Rapid Response to Natural Disasters, the National Disaster Reduction Committee activated the Grade-I Disaster Response, the highest level response to disaster, and according to the National Plan for Rapid Response to Earthquake, the China Earthquake Admission activated the Grade-I Disaster Response of its department too. Some ministries, such as Ministry of Civil Affairs, Ministry of

Finance, Ministry of Railway, Ministry of Health, activated their department response plan for disaster relief and reduction.

The Political Bureau of the Communist Party of China (CPC) Central Committee holds five Standing Committee meetings on earthquake disaster relief, and members of the Standing Committee, President Hu Jintao, Vice President Xi Jinping, Vice Premier Li Keqiang, inspected the disaster area and guided the disaster relief by June 23, 2008. The central government provides a 49.6 billion yuan (\$7.2 billion) disaster relief fund from the central budget. The State Council regulated Regulation on Reconstruction of Wenchuan Earthquake, and released as No. 526 Order of the State Council to enforce on June 8, 2008, and then released Master Plan on Recovery and Reconstruction of Wenchuan Earthquake on September 16, 2008. The National Congress revised the current Law on Earthquake Resistance & Disaster Relief, and it was the second revision and important revision. China began a three-day mourning period for the victims from 19–21, May, with flags flying at half-staff and public amusements suspended. It is the first time that China government declares a national mourning and half-mast national flags for civilians.

2) Local Government

The local governments are on the first line of natural disaster management, especially for the sudden happened disasters and emergencies, like the earthquake, for the central government has no plenty of time to mitigate, prepare, and response the disaster earlier. The primary function of local

government is trying to protect its people and property from dangers and disasters. Although all roads were broken off, and the communication were cut off after the earthquake, the local governments started to collect materials, evacuate people, find survivors from ruins, contact with outside world, response disaster right after the disaster happened. There are four levels local government in China, which is provincial level, city level, county level, and town level, and the most important level is county level, for the central government and provincial government support county government with policy, material, and budget for disaster response and relief. For example, the local government gathered 4.7 billion yuan (\$683 million) from the local budget, and it is only 8.6 percent total fund for earthquake victims.

The local government involves in disaster response and relief mainly in two ways, the first is direct relief, and the second is indirect relief. Liu Qibao, the Party secretary of CPC Sichuan Province, called on public servants of local governments and party organizations of earthquake-hit areas lead local people for earthquake response and disaster relief in the front line. He points out that the local governments should save the injured as quickly as possible; transfer the injured to safe place; provide the victims food, clothes, and houses; maintain the sound social order and keep society stability; (Earthquake Admission department) forecast the earthquake, and release relative information; lead the public opinion on the right direction. On the indirect way, the local governments of

non-earthquake hit area have two tasks, first is to responsible for the local people safe with any efforts, and second is responsible for the disaster area by provide materials and fund. There are 19 provincial governments take one-to-one cooperation with earthquake-hit counties for reconstruction.

But the interests of central government and local governments are not complete conformity. Some of local governments got financial budget by cheating central government. According to the report of State Audit Admission, there is almost 1.4 billion yuan disaster relief fund has been defalcated. For example, Chong zhou city of Sichuan Province cheated more than 1.2 billion funds from central government, and Tianshui city of Gansu Province reported more than 71 thous and illusive victims and cheated a great amount of charity money. By the end of April, 2009, 246 individuals were punished for their violations by the law of country and by the discipline of CPC in disaster relief in Sichuan Province, and 31 of them were affixed criminal responsibility.

3) People's Liberation Army (PLA) and Policeman

In China, PLA and policeman are composed of all the arms and services, and Fire Service Army, armed policeman and people's policeman. The PLA and policeman take an important role on disaster management on the spot. The General Staff Headquarters of PLA activated the emergency response mechanism 13 minutes after the earthquake, and commanded Chengdu military area, air force, armed police firmly implement the

important instructions from President Hu Jintao, and combat the earthquake, provide first aid to the injured, and less the loss with the most efforts. According to the statistics, there were 146 thousand solders, armed policemen, and 75 thousand militias fight against the disaster and disaster relief. There were more than 20 kinds of technological army, such as earthquake relief, monitoring, communication, engineering, health care, and mapping, worked in the front line. The scale, the kinds, and the high-speed to action of the army set up a record in PLA's history.

By July 18, 2008, the PLA prepared 14.8 thousand kilometers road, built 220 thousand mobile rooms, evacuated 1.4 million people to safe place, transferred 1.36 million tons of disaster relief materials GOV.cn. Officers and Soldiers of Relief Army Want to Make New Contribution to Fight Disaster. http://www.gov.cn/jrzq/2008-07/20/content_1050646.htm, accessed on 2008.11.19., which has made an important contribution to the staged success of combat earthquake and disaster relief. According to incomplete statistics, there were tens of PLA soldiers and armed policemen died for the country in the process of disaster relief, including 5 solders died in a helicopter craft. South Korean scholar Lee and Yoo made a questionnaire and found that the Chinese people think the performance of army, policeman, and fire service is better than the central government and local government (Lee and Yoo, 2008: 6-7). The Asia and Pacific Research Center of Chinese University of Hong Kong made a similar investigation, and their findings confirmed the Lee and Yoo's conclusion The Chinese University of

Hong Kong. Abstract of Investigate Findings on Attitude to Sichuan Earthquake Relief from Civilians. (<http://www.cuhk.edu.hk/cpr/pressrelease/080522.htm>, accessed on 2008.11.19.).

4) Non-Government Organizations (NGOs)

In the Wenchuan earthquake, the NGOs include charity organizations, volunteer organizations, and parts of civilians who have the intention for disaster relief. Just after the earthquake, China Red Cross Society activated the Grade-I response plan, and allocated millions RMB yuan to the disaster-hit areas, and China Charity Federation called on donation for the victims too. By April 30, 2009, the donation from all over the world is about 76.7 billion yuan. NGOs here often refer to the NGOs without official background, and the China Red Cross Society and China Charity Federation which with official background often are classified into central government. At the same time, all kinds of volunteer organizations and volunteer individuals from the whole country gathered the disaster areas for disaster relief. According to incomplete statistics, there were over 300 NGOs and at least 3million volunteer worked in Wenchuan disaster area. The works which the volunteers mainly took were six kinds. They provide first aid and professional health care to the injured; take part in the disaster relief, and search for the survivors in the ruins; help to build camps, settle the victims, and allocate food and water; provide psychological assistance to the victims; collect donation for the disaster areas, including fund, material, and blood; and look for the lost relatives for the victims. The development

of volunteer organization has been limited and discouraged for a lone time, but the earthquake helps the NGOs break the constraints and get prosperous development, although it was a short period, it gave a great courage to the NGOs in China. But the development of NGOs was not optimistic. By the April 2009, there were less than 50 NGOs and no more than 50 thousand volunteers who left continuing work in disaster area.

5) Community

Wenger(1978: 18) argues that communities are "problem-solving entities". In the earthquake-hit disaster, communities refer to the residents' committees in urban area, villagers' committees in rural area, and schools. According to the figures given by Wei Hong, the deputy governor of Sichuan Province on a press conference, there were more than 10 thousand schools were damaged, and 19,065 students were killed in the earthquake CHINA.com.cn. Press Conference on Post Disaster Reconstruction. http://www.china.com.cn/zhibo/2008-11/21/content_16793341.htm?show=t, accessed on 2008.11.19., that is, the schools were the most severely afflicted areas. From the September1, 2008, the new semester started, the first lesson of all the primary school and middle school is earthquake response knowledge education, in order to enhance the safety awareness and the ability of self relief and each other relief. Communities settled the victims and strengthened the settlements, helped to recover the normal social order. Followed the instruction of the Organization Department of CPC of Sichuan

Province and Department of Civil Affairs of Sichuan Province, temporary community management committees and temporary CPC unions were established in the victim settlements to organize, co-ordinate the routine work of communities, and to shape the community consciousness, integrating community resources and advancing community development. Because of the complicated and arduous characteristics, local volunteer organizations were established in the settlements to provide settlement information, emergency service, and life care for efficiency and effectiveness of volunteer service. Millions of people lost their jobs in the earthquake, so the communities also help to find jobs for those who want to work by provide skill training and distance education training Tang Jinsu and He Gengxing. Investigative Report on Villagers' and Residents' Committee and Reconstruction. <http://www.mca.gov.cn/article/mxht/llyj/200807/20080700018600.shtml>, .

6) Private Sector

Some state-owned and state-shareholder enterprises, such as communication, railway, electronic power company, waded into disaster reduction and relief right after the earthquake, and the private sector also take an important role in disaster relief. Firstly, they take part in disaster relief immediately. Chen Guangbiao, the Chairman of Jiangsu Huangpu Recycling Resources Co. Ltd. was holding a broad meeting 1000 kilometers away at the earthquake moment, and he changed the broad meeting to a disaster relief meeting. Two hours later, a rescue and relief team composed by 60 cranes, heavy graders, and bulldozers marched

to the earthquake areas, and arrived at the epicenter of the quake in 36-47 hours, and it was the first civilian mechanized rescue team be there. Mr. Chen rescued 5 five students and brought out 208 students bodies from ruins. Secondly, they donate to the disaster area. By middle of November 2008, the donation from enterprises reached 7.2 billion RMB yuan SINA.com. Enterprise Citizen is Acting. <http://finance.sina.com.cn/blank/zzqyxd.shtml>, accessed on 2008.11.19., and it was about 12% of the total amount of donation. Thirdly, they take part in the post-disaster reconstruction. Some enterprises work at disaster area recovery for public interest without profit. For example, Vanke Co., Ltd. declared to expend 100 million RMB yuan, non-profitable and not commercial development, to victim settlement, post-disaster recovery and reconstruction in 3-5 years. The private sector advanced the positive production and rescues themselves, recovery and reconstruction by take part in disaster reduction and relief, nonprofit project, and donation.

7) Victims

Victims, no matter the death and the injured, are the bearer of the disaster, who has to suffer the great influence of disaster in terms of both their physically and psychosocially. Some of influence can be lessened or eliminated in short term, but some can be not, and will last with the victims all life. But the victims realized that they should not fall in deep mourning and can not escape from it, and they know that it is impossible for reconstruction by outside relief and

donation. There were four kinds of actions which the victims had to rescue and relief immediately after the earthquake. The first is rescue people. Some people escaped from the ruins with great difficulties, and then help others in ruins on the risk of death. The second is disaster relief. The victims saved property, materials of life and production from the ruins to prepare for the reconstruction their houses. The third is multi-help. Although they were all disaster victims, they helped each other for reconstruction houses or gather harvests and plant crops. The fourth is jog-finding. Some victims realized the complexities and difficulties of reconstruction, in order to accumulate money for it, they took part in the employment training which provided by local government, and get job at local or for away from hometown. By these production and self-rescue methods, the victims can eliminate the influence of disaster and finish the task of recovery and reconstruction.

8) Media

The Chinese media got highly praise from domestic and international society for their participants in the disaster management process. Besides the traditional television, radio, newspaper, and magazine, the new media, especially the internet and cell phone, took a key role in disaster management. The China government released the media control which have been constrain the media report the emergencies for a long time, and opened the disaster reduction and relief process for the Chinese and international media at the largest. It was the first time that the national

television, China Central Television (CCTV), broadcasted a complete round-the-clock live video report on disaster management, and drove and promoted the report length and depth of local media. Radio broadcast and internet had huge advantaged over other media, because in the epicenter of the great earthquake, all the communication facilities and roads were destroyed but radio broadcast and internet, and they became the only channel for outside get disaster information. In order to let the victims know what the governments were doing for them, thousands of mini radios with batteries by aircraft drop. On the other hand, the media has been supervised the whole process of disaster relief of governments. By the efforts of media, professionals, and net citizen, at least 6 local public officers were chucked out of offices, and other 21 were punished by CPC disciplines and administrative disciplines for their improper behaviors and default of duties.

9) Natural Environment

Natural environment is often the "trigger" of natural disasters, and it is not only affecting natural disasters, but also affected by natural disasters. Wenchuan earthquake was the result of crash and crush of the India plate against the Burma plate at Qinghai-Tibet Plateau and Himalaya Mountains, and at the same time, the Wenchuan earthquake reshaped the land form disaster area. After the earthquake, the monitoring site in the epicenter moved at horizontal shift by 238 centimeters, settlement by 70 centimeters, and uplift by 30 centimeters. The earthquake

greatly changed the surface and land form, and greatly effected the disaster reduction, recovery and reconstruction. The mudslide and landslide deduced by the earthquake destroyed the roads and bridges, and blocked the road transport. Three days later, the road transport had been gotten through, but the golden 72-hours relief time had passed, which resulted in thousands of victims died. The site selection of New Beichuan County Seat for reconstruction started right after the earthquake, but after several repeat, it was not decided until November, 2008. It took six months for the relocation, and made the recovery and reconstruction behind the schedule.

IV. Conclusions and Suggestions

President Hu Jintao pointed out at the "National Commending Conference on Earthquake Combat and Disaster Relief" on October 8, 2008, the fundamental reasons for great victory of Wenchuan earthquake reduction and relief were the superiority of China's socialist system, the good qualities of Chinese nation, political nature of people's army, strong leadership of CPC Ibid 6.. In his conclusion in political perspective, people, people's army, and CPC are considered as three primary stakeholders in Wenchuan earthquake response management, in natural disaster management, even in crisis and emergency management. Compare President Hu's primary stakeholders with the primary stakeholders of this study, although the numbers of two kinds of primary stakeholders are different, they have a correspondence between them. Communist Party of China(CPC) corresponds with the Central

Government and local governments, people's army corresponds with the PLA and policeman, and people corresponds with the NGOs, community, private sector, victims, and media. The difference is showed in Table 2.

<Table 2: Comparison of Primary Stakeholders of Hu and Qiang>

Hu's Primary Stakeholders	Qiang's Primary Stakeholders
Communist Party of China	Central Government
	Local governments
People's army	PLA and policeman
People	NGOs
	Community
	Private sector
	Victims
	Media

The great victory of earthquake reduction and relief is not a victory of one stakeholder, but the victory of all stakeholders together. In the disaster management process, the CPC committee and government at central level have been leded strongly and decision-making scientifically the local government directed correctly in the first line; the PLA, armed police and public security police, militia have been fought against the disaster at the most dangerous places; the scientific and technological workers and engineers provided supports; the citizens and volunteers worked for the disaster area, or donated materials, money, or blood; the victims overcame many obstacles to recovery and reconstruction the journalists of medias investigated in the disaster area at the risk of their lives, and provided powerful public support in opinion. The primary stakeholders interacted each other, helped each other and affected each other, and achieved the

unification on the interest maximization of nation, country, and victims. The Chinese disaster reduction and relief model, the serious participant of primary stakeholders, is a well developed natural disaster management model, for it is not proved in the Wenchuan earthquake, but also has proved in the other natural disaster management, like the disaster management process of Typhoon Saomai of 2006(Qiang and Lee, 2007: 80–81).

By systematic analysis of stakeholders in natural disaster management in China, this study answers three question, that are which stakeholders are primary ones, how primary stakeholders affect and affected by natural disasters, and how primary stakeholders participant the natural disaster management. President Hu Jintao concluded that China "has accumulated valuable experience on response emergencies and fight against extreme natural disaster" Ibid 6. through Wenchuan earthquake reduction and relief, but the experience is not enough and sufficient for government administrative management. The possibility of extreme weather greatly increased because of the global climate change, and China has to face more critical challenge of natural disasters. Strengthen the study of stakeholders of disaster management can help to develop the disaster management system, and achieve the maximization of society interest. According to the China's national conditions and actual situations, this study presents following policy suggestions.

1. Strengthen the systematic research on stakeholders to form combined force for disaster relief. The theory research of scholars and

emergency management practice of public servants have been paid much attention on the status and role of government, army and people in the natural disaster management, and made a broad consensus on it. But we should realize that the three stakeholders' disaster relief system is not perfect. For example, the army has been ready adequately for disaster relief, but because of lack of disaster relief experiences and equipments, the obsolete methods influenced the national disaster relief performance in "golden 72-hours". The effort of three primary stakeholders is not enough for disaster reduction and relief, and must strengthen the research on the evaluation of NGOs, community, private sector, and volunteers. By enhance the "short boards"of the wooden barrel, the combined force of all stakeholders can well functioning, and accomplish the public interests at maximization.

2. Research the primary stakeholders in-depth, and organize their relations. Organize relation here refers to make the relations clearly between the CPC committee and the government, and the government and the army. Because of the special national conditions, the CPC which is in power has enormous absolute public power, which usually out of supervision, and sometimes be considered as the superiority of the China's socialist system. On a global scale, it is mainly the government's duty but not the political party's to protect the life and property of people, and lessen the economic loss. Additionally, not all citizens are members of the party in power, and there must be some problem on direction and mobilization in the disaster

response process. So the CPC committee must transfer or retrocede the power which should belong to government to government, and let it head the disaster management.

The army is not belong to the nation, and the basic principle is the "Party commands the gun", so the State Council has no right to coordinate the army to disaster reduction. The confused management of government and army can not combine the two superiority resources into one force for in disaster reduction, and the problem was clearly exposed in Wenchuan earthquake reduction. The policy maker at central level realized the problem too, in the Act on Earthquake Prevention and Disaster Relief (Amended Draft), which was presented to the Fifth Meeting of the Eleventh National People's Congress Standing Committee for consideration on October 25, 2008, the cause of the State Council can coordinate the PLA, armed police, and militia to reduce earthquake was added to the act (Article 56 of the Amended Draft) GOV.cn. Act on Earthquake Prevention and Disaster Relief of People's Republic of China (Amended Draft). http://www.gov.cn/jrzg/2008-10/29/content_1134056.htm accessed on 2008.11.19.. This act adjusts the relationship between the State Council and the army only in earthquake, but not in other disasters, like flood, typhoon, and tsunami, and the relationship between them can not be adjusted clearly until the cause added into the Act on Emergency Countermeasures and even the Constitution.

3. Expand the research scale of stakeholders, and pay attention on both primary stakeholder and

secondary stakeholders. The secondary stakeholders should not be ignored, for the stockholders, employees, foreign governments, international NGOs, foreigners, and oversea Chinese participant the reduction and relief as the secondary stakeholders. For example, the stockholders of some enterprises passed the resolution of donation to the disaster area in a short time, and the donations of fund, materials, and on spot relief from international society provided great help for disaster reduction and post-disaster recovery and reconstruction. But there is a critics to some countries, foreign companies and individuals for their "too less donation" from the internet society, because some of net citizens argue that the amount of their donation should be much more. This shows that part of Chinese have a wrong or misunderstand on charity, and should be guided by training and propaganda. The Chinese government has a relative conservative opinion to international assistance, and should deepens the cooperation and coordination with other countries, international organization, and foreign companies, makes good use of international resources, and learns management experience from them for natural disaster reduction and post-disaster recovery and reconstruction.

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姜恩芳. En-Fang Qiang is a senior lecturer of public administration at the Department of Public Administration, College of Political Science and Public Administration, Tianjin Normal University. He received his Ph.D. from the Chungbuk National University, South Korea. His research interests include crisis and emergency management, human resource management, and government management(cnqef@hotmail.com).

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