

China's Management of Environmental Crises: Risks, Recreancy, and Response

Richard P. Suttmeier
University of Oregon
Eugene, OR, USA¹

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Introduction - A Country at Risk.

As the crisis events of the last several years remind us, China is a nation of risks. Serious floods, deadly landslides, chemical spills, industrial accidents, drought and catastrophic earthquakes all point to China's vulnerability to natural and human created hazards. In an average year, thousands of people die as result of natural hazards and millions more are otherwise affected by injury and the loss of homes and property.² Environmental pollution and industrial accidents kill and maim additional thousands. The risks are diverse, are widely distributed around the country, occur with relatively high frequency, and typically involve high losses.³ Ongoing urbanization, increasing inter-regional interdependencies, and the deployment of more demanding and powerful technologies increase the likelihood that the magnitude of catastrophic incidents will increase. The management of crises resulting from these risks poses serious governance challenges for the Party-state. It must both devise effective emergency responses to the multiple crises which a society of risks engenders while also meeting the

¹ I am grateful to Professors Xue Lan and Zhong Kaibin for their thoughtful comments, and to Elaine Sun Xiao E for research assistance.

² In 2009, there were 80,000 casualties resulting from natural disasters. "Public Still Unprepared for an Actual Disasters." Interview with Shan Chunchang. *Global Times*. April 25, 2010. <http://opinion.globaltimes.cn/commentary/2010-04/525687.html>

³ Information Office of the State Council. "China's Actions for Disaster Prevention and Reduction." *People's Daily*. May 11, 2009.

increasingly pressing need for risk reduction measures, a challenge which ultimately involves a reconfiguration of incentives and patterns of responsibility in both state and society.⁴

Many of today's risks are certainly not new to China. Chinese history is punctuated by major earthquakes, for instance, with four in particular taking more than 200,000 lives each.⁵ Major floods, typhoons, famines, droughts and epidemics have been more frequent occurrences. The traditional state was conscious of these risks and devised crisis management policies and institutions to respond. Given China's size and complexity, and given the ubiquity of its bureaucratic system, it is not surprising that central tenets of this crisis management tradition involved establishing a hierarchy of incidents in terms of their severity, with efforts to parcel out responsibilities for them between central and local authorities, depending upon severity. At the same time, China's traditional approach to crisis management also recognized the limits of the state and the importance of mobilizing local elites outside of the state for both disaster prevention and crisis response.⁶ While remarkable in a variety of ways, the traditional crisis

⁴ Richard P. Suttmeier. "The Sixth Modernization? China, Safety, and the Management of Risks." *Asia Policy* (July, 2008); Paul Thiers. "Risk Society Comes to China: SARS, Transparency and Public Accountability." *Asian Perspectives*, Vol.27, No. 2 (2003). Pp. 241-251.

⁵ These include the Hongdong quake of 1303 in Shanxi, the Huaxian earthquake of 1556 in Shaanxi (thought to be the world's most deadly), the 1920 Haiyuan quake in Ningxia, and the Tangshan earthquake of 1976. Historical records also indicate that there had been eight magnitude 7 earthquakes within 200 km of the 2008 Wenchuan epicenter. Wang Zifa, Lin Tun, Walker, George. "Earthquake Risk and Earthquake Catastrophe Insurance for the People's Republic of China." MPRA (Munich Personal RePEc Archive). Report prepared for the Asian Development Bank, MPRA Paper No. 21248. Posted March 10, 2010. Available at <http://mpra.ub.uni-muenchen.de/21248/>. P.1.

⁶ Robert J. Antony and Jane Kate Leonard (eds.). *Dragons, Tigers, and Dogs: Qing Crisis Management and the Boundaries of State Power in Late Imperial China*. Ithaca. East Asia Program, Cornell University. 2002.

management regime was nevertheless subject to failure, typically by falling victim periodically to debilitating recreancy⁷ and a breakdown of a capacity for collective action. As in other countries, the failure of crisis management capabilities reflected negatively on political legitimacy and, in extreme cases, led to the loss of the “mandate of heaven.”

The Communist regime understood well the relationships between effective crisis management and political legitimacy when it took power in 1949, and strove to both protect Chinese citizens from risks and to devise response mechanisms when disaster struck. Unfortunately, the developmental trajectory of Maoist China included innumerable misguided policies and practices which in many ways put the country at greater risk, especially when considering the increased possibilities for damage resulting from industrialization, population growth, and the deployment of more powerful technologies.⁸ At the same time, its approach to the development of crisis response mechanisms resisted modernization, relying largely on ex post-facto mass mobilizations and relatively weak crisis management planning.⁹

⁷ Recreancy is understood here as "*the failure of institutional actors to carry out their responsibilities with the degree of vigor necessary to merit the societal trust they enjoy.*" Recreancy is thus a failure of individuals or institutions to live up to expectations of "trust, agency, responsibility, or fiduciary...obligations." William R. Freudenburg, "Risk and Recreancy: Weber, the Division of Labor, and the Rationality of Risk Perceptions." *Social Forces*. 71 (4)(1993). pp. 909-932.

⁸ Judith Shapiro. *Mao's War against Nature*. Cambridge and New York. Cambridge University Press, 2001.

⁹ For instance, at the time of the 1976 Tangshan earthquake, one of the most severe natural disasters in the pre-reform period, there was no specialized disaster management agency and, although a crisis management center was promptly established, there was no significant planning or preparedness, or established protocols, for coordinating various agencies. Although 100,000 troops were mobilized for the rescue effort, there were no professional rescue teams or specialized rescue equipment to speak of. It has been estimated that of those rescued, some 80% were saved by local people themselves. In addition, the government refused offers of assistance

The China of the late Mao era, thus, had become one which had entered a “risk transition,” where new modern risks resulting from industrialization, population growth, and urbanization existed side-by-side with traditional risks, and where the crisis management mechanisms had yet to be adapted to the new risk realities.¹⁰ The initiation of the programs of reform and openness in 1978 accelerated the movement into the risk transition phase as China’s risk profile changed in a variety of ways. Rapid economic growth has been accompanied by dreadful environmental degradation and severe ecological stresses which frequently produce crisis incidents, and the introduction of many new and powerful technologies, somewhat Janus faced, both exacerbate environmental and safety problems but also offer new opportunities for more effective risk management.

China’s increasingly complex and deep engagement with the international community has also exposed it to new norms of risk management and international best practices for responding to crisis incidents. At the same time, the years of marketizing reform has also had the effect of removing many of the “guarantees” that constituted the socialist safety net Chinese citizens had taken for granted. Thus, Chinese citizens have experienced a psychological shift characterized by heightened awareness of risk - economic, safety, environmental - in society. The old “total insurance” assumptions of socialist society have given way to new uncertainties. In spite of these developments, China had, until recently, been slow to develop new institutions

from other governments and did not have the benefits of participating in the international regimes for disaster risk reduction and emergency response. Poor building construction accounted for most of the deaths, but inadequate attention was given to building standards and land-use planning in the reconstruction efforts. Jiang Lingling, Wang Jiexiu, and Liu Lianyou. “People’s Republic of China: Providing Emergency Response to Sichuan Earthquake.” Asian Development Bank, Technical Assistance Consultants Report. December, 2008. Pp 132-133.

¹⁰ Kirk Smith. "The Risk Transition." *International Environmental Affairs*. Vol. 2, No. 3. (1990).

for managing risks and responding to crisis situations. Thus, Aaron Wildavsky's observation that "richer is safer" has yet to apply unambiguously to China.¹¹

Risk, Emergency, and Crisis.

In attempting to understand China's current approach to crisis management in the areas of natural disasters, environmental pollution, and industrial accidents, it is helpful to reflect on the evolution of thinking in the international community on these issues. As China has struggled to develop an improved crisis management system, it has consciously sought to study, and where appropriate, emulate international experience. This has occurred through its interactions with international organizations with active crisis management programs, especially United Nations agencies,¹² through regional and bilateral programs of cooperation, and increasingly through the development of a professional crisis management research tradition in China which has studied crisis management approaches in other countries.

However, there are inherent limitations to the relevance of international experience. Crisis incidents inevitably involve many distinctive local conditions, and local responses to crisis incidents shape the character and effectiveness of emergency response. More importantly, the development of a crisis management system reflects not only the influences of international best practices, but also the path dependency of national and local institutions. Thus, it is useful to see China's approach to crisis management as involving a tension between international norms and the values and traditions of its extant institutions. In this sense, China's approach to crisis management parallels its experience with reform and development over the past several decades more generally. Institutional models from the international community have been studied and

¹¹ Aaron Wildavsky, *Searching for Safety*. New Brunswick, NJ, Transaction Press. 1988).

¹² China's first disaster reduction plan was developed in conjunction with the United Nations Development Program in 1998.

selectively introduced. Advanced technologies have been imported and deployed. But, through it all, certain core values and practices of political institutions have persisted, and/or resisted reform. As with China's broader development experience, its evolving approach to crisis management raises the question of whether China's relative ability to accommodate both global influences, and local and national institutional interests, is best understood either as the creation of a new 21st century "Chinese model" of governance, or as the source of potential societal instability.

The concepts of *risk* and *risk management* have come to figure prominently in international thinking about crisis management. As catastrophic incidents have increased around the world, the sense of being "at risk" has become more widespread, and with it, increased concern for the costs of disasters and ways of reducing the costs of catastrophic incidents. Growing professional attention to the management of crises has been accompanied by interest in securing the best returns from increased investments in crisis management. Wise investment decisions are those which normally take account of some sort of risk-benefit analysis, where risk is understood as the probability of an event times the magnitude of its impact.

Understanding risk in these terms points to a fundamental conundrum in building crisis management systems. Crisis incidents are usually understood in terms of low probability but high impact events, thus complicating the investment intervention decision. If an event is of low probability, investment in prevention or mitigation might be considered a poor use of scarce resources, especially in developing countries. On the other hand, the cost of crisis incidents can be staggering, with the result that interventions taken to lower those costs often can be more than justified. The questions then become, when are such investment interventions justified, and how are institutional arrangements put together to assess risk and make investment decisions?

Much recent research suggests that investments in "pre-event" activities warrant considerably more attention; crisis management thinking should therefore move beyond the immediate "emergency response" challenges to a more comprehensive risk management perspective. Crisis managers are therefore enjoined to think not only in terms of response mechanisms for immediate post-event actions, but also in terms of pre-event investments in prevention and mitigation activities, in the preparations for response, in preparation for

immediate post-event recovery challenges, and in planning for the longer-term recovery.¹³ Again, since it requires action by a variety of organizations across a variety of organizational jurisdictions, one of the more challenging tasks for crisis managers is to devise institutional arrangements that will permit the effective adoption of this more comprehensive risk management approach. As we will see, an understanding of the importance of this comprehensive approach is taking root in China, but progress towards its implementation has been quite mixed.

The overlapping of the concepts of “risk management,” “emergency management,” and “crisis management” is evident when a crisis is understood in terms of three main components - *threat*, *urgency*, and *uncertainty*. Crises are understood in the first instance when values, lives, and property are threatened, or are at risk. Of course, many threats (e.g., climate change) seem to be longer-term and do not elicit crisis responses. Crises, like emergencies, therefore typically involve the compression of time, or urgency, where responses from decision-makers must be made quickly. In many situations where lives and property are at risk, and where decisions must be made quickly, preplanned routines, characteristic of sound emergency management practices, can be invoked with some confidence that the threat is understood and that the consequences of response are reasonably well-known. Crises, and the other hand, can be distinguished from emergency incidents by the levels of uncertainty surrounding the causes of the threat, the ways in which the incident unfolds or develops, and the likely consequences of intervention.¹⁴

¹³ Herman B. Leonard and Arnold M. Howitt. “Acting in Time against Disasters: A Comprehensive Risk-Management Framework.” In Howard Kunreuther and Michael Useem (eds.). *Learning from Catastrophes: Strategies for Reaction and Response*. Philadelphia. Wharton School Publishing, 2010. pp. 18-40.

¹⁴ Arjen Boin, Paul Hart, Eric Stern, and Bengt Sundelius. *The Politics of Crisis Management: Public Leadership under Pressure*. Cambridge and New York, Cambridge University Press, 2005. 2-4.

In their recent work on crisis management, Arnold M. Howitt and Herman B. Leonard draw even finer distinctions between emergencies and crisis, arguing that the novelty associated with a crisis - resulting from the scale of an incident (eg., a major earthquake, typhoon or hurricane) and/or the strange, unfamiliar, or unexpected pattern of its development (eg., a nuclear accident, a deep sea oil well blowout) - often renders established emergency procedures irrelevant or counterproductive. "Routine emergencies" (referred to as "Mode R" incidents) are therefore distinguishable from "crises" ("Mode C") by the high degree of uncertainty found in the latter. Mode C incidents thus put a premium on "sense making" in the face of the unfamiliar, and on creative, adaptive decision-making that is not presumed in the scripted routines typically found in good emergency management procedures. Effective crisis management organizations must therefore be prepared to operate in both Mode R and Mode C, by no means an easy challenge given the different organizational requirements of the two modes.¹⁵

As we shall see, Chinese experience builds on emergency management traditions from the past and on recent disaster experience combined with lessons learned from the international community. Since a number of recent incidents have exhibited crisis characteristics, the challenge of developing crisis management capabilities has become pressing. Let us review several of these before examining recent developments of China's crisis management regime in greater detail.

A Mini-Bhopal?

There is no shortage of environmental insults and industrial accidents which have put, and continue to put, Chinese citizens at risk. One particularly striking case, considering the ghoulish consequences, nicely illustrates many of the the problems with China's crisis management system. At 9:55 PM on the night of December 23, 2003 in Kaixian County, Chongqing municipality, a natural gas well experienced a serious blowout resulting in the release of a large amount of hydrogen sulfide. The release affected 28 villages in four towns, killing more than 200 people, either in their sleep, or as they attempted to escape the gas. Some 4000 others were hospitalized.

The investigation that followed the incident found that the Eastern Sichuan Drilling Company, a subsidiary of China National Petroleum Corporation was negligent. The negligence of the company, which supposedly was using safe and reliable advanced technology, involved the removal of a critical blowout prevention valve, a failure to promptly ignite the gas (which would have resulted in the production of relatively harmless by-products) until 18 hours after the event, and a failure of the workers to promptly notify the local government, the obvious first responder. But, media accounts of the incident also illustrated that much was wrong with China's approach to crisis management more broadly in the face of potentially catastrophic incidents.

¹⁵ Arnold M. Howitt and Herman B. Leonard. *Managing Crises*. Washington, CQ Press, 2009. Pp. 1-14, 611-6624.

As a state owned company, East Sichuan Drilling had a bureaucratic status that required that its regulatory oversight be provided by the municipal, rather than by the county government. As a result, the standard operating procedure dictated that the municipal government should be notified first in the event of an incident. As a result, it was only one and a half hours after the initial release that the county government was notified of the accident by the municipal government, thus wasting critical time during which - in principle - lives could have been saved. Whether the county government could have done more, though, is also an open question since it did not have the equipment to safely enter the affected area to rescue residents, nor did most residents have telephones which could have been used to alert them in a timely fashion. Thus, faulty decision-making mechanisms combined with weak emergency preparedness at the local level helped turn a controllable accident into a deadly crisis.

Further evidence of a flawed crisis management system are the indications of official recreancy, especially with reference to government-industry relations. The government failed to require what should have been a mandatory environmental and safety assessment of the site, thus saving the company the cost of the evaluation (estimated to be in the range of \$US 200,000-300,000) and also failed to enforce zoning regulations which prescribed that there be no residences within a 1 kilometer diameter zone around the well.¹⁶

The Kaixian case illustrates very nicely how crisis management measures had fallen well behind the changing risk profile of a China experiencing rapid economic development, new technologies, and population growth. Not only was the emergency response deeply flawed, but more importantly, the pre-event risk reduction and risk mitigation opportunities were tragically overlooked.

Intensifying Crises, Learning, and Reform.

Most observers of China's approach to crisis management today call attention to the impacts which the 2002-2003 outbreak of Severe Acute Respiratory Syndrome (SARS) had on Chinese thinking. The SARS experience, involving a new and unconventional risk, revealed many problems with China's approach to managing crisis situations. These included problems of interagency coordination, coordination between local (especially provincial) and central

¹⁶ "Tragedy of Errors in Gas Blowout." *China Daily*. January 12, 2004.

governments, civil-military relations, international liaison, expert scientific advice, and public relations/information management. But, in addition, as a new and unfamiliar phenomenon, Chinese crisis managers failed in the “sense making” task of understanding and characterizing the risk, thus contributing to the severity of its consequences.¹⁷

The serious problems of crisis management revealed in the SARS episode prompted the Chinese government to rethink its crisis management regime and initiate a number of important institutional changes. The most notable of these was the establishment in December, 2005, of a “one office, four committees” crisis management system. It includes a new National Emergency Management Office in the State Council (*guowuyuan yingji guanli bangongshi*), which is intended to achieve national coordination among the many agencies involved in crisis management, and see to the development of up-to-date contingency plans at both the national and local levels, and four more specialized interagency committees - the National Committees for Disaster Reduction, Work Safety, Food Safety, and the Communist Party’s National Committee for Integrated Crisis Management (having responsibility, respectively for natural disasters, industrial accidents, public health and food and drug safety emergencies, and public security incidents).

The committees are led by a vice-premier with staff support coming from four specialized State Council level entities: the National Disaster Reduction Center of the Ministry of Civil Affairs (MOCA); the Supervision Center for Work Safety of the State Administration of Work Safety; the Emergency Management Office and Center for Disease Control and Prevention

¹⁷ As Xue and Zhong point out, for familiar threats from flooding and drought, earthquakes, typhoons, etc., the government’s lead agencies had developed contingency plans which could be promptly employed. The threat from SARS, however, being unfamiliar, revealed limitations to the “cognitive capabilities” of the crisis management regime. Lan Xue and Kaibin Zhong. “Turning Danger to Opportunities: Reconstructing China’s National System for Emergency Management After 2003.” In Kunreuther and Useem (eds.). *Learning from Catastrophes*: Pp. 190-210.

of the Ministry of Public Health; and the Committee for Comprehensive Management of Public Security of the Ministry of Public Security.¹⁸ Specialized units of these sorts have been established at local government levels as well, with efforts made to achieve “unified leadership combining vertical and horizontal agencies.”¹⁹ In addition, at the national level, there are also special State Council “leading groups” dealing with emergency situations, such as the State Flood Control and Drought Relief Headquarters, and the State Earthquake Relief Headquarters.

The new emergency response system also calls for the development of contingency plans for responding to crisis incidents in which an incident is ranked and color-coded by the degree of severity. Four levels are specified, with lead responsibility being assigned to different levels of government depending on the nature and seriousness of the emergency (eg., location and spatial dimensions, numbers killed, etc.). Level 1 incidents elicit the highest response, with a vice-premier taking the lead. Level 2 responses are led by a minister, etc. The hierarchical system of crisis incident classification is also used at local levels, where, in the event of a major Level I emergency, for instance, a provincial governor would be designated as commander.

¹⁸ Drew Thompson and Carla Freeman. “Flood Across the Border: China’s Disaster Relief Operations and Potential Response to a North Korean Refugee Crisis.” Washington. US-Korea Institute, Johns Hopkins University School of Advanced International Studies, 2009. Thompson and Freeman. Pp. 37-38.

¹⁹ Xue and Zhong. Some cities have invested heavily to produce a high-tech emergency response system. Nanning, for instance invested 170 million RMB for a system inspired by the US 911 system which involve technical cooperation with Motorola. Lei Zhang and Lijin Zhong. “Integrating and Prioritizing Environmental Risks in China’s Risk-Management Discourse.” *Journal of Contemporary China*. (2010), 19 (63), January. p. 132.

Much is made in China about the importance of local government roles in crisis management, with the local government being expected to take the lead whenever possible.²⁰ Clearly, local emergency response mechanisms are quite important since they are likely to result in the deployment of first responders. It is also clear, that accurate information from the site of the incident is critical for activating the system both at national and local levels. This in turn calls attention to the importance of situational awareness on the part of local officials and a willingness to provide prompt and candid reports in the event of an emergency. But, as seen in the Kaixian case, and in countless others, including the Songhua River case, discussed below, these conditions have not always been met. As a result, controllable emergencies have escalated into major crises.

As part of the new crisis management system, the State Council also formulated a national Master Plan (*guojia tufa gonggong shijian zongti yingji yu'an*) which reflects the institutional changes noted above. Subordinate to the Master Plan are 25 incident specific “thematic” plans (*zhuanxiang yingji yu'an*) relating to floods, earthquakes, forest fires, industrial accidents, aviation accidents, ocean salvage and rescue, urban subway accidents, blackouts, nuclear accidents, environmental emergencies, telecommunication emergencies, public health crises, emergency medical assistance, animal disease outbreaks, food safety incidents, financial emergencies, and emergency incidents abroad, as well as 80 central departmental plans (*bumen yingji yu'an*) and local emergency plans, the most important of which are the provincial emergency plans (*shengji zongti yingji yu'an*).²¹ In addition, in November, 2007, the National People’s Congress enacted a new Emergency Response Law.

The November, 2005 chemical spill on the Songhua River further illustrated why the development of a modern and effective crisis management system was needed. The spill was caused by a powerful explosion which killed five people and wounded 70 at the Jilin Chemical

²⁰ James Bellacqua. *A Closer Look at Chinese Emergency Planning*. CNA, April, 2007. Cited with permission of the author.

²¹ James Bellacqua. *A Closer Look at*

Industrial Co., a subsidiary of PetroChina. The explosion then led to the release of 100 tons of benzene into the Songhua River. Releases of information about the spill were delayed and coordination among relevant agencies at both national and local levels left much to be desired.²² Indeed, it has been argued that the failure of the emergency management system again helped turn an emergency into a crisis. The explosion at the Jilin chemical plant which led to the release of the benzene occurred on November 13. But, officials in downstream Harbin only learned of the release on November 18, and they, in turn, did not turn off the city water supply until November 22.²³ The State Environmental Protection Administration (SEPA) (now, the Ministry of Environmental Protection, or MEP) was also very slow to react, and its poor performance led

²² The World Bank. *Water Pollution Emergencies in China: Prevention and Response*. Washington. The World Bank. June, 2007. See, also, Nat Green. "Positive Spillover? Impact of the Songhua River Benzene Incident on China's Environmental Policy." Research Brief. China Environmental Health Project. China Environment Forum. March, 2009. (Available at http://www.wilsoncenter.org/index.cfm?topic_id=1421&categoryid=EF5B2D71-423B-763D-DB0B54DDAE395532&fuseaction=topics.doc_topics&doc_id=514852&group_id=233293).

The Songhua incident has been widely reported and analyzed, in large part because of the international implications of the spill. However, chemical spills occur regularly in China without getting the public attention that Songhua did. (Interview, MEP official, March, 2010). Indeed, in the 2 ½ months following the Songhua spill, SEPA received 45 reports of significant environmental incidents, including the release of cadmium into the Beijiang River in Guangdong. Lei Zhang and Lijin Zhong. "Integrating and Prioritizing Environmental Risks in China's Risk-Management Discourse." p. 124.

²³ Zhong Kaibin. "Crisis Management in China." *China Security*. Winter, 2007. p. 93.

to the resignation of SEPA Minister Xie Zhenhua, and an invitation to the UN Environment Program to review the incident.²⁴

The Songhua incident further revealed a number of familiar problems with the crisis management system, including problems of low emergency awareness, misaligned incentives for preventing crises, inadequate emergency preparedness, inadequate financing of crisis management activities, and problems of coordination, monitoring, and reporting. Coming as it did at roughly the same time that innovations in the emergency management regime were being introduced, it accelerated the planning process for environmental emergencies, as indicated by the promulgation of the “National Plan for Environmental Emergency Response” by the State Council in January, 2006, and the subsequent establishment of an Environmental Emergency Response Center within SEPA, and an Inter-Ministerial Committee for Environmental Protection under the State Council.²⁵

If the evolving new crisis management system needed further testing, the year 2008 obliged. A first crisis was brought on by the unusual winter weather which affected 21 provinces, and caused 129 deaths, in the early part of the year. The snow and ice which afflicted South China had not been anticipated in contingency plans and led to a cascade of problems affecting the transportation and electric power systems, and producing widespread discomfort and economic loss. The emergency response system was slow to respond, again, demonstrating both the problems of information management and interagency coordination. In this case, the fact that the emergency cut across provincial boundaries further increased the administrative complexities of the crisis. The weather events also demonstrated the complex interdependencies that a modernizing China has developed, where a troubled energy policy, for instance, affected coal

²⁴ United Nations Environmental Program. *The Songhua River Spill, December, 2005: Final Mission Report*,
http://www.unep.org/PDF/China_Songhua_River_Spill_draft_7_301205.pdf

²⁵ The World Bank. *Water Pollution Emergencies in China...*

supplies, which in turn affected the ways in which crisis managers could, or could not, respond to transportation and heating emergencies.²⁶

In response to the unusual snowfall which began to impact south and central China on January 10, the new Emergency Management Office, in an effort to promote an integrated interagency response, finally swung into action on January 22. As the weather worsened, unexpected problems, involving the jurisdictions of a number of different organizations, multiplied and overwhelmed the emergency response regime. By January 28, it was decided that a special disaster relief and emergency response command center had to be established under the State Council. The new *ad hoc* command center, superceding the Emergency Management Office, then set up six task forces - for transportation of energy supplies, road clearing and repairs, powerline repairs, post-disaster recovery, and news media and public information.²⁷

In their review of this case, He Guizhen, Lu Yonglong , and Zhang Lei concluded that the crisis was again exacerbated by recreancy. Vulnerabilities in the road maintenance system, in the electric power system (old transmission lines and an antiquated grid), and in the systems for coal deliveries were long neglected. Problems of interagency coordination, transportation planning,

²⁶ As one Guizhou-born interlocutor in Beijing explained to me, snow and severe winter weather were not unheard of when he was growing up in Guizhou. But at that time, communities were not linked together by modern transport systems, and by economic interdependencies, with the result that the sense of crisis was muted, if it existed at all. Personal communication. Beijing, March, 2010.

²⁷ The snowstorm case illustrated how the incident classification system can change as the crisis deepens. Initially, the problems did not call for a national response. As the crisis worsened, a Level IV emergency was declared. This then led to a further escalation to Level II, and finally to the special arrangements involving State Council control. James Bellacqua, *Crisis Response in Action: Examining the Implementation of China's Emergency Response Plans*. CNA, October 10, 2008. Cited with permission of the author.

news reporting, and weather forecasting were made much worse by a lack of pre-event preparation. Response and recovery times, as a result, were unacceptably slow. Thus, what started as a freak act of nature, escalated into a major national crisis.²⁸

An emergency of a somewhat different kind, with greater consequences for the loss of human life and property, was the Wenchuan earthquake in May, 2008. As China's most serious earthquake since the 1976 Tangshan event, the quake left some 69,000 dead and another 19,000 missing, and destroyed countless homes and facilities in western Sichuan. There is general agreement that China's crisis management system worked much better in this emergency than in the snow storm and in other prior emergencies. The response to the Sichuan earthquake was guided by the general Plan for Natural Disasters and by the National Emergency Plan for Earthquakes. Under the former, a Level I emergency was declared for the first time²⁹ (the Yushu quake elicited a Level I response for the second time). Response times were good, interagency coordination was relatively effective, information management was improved, and opportunities were available for civil society actors to participate in the response.

Yet, post-event analyses have nevertheless identified a number of problems needing further attention. In a study conducted for the Chinese Ministry of Civil Affairs and financed by the Asian Development Bank, for instance, Jiang Lingling, Wang Jiexiu, and Liu Lianyou identified a number of lessons learned from the Wenchuan earthquake.³⁰ They found that in spite of the prompt establishment of an earthquake disaster relief headquarters by the State Council to coordinate response activities, problems of coordination among central ministries, and between central ministries and local authorities still existed. A lack of attention to pre-event risk

²⁸ Guizhen He, Yonglong Lu, and Lei Zhang. "Risk Management: Lessons Learned from the Snow Crisis in China." Woodrow Wilson International Center for Scholars. China Environment Series, 2008/2009. Pp. 143-149. See, also, Bellacqua, *Crisis Response in Action...*

²⁹ Bellacqua, *Crisis Response in Action...*

³⁰ Jiang, Wang, and Liu. *People's Republic of China.....pp.127-133.*

reduction clearly exacerbated the consequences of the disaster. An important part of the problem was inadequate preparedness and a lack of practice in emergency response. Since building collapses were the main cause of the severity of the consequences, the report argued that the quality of buildings - especially public buildings like schools, hospitals and centers for emergency management - must be improved by the introduction of strict building codes and by retrofitting buildings and homes.

The authors found that in spite of the new Emergency Management Law, China needs a stronger, more comprehensive disaster risk management law which would spell out powers and responsibilities of various national level agencies and local authorities. The objectives would be to facilitate greater automaticity (and thus greater speed) in responding to events and require much more attention to risk reduction and mitigation. In addition, in spite of a much greater openness in the information environment relative to other disasters, the authors nevertheless call for more attention to the provision of prompt and accurate information for both the Chinese public and the international community, in order to “... ensure transparency, facilitate operational effectiveness and achieve an appropriate level of interaction between the government and the public during a disaster.” (128)

As widely reported, responses to the Wenchuan earthquake involved an outpouring of support from the public in ways that had not been seen before. This included generous donations of funds, active NGO participation in emergency response efforts, and the provision of psychological counseling services. The report found that more attention should be given to a “needs driven” approach to the management of donations, as opposed to a ‘supply driven’ one, and to the provision of resources for the development of Community-Based Disaster Risk Management (CBDRM) processes to strengthen self-help capabilities. While the participation of NGOs was welcomed, the existing emergency response capabilities of NGOs was limited. There is therefore a need for more training and organization in the NGO community for disaster response. The latter observation also applies to the provision of psychological services. More professionalization and specialized training in responding to catastrophic incidents is needed.

Specialized professional rescue teams from both national and local agencies played important roles in responding to the earthquake. However, their numbers were inadequate with

the result that needed assistance was slow to reach some of the affected areas. Since emergency rescue forces are based at dispersed locations around the country, it takes time for them to reach the site of a disaster, especially when the event is located in difficult terrain. Much more attention should be given, therefore, to the development of local rescue teams trained to be first responders.

The report found that China needed new mechanisms for involving those affected by the disaster in the processes of rebuilding their lives. It notes, for instance, that the supply of prefabricated dwellings did not effectively address the housing needs of local people since they necessarily had to be located on flat land that would otherwise be used for cultivation. Through the assistance of a number of other provinces which have made commitments to the recovery process, reconstruction has proceeded quite rapidly. However, this has had the effect of driving up the prices of construction materials and labor to unreasonable levels and has led to building practices which do not necessarily incorporate earthquake resistant standards. In spite of improvements in assessing damages and losses, China's practices in this area still fall below international standards. There is a need to introduce better methodologies for damage assessment and needs analysis, and to train specialists in their uses.

Although there is general agreement that the new Emergency Management Office acted far more credibly than in the snowstorm, its role was still subordinate to the ad hoc organization, the Earthquake Relief Headquarters established by the State Council to take command of the situation. According to the authors, "... the country needs to establish a national disaster management (authorized) agency with sufficient power to target all hazards and disasters and implement a full range of disaster risk management strategies." (127) As discussed further below, the question of having an effective, permanent emergency response office has yet to be resolved in China.

"Learning from Catastrophes."

As suggested at the outset, one can legitimately speak of contemporary China as part of today's "risk society."³¹ The management of risks, and the crises that emanate from them, have clearly become a central part of governance for Chinese political leaders and for society as a whole. The failings of the crisis management regime in recent years have been studied and analyzed, and there is clearly an effort to "learn from catastrophe."³² Reportedly, rescue efforts in the Yushu earthquake were more efficient and better organized as a result of lessons learned in Wenchuan,³³ and responses to the disasters of the summer of 2010, in general, were prompt and showed improved inter-agency coordination.

Many of the lessons learned are incorporated into the 2009 State Council White Paper, "China's Actions for Disaster Prevention and Reduction," which focuses on the steps taken to enhance disaster reduction capabilities during the 11th Five-Year Plan - strategic goals, legal framework and institutional changes for disaster reduction.³⁴ It also addresses questions of public participation and international cooperation. In many ways, the White Paper reflects an awareness of the importance of comprehensive risk management noted at the outset.

In this process of learning, the lessons are not all from domestic emergencies. Instead, China has sought to learn from the national emergency management experiences of other countries and from participating in a number of international forums relating to disaster prevention, mitigation, and crisis management. As it does so, crisis management in China increasingly becomes professionalized, and the norms of international practice become points of

³¹Ulrich Beck. *Risk Society: Toward a New Modernity*. London. Sage, 1992.

³² Howard Kunreuther and Michael Useem (eds.). *Learning from Catastrophes: Strategies for Reaction and Response*. Philadelphia. Wharton School Publishing, 2010.

³³ "Public Still Unprepared...."

³⁴ Available at <http://english.peopledaily.com.cn/90001/90776/90785/6655019.html>

reference for evaluating Chinese performance - consider, for instance, the involvement of the ADB in supporting an evaluation of the response to the Sichuan quake and the participation of the UN Environmental Program in reviewing the Songhua incident. The new professionalization, then, becomes the site for the dynamic interactions between international norms and those of China's own crisis management regime, interactions which show both the malleability, and lack thereof, of Chinese institutions. These dynamics are specially interesting in several important realms.

1. Civil-military Relations. The Chinese armed forces have long been active in emergency response, often performing heroic deeds against very unfavorable odds.³⁵ Since

³⁵ For instance, since 1998, PLA engineering units have been assigned flood response responsibilities near major rivers. See, Peter J. Brown. "China Plans for the Next Big Disaster." <http://www.atimes.com/atimes/China/KE30Ad01.html>. Reportedly, over 130,000 PLA and PAP troops from all seven military regions were mobilized to respond to the Wenchuan earthquake and began to move supplies to the region on the first day. See also, Harold M. Tanner. "The People's Liberation Army and China's Internal Security Challenges." In Roy Kamphausen, David Lai, and Andrew Scobell (eds.). *The PLA at Home and Abroad: Assessing the Operational Capabilities of China's Military*. Seattle, National Bureau of Asian Research, 2010. Pp. 237-293.

While the courage and heroism of many members of the armed forces cannot be doubted, it is also important to note the propaganda objectives of much reporting about the roles of the PLA and PAP in responding to emergencies. In the Sichuan earthquake, there were reports that media attention was directed away from civilian responders and NGOs to the military, and similar reports have surfaced in conjunction with the recent Qinghai quake, where media attention focused on the military rather than the activities of Buddhist monks and other civilian responders who were very active in the rescue. In addition, much of the reporting of the military's role in responding to the Sichuan earthquake called attention to the military's loyalty to the Party and the directives of Hu Jintao. See, James Mulvenon. "The Chinese Military's Earthquake Response Leadership Team." *China Leadership Monitor*. No. 25.

2000, efforts have been made to define more clearly the military's role in response to crisis incidents. In June, 2005, the State Council and Central Military Commission issued "Regulations on the Participation of the Military in Disaster Relief Operations," and in November, 2006, the CMC produced its "General Emergency Plan for the Military for Dealing with Sudden Incidents," a document which has not been made public.³⁶ As in other countries, when a disaster reaches a certain scale, only military organizations have the manpower, equipment, and command structure to respond to the needs. In spite of the positive reputation which the Chinese armed forces enjoys, problems with their roles have nevertheless been identified and, more broadly, the ways in which military and paramilitary personnel and organizations fit into a new modernized national crisis management scheme have yet to be defined.

Following the serious emergencies of 2008, the military initiated a review of its crisis management capabilities in the context of an overall review of "military operations other than war" (MOOTW), announcing in May, 2009 that five specialized emergency response units had been formed to deal with floods, earthquakes, chemical, biological, radiological and nuclear incidents, major transportation accidents, and international disaster response and peacekeeping assignments.³⁷

Reviews of the military's past performance by Chinese and foreign observers have pointed to problems in preparedness, including equipment problems and failures to develop specialized units for disaster response. For instance, although there were some units specialized in incident response, most military responders to the Sichuan earthquake had little rescue training. Deficiencies with the airlift capabilities of the PLA Air Force got particular attention. In general, the armed forces still lacked a broad range of engineering capabilities relevant to earthquake response, including a variety of necessary equipment such as heavy lift helicopters.

³⁶ Thompson and Freeman. "Flood Across the Border:"

³⁷ Brown. "China Prepares..." See also, Tanner. "The People's Liberation Army...."

Thus, in spite of rapid mobilization, the forces were not prepared to deal with rescues during the first critical 72 hours.³⁸

There has been considerably less public discussion, however, of the ways in which military preparedness and responses to crises fit with the new institutions and policies on the civilian side. Although there is clearly evidence of civilian-military cooperation in responding to recent disasters, the maintenance of a military-civilian divide has been evident. In the Sichuan earthquake, for instance, military commanders reportedly resisted implementing orders from Premier Wen, who was then directing response efforts on the civilian side, pending clarification from higher authority, presumably, including the Central Military Commission.³⁹

The command and responsibility relations for civil-military integration in the face of an emergency are seemingly quite ambiguous. China's 2007 Emergency Response Law and Regulations on the Participation of the People's Liberation Army in Emergency Rescue and Disaster Relief identify *both* the State Council and the Central Military Commission as command organizations in crises. In the Sichuan earthquake, the response was led by the special State Council Headquarters For Resisting Earthquake and Providing Disaster Relief, with Premier Wen Jiabao in command and vice premiers Li Keqiang and Hui Liangyu as deputy commanders. The Headquarters established nine specialized working groups to respond to different aspects of the disaster with military or paramilitary organizations participating in six of these.⁴⁰ Yet, as has been customary, the PLA also established a separate "PLA Command Group for Resisting the

³⁸ Jake Hooker. "Quake Revealed Deficiencies in China's Military." *New York Times*. July 2, 2008. See also Tanner, "The People's Liberation Army..."

³⁹ Interview, Beijing. March, 2010.

⁴⁰ Bellacqua, *Crisis Response in Action...* Eight working groups were established at first on May 12, with a ninth added on May 15.

Earthquake and Providing Disaster Relief.” The Command Group was led by Chief of the General Staff Chen Bingde, with assistance from CMC Vice-Chairman Xu Caihou.⁴¹

In the Yushu earthquake, the reported response times were impressive. Word of the quake was received at General Staff Headquarters 12 minutes after the occurrence (indicating effective communication between the PLA and civilian earthquake authorities), most of the 12,000 military rescuers were at the site within 30 hours.⁴² Other reports, though, indicated that the troops were not working on site as effectively as they were expected to, suggesting again a lack of preparedness. In spite of the rapid response, how the lines of command and responsibility between civilian and military authorities are worked out remains somewhat unclear. The idea of an integrated national crisis management regime is unlikely to be realized as long as the divide continues.

2. The Role of Non-state Actors. As a number of reports have indicated, the participation of nonstate actors in responding to the Wenchuan earthquake was somewhat unprecedented.⁴³ There was an outpouring of volunteerism of time and money, and a number of NGOs responded

⁴¹ Mulvenon. “The Chinese Military’s...”

⁴² “Chinese Army Makes Quick Response to Yushu Quake.” China.org.cn. April 20, 2010.

⁴³ NGOs began to make an appearance in emergency response situations in the late 1990s (e.g., for flooding on the Yangtze), and in the SARS epidemic and in the earlier snowstorm. The scale of participation for the earthquake, however, far exceeded those previous experiences. One estimate put the number of NGOs (of all sorts) active in the earthquake region one week after the event at 50 (30 from Sichuan). Shawn Shieh and Guosheng Deng. “An Emerging Civil Society: The Impact of the Sichuan Earthquake On Grassroots Associations in China. Unpublished paper, December, 2009. Cited with permission of the authors.

actively.⁴⁴ Press coverage from both the Chinese and international media was, at first, relatively open and quite extensive. In many ways, the earthquake seemed to mark a turning point in state-society relations in China, both pointing to an increasingly robust civil society, while also suggesting a distinctive relationship between the state and civil society groups.⁴⁵ Indeed, it seems as if the more effective NGOs were those that established partnership relationships with mass organizations such as the Communist Youth League, which mobilized large numbers of young people, and the Chinese Red Cross (a government organized NGO, or GONGO). Those who failed to establish these partnerships were more likely to be told to leave the area.

At the same time, there have been reports that nonstate actors lacked preparation for effective emergency response and on occasion interfered with the efforts of government response teams, civilian and military. In the Yushu quake, the remoteness of the area made it difficult for nonstate actors to reach the site. The one major exception, however, were Buddhist monks who, according to some reports, were very active in the rescue efforts. Reportedly, though, monks from outside of the immediate area who had traveled to Yushu were asked to leave since they allegedly were interfering with the rescue and relief work, in spite of the fact that they had language and cultural identities with most of the victims, of relevance to relief efforts, which others rescuers lacked.⁴⁶ In addition, we should note the arrest of the Tibetan intellectual, Zhogs Dung (Tra Gyal), in spite of his reputation for being close to the Communist Party, for his efforts

⁴⁴ Shieh and Deng report that more than 30 billion yuan public donations poured in following the earthquake, an impressive figure when compared with the more than 16 billion spent from the government's earthquake fund two weeks after the event. Shieh and Deng. "An Emerging Civil Society..."

⁴⁵ Jessica C. Teets. "Post-Earthquake Relief and Reconstruction Efforts: The Emergence of Civil Society in China?" *The China Quarterly*. 198. June, 2009. pp. 330-347.

⁴⁶ <http://loudcanary.com/2010/04/28/the-stage-the-yushu-earthquake-in-fact-and-fiction/>

to organize relief work in response to the Yushu quake. Reportedly, he angered the regime by urging that private donations from Tibetans not be sent through the Chinese Red Cross, or official channels, but should instead be delivered directly in order to ensure that they reach those in need.⁴⁷

It seems likely that nonstate actors will, if anything, become more active in responding to future disasters, but in doing so they will be acting in a policy and institutional limbo, especially with regard to the three areas that most impeded their activities during the aftermath of the earthquake - registration with the state, organizational capacity, and fund raising.⁴⁸ As with the civil-military relations issue, it would appear that the development of an integrated crisis management system will require further clarification of the role of NGOs and other nonstate actors, and opportunities for the latter to acquire the necessary crisis response capabilities so that they can be integrated more effectively with government efforts.

3. Risk Reduction. There is little doubt that the challenges of crisis management in China would be more readily handled were risks reduced. While China has shown an impressive capacity to “learn from catastrophes” with regard to the enhancement of crisis response capabilities, it has seemingly been less successful at implementing lessons illustrating the importance of reducing risks. This point was made abundantly clear again during the summer of 2010 in the face of industrial accidents and the landslide in Zhouqu county, the catastrophic qualities of which were largely man-made. Thus, in spite of regular environmental emergencies, the prevention of environmental insults seems to be elusive - major environmental accidents during the first 6 months of 2010 were double those of 2009. In spite of the lessons learned about shoddy construction and urban design from the Tangshan and Wenchuan earthquakes, strict building codes have not always been enforced in spite of national retrofitting programs and

⁴⁷ Jane Macartney. “Tibetan Writer Zhogs Dung Held for Organizing Yushu Quake Donations.” *Times Online*, April 26, 2010.

<http://www.timesonline.co.uk/tol/news/world/asia/article7108169.ece>

⁴⁸ Shieh and Deng. “An Emerging Civil Society...”

policy declarations to the contrary.⁴⁹ One of the heartening aspects of the Wenchuan earthquake recovery efforts has been the use of a “buddy system” in which other provinces “adopt” communities in the affected area and pitch in with reconstruction assistance. This has made the recovery phase proceed quite rapidly, but a number of observers are concerned that building practices do not yet reflect the lessons of poor construction brought home so poignantly by the deaths and injuries of the 2008 quake.⁵⁰

4. The Insurance Question. The frequency and severity of natural disasters in China in recent years has stimulated debate about the feasibility of, and possible roles for, catastrophe insurance. Large disasters tax the resources of the state - at the local and national levels - and point to the need for mechanisms to share risks and generate resources that could be applied to emergency response and recovery efforts. In addition, interest in catastrophe insurance is driven by the belief that insurance schemes reconfigure incentives and force attention to prevention and mitigation efforts. Thus far, disaster insurance is not widely used in China; only about 5% of losses are covered by insurance in contrast to the 30% covered in developed countries.⁵¹

Nevertheless, some experimentation with catastrophe insurance has occurred. A flood insurance scheme was introduced in 1992 following the Huai River flood in 1991 but was subsequently abandoned, and programs for agricultural disaster insurance are being attempted. In spite of encouragement from international institutions like the World Bank, the challenges of

⁴⁹ The White Paper, for instance, calls attention to the need for stricter building codes and for retrofitting schools and residences to meet stricter codes. See, also, Cara Anna. “China Quake Awakens New Fears for School Safety.” <http://www.ajc.com/news/nation-world/china-quake-awakens-new-475486.html>

⁵⁰ Interview. March, 2010.

⁵¹ “Catastrophe Insurance in the Works.” *People’s Daily Online*. April 20, 2010 at <http://english.people.com.cn/90001/90778/90859/6956566.html>. Accessed April 21, 2010.

establishing catastrophe insurance in China are daunting. Although some insurance companies are offering earthquake insurance, the penetration rate is low by international standards - only 3% in China in contrast to 50% in Japan and more than 20% in Turkey. While the Wenchuan earthquake raised awareness about the possible utility of earthquake insurance, the magnitude of the destruction was sobering to the companies, and they have subsequently delisted earthquake coverage from catastrophe policies. In March, 2009, the National People's Congress began discussions of a national catastrophe insurance law.⁵²

5. Leadership Training. As noted at the outset, one of the conundrums of crisis management is that the very nature of natural disasters, environmental emergencies, and serious industrial accidents is often one of surprise. Advanced planning and preparedness, of course, can make a big difference in effective responses, but there clearly are limits to planning when the contingencies of unexpected events confront us. For instance, established contingency plans were of limited value in the snowstorm emergency, as one problem after another combined to produce a fully unfamiliar and unanticipated crisis. Hence, crisis management systems must be nimble and adaptable.⁵³ The ability to respond to contingencies outside of established plans puts

⁵² Wang Zifa, Lin Tun, Walker, George. "Earthquake Risk and Earthquake Catastrophe Insurance for the People's Republic of China." MPRA (Munich Personal RePEc Archive). Report prepared for the Asian Development Bank, MPRA Paper No. 21248. Posted March 10, 2010. Available at <http://mpra.ub.uni-muenchen.de/21248/>. ; See, also, George Walker, Tun Lin, Yoshiaki Kobayashi. "Is Flood Insurance Feasible? Experiences from the People's Republic Of China." Asian Development Bank, ADB Sustainable Development Working Paper Series, No. 5, April, 2009; "Catastrophe Insurance Policy for China." World Bank Good Practice Notes, July, 2008.

⁵³ Plans for the snowstorm emergency called for the closing of major roads until they could be cleared. Local authorities, however, contravene the plans and opened roads with strictly reduced speed limits. This had the effect of overcoming some of the more serious transportation bottlenecks while also helping to wear down snow and ice on the road surface.

a premium on good leadership, and the cultivation of effective leadership should become part of the building of crisis management capabilities.⁵⁴ The recently established National Institute for Emergency Management (NIEM) at the Chinese Academy of Governance (formally the National School of Administration) indicates that China has begun to take crisis management leadership issues seriously. The ability to respond creatively to surprising contingencies is also being strengthened by the availability of new technologies - satellite observations, GPS, modern telecommunications, ground sensors, etc.- which China is introducing or which are available from international partners.⁵⁵

6. Information Management. There is no doubt that there have been major changes in Chinese thinking about how information pertaining to emergencies and crisis situations should be managed. As the 2009 White Paper puts it, the release of information should be “prompt and precise, open and transparent.” That said, it is also clear that Chinese media and information management practices still depart notably from the norms of international best practices. As noted above, media have been instructed to direct celebratory attention to the role of the military in disaster response and, more generally, there is still a strong inclination to manage information during crisis incidents in support of political objectives. In addition, there are also active efforts at information control during pre- and post-incident situations which, arguably, constrains knowledge of official recreancy and thus inhibits risk reduction efforts. The most egregious recent case of this information control is the draconian steps taken to suppress information about

⁵⁴ On this point, I have profited from discussions with Professor Xue Lan of Tsinghua University.

⁵⁵ See, for instance, Wang Guilian, Lu Yonglong, and Xu Jian. “Application of GIS Technology and Chemical Emergency Response.” *Journal of Environmental Sciences*. Vol. 12, No. 2 (2000). Pp. 172-177.

collapsed schools and the deaths of schoolchildren in Sichuan, as seen, for instance, in the imprisonment of Tan Zuoren and the beating of Ai Weiwei.

7. A National Coordinating Agency. It is clear that the Emergency Management Office set up in 2005 has yet to function as an authoritative crisis management agency.⁵⁶ Instead, in the face of Level I incidents, special *ad hoc* command centers under the State Council have been set up which presumably have been able to get some control over China's notorious "stovepiping" problems in the midst of a crisis. When the crisis passes, however, they are then disbanded, and the system reverts to a more fragmented set of agencies which have failed to give coordinated attention to pre-event risk mitigation and crisis preparation and to post-event recovery.⁵⁷

Not surprisingly, therefore, inter-agency coordination seems to improve when crises are designated as serious, presumably because this leads to the involvement of high ranking leaders, as seen, for instance, in Premier Wen Jiabao's association with the establishment of crisis command centers. Wen's actions indicate the growing political significance of recent crises, but some observers believe is counter-productive since 1. the intervention of the Premier doesn't allow the provisions of the new crisis management regime to take hold and become

⁵⁶ As noted by Shan Chunchang, head of the State Council expert group on emergency response, the Yushu quake experience indicated both that progress had been made, but that still more is necessary. "First, we need to enhance the coordination between departments and all levels of government to better allocate the rescue resources. Due to the lack of coordination, our earthquake rescue teams, firefighters and medical services fail to form a link service. Second, the organizing of volunteers should be more orderly." "Public Still Unprepared....."

⁵⁷ Zhong Kaibin. "*Zhongguo Shi Yingji: Cong Pingzai Zhuanhuan Dao Pingzai Jiehe*" ("The Chinese Emergency Response System: Transforming the Ordinary to the Coordinated"). Forthcoming in *Zhongguo Gaike (China Reform)*.

institutionalized, and 2. the visit of such a high official to the site of a disaster requires that the attention of incident management leaders on the scene be shifted from the management of the emergency to the management of the visit.⁵⁸

Some members of China's crisis management community believe that a stronger permanent central agency, perhaps inspired by the US FEMA, is called for. Others, however, are either unconvinced that such an office would work in the Chinese context, or are resistant to the idea for fear of losing power and resources over the crisis management turf they now control.

8. Vertical Coordination and the "Tiao-Kuai" Problem. Whereas much of the recent reform and innovation in crisis management institutions, discussed above, focused on horizontal coordination among government agencies, a variety of problems of vertical coordination among different levels of the state still plague the system. Although it sometimes functions as one, China is not a federal system in which sub-national powers and prerogatives are spelled out. Instead, as a unitary state - one with an enormous population and a large and complex landmass - it faces difficult problems of coordination between the central government and provincial, and sub-provincial governments. Local officials are part of a vertically organized government system of accountability (the *tiao*, or "branch"). At the same time, the Communist Party is expected to provide unified leadership across different levels of government; thus, local Party committees also oversee local government officials in a system of horizontal supervision (thus, creating the *kuai*, or "lump"), Party-government relations, in short, can and do further complicate the development of effective crisis management system.

Local governments, for instance, are intended to be first responders to emergency incidents, but local governments are also politically subordinate to local Party authorities who control the career prospects of local officials and the flows of information within the government structure. The "situational awareness" of local officials to emergency conditions is thus strongly influenced by the preferences of local Party officials, a fact which makes local decision-making and crisis reporting an especially complex matter. Should a report of an incident be sent first to the central Party authorities or to the appropriate higher level of government? Should a report be sent at all and, if so, at what point in the development of the event? Should the report of an incident be understated (so as not to reflect badly on local authorities), or should it be reported as more serious (in order to "play it safe," should the incident take on crisis characteristics)? As noted above, the new crisis management regime relies heavily on the flow of information from the site of an incident, but the institutional complexities of center-local/Party-government relations often undercut the requirements for accurate and candid information.

⁵⁸ Of course, the presence of a national leader at the scene of a crisis, by signaling national care and responsibility, is an important political gesture. The absence of such a presence during Indus River flood in Pakistan stands as a notable contrast to Chinese practice.

Conclusion - The “Chinese Model” And Its Limitations.

A distinctive feature of China’s approach to crisis situations is its remarkable ability to mobilize resources quickly at the time of a catastrophic event and allocate them to where they are needed. China’s crisis management capabilities, thus, are impressive in comparison with those of many other countries; the response of the Government of Pakistan to the Indus River flood of the summer of 2010, for instance, stands in sharp contrast to China’s recent record. But whereas rapid mobilization in the face of a crisis marks the strength of the “Chinese model,” the maintenance of purpose and coordinated action needed for pre-event risk reduction, and post-event policy implementation to prevent a recurrence of the crisis, are marks of its weakness.⁵⁹ These strengths and weaknesses are manifestations of an inherited system of political institutions with which international best practices fit uneasily.

The reform of China’s crisis management system, thus, is still a work in progress. The events of the last several years have tested the system, have stimulated learning, and have led to significant policy and institutional innovations.⁶⁰ At the same time, many problems remain and, being outgrowths of established institutions, will likely resist solution. But, as crisis incidents continue to multiply, as they surely will, the pressures for change will surely increase. China is thus in a race pitting a developing capacity for institutional innovation against the generation of risks from natural disasters (exacerbated by human interventions) and environmental and industrial safety emergencies. How the race is run will have a lot to do with the kind of society China will have in the coming years.

As China seeks to devise new organizations and procedures to harmonize Chinese realities with internationally recognized best practices, it has clearly made progress in preparing for crisis response, response implementation, and to a lesser extent, recovery. But, although there is a declarative commitment to the importance of pre-event prevention and mitigation, the

⁵⁹ Cf., Zhong Kaibin. “Zhongguo Shi Yingji...”

⁶⁰ This includes the development of an international disaster response team which is being expanded from 220 members to 500, along with a significant increase in the budget for international and domestic rescue teams. The latter includes some 5,000 members distributed around the country. Tania Branigan. “China Boosts International Rescue Squad to Match Its Growing World Role.” *The Guardian*. February 26, 2010.

prevalence of recreant behavior among officials and industrial leaders makes the promise of risk reduction somewhat empty to date. It is therefore difficult to escape the impression that the successful modernization of China's crisis management system ultimately depends on changing the incentives of critical decision-makers throughout the polity and economy such that risk reduction and risk mitigation investments prior to catastrophic incidents deserve much higher priorities. Whether this can be accomplished without fundamental changes in the information culture, and thus in political practice, remains to be seen.