Disasters and Cultural Stereotypes

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Edited by

Elya Tzaneva (Editor-in-Chief)
with Fang Sumei and Edwin Schmitt

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FOREWORD

This is the second collection inspired by the Chinese-Bulgarian joint research efforts on the subject of "Disasters and Culture," kindly published by CSP. The partnership between the research teams of the CHINESE ACADEMY OF SOCIAL SCIENCES in Beijing, CASS, (represented by the INSTITUTE OF ETHNOLOGY AND ANTHROPOLOGY), and BULGARIAN ACADEMY OF SCIENCES in Sofia, BAS, (represented by the INSTITUTE FOR ETHNOLOGY AND FOLKLORE STUDIES WITH ETHNOGRAPHIC MUSEUM), began initially as a three-year project within the General Agreement for Scholarly Cooperation between CASS and BAS, with the participation of the SCHOOL OF ETHNOLOGY AND SOCIOLOGY – MINZU UNIVERSITY OF CHINA – former CENTRAL UNIVERSITY FOR NATIONALITIES, Beijing. Following expanded field-work and the presentation of the results at a scholarly conference in Sofia (June 2007), the first volume was published in 2009 under the title "Disasters, Culture, Politics: Chinese-Bulgarian Anthropological Contribution to the Study of Critical Situations". Edited by Elya Tzaneva (Editor-in-Chief), with Fang Sumei and Liu Mingxin. Cambridge Scholars Publishing, 2009".

The project was extended for another three-year period and successfully expanded by academic cooperation between ethnologists from Bulgaria and Russia on this subject (participants from Russia are from the INSTITUTE OF SLAVIC STUDIES BY THE RUSSIAN ACADEMY OF SCIENCES in Moscow). The second stage of this three-institution' research concluded with a conference in Sofia (October 2010), where the observations and analysis of the scholars from these different anthropological traditions were reported. While preparing the publication, the subject attracted also anthropologists from the USA (the UNIVERSITY OF OREGON), whose contribution has been included in this volume with gratitude. Similar to the 2010 volume, the contributors are among the most recognized and highly positioned ethnologists in their respective countries, whose expertise and scholarly interpretation of the problems discussed are grounds for significant expectations on both levels of scholarly achievements and practical application.

Right at the outset of the joint work, the participants accepted the concept that catastrophic events challenge society to rework a specific

methodology, and to activate a specific resource to adapt to and cope with the crises ecologically, socially and ideologically. The main aim of this volume is to reveal the important role of studying and taking into account the cultural stereotypes in this process. The ethnological point of view in this investigation stresses the role of the cultural systems (traditional beliefs and behaviour, and the institutional characteristics of a particular society or group) affected by a situation of disaster, and focuses on how people draw upon and alter their belief systems over longer periods of time in their efforts to come to terms with catastrophic events.

Through the detailed analysis of different case-studies, the contributors generalize the definition of disasters and critical situations as a situation that arises from the violation of a balance in individual and collective life; the deviation from "normality" in the particular context of each discreet culture. This interpretation forms the ground for a structural grouping of the materials into three main parts: The "Conceptualization of Cultural Knowledge about Disasters" is followed by specific case-studies of "Cultural Responses to Natural, Biological and Technological Crises." The contributors to the collection, who are looking forward to the next stage of their joint research efforts, share the conviction that the "Ecology of Social Crises" is a valuable and necessary addition to the field of natural and technological, bio- and man-made disasters. We believe this is proved by the texts presented in this volume which concludes therefore with a section on "Cultural Management of Social Crises".

The contributors' research credo focuses on applied ethnology in terms of three social perspectives that include: protecting the ecological environment within its complexity and regional contexts and achievements; protecting the traditional cultures within their inherited traditional (and developing) norms and values; and promoting and supporting the rights and interests of the diverged groups of people (identified and organized in different ways) in their relation to the natural and social environment. These three main ideas reflect on the scholarly paradigm of the volume. The authors are convinced that the ethnological observations and discussions could add a valuable perspective to the emergence and spread of such ideas, as well as to the relief management, mitigation and overcoming of any crisis and critical situation in this relationship.

Elya Tzaneva

PART I:

DISASTERS AND CULTURAL KNOWLEDGE

CHINA'S "2008 LESSONS AND EXPERIENCES" IN ITS RESPONSE TO NATURAL DISASTERS: A CASE STUDY OF RESISTING THE 2008 FREEZING RAIN AND SNOW DISASTER

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In early 2011, some provinces and regions in South China were again hit by freezing rain and blizzards. This was the first time such a natural disaster occurred in the second decade of the 21st century. It tested once again the capacity of all levels of government to respond to and resist the same type of natural disaster following the 2008 event, which had never been seen in the history of South China. The "2008 Experience", a phrase coined in news reports, concludes precisely China's experiences in its response to the 2008 case and the follow-up improvements in emergency management mechanisms.

High voltage transmission line breakage and the collapse of power-line towers caused by line icing were the most apparent impacts, among others, in the 2008 case. The power failure not only limited the capacity of the government's emergency management and relief efforts, but also the coping strategies for those in the disaster area. In the face of such a rare natural disaster, the recovery capacity of the area and professional emergency teams of the power sector couldn't deal with or mitigate the impact. The power sector thus suffered a tremendous loss.

According to *Electricity Emergencies in the 2008 Freezing Rain and Snow Disaster*, issued by the State Electricity Regulatory Commission, electricity systems in 13 provinces had been affected to different degrees, particularly Guizhou, Hunan, Jiangxi, Guangxi and Zhejiang, with severely-damaged infrastructure, blocked electricity output, disconnected power grids and widespread power failure. Around the country, 36,740 lines and 2,018 substations were shut down; 8,381 transmission towers of 110kv and higher as well as 1,000,000 towers below 110kv collapsed; 170 counties (or cities) suffered from power failure, which lasted more than 10 days in some areas. The paralyzed railway traction substations caused an

interruption of electrified railways, such as the Jingguang Line (from Beijing to Guangzhou), the Hukun Line (from Shanghai to Kunming), and the Yinxia Line (from Yintan to Xiamen), disturbing people's daily production and life. Most communication base stations and public communication networks came to a stop due to power failure. Furthermore, the heavily-loaded sectors (e.g., government, hospital and financial institution) and around-the-clock industrial sectors (e.g., chemistry, iron and steal, refinery, mine and cement) were affected (http://www. emc.gov.cn/emc/). A Chinese proverb says, "A fall in the pit, a gain in your wit". Then, how did the "2008 Lessons" turn into "2008 Experiences"?

On Jan. 6th, 2011, the China Southern Power Grid Emergency Command Center activated a Level-II emergency response due to the freezing rain and snow disaster announced by the Central Meteorological Station forecast. In Guizhou, 286 110kv and above lines were covered with ice. Among them, 122 were heavily covered with ice and the maximum diameter of ice reached 18mm. Guizhou Power Grid thus activated the 12 sets of DC ice melting devices and achieved good results. By midday, the ice was removed from 75 lines and returned to normal operation (http://news.163. com/11/0107/20/6PQQH5DC00014AED.html).

The DC ice melting device is a new invention of the China Electric Power Institute, who was entrusted by State Power Grid after the 2008 case, and also can be seen as an outcome of the "2008 Lessons". In the response to the 2011 case, it guaranteed a technological solution to the security of the power grid and enhanced China's emergency response capacity to the freezing rain and snow disaster.

Apart from technological solutions, however, emergency management also involves elements of government, legislation, social action and pubic opinion. No doubt, the examination of the freezing rain and snow disaster is about national capacity, rather than about natural disaster.

Tremendous Losses Induced by the Freezing Rain and Snow Disaster

From Jan. 10th to Feb. 20th, 2008, a rare freezing rain and snow disaster swept South China with an affected area of an unprecedented size. The lowest temperature in the middle and lower reaches of the Yangtze River was down to -6℃, and the daily maximum temperature was nearly on par with the daily minimum temperature. 20 provinces and regions, i.e.,

Guizhou, Hunan, Hubei, Guangxi Zhuang Autonomous Region, Guangdong, Fujian, Jiangxi, Chongqing, Sichuan, Jiangsu, Zhejiang, Yunnan, the Tibetan Autonomous Region, Henan, Shanxi, Gansu, Shaanxi, and Shanghai were affected to different degrees. This "extreme weather" event ranked the most serious one since 1949 in terms of duration, affected area, intensity and aftermath.

According to meteorological analysis from 1951-2007 in the middle and lower reaches of the Yangtze River and Guizhou province, the maximum continuous number of days with freezing weather from Dec. 1st, 2007 to Feb. 2nd, 2008, broke the historical record. Moreover, the freezing rain and snow disaster, "as an extreme weather event, has surpassed multiple local meteorological extreme values." (Wang Donghai, 2008) So it posed a rare challenge to the Chinese government, the affected local governments and population, as well as individuals around the country.

As a type of natural disaster, meteorological disaster refers to disasters caused by typhoons, heavy rains (or blizzards), gales (or sandstorms), extreme low and high temperatures, drought, thunder and lightning, hail, frost and dense fog (The State Council 2010). The freezing rain and snow disaster falls into the category of extreme low temperatures, but it has its own characteristics. According to the *Natural Disaster Statistical System*, issued by the Ministry of Civil Affairs, the freezing rain and snow disaster (including freezing, chilling, cold snaps and blizzards) are the same type of disaster (Faculty of Chinese Academy of Sciences 2008). The frigid high pressure from Mongolia and Siberia formed a south-bound strong cold front, which encountered a warm front in the south, resulting in a strong and widespread frontal system, causing the 2008 freezing rain and snow disaster in South China. The continuous low temperature, rain and snow brought about frost, condensation, ice fog particle attachment and other physical phenomena.

In early 2008, due to the fact that there were no public heating systems in the south during winter time, neither local governments nor households were well prepared for such a freezing rain and snow disaster. When it struck, the beautiful icy sceneries in towns, cities, villages and natural settings at once became an internet sensation, named "An Icy World in the South". When the transmission lines broke down because of line icing, followed by the interruption of railways and communication systems, a touch of disaster was quickly felt.

The disaster caused not only icy roads, collapsed buildings, blocked highways, interrupted railways, broken lines and toppled communication towers, but also damaged agriculture, forestry and aquaculture in the region, seriously affecting people's daily production, as well as causing tre-

mendous losses in property and life.

On Apr. 22nd, 2008, Mr. Zhang Ping, Director of the National Development and Reform Commission, reported the disaster and its losses at the second meeting of the 11th National People's Congress Standing Committee. Specifically he noted:

1. Traffic was seriously interrupted. The electrified railways such as the Jingguang Line and the Hukun, came to a stop because of power failure. "5 longitudinal and 7 horizontal expressways" nationwide, totaling 20,000 km, were paralyzed. 220,000 highways were blocked. 14 airports were closed while a large number of airlines were cancelled or delayed, causing millions of Chinese New Year returnees to be stranded at terminals, stations, railways, expressways and highways

2. Power infrastructure was seriously damaged. The ongoing freezing rain and snow disaster led to a large region of collapsed towers and broken lines, affecting the transmission and distribution of electricity systems in 13 provinces (and regions and municipalities). The event interrupted power supplies in 170 counties (and cities) paralyzing 36,700 lines and 2,018 substations. The 500kv power grid in Hunan province was almost completely shut down except for the northern and southern regions, while the power grid in Chenzhou city was totally damaged. The 500kv power grid in Guizhou province was nearly paralyzed, interrupting the power transmission from West to East. The power grid in Jiangxi and Zhejiang provinces were seriously damaged as well.

3. The coal supply for electricity generation was in short supply. The coal stockpile was running out in some power plants due to power failure, interrupted transportation as well as the holiday schedule and overhaul arrangements in some mines. On Jan. 26th, the stockpile decreased to 164,900,000 ton, and was sustained for 7 days (less than half of the normal stockpile level). In some cases, the stockpile was sustained for only 3 days. The maximum power output, which was blocked due to the shortage, reached 4,200kv, resulting in electricity restrictions in 19 provinces, regions and municipalities.

4. A large number of factories and enterprises were closed. Power failure and transportation interruption affected industrial production in the disaster area. 83% of factories and enterprises in Hunan province and 90% in Jiangxi province were temporarily closed. More than 600 mines were flooded.

5. Agriculture and forestry were heavily impacted. 217,000,000 *mu*[1] of crops were affected by the disaster, and 30,700,000 *mu* of crops produced

[1] *Mu* is a Chinese measurement of land equal to 1/15th of a hectare.

no harvest. The affected area for rapeseed and vegetables planted in winter and autumn accounted for 57.8% and 36.8% of the total in the country. The seed's breeding systems were damaged, so were plastic sheds, animal pens, and aquaculture facilities, leading to a large number of deaths in animal husbandry and aquaculture. 340,000,000 *mu* forests were also affected, including 2,430,000 *mu* seedlings.

6. The life of residents was seriously affected. The people's lives were in great danger due to damages in water, electricity, gas and communication systems. According to the initial assessments by the civil affairs sector, the disaster caused 129 deaths, while 4 people went missing. In total there were 1,660,000 evacuees, 485,000 collapsed houses, and 1,685,000 damaged houses.

7. The total direct economic losses amounted to 151.65 billion. (Zhang Ping, 2008)

Despite these statistics, the losses to various sectors were still stunning. In forestry, a peasant from Jiangxi province wept without tears before his bamboo forest, "in the day time, what I saw were the broken bamboo plants laying here and there, and at night, what I heard was their blasting sound." In Jiangxi, Guizhou, Anhui, Guangxi, Hubei and other provinces and regions, blasted bamboos, broken pines, fallen fruits of camellia oleifera, and toppled seedlings, leading to the reduced economic output of fruit or the prevention of the production of any fruit at all, were common scenes. The forestry losses in Qiandongnan Prefecture, Guizhou Province, accounted for above 70% of the total area. In Guilin, the capital city of Guangxi Autonomous Prefecture resulted in losses of 60% of the total. In particular, a peasant from Yongfu County discovered 80% of his 30,000 *mu* forest had broken eucalyptus trees. The water conservation forest near the Lijiang River was "totally toppled". 90% of seedlings in Hubei province, particularly seedlings and container seedlings planted in autumn and winter, died from the disaster and a workshop of a modern seedling breeding factory with an investment of hundreds of millions collapsed. Apart from the initial impact of the disaster, latent impacts, hidden losses and subsequent consequences would gradually emerge. The damaged trees and bamboos would be the most prominent aspects of the secondary disasters in forestry, since they brought about devastating impacts on forest farmers and workers' production, as well as regional ecological impacts.

During the disaster, the income of forest farmers, which relied on bamboos and trees, decreased. Some of them experienced a negative growth of income. In the next 2-10 years, 2,613 wood and bamboo processing factories in Jiangxi province would likely face shrinking material sources, affecting 315,000 workers and resulting in a large number of lay-

offs. According to forestry specialists', the recovery of bamboo trees takes 5 years, pines and firs 10 years, broad-leaf trees 20 years, and old trees were unlikely to recover at all (http://xnhz.forestry.gov.cn). Obviously, examined from the perspective of forestry, the impact of the disaster involves not only the presentation of statistics, but also a series of subsequent problems concerning the future development of ecology, industry and people's livelihoods.

National Capacity showcased in the National Response to Disasters

2008 is the 30th year since China implemented the policy of reform and opening-up, and is also a year of hardships and glories. Following the freezing rain and snow disaster at the start of the year, the "3.14" Tibetan Incident, the "5.12" Wenchuan earthquake and the international Olympic torch relay, the Olympic games, for which China had been waiting for more than a hundred years, finally took place in Beijing. It garnered the attention of all the Chinese at home and abroad, whose laughter, tears, and solidarity exhibited national involvement. The combat against the freezing rain and snow disaster thus became a prelude to this rough and glorious year.

On Jan. 10th, 2008, the Central Meteorological Station released the following forecasts: affected by a south-bound cold wave originating from Lake Baikal, most areas in middle and eastern China would see a significant drop of temperature from north to south, i.e., a drop of 4–8℃ in Inner Mongolia, Huabei, Jianghuai, Jianghan, Jiangnan and Huanan; a drop of 10 ℃ in the east of the Yunnan-Guizhou Plateau and the middle and lower reaches of the Yangtze River, opening the prelude to the freezing rain and snow disaster in South China. In the following days, disasters began to emerge in the southern provinces and regions: large numbers of passengers were not only stranded in railway stations and airport terminals because of interrupted traffic, but also trapped along highways because of blocked roads and frequent accidents, intensifying the already difficult situations during the Chinese Spring festival, the one and only yearly transportation spectacle in the world. The snow-besieged townships and villages suffered from not only failures in power, gas, communication, water and business, but also toppled houses, personnel casualties and separation from the outside world.

In the face of the freezing rain and snow disaster, all levels of government responded to the disaster quickly and implemented countermeasures and relief work. From Jan. 10th, the National Disaster Reduction Committee and the Ministry of Civil Affairs activated a Level-4 emergency re-

sponse to the freezing rain and snow disaster, transporting cotton tents, coats and quilts and other basic materials to the affected population in Hunan, Guangxi, Chongqing, Sichuan, and Guizhou. Guided by the principle of "transportation, electricity and people's livelihood comes first" in disaster mitigation and relief, put forward by the central government, people around the country were united together, demonstrating the mobilization of emergency management from the central government to local governments, and from the government to the public. During the disaster, top leaders like Hu Jingtao, Wen Jiabao and Wu Bangguo, inspected coal, electricity and fuel enterprises and the affected southern provinces and regions, and made important instructions.

When the disaster began to emerge from the freezing rain and snow disaster, the related sectors, abiding by orders from the central government, quickly activated the national disaster response mechanism in accordance with the *National Natural Disaster Relief and Emergency Plan*. Coordinated by the State Council for Coal, Electricity, Fuel and Transportation and the Disaster Relief and Emergency Command Center, 23 sectors, such as finance, civil affairs, railway, transportation, public security, commerce, health, civil aviation, electricity, fuel, coal, military, media, etc., implemented countermeasures and relief work in terms of policy planning, financial support, material transportation, infrastructure restoration, coal, electricity and fuel supplies, healthcare provision, rescue operations, traffic dispersion, communication security, social stability, commodity supplies and media coverage. Particularly in the "protection of people's livelihood", daily necessities and emergency supplies were guaranteed by special coordination. On Feb. 4th, the State Council Coal, Electricity, Fuel and Transportation and Disaster Relief and Emergency Command Center set up the Power Grid Emergency Command, stepping up the restoration of electricity. Meanwhile, the governments of the affected provinces and regions activated emergency management plans and were committed to the organization, mobilization, coordination and command of disaster relief and emergency actions.

The military always plays an important role in disaster relief and emergency actions. In the fight against the freezing rain and snow disaster, the Army dispatched 667,000 personnel in all, and the Air Force dispatched 41 aircrafts conducting 174 sorties airlifting cotton coats, quilts, candles, emergency lights and other relief materials, totaling 30,000 pieces and weighing 700 tons. The public security forces also participated in disaster relief and emergency actions, preserving social stability. According to statistics, from Jan. 11th to Feb. 8th, 5,938,000 police were mobilized in Guangdong, Hunan, Anhui, Guizhou, Zhejiang, Jiangsu, Jiangxi, Guangxi, Hubei, and Henan, helping about 7,439,000 people and dispersing

19,274,000 vehicles (www of People 2008). The fire-fighting forces formed more than 300 working teams and a mobile emergency force made up of more than 30,000 firefighters, playing an important role in road-clearing, rescuing and repairing (www of China 119 2008).

During the national mobilization, the disaster area received support from all over the country and all walks of life, and donations from social organizations and ordinary people. Hong Kong and Macau SAR governments and Chinese compatriots from all over the world made active contributions too. Meanwhile, coordination mechanisms and express lanes for overseas donated materials were established under the coordination between the Ministry of Civil Affairs and the Foreign Ministry, Customs and the quality inspection sector. The relief donations and materials, received by the Ministry of Civil Affairs, China's Red Cross, China Charity Foundation and 7 severely affected provinces and regions, i.e., Hunan, Guizhou, Jiangxi, Anhui, Hubei, Guangxi and Sichuan, totaled about RMB1.195 billion (www of China's Ministry of Civil Affairs).

Also during the national mobilization, local governments utilized the emergency warning information platform, and formed a quick and accurate report network by providing dynamic and anticipatory information useful for policy planning. Free information about transportation, weather and healthcare were sent to mobile phone users twice a day, via a contribution made by the media. After major disasters, the panic and helplessness of people usually intensify the disaster. Speculations, rumors and blind actions lead to secondary disasters endangering social stability. Therefore, grand pictures of disaster relief and emergency actions and scenes of mutual assistance between ordinary people, presented via radio, TV, internet and text messages, strengthened the confidence of the affected population and aroused the passion of people all over the country to devote themselves to disaster relief and emergency actions. "When a crisis occurs, the explanation, guidance, encouragement and comfort, provided by the media, are indispensable motivations for people to overcome the crisis" (Rui and Li 2008). In the national fight against the 2008 freezing rain and snow disaster, Chinese newspapers, TVs, radios, websites and communication platforms showcased to the public the national capacity and strength of the people through multiple channels and perspectives, and played a guiding role in building confidence, stabilizing society and encouraging national spirit.

"2008 Lessons": A Test of Chinese Emergency Management Plans

The building of an emergency management system has been gradually incorporated into the building of national capacity since the adoption of the policy of reform and opening-up. The important turning point began with the lessons and experiences of the national response to the outbreak of SARS in 2003, followed by incidents like bird flu, mine explosions and pollution.

On Jan. 8th and 10th, 2006, the State Council issued the *National Emergency Plan for Unexpected Public Incidents* and *National Disaster Relief Plans* respectively, providing standards for all levels of government in developing plans for unexpected public incidents and natural disaster relief efforts. On June 15th, the State Council issued *Recommendations on Enhancing Emergency Management* (the State Council [2006], no.24), pointing out the fact that there was "a relatively weak foundation for emergency management, yet-to-be-improved systems, mechanisms and regulations, and yet-to-be-updated capacities of warning, preventing and dealing with unexpected public incidents". The document requested "the completion of an emergency planning system involving all regions, all walks of life and all units during the 11th Five-Year period". It identified targets of "setting up a unified, sensitive, coordinated, orderly and effective emergency management mechanism; improving laws and regulations on emergency management; building an emergency management security system combining an early warning information system of unexpected public incidents with specialization and socialization; forming an emergency management layout characterized by government leadership, coordination between sectors, including a military-civilian combination, and social involvement".

China has made major breakthroughs in its legislation on emergency management since 2006. In particular, the *Emergency Response Act of the People's Republic of China*, issued on Aug. 30th, 2007, provided a basic law for the building of an emergency management system, and established a system of emergency plans consisting of 1 national general plan, 31 province-level general plans, 85 plans by sectors in the State Council, and 20 national special plans. The structural completion of emergency management, however, didn't mean the improvement of comprehensive efficiency.

The development of emergency plans is an important way to carry out effective emergency management mechanisms in the construction of a social management system. All regions should develop their emergency

plans according to local conditions, and form a linkage mechanism among all sectors and all walks of life in the course of normalizing prevention, simulation and exercise. When an emergency like a natural disaster occurs, they can quickly activate emergency plans, and reduce its effects to the maximum extent possible. But in the fight against the 2008 freezing rain and snow disaster, we came to know that China was still at the start of the building process of an emergency management system and mechanism. Problems were exposed both in the development of emergency plans and their implementation. For instance, local emergency plans usually copied the basic content, structure and words of the state- and provincial (or region, municipality)-level emergency plans. Targeted emergency management designs were missing due to the lack of integration of local geography, climate, urban-rural distribution, transportation, power supplies, economy and social life, and the lack of reviews and analysis of previous lessons and experiences. Some regions developed dozens of individual emergency plans, but the absence of a coordination mechanism led to disorders in practice.

Effective communication and combined actions between sectors, such as meteorology, railway, civil aviation, highway, electricity, public security, civil affairs, healthcare, and between the central and local governments, would have guaranteed the fight against the freezing rain and snow disaster, but there were problems in the network mechanism due to the "lack of a comprehensive major disaster emergency plan integrating all the key issues and details" (Shi 2008). In some regions where emergency plans were put into place, the lack of normalized exercises and simulations and modifications in line with local conditions led to an ineffective linkage mechanism among sectors involved in an emergency plan. Also in some regions, particularly in the lower-levels of government, due to the factors of personnel, equipment and finance, emergency management offices were in a nominal or even dormant state, and failed to satisfy emergency requirements of rapidly responding, mobilizing, commanding, coordinating and jointly acting. In the face of unexpected natural disasters, some regions exposed their inability to cope with disaster reduction and relief by themselves, and spent time waiting for supplies from the central government and other regions, which tended to result in the emergence of secondary disasters.

In general, the planning of infrastructure in China usually has not taken climate change and its impacts into considerations in terms of design, construction and maintenance. Moreover, many industries haven't been well prepared for major disasters. For example, when the freezing rain and snow disaster struck, the insurance industry actively carried out compen-

sation to reduce losses in the region's enterprises, industries and households, and restore normal production and life to the disaster area. As of Mar. 5th, 2008, the insurance industry "received 10,170 claims of disaster insurance, paid off RMB 2.23 billion and donated RMB 60 million". But "compared with the losses caused by the freezing rain and snow disaster, the compensation from the insurance industry accounted for a rather small share, less than 2%, far from the 30% average around the world, and the 5% average in most developing countries, displaying the extremely low insurance coverage in China. Many enterprises, infrastructures and farmers haven't participated in insurance programs and couldn't be compensated for their economic losses. Even if they had participated, they only picked some high risk products instead of a full and complete coverage (The Policy Research Office 2008). Thus it has been proved that insurance awareness hasn't been socialized in the development of the Chinese insurance industry. An insurance system for major disasters was absent, so was the capacity to divert the risks of major disasters by means of insurance. The insurance industry wasn't the only sector which failed to cope with disaster response. Traditional industries concerning people's livelihood and socio-economic life faced serious challenges as well.

For example, in the response to the unexpected freezing rain and snow disaster, due to the "lack of an effective electricity emergency platform", the State Electricity Regulatory System couldn't obtain immediate information about the damage and restoration of the affected electricity infrastructure, and understand the real-time and overall situation of operations of the power grid, affecting emergency assessments, decisions and commands. In particular, "the fact that local electricity sectors were in short supply of materials, technology and personnel intensified the disaster and extended the duration of the event to some extent." (Li 2008) A comprehensive report by the Faculty of the Chinese Academy of Sciences analyzed the chains in this major natural disaster, "The transportation in the south relies on electricity, and electricity on coal, and coal on transportation, thus forming a vicious circle in the socio-economic operation. Among them, electricity always plays the role of a switch" (Faculty of the Chinese Academy of Sciences 2008). Once "the master switch" was damaged, a chain reaction "resulting in one kind of damage after another" was inevitable. In some cases, the emergency plans of other industries lost effectiveness and emergency capacity since their "power" was constrained. These lessons are profound.

The 2008 freezing rain and snow disaster in South China not only affected the electricity, transportation, and communication sectors, social order and people's lives, but also highlighted the incompetence of all sec-

tors, industries and regions in emergency response. The development of an emergency management plan should be in line with local conditions and past experiences, and prepared for unexpected incidents and natural disasters of different scale and intensity, an element which couldn't be ignored. For instance, "the emergency plan for stranded passengers in Guangzhou railway station was developed in 1998 based on an estimate of 150,000 to 200,000 stranded passengers. Before the 2008 Chinese New Year, the stranded passengers reached more than 2 million, making the plan ineffective." (Ruan 2008) Therefore, the development of an emergency plan needs forward-thinking and should be prepared for any future unexpectedness. But a plan is neither inclusive nor unchangeable. It should be tested in the practice of the response to emergencies and improved in the course of learning lessons and experiences. The unexpectedness and seriousness of disaster, as well as flaws and effectiveness of an emergency plan, raise new requirements in the following aspects: the implementation of related laws and regulations, the building of an emergency management system, the training of emergency management and rescue teams, the improving of the organization of relief material stockpiles, and the updating of relief equipment.

"2008 Experiences": Improving the Emergency Management System and the Capacity of Disaster Reduction and Relief

Since the outbreak of SARS in 2003, China has started to build an emergency management system and developed an initially all-around, multi-level and wide-ranging emergency plan system, which underwent a first test in the fight against the 2008 freezing rain and snow disaster. The "5.12" Wenchuan earthquake which followed, posed a new challenge to the emergency management system in its response to major natural disasters. Therefore, it's necessary to sum up those experiences and reflect upon defects to improve the emergency management system and the capacity of disaster reduction and relief.

The improvement of the emergency management system relies on the building of the comprehensive capacity of emergency plans and their operational mechanism in the response to emergencies by the state, all regions and all walks of life, focusing on "problems and weaknesses exposed in the socio-economic development and disaster response". It was proved in practice that apart from factors of emergency planning and emergency response mechanisms, the problems exposed in the disaster highlighted the absence of a comprehensive capacity of social manage-

ment, including awareness of and capacity for disaster reduction and relief. In the face of major disasters, China demonstrated its capacity for national mobilization and social awareness, i.e., "when a disaster struck, help arrived from all directions". However, the disaster also exposed the more or less inability of the system to consider all walks of life in disaster reduction and relief. The defects were partly due to the general conditions of China's socio-economic development, and partly due to the problems in the stockpile, layout and allocation of existing resources and capacities. Therefore, "2008 Lessons" highlight the capacity building of disaster prevention and relief material stockpiles based on the recognition of insufficient national awareness of disaster reduction, and incompatibility between socio-economic development and disaster relief (Ma 2009).

China's central relief material stockpile system started in 1998, an outcome of relief practice from the same year as the Hebei earthquake, as well as a decision targeting the lack of uncoordinated planning of relief materials. At that time, the Ministry of Civil Affairs and the Ministry of Finance issued *A Notice on the Building of Central Relief Materials Stockpile System*, requesting that "the central and local governments as well as those disaster-prone regions, should stockpile some relief materials to improve emergency relief capacity, guarantee the smooth-going of relief efforts and promote the stability in the disaster area". As a result, cities of Shenyang, Tianjin, Zhengzhou, Wuhan, Changsha, Guangzhou, Chengdu and Xi'an were among the first 8 stockpile sites, covering the Northeast, Huabei, Huazhong, Huanan, Southwest and Northeast regions of China. Guangzhou was later substituted by Nanning, capital city of Guangxi Autonomous Region. With Harbin and Hefei added to the list, a national layout of 10 central relief material stockpile sites were established under the supervision of the Ministry of Civil Affairs. A national central relief material stockpile system has thus taken shape with the implementation of a management system and operation mechanism. Meanwhile, all regions established suitable relief material stockpile sites in line with local conditions.

In 2002, the Ministry of Civil Affairs and the Ministry of Finance jointly issued *Measures on the Management of Central Relief Reserve Materials*, standardizing the purchase, management, use, allocation, recovery and punishment of national relief reserve materials in terms of "the rule of law". By the end of "the 10th Five-year Plan", China had established 10 central stockpile sites and 31 provincial, regional and municipal stockpile sites; 251 prefecture-level stockpile sites, accounting for 75.3% of the total prefectures in the country; and 1079 county-level stockpile sites, accounting for 37.7% of the national total (*Jinghua Times*, Jan.13,

2006). These stockpile sites played a tremendous role in relocating affected populations and providing them daily necessities.

It was proved in practice that the building of a central and local relief material stockpile system was vital in responding to natural disasters and providing relief efforts to the affected population, and reducing losses as well. But it was also proved in the 2008 freezing rain and snow disaster and the Wenchuan earthquake which followed, that the national relief materials stockpile system couldn't meet the requirements of emergency management, highlighting defects in a number of relief materials, their variety and the distribution from stockpile sites.

First, there was only one item in relief materials stockpile, i.e., tents, which could only shelter the affected people, but couldn't satisfy their other needs for clothes, food, water, light and heating. Second, the limited room for relief materials (a maximum of 10,000 m^2 for central stockpile sites) led to an insufficient stockpile of tents. In 2004, there were 158, 000 tents in central stockpile sites, plus 212,600 tents transferred to local sites by the Ministry of Civil Affairs, 370,000 in total. (Gao 2005). The requirement for tents in Wenchuan 10 days after the earthquake amounted to 900,000, taking a month to produce, allocate, and transport them to the disaster area. Finally, due to the imbalanced distribution of stockpile sites and the single-structured and inadequate amount of relief materials, the difficulties in organizing and transporting the material further delayed the timeliness and effectiveness of disaster reduction and relief while raising the transportation cost of relief materials.

Whether relief materials could be transported to the disaster area in the shortest time or not is an important indicator of national emergency capacity. On the other hand, whether relief materials could cope with the basic humanitarian needs of the affected people or not is another indicator of a "people-oriented" practice. As a disaster-prone, vast and populous country, it's essential for China to rationalize the layout of stockpile sites and normalize the items for relief materials. Therefore, "we prepare things for future use rather than we're not prepared in case of use", has been the principle of improving the emergency management system in China since 2008. In this regard, problems did emerge in the finance and technology of relief material stockpiles. Among them, problems in the middle and western regions, including it's vast area, imbalanced population density, poor transportation capacity and difficult financial situations, should be given due attention in the process of integrating relief material stockpiles and disaster relief capacity into the coordinated development of regional socio-economic development.

In 2009, the Ministry of Civil Affairs re-planned and designed the cen-

tral relief materials stockpile sites, raising the number of sites to 24 and starting to construct them one by one. *Construction Standards for Relief Materials Stockpile Sites*, stipulated by the Ministry of Civil Affairs, provided a national standard for the construction of central and local stockpile sites, and clarifying technical specifications for different levels of stockpile sites. The just completed Kunming central relief materials stockpile site is the largest one in the country, with enough room for helicopters and basic necessities for 700,000 affected people. The original relief material (only tents) was also expanded to a number of daily necessities (e.g., quilts, clothes, water purifiers, stoves and utensils), as well as rescue equipment and instruments. Therefore, all related sectors including the Ministry of Civil Affairs, has been committed to the development of systems and standards in the following aspects: extending the number and type of items included in relief materials, building a management information system for material transportation and stockpile organization, stipulating standards for relief material industries, which were fully represented in the *Guiding Recommendations on the Building of an Emergency Relief System*, issued by the Ministry of Civil Affairs (Ministry of Civil Affairs [2009], no.148).

In the same year, concerning the talent shortage in the building of an emergency management system, the Office of the State Council issued *Recommendations on the Building of Lower-level Emergency Teams* (Office of the State Council [2009], no.59), identifying the following guiding principles: combining professionalization with socialization, improving the capacity of emergency teams and the degree of social involvement, and building a lower-level emergency team system with appropriate scale and standard management. It also called for achieving the following aims in the building of a lower-level emergency team system in three years: setting up comprehensive county-level emergency teams, strengthening professional emergency teams in important sectors, establishing emergency teams in townships, communities and enterprises, standardizing volunteer emergency services, realizing united leadership, orderly coordination, professional-volunteer coexistence, complementary advantages and forceful logistic support.

These policies and principles reflected that the Chinese government attached great importance to emergency relief management via "…The building of an emergency relief system is important to the overall situation of national socio-economic development and people's vital interests, and is the content of implementing the scientific development concept and building a harmonious socialist society. It reflects that all levels of government perform their functions based on the principles of people orientation and governing for people". It also establishes the basic principles of

"regarding the safety of people's lives and properties and their basic living rights as the starting point and the final aim while centering on the capacity improvement of emergency relief". It demands "a comprehensive use of means of administration, legislation, technology and market; coordinates relief efforts before, during and after disaster; and improves the comprehensive capacity of disaster reduction and relief in the response to natural disasters." It also suggested that the objectives of building an emergency relief system with Chinese characteristics and the overall improvement of emergency relief efforts be completed in 3 to 5 years.

These constructive objectives are as follows: establish an emergency relief management system and mechanism, formulate laws and regulations on emergency relief, establish an emergency relief plan system, form emergency relief teams and a disaster management system, create a relief fund mechanism, increase relief material stockpile capacity, develop relief equipment construction, establish an emergency relief command system, construct emergency shelters, update relief technology support capacity, improve community disaster reduction and relief capacity, and emergency relief social mobilization. Hence, an emergency relief plan system "involving all horizontal and longitudinal sectors" was basically established in 2010. All these measures and objectives are the outcome of the lessons and experiences drawn from a series of major natural disasters in 2008, as well as the planning of overall construction of China's emergency relief system.

Emergency management is an indispensable element in social management. As an unusual management, it must be integrated into the usual construction of social management, i.e., developing and improving emergency management plans, building and improving an emergency surveillance and warning system, forming a network coordination system between the central and local governments and between sectors and social organizations, making preparations for relief material stockpiles and transportation, establishing and training professional emergency and relief teams, providing education on disaster prevention, self-help and social stability. In this sense, although emergency management deals with "unusual" emergencies, the response capacity was built and improved in the usual preparatory manner. In this regard, the development and improvement of related laws and regulations, the education of public opinions, the standardized excises of all types of emergency plans, constitute the basic elements in emergency management.

When asked randomly by the media "if there are any emergency shelters in the city", most Beijing citizens were not aware of any. It can

be concluded that awareness of crisis and self-help hasn't been established even into the mindset of a resident of China's capital city. As a vast and populous country, China will face frequent natural disasters and social contradictions in the long run. Based on these characteristics, not only all levels of government and all walks of life should attach great importance to emergency response, but also the public should raise theirs awareness of crisis, safety and self-help. According to international experience, the more the public can raise their awareness of emergency management, the more effective national capacity and social function will be in a crisis situation. The awareness and knowledge of crisis response and emergency management must be integrated into the content of national education.

Compared with the breakout of natural disasters like earthquakes and mudslides, the 2008 freezing rain and snow disaster no longer stands out, but the response, lessons, and experiences of the event have had a great impact on China's emergency management system, which constitutes the main theme of the "2008 Experiences".

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Abstract

From Jan. 10th to Feb. 20th, 2008, a rare freezing rain and snow disaster struck South China across a large, unprecedented area. The disaster not only brought about serious consequences of icy roads, collapsed buildings, blocked highways, interrupted transportation, broken transmission lines and towers, but also damaged agriculture, forestry and aquaculture, resulting in impacts on people's work and tremendous losses to property and life. In the face of the unexpected freezing rain and snow disaster, the central and local government quickly carried out disaster reduction and relief efforts and the people around the country were united together to fight against the disaster, demonstrating the mobilization of emergency management from the central government to the local government and from the government to the public in the response to major natural disasters. In early 2011, some southern provinces in China were again hit by a freezing rain and snow disaster, the first ever natural disaster in the second decade of the 21st century. It tested once again the capacity of all levels of government to respond to and resist the same type of natural disaster. The "2008 Experiences", a phrase coined in news reports, concludes precisely China's experiences in its response to the 2008 freezing rain and snow disaster and the follow-up improvements in the emergency management mechanism. Compared with the breakout of natural disasters like earthquakes and mudslides, the 2008 freezing rain and snow disaster no longer stands out, but the response, lessons, and experiences of the event have had a great impact on China's emergency management system, which constitutes the main theme of the "2008 Experiences".

TRADITIONAL MECHANISMS FOR OVERCOMING NATURAL AND LIFE CRISES IN THE COMMUNITY AND THE FAMILY: CHRISTIAN ETHICS, HUMAN BEHAVIOUR AND HEALTH

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Contemporary society has developed diverse technical means and organizations to ensure humanitarian help in critical situations, such as earthquakes, fires, floods, tsunamis, etc., yet this technical preparedness is not always sufficient to prevent fatal consequences for nature and people. Nowadays, people act to solve a particular problem, but they do not directly bind their behaviour and way of life to unfavourable natural conditions and phenomenon, such as those mentioned above. Is it a centuries-old practice to act *post factum*, or does the experience of past generations show that people have a different attitude to natural and life crises?

This chapter will outline those notions and acts through which the individual, the family and the local community aim to cope with or prevent critical situations. The focus of attention will fall on various established and repeated mechanisms and means for ensuring protection from natural disasters, such as earthquakes, continuous droughts, rains, floods, thunderstorms or strong winds (tornados), which destroy fertility. This chapter will also examine efforts to prevent and overcome the fall in demographic growth due to the avoidance of illnesses and epidemics through the use of prophylactics and medical treatment. A special emphasis is placed on the worldview, norms of behaviour and values that exist among Bulgarian peasants and follows the way they postpone in time and isolate in spatial terms natural calamities, epidemics and diseases.[1] These convey certain

[1] Various aspects of this problem are studied in the previous volume on Disasters

ideas about the connection between people's behaviour on the one hand, and natural and life crises in their social community (family, village, etc.) on the other.

The value system of peasants, who were in fact the majority of the Bulgarian population until the middle of the twentieth century, found its utmost expression in the social structures where their society and culture were reproduced. Generally, this value system included marrying a person who belonged to "one's own culture,"[2] which was defined as a stable Christian family within the confines of the local community (Sanders 1935–1936, 134; Filcheva 1984, 38–39; Hristov 1990, 9–10; Boneva 2001, 761–783). Economic life was organized in one's own family farm through the hard work of family members (note in this respect the saying "better to work in vain, than just stay in vain"), and social solidarity and egalitarian philosophy were the main features of their social behaviour (Hadjijski 1974; Draganov 1974; Boneva 2002, 423–445).

One of the challenges for writing this article arose from a conversation with a female friend of mine who is educated and has a modern worldview. She gave birth after the age of thirty-six which meant that, according to contemporary medicine, special examinations and a control on the pregnancy were required. The woman missed attending the examinations for possible aberrations in the baby's development during pregnancy using the argument of her mother: "In our family no one has done anything evil".[3]

This chapter includes portions of fieldwork material about the commonly accepted norms of behaviour in a Bulgarian village over the second half of the nineteenth and the first half of the twentieth century, as well as the rationale and symbolic forms through which those were instilled in the individual, with the purpose of ensuring fertility and avoiding natural disasters and life crises. These norms generally reflect the main Christian ethical notions: virtue, sin, humility, temptation, repentance, forgiveness, etc., which guide human life.[4]

2009. See there Boneva 2009, 132–148, as well as Boneva 2010, 5–18.

[2] Such a "familiar" person was the one who lived within the community. This community was construed on religious and ethnic principles. "Aliens" for the community were Muslims, who were regularly termed by Christians in the Balkans as "Turks" (Boneva 2006**,** 283–303; See also anamnesis.info 2007). In folk songs and legends, the Turk belonged to an "alien faith" and was considered to be an inappropriate marriage partner (Karamihova 1995, 263–267).

[3] Luckily, her children were born properly and in good health.

[4] Here are the Ten Commandments:

– Do not worship any other gods besides me.

– Do not make idols of any kind, whether in the shape of birds or animals or fish. You must never worship or bow down to them.