

Exploring the Path of Urban Emergency Management in China Based on Social Crisis Life Cycle Theory--Taking Zhengzhou 720 Extraordinary Rainstorm Disaster Response as an Example

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Abstract: Comprehensive urban disaster prevention planning is an integral part of China's local planning system. With the continuous upgrading of China's urbanization level, the population and wealth in the cities are becoming more and more concentrated, and the economic risks and social impacts of sudden disasters such as rainstorms and typhoons on cities have become more severe than ever. However, some cities suffer from a one-dimensional emergency management system, while the local variations are great with the management theory lagging behind. This undoubtedly urges the innovation of urban emergency management approach theory in China. Based on the life cycle theory of social crisis, this article analyzes the problems of urban emergency management in China and their corresponding improvement countermeasures from four time periods: gestation period, outbreak period, diffusion period and recovery period, so as to explore the approach innovation of urban emergency management in China, taking Zhengzhou 720 mega rainstorm disaster as an example.

1. Introduction

At present, disaster prevention mode adopted by most cities in China has changed from single prevention to comprehensive management, but the perfect urban emergency management system has not been established, and the concept of urban emergency management is somewhat backward. The expected disasters can bring huge losses due to human and natural factors, such as Wenchuan earthquake in 2008 as well as the snow disaster in Southern China, the drought in Yunnan province in 2010, the flood in Southern China in 2012 and the landslide in Guizhou in 2019, which all endangered human health and life safety, caused severe economic losses, and even threatened social stability and sustainable development. In this thesis, according to the life cycle theory of social crisis, how to promote the whole society to change emergency management concepts in the case of frequent occurrence of sudden natural disasters was studied on the basis of analyzing the response and countermeasures of "July 20 Heavy Rainstorm in Zhengzhou", so as to achieve multiple subjects co-governance and reduce the impact of disasters to a greater extent.

2. Overview of the "7.20" Mega Rainstorm Disaster in Zhengzhou

2.1 Meteorological Characteristics of the "7.20" Heavy Rainstorm in Zhengzhou Province

China is a vast country, from the three eastern provinces in the north to many provinces in the south, there is a possibility of flooding caused by very heavy rainfall. According to Figure 1, the national average annual precipitation for the last five years is about 600 to 700 mm, and there are more obvious "small and large years" of precipitation [according to the definition of meteorology, precipitation refers to the liquid or solid (after melting) water that falls from the sky to the ground in a certain period of time^[1]. water, without evaporation, infiltration, or loss, and the depth of accumulation on the horizontal plane. In addition to rainfall, precipitation also includes snowfall and hail. Very heavy rainstorm generally statistics of its rainfall, but the weather yearbook is generally statistics of the amount of precipitation, can be tentatively considered the main

composition of precipitation as rainfall^[2].

Zhengzhou, located in the hinterland of the Central Plains of China, has a high western, low eastern, high central, and low northeastern and southeastern climate, with a north temperate continental monsoon climate and four distinct seasons. From 1984 to 2020, the precipitation in Zhengzhou city (see Figure 2) shows that the annual precipitation in Zhengzhou city is in line with the “small and large year” characteristic of precipitation in China, and the maximum precipitation in 2003 was 1011 mm, and the minimum precipitation in 2013 was 353 mm, and the average annual precipitation in Zhengzhou city under normal conditions was 627 mm. However, from 18:00 to 0:00 on July 18, 2021, there was a sudden and continuous heavy rainfall process in Zhengzhou, with heavy and very heavy rainfall all over the city, breaking the norm of annual average precipitation in Zhengzhou. During this period, the single-day rainfall in Zhengzhou reached 552.5 mm, of which the maximum hourly rainfall reached 201.9 mm (from 16:00 to 17:00 on July 20), breaking the historical extreme value of hourly rainfall in mainland China (198.5 mm, Linzhuang, Henan, August 5, 1975). Both the hourly rainfall and the single-day rainfall broke the historical record since the Zhengzhou Meteorological Bureau built the station in 1951, of which, the 24-hour rainfall at the meteorological station in Jiengang, Erqi District, Zhengzhou City, was as high as 696.9 mm, exceeding the total annual average precipitation in Zhengzhou. 73 meteorological stations (accounting for about 38%) accumulated more than 500 mm of rainfall, with the largest rainfall of 875 mm in Xinmi Baishai, Zhengzhou City Zhengzhou, Dengfeng, Xinmi, Xingyang, Gongyi and other 5 meteorological stations daily rainfall exceeded the extreme value since the meteorological records were available.

2.2 The Damage Situation of the “7.20” Heavy Rainstorm in Zhengzhou

The intensity and duration of the “7.20” heavy rainstorm in Zhengzhou showed the typical characteristics of urban flooding disaster, causing casualties, traffic damage, crop failure and other losses. According to statistics, the province of Henan Province direct economic loss due to heavy rainfall is about 133.715 billion yuan, of which the direct economic loss of Zhengzhou City is about 53.2 billion yuan ^[3](the data in this section on the disaster of heavy rainfall in Henan Province, except where indicated, are based on the statistics released by the Henan Provincial Government Information Office at the press conference on flood control and disaster relief in Henan Province and the press conference on accelerating post-disaster reconstruction in Henan Province) (The final data is subject to official release).

2.2.1 High Number of Casualties

According to relevant statistics, a total of 150 counties (cities and districts), 1664 townships and 14.814 million people were affected in Henan province; 933,800 people were organized for emergency shelter, and 1,470,800 people were relocated. Zhengzhou City, 292 people were killed, 47 people missing. Among them, 189 people were killed due to floods and mudslides; 54 people were killed due to house collapse; 39 people drowned in underground spaces such as basements, garages and underground corridors, including 14 people killed in Metro Line 5 and 6 people killed in Jinguang Road Tunnel; and 10 other people were killed. Among the killed population, a total of 108 people were killed in five districts and four development zones in Zhengzhou City, 64 people were killed in Gongyi City, 58 people in Xingyang City, 46 people in Xinmi City, 12 people in Dengfeng City, 2 people in Xinzheng City, and 2 people in Shangdong District under the city. According to the distribution of the number of victims, this disaster is centered on Zhengzhou City, the risk of urban flooding caused by heavy rainfall^[4].

2.2.2 The Transportation Facilities and Residential Properties Were Severely Damaged

According to the national natural disaster statistics: Firstly, in terms of infrastructure, the extraordinarily heavy rainfall in Zhengzhou led to dangerous conditions in many projects such as Changzhuang Reservoir, Guojiazui Reservoir and Jialu River. Secondly, in terms of transportation facilities, the extraordinarily heavy rainfall caused 2730 damages to municipal roads, 1190 damages to trunk highways, 2075 urban road collapses, 67 tunnels and bridges in urban areas were damaged,

6415 rural roads were damaged, and the most serious losses were the Zhengzhou Metro Line 5 and Jingguang Road Tunnel. Third, in terms of living facilities, 1,194 neighborhoods in the main city of Zhengzhou city lost electricity and 1,864 neighborhoods lost water due to the disaster; 30,106 houses and 89,001 rooms collapsed; underground garages in hundreds of neighborhoods and tens of thousands of vehicles were flooded, according to the estimate of the China People's Insurance Company of Henan Province, about 400,000 vehicles in Zhengzhou city suffered different degrees of water damage due to the heavy rainstorm. [5]

2.2.3 High Level of Direct Economic Losses in Agriculture

Henan Province is the largest agricultural province in China, with a grain output of more than 130 billion pounds in the past three years, accounting for 10% of the country's total. In 2020, Henan's vegetable output will account for about 10% of the country's total, and pork output will account for about 8% of the country's total. The "7.20" heavy rainstorm It has a significant impact on agricultural production in Zhengzhou and Henan Province. Figure 1 shows the national average precipitation, and Figure 2 shows the historical precipitation and average precipitation in Zhengzhou City. According to the statistics of the Henan Provincial Emergency Management Office, the heavy rain caused 16.203 million mu of crops, 10.01 million mu of the disaster area, and poor harvest. 5.137 million mu, 1,126 affected villages, and 52,800 collapsed houses. To sum up, whether it is the number of people affected by the disaster or the number of deaths, whether it is the collapse of bridges, tunnels, roads or damage to residential facilities, whether it is agricultural planting or agricultural farming, the heavy rain has caused huge direct economic losses to Henan Province, especially Zhengzhou City. loss. In the face of severe disasters, the relevant government departments quickly organized emergency rescue and disaster relief: First, disaster relief personnel, about 5,290 troops, 30,000 public security police, 164,000 volunteers, 5,556 field rescue teams, and more than 400,000 party members and cadres participated in the disaster. Flood control and disaster relief. The second is the emergency repair of the power grid. The state coordinated with the State Grid Corporation of 10,000 maintenance personnel, 181 power generation vehicles, and more than 1,000 high-power power generation equipment in 24 provinces and cities to participate in the emergency repair of damaged substations in Zhengzhou. The third is emergency repair of water supply. More than 3,000 emergency repair personnel have been on duty one after another to speed up the emergency repair and maintenance of water supply facilities. The community's temporary water supply has not been restored, and all temporary water intake points and water delivery vehicles have not been restored. The fourth is emergency repair of road traffic. More than 5,000 emergency repair personnel are on the front line of emergency rescue in damaged roads, bridges, culverts and rural roads.

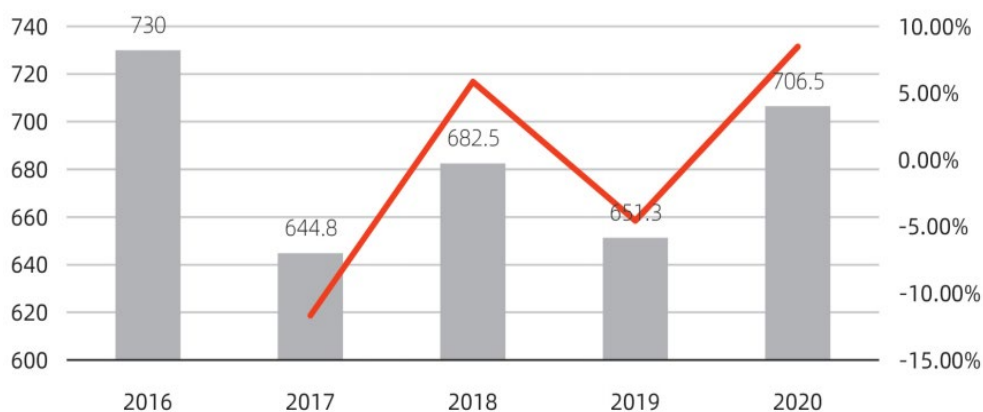


Figure 1: National Average Precipitation

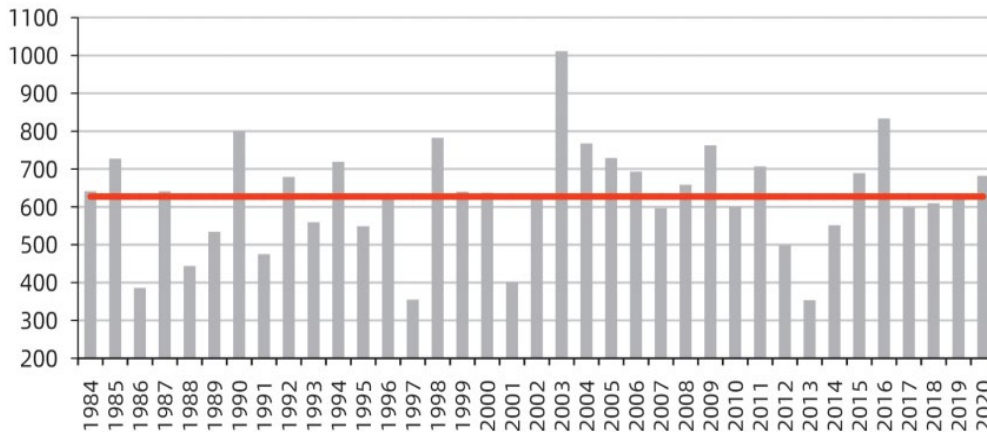


Figure 2: Historical Precipitation and Average Precipitation in Zhengzhou

3. Social Crisis Life Cycle Theory

In 1986, Steven Fink proposed a four-stage model of crisis communication. In 1986, Steven Fink proposed a four-stage model of crisis communication from a medical point of view, analogizing crisis and disease, according to the different stages of disease development, which are classified as follows:

The first stage is the Prodromal stage. The outbreak of crisis is generated by the interaction of various factors, and the control of related factors can effectively control the outbreak of crisis, while in reality, related factors are often easy to be ignored. Therefore, insufficient attention to this stage and improper handling will result in the situation not being controlled before the outbreak of crisis, which will then cause the deterioration of the situation and the outbreak of crisis.

The second stage is the Breakout stage. Although the breakout phase is often not long, it is the phase where the crisis has the greatest impact on people, and because of its great influence, some people in society equate this phase with the whole process of the crisis. At the same time, this phase is also the most demanding phase for emergency management, where subsequent response work is set up, mobilized and launched.

The third phase is the Chronic phase. That is, the disposal phase of the crisis, the focus of this phase is to respond to a series of effects of the crisis outbreak, especially some destructive crisis, the need to maximize the lives of people and property recovery in this phase, to prevent casualties and property damage again.

The fourth stage, the healing period (Resolution). Therefore, in this stage, besides compensating the relevant personnel, we should also reflect on the shortcomings of the latent stage of the crisis and summarize the relevant experience and lessons learned after the crisis. Crisis life cycle theory was first proposed for corporate crises, and later it was often used for public emergencies.

4. Based on the Crisis Life Cycle Theory Zhengzhou 720 Extraordinarily Heavy Rainfall Disaster Revealed the Problem

4.1 Gestation Period: Prevention Mechanisms and Concepts Lagging Behind

In this round of heavy rainfall before the arrival of the meteorological department has made a forecast, July 15 to 16, the State Council leadership comrades specifically to Zhengzhou, Henan and other places to inspect and guide the flood control work, to prevent heavy rainfall, prevention and control of major risks, to ensure the safety of flooding put forward clear requirements. Henan provincial government on July 13, July 16 specifically to make the deployment. The city government of Zhengzhou has not paid enough attention to this round of heavy rainfall, the main person in charge still subjectively believes that the rain in the north will not be too big, paralysis, vigilance is not high, responsibility is not strong, prevention deployment is not determined not in

place, lack of target.^[6] The meeting, but the deployment of generalized, no specific, strong and effective implementation measures; in the 17th and 18th double holiday disaster response preparation of the most critical and most important two days, the municipal government, the main responsible for flood control work is not organized analysis and research, mobilization and deployment, supervision and inspection actions, in addition to a deputy mayor research road comprehensive transformation and waterlogging point rectification, other city leaders are not checking the flood control Until the afternoon of the 19th municipal party committee in charge, the morning of the 20th city government in charge of the first check since the 13th flood control work.^[7] This is also the case with the party committees and departments of the counties concerned, where the “critical period” of flood control preparation has become a “blank period”. Zhengzhou City entered the flood control period on May 15, and the municipal defense committee issued the “Notice on the division of responsibilities and duties of the municipal government leaders in flood control and drought control in 2021” on July 14, in which it was clear that the municipal government leaders were responsible for the districts, counties and cities, and asked the districts, counties and cities to clarify their responsibilities for 7 packages.

The implementation of this Zhengzhou meteorological department issued two consecutive yellow warnings, one orange warning and one red warning on July 19, and five consecutive red rainstorm warning signals on the 20th. But the general public still have a fluke mentality for natural disaster-type emergencies, before the crisis may occur, the relevant government departments will often organize the evacuation of people, evacuation, but in practice, the relevant staff of government departments in such work, still encounter some people because of home belongings do not want to evacuate or have evacuated secretly returned to the situation, which increases the natural disaster-type emergencies occur after Risk of casualties.

4.2 Explosive Period: Confusion in Coping Mechanisms

“Zhengzhou Flood Control Emergency Plan” clearly defined the seven conditions for the start of the I response, one of which is “Changzhuang Reservoir is a major risk”, Changzhuang Reservoir 20 10:30 began to appear “tube surge” risk, Zhengzhou City did not start the I emergency response as required . Zhengzhou City has not yet effectively established the flood control emergency response mechanism with weather forecast information, emergency action and forecast information release is obviously disconnected, until the meteorological department issued the fifth red warning at 16:01 on the 20th, Zhengzhou City only at 16:30 to start the level I emergency response, but also did not declare the emergency flood control period as required by the plan. In fact by this time the disaster has already happened, the 4 cities in the hilly area of 251 people dead and missing (96 in Xinyang, 84 in Gongyi, 58 in Xinmi and 13 in Dengfeng), more than 90% of the deaths and disappearances were concentrated between 13:00 and 15:00 before the start of the level I emergency response.

On July 13, Zhengzhou municipal party committee main person in charge of the city's flood control work video conference proposed flood control “five not” goal (important water conservancy projects do not happen, due to geological disasters small basin flooding casualties do not occur, important traffic does not interrupt, residents do not enter the water in their homes, local areas do not appear a long time water), which is the normalized conditions of flood control work requirements. 19 Zhengzhou 8 city has 12 districts and counties (cities) 153 sites rainfall has exceeded 50 mm, 18 sites have exceeded 150 mm, on this serious situation, the municipal government did not cause a high degree of vigilance, did not recognize the seriousness of the problem, the afternoon of the municipal party committee in the grassroots inspection, the evening municipal government held a video emergency flood control scheduling meeting, continue to emphasize “At 6:00 a.m. on the 20th, the meteorological department issued the second red warning of heavy rain, at this critical moment, the main person in charge of the municipal government still did not pay enough attention to the action is not decisive, the measures are not effective. 8:00 a.m. Although the main responsible person of the municipal government issued an emergency notice of the city's defense, but not in accordance with the red alert decisively take to stop assembly, classes,

shutdown measures, only proposed “the city's construction work in progress are suspended outdoor work, the education sector to suspend out-of-school training institutions”, only suggested that “the city does not involve the operation of the city's organs In addition, the media website released the above suggestions when people went to school and went to work normally, missing the opportunity to effectively avoid a large number of casualties.

At the same time, the grassroots lack of professionals and professional teams to respond. After the occurrence of natural disaster emergencies, the first time is often the local party committee and the government's main leadership to lead the rescue. The nature of natural disaster-type emergencies determines that secondary disasters may occur at any time, and the relevant staff of the party committee and government, although they have received emergency drills in the normal state, are not emergency rescue professionals, therefore, the rescue led by them is easy to cause threats to their personal safety.

4.3 Proliferation Period: Late Reporting and Concealment of the Number of Deaths and Disappearances Due to Disasters

As of September 30, 380 people died and disappeared in Zhengzhou due to the disaster, of which 139 people were concealed at different stages: 75 at the Zhengzhou city level, 49 at the county level, and 15 at the township (street) level.

First, not reported in accordance with the required statistics. The company's main business is to provide a comprehensive range of products and services to the public. It was not until the central leading comrades repeatedly requested, the provincial party committee office and the provincial government office issued two emergency notices on July 29 and August 1 that the statistics were reported, 322 people on July 30 and 339 on August 1.

Second, deliberately hindered the reporting of information on deaths and missing persons due to disasters. Zhengzhou City has a negative attitude towards the statistical reporting of the number of dead and missing due to disasters, not only did not take the initiative to deploy the survey and require timely reporting, but also violated the requirement to verify the identity of the people and other circumstances before reporting, using a variety of excuses to hinder the reporting of information. From July 25 to 29, a total of 116 people were concealed at the city and county levels; from August 18 to 19, during the visit of the central leadership to Henan, Zhengzhou City had 12 new deaths due to the disaster, but still did not report truthfully; after the investigation team moved in on August 20, the number of deaths and disappearances due to the disaster increased by 41 compared to the number announced on August 2, of which 23 people were concealed.

4.4 Recovery Period: Post-Event Prevention and Recovery Mechanism is Not Perfect

This rainstorm disaster concentrated on revealing many shortcomings in Zhengzhou's early warning and issuance capability, emergency command capability, rescue and relief capability, social mobilization capability, and insufficient scientific and technological support capability. In particular, the confusion between disaster weather forecasting and disaster warning, the division of warning issuing departments, the lack of targeted, effective and mandatory disaster prevention and avoidance measures, the lack of a unified authoritative and efficient warning issuing mechanism; warning and response linkage mechanism is not sound, who responds, how to respond is not clear, Zhengzhou in the case of five consecutive red warnings before starting the I response, the actual disaster has already occurred; emergency plans are not strong practicality. Most of them have serious consequences as the start condition, often start late, the actual effect is greatly reduced, and the response measures are not specific. To a certain extent, these problems reflect that the system of emergency management in China is not strong, has not yet established a set of systematic system and capacity system, the grass-roots foundation is particularly weak, it is still difficult to achieve scientific and efficient response, hierarchical and graded disposal, powerful and orderly response, the task of modernizing the emergency management system and capacity is still arduous and heavy.

However, the Zhengzhou government has not yet perfected the legal mechanism to guarantee, and at the same time lacks a lasting supervision and repair mechanism after the disaster, and has not

paid attention to the indirect losses after the disaster. The indirect losses of urban disasters mainly include two aspects: one is the indirect losses caused by direct losses from micro perspective, mainly refers to the indirect losses caused by the disaster resulting in the loss of enterprise and personal property and casualties, such as the destruction of plants caused by rain, which in turn leads to the production stoppage and profit loss of industrial enterprises; the other is the indirect losses from macroeconomic perspective, mainly includes The second is the indirect loss from the macroeconomic perspective, which mainly includes the indirect loss caused by “school, work and transportation stoppage”. The current risk management system in Zhengzhou tends to focus on and aims to reduce direct economic losses, ignoring the indirect losses of catastrophe risks. After a major rainstorm, the city management mainly counts the damage to grass, gardens, forestry, agriculture, roads and vehicles, but rarely involves indirect loss analysis.

5. Optimization of Emergency Management Strategy for Natural Disaster-Like Emergencies Based on Crisis Life Cycle Theory

At present, the main focus of emergency management for various types of emergencies is the response and disposal after the occurrence of the event, while the early warning and preparation for emergencies under normal conditions are neglected. According to the framework of crisis life cycle theory, the successful experience and improvement of emergency management of Zhengzhou “7.20” disaster are summarized as follows.^[8]

5.1 Gestation Period: Improve the Monitoring and Early Warning System, Improve the Security Awareness of the Whole Society

Monitoring and early warning refers to the process and behavior of the government to identify, analyze and judge various risks in order to effectively prevent and dispose of emergencies, and timely issue hazard warnings to relevant personnel and regions. At present, China's natural disaster monitoring and early warning system has taken initial shape, in meteorological disaster monitoring, has initially established a global weather monitoring network, including satellites, radar, global communication network; in marine disaster monitoring, China has initially formed a framework of marine disaster observation (monitoring) network system covering shore-based marine observation system, offshore marine observation system, oceanic and polar observation; in earthquake monitoring In terms of earthquake monitoring, China has initially established a nationwide national, provincial and municipal management of digital, networked earthquake monitoring network; in terms of geological disaster detection, China has built a geological disaster monitoring system consisting of monitoring systems, early warning platforms and systems and group testing and prevention systems. In order to ensure that possible risks can be detected at the latent stage of natural disaster-like emergencies and controlled and solved in advance, electronic information technology should be fully utilized to continuously improve the monitoring and early warning mechanism, collect information on factors that may lead to the occurrence of various natural disasters with scientific and advanced methods, provide accurate and reliable information sources for analyzing and predicting the occurrence of events, and on this basis, make scientific On this basis, scientific predictions are made to infer the strength and weakness of the event, so as to formulate precise response plans, thereby further improving monitoring and early warning capabilities.

On the basis of a perfect monitoring and early warning mechanism, the safety awareness of the whole society can be continuously improved, mainly through emergency drills. Emergency drills for natural disaster emergencies refer to the actual situation in the region, simulating the real situation when a natural disaster occurs to find a response method that meets the local reality, and guiding residents to escape and avoid danger in a scientific and correct way in practice. This method is more direct and effective than the more theoretical propaganda and education methods. Once a natural disaster-like emergency breaks out, not only should the party committees and governments at all levels react quickly to make decisions on response and rescue programs, but all people who may be affected by a natural disaster should react in the first place and launch self-help

and rescue within their capabilities. In practice, there is a feedback from party committees and government personnel that emergency drills do not cover enough breadth, mainly for the various departments involved in rescue, and the general public does not participate much, and even if they do, they just cope. This requires fundamentally stimulating the general public's safety awareness, constantly strengthening emergency drills in the normal state, and enhancing the professional ability of party committees and government personnel in emergency rescue and the general public's ability to save themselves and each other through emergency drills.

5.2 Outbreak Period: Emergency Rescue to Form a Joint Effort

Emergency rescue capacity by the emergency command capacity, emergency rescue capacity and material security capacity, the disposal phase requires these three aspects must form a synergy to ensure efficient and effective emergency rescue. Drawing on the successful experience of the natural geological disaster of the "5.8" mudslide in Taining, in terms of emergency command, after the outbreak of the disaster, the party committee and government should immediately report the disaster upward after receiving the disaster report, with the fastest speed in the party committee and government system to achieve transmission. From the central to local, party committees and government leaders at all levels should make instructions or visit the first scene of the rescue according to the actual situation of the disaster. In practice, the leadership's forward command can maximize the morale of rescue site personnel. In emergency rescue, from the central to grassroots, from the military to local, each professional rescue team and relevant departments personnel, should act in the shortest possible time, open all channels to the disaster area, rushed to the disaster area, according to the disaster situation, according to their respective division of labor, launched rescue. The rescue work should always adhere to the principle of people-oriented, on the one hand, the people still in danger to transfer, on the other hand, actively search and rescue people in distress, and strive to minimize the casualties of the people. In the face of a major disaster, the enthusiasm of the general public should also be actively mobilized, so that they actively participate in the rescue process. In terms of material security, material security includes rescue material security, rescue personnel material security and affected people material security three aspects. Therefore, the urgent need for rescue communications, electricity, fuel and other materials, rescue personnel need rescue equipment, food and other materials, as well as the affected people's living materials to give full protection, which is the guarantee of the smooth implementation of rescue work.

5.3 Proliferation Period: Implement Work Mechanisms At All Levels and Make Good Use of the Power of Media Opinion

Implement the main responsibility of the local party committee and government for flood control and disaster relief, the implementation of flood control and disaster relief party and government with the same responsibility, a double responsibility, refining the responsibilities of the main party committee and government at all levels, the person in charge and other members of the team of flood control and disaster relief, compacting the daily prevention and before, during and after the whole process of leadership responsibility. Improve the response plan and operation system of the flood control and drought control command, the key moment must adhere to the unified leadership command of the command, clear specific division of labor between team members to ensure the work and the degree of accuracy of reporting.

In the process of coping with this extraordinarily heavy rainfall, the media's propaganda and warning role is not in place, some concerns cause social panic, the dissemination of disaster warning information is not timely and adequate, the warning effect is not strong; some even dilute and mislead the masses to disaster alertness. It is necessary and urgent to cultivate emergency culture in the whole society and strengthen the training of leading cadres at all levels in disaster prevention, mitigation and relief, emergency management capabilities and popular science education for the masses. Therefore, public opinion should be guided and worked well during the proliferation period. After the occurrence of natural disasters, the panic among the people is easily passed to each other, therefore, it will breed various gossips, rumors and untrue rumors. Party committees and governments at all levels should take the initiative to release the latest progress of

rescue, and in response to questions from public opinion, professional answers, to curb the generation of gossip, rumors and false rumors from the source.

5.4 Recovery Period: Improve the Prevention and Rehabilitation System and Complete Post-Disaster Reconstruction

In the recovery phase of emergency management of natural disaster-like emergencies, one is to do a good job of summarizing the lessons learned and establish a sound post-event prevention and recovery mechanism. According to the theory of emergency management, reflect on the whole process of the incident in the light of the life cycle of the crisis, summarize the successful experience, find the shortcomings, summarize the successful experience, and share and publicize; for the rescue process, such as the lack of public safety awareness, material security is not in place and other aspects of the lack of timely research countermeasures to fill in the gaps and improve continuously; for the emergency management process, the work of For those who do not work well in the process of emergency management, they should be held accountable according to relevant laws and regulations. Improve the overall level of urban disaster prevention and mitigation. Integrate extreme weather response and natural disaster prevention and control into major urban development plans, projects and strategies, improve flood prevention and drainage standards and disaster prevention and protection standards for public service facilities such as hospitals and subways, and realize the city's disaster prevention and mitigation capacity in line with economic and social development.

The second is to do a good job in the aftermath of the disaster. Casualties caused by natural disasters are major losses for their families, therefore, family members of the casualties should be provided with corresponding psychological counseling and emotional guidance work, and at the same time, they should be provided with assistance according to the actual situation of the families of the casualties. In addition, if the casualties are caused by the work mistakes of the party committee, government or relevant departments, the families should be compensated according to the relevant policies.

Third, carry out restoration and reconstruction work. The restoration and reconstruction of the disaster site is a major issue concerning people's livelihood, therefore, funds should be actively raised through multiple channels, and in addition to the finance as the main source of funds, the PPP model can also be fully utilized to attract social funds to participate in the restoration and reconstruction.

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