

*The Public Evaluation Analysis for Natural Disaster Emergency Management of Local Government in Hainan Province**

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Abstract—Natural disasters happened frequently in Hainan province, which challenges the Hainan local government emergency management capacity focusing on natural disasters. The aim of this study was to assess natural disasters emergency management capacity of Hainan government. During the period of six months, we mainly adopted the approach of questionnaire and interview for evaluating the public evaluation of natural disaster emergency management in Hainan province. Through making analysis for the present status of emergency management, public satisfaction index (PSI), emergency level, and emergency fund transparency, emergency publicity etc. of natural disasters in Hainan province, the results we obtained demonstrate that the overall satisfaction degree of public evaluation for natural disaster emergency management in Hainan Province is not very high. We suggest that government should promote emergency management capacity from the perspective of early warning before disaster, construct an emergency management mechanism of natural disaster which is more adaptive to Hainan province's own need from the aspects of response level in disaster, production recovery after disaster, psychological intervention after disaster and so on, thus Government's image of 'serving people' is set up. This study will further promote the government emergency management capacity for natural disasters.

Keywords—Local government; natural disaster; emergency management, public evaluation

I. INTRODUCTION

China is one of the countries which have most serious natural disasters in the world. On August 30, 2007, the Standing Committee of the Tenth National People's Congress had passed the 'The emergency response law of the people's Republic of China' in the 29th meeting, which defined the emergency as that sudden events refer to that sudden breaking out cause or maybe cause serious social harm, the emergency disposal measures should be adopted to deal with them'. Sudden events could be divided into four categories including natural disasters, accidents disasters, public health events and social security incidents, which are divided into four levels, namely particularly significant, major, large and general events according to the factors such as the degree of social harm, sphere of influence and so on.

For local governments, whether it could adopt effective means to cope with natural disasters through combining with local actual situation or not is a great event facing the local governments at all levels[1]. There into, how to effectively carry out the emergency management of natural disasters ,establish the corresponding management mechanism, attaches great importance to the evaluation of the public ,take reasonable measures through combing with public evaluation data, establish a benign communication channels with affected public, as well as the establishment , maintenance and restoration of local government's benign image is particularly important.

In order to obtain further knowledge about the local government's evaluation for emergency management construction situation of natural disasters among social public, the writer has performed research analysis for Hainan province's governmental public evaluation of natural disaster's emergency management ,analyzed local government's active role in emergency management construction of natural disaster and existed problem, attempts to provide theoretical basis for emergency management of natural disaster in Hainan province.

II. INVESTIGATED SUBJECTS AND METHODS

During the period of six months (October 2012 - April 2013), this paper mainly adopted the approach of questionnaire and interview etc. for evaluating the public evaluation of natural disaster emergency management in Hainan province. Four representative cities in Hainan province were selectively chosen as investigation places, field study has been made according to local people's evaluation and views about emergency management of natural disaster .The informants are all permanent residents of Hainan province, the involved professional scope is extensive, there are teachers, farmers, students, doctors, government officials, self-employed and enterprise employees. The education background of informants covers bachelor degree, junior college, senior high school, junior high school, secondary specialized school, primary school education. The sample is representative. 253 questionnaires are issued this time, there are 248 effective questionnaires among them, and effective rate is 98.02%.

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III. INVESTIGATION RESULT AND ANALYSIS

A. Pre-disaster prevention stage

1) The consciousness of disaster prevention is weak, channel of information is blocked.

The survey data demonstrates that there are more than 40% respondents giving the answer of ‘insensibility’ when they are inquired about whether they know the received telephone or email of related information about natural disaster and monitoring institutions of major disaster in local area, only 22.% interviewee know the major local institutions of disaster monitoring , 8.% interviewee know the received telephone or email of related information about natural disaster. The data suggests that basic public awareness of disaster prevention and reduction needs to be strengthened in Hainan, public channel of obtaining natural disaster information is blocked to some extent. The government should perform better popularization for the common sense of preventing disasters and reducing damage at the same time. Thus in the course of government emergency management, it is necessary to pay attention to increase pre-disaster prevention work and enhance people’s safety awareness simultaneously.

2) Propaganda strength is not enough, few people know pre-arranged planning.

Hainan province had issued a document whose headline was ‘emergency rescue preplan of natural disaster in Hainan province’ in August of 2006. As the important component of natural disaster’s emergency management implemented by Hainan province’s local government deserves the energetic publicity. But we know from survey data that (Figure 1), there are only 17 % interviewee knowing this pre-arranged planning, as well as its content. However there are 40% who are completely unknown about that, the remainder know about it but not understand its content and significance. These data show production plan of Hainan province is worth being affirmed, but the publicity strength is not enough and it could not be popularized to the public.

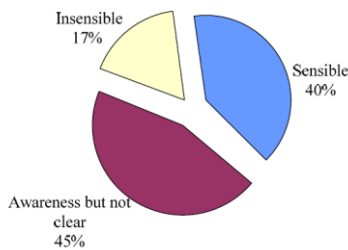


Fig. 1. Investigation on awareness of emergency pre-arranged plan

3) Early warning system is complete, maneuvering should be perfect.

According to public feedback about disaster warning system and daily simulation exercises, we know such practice is performed in a few area of Hainan province, but its frequency is not very high, the regular performance proportion of public feedback only accounts for 2.4%. In view of the Hainan province, the early warning and maneuver of natural disasters like typhoon, drought, strong convective weather is very necessary, however early warning with few maneuvering is not enough obviously.

B. Response phase in the disaster

1) The pre-arranged planning is in time, the loss should be reduced from the source.

The government has released all kinds of preparedness plan to promote these measures to the public aiming at the emergency circumstance before the arrival of natural disaster. The government of Hainan province is worthy of affirmation. Survey data shows (Figure 2) that there are about 73 % public expressing that when previous natural disasters occur, government often or occasionally release various prevention plan to public or start the relevant preparation system as leader. In the first time of disaster, they should pay attention to it and take corresponding action, and then the disastrous situation could be prevented not to be expanded from the source. But we also want to focus on the remaining 27 % of the public that government did not act accordingly, which is due to that this information does not get attention for public’s own reason. But on the other hand, the working aspect of government should be expanded further until all people could receive this information.

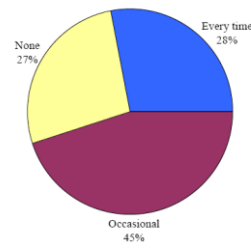


Fig. 2. Investigation on start situation of preparedness plan

2) Relief supplies are enough and could satisfy rescue needs

Relief goods should be in adequate preparation in the preparation stage before disaster, thus whether the distribution and use of relief supplies is proper or not should be stressed in the coping phase of disaster ,namely whether affected people enjoy these relief and rescue equipment ,and whether these equipment could satisfy people’s demand or not .While the investigation represents that over half of public think the emergency medical rescue equipment like ambulance at basic level and local area are able to cope with daily natural disasters, but there is still room for further improvement for dealing with big disaster, while such space need us to make efforts to improve. Although public resources could not satisfy every people’s requirement, a minute of hope will be added for the requirement of relief in the face of natural disaster.

3) Rescue level is general, self-rescue is worthy of affirmation

Rescue level is vital after disaster; the level of rescue could determine the final effect of relief to a certain extent[2]. Disaster relief requires the rescue level first. With regard to the problem of social volunteer relief workers and self-rescue or buddy aid, investigation (Figure 3) indicates both are almost the same on data, the public with high level is only a few, accounting for merely 5%, while 69% interviewee think these two kinds of rescue are able to cope with daily disasters. But it still needs to be improved in front of the disaster. This demonstrates that public knowledge about natural disaster has

been increased gradually, while the experience of coping with these disasters is in unceasing accumulation. But it has put forward higher requirement for the rescue level of government and organization.

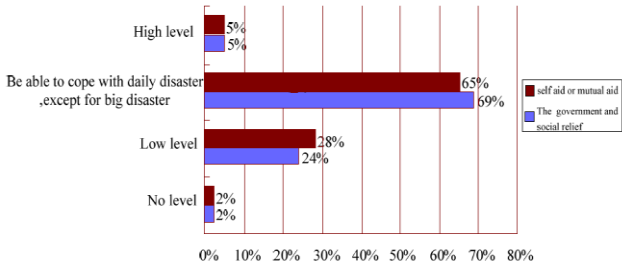


Fig. 3. Comparison on government and social rescue level

C. The recovery phase after disaster

1) Life improvement should be valued, while production recovery is ignored

The recovery phase after disaster is not only the end of disaster relief operations, but also to be the link of next disaster relief and prevention operation. Reconstruction work should be the first; the public life and production are affected by it to a certain extent after being damaged by natural disaster. Then government should play the role of reliever and provide some support of fund, goods and materials for production and life. Survey data shows that (Figure 4, 5), related department of Hainan province pay relatively more attention to life improvement, but sluggish on production. 50% interviewee thinks the speed of life improvement after disaster is very fast, while merely 13 % interviewee thinks it is slow. And only 18% interviewee think there is lots of fund when helping to recover production, fund, good and material.50% interviewee think the fund is not as much as we hope, the reminder thinks there is no fund or its quantity is not clear.

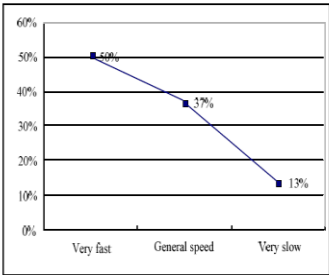


Fig. 4. Investigation on life improvement disaster

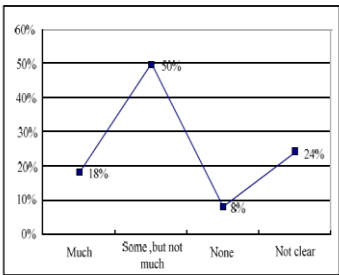


Fig. 5 Investigation on after recover production after disaster

2) Relief funds for disaster should be transparent, psychological guidance should be strengthened

Relief funds for disaster is one of the public expenditure, it should be in immediate public announcement after finishing disaster relief operations to make public have document to search, and more attention should be paid to disaster relief operations[3]. Psychological guidance has generally played very important role when confronting major natural disasters. For investigation (Figure 6), the government in Hainan province has certain transparency on the aspect of disaster

relief funds, 30% interviewee express that they have paid attention to the usage problem of disaster relief funds, but 52.% interviewee said they are not clear or did not pay close attention .For the aspect of psychological counseling intervention ,there is some shortage, only 4% interviewee expressed that they had psychological guidance after disaster, 70% of them said they are not clear or did not pay close attention, while the remaining 26% interviewee said there was no counseling psychology after disaster clearly and definitely. As an important link of post-disaster psychological recovery, psychological guidance should be strengthened further.

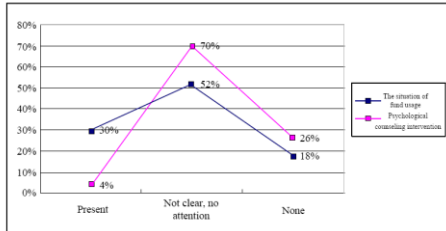


Fig. 6. Investigation on use of relief funds and psychological guidance after disaster

D. The public evaluation for local government's emergency management of natural disaster in Hainan province

1) Comprehensive evaluation

Survey data show that (Figure 7), the satisfaction degree of public evaluation for natural disaster's emergency management in Hainan province is not very high. The proportion of high satisfaction only accounts for 33%, while the remaining 67% are more or less disgruntled about the natural disaster's emergency management of local government. There are even 8% interviewee being very unsatisfied about it, which is worthy of government's much introspection.

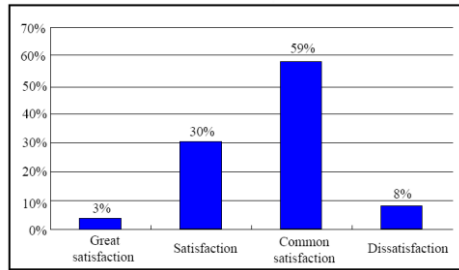


Fig. 7. Comprehensive evaluation for local government's emergency management of natural disaster in Hainan province

2) Respective evaluation

The evaluation for warning performance before disaster.The warning performance before disaster has been pointed out in the previous analysis of this article. Public sensibility about the warning in emergency management is not high; their attention is also not very high. Thus we are given a glimpse of the understanding degree of government's related policy, while it does not represents that the warning representation of government is unsatisfactory. There is more careless mistake about carrying out government's policy advocacy .As a whole, government's various measures aiming at warning before disaster is excellent, but more skill about

dissemination of public relations are required to be applied and better popularized.

a) *The evaluation of response speed in disaster* .Survey data show that(Figure 8) media’s response speed at the beginning of natural disaster is considered to be the fastest among interviewee, 65% interviewee think the response speed of media is sensitive. While there is no big difference between the response speed of community, citizen and government, they are 43% and 47% respectively. Through making comparison for the response speed of government, media, communities and citizens,it is obvious that the response speed of government remains to be strengthened, its response speed in the public mind is not as good as media. For government, 8% interviewee thinks its response is blunt, this is the taboo when the government is dealing with the crisis event of natural disaster, the response speed of coping with crisis event is vital [4].

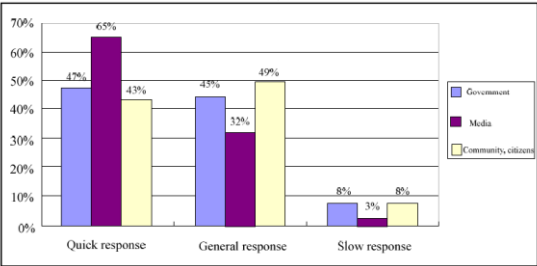


Fig. 8. Investigation on response speed of all organizations in disaster

b) *The evaluation of processing ability after disaster*.Survey data show that(Figure 9) public satisfaction degree of government’s coping with disaster is only at general level .The public who selects the general coping level account for 61% of the total investigated people,the proportion is relatively big. While it is worthy of high compliment that the interviewee who considers it to be poor coping ability only accounts for 12%, it demonstrates that although the processing capacity of government in Hainan province after-calamity needs improvement, its capacity can not be ignored.

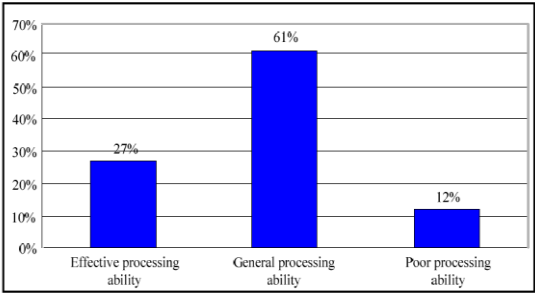


Fig. 9. Evaluation of processing ability after disaster

IV. THE CONSTRUCTING ADVICE OF NATURAL DISASTER’S EMERGENCY MANAGEMENT MECHANISM FOR LOCAL GOVERNMENT IN HAINAN PROVINCE

- On the perspective of warning before disaster, efforts in publicity and education should be strengthened, channel of information should be expanded, disaster prevention drill should be intensified, and disaster prevention and mitigation capabilities of government should be comprehensively enhanced.
- On the perspective of response in disaster, rescue level of natural disaster should be enhanced indeed, a real emergency response team of local natural disasters should be constructed studiously.
- On the perspective of restoration after a disaster, production recovery should be valued, post-disaster psychological intervention should be enhanced, public health work after a disaster should be well accomplished.
- On overall perspective, government should value more about their evaluation in public, surely construct better natural disaster’s emergency management mechanism which is more adaptive to the own need of Hainan province itself, and establish government’s image of ‘serving people’.

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