

Research on disaster management personnel improvement measure of local government

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Abstract

The purpose of this study is to examine the disaster management system of local governments by diagnosing the current status of disaster management experts in Korea, deriving problems and improvement measures, and looking at local governments' total labor cost system. The status and status of disaster management personnel were compared and analyzed to find ways to improve the local government's disaster management response system under the Framework Act on Disaster and Safety Management in Korea. Considering Korea's reality, because national security and disaster management exist together, we devised a plan to improve on-site response capabilities and seek solutions by deriving the problems of the currently operating security and safety-related organizations.

Keywords: Disaster, Local government, Disaster safety management, Professional, Disaster management response system

1. INTRODUCTION

Humanity has overcome various disasters and achieved the development of science and technology. Paradoxically, however, progressive technological advances have thus created a new kind of disaster that did not exist in the past. Examples include fires caused by electric short circuits, aircraft accidents, ship accidents, environmental pollution caused by industrial waste, and nuclear power plant accidents.

In addition, social anxiety factors such as various terrorist attacks are rapidly increasing due to a new type of social disaster. Recently, natural disasters such as abnormal climate phenomena and earthquakes are also increasing.

Recently, the types of disasters occurring in Korea are becoming more diverse and extensive. Social and natural disasters occurring everywhere in our daily lives make us realize the crisis.

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Since the last Ferry Sewol incident, the government has been making all-around policy efforts in the disaster and disaster areas. However, the function of coordinating disaster affairs is still insufficient. Fire disasters are endless, like the fires in logistics warehouses that have been repeated for years. Therefore, it is time to thoroughly prepare for establishing a safe society where people can live confidently from disaster accidents through the awareness that Korea is no longer a safe country.

In modern society, the risk of new disasters derived from the development of science and technology is increasing rapidly. Therefore, it is time to establish scientific and systematic disaster management to cope with the disaster environment. The reason is that a disaster can be a risk factor that can determine the existence of individuals, families, society, and the state itself, depending on the scope of the damage.

Moreover, recent disasters are not just direct damage but also cause continuous, complex, and overlapping damage in a chain. In particular, the frequency of disasters increases yearly, and the scale of disasters and the diversification of types of disasters are underway.

Recently, the frequency of natural disasters such as heat waves, torrential guerrilla rains, ultra-strong typhoons, and fine dust has been steadily increasing due to abnormal climate phenomena, including COVID-19. Moreover, in Korea, the aftermath of frequent earthquakes in the Pohang, Gyeongju, Ulsan, and Gangwon mountainous areas made residents feel considerable anxiety about safety. future research needs to be conducted more actively to improve disaster management than in the past.

Even considering the force majeure aspect of natural disasters, it should be an opportunity to reflect on the lifestyle and environment of all of us, including ourselves, from the perspective of how to look at the constant occurrence of social disasters. Disaster grows in the pattern of psychological state, insensitivity, indifference, and complacency that who want to turn a blind eye to as if it is not their job. Therefore, this is why a significant transformation of consciousness about disaster management and a transformative mind is required.

The primary role of the government in any form of state is to protect the lives and property of people. Therefore, when there is a risk of damaging the lives and property of the people from natural disasters, social disasters, and various disasters and safety accidents, the government is obligated and responsible for managing such disasters.

Disaster and safety management, one of the most basic responsibilities of the government, has been forgotten over time after an accident due to chronic safety insensitivity, and improvement measures for safety management have been repeated. However, poor safety management and insensitivity to safety have continued, which have been pointed out as causes of many accidents. Therefore, natural solutions are needed as social problems should no longer be neglected.

From this point of view, one of the systems introduced in earnest to strengthen disaster safety management capabilities at the national level was to promote the recruitment of professionals and strengthening of expertise through establishing disaster prevention safety series.

Article 2 of the Framework Act on Disaster and Safety Management stipulates that "the basic duty of the state and local governments is to prevent disasters and minimize damage caused by disasters." Therefore, the state and local governments should prepare the best measures for efficient disaster management related to the quality of life of the people. Regarding the disaster prevention safety sequence, we hope to diagnose the situation. We derive problems and improvement measures to contribute to the establishment of the disaster management response system of local governments.

As a necessary condition for developing the national disaster and safety management system, there is a need to establish a management system to enhance the expertise of disaster management personnel for each type and central and public institutions. Therefore, this study analyzes the current status of disaster safety

management personnel and factors.

Hinder the enhancement of the expertise of local governments. Suggests improvement measures to strengthen the expertise of disaster safety management personnel in the future.

2. Theoretical background

2.1 Disaster management personnel

The concept of disaster safety management workers has yet to be organized legally and academically. However, disaster and safety management workers are generally divided into initial responders and disaster managers).

Initial responders refer to personnel dispatched to actual disaster and accident sites to perform response activities such as search, rescue, emergency medical care and quarantine, environmental maintenance, facility emergency recovery, communication, relief, and material support. However, disaster managers are not field response personnel such as firefighting, emergency, and medical personnel. Nevertheless, most of them are public workers who predict and analyze the overall risks and vulnerabilities of the local community and oversee and coordinate prevention, preparation, response, and recovery activities.

Previous studies have focused on discussing the importance, field command system, and expertise of field response personnel such as fire fighting, medical care, and relief rather than disaster managers. However, this study intends to research 'disaster safety managers.' Usually, disaster safety managers include public officials working at central ministries such as local government disaster management departments, the Ministry of Public Administration and Security, and those in charge of disaster management departments of government public institutions.

3. Main body

3.1 Human resources status of disaster safety general department of essential local governments

In 2013, Korea newly established a disaster prevention safety series to improve the expertise of disaster safety management work and strengthen disaster management capabilities. However, until now, the number of public officials in the disaster prevention safety series has been increasing little by little every year, and disaster management improvement measures have been drafted and implemented.

Who is looking at the workforce status of the disaster safety general department? According to the type of essential local government, it was confirmed that there was no significant difference in human resources size except for essential local governments with large populations. In the case of large cities, there are an average of 37.07 disaster safety personnel, while 23.87 in small and medium-sized cities, 24.17 in urban and rural types, 27.57 in rural types, and 25.38 in restricted urban types are working at the Disaster and Safety Department. However, the size of the disaster safety department varies significantly from at least 13 to 90 people, and transportation and construction work may be included in the disaster safety department depending on the type of primary local government.

Table 1. Disaster and safety departments and personnel of essential local governments

Sortation	basic local government	Average	Minimum	Maximum
metropolitan	including Goyang City	37.07	18	71
a medium-sized city	includin DongHae sity 25	23.875	15	45
urban and rural type	includinGangneung City 36	24.17	16	46
rural type	including Goseong-gun 82	27.57	15	90
Restricted city type	including Gangnam-gun 69	25.38	13	58

Source: Ministry of Public Administration and Security (2021).

The Ministry of Public Administration and Security is also the general department of disaster management in Korea and the competent department for a government organization and garden management. Therefore, it is necessary to prepare and support measures to recruit disaster management experts to introduce the disaster prevention safety serial system in 2013.

However, the number of public officials in the disaster prevention safety series, introduced in earnest under the disaster management and professional recruitment system, gradually increases yearly, but it is not up to expectations.

The government has been steadily pushing for disaster safety policies to "implement a field-centered preemptive disaster management system" to "implement a safe society that protects public safety and life." However, despite the steady push to strengthen the expertise and capabilities of disaster safety management for the serial recruitment of disaster prevention safety, the actual performance at the site is poor compared to the work plan at the beginning of the year. This status quo is so slow that the purpose of introducing the system is overshadowed.

The local government's field reflects the central government's willingness to realize policies. Therefore, even at the central government level, the central government should fill the disaster prevention safety line. In addition, practical support measures are needed for local governments' direct recruitment of disaster prevention safety. Above all, gradual measures are required for support for disaster management organizations of local governments and their dedicated organizations.

3.2 Current status of disaster safety management and disaster prevention serial status of local governments

Looking at human resources, on average, 27.57 people worked in the disaster safety general department. There were many workers in the order of safety in Jeongseon-gun (90), safety disaster transportation in Gangjin-gun (56), safety construction in Wando-gun (51), safety construction in Hampyeong-gun (50), and safety construction in Jangseong-gun (49). In the case of the department with small human resources, it is in charges of disaster safety, such as the Gun-gun Safety Management Division (15 people), Ongjin-gun Disaster Safety Officer (15 people), Sunchang-gun Safety Disaster Division (16 people), and Ganghwa-gun Safety General Division of Ganghwa-gun Safety General Division (17). As such, the planned goals established in the work plan at the beginning of the year in response to the government's policy stance are showing many gaps in performance compared to the plan in the year-end performance.

From this point of view, overall diagnosis and countermeasures are needed for the disaster prevention safety series recruitment plan. On the other hand, public officials working in the current disaster prevention

safety series need continuous attention and support, such as raising pride in their jobs and strengthening their support measures are urgently needed.

They were looking at the current status of the disaster. Prevention safety series working in essential local governments, on average, many disaster prevention safety workers were employed by large metropolitan local governments. In the case of large cities, an average of 6.47 disaster prevention safety workers were employed. In the case of small and medium-sized cities, 3.42 were employed, 2.83 were urban and rural, 1.95 were employed, and 1.58 were restricted urban.

The number of public officials in the disaster safety department was similar except for the metropolitan type, but a study on how to improve public officials' disaster safety management capacity in the disaster safety series. The number of public officials in the metropolitan type with a relatively large population was more than twice that of other types of local governments.

In addition, we are comparing the number of disaster prevention safety workers in municipalities, such as small and medium-sized urban and urban-rural types, and local governments, such as rural types. It can be seen that there are more disaster prevention safety officials in municipal governments with relatively large populations. This suggests that as the population size of local governments increases, the size of disaster prevention safety workers may increase. In addition, considering that the number of disaster prevention safety workers in the restricted city type was the smallest, the scale of disaster prevention safety jobs in the primary local government might vary depending on the relationship with the upper local government.

Finally, looking at the disaster prevention safety personnel by water supply, there were 0 level 5 public officials in essential local governments and 2 level 6 public officials, indicating that most of them were concentrated in the lower levels 7, 8, and 9.

Table 2. Average disaster prevention safety sequence by primary local government type

Sortation	Grade 5	Grade6	Grade7	Grade8	Grade9	total
metropolitan	0	0	0.47	2.67	3.33	6.47
a medium-sized city	0	0.04	0.58	0.92	1.88	3.42
urban and rural type	0	0	0.42	1.11	1.31	2.83
rural type	0	0	0.18	0.88	0.89	1.95
Restricted city type	0	0.01	0.3	0.59	0.67	1.58

Source: Ministry of Public Administration and Security (2021).

According to the Ministry of Public Administration and Security (Disaster Management) work plan, established and implemented every year by the State Administration and Management Committee, the importance of "safety" is emphasized. However, the results of personnel management are sluggish.

Even after introducing the disaster and safety management system as a policy to strengthen disaster and safety management, the results of the central government's survey on the new recruitment and employment of the disaster safety system at the local government level show sluggish performance.

4. Problems and Improvement Measures due to Lack of Operational System of Disaster Management Specialists

The legal basis for the Disaster Stability Situation Room, which is the basis for disaster and safety

management of local governments, is insufficient. However, under the Framework Act on Disaster and Safety Management, 136 out of 226 local governments in Korea have implemented guidelines for operating the disaster safety situation room.

Although the disaster safety room of Korean essential local governments is a fundamental control tower function from the pre-disaster stage, such as detecting disaster signs and disseminating reception, it does not have a practical legal system.

As such, under the Disaster Safety Act, the legal basis for the local government's disaster safety rehabilitation room is insufficient. As a result, the Disaster and Safety Situation Room is the basis of local government disaster management.

It is supposed to exercise command as a control tower in the initial response to a crisis disaster. It is established to fulfill its responsibilities and duties to collect and disseminate local information. However, operational limitations also exist.

In addition, the operation system of dedicated and professional personnel by the disaster management organization of local governments is insufficient. In other words, since the disaster management organization of essential local governments is insufficient, the 'professional manpower' by the dedicated organization is inevitably insufficient.

Therefore, it is necessary to recruit disaster prevention safety series experts in disaster management, and measures to inspire pride and boost morale are required so that the disaster prevention safety series can become long-term positions.

Above all, the planned recruitment of disaster prevention safety series introduced to systematically accumulate and manage the expertise, experience, and experience of public officials in charge of disaster management and strengthen disaster management capabilities should be made.

Nevertheless, the administrative demand for disaster management by central ministries and local governments continues to increase. The importance of disaster management is undeniably emphasizing the weight and specificity of work. However, no new recruitment of disaster prevention safety lines has been made to the extent that the central government's policy implementation purpose is overshadowed.

Disaster is not an avoidable target, so the investment is needed in fostering human resources for future disaster management. No matter how advanced the technology and system are, there must be a person who is the operator. In other words, it is necessary to cultivate human resources to cope with future disasters that threaten the safety of our society. Therefore, as part of creating new jobs, a gradual review is required on ways to expand the training of disaster prevention safety personnel.

In particular, the most complicated thing in hiring and deploying disaster safety officials in Korea is the lack of experience in disaster safety, with only 31% of public officials belonging to the Ministry of Safety and Administration and only 59% of public officials belonging to the Safety Management Headquarters.

Unlike the policy goals of the disaster prevention safety serial system, most local governments do not have a dedicated department. They lack dedicated personnel due to the lack of disaster prevention safety serial recruitment and operation. In addition, in the case of general positions other than disaster prevention safety, the experience and expertise of disaster management will inevitably be insufficient as the disaster department tries to move quickly from the disaster department to another department through circular position practice.

As a result of this improvement, it is necessary to increase professional human resources to strengthen expertise and capabilities.

Due to the lack of expertise in disaster safety management whenever a disaster breaks out, essential local governments have many limitations in managing disaster management, even if there is an expansion of disaster management personnel, such as establishing a department dedicated to disaster safety.

This is because there is a standard for calculating labor costs, which is the standard for each local government, so the quota of local governments is operated within the range of the standard labor costs. Moon Jae In Although it was revised with a focus on the autonomy of the local government's organizational operation, even this has a limit to be operated at a low cost within the scope of the standard labor cost.

Therefore, unlike when the system was introduced, it should not cause the loss of driving power for various reasons, such as changes in conditions and regime change. In addition, the expansion of experts in disaster management should not be placed as the second priority as it is pushed out of priority in the actual personnel management of the existing local government. In other words, to strengthen the disaster capacity and manage human resources at Korea's front-line disaster sites, policy judgment and support for the direct recruitment of disaster prevention safety personnel of essential local governments are more required. Local governments also need to plan to recruit disaster management experts, establish a mid-to-long-term disaster prevention safety series, and actively respond to various acceptance measures such as new recruitment. In addition, it is necessary to consider the vertical circular position system's operation to reduce the gap between the central and local governments.

This will require local governments to understand reality and operate as a way to broaden their perspective and will help strengthen organic networks among local government officials. Finally, various measures, such as recruiting career competitors and existing employees for groups of disaster safety majors and experts, are needed regarding insufficient disaster management personnel.

5. Conclusions and suggestions

This study aimed to develop measures to improve on-site response capabilities considering that national security and disaster management coexist for public protection and to find a solution by deriving the problems of the currently-operated security and safety-related organizations.

First, the current status and status of disaster management personnel were examined to find ways to improve the local government's disaster management response system under the Framework Act on Disaster and Safety Management in Korea.

First of all, contrary to the purpose of the government's policy introduction, natural disasters continue to cause damage due to torrential rains, making them unpredictable and force majeure. So they are more prepared and responsive than preventive functions of disasters. In the case of human disasters, the number and damage of urban concentration, high-rise, and large-scale have not decreased, so safety programs for facility owners and residents should be prepared. However, since the introduction of the policy, the recruitment and deployment of disaster management personnel by local governments have not escaped.

Since there is inefficiency due to selfishness among departments due to the dualization of disaster management tasks, it is necessary to establish an efficient disaster management system through joint work of disaster-related departments. As a result, unlike the purpose of the government's policy introduction, the recruitment and deployment of disaster prevention safety series, which are dedicated personnel for disaster management of local governments, have not escaped insignificant levels since the policy was introduced.

When simply looking at this phenomenon on the surface, it raises the question of whether local governments have the will to manage disaster safety. Because of the nature of the work, disaster management workers should have experience and experience that contains the expertise, characteristics, and characteristics and experience of disaster management.

However, looking behind it, it can be said that it is in the limitations of administrative organizations and garden management of local governments. This limitation can be seen in the labor cost system, which is the

total amount operated by the local government's standard quota system and, based on this, administrative. To realize the central government's disaster safety management policy, financial support is needed to expand and operate the disaster safety series of local governments.

First, it is necessary to increase disaster prevention safety in series to strengthen the disaster response capabilities of local governments. To this end, the Framework Act on Disaster and Safety Management needs to revise the law, specifying "Matters related to the recruitment and operation of disaster safety personnel, such as disaster safety series." As a responsibility of the state and local governments are responsible for the lives of the people. Even if it is necessary to gradually review the case of the 2005 Implementation Guidelines for Social Welfare Officials in Local Governments, there are many restrictions on the actual promotion.

The current problem of recruiting essential human resources for disaster management in primary local governments is to secure national safety and strengthen local governments' expertise in disaster management. When a dedicated organization in disaster safety management is established, and the disaster prevention safety series is filled, expertise will be strengthened. However, prior to such expansion, it is necessary to establish a plan to deploy excellent public officials in the disaster management department and hire excellent private experts to accumulate experience in disaster management. Suggestions for follow-up studies are as follows.

At the national level, practical support policies are required for the recruitment and operation of disaster safety experts, such as acknowledging a "separate additional quota" for disaster prevention safety series dedicated to regional disaster and safety management.

Disaster management by local governments to protect the lives of residents from various disasters and maintain and manage a safe life should be carried out with disaster safety administration based on various experiences, experiences, and expertise. As previously discussed, it should be the deployment and operation of the existing organizational system and dedicated personnel through the recruitment of the disaster safety series, which is dedicated to disaster safety management.

In this way, disaster management of local governments to ensure the protection and safety of people from various disasters should be carried out with disaster safety administration based on various experiences, experiences, and expertise.

However, due to the frequent occurrence of natural, artificial, and social disasters, the need for an integrated organizational system for disaster safety management and the plan to build an infrastructure for disaster management professionals is relatively insufficient. Therefore, a gradual review will be needed to implement the purpose and policy objectives of the original disaster prevention safety series.

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