

# Research on the construction needs of Transportation Emergency Plan System in The New Era

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**Abstract.** This paper analyzes the characteristics and lessons of emergency response to major emergencies in China since the new century. In view of the development characteristics and development trend of transportation emergencies in the new era, it puts forward the specific needs of the construction of emergency plan system for transportation emergencies in China in the new era, standardizes the preparation process of the plan, Systematic and Strict Management of Emergency Plan Quality, establishes the concept of risk assessment, constructs a Stereoscopic emergency plan system, improves the exercise inspection mechanism, and improves the digital level of emergency plans. It provides reference for scientific construction and development of emergency plan system in transportation department.

**Keywords:** New era; emergency plan; transportation; needs

## 1. Introduction

General Secretary Xi Jinping pointed out: China is in a period of public security incidents prone, frequent and frequent, and the task of maintaining public security is important and arduous. We should strengthen the management of emergency plans, improve the emergency plan system, and implement all aspects of responsibility and measures. Transportation is an important basic, strategic and leading industry for national economic and social development. The scientificity, Global, prospective and operability of transportation emergency plan system are of great significance to ensure national economic development and people's life and property safety. Since the new century, China's transportation emergencies have been accompanied by multiple disasters and major events, and the number of incidents, the heavy damage caused by disasters and the difficulty in handling are rare in history. The grim facts show that transportation emergencies have changed from a non-normalized accidental event to a normalized frequent event. As a guiding document for emergency work, the construction of transportation emergency plan system has a long way to go, and the characteristics of construction demand need to be further studied.

## 2. Characteristics of Transportation Emergencies in the New Era

### 2.1 The Severity and Influence of Emergencies

Since the new century, China's sudden natural disasters have a variety of types, high frequency, frequent traffic accident disasters ( such as : 6.26 YiFeng highway traffic accidents, 8.1 XiHan highway traffic accidents, etc. ), a comprehensive impact on social and economic development, group ( such as : 3.1 KunMing railway station terrorist incidents, etc.), personal extremes (such as: 10.28 ChongQing bus crash events, etc.) traffic emergencies continue, resulting in the severity of the consequences and the scope of influence is increasingly difficult to control.

### 2.2 The complexity and uncertainty of emergencies are obvious

From the perspective of the disposal process of transportation emergencies, the complexity of all kinds of emergencies increases, and nature and man-made, offline and online, traditional security and non-traditional security factors, original social contradictions and new social contradictions are interrelated, intertwined and interacted. At the same time, the new security risks and various

potential hazards increase, and the 'Black Swan' and 'Grey Rhino' events continue to occur, making prevention and control more difficult.

On the other hand, the emergency itself is local, and the impact, threat and destruction generated by the spread of the network are radioactive, mobile, serious and national.

### 3. The Administrative Structure and System Structure of Transportation Emergency Plan

#### 3.1 The Administrative Structure of Transportation Emergency Plan

The transportation emergency plan is formulated by the competent departments of transportation at all levels and transportation enterprises and institutions as the main body. Its system architecture should meet the requirements of the national emergency plan system architecture, and the emergency plan of the transportation department should be consistent with the relevant emergency plans formulated by the people's government at the corresponding level and the higher transportation department. That is, the Ministry of Transportation should formulate the emergency plan of the transportation department according to the overall emergency plan of the national emergency and the relevant special emergency plan; provincial, municipal and county transportation departments should formulate emergency plans for transportation emergencies according to the relevant emergency plans formulated by local people's governments and higher transportation departments. At the same time, transportation enterprises and institutions should formulate their own transportation emergency plans according to the transportation emergency plans formulated by the transportation department of the local people's government at the corresponding level.

The system structure of transportation emergency plan is shown in Figure 1, which clearly shows the hierarchical relationship between transportation department emergency plan and transportation enterprise emergency plan.

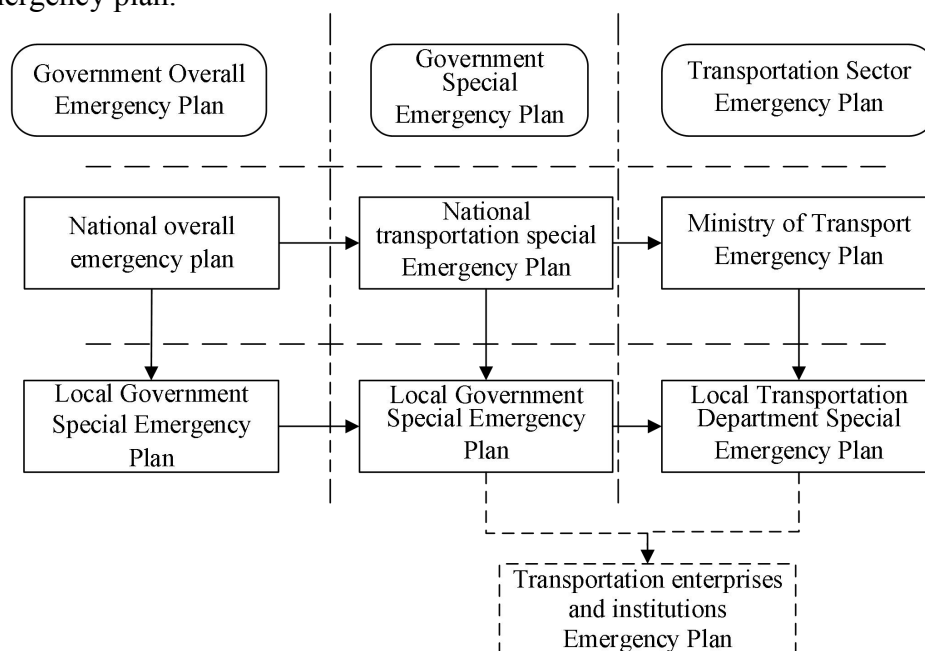


Figure 1 Architecture of Transportation Emergency Plan System

Generally, the levels of transport authorities and industry management agencies at all levels correspond to emergencies at all levels, as shown in table 1.

Table 1 List of Graded Responsive Subjects of Transportation Departments and Industry Management Institutions

Level of emergencies Main department of plan	Special emergencies (Grade I )	Bigger emergencies (Grade II )	Major emergencies (Grade III)	General emergencies (GradeIV)
Ministry of Communications	√			
Provincial transportation departments and industry management agencies	√	√		
Municipal transportation departments and industry management agencies	√	√	√	
County transportation authorities and industry management agencies	√	√	√	√

### 3.2 The Architecture of Transportation Emergency Plan

Transportation departments at all levels should formulate transportation emergency plan system according to their own actual situation. Departmental emergency plan system generally includes comprehensive emergency plan and special emergency plan. In order to improve the comprehensiveness and applicability of the emergency plan system, the emergency plan of transportation enterprises and institutions can be included in the special emergency plan system of transportation departments. In addition, the emergency plan system also includes the joint emergency plan prepared by the transportation department and similar and adjacent relevant departments.

Transportation emergency plan system architecture is shown in Figure 2.

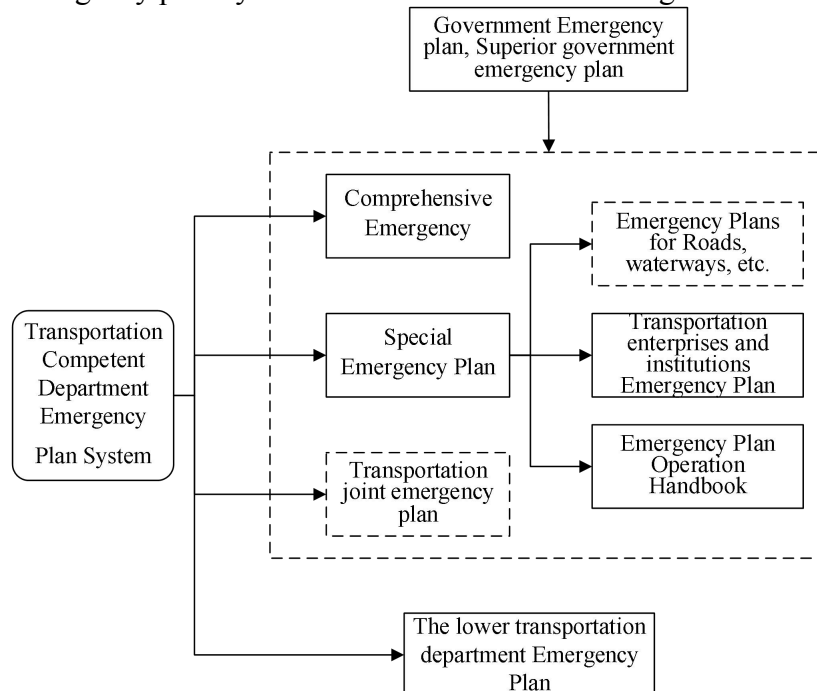


Figure 2 Architecture of Emergency Plan System for Transportation Emergency

## **4. Characteristics and trends of transport emergency response in the new era**

### **4.1 Characteristics of transportation emergency work in the new era**

In the new era, China 's transportation emergency work must start from ' new ', formulate new goals, embark on a new journey and meet new challenges. The characteristics of transportation emergency work are :

Under the guidance of the overall national security concept, we should integrate development and security, enhance awareness of hardship and achieve security.

(2) We will weave a comprehensive and three-dimensional public security network to build a community of social governance that everyone is responsible, everyone is responsible and everyone enjoys.

(3) Continue to put risk prevention in a prominent position, adhere to the bottom line of thinking, enhance the awareness of hardship, improve prevention and control capabilities, and strive to prevent and resolve major risks.

### **4.2 Development trend of transportation emergency work in the new era**

The transportation emergency work in the new era should continue to strengthen the optimization and coordination of national emergency capacity building, and build a unified leadership, consistent power and responsibility, authoritative and efficient national emergency capacity system. At the same time, it is necessary to resolutely implement the Belt and Road Initiative, build a community of shared future for mankind, and promote international exchanges and cooperation in disaster prevention, mitigation and relief.

## **5. Demand for the Construction of Transportation Emergency Plan System in the New Era**

The construction of emergency plan system is a long-term and complex systematic project, which requires not only the overall design and coordination of all parties, but also the focus and outline. The construction of emergency plan system should be standardized, risk analysis, emergency resource investigation and emergency capability assessment should be carried out in detail. It is necessary to highlight the actual combat attributes, refine the responsibilities and tasks of governments at all levels and relevant departments in emergency plans, and formulate emergency work manuals and event action plans combined with the actual situation ; it is necessary to highlight the dynamic management, establish the periodic evaluation system of emergency plans, and improve the timeliness of emergency plans. In the new era, the construction of transportation emergency plan system should pay attention to the following aspects :

### **5.1 Standardize the preparation process of emergency plan, Strict systematic management of emergency plan quality**

In recent years, our country simply requires the coordination and consistency of emergency plan system among departments in principle, and does not play its due effect. In this case, the transportation industry emergency plan system construction can refer to Europe and the United States developed countries plan system construction mode, the introduction of P-C-D-A quality management mode, from the perspective of standardization of the existing plan preparation process for more detailed provisions, and to ensure the consistency of the follow-up plan management.

In the process of emergency plan system construction, according to the P-D-C-A management method, it is divided into four stages : Plan ( Plan preparation ), Do ( Plan training and drill ), Check ( Plan effect evaluation ) and Act ( Cycle improvement measures ). The process is shown in Figure 3.

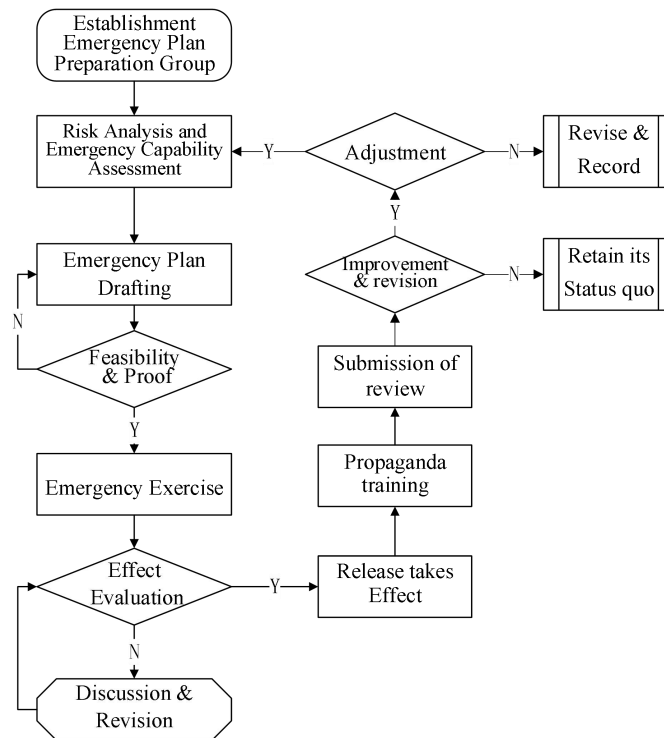


Figure 3 Quality Management Process of Transportation Emergency Plan

## 5.2 Establishing the concept of risk assessment, Building a three-dimensional emergency plan system

Risk assessment is the most important and basic work in the process of emergency plan formulation. The departments in charge of transportation at all levels, enterprises and institutions should establish the scientific concept of risk assessment. Through risk identification, analysis and evaluation, emergency plans should be prepared in a targeted manner while mastering the risk situation within the jurisdiction. In the initial stage of the preparation of the plan, a risk assessment working group was established to investigate and identify all types of risks in the jurisdiction, assess social risk vulnerability and coping ability, establish risk parameters and critical values that are in line with local reality, evaluate the risk level of various types of risks, and determine the key risk scenarios in the plan.

The construction of emergency plan system should adhere to the principle of differentiation and 'bottom line thinking', strengthen scientific positioning and planning, and construct a three-dimensional emergency plan system with clear hierarchy and complete types, so as to adapt to the characteristics of emergency management in different places and departments, and reduce and avoid the phenomenon of similar contents. Vertically, different levels of transportation departments, enterprises and institutions to prepare special plan content should have their own focus, national and provincial level emphasis on guidance, city and county level outstanding territorial management requirements ; horizontally, the transportation departments, enterprises and institutions should incorporate the protection of important target objects, the protection of major activities and the protection of emergency resources in their jurisdictions into the content of special emergency plans, and enrich the emergency plan system of the region and the department.

## 5.3 Improve the exercise inspection mechanism, Improve the digital level of emergency plans

Planned and purposeful emergency drills are of great significance to effectively prevent accidents, improve the success rate of emergency operations, reduce accident losses and hazards, timely detect and correct the defects of emergency management system, and improve emergency response capabilities. In the process of transportation emergency plan system construction, the

relevant units should establish and improve the emergency plan optimization mechanism, establish and standardize the system of regular emergency drills, and constantly adjust and optimize the existing plan system through emergency drills of key projects and experience summary. At the same time, we should pay attention to the preparation process of emergency drills, improve the fidelity and practicality, establish the evaluation mechanism of emergency drills, summarize and evaluate the defects of emergency drills and plans in time, and revise the existing emergency plans according to the evaluation results of drills.

The new era is the era of digital information technology. Making full use of digital technology can effectively improve the penetration rate of emergency plans and the efficiency of emergency response. Therefore, the construction of transportation emergency plan system should pay great attention to the digitization, information and network construction of emergency plan, transform the text plan into a digital emergency plan, and improve the digitization level of emergency plan. According to the working characteristics and usage habits of different groups, the mobile APP and computer network emergency platform system are scientifically developed, and the digital plan is modularization and processed to enhance the practicability of digital plan.

## 6. Conclusion

In the construction process of China's transportation emergency plan system in the new era, we must always adhere to the guidance of General Secretary Xi Jinping's socialism with Chinese characteristics in the new era, under the guidance of the overall national security concept, with the purpose of ensuring the safety and health of people's lives, with the goal of realizing the modernization of national governance system and governance ability, with the prevention and emergency preparedness of major disasters, catastrophes and crises as the main line, with strengthening the overall coordination and optimization of emergency management ability as the core, with modern science and technology and information technology as the support, with the rule of law as the guarantee, and the construction of people-oriented. The emergency plan system with unified command, expertise, responsiveness, up-down linkage and integration of peace and war is composed of all kinds of disasters, all processes, all directions, the whole society and globalization.

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