



交通运输部规划研究院  
Transport Planning and Research Institute  
Ministry of Transport

China-U. S. Transportation Forum  
Disaster Assistance Workshop

Principles of Chinese transportation emergency  
supplies reserve

Transport Planning and Research Institute Ministry of Transport

2012.08

# Table of contents

- 1 Status of emergency supplies reserve**
- 2 Emergency needs and influencing factors**
- 3 Basic principles of material reserve**
- 4 Construction and management model**

# Status of emergency supplies reserve

## 1. Status of emergency supplies reserve

# Transportation emergency supplies reserve system

Transportation emergency supplies reserve system includes highway and waterway

*From the government's point of view*

## Highway

National regional reserve center

Provincial emergency supplies reserve center

Municipal emergency supplies reserve center

County-level emergency supplies reserve center

## Waterway

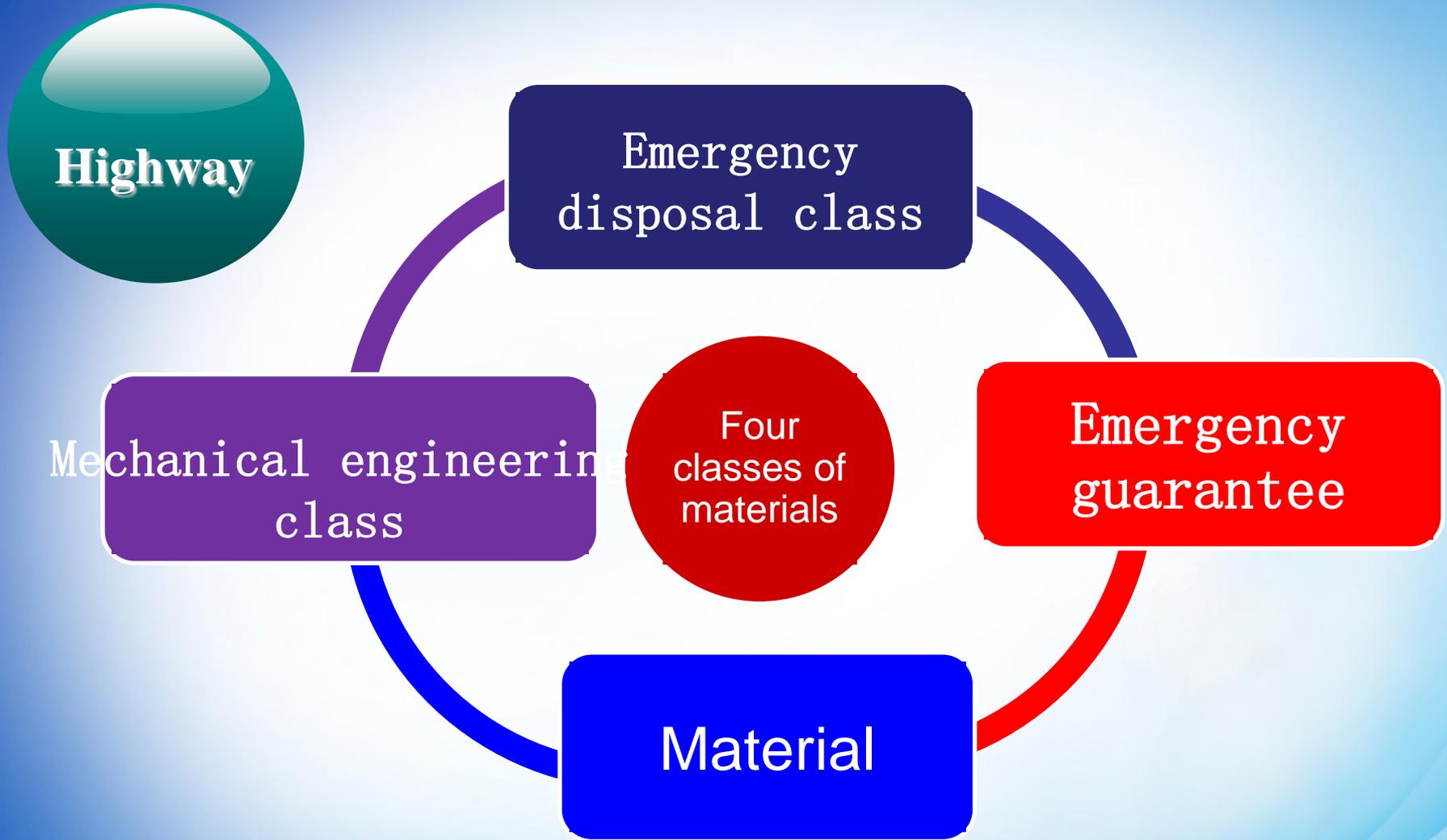
Large oil spill equipment library

Medium-sized oil spill equipment library

Small oil spill equipment library

Oil spill equipment set points

# Highway emergency supplies reserve system



# Waterway emergency supplies reserve system



- Large equipment libraries: 3
- Medium-sized equipment libraries: 5
- Small equipment libraries: 10
- Device points: 10

# Variety of reserve ways

## Physical reserves

Store the frequently used necessary emergency supplies and equipment

## Agreement reserves

Sign reserve contracts with large-scale enterprises working on transportation construction and maintenance, and use agreement reserves

## Capacity reserves

Determine enterprises of a certain production capacity as reserves enterprises which are required to retain some surplus capacity and can rapidly improve production capacity for emergency in a short time

The combinations of physical reserves, agreement reserves and production capacity reserves lead to a variety of reserve ways.

# Emergency needs and influencing factors

## 2. Emergency needs and influencing factors

# Demand of emergency disposal for emergency supplies



## **Quick response**

Require of emergency supplies reasonable coverage and arrival at the site of the incident timely



## **Professional equipment**

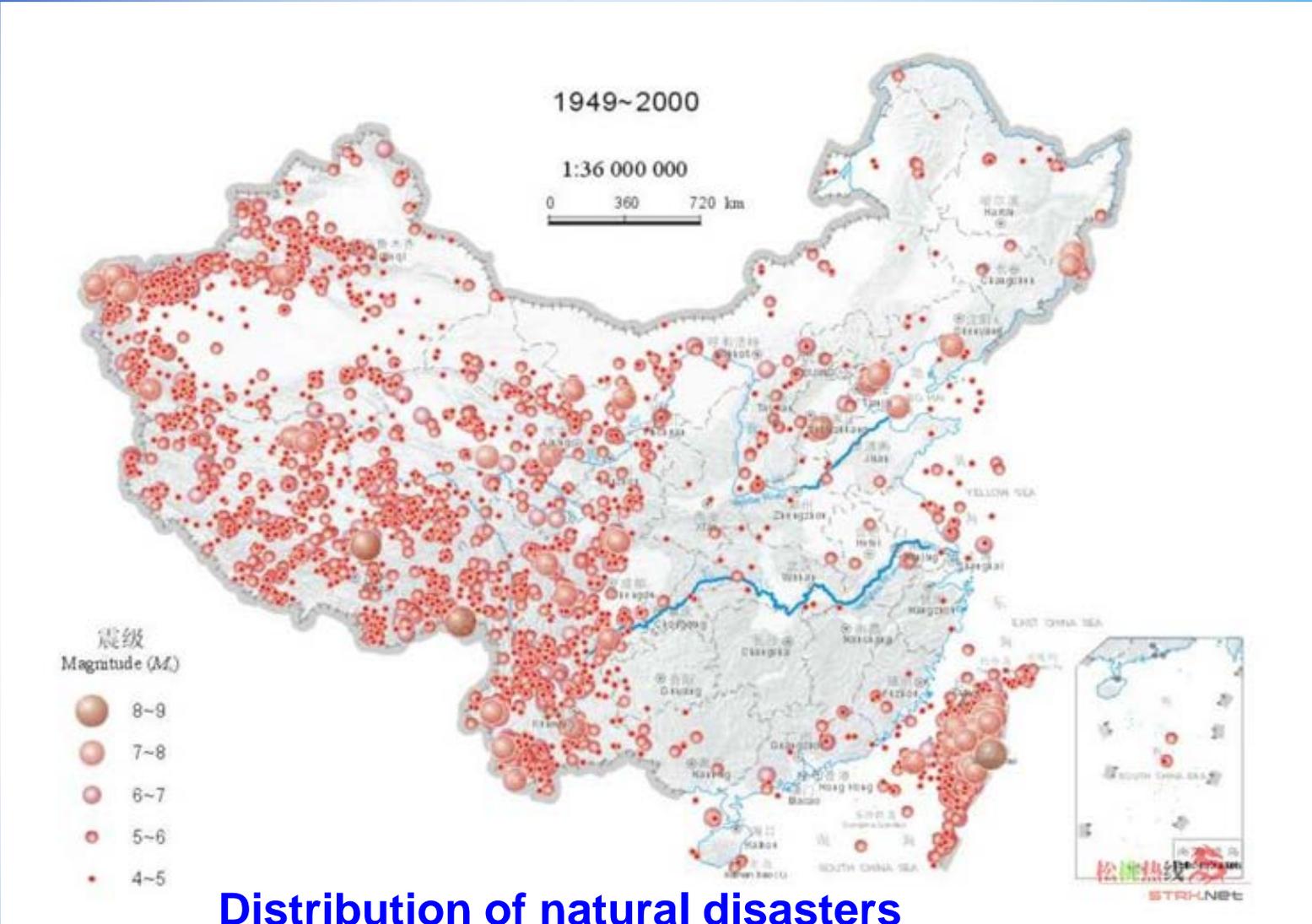
Require the matching of emergency supplies reserves with the rules and characteristics of emergencies in the region and reserve a certain number of large-scale specialized mechanical equipment



## **Sufficient capacity**

Require the reserve materials meet the emergency needs of unexpected major contingencies in type, quantity and technical specifications

# Influencing factors of emergency supplies reserve



Distribution of natural disasters

# Influencing factors of emergency supplies reserve

滑坡灾害分布图



Distribution diagram of landslide disasters

泥石流灾害分布图

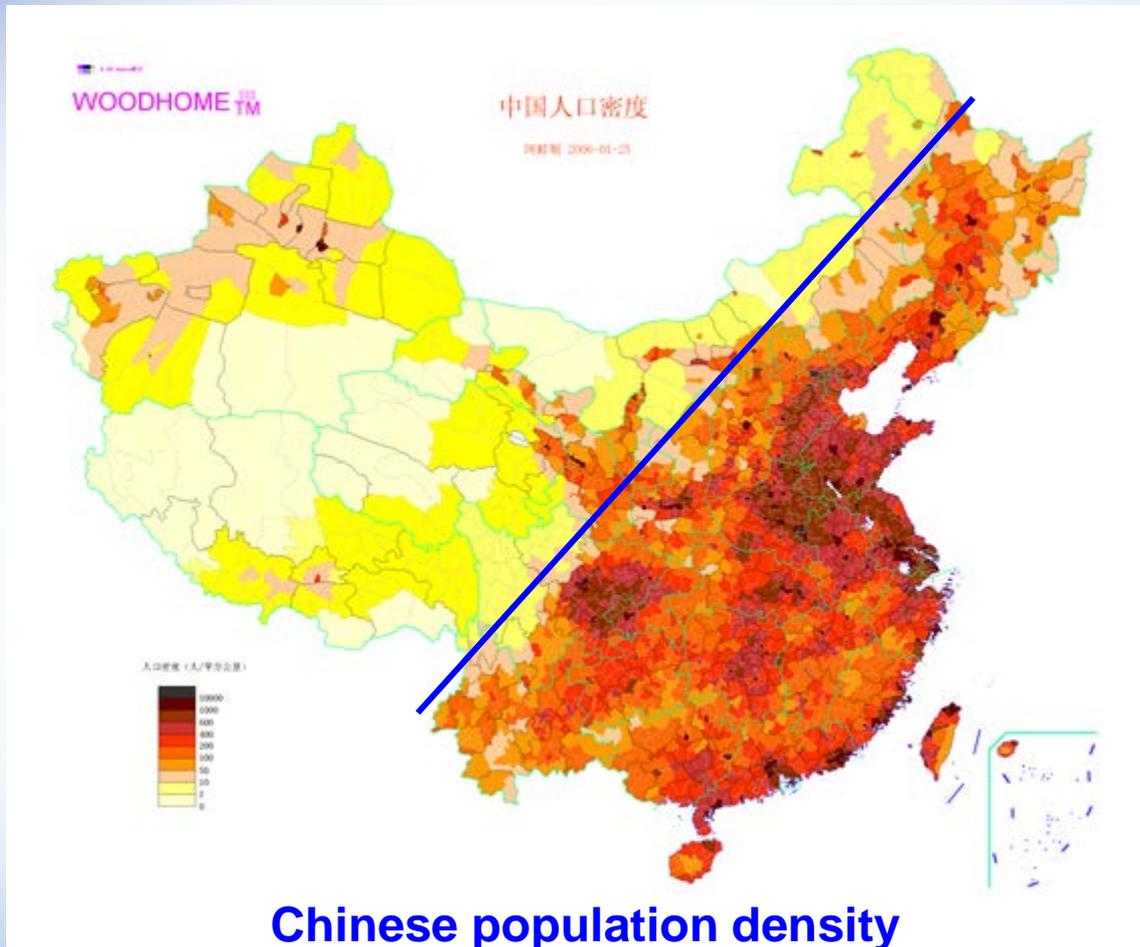


Distribution diagram of debris flow disasters

Distribution of natural disasters

# Influencing factors of emergency supplies reserve

## Population distribution



# Influencing factors of emergency supplies reserve

## Layout situation of road network and port

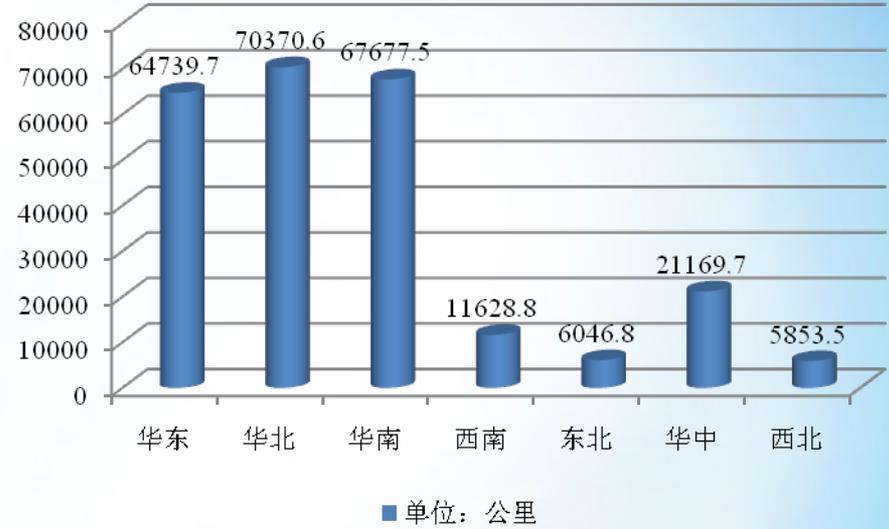
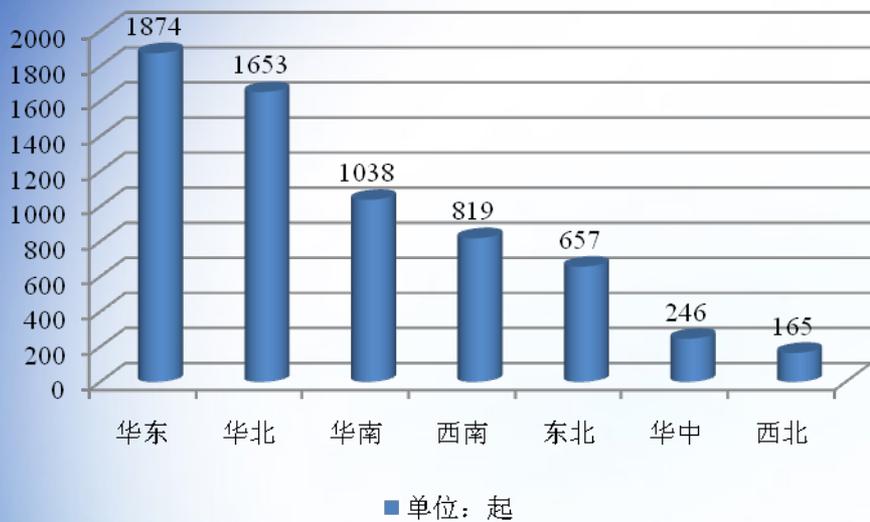


National Highway Network Plan



National coastal port layout

# Influencing factors of emergency supplies reserve



## Distributions of regional highway traffic blocking events and accumulated blocking mileage

# Influencing factors of emergency supplies reserve



# Influencing factors of emergency supplies reserve

## Distribution of emergency rescue system of other departments

- Deployment of 10 national regional protection centers in Northeast, North China, South China, East China, Central China, Southwest, Northwest and Qinghai-Tibet
- Not considering the arrival time, but mainly responding to major disasters
- According to the characteristics of the layout of disasters such as rain and snow, geology and sand damages

Successful building of emergency relief supplies reserve system and construction of 10 central relief materials reserve points in Shenyang, Harbin, Tianjin, Zhengzhou, Hefei, Wuhan, Changsha, Nanning, Chengdu and Xi'an



# Basic principles of material reserve

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## 3. Basic principles of material reserve

# Basic principles of material reserve

**Flat combined with urgent and give priority to urgent**

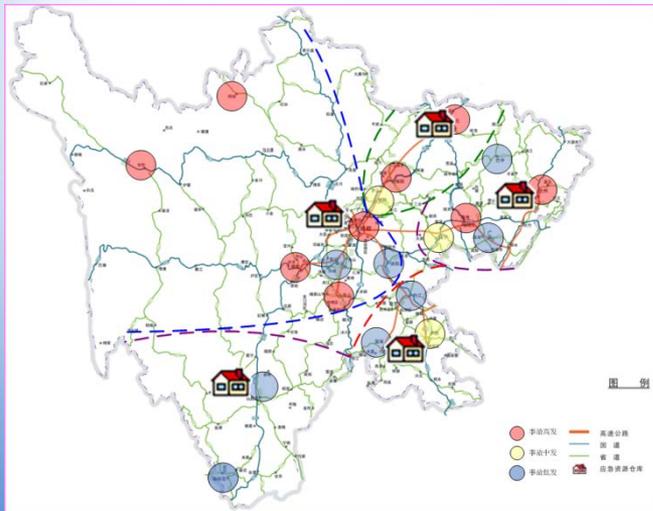
**Supplies reserves adhere to the combination of prevention and emergency, normal and abnormal states. Specialized mechanical facilities can carry out manufacturing & managing activities at ordinary times , but primarily operate for abnormal situations so as to ensure the efficiency of emergency disposal.**



# Basic principles of material reserve

## Demand accommodation and rational distribution

The location requirements of emergency material reserves, the scale of construction and the number and types of reserve equipment should be based on actual demand for the materials and equipment in the process of emergency disposal, considering influencing factors such as arrival time of emergency disposal and coverage, and material reserves such as the armed police, the transportation and war preparedness.



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# Basic principles of material reserve

## Appropriate scale and scientific management

Combining the type and distribution of emergencies within the service scope and based on professional emergency supplies and equipment reserve, determine the scale of construction reasonably and establish a sound emergency supplies reserve protection system.



# Basic principles of material reserve

## Unified planning and distribution implementation

**On the basis of unified planning, determine the sequence of implementation reasonably, carry the project into execution step by step, gradually improve and dynamically supplement and update in the purchase of materials and equipment.**



# Construction and management model

## 4. Construction and management model

# Construction model

## Transport department

**The Ministry of Transport is responsible for the purchase of specialized equipment and emergency supplies**

Mainly include major highway reopened machinery, professional rescue equipment, emergency communication equipment, etc.

## Local province

**The provinces where reserve centers are located are responsible for land acquisition of material reserve centers and construction of infrastructure and supporting facilities**

Can take advantage of existing transport war material storage library, materials station, highway maintenance center and so on

# The operation management mode



## ● Administrative agencies

Storage of forms of management, master plan of reserve centers by the Ministry of Transport, act as storage units of the provincial competent departments for communications where the reserve centers are located



## ● Materials call

Reserve Centers implement duty system, take charge of emergency preparedness

Call emergency supplies in accordance with the nearby and convenient principles

The provincial departments of national supplies need to apply to the Ministry of Transport



## ● Compensation for expropriation

Free use of national material reserves is available for I level emergencies

Principle of "Who use , who compensate" is available for other levels



**谢谢！**

Thanks for you attention!