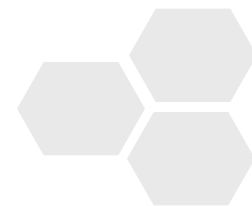


Work of Beijing transportation industry on preventing and responding to torrential rain


Beijing Municipal Commission of Transport
October 2013





Main contents

Construction of Beijing transportation industry
on emergency system

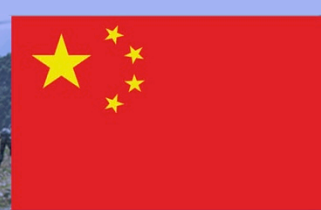


Responses to “7.21” extraordinary serious
natural disaster



Countermeasures to torrential rain





**Construction of Beijing transportation industry
on emergency system**

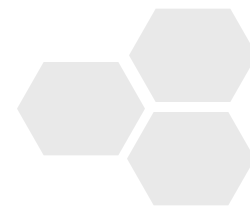
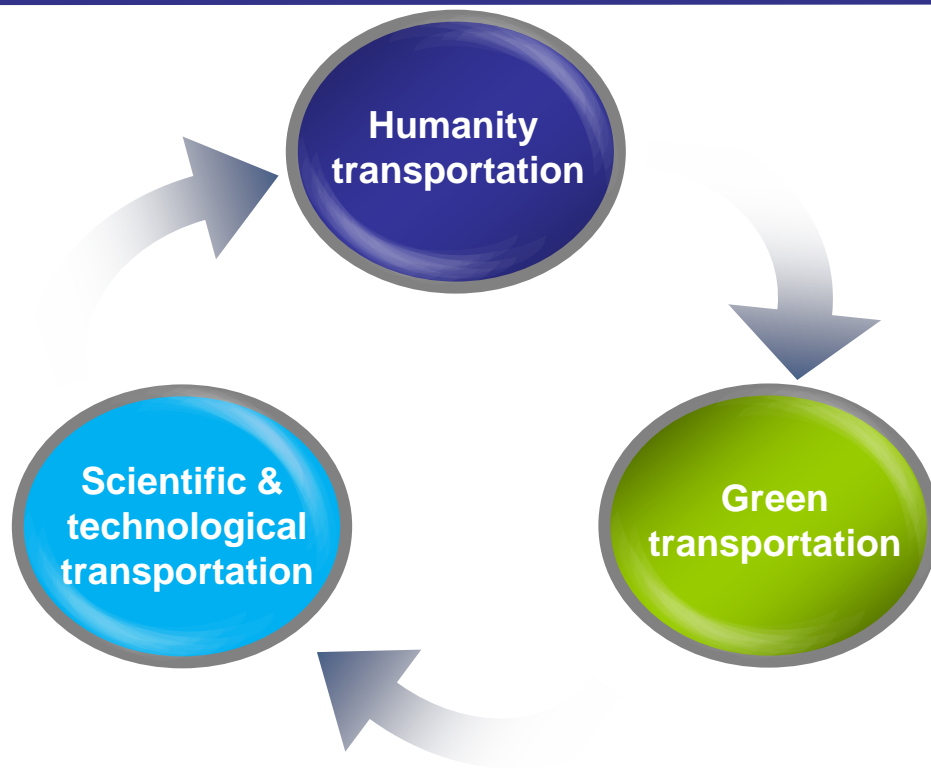
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natural disaster**

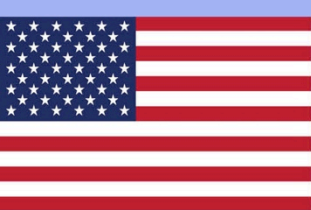
Countermeasures to torrential rain





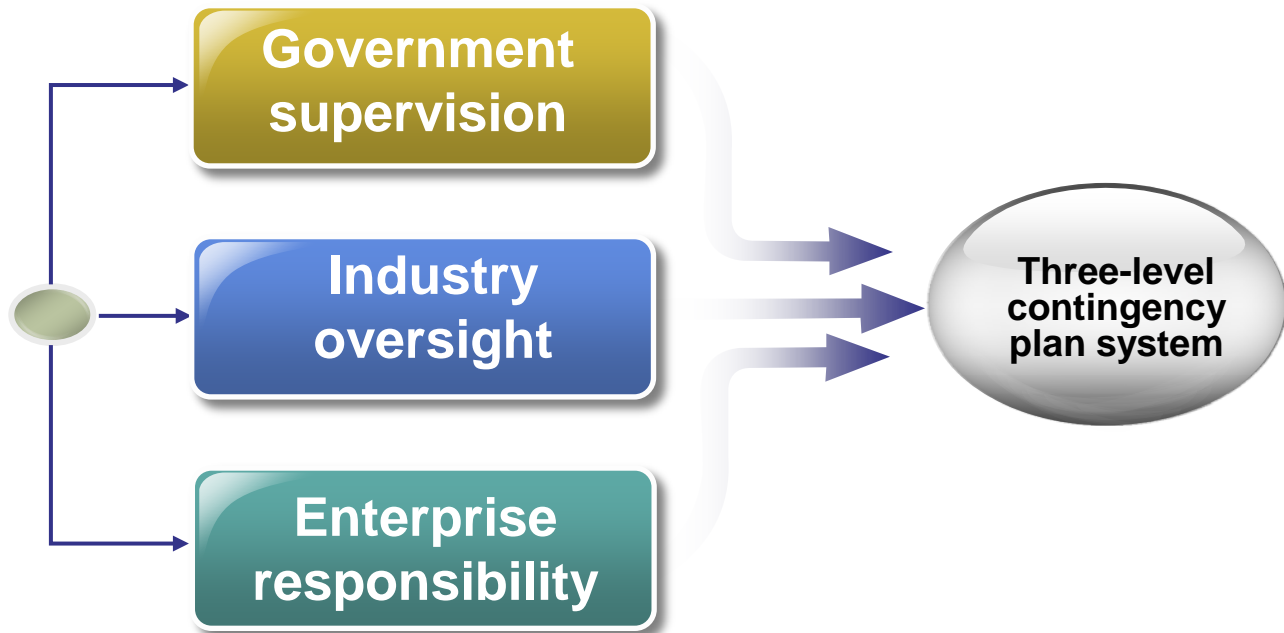
Construction of Beijing transportation industry on emergency system





Construction of Beijing transportation industry on emergency system

I. Contingency plan system is gradually improved





Construction of Beijing transportation industry on emergency system

I. Contingency plan system is gradually improved

6 comprehensive contingency plans at municipal level

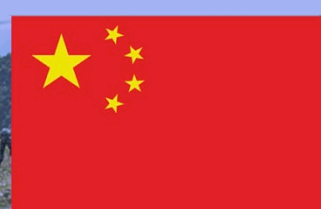
50 contingency plans at industrial level

126 contingency plans at enterprise level

182

A transportation contingency plan system of “horizontal to edge and vertical to end” which covers the whole transportation industry, all relevant departments, and all production and management units has been basically established.

In 2010, *Measures for the Administration of Contingency Plan for Emergency and Guide for the Formulation Framework of Contingency Plan for Emergency* were formulated and promulgated.



Construction of Beijing transportation industry on emergency system

II. The emergency system construction becomes gradually mature



In 2006, the municipal command center of transportation safety for emergency which included 41 member units was established. The municipal command center of transportation safety for emergency is one of the 14 special command centers in the whole city. Its establishment makes the safety emergency work of the transportation industry integrate into the municipal emergency work in a better way and realizes the multi-industry high-efficient linkage of emergency work for transportation safety.





Construction of Beijing transportation industry on emergency system

III. The emergency system becomes gradually sound

Emergency mechanism

Coordination mechanism of Internal emergency command

- Centered on municipal command center of transportation safety for emergency;
- Focused on oversight departments of three industries and the enterprise emergency institutions affiliated by various cities;
- Regarded transportation management departments of various districts and counties as the backbone network;

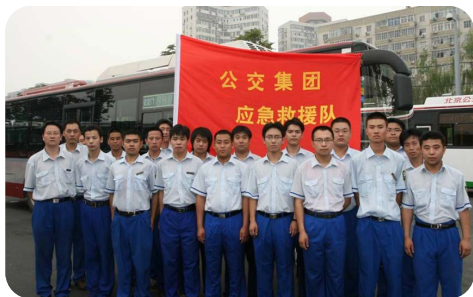
Coordination mechanism of external emergency command

A mechanism which coordinated with relevant departments such as weather department, earthquake department, public security department, and traffic management department in forecasting, pre-alarmed, preventing, and rescuing public disasters was established.

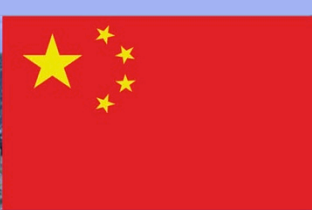


Construction of Beijing transportation industry on emergency system

IV. Emergency guarantee capacity has been substantially improved



- Organized 104 emergency rescue teams, provided with over 600 sets of rescue equipment, configured with over 50 duty points;
- Integrated about 6,000 video monitoring images of such fields as the public transit, metro, inter-provincial passenger transportation, civil aviation, and mobile command vehicle, realized the coordination and linkage among all units.



**Construction of Beijing transportation industry
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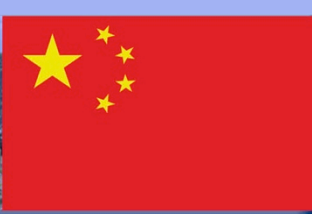




Responses to “7.21” extraordinary serious natural disaster

Date	July 21, 2012
Warning Level	Orange torrential rain warning
Characteristics	The rainfall was rare in history. The average rainfall of the whole city was 170mm and the average rainfall of the urban area was 215mm . It is the largest rainfall process since 61 years ago.
	The rainfall intensity of local areas was rarely-seen in history. The rainfall of Hebei Town of Fangshan District was 460mm which was the largest since near 500 years ago . The rainfall of Moshikou of Shijingshan District was 328mm which was the largest since 100 years ago . The rainfall of the mountain areas even reached to 514mm .
Traffic impact	206 road lines were blocked and cut off; 110 parts of the urban roads collapsed. 2,322 parts totaling 100,000m² of rain-caused damage and diseases, serious stagnant water to several concave overpass areas.





Responses to “7.21” extraordinary serious natural disaster

I. Through Scientific dispatching, the normal operation transportation was guaranteed.

The ground public transportation was guaranteed.

- ◆ Increase vehicles and shuttle buses and prolonged the service time;
- ◆ Dispatched shuttle buses and adopted detour measure according to the situations of accumulated water;
- ◆ Arranged professional personnel to key transportation lines which pass through low altitude bridges and low-lying areas.





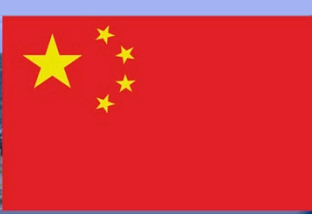
Responses to “7.21” extraordinary serious natural disaster

I. Through Scientific dispatching, the normal operation of urban transportation was guaranteed.

Rail transit transportation was well organized

- ◆ Pumps, sandbags, and rain baffles were provided at the metro entrance and exit and in stations; simple rain covers were equipped;
- ◆ Personnel concerning station affairs and security personnel were dispatched;
- ◆ Increased the transportation capacity and increase temporary trains;
- ◆ Service time of airport metro line was prolonged by 1 hour and 20 minutes.





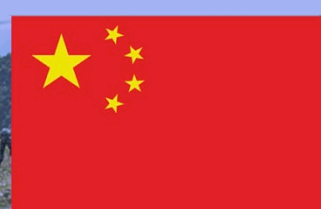
Responses to “7.21” extraordinary serious natural disaster

I. Through Scientific dispatching, the normal operation of urban transportation was guaranteed.

Dispatching of taxi transport capacity was strengthened

- ◆ **Targeting the flight delay of Beijing Capital International Airport, vehicle demand information concerning the airport taxi was published at regular time;**
- ◆ **The taxi enterprises dispatched taxis to reinforce the transportation;**
- ◆ **60 coaches were allocated to support Beijing Capital International Airport and over 3,000 people were transported free of charge.**



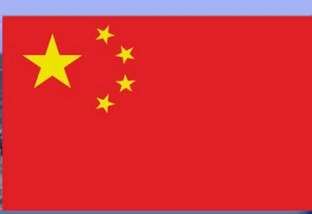


Responses to “7.21” extraordinary serious natural disaster

II. Through continuous fight against the disaster, lifeline of city operation was unblocked with great efforts.

- ◆ Comprehensively investigated the damage situations of the highway facilities;
- ◆ Coped with the dangers and unblocked the roads at first, so as to realize that the emergency rescue personnel, materials, and equipment could be transported in the disaster areas and the residents could come out;
- ◆ Emergency rescue forces of the whole city were assembled to the districts and counties with serious disaster situations such as Fangshan District and Pinggu District. The rescue forces conducted emergency rescue and relief work with all great efforts and closely cooperated with the local governments to conduct continuous fight day and night.



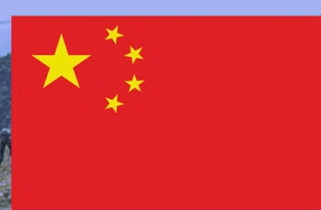
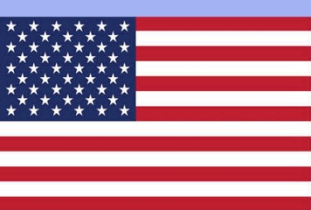


Responses to “7.21” extraordinary serious natural disaster

III. The departments coordinated with each other and strived to fight against the flood and emergencies.

Immediately launched the contingency plan, formed the site command center of emergency rescue and relief work, established seven working teams including search and rescue team, water pumping team, cleaning team, security traffic guarantee team, publicity and report team, restoration team, and logistics team, so as to conduct continuous emergency rescue and relief work.

It coordinated with all related units and dispatched over 7,000 emergency rescue personnel, of which over 4,000 people were officers and soldiers of armed police forces and public security & fire-fighting forces. It dispatched over 500 sets of various kinds of mechanical equipment, pumped and drained 230,000m³ of accumulated water, dredged 3,000m³ of sludge, and restored 1,000m³ of collapsed roads and side slopes.



**Construction of Beijing transportation industry
on emergency system**

**Responses to “7.21” extraordinary serious
natural disaster**

Countermeasures to torrential rain





Methods and measures adopted by Beijing transportation industry against torrential rain

I. Provided security assurance tightly around the roads and bridges to ensure citizen's safety to move around.

Install adjusting valves and water fenders to ensure the normal operation of the vehicles;

Strengthened the function of dewatering; carried forward the upgrading and reconstruction of the Pumping station in the concave overpass;

Strengthen the setting up of the warnings; carried forward the management of the geological disaster in the mountain road

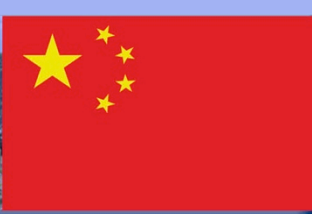


Methods and measures adopted by Beijing transportation industry against torrential rain

I. Provided security assurance tightly around the roads and bridges to ensure citizen's safety to move around.


Install adjusting valves and water fenders to ensure the normal operation of the vehicles;

- we install adjusting valves in the area of the recessed overpass. Once the water depth reached the warning value of 27cm, we will quickly set up warning signs, and cooperate with the traffic administration department to open the adjusting valves to guide the vehicles.
- At the same time, set up water fenders in the area of the concave overpass; established tripartite consultation mechanism among water sector, traffic administration and road administration department, and let them, based on the actual situation, to decide whether or not to start the water fenders.

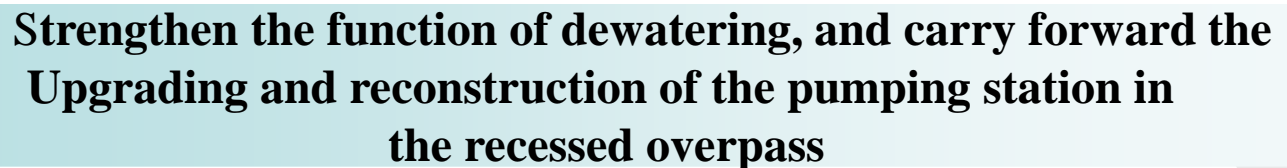


Methods and measures adopted by Beijing transportation industry against torrential rain

I. Provided security assurance tightly around the roads and bridges to ensure citizen's safety to move around.



Improved the drainage standard of the pumping station in accordance with the recurrence interval of every **five years**; as for the parts which can't be solved temporarily, we take such targeted and temporary disposal measures as adding mobile pumping stations and drainage units to ensure the safety of road dewatering in flood season. At the same time, as for the area of the concave overpass area which is easy to accumulate water, we add such facilities as night lighting, electronic warning, water level monitoring, and etc.



Strengthen the function of dewatering, and carry forward the Upgrading and reconstruction of the pumping station in the recessed overpass



Methods and measures adopted by Beijing transportation industry against torrential rain

I. Provided security assurance tightly around the roads and bridges to ensure citizen's safety to move around.

As for 219 segments of country, city and county roads, and 44 segments of expressways where geological disasters are prone to take place, and 260 segments of rural roads where collapse is prone to take place, we all have taken such measures as setting up warning signs and publishing online etc. for prevention and protection. Meanwhile, we send specialized people to keep watching over.

➔ Strengthen the setting up of the warnings and carry forward the Management of the geological disaster in the mountain road



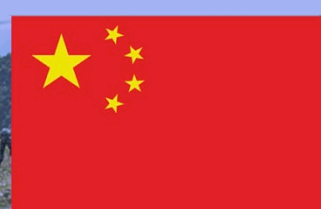
Methods and measures adopted by Beijing transportation industry against torrential rain

II. Provide security assurance tightly around public Transportation to ensure citizen's safety to move around

Strengthen the rail transit passenger transport organization in rainy days

Rail transit operation industry, according to the early warning of rainfall regime, will make an arrangement of the vehicle scheduling in rainy days, start the flood prevention and emergency plan

- ◆ Arranged rescue personnel to strengthen the inspection tour;
- ◆ Put notice boards indicating “Caution Wet Floor” at the entrance and exit of the station, and put anti-skid mats at the entrance, exit, and passageways of the station;
- ◆ When rainfall causes the passengers to be held up in the station, the rail transit station staff will give out disposable raincoats to passengers;
- ◆ When the rain water flows backward into the rail transit station, we strengthened the operation of suction and drainage, shut down the entrances and exits, took the measure that the trains go through without a stop, and released information in advance.



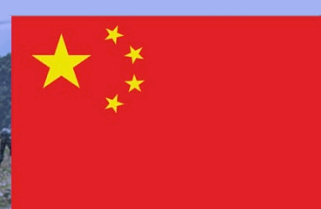
Methods and measures adopted by Beijing transportation industry against torrential rain

II. Provide security assurance tightly around public Transportation to ensure citizen's safety to move around

Strengthen the organization of the capacity of the public transportation in the flood season.

When the passenger flow is increasing, the lines' allocation is insufficient to meet the demand, and the road condition is able to ensure the passing safety,

- ◆ we will timely put alternative vehicles into operation, increase transportation capacity and extend the bus operating time.
- ◆ we will organize bus operating companies to make a detailed investigation on the bus roads which are easy to accumulate water. We will make bus detour plans one by one, road by road and bridge by bridge. We will specifically formulate such measures as expanding the interval and the driving range and circling around.



Methods and measures adopted by Beijing transportation industry against torrential rain

II. Provide security assurance tightly around public Transportation to ensure citizen's safety to move around

Strengthen the emergency transport capacity guarantee of the airport and railway station

The transportation management department, airport, and the railway station established an information communication mechanism. Once there were a large number of passengers are held up in the airport and railway station because of the bad weather,

- ◆ The passengers' stranded situation would be timely informed to the transportation management department by the airport and railway station.
- ◆ At the same time, if there is a rain forecast, transportation management department will arrange specialized people on duty to keep monitoring the taxi transport capacity situation in the airport and railway station. We will grasp in the first time the passenger flow change and scientifically and reasonably organize the companies to transfer vehicles for the guarantee of the transportation capacity.
- ◆ We have identified 17 large rental car companies as the designated security enterprises. There are 3200 vehicles for class every day.



Methods and measures adopted by Beijing transportation industry against torrential rain

III. Made propaganda and emergency drills tightly around the citizens to make sure citizens' safety to move around

1

Strengthen the propaganda of the flood prevention knowledge to the general public

Set up promotion points in the key public transit hub stations and subway stations. We took such measures as rolling broadcast propaganda, station radio, posting posters, and giving out publicity materials to carry out propaganda activities of flood prevention knowledge to the vast number of passengers.

2

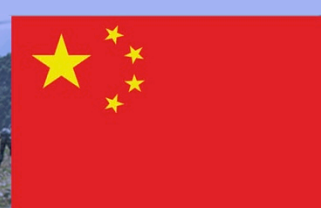
Strengthen the external release of the information of road condition in rainy days

Before it rains, we strengthen the guidance of the citizens' activities. We timely send prompt message to the citizens with the help of the emergency information release system "Beijing serves you"
When it rained, we timely released information through the variable information board, consulting telephone, radio, television, and network.

3

Comprehensively strengthen the flood prevention and emergency drill

In accordance with the work principle of "overall planning, graded responsibility, close to reality and focus on actual effect", and the main risk faced by the transportation sector in the flood season, we organize the city's transportation industry to carry out the work for flood prevention and emergency drills. In 2013, 26 items of emergency drills specialized for flood prevention were organized.



Thank you!

