

## Part 2 Railway Transport

### Chapter 1 Railway Traffic Accident Trends

#### 1 Operating Accidents over Recent Years

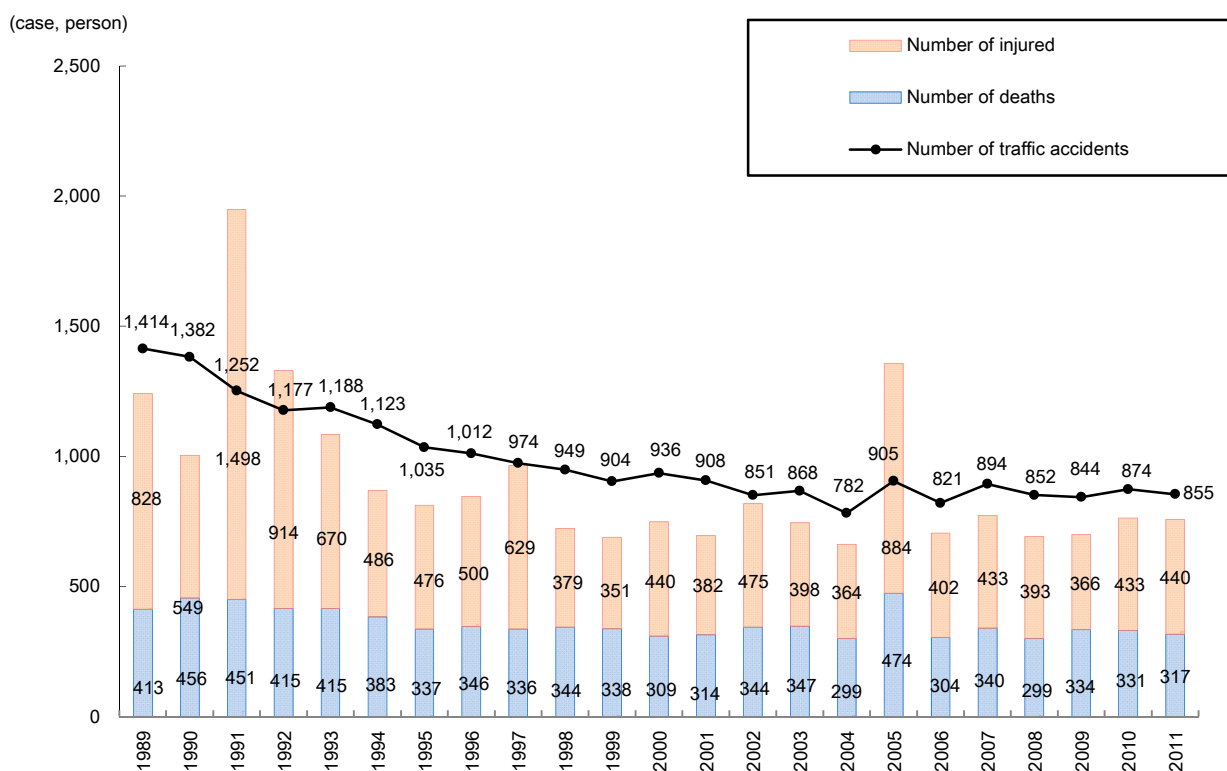
(1) Railway operating accidents<sup>5</sup> have been on a long-term decline, and although there were 1,252 in 1991, in 2011 there were only 855 incidents.

(2) There were 757 injuries and fatalities resulting from railway operating accidents (including 317 fatalities), which indicated 0.9% decrease from the previous year.

(3) Accidents at railway crossings increased by 2.8% to 325, of which operating accidents accounted for roughly 38.0%. 211 fatalities resulted from those accidents, which was 15.9% lower than the previous year.

(4) A major accident in 2011 occurred (there were over 10 fatalities and injuries, and over 10 cars derailed in the accident) on May 27th with JR Hokkaido Sekisho line in Seifuzan signal field, when the disaster of train derailment occurred in a tunnel causing injuries to 79 passengers.

Changes in Railway Operational Accidents and Casualties



Notes: 1. Source: Ministry of Land, Infrastructure, Transport and Tourism  
2. Fatalities are defined as deaths occurring within 24 hours of an accident.

(year)

<sup>5</sup> Operating accidents - Train collisions, derailments, train catching fire, accidents at rail crossings, accidents along other roads, railroad accidents resulting in injury or death (other than from the foregoing five types of accidents), and accidents resulting in material damage to property (other than from the foregoing six types of accidents). Street rail accidents are defined in the same manner as railway operations accidents.

## Chapter 2 Overview of Current Railway Traffic Safety Measures

### 1 Improvement of Railway Environment

#### ○ Improving Operational Safety Devices

Based on the technical criteria amended with regard to the JR West Fukuchiyama Line train derailment accident, improvement such as ATS is being promoted for curves, turnouts, feed lines, and others that have the risks of causing a serious accident.

#### ○ Strengthening of the Earthquake Resistance of Railway Structures

Seismic strengthening of the elevated bridges of the Shinkansen and conventional lines were promoted. Furthermore, in preparation for the next expected large-scale earthquake, the emergency implementation of seismic strengthening was also carried out in primary stations that function as bases for emergency personnel transportation.

### 2 Dissemination of Knowledge about the Safety of Rail Traffic

The government tried to raise awareness for the prevention of accidents and the dissemination of knowledge of the road and rail traffic crossing safety through campaigns in schools, for residents living along the railroad, and for road transport operators, with posters about accident prevention crossing.

In addition, for effective safety education regarding the railroad usage for children the necessary matters were investigated, and train operators were encouraged to make lectures regarding the materials created.

### 3 Ensuring the Safe Operation of Railways

#### ○ Retaining the Quality of Train Operators

In order to ensure the quality of power car operators, a power car operator license examination has been carried out. Also, in order to retain the quality of the crew, operation management instructed to take appropriate measures regarding education.

#### ○ Analysis and Utilization of Risk Information

In order to prevent serious train accidents, incidents information has been collected, so that it can be shared between the parties concerned with the risk information. In addition, regarding risk information that was not subject to the national report, information sharing among train operators is aimed for.

#### ○ Enhancement of Transportation Safety Management System

Based on the “Transport Safety Management System” introduced in October 2006, a safety management system was established by the operators, which was taken action by management executives to on-the-site workers as a whole. The country carried out the evaluation for transport safety management to 814 companies by the end of December 2011 to confirm the status of implementation.

#### ○ Appropriate Response in Cases of Large-Scale Accident Occurrence

The emergency contact system during holidays or nighttime of the country and railway operators was checked and confirmed to perform the collection and communication of information quickly and accurately in cases of a large accident or disaster occurrence.

In addition, in metropolitan areas, in order to reduce the social impact of transport, such as failure in arterial traffic, the railway companies were instructed to develop a system necessary for rapid recovery with providing appropriate information to passengers to accurately understand the train service situation.

## Topics

### Assistance to Victims of Public Traffic Accidents

Requests to be considered by the nation regarding the assistance to the victims of public traffic accidents, starting from the people who are victims and survivors of railway accidents or aircraft accidents, and as a way to support the families and the victims by providing mental health care and information about the cause of the accident and the accident situation, have been continuously made.

Based on the opinions stated above, in 2008, during Diet deliberations in a partial revision of the Act for Establishment of the Ministry of Land, Infrastructure, Transport and Tourism (Act 100, 1999) stating the contents of the installation of the Japan Transport Safety Board, supplementary resolution stating that “In view of the importance of support for victims of an accident, such as an aircraft, ship or railway accident, while exploiting the experience and knowledge from the previous accidents, the necessary measures for the promotion of comprehensive policies are to be considered under the close cooperation of the relevant administrative organs.” was made.

In response to this, the Ministry of Land, Infrastructure, Transport and Tourism, held a "Review Committee for ways of assistance to victims of public transport accidents" including victim groups and experts as members.

“Review Committee for ways of assistance to victims of public transport accidents”  
Expert committee name list

Name	Affiliations
Yukiko Kakimoto	Rissho University Graduate School of Psychology, Part-time Lecturer Institute of Human Factors of Japan, Doctor of Medicine [Ergonomics]
Seiji Shimomura	TASK (Railway Safety Promotion Conference) Vice Chairman Great Hanshin-Awaji Earthquake corporation NPO "Light of Hope 1.17" Vice President
Keiko Takaki	Sophia University, Professor, Grief Care Research Institute at the same university, Director National Council Association to consider life and death, Chairman Ph.D. (Religion and Culture)
Tomita Nobuho	Tokiwa University, Professor, Head of Human Sciences Department Ibaraki Center for Victim Assistance, (Company) President National Victim Support Network (NPO), Vice President [Criminology, Victimology]
Satomi Nakajima	National Institute of Mental Health National Center of Neurology and Psychiatry, Department of Adult Mental Health Support for Crime Victims Research Laboratory Section Chief Psychiatrist, Doctor of Medicine, Clinical psychotherapists
Haruo Hayashi	Kyoto University, Disaster Prevention Research Institute, Catastrophe Research Center, Professor Director [Social Psychology (Human Behavior in the Event of a Disaster, Disaster Psychology)]
Kuniko Tanishima	8.12 Liaison Committee, Secretary General Psychiatric social worker
Emiko Okubo (FY 2009 only),	National victim assistance network (NPO), Vice President Victim Assistance Citizens Center (company), Director Public Health Nurse

\* Assigned to the Review Committee at the time

In fiscal 2009 the Review Committee conducted a survey on the victims assessment needs and a survey on victim assistance efforts of other countries NTSB (National Transportation Safety Board, USA).

In addition, in fiscal year 2010, modalities for the roles of the state of the contents of the support and related organizations, modalities for the existence of a central office functions to the victims and family members like a system that is required, were studied. On top of that, in June 2011, a study group was made as a compilation.

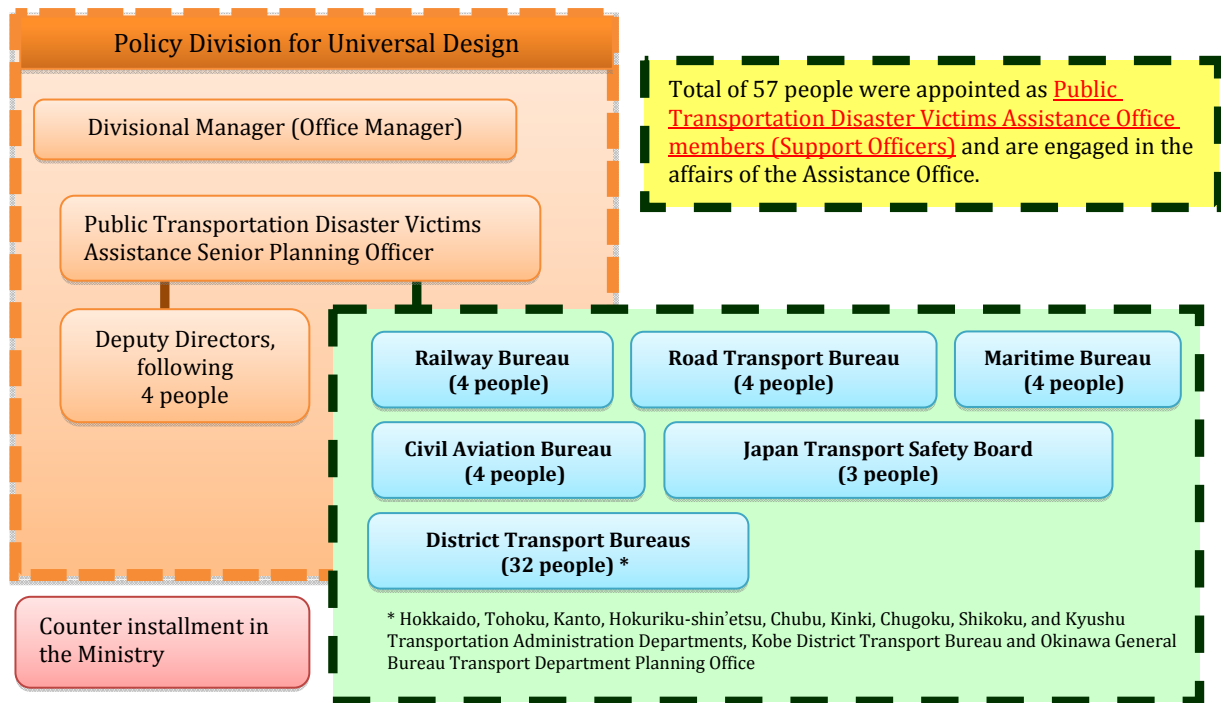
In the compilation of the Review Committee the following opinions have been demonstrated:

- 1) Victim assistance efforts will be regulated by the Ministry of Land, Infrastructure, Transport and Tourism according to the Fundamental Traffic Safety Program and Traffic Safety Affairs Program by the Ministry of Land, Infrastructure, Transport and Tourism on the basis of Traffic Safety Measures Basic Act, as well as the Fundamental Disaster Prevention Program and Operational Disaster Prevention Plan the Ministry of Land, Infrastructure, Transport and Tourism based on the Basic Act on Disaster Control Measures.
- 2) Guidelines for Family Assistance Plan by transport operators will be established by the Ministry of Land, Infrastructure, Transport and Tourism, and voluntary planning in transport operators will be promoted.
- 3) For carrying out the efforts of victim assistance in the Ministry of Land, Infrastructure, Transport and Tourism, the organization and structure development will be advanced.

Based on this compilation, from now on, efforts of support for public transport accident victims are going to be steadily processed in the Ministry of Land, Infrastructure, Transport and Tourism, while carrying out the necessary investigations.

### Initiatives System for Support of Public Traffic Accident Victims

Promoting assistance initiatives for victims of public transport accidents at the "Public Transportation Disaster Victims Assistance Office" (Established April 2012), as the following systems



(Immediate Duties of the Assistance Office)

- Implementation of educational training for the support officers
  - Promotion of transport operators' development of Family Assistance Plan
  - Review of the manual for the support officers
  - Trial implementation and verification of counter services
  - Building a network with the external related institutions
- Etc.

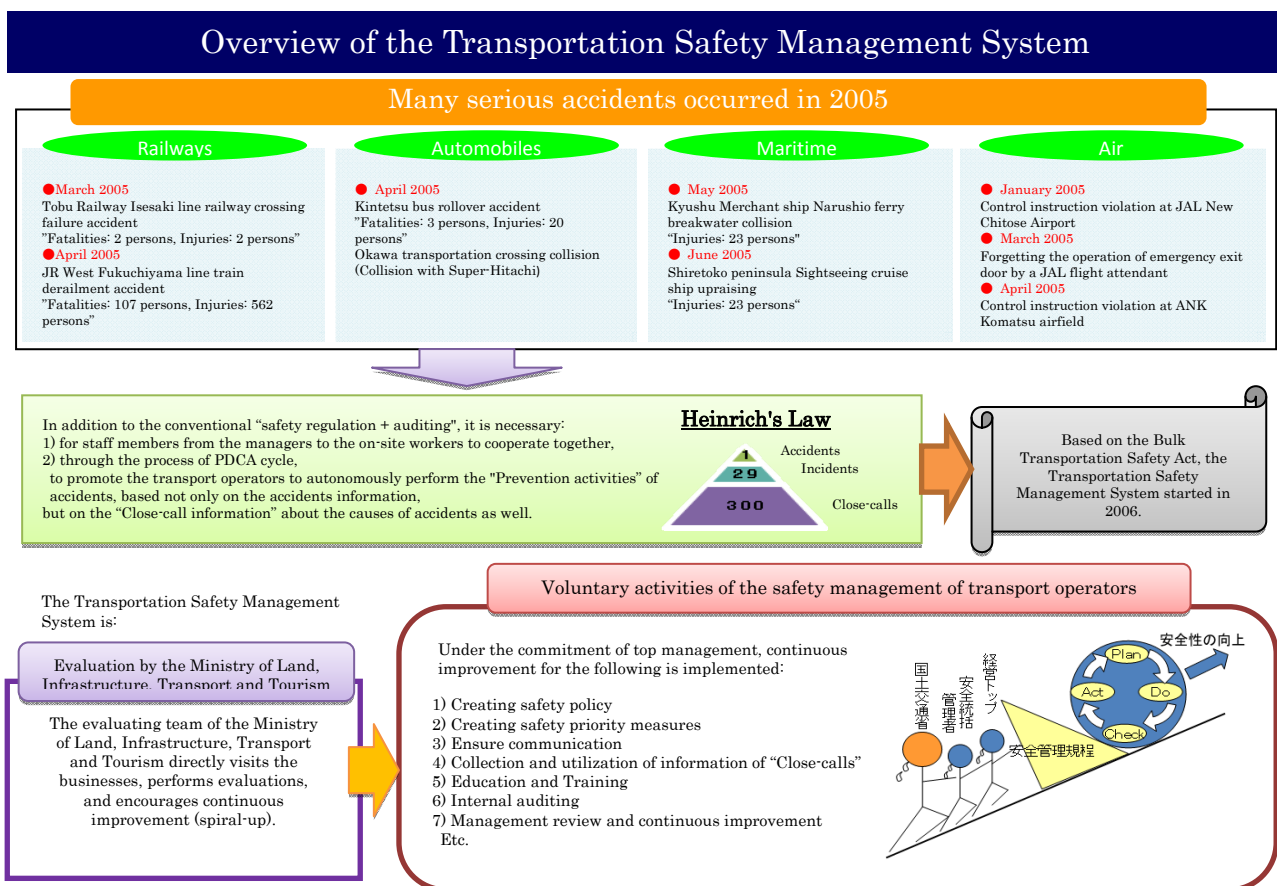
# Topics

## Future Efforts in Transportation Safety Management System

Given that several serious accidents and problems have occurred in the transportation business beginning with Fukuchiyama derailment in 2005, in order to improve the safety of the transportation, the Ministry of Land, Infrastructure, Transport and Tourism has introduced the Transportation Safety Management System in October 2006, based on the law (Act19, 2006) amending a part of the Railway Business Act.

Focusing on collecting information about close-call accidents and implementing prevention activities based on it, while making continuous efforts to improve the contents by turning the PDCA cycle, the Transportation Safety Management System is a mechanism that unifies transport operators from the top management to the on-site workers and autonomously addresses the safety management, with the Ministry of Land, Infrastructure, Transport and Tourism evaluating and giving advice regarding the status of initiatives through land, sea and air transport modes.

Transportation Safety Management System is constructed for the autonomous initiatives of transport operators and performs the evaluation and advice regarding those initiatives, rather than having them checked by the national government, which is different from the traditional transportation safety administration approach focused on the safety standards and auditing. By promoting both: the Transportation Safety Management System and the conventional safety administration as the two wheels of one car of safety policy, the Ministry of Land, Infrastructure, Transport and Tourism aims to achieve a more advanced transportation safety management system.



Given that the Transportation Safety Management System held the fifth anniversary from its introduction in October 2006, as a way to organize the current state of security in transportation business and to indicate the direction of future efforts, the public announcement of the "Policy vision regarding ensuring safety of transportation" was made by the Ministry of Land, Infrastructure, Transport and Tourism in December of 2011.

In the vision the following two points about the current state of the transport operator's safety

management system are indicated:

- 1) Although for large to mid-sized businesses it has become the stage where the PDCA cycle<sup>6</sup> can be entirely to be circulated within, the situation of small and medium-sized businesses still strongly needs awareness and dissemination.
- 2) Furthermore, regarding large to mid-sized businesses, cases that could question the effectiveness of ensuring safety are occurring.

On top of that, the following are the directions for the policies ensuring transportation safety in the future:

- 1) Regarding the awareness and dissemination for small and medium-sized businesses, the cooperation with risk management business of insurance companies that are interested in the dissemination of transportation safety management is promoted,
- 2) For ensuring the effectiveness of the safety management of the large to mid-sized businesses, the implementation of evaluation focused on the effectiveness and efficacy of the operator's safety management system in evaluating management is been worked at.

## Policy Vision Regarding the Safety of Transportation (Overview) ~In particular, regarding ensuring the Safety Management System ~

### 1. Current Situation Towards Ensuring Safety Management System and the Basic Concept

#### ○ Background Efforts

· 5 years passed after the the introduction of transportation safety management system in October of 2011. Policy review was conducted in FY2010.

#### ○ Status of Initiatives

· **Focusing on large and medium-sized operators, PDCA cycle is generally maintained.**  
However, cases that demand more effective security also occur.  
· **Request of thorough safety** from the Chairman of the House of Representatives of Land, Infrastructure and Transport (triggered by the serious ANK incident)  
· **Small and medium-sized businesses still have a high necessity of awareness and dissemination.**

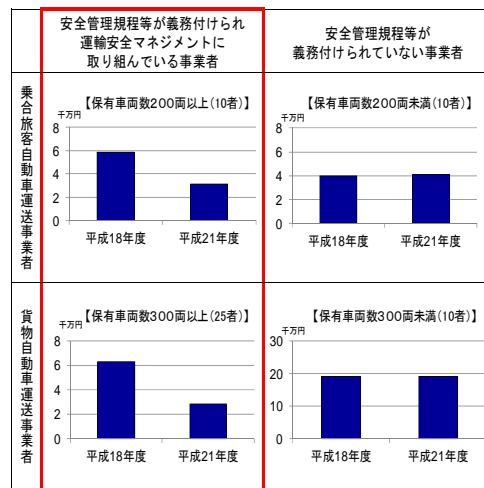
#### ○ Effects of the Implementation of Transportation Safety Management

· As a result of a sample survey, **while the payment of insurance companies to implement safety management is reduced, there is no significant change in the non-obligatory carriers.**

→ Safety management efforts ensure the safety effect

#### ○ Future Direction Towards Ensuring the Safety of Transportation

· Safety auditing and ensuring compliance with laws and regulations and safety management system by ensuring transportation safety management evaluation are the wheels of the transportation safety vehicle.  
· As for **the main challenges in transportation safety management, for further consolidation of medium-sized to large businesses - the depth and sophistication of efforts, while for small and medium businesses these are the dissemination and awareness.**



\* With the cooperation of insurance companies, the amount of insurance payments was converted to 1000 units per insurance contract

## Policy Vision Regarding the Safety of Transportation (Overview) ~In particular, regarding ensuring the Safety Management System ~

### 2. Direction of concrete efforts towards ensuring future safety management system

#### ○ Enhancing awareness and dissemination activities for small and medium businesses

In order to **promote the cooperation with private business risk management**, at the stage of awareness and dissemination activities, **the enhancement of awareness and dissemination activities for small and medium businesses are promoted through public-private partnerships.**

#### ○ Ensuring the effectiveness of safety management in large and medium-sized businesses

In order to continue to ensure the effectiveness of the safety management in large and medium-sized businesses, **while strengthening management evaluation and the cooperative integration of safety audits at each station,**

· regarding management evaluation, research on methods of **evaluating the "effectiveness and usefulness" of the efforts based on risk assessment.**

· research on methods **ensuring the the effectiveness of safety management of safety audit of each station as well.**

#### ○ Securing and training human resources to perform the transportation safety management evaluation

**Strengthening of the training program for the management evaluation personnel, considering measures for the improvement of their skills.**  
In particular, the improvement of skills in the local transport bureaus.

#### ○ Responding to emerging trends related to safety management

**ISO39001 is a new private standard related to road traffic, expected to enter into force in November 2010.**

Based on the dissemination situation after the entry into force, from the perspective of realizing a higher level of the safety of transportation ensuring, **the ways for the integration and cooperation with the national security measures are considered.**

<sup>6</sup> PDCA cycle refers to the mechanism of connection between planning (Plan) the action (Do), evaluating it (Check) and consider ways for improvement (Act) to make use of the results in the next planning.