

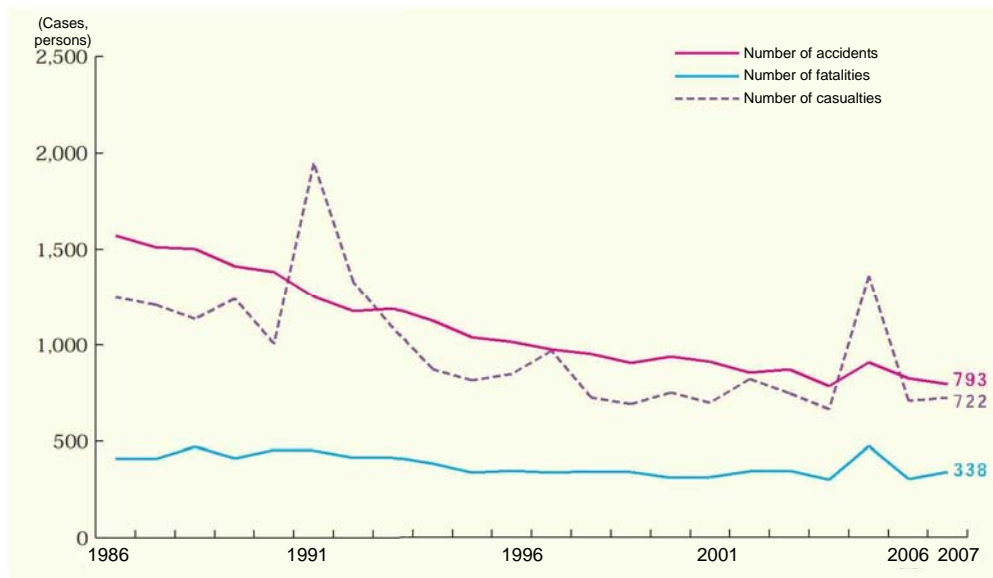
## Section 2 Railway Transport

### 1 Trends in Railway Accidents

#### 1-1 Operations accidents in recent years

- (1) Railway operational accidents\* have been in a long-term decline, and totaled 793 in 2007, falling 3.4% from that of the previous year.
- (2) Casualties from railway operational accidents numbered 722 (including 338 fatalities), a 2.3% increase from the previous year.
- (3) Accidents at railway crossings decreased by 2.2% from the previous year to 355, accounting for roughly 44.8% of operational accidents. Casualties from these accidents numbered 295, which was 24.5% higher than the previous year.
- (4) There was one major accident (resulting in at least ten casualties or derailment of at least ten cars) in 2007: a derailment on the Hokkaido Railway Company's Sekihoku Line on March 1.

Transition in the number of 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.

\*Operational accidents:

Refers to train collisions, derailments, fires on trains, railway crossing obstruction accidents, road obstruction accidents, railway accidents involving people, and accidents involving railway property damage. Also, railway track accidents are defined as railway operational accidents.

## 2 Railway Traffic Safety Measures

### 2-1 Improving the railway traffic environment

#### - Upgrading operational safety devices

In reflection of JR West Fukuchiyama Line derailment, the government revised technical standards to require installation of ATS devices and other safety systems at curves, switches, terminuses, and other rail sections with a risk of major accidents.

#### - Strengthening the earthquake resistance of railway structures

Based on evaluations made by the “Shinkansen Derailment Countermeasures Conference”, the government implemented measures to strengthen tunnels where reinforcement against earthquakes became necessary following the confirmation of active faults along their routes. The steps were taken to strengthen pillars for elevated tracks of the bullet train route and other existing lines. In preparation for large earthquakes with high probability of occurrence in the future, authorities urgently implemented measures to reinforce the earthquake resistance of major railway stations, which are expected to play key roles in earthquake-related operations, such as by functioning as staging centers for the transport of emergency personnel. As another earthquake countermeasure, the government promoted the installation of re-transmitters that would enable information to be transmitted to subway zones that are otherwise impenetrable by terrestrial broadcasts.

### 2-2 Assuring the safe operations of railways

#### - Improving educational programs for trains crews and safety specialists; enhancing the basic competence of personnel

To ensure that those who operate power cars (hereinafter, “train operators”) have the competence to perform the job, Power Cars Operators Driving License Exam was implemented. It also examined methods of educating train operators and improving their occupational environment in order to enhance the competence of train operators.

#### - Improving the management of train operations and crews

In the area of traffic control systems, introduction of radio equipment for operational commands and intra-crew communications and of Centralized Traffic Control (CTC) devices was promoted and directions were given to railway companies to take steps to establish rapid and efficient driver command systems. In terms of personnel management, directions were given to railway companies to foster a greater awareness of the importance of safety among their employees. They were also directed improve their systems of safety management by establishing procedures that enable them to closely monitor the psychological and physical condition of their crews at the time they begin work in order to enable the crews to perform their jobs competently and to ensure safe driving, thus to work on the safety management.

#### - Safety auditing of railway companies

As a means of ensuring safety in railway operations, based on the Railway Business Act, safety auditing of railway companies was carried out. And guidance was given to railway companies in relation to their efforts to secure safety, management of facilities and cars, their usage and operation of cars and education and training for crews.

Through the Transport Safety Management System, which was introduced in October 2006, along with promotion of constructing a safety management system that realize a unified approach to safety for the entire organization, from its top management to its front-line workers, 176 companies were assessed by the end of March 2008 for their progress in constructing safety management systems, and efforts were made to ensure the transport safety.