

# WHITE PAPER

## ON TRAFFIC SAFETY

## IN JAPAN

# 2004

*Abridged Edition*

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CABINET OFFICE

Editorial Supervision:  
Directorate General for Policies on Cohesive Society, Cabinet Office

**IATSS** *International Association of Traffic and Safety Sciences*

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This English version of White Paper on Traffic Safety in Japan (Abridged Edition) was compiled under the supervision of Directorate General for Policies on Cohesive Society, Cabinet Office.

The International Association of Traffic and Safety Sciences hopes this paper, in conjunction with Statistics of Road Accidents Japan (Abridged Edition), will greatly enhance readers' knowledge of traffic accident remedial measures.

## **White Paper on Traffic Safety in Japan 2004**

### **Cabinet Office**

As required by Article 13 of the Traffic Safety Policies Law (Law No. 110 of 1970), each year the Cabinet presents its *White Paper on Traffic Safety in Japan* to the Diet. The FY2004 edition of the White Paper consists of the following two volumes.

- (1) “Traffic Accidents and Safety Measures in FY2003” reports the latest national statistics on traffic accidents, and summarizes traffic safety measures implemented in FY2003.
- (2) “Traffic Safety Measures for Implementation in FY2004” provides details of the traffic safety measures planned for implementation during the current fiscal year (FY2004).

This is the 34th White Paper since the first was issued in 1971. It is organized in the categories of land transport (road and rail), maritime transport, and air transport in line with the structure of the Seventh Fundamental Traffic Safety Program.



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# CONTENTS

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## — PART I —

<b>TRAFFIC ACCIDENTS AND SAFETY MEASURES IN FY2003 .....</b>	<b>5</b>
<b>CHAPTER 1 LAND TRANSPORT .....</b>	<b>5</b>
<b>Section 1 Road Transport .....</b>	<b>5</b>
1 Road Traffic Accident Trends .....	5
1-1 Long-term trends .....	5
1-2 Government's goal to halve accident fatalities .....	6
<b>Focus Efforts to Reduce Traffic Accidents Involving Seniors .....</b>	<b>7</b>
2 Road Traffic Accident Statistics for 2003 .....	13
2-1 Overview .....	13
2-2 Casualties: By age group .....	13
2-3 Casualties: By mode of transportation .....	15
2-4 Fatalities: By seat belt usage .....	16
2-5 Child fatalities and child safety seat usage .....	17
2-6 Annual, weekly, daily accident/fatality peaks .....	17
2-7 Fatal accidents caused by primary party .....	17
3 Major Road Traffic Safety Measures in FY2003 .....	18
3-1 Road environment enhancements .....	18
3-2 Implementation of the Traffic Safety Initiative .....	20
3-3 Promotion of safe driving .....	20
3-4 Improvement of vehicle safety .....	21
3-5 Enhancement of rescue systems .....	21
3-6 Improvement of liability security and victim support .....	22
<b>Focus Development of "Safe Pedestrian Areas" .....</b>	<b>23</b>
<b>Section 2 Railway Transport .....</b>	<b>24</b>
1 Railway Traffic Accident Trends .....	24
2 Major Railway Traffic Safety Measures in FY2003 .....	25
2-1 Railway environment enhancements .....	25
2-2 Measures to prevent level crossing accidents .....	25
<b>CHAPTER 2 MARITIME TRANSPORT .....</b>	<b>27</b>
1 Maritime Accident Trends .....	27
1-1 Maritime accidents and rescues in 2003 .....	27
1-2 Major constituents of 2003 maritime accidents .....	27
2 Major Maritime Traffic Safety Measures in FY2003 .....	28
2-1 Maritime environment enhancements .....	28
2-2 Maritime safety campaigns .....	28
2-3 Promotion of disaster prevention .....	28
2-4 Promotion of vessel safety .....	28
2-5 Enhancement of other safety measures .....	28

<b>CHAPTER 3</b>	<b>AIR TRANSPORT</b> .....	30
1	Air Traffic Accident Trends .....	30
2	Major Air Traffic Safety Measures in FY2003 .....	30
<b>Focus</b>	DC-9 Engine Trouble Leads to Massive Flight Cancellations .....	31

— PART II —

<b>TRAFFIC SAFETY MEASURES FOR IMPLEMENTATION IN FY2004</b> .....	32
---	----

<b>CHAPTER 1</b>	<b>LAND TRANSPORT SAFETY</b> .....	32
<b>Section 1</b>	Road Transport Safety .....	32
1	Road Environment Enhancements .....	32
2	Implementation of the Road Traffic Safety Initiative .....	33
3	Promotion of Safe Driving .....	33
4	Improvement of Vehicle Safety .....	33
5	Enhancement of Rescue Systems .....	34
6	Improvement of Liability Security and Victim Support .....	34
<b>Section 2</b>	Railway Transport Safety .....	34
1	Railway Environment Enhancements .....	34
2	Measures to Prevent Level Crossing Accidents .....	34
<b>CHAPTER 2</b>	<b>MARITIME TRANSPORT SAFETY</b> .....	35
1	Safety Facility Enhancements .....	35
2	Improvement of Traffic Information and Control .....	35
3	Promotion of Vessel Safety .....	35
<b>CHAPTER 3</b>	<b>AIR TRANSPORT SAFETY</b> .....	36
1	Safety Facility Enhancements .....	36

**Note:** Since the figures in the graphs and tables were rounded to the nearest unit, the totals expressed may slightly differ from the sum of constituent figures.

— PART I —  
**TRAFFIC ACCIDENTS AND SAFETY MEASURES IN FY2003**

**CHAPTER 1 LAND TRANSPORT**

**Section 1 Road Transport**

**1 Road Traffic Accident Trends**

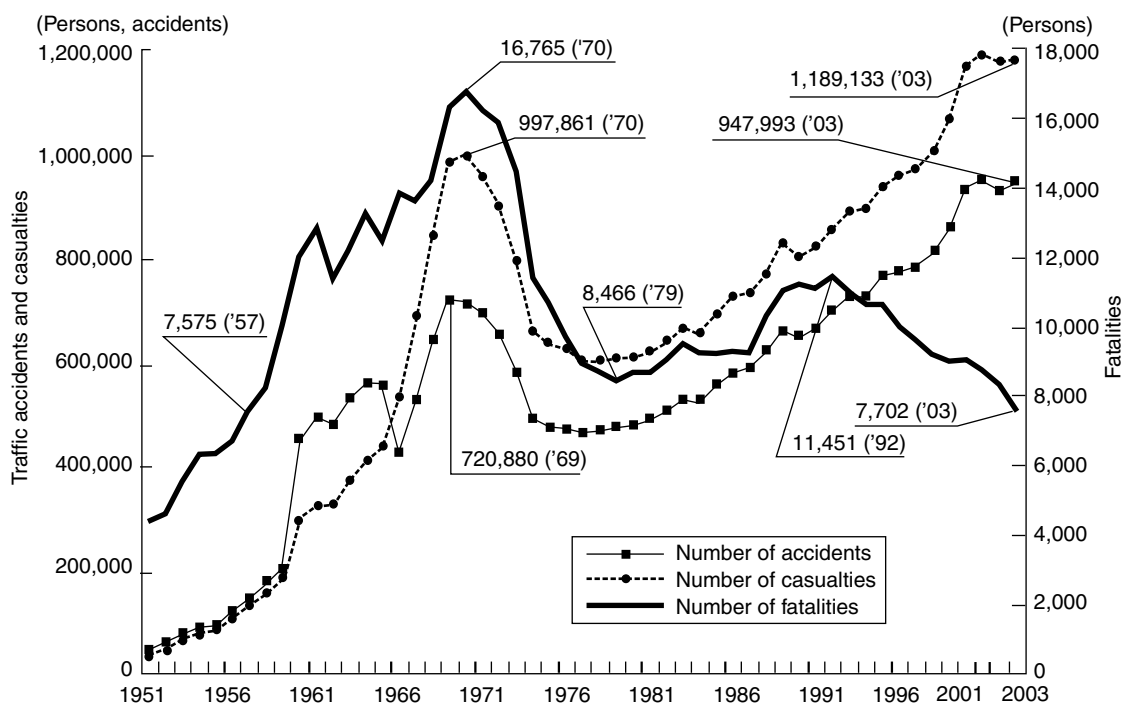
**1-1 Long-term trends**

The annual number of fatalities resulting from road traffic accidents in Japan peaked at 16,765 in 1970.

To address concerns about the alarming death toll on the nation's roads, the Traffic Safety Policies Law was enacted in that same year. Based on the new law, in FY1971 the government began drawing up five-year plans, known as Fundamental Traffic Safety Programs, to comprehensively and systematically promote traffic safety improvements.

Annual road traffic fatalities began to fall steadily in 1971 until they were down to 8,466 in 1979. However, the yearly death toll started to rise in the following year, and continued to rise in most years until 2002, when a new declining trend began.

**Changes in Road Traffic Accidents, Casualties and Fatalities**



- Notes:**
1. Source: National Police Agency
  2. Figures after 1966 do not include property-damage-only accidents.
  3. Figures for Okinawa Prefecture were not included before 1972.

There were 7,702 fatalities in 2003, the first time that the number fell below the 8,000 mark in the 46 years since 1957 (7,575 fatalities). However, the year also recorded the worst levels ever in accidents and injuries, which rose to 947,993 and 1,181,431, respectively.

## **1-2 Government's goal to halve accident fatalities**

As mentioned earlier, the number of road traffic accident fatalities in 2003 dipped under the 8,000 mark for the first time in the 46 years since 1957, dropping to 7,702.

This success can be primarily attributed to the long-running nationwide efforts to implement a comprehensive set of measures under the Fundamental Traffic Safety Programs, including enhancement of the road traffic environment, widespread improvement of safety awareness, promotion of safer driving practices, advancement of vehicle safety, preservation of orderly road usage, and improvement of rescue systems. In addition, local communities, businesses, schools, families, and other non-governmental parties are seen as having played a significant role in reducing the death toll.

Other major factors behind the recent decline in fatalities include a decrease in the hazard recognition speed (the speed immediately before the accident occurs) and a rise in use of seat belts.

One key element behind the reduction in 2003 was the inclusion of tougher drunk driving penalties in the June 2002 revision of the Road Traffic Law.

Nevertheless, the incidence of road traffic accidents and injuries in 2003 rose above the preceding year's levels, and the overall rate of road deaths and injuries still remains at the deplorable rate of one in every 100 people.

In the January 2003 "Prime Minister (Chairman of the Central Committee on Traffic Safety Measures) Discussion on Reducing Road Traffic Fatalities by Half" and the Prime Minister's policy speech to the 159th Diet this year, Prime Minister Koizumi announced his intention to make Japan's roads the "safest in the world" by bringing the annual number of road deaths below 5,000 in a ten-year period. There is also the need to reduce the incidence of road accidents and injuries.

One of the most effective strategies for the coming years will be to implement a package of safety measures under the seventh installment of the highly successful Fundamental Traffic Safety Program. There is also the need to take action with regard to senior drivers, who account for the highest ratio of fatalities. Specifically, this means carrying out an extensive set of measures based on the "On comprehensive traffic safety measures for the elderly toward the transition to the full scale of aging society," a collection of senior driver safety guidelines adopted by the Task Force on Transportation in March 2003. Another critical endeavor is to aggressively formulate and implement new strategies that respond to recent changes in road accident factors and take advantage of technological advances. The planners of these efforts should also look for ideas in progressive measures being implemented domestically and abroad.

## Focus Efforts to Reduce Traffic Accidents Involving Seniors

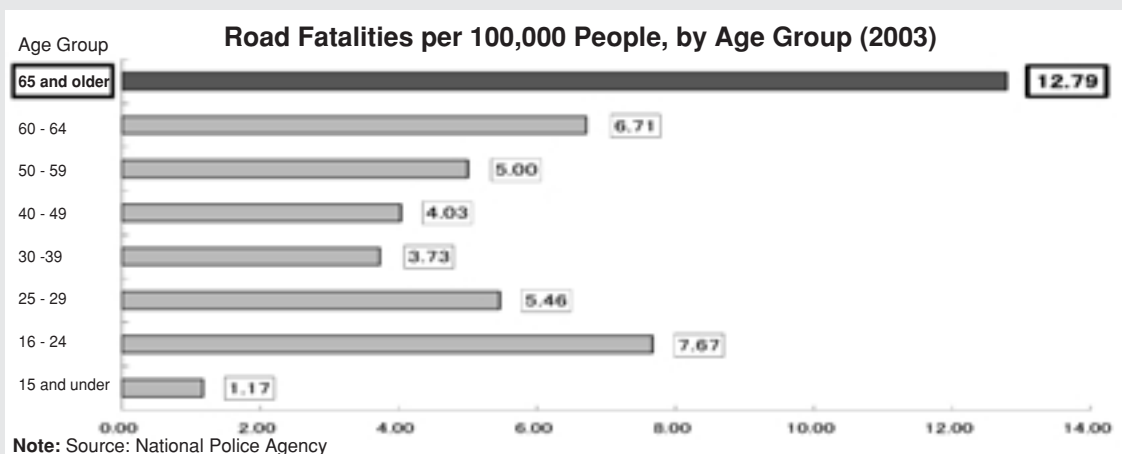
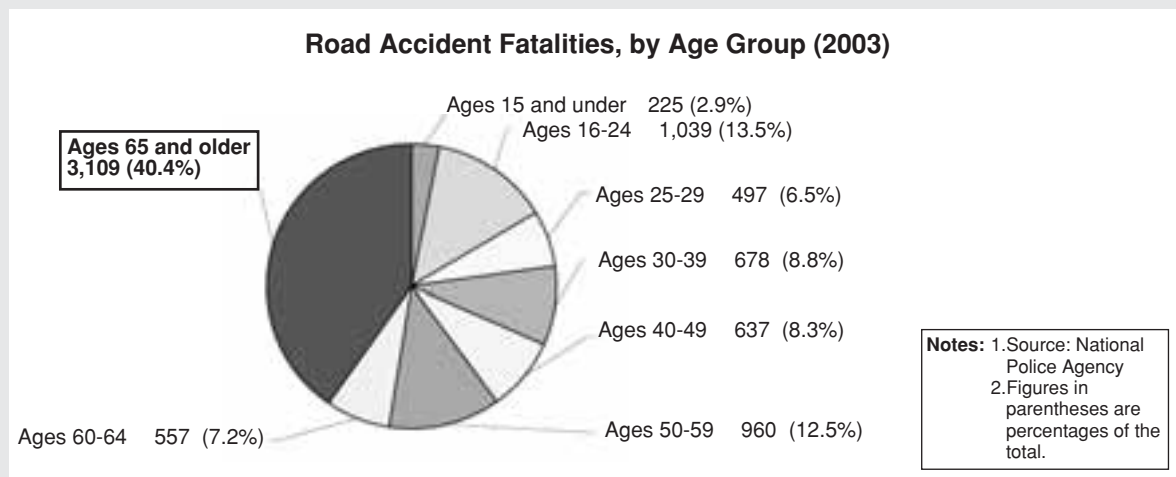
Although road traffic fatalities in 2003 fell below 8,000 for the first time in 46 years, the ratio of elderly people killed in accidents rose above 40% for the first time ever, signaling a growing crisis in the state of senior traffic safety.

Consequently, the national goal of making Japan's roads the "safest in the world" by reducing annual traffic fatalities below 5,000 in ten years can be realized only if greater effort is made to improve senior traffic safety.

Against this backdrop, the government is now implementing a diverse array of strategies under the "On comprehensive traffic safety measures for the elderly toward the transition to the full scale of aging society."

As recognized by these guidelines, traffic safety measures for seniors are intertwined with those for younger generations. Developing greater consideration for the elderly in younger people would help to foster stronger traffic safety awareness in every individual, and thus serve as a safety strategy targeting all generations.

In order to safer roads, the government, the private sector, and the general public must work together to put into action initiatives based on the above guidelines.





**National Efforts under the “On comprehensive traffic safety measures for the elderly toward the transition to the full scale of aging society” (adopted March 27, 2003 by the Task Force on Transportation)**

**I. Traffic Safety Measures for Elderly Pedestrians and Cyclists**

**1. Development of Universal Design<sup>1</sup>-based Road Traffic Environment**

(1) Creation of Safe Pedestrian Areas

Targeted at specific residential and commercial districts where traffic accidents frequently occur, the “Safe Pedestrian Areas” program implements comprehensive, wide-area accident prevention measures to ensure the safety of pedestrians and bicycle riders traveling through the designated area.

(2) Promotion of universal design-based urban development

Under this program, community revitalization project (projects dealing with the declining birthrate and population aging) bonds and other public funding are offered to assist local projects for universal design-based urban development.

(3) IT-powered R&D for supporting pedestrians

In order to aid the development of pedestrian-friendly travel environments, this program promotes alliances with other relevant organizations to supply essential information on public transportation, barrier-free<sup>2</sup> environments, and other matters to mobile terminals.

(4) R&D for mobility support

This program develops accessibility maps for seniors and disabled people to help them find barrier-free routes.

**2. Protection of Pedestrians through Vehicle Safety Measures**

(1) Standards and safety information for pedestrian head protection

This program has established impact absorption standards for automobile hoods in order to reduce pedestrian fatalities resulting from vehicular collisions. Moreover, the program’s automobile assessment project conducts tests to evaluate automobiles’ capacity for limiting pedestrian head injuries, and shares the test results with users.

(2) Development of the Advanced Safety Vehicle (ASV)

The ASV project aims to promote the development of the Driver Assistance System with Information Exchange, scheduled for practical use around 2008. This system is intended to make driving safer through information exchange based on vehicle-to-vehicle communication and vehicle-to-pedestrian communication.

(3) Non-step Bus<sup>3</sup> Certification System

The “Standard Specifications for Next-generation Non-step Buses were established in March 2003, and the “Standard-Specification Non-step Bus Certification System” was established in January 2004.

(4) Subsidy for Enhancement of Mobility in Public Transportation

Based on the principles of the Law to Promote Improvement of Mobility in Public Transportation for Seniors, Disabled People, etc. (Law No. 68 of 2000), subsidies are offered to public transportation services to help them adopt low-floor buses and other modes of transport that offer easier access for seniors and disabled people.

### 3. Traffic Safety Education and Awareness Campaigns

#### (1) Home visits and traffic safety tips for seniors

Since seniors have few opportunities to receive instruction and training in traffic safety, this program sponsors instructor visits to the homes of elderly people living in areas with high traffic accident rates to provide them with one-on-one guidance. In addition, doctors and other people who have frequent contact with seniors are called upon to pass on traffic safety tips to the elderly.

#### (2) Traffic Safety Awareness Program for Seniors

This program includes the “Cross-generation Sharing Project,” which sponsors interactive gatherings that bring together children, parents, and especially the elderly to think and learn about traffic safety, and the “Senior Home Visit Project,” which provides at-home traffic safety instruction for elderly people who are unable to attend safety seminars.



Cross-generation Sharing Project participants creating a “Hiyari Map” (map of near-miss spots)

1. Universal design: Design of urban and residential environments that can be easily used by a broad spectrum of people, regardless of age, physical impairment, etc.
2. Barrier-free: The condition of being free from impediments (such as level differences without ramps) to the mobility of seniors and physically disabled people.
3. Non-step bus: A bus whose doorways are very close to ground level.

(3) **Bicycle safety awareness**

This program advances efforts to raise public awareness concerning bicycle safety, such as the inclusion of “bicycle safety promotion” as one focus of the spring Nationwide Traffic Safety Campaign in 2004.

**4. Traffic Safety Measures for Night/Dusk**

(1) **Promotion of use of reflectors**

Through traffic safety lessons and publicity campaigns, this program endorses the wearing of reflective materials as an effective means of preventing nighttime accidents.

(2) **Promotion of early use of headlights**

This program calls upon prefectural governments to encourage motorists to switch on their headlights early as a preventive measure against evening accidents.

(3) **Promotion of greater visibility in signs**

This program encourages the deployment of larger, brighter road signs and brighter road markings for improved visibility.

**5. Electric Wheelchair Safety Measures**

**Electric wheelchair safety model areas**

In order to prevent traffic accidents involving electric wheelchairs, this program conducted R&D in FY2002 on programs for providing guidance and education on the safe use of electric wheelchairs, and created manuals for instructors and wheelchair users. In FY2003, the program designated a model area where courses based on the manuals were provided to train wheelchair safety instructors and educate wheelchair users on traffic safety.

**II. Traffic Safety Measures for Elderly Drivers**

**1. Enhancement of Courses for Elderly Drivers**

(1) **Courses for senior drivers**



Course for senior drivers

This program conducts research on the level of driving aptitude necessary for senior motorists by examining the skills of drivers aged 70 and older whose licenses are due for renewal. The courses require participants to operate a motor vehicle and undergo testing with aptitude test machines, with the aim of having them directly recognize changes in their physical faculties with respect to driving aptitude. The results of this research are used to develop suggestions and guidance on elderly driving education.

(2) Courses for senior operators of commercial vehicles

Under the supervision of the Ministry of Land, Infrastructure and Transport, the National Agency for Automotive Safety and Victims' Aid assesses the aptitude levels required of elderly drivers who operate buses, taxis, or other commercial vehicles, and uses the results of its evaluations to encourage the drivers to reflect upon how they need to deal with the physical changes caused by aging in order to maintain the ability to drive safely.

## **2. Efforts Aimed at Younger Drivers**

(1) Government-sponsored publicity

The government sends messages to younger drivers through television, magazines, newspapers, and other media to help them to recognize how aging affect the physical faculties of older drivers, and to encourage them to adopt driving habits that are considerate toward elderly motorists.

(2) Senior driver markers

This program is aimed at increasing the number of elderly motorists who mark their vehicles with senior driver markers, so that younger drivers can become more aware of the changes in the physical faculties of older drivers and recognize the need to treat them with consideration.

## **3. Enhancement of Road Environment**

### **Road environment enhancements**

This program promotes construction of auxiliary lanes (for passing slower moving vehicles), installation of additional road lighting, improvement of the brightness and size of road signs, improvement of the brightness of road markings, conversion to LED traffic signals, development of “Michi-no-Eki” roadside stations and other easy-access parking areas, and other enhancements to the road environment.

## **4. Elderly Driver-oriented Vehicle Safety Measures**

### **Comprehensive Vehicle Safety Plan for Responding to a Rapidly Aging Society**

Aimed at supporting the development of vehicle safety measures targeted at older motorists, this plan promotes the implementation of accident surveys, behavior analysis,

and R&D for creating new technologies to improve the sensory perception of elderly drivers.

### **III. Citizen-involved Traffic Safety Campaigns and Enhanced Protection for Seniors**

#### **1. Community Traffic Safety Measures**

Traffic Safety Awareness Program for Seniors (See I-3-(2) above.)

#### **2. Traffic Safety Instructor Training**

##### **Citizen-involved project for improving traffic safety for seniors**

This project provides advanced training to “Silver Leaders,” safety instructors who offer guidance to seniors and other community members, to improve their teaching skills and promote widespread sponsoring of community-based traffic safety courses for the elderly.

#### **3. At-home Traffic Safety Education**

Traffic Safety Awareness Program for Seniors (See I-3-(2) above.)

#### **4. School Traffic Safety Measures**

##### **Research Project for Promoting Effective Traffic Safety Education**

This project carries out research for developing effective traffic safety education strategies to help school students understand the reasoning and behavior that make seniors and toddlers susceptible to accidents as pedestrians, and to instill the students with greater awareness of the need to protect the safety of those pedestrians.

## 2 Road Traffic Accident Statistics for 2003

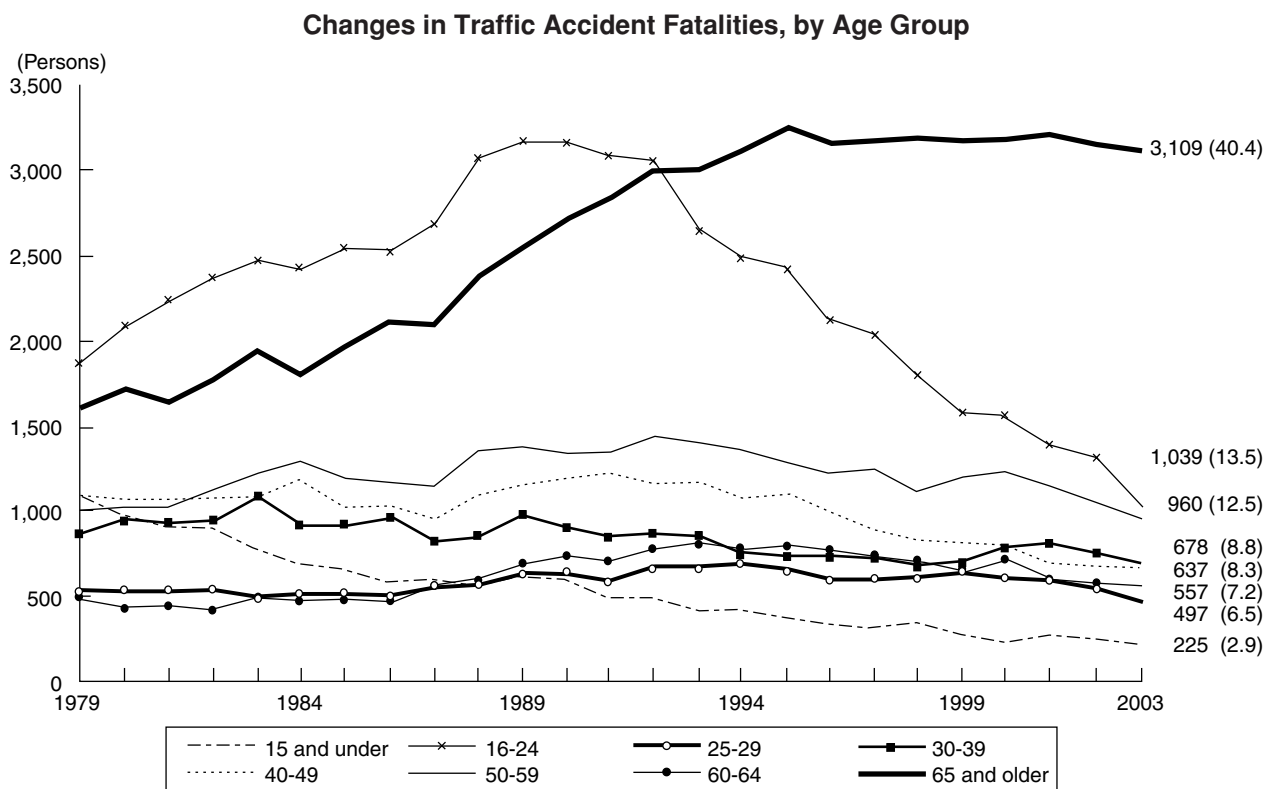
### 2-1 Overview

Road traffic accidents	947,993
Casualties (Fatalities + Injuries)	1,189,133
Injuries	1,181,431
Fatalities (within 24 hours of the accident)	7,702
Fatalities (within 30 days of the accident)	8,877

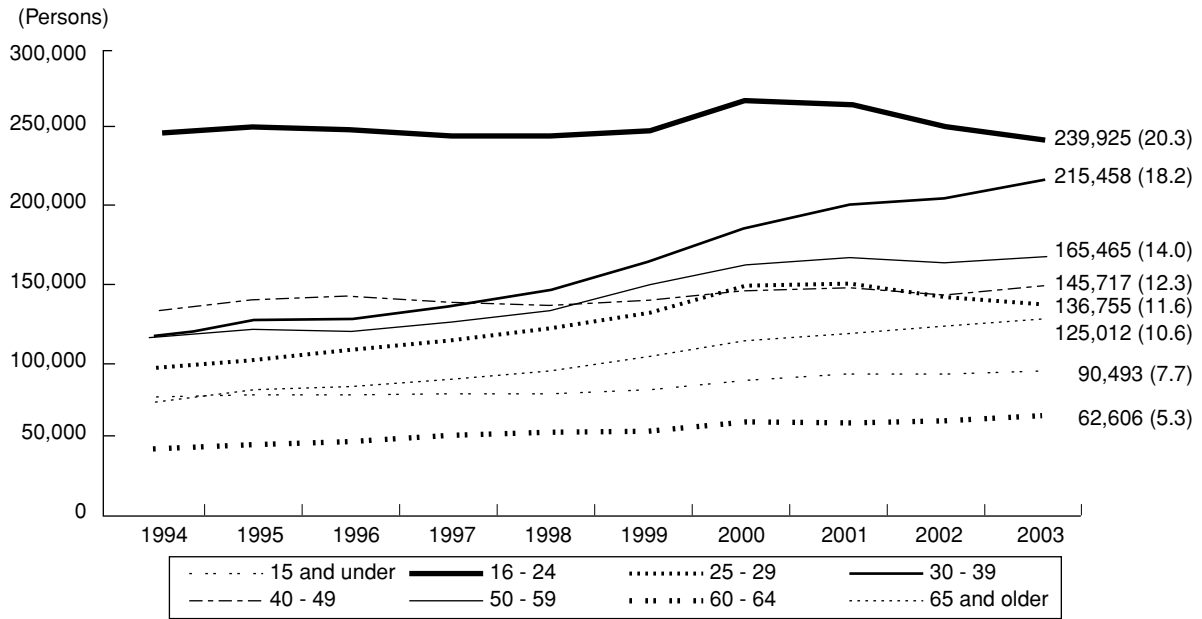
### 2-2 Casualties: By age group

People aged 65 and older had the largest number of road fatalities of any age group, 3,109, marking the eleventh straight year that this segment has remained at the top. The group with the second largest number of fatalities, 1,039, was people aged 16-24, and both groups combined accounted for 53.9% of the total death toll. In comparison with the preceding year, the number of fatalities declined in every age group, particularly the 16-24 segment (down 277).

The number of injuries was highest for 16-24 year-olds, 239,925, representing 20.3% of the total. Compared with 2002 figures, injuries sharply decreased for the 16-24 group (down 9,977) and the 25-29 group (down 3,751), but drastically rose for the 30-39 group (up 11,583) and the 65 and older group (up 5,277).



### Changes in Traffic Accident Injuries, by Age Group

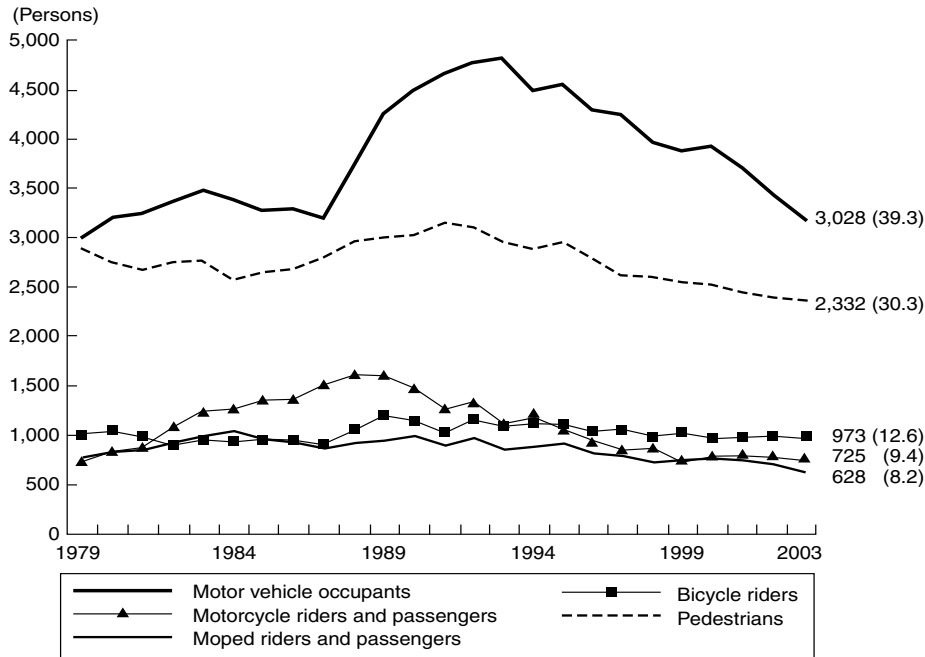


**Notes:** 1. Source: National Police Agency  
 2. Figures in parentheses show percentage (%) of injuries by age group.

### 2-3 Casualties: By mode of transportation

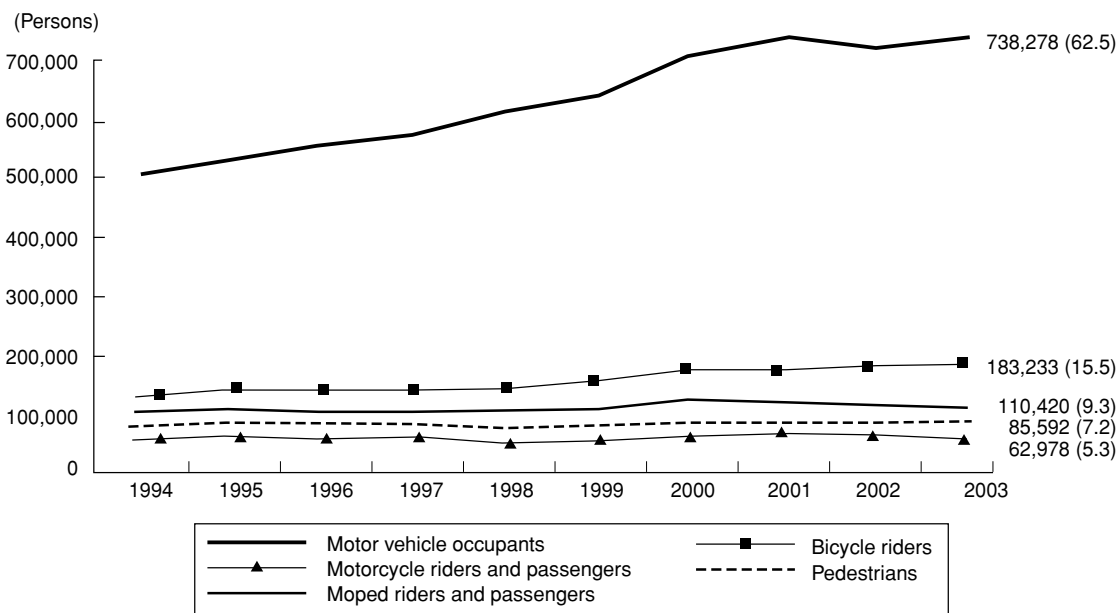
In terms of the mode of transportation used by the accident victim, automobile occupants accounted for the largest number of fatalities, 3,028 (39.3% of total), and the largest number of injuries, 738,278 (62.5% of total).

**Changes in Traffic Accident Fatalities, by Mode of Transportation**



**Notes:** 1. Source: National Police Agency (figures for "Other" omitted)  
2. Figures in parentheses show percentage (%) of fatalities by mode of transportation.

**Changes in Traffic Accident Injuries, by Mode of Transportation**



**Notes:** 1. Source: National Police Agency (figures for "Other" omitted)  
2. Figures in parentheses are percentages of injuries by mode of transportation.

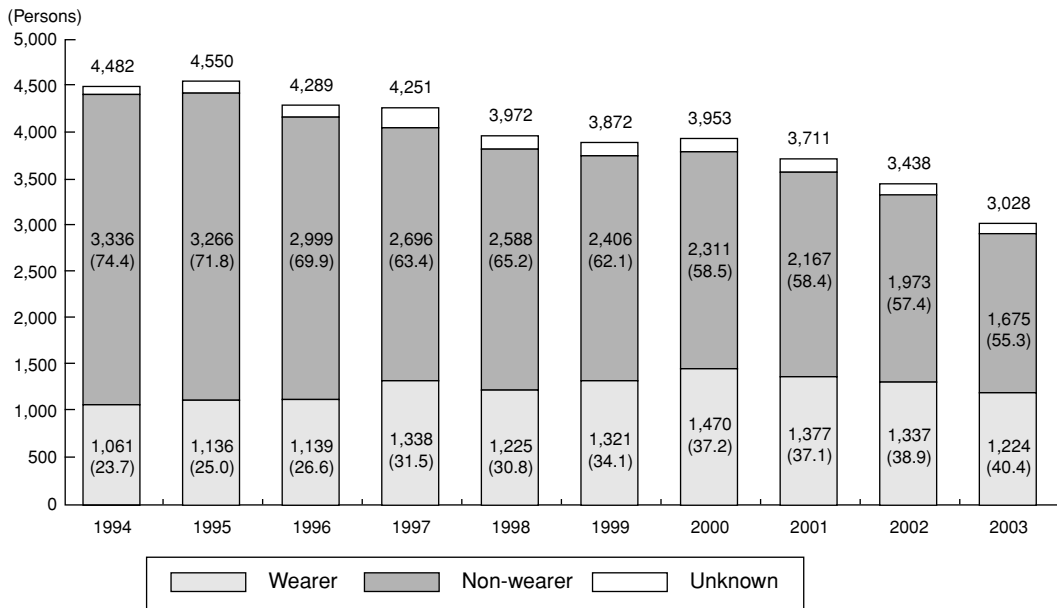


## 2-4 Fatalities: By seat belt usage

A total of 1,675 automobile occupants were killed in accidents while not wearing seat belts. This represented a decrease of 298 (15.1%) from the preceding year.

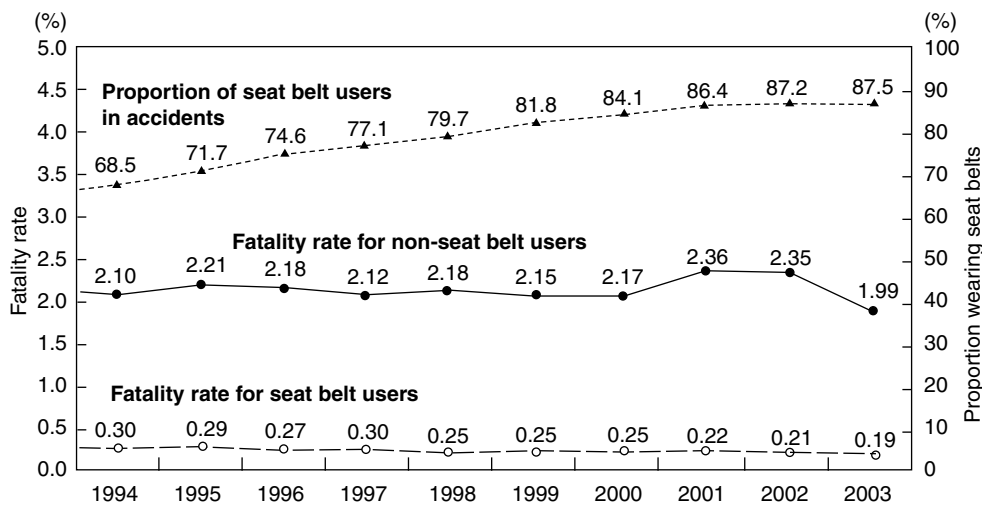
The fatality rate (ratio of fatalities to total casualties) for seat belt wearers was approximately ten times lower than that for non-wearers.

**Changes in Automobile Occupant Fatalities, by Seat Belt Usage**



Notes: 1. Source: National Policy Agency  
2. Figures in parentheses are percentages of the total.

**Changes in Automobile Occupant Fatality Rates, by Seat Belt Usage;  
Usage of Seat Belts by Automobile Occupant Casualties**



Note: Source: National Policy Agency

## 2-5 Child fatalities and child safety seat usage

A total of 31 children under age six were killed while riding in an automobile. Of the 18 deaths that occurred in vehicles not heavily damaged, 4 children were restrained in child safety seats, and 14 were not.

## 2-6 Annual, weekly, daily accident/fatality peaks

The month with the highest accident and fatality rates is December.

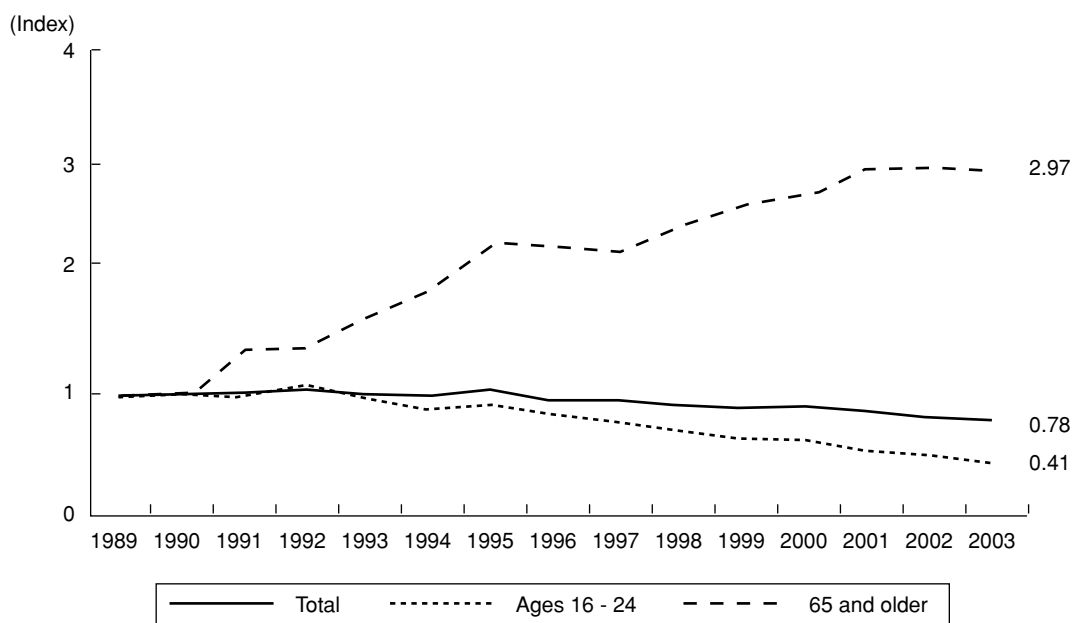
Fatal accidents occur more frequently on Friday and Saturday than on other days.

Nighttime accidents account for 29.1% of all accidents, and for 59.1% of all fatal collisions. The nighttime fatality rate (fatal crashes per 1,000 accidents) is 2.6 times higher than that for the daytime.

## 2-7 Fatal accidents caused by primary party

The number of fatal accidents in which automobile drivers are the primary party\* continued its slow downward trend. However, the number of primary-party drivers aged 65 and older remains 2.97 times the level in 1989.

**Changes in Fatal Accidents Caused by Primary-party Automobile Drivers (Young and Elderly)**



**Notes:** 1. Source: National Police Agency  
2. Index figures are based on 1989 (= 1).

\* The party most to blame for the accident, or, when the parties involved share nearly equal fault, the party that suffered the least harm.

## 3 Major Road Traffic Safety Measures in FY2003

### 3-1 Road environment enhancements

New enhancement initiatives

Promotion of the Provision of Traffic Safety Facilities

Development of the Intelligent Transport Systems

### 3-2 Implementation of the Traffic Safety Initiative

Traffic safety education for seniors

Education on seat belt and child safety seat usage

### 3-3 Promotion of safe driving

Enhancement of driver's education and driver supervision

### 3-4 Improvement of vehicle safety

Dissemination of safety assessment results

Improvement of vehicle recall systems

### 3-5 Enhancement of rescue systems

Emergency life guard training

Expansion of emergency contact system

### 3-6 Improvement of liability security and victim support

Promotion of accident victim support measures

### 3-1 Road environment enhancements

#### New enhancement initiatives

With an eye on promoting the efficient, effective, and focused implementation of infrastructure development projects, the government enacted in April 2003 the Priority Plan Act for Social Infrastructure Development, which stipulated the creation of the "Priority Plan for Social Infrastructure Development" to integrate nine long-term projects scheduled for completion in FY2002-2003. As result, the long-term plan for the Provision of Traffic Safety Facilities was integrated into the Priority Plan along with infrastructure development projects for other fields.

In addition, the government revised the relevant clauses of the Emergency Measures Law Relating to Provision of Traffic Safety Facilities, and changed the law's name to the "Law on Promotion of Provision of Traffic Safety Facilities."

In accordance with the Priority Plan Act for Social Infrastructure Development, the Cabinet adopted in October 2003 the Priority Plan for Social Infrastructure Development for implementation from FY2003 to FY2007. This plan, which shifts the government's focus from "project quantity" to "project outcome," includes as one of its objectives an effort to reduce 2002's casualty-inflicting road accident rate of 118 incidents per 100 million vehicle-kilometers by 10% (down to 108 incidents) by 2007.

The Provision of Traffic Safety Facilities is focused on: (1) ensuring safe travel for pedestrians and bicycle riders, (2) maintaining safe, smooth traffic flow on arterial roads, and (3)

using information technology to realize a safe, pleasant road environment.

### **Promotion of the Provision of Traffic Safety Facilities**

The following projects were conducted in FY2003 for the first year of the Provision of Specific Traffic Safety Facilities, which is based on the Priority Plan for Social Infrastructure Development.

- (1) In July, 796 residential and commercial districts were designated under the “Safe Pedestrian Area” program as urgently needing measures to ensure the safety of pedestrians and bicycle riders traveling through them. With the cooperation of prefectural public safety commissions and road management agencies, program coordinators have implemented, comprehensive, wide-area accident prevention measures as a first step toward the goal of reducing casualty-inflicting accidents in the areas by approximately 20% (approximately 30% for pedestrians and bicycle riders) in the five years from FY2003 to FY2007.
- (2) In another project, 3,956 intersections and road sections with a high incidence of casualty-inflicting accidents were designated as “black spots,” and concentrated accident prevention measures were implemented to reduce the number of casualty-inflicting accidents at each site by approximately 30% in the five years from FY2003 to FY2007 with support from prefectural public safety commissions and road management agencies.
- (3) In order to help seniors and disabled people lead independent, socially active lives, projects were implemented to develop broad, level walkways and install barrier-free signals in areas around train stations and other public facilities, and to install elevators for pedestrian overpasses at busy traffic junctions. As a response to the growing number of elderly motorists, traffic signals were converted to LED systems, and road signs and markings were redesigned to be more visible.

### **Development of the Intelligent Transport Systems**

In accordance with the Comprehensive ITS (Intelligent Transport Systems) Initiative formulated in 1996, R&D, field tests, infrastructural development, and other endeavors are being carried out to develop the ITS, which uses advanced information technology to integrate people, roads, and vehicles into a unified system to improve safety, transport efficiency, and other aspects of road traffic.

- (1) VICS (Vehicle Information and Communication System) has been further developed, and nationwide service started in February 2003. In addition, ETC (Electronic Toll Collection) service, which allows motorists to automatically pay tolls without stopping at toll booths, has been extended to cover virtually all toll collection points throughout the nation as of the end of March 2004.
- (2) Progress has also been made in the UTMS (Universal Traffic Management Systems) project, which is aimed at preserving road safety and convenience through active, comprehensive management of traffic flow and volume. Advances include system enhancements and deployment of road infrared beacons, which measure traffic and relay information between navigational devices and traffic control centers.
- (3) R&D efforts are being focused on the rapid development and deployment of a triad of

innovative road technologies: ITS-compliant next-generation “smartway” roads, “smart gateways” for advanced communication between automobiles and roadside systems, and high-speed “smart cars.”

### **3-2 Implementation of the Traffic Safety Initiative**

#### **Traffic safety education for seniors**

With the cooperation of local governments, a variety of traffic safety education programs were offered to elderly people who do not hold driver’s licenses, attend seniors’ clubs, or engage in other public activities that provide opportunities to receive safety guidance. These community-based programs included visits by instructors to the residences of elderly people living along roads with a high incidence of traffic accidents, and traffic accident prevention advice given through doctors and other professionals who have frequent contact with seniors.

In addition, projects were pursued to improve safety awareness among the elderly through peer-to-peer instruction, such as efforts to actively promote the establishment of traffic safety committees at seniors’ clubs and nursing homes, and the training of Silver Leaders (instructors who provide safety education to seniors). Other such projects included the creation of “Hiyari Maps” (maps of near-miss spots) with the involvement of seniors’ clubs, and the provision of guidance and assistance to locally led initiatives, such as model projects offering hands-on training for senior motorists or instruction on the safe use of electric wheelchairs, which are recently becoming more prevalent.

The “Citizen-involved Project to Promote Traffic Safety Education for Seniors” was implemented to train Silver Leaders as promoters of sustained safety education for seniors that is oriented toward involvement, hands-on experience, and personal practice. Moreover, community gatherings were sponsored under the “Traffic Safety Awareness Program for Seniors” to bring together people of all generations to share their knowledge and concerns regarding traffic safety.

Awareness-raising efforts aimed at ensuring that proper safety advice is given at the home were made through the Traffic Safety Mothers and other groups.

#### **Education on seat belt and child safety seat usage**

Efforts were made to raise awareness regarding the benefits of seat belts and provide instruction on their correct usage through various outlets, such as traffic safety seminars and campaigns.

In response to the common problem of incorrectly fastened child safety seats, promotional activities were conducted in conjunction with the spring and fall Nationwide Traffic Safety Campaigns and other events, and workshops on correct usage were sponsored at obstetrics/gynecology clinics, kindergartens, nursery schools, and other venues.

### **3-3 Promotion of safe driving**

#### **Enhancement of driver’s education and driver supervision**

Since June 2002, education for drivers renewing their licenses has been enhanced through the

establishment of four separate seminars based on driving record: model drivers, average drivers, traffic rule violators, and first-time renewals.

In addition, there is an ongoing effort to raise the quality of Class 2 large/general vehicle license holders by requiring driving schools to instruct Class 2 students in first-aid techniques and large/general passenger vehicle operation.

Efforts were stepped up in 2003 to encourage trucking business owners and operations managers to ensure that their drivers refrain from drunk driving and other forms of negligent, dangerous behavior on the road.

### **3-4 Improvement of vehicle safety**

#### **Dissemination of safety assessment results**

Information is disseminated on a variety of safety-related assessments, including the results of comparative tests on the collision safety of automobiles and child safety seats, and the extent to which motor vehicles are fitted with air bags and other safety devices.

In FY2003, pedestrian head protection was added to the scope of collision safety tests, and the overall results of these tests were published.

#### **Improvement of vehicle recall systems**

On January 1, 2004, the government put into effect recall systems for tires and child safety seats that were fitted after the purchase of the vehicle.

The recall system improvement project is continuing to collect extensive defect information from users via a hotline service, and analyze this data to promptly identify vehicles that need to be recalled. The defect information is published on the Ministry of Land, Infrastructure and Transport's website, and other efforts are being made to increase the information gathering capabilities of recall systems.

### **3-5 Enhancement of rescue systems**

#### **Emergency life guard training**

As of the end of 2003, there were 25,125 people qualified as emergency life guards capable of handling airway management, establishing IV lines, and performing other physician-directed first aid techniques on accident victims who have suffered cardiopulmonary arrest and consequently the quality of prehospital care has improved.

#### **Expansion of emergency contact system**

In accordance with the UTMS (Universal Traffic Management Systems) project and other initiatives, efforts were made to accelerate rescue and cleanup responses to traffic accidents and other road emergencies by expanding HELP (Help systems for Emergency Life saving and Public safety), a GPS-based system designed to improve the rescue success rate by allowing accurate accident information (location, etc.) to be instantly sent via mobile phones and other

communicators.

As an endeavor to reduce the response time and collision risk of ambulances en route to accident sites, plans were made to develop FAST (Fast Emergency Vehicle Preemption Systems) for providing route information to ambulance drivers and controlling traffic signals to facilitate ambulance travel.

### **3-6 Improvement of liability security and victim support**

#### **Promotion of accident victim support measures**

This project is aimed at aiding traffic accident victims by developing a safe, stress-free traffic environment based on the public's mutual support. Project activities include: (1) creation of manuals for support providers, (2) development of systems and networks to support the establishment of self-help groups to help victims recover from emotional trauma, and (3) sending of project specialists overseas to receive advanced training.

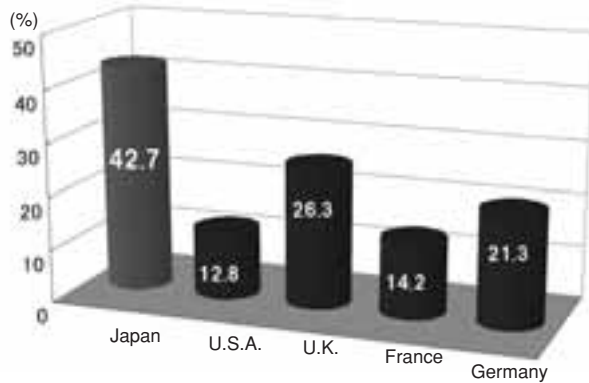
## Focus Development of “Safe Pedestrian Areas”

More than 40% of traffic accident fatalities in Japan are pedestrians and bicycle riders, a ratio higher than that of Western industrialized nations. Moreover, nearly 60% of pedestrian deaths occur near the victim’s home.

In response to this critical situation, public safety commissions and road management agencies are pursuing the creation of “Safe Pedestrian Areas” to ensure the safety of pedestrians and bicycle riders.

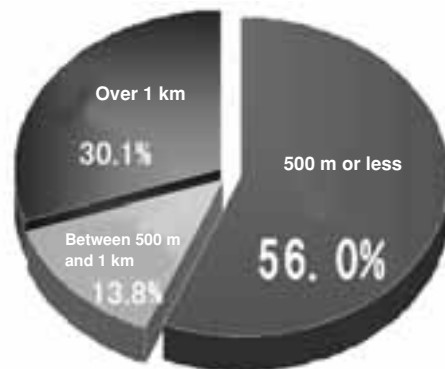
Under this system, a 1-2 km<sup>2</sup> section (usually bordered by major roads) in an accident-prone residential or commercial district is targeted for remedial action. Local residents/workers are called upon to attend safety workshops and high-risk site inspections, and a variety of community-approved measures are implemented to prevent casualty-inflicting accidents.

**Ratio of pedestrians/bicycle riders in accident fatalities (death within 30 days)**



Source: International Road Traffic and Accident Database (IRTAD)  
Note: Accident data is for 2002.

**Distance from home of fatal pedestrian accidents (2003)**



### Examples of Measures Taken

#### Sidewalk Enhancements

- Widening of roadside strips
- Enhancement of sidewalks, bike paths, wide sidewalks, shared roads
- Removal of bumps and steep slopes; burying of power lines



#### Traffic Signal Enhancements

- Signal control based on traffic data
- Conversion to LED/barrier-free signals
- Installation of bright/illuminated signs, etc.



#### Creation of pedestrian/bicycle rider priority zones

- Installation of speed bumps



- Regulation of pedestrian/bicycle rider routes



#### Intersection Enhancements

- Creation of right-turn lanes
- Improvement of irregular intersections
- Creation of designated parking spaces
- Crackdowns on parking violators





## Section 2 Railway Transport

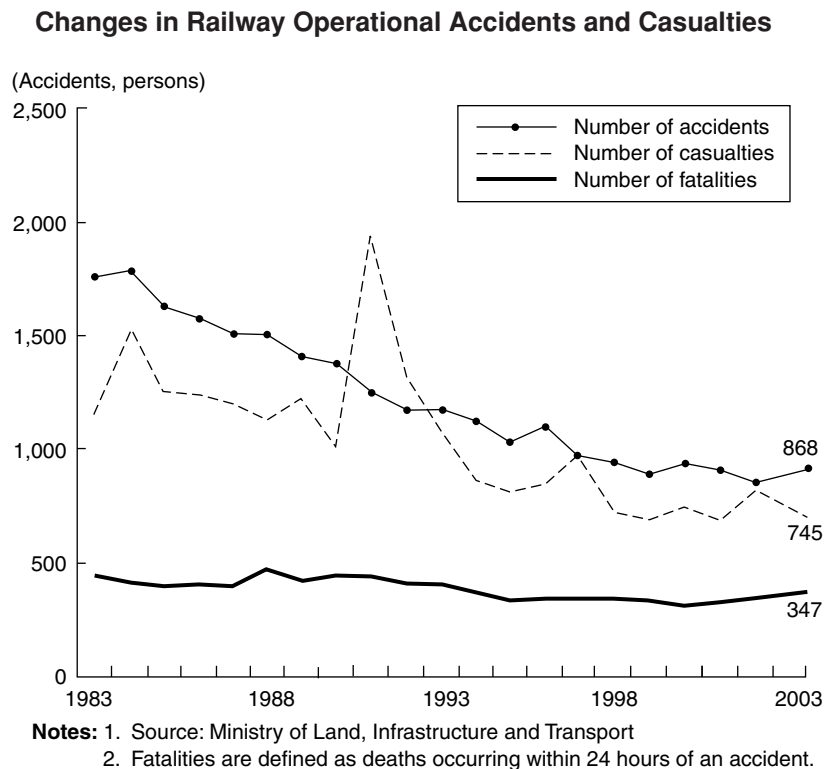
### 1 Railway Traffic Accident Trends

The number of railway operational accidents<sup>1</sup> has continued its long downward trend, with 868 incidents occurring in 2003. This steady decline can be attributed to the success of a comprehensive set of safety initiatives, including the implementation of measures for preventing crossing accidents, the installation and upgrading of operational safety systems, improvements to controllers, and higher crew training standards.

A total of 745 casualties (including 347 fatalities) resulted from the operational accidents, representing a 9.0% drop from the preceding year.

Half of the accidents occurred at crossings (434), but this figure has been decreasing over the long run.

There were two major accidents during the year, a Keisei Electric Railway derailment on January 23, and a JR Kyushu derailment on July 18.



1. "Railway operational accidents" refers to train collisions, derailments, fires, crossing accidents (collisions/scrapes with humans, automobiles, etc. at crossings), road accidents (collisions/scrapes with humans, automobiles, etc. at road contact points other than crossings), human accidents (casualties occurring from accidents other than the aforementioned), and damage to railway structures (accidents resulting in damage worth 5 million yen or more, excluding the aforementioned).

## **2 Major Railway Traffic Safety Measures in FY2003**

### **2-1 Railway environment enhancements**

#### **Inspection and enhancement of railway structures**

In order to prevent damage to railway structures from landslides, falling rocks, avalanches, and other natural forces, this program promoted the enhancement of disaster prevention systems, and called upon railway operators to regularly perform maintenance and repairs.

In addition, full inspections and safety assessments were conducted on tunnels, bridges, and other structures in order to ensure safe travel on smaller regional lines.

In another effort, the elimination of mobility barriers at railway stations was promoted to improve the level of safety for seniors and disabled people. This included the elimination of bumps and level differences, and the installation of fall prevention fittings.

In order to prevent casualties caused by falls from platforms, railway companies were encouraged to install alert buttons and fall detection mats, create escape space under platforms, and implement other safety measures.

#### **Deployment of operational safety systems**

This project promoted efforts to ensure safe train operation, including the further establishment of Centralized Train Control (CTC) systems, and the installation of Automatic Train Stop (ATS) systems on lines not yet so equipped.

#### **Reinforcement of earthquake resistance**

Railway operators were called upon to reinforce the earthquake resistance of railway overpasses, tunnel pillars, and other structures, including measures to prevent railway bridges from falling.

#### **Promotion of subway fire prevention measures**

In response to concerns arising over the devastating subway fire that occurred in South Korea on February 18, 2003, this project conducted a survey of fire prevention equipment at domestic subway stations, and requested subway operators to promptly bring inadequately equipped stations into compliance with the “Standards for Fire Prevention in Subways” (enacted in 1975) in order to ensure the safety of users.

### **2-2 Measures to prevent level crossing accidents**

Based on the Law for Promotion of Level Crossing Improvement (Law No. 195 of 1961) and the Seventh Comprehensive Crossing Accident Prevention Initiative, projects were implemented to replace level crossings with overpasses or underpasses, carry out structural improvements, and install new safety equipment.

As of the end of FY2002, 2,174 sites – requiring overpass / underpass construction –, 3,924 sites – requiring structural improvement –, and 27,629 sites – requiring new safety equipment –

were designated for improvement under the above law and work has been continued to accomplish these improvements.

At the same time, efforts were continued to phase out certain crossings. As of the end of FY2002, the nationwide total number of crossings had been reduced to 36,131.

# CHAPTER 2 MARITIME TRANSPORT

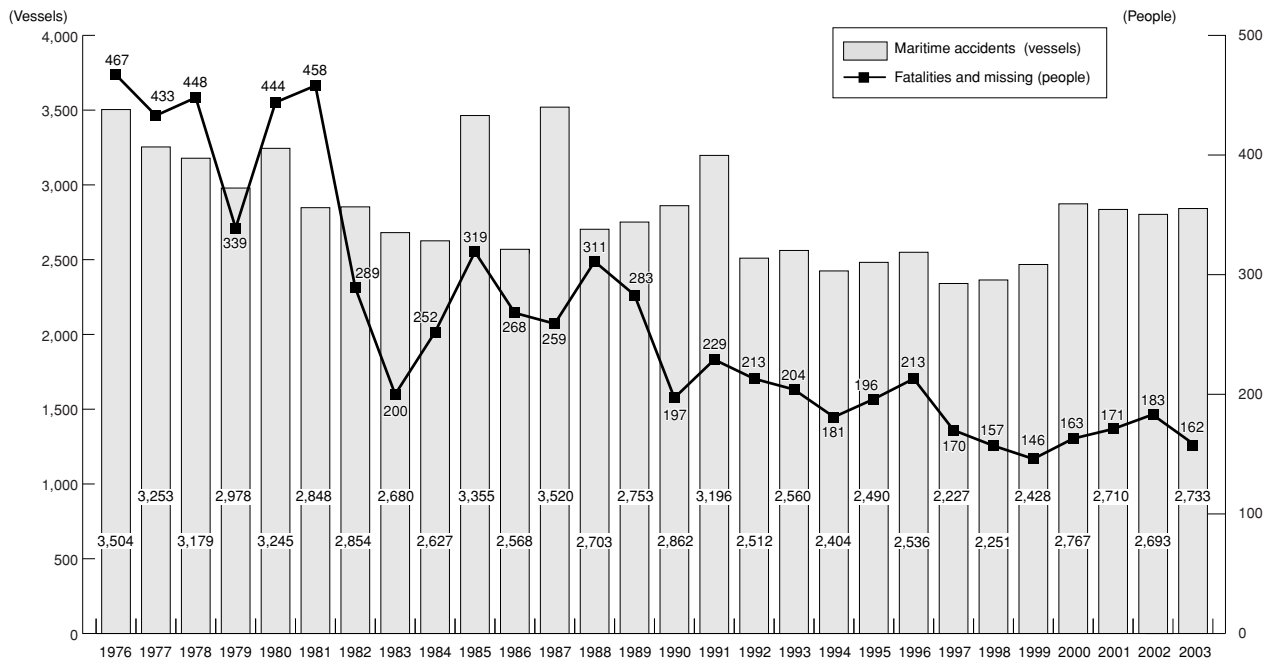
## 1 Maritime Accident Trends

### 1-1 Maritime accidents and rescues in 2003

A total of 2,733 vessels were involved in maritime accidents, with 1,006 of them safely returning to port without assistance. Of the remaining 1,727 vessels, 1,439 needed to be rescued. A total of 13,039 people were on board the vessels involved in accidents. The vessels that required no assistance carried 8,420, while 4,457 of the remaining 4,619 required rescue.

There were 162 people who died or became missing in maritime accidents, and 136 people who died or became missing from falling overboard.

**Changes in Vessels, Fatalities and Missing People in Maritime Accidents**



Notes: 1. Source: Japan Coast Guard  
 2. Figures for fatalities and missing people include those who, due to illness or other reasons, became unable to operate the vessel and died as it drifted.

### 1-2 Major constituents of 2003 maritime accidents

The growth of marine leisure activity in recent years has been accompanied by a rise in maritime accidents involving pleasure boats and pleasure fishing boats. The number of such vessels involved in maritime accidents rose by 59 over the preceding year to 1,051, accounting for 38% of all vessels in maritime accidents.

Fishing vessel accidents were responsible for the largest number of fatalities and missing people resulting from maritime accidents (60% of total) and from falling overboard (66% of total).

## **2 Major Maritime Traffic Safety Measures in FY2003**

### **2-1 Maritime environment enhancements**

In accordance with the Priority Plan for Social Infrastructure Development, projects were carried out to develop ports, harbors, and selected waterways, and to enhance the earthquake resistance of ports and harbors. Under the Long-term Development Plan for Fisheries Infrastructure (FY2002-2006), improvements were made to fishing port and area facilities to promote greater safety for fishing vessels.

The “Cabinet Order for the Enforcement of the Port Regulations Law” and the “Regulations for the Enforcement of the Port Regulations Law” were partially revised on July 1, 2003 to respond to changes in port traffic conditions accompanying the progress of harbor facility development. Changes included the expansion of the areas of ports, and the re-defining of sections of ports and passages.

In order to improve the safety and traffic efficiency of congested waters, the government established the Maritime Traffic Information Systems to provide maritime traffic information and control shipping, and it operates Traffic Advisory Service Centers, such as the Ise Wan Traffic Advisory Service Center, which began operating on July 1, 2003.

### **2-2 Maritime safety campaigns**

The government carried out the “FY2003 National Emphasis Campaign for Prevention of Maritime Accidents.” The campaign included two important focuses, one aimed at preventing accidents by encouraging vessel operators to dutifully conduct pre-departure checks and watch out for other vessels, and the other aimed at promoting the wearing of life jackets and use of other self-preservation measures. These focuses were selected because maritime accidents resulting in fatalities and missing people are most commonly capsizings and collisions (in that order), and because life jackets are very effective for saving lives.

### **2-3 Promotion of disaster prevention**

Ship owners, crews, and the government joined forces to promote measures for preventing crew casualties and other maritime disasters, including the formulation of the FY2003 implementation plan for the Eighth Fundamental Program for Preventing Ship Disasters (a 5-year program), and the development and application of safety and hygiene management systems.

### **2-4 Promotion of vessel safety**

The prescriptions of the International Convention for the Safety of Life at Sea (SOLAS) are constantly reviewed and updated to incorporate advances in technology related to ship safety. The government revised domestic laws with regard to such changes and the requirement for ships to carry search and rescue manuals. In addition, domestic regulations were rewritten in response to a revision of the Convention on the International Regulations for Preventing Collisions at Sea, and life jacket standards were revised to reflect a new requirement making wearing of life jackets mandatory on small craft.

In response to the growing popularity of marine recreation and the increased presence and diversification of pleasure boats, the process of small craft inspections was streamlined by changing the scope of inspections from “vessel tonnage under 20 tons gross” to “vessel length under 24 meters,” and by also enlarging the scope of vessels not subject to the inspections.

Driven by growing public awareness concerning the important role played by Port State Control (PSC) on vessels of foreign registry since May 2003, the government continued to enhance PSC systems and coordination with other authorities, and focused PSC on vessels of registries with frequent incidence of defects.

### **2-5 Enhancement of other safety measures**

The “Law for Ships’ Officers and Boats’ Operators” (enacted on June 1, 2003), which defines duties of captains of small vessels, made it mandatory for certain passengers to wear life jackets. Campaigns were conducted at boat shows and other venues to raise awareness regarding this requirement.

The Law Partially Revising the Law for Ships’ Officers was promulgated on June 7, 2002 and put into force on June 1, 2003 to reorganize the system of officer qualifications, clearly define the responsibilities of small vessel captains, and make other changes designed to respond to the needs of small vessel users and to improve the safety of small vessel voyage.

## CHAPTER 3 AIR TRANSPORT

### 1 Air Traffic Accident Trends

The annual number of civil aircraft accidents in Japan has remained mostly level in recent years, showing only slight fluctuations. A total of 19 accidents (including one overseas) occurred in 2003, the lowest figure in the past 50 years. These accidents resulted in 12 deaths and 13 injuries.

#### Changes in Civil Aircraft Accidents and Casualties

Aircraft type Year	No. of accidents								No. of casualties	
	Large aircraft	Small aircraft	Ultra-light aircraft	Helicopters	Gyroplanes	Gliders	Airships	Total	Fatalities	Injuries
1999	1	9	5	7	1	5	0	28	9	18
2000	3	5	5	11	1	5	0	30	9	28
2001	2	6	2	7	0	4	0	21	12	131
2002	4	4	5	15	0	7	0	35	13	65
2003	3	10	3	1	0	2	0	19	12	13

- Notes:**
1. Source: Ministry of Land, Infrastructure and Transport
  2. All figures are as of the end of the given year.
  3. Figures include accidents involving Japanese aircraft outside Japan (2 in 2000, 1 in 2003), and accidents involving foreign aircraft in Japan (1 in 2003).
  4. Figures do not include natural deaths or non-accidental casualties (self-inflicted or otherwise) that occurred on board aircraft.
  5. Fatalities include all deaths occurring within 30 days and missing people.
  6. Injury figures for 2002 and 2003 are provisional.

### 2 Major Air Traffic Safety Measures in FY2003

In order to increase safety, efficiency, and capacity for air traffic in offshore airspace, the government is pressing ahead with the development of a new satellite-based system for air traffic communication, navigation, and control. In FY2003, this effort included continued work on the production of the new Multi-functional Transport Satellite (MTSAT) II and rockets for launching the new MTSAT I and II.

The government also completely redesigned the air traffic control area in order to simplify airspace structure and clearly delineate the flight requirements and services provided for each airspace in compliance with the “classifications” defined by the International Civil Aviation Organization (ICAO) standards.

## **Focus** DC-9 Engine Trouble Leads to Massive Flight Cancellations

In separate incidents occurring on January 6 and 7 of this year, two DC-9s operating in Japan experienced engine malfunctions resulting from flaws in the row-8 stator vanes of the high-pressure compressors. In response, the Ministry of Land, Infrastructure and Transport (MLIT) issued an order to aircraft operators on January 19 requiring them to perform endoscopic inspection on all DC-9-81 and DC-9-87 aircraft before their next flight.

As a result, of the 52 engines inspected, including spares, 21 were discovered to have the same flaw and had to be removed from the aircraft, resulting in the cancellation of approximately 600 flights and the disruption of travel plans for nearly 40,000 passengers.

As the engines had been designed in the US, the MLIT reported the defects to the Federal Aviation Administration (FAA) and requested that it investigate the cause and formulate an appropriate measures immediately. Although the FAA and Pratt & Whitney, the engines' manufacturer, are still in the process of conducting their investigation, the MLIT has adopted an interim measure on February 24 to preserve the safe operation of DC-9-81s and DC-9-87s flying in Japan by requiring aircraft operators to conduct endoscopic inspections on the row-8 stator vanes every 500 flight hours.

The MLIT will consider implementing other necessary measures after receiving the report of the investigation.



— PART II —  
**TRAFFIC SAFETY MEASURES FOR IMPLEMENTATION  
IN FY2004**

**CHAPTER 1 LAND TRANSPORT SAFETY**

**Section 1 Road Transport Safety**

- 1 Road Environment Enhancements**  
Development of “Safe Pedestrian Areas”  
Promotion of black spot remedies  
Barrier-free development of safe walkways
- 2 Implementation of the Road Traffic Safety Initiative**  
Traffic safety education for seniors  
Bicycle etiquette campaigns
- 3 Promotion of Safe Driving**  
Awareness raising for proxy driving service drivers
- 4 Improvement of Vehicle Safety**  
Dissemination of safety assessment results  
Improvement of vehicle recall systems
- 5 Enhancement of rescue systems**  
Rescue service enhancements
- 6 Improvement of liability security and victim support**  
Enhancement of public traffic accident consultation services

**1 Road Environment Enhancements**

With the cooperation of prefectural public safety commissions and road management agencies, the national government will actively promote enhancement of traffic safety facilities and other elements of the road environment during FY2004 in accordance with the aims of the Priority Plan for Social Infrastructure Development.

**Development of “Safe Pedestrian Areas”**

The “Safe Pedestrian Area” program will continue to implement wide-area, comprehensive accident prevention measures in designated residential and commercial districts (bordered by major roads) with high traffic accident casualty rates, based on collaboration with prefectural public safety commissions and road management agencies.

**Promotion of black spot remedies**

With the assistance of prefectural public safety commissions and road management agencies, focused accident prevention measures will continue to be applied to “black spots” intersections and road sections that have a high incidence of casualty-inflicting accidents.

### **Barrier-free development of safe walkways**

In order to ensure the safety and convenience of pedestrians and bicycle riders, the government will promote focused projects for the enhancement of existing sidewalks and the creation of new walkways and bike paths in areas with frequent pedestrian and bicyclist accidents.

In addition, steps will be taken to help seniors and disabled people lead independent, socially active lives by developing broad, level walkways and installing barrier-free signals in areas around train stations, welfare centers, hospitals and other public facilities, implementing reconstruction projects, and burying power lines and other aerial cables. Other projects include the conversion of traffic signals to LED systems, and efforts to enhance the visibility of road signs and markers, such as by redesigning signs to be larger, brighter, and adjustable.

## **2 Implementation of the Road Traffic Safety Initiative**

### **Traffic safety education for seniors**

A “Central Silver Leader Training Program” will be newly implemented under the “Citizen-involved Project to Promote Traffic Safety Education for Seniors,” which is aimed at training Silver Leaders as promoters of sustained safety education for seniors with an orientation toward involvement, hands-on experience, and personal practice. In addition, efforts will be made to further expand the “Traffic Safety Awareness Program for Seniors,” which includes interactive traffic safety seminars that bring together community members of all generations.

### **Bicycle etiquette campaigns**

This project will sponsor campaigns aimed at reducing bicycle accidents and dangerous bicyclist behavior by instructing bicyclists in proper bicycle usage and etiquette, including how to show more consideration toward pedestrians.

## **3 Promotion of Safe Driving**

### **Awareness raising for proxy driving service drivers**

Under Road Traffic Law revisions (Paragraph 5 of Article 86, and other sections) adopted on June 1, 2004, people wishing to drive for proxy driving services (driving someone who has consumed alcohol to his/her home in his/her vehicle) are now required to hold a Class 2 general vehicle license. The government will sponsor publicity activities aimed at encouraging such vehicle operators to acquire this license.

## **4 Improvement of Vehicle Safety**

### **Dissemination of safety assessment results**

Safety assessment tests will continue to be conducted regarding the overall collision safety of automobiles, the ability of vehicles to prevent or reduce pedestrian head injuries, and the comparative effectiveness of child safety seats, and the results of these assessments will be

published. The program will be expanded in FY2004 through the addition of side impact testing and other new tests.

### **Improvement of vehicle recall systems**

The government will enhance its supervision of manufacturers of automobiles and related devices in order to ensure vehicle safety. This will be realized by improving recall systems so that recall orders to manufacturers of design-flawed substandard vehicles and devices fitted after vehicle purchase (tires and child safety seats) can be promptly and accurately processed.

## **5 Enhancement of Rescue Systems**

### **Rescue service enhancements**

In order to provide a more effective response to people injured in traffic accidents, rescue services will be improved through equipment enhancement, promotion of emergency life guard training and deployment, and expansion of the scope of aid that can be provided by emergency life guards (such as use of a defibrillator<sup>1</sup> without a doctor's guidance, and tracheal intubation or drug administration based on a doctor's instructions).

## **6 Improvement of Liability Security and Victim Support**

### **Enhancement of public traffic accident consultation services**

This program will support counselors at local public centers that offer traffic accident consultation by sponsoring visits by program advisors, holding block liaison meetings that include case presentations, and creating and distributing advice booklets.

## **Section 2 Railway Transport Safety**

### **1 Railway Environment Enhancements**

With regard subway stations constructed prior to the 1975 enactment of the "Standards for Fire Prevention in Subways," this project will continue to encourage subway operators to rapidly bring those stations into compliance with the standards in order to ensure the safety of subway users. In addition, a new program will be established in FY2004 to provide partial subsidies on large-scale construction work to install evacuation routes and smoke ventilation systems at stations.

### **2 Measures to Prevent Level Crossing Accidents**

In accordance with the Law for Promotion of Level Crossing Improvement and the Seventh Comprehensive Level Crossing Accident Prevention Initiative, projects will be implemented to replace level crossings with overpasses or underpasses, combine and eliminate certain crossings, and make other improvements to prevent level crossing accidents and facilitate traffic flow.

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1. Defibrillator: A device that externally delivers electrical shocks to the heart.

## **CHAPTER 2 MARITIME TRANSPORT SAFETY**

### **1 Safety Facility Enhancements**

In accordance with the Priority Plan for Social Infrastructure Development, projects will be carried out to develop breakwaters, waterways, anchorages, and other infrastructure, create emergency refuge harbors for small vessel operating in coastal waters, reinforce the earthquake resistance of ports and harbors, and make other improvements.

Under the Long-term Development Plan for Fisheries Infrastructure, fishing port and area facilities will be enhanced to realize greater safety for fishing vessels.

### **2 Improvement of Traffic Information and Control**

The government will continue operating the Maritime Traffic Information Systems, which provide maritime traffic information and control shipping with the aim of ensuring the safe navigation of vessels in Tokyo Wan, Seto Inland Sea, and other congested areas. In addition, the radar monitoring range in the Seto Inland Sea's Bisan area will be enlarged. The government will also continue to promote the development of a maritime highway network by examining ways to create a new traffic system in Ise Wan and deploying in Ise Wan and Seto Inland Sea next-generation navigational support systems that use Automatic Identification Systems (AIS).

### **3 Promotion of Vessel Safety**

In accordance with the "International Convention on Standards of Training Certification and Watchkeeping for Seafarers, 1978" (STCW) and the Convention for the Safety of Life at Sea (SOLAS), the government is promoting proper Port State Control (PSC) with regard to foreign crew licenses, watchkeeping systems, operational requirements (whether crew is fully capable of operating ship systems), and ship security requirements that will enter into force under the amend SOLAS on July 1, 2004.

## CHAPTER 3 AIR TRANSPORT SAFETY

### 1 Safety Facility Enhancements

In response to air traffic increase and the diversification of user needs, this project seeks to expand airway capacity while giving priority to flight safety. Efforts include implementation for the operation of “new air navigation systems” (such as the Multi-functional Transport Satellite (MTSAT)), and the enhancement of current air navigation systems (such as Instrument Landing Systems (ILS) and lighting systems ) in line with progress in the development of new airports.

As a response to the system down failure of the Flight Data Processing System (FDP) on March 2003, this project is developing fail-safe measures to minimize the impact of potential system trouble in air traffic control data processing systems.





*International Association of Traffic and Safety Sciences*