



International Association of Traffic and Safety Sciences

WHITE PAPER

ON TRAFFIC SAFETY

IN JAPAN

2001

Abridged Edition

CABINET OFFICE

Editorial Supervision:

Directorate General for Policy Planning and Coordination, Cabinet Office



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This English version of White Paper on Traffic Safety in Japan was compiled under the supervision of Directorate General for Policy Planning and Coordination, Cabinet Office, Japan.

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

OUTLINE OF WHITE PAPER ON TRAFFIC SAFETY TRAFFIC ACCIDENTS AND CURRENT TRAFFIC SAFETY MEASURES

Cabinet Office

As required by Article 13 of the Traffic Safety Policies Law (Legislation 110, enacted in 1970), each year the government presents its "White Paper on Traffic Safety in Japan" to the Diet.

This document provides a summary of the information contained in this year's White Paper (FY2001 White Paper on Traffic Safety in Japan) — the 31st since the first was issued in 1971.

The main volume of the White Paper, "Traffic Accidents and Traffic Safety Measures in FY 2000" reports the latest national statistics on traffic accidents, organized according to the categories of land transport (road and rail), maritime transport and air transport, and gives an outline of traffic safety measures implemented in FY2000. The volume also explains the Seventh Fundamental Traffic Safety Program (issued on March 16, 2001), which proposes a range of comprehensive and long-term measures relating to traffic safety. This report will focus on the background and most significant measures of the program.

A separate volume of the White Paper, "Traffic Safety Measures for Implementation in FY2001," provides details of the traffic safety measures planned for implementation during the current fiscal year (FY2001), according to the three categories of land transport (road and rail), maritime transport and air transport.



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Part 1. Road Transport

Chapter 1. Trends in Road Traffic Accidents and Future Directions in Traffic Safety Measures

Long-term trends in road traffic accidents

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

From 1971, annual road traffic fatalities fell steadily, down to 8,466 by 1979. However, it began to rise in the following year, exceeding 9,000 yearly in the 1982-1987 period, followed by eight consecutive years of over 10,000 deaths. In 1995 total road fatalities started to fall, dipping below 10,000 in 1996.

Road traffic accidents in 2000

1. Overview

In 2000 a total of 931,934 road traffic accidents occurred in Japan, resulting in a total of 1,164,763 casualties, including 9,066 fatalities.

Road deaths in 2000, though they were held below 10,000 for the fourth consecutive year, represented the first year-on-year rise in five years. In addition, 2000 was the eighth straight year to mark a new high in the total number of road accidents, and the third straight year to mark a new high in total road accident casualties. (See **Fig. 1**)

2. Traffic accident fatalities and injuries by age group

The year 2000 was the eighth straight year in which the elderly (people over 65), with 3,166 deaths or 34.9% of total, accounted for more road fatalities than any other age group. Next highest was the age group of 16 to 24 (1,563 deaths, 17.2% of the total). Together, these two age groups shared 52.1% of all traffic fatalities. (See **Fig. 2**)

Young people (16 to 24) also suffered 23.1% (266,728) of all road injuries — more than any other age group. The number of people injured in traffic accidents was higher than the previous year for all age groups.

3. Traffic accident fatalities and injuries by road user type

Statistics show that motor vehicle occupants (drivers and passengers), with 3,953 deaths or 43.6% of total, accounted for more road fatalities than any other type of road users.

Motor vehicle occupants also topped the list of injuries by road user type (708,645, 61.3% of total).

Figure 1 Changes in Road Traffic Accidents, Casualties and Fatalities

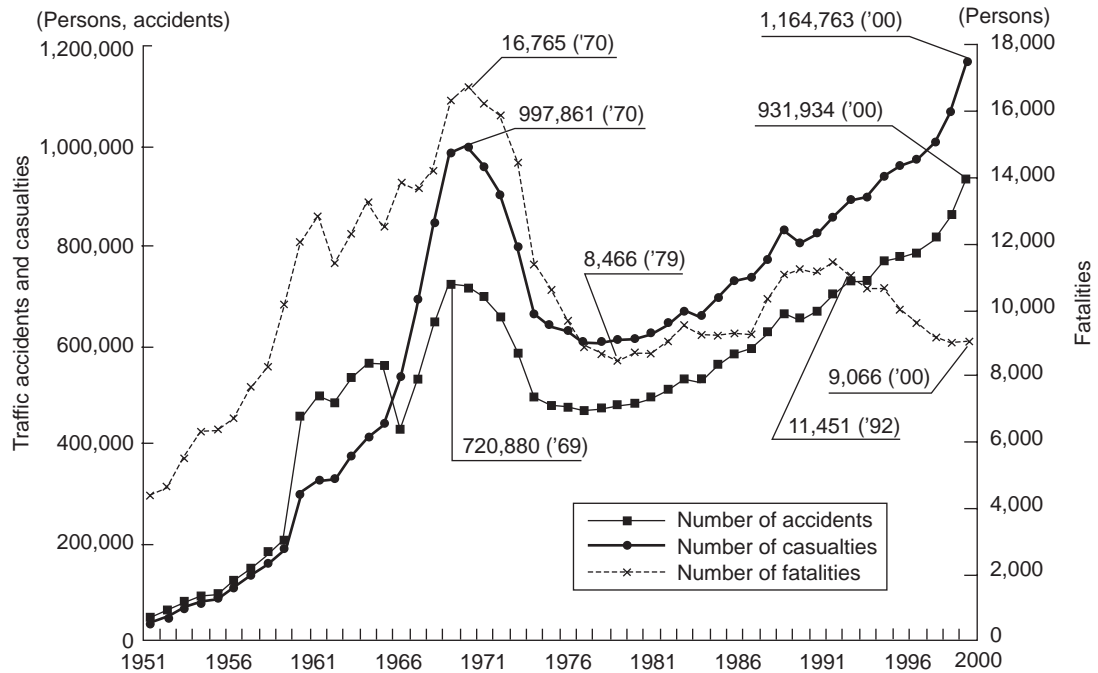


Figure 2 Changes in Traffic Accident Fatalities by Age Group

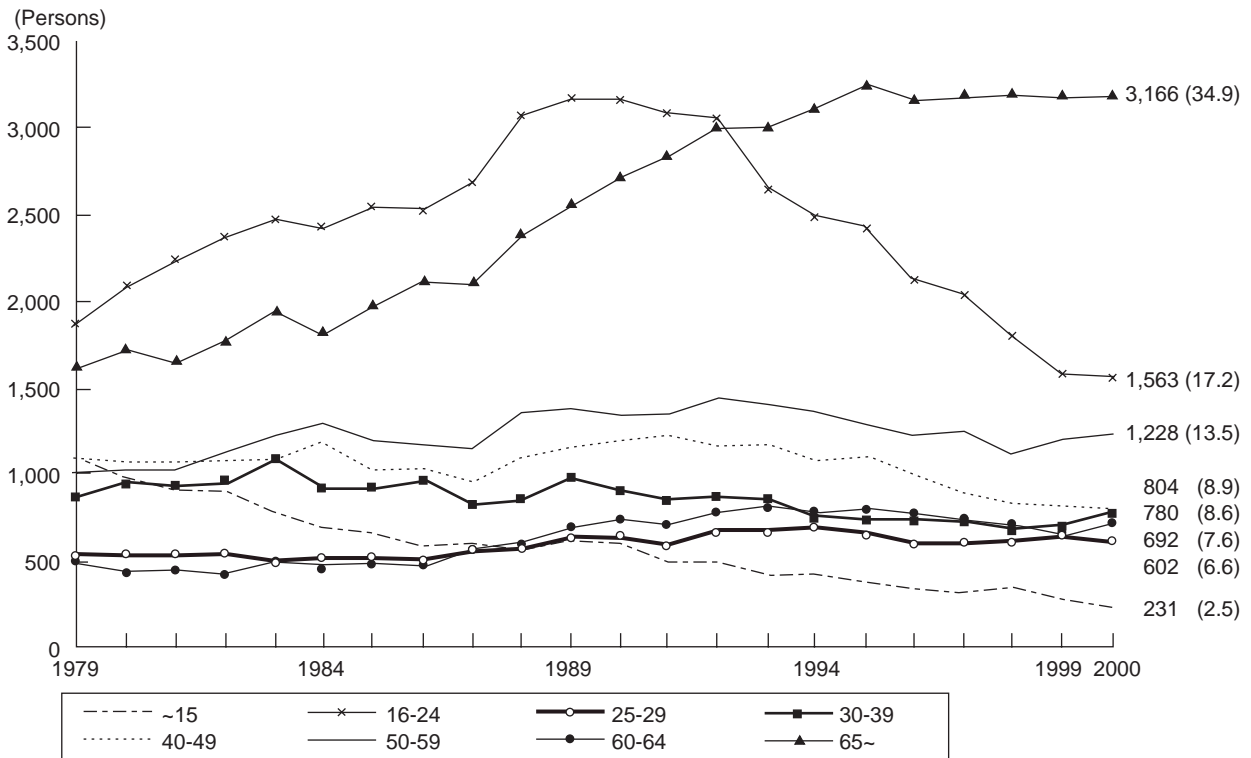
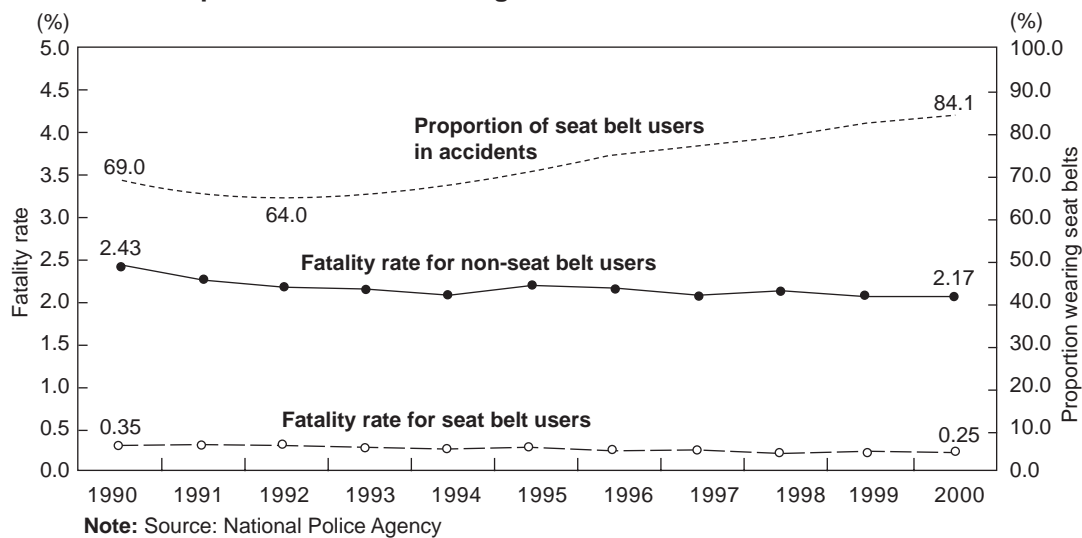


Figure 3 Changes in Fatality Rates among Motor Vehicle Occupants in Traffic Accidents by Seat Belt Use, and Changes in Proportion of Motor Vehicle Occupant Casualties Wearing Seat Belts in Accidents



4. Traffic accident fatalities by seat belt use

Out of all motor vehicle occupants killed or injured in road traffic accidents, the proportion wearing seat belts (ratio of seat belt-wearing casualties to total casualties) has been increasing steadily since 1993, reaching 84.1% in 2000.

The fatality rate (ratio of fatalities to total casualties) for seat belt wearers was approximately nine times lower than that for people not wearing belts. (See **Fig. 3**)

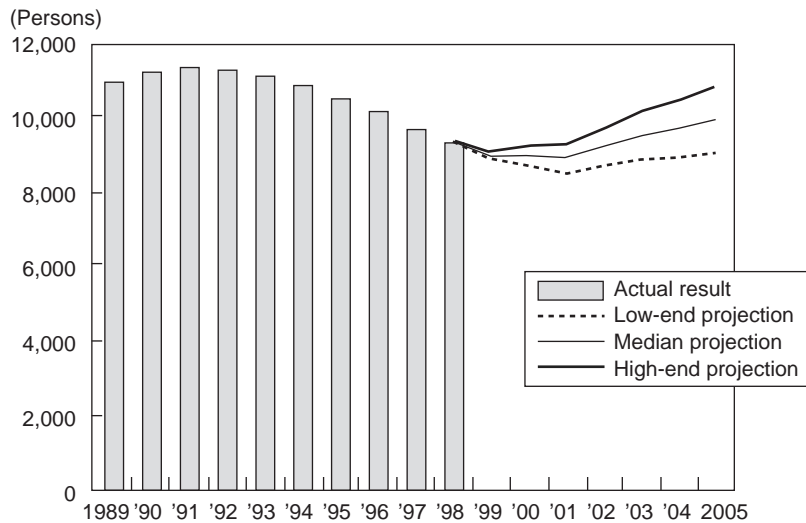
Future directions in road traffic safety measures

1. Likely developments in the environment of road traffic

The environment of road traffic is likely to worsen over the coming years. Some of the reasons for this are given below.

- 1) The total number of driving license holders is increasing year by year in Japan, reaching 74.69 million as of the end of December 2000. This corresponds to one out of every 1.4 citizens eligible for a license. It is estimated that the number of driving license holders in 2005 will be 81.22 million, of which 10.88 million will be elderly (over 65).
- 2) Registered motor vehicles numbered 75.86 million units in 2000. Notably, the number of passenger vehicles has increased rapidly to reach 42.54 million units in 2000.
- 3) Motor vehicle kilometers traveled has been rising steadily for decades, except for a temporary fall in 1974 in the wake of the oil crisis. The total for 1998 was about 613.9 billion kilometers.
- 4) In view of the rapid aging of Japan's population, more and more elderly people will be

Figure 4 Projections of Traffic Accident Fatalities



driving on the nation's roads in the coming years. The proportion of the elderly (over 65) in the total population is expected to reach 19.6% in 2005.

2. Road traffic accident projections

Based on "Research on Long-term Projections of Traffic Accidents and Development of Effective Traffic Safety Plans" and other resources, the following projections have been made on the number of road accident fatalities in the coming years.

- 1) Based on traffic accident figures up to 1998 and on the assumption that no new safety measures are introduced, total annual road traffic accident fatalities are forecast to be between 9,000 and 10,800 in 2005. (See **Fig. 4**)
- 2) Based on traffic accident fatality figures for 1999 and 2000, it is very likely that total annual fatalities will remain high over the coming years.
- 3) The numbers of fatalities in the over-75 and 25-64 age groups are expected to increase significantly.
- 4) In terms of road user type, motor vehicle occupants are expected to continue accounting for the highest number of fatalities in the years ahead. Fatalities for pedestrians and bicycle users are also expected to increase.

3. Future directions in road traffic safety measures

Since the road traffic environment is expected to become increasingly hazardous over the coming years, there is a fear that the incidence of traffic accidents will rise. To address this concern, the government organized a meeting of the Central Traffic Safety Policy Council on March 16, 2001. The council produced the Seventh Fundamental Traffic Safety Program, which

outlines the traffic safety measures to be implemented by the national and local governments in the five-year period from FY2001 to FY2005.

The Fundamental Traffic Safety Program specifies a variety of traffic safety improvement measures, to be comprehensively and systematically promoted in close cooperation with all relevant bodies and organizations. In this way, the program aims to reduce the ratio of casualties to the total number of registered motor vehicles as far as possible, and to reduce total annual fatalities (defined as deaths occurring within 24 hours of an accident) to below the 1979 level of 8,466 — the lowest on record since the introduction of the Traffic Safety Policies Law — by 2005.

In this report, we present an outline of some of the more important measures proposed in the Seventh Fundamental Traffic Safety Program.

(1) Promotion of traffic safety measures for the elderly

Statistics on traffic accidents involving the elderly (over 65) reveal a very serious safety issue. In 1993, total annual fatalities of elderly people overtook total annual fatalities of young people (16-24) for the first time. Although elderly fatalities are levelling off since, their ratio in total fatalities on roads has been rising year by year. Furthermore, as the population of Japan continues to age over the coming years, there is widespread concern that the number of traffic accidents involving the elderly will continue rising.

In view of this, the Seventh Fundamental Traffic Safety Program calls for major improvements in traffic safety measures for the elderly. The program pushes for the promotion of participation-, experience- and practice-oriented traffic safety education for the elderly aimed to substantially raise the level of their traffic safety awareness; efforts to improve road traffic environments to allow the elderly to live in greater safety and tranquillity; and measures to ensure safe driving by the elderly.

a) Promoting participation-, experience- and practice-oriented traffic safety education

The program calls for the active promotion of participation-, experience- and practice-oriented traffic safety education measures, in which the elderly can directly experience various types of road environments and typical hazardous traffic situations, and then practice dealing with such situations themselves. In addition, these activities should teach the elderly about the effectiveness of reflective materials at night. At the same time, the program calls for local communities to try and provide elderly people with personal guidance through home visits, and to advise them whenever they have the opportunity of contact in daily life.

Furthermore, the program proposes supporting the elderly to get involved in traffic safety activities as volunteers, by training them to serve as traffic safety instructors (“Silver Leaders”), and by encouraging them to take initiatives in traffic safety activities in their communities and their homes.

b) Improving road traffic environments to help the elderly live with peace of mind

To help elderly and disabled people to lead their lives as independently as possible, the program calls for the promotion of the following steps, especially in areas around railway

stations and public facilities: constructing wide, flat pedestrian walkways; installing traffic lights sensitive to pedestrians including the elderly; making roadside signs brighter, larger, and variable; and making road surface signs brighter.

Also, based on the Transportation Accessibility Improvement Law (“Barrier-Free” Law), and in line with the general trend towards “barrier-free” public transport, the program calls for the construction of wide, easy-to-use pedestrian walkways in a wide area as part of a network of roadways in that area.

c) Measures to promote safer driving by elderly drivers

The program calls for the provision of appropriate guidance to the elderly, based on understanding the effect of aging on physical functions. This will be done by trying to improve the content of general lectures and classes for the elderly, by expanding the classes provided to elderly people when they renew their driving licenses (focusing on driving issues for the elderly and the characteristics of traffic accidents caused by elderly drivers.)

(2) Promoting use of seat belts and child seats

The program calls for the promotion of greater public understanding of the importance of using seat belts and child safety seats, and to implement educational activities to ensure that people use these safety devices properly. In addition, the program calls for the national government to actively carry out publicity and educational activities to promote the use of seat belts for rear-seat passengers, making use of all available opportunities and media, in cooperation with local governments, relevant bodies and organizations. The governments must also work to improve guidance and control measures for people who violate mandatory belt-use or child seat-use regulations. Also, particularly for child seats, the program aims to develop instructors for educating the public about how to use child seats properly, and take measures to make them easier to use.

(3) Making road traffic facilities safer and smoother

Under the program, detailed analyses are made of accidents that have occurred in areas where accidents have been repeated and thus countermeasures have to be taken urgently. Based on the analysis results, steps will be taken to improve the visibility and safety of intersections, add lanes to roads, among others. After implementing such improvements, the governments should evaluate their effectiveness and then undertake further measures to correct any remaining deficiencies.

Furthermore, the program will create community zones, to promote research and development into the Intelligent Transport System (ITS), and to promote Traffic Demand Management (TDM) measures to increase transport efficiency and balance traffic flow across time and space.

(4) Promotion of traffic safety education

Making use of the Traffic Safety Education Policy and other resources, the national government, local governments, police, schools, relevant private organizations and citizens

should cooperate to implement staged and systematic traffic safety education for children and adults, as well as appropriate traffic safety training for the elderly and the disabled. These efforts will focus particularly on training and cultivating instructors, and promoting participation-, experience- and practice-oriented education activities. In addition, the program calls for improvements to the education provided to drivers before and after obtaining a license, as well as during license testing.

(5) Ensuring vehicle safety

In order to develop and spread Advanced Safety Vehicle (ASV) technology, the program calls for promotion of the Motor Vehicle Assessment Project and for improvements to vehicle recall procedures.

(6) More effective traffic guidance and control

The program calls for the promotion of more accurate evaluation and analysis of traffic accidents and stricter traffic guidance and control, focusing on malicious, dangerous and annoying traffic violations, since these are the most likely to cause fatal and serious accidents. In addition, the program calls for improved initial and scientific investigations.

Also, to prevent the increasingly serious problem of flagrant traffic violations by hot-rodders, the program recommends that all relevant bodies and organizations cooperate to implement tougher measures to deal with the problem. These include cultivating a greater resolve among citizens to eliminate, and create an environment against, reckless and annoying driving in their communities, and improving guidance for youths in schools and in the home. Furthermore, the program calls for stricter guidance and control of recklessly driving gangs, to prevent repeat offences by their members, and to keep illegally modified vehicles off the roads.

(7) Improvement of rescue and first-aid systems

The program calls for increased training and deployment of emergency life-saving technicians and greater use of medical service vehicles. In addition, it proposes the deployment of the helicopters that are normally used in fire fighting or disaster emergency work for use in traffic accident rescues; the utilization of medical service helicopters for emergency medical care; and the provision of heliports in expressway service areas for landing helicopters in emergencies.

(8) Improving measures for accident victims

The program calls for better financial support for the nursing care expenses incurred by people suffering from serious disabilities resulting from traffic accidents, and improved support for the establishment and management of facilities specializing in treatment and nursing of accident victims. In addition, the program calls for the promotion of services to provide compassionate counselling to traffic accident victims, by traffic counsellors and the Traffic Safety Activities Promotion Center of the police, and by victim support officers at the Public Prosecutor's Office.

On top of this, the program will ensure that victims be provided with information about their

traffic accidents, such as an outline of how the accident occurred, progress reports on any investigation and action taken, and details of any non-indictments. The program also urges improved victim liaison procedures, more effort to provide the families of the victims of hit-and-run accidents and fatal accidents with information on the arrest of suspects, reports of any criminal charges that are laid, and with information on the results of any prosecutions.

(9) Improving traffic accident investigation and analysis

To improve the quality of accident investigations and analysis, the program recommends the reinforcement and utilization of the resources of the Institute for Traffic Accident Research and Data Analysis, and the widespread publication of traffic accident investigation and analysis results held by governments and private-sector organizations.

(10) Promoting traffic safety activities with public participation

The program calls for encouragement of greater participation by citizens in traffic safety activities, through involvement in traffic safety policy formulation, from the planning stage through to final implementation; by creating maps of traffic “near-miss spots” (“Hiyari” Map) in local areas based on information provided by local residents and road users; and by implementing comprehensive traffic safety checks.

Chapter 2. Major Road Traffic Safety Measures

1. Selective development of traffic safety facilities

The following projects were implemented during FY2000, the fifth year of the Seven-Year Program for Provision of Traffic Safety Facilities.

- 1) Widening sidewalks; creating community zones in residential areas; upgrading traffic signals to make them sensitive to elderly pedestrians; and installing more road lights and road signs.
- 2) In order to prevent traffic accidents on school routes, improvements were made to sidewalks, traffic signals, aboveground and underground pedestrian crossings and road signs.
- 3) The causes of accidents occurring at “black spots” on arterial roads were analyzed. Measures to prevent accidents were then formulated and implemented based on the analysis. These included improving intersections, installing road lights and traffic lights, and reviewing traffic regulations.
- 4) To help prevent vehicle accidents, traffic lights were upgraded to take advantage of cutting-edge technology, intersections were improved and more traffic lanes were added to roadways. In addition, to prevent nighttime traffic accidents, speed restriction systems and more road lights were installed.

5) As part of the Universal Traffic Management Systems (UTMS), the operation of traffic management systems was upgraded or enhanced, through measures such as improving central control systems and traffic information relay equipment.

2. Improving road traffic systems using advanced telecommunications technology

Extensive research and development, field-testing and infrastructure work is currently underway in accordance with the comprehensive ITS (Intelligent Transport System) plan drawn up in 1996.

3. Promoting Transportation Demand Management (TDM)

The national and local governments have been comprehensively promoting Transportation Demand Management (TDM) measures to improve transport efficiency and level out traffic demand across time and space.

Steps have been taken also to promote increased traffic capacity, as well as multi-modal and TDM measures.

Another current initiative, involving relevant government ministries and agencies, is the Omnibus Town Project, a comprehensive set of measures to make more effective utilization of bus services.

4. Expanding systems for promoting the development of safe road traffic environments

The government has proposed some basic ideas on future safety improvements to road traffic environments in the form of its “Policy for Promotion of Road Traffic Environment Safety Improvements.” The government is promoting a variety of measures based on this policy, including a project to create community zones, urgent measures to deal with traffic “black spots.”

5. Promoting more widespread use of child safety seats

In April 2000, it became mandatory for children under the age of six to use child safety seats or Child Restraint System (CRS) in vehicles. In line with this, the government has been conducting campaigns to promote increased use of CRS during the Nationwide Traffic Safety Campaigns held in spring and fall. The government has also promoted the use of child restraints through various support measures, such as a system for lending them out free of charge.

6. Implementation of regional traffic safety checks

Traffic safety inspections have been conducted with the voluntarily participation of local citizens and road users. The results of such inspections have prompted measures such as sidewalk repairs and installation of traffic signals.

7. Promotion of vehicle safety measures

The Vehicle Safety Measures Review Council has developed long-term plans for vehicle safety measures after examining preliminary studies on the effectiveness of such measures and their ex post facto evaluations.

8. Providing information on motor vehicle assessments

The motor vehicle assessment project releases the results of comparative safety performance tests of motor vehicles, such as collision tests. An oblique, head-on crash test has now been added, and the project has published the results of comparison tests of 24 vehicle types. In addition, the project provided consumers with information on how to properly use safety devices such as air bags.

9. Promoting measures with greater consideration for the feelings of traffic accident victims

Efforts are now made to provide the families of victims of hit-and-run accidents and fatal traffic accidents with timely and appropriate information, such as outlines of how accidents occurred and reports on the progress of investigations. Other measures to give more consideration to the feelings of accident victims and their families have been implemented, including the distribution of “Guidelines for Traffic Accident Victims” and the provision of various counselling services.

Part 2. Railway Transport

Chapter 1. Trends in Railway Traffic Accidents and Future Directions in Traffic Safety Measures

State of railway accidents

The long-term decline in the number of railway accidents continues, as a result of the implementation of a comprehensive safety strategy involving measures to prevent railway-crossing accidents, installation and upgrading of operational safety systems, improvements to control equipment, and higher training standards for crews. In 2000, a total of 936 railway accidents occurred, resulting in 749 casualties (309 fatalities). (See **Fig. 5**)

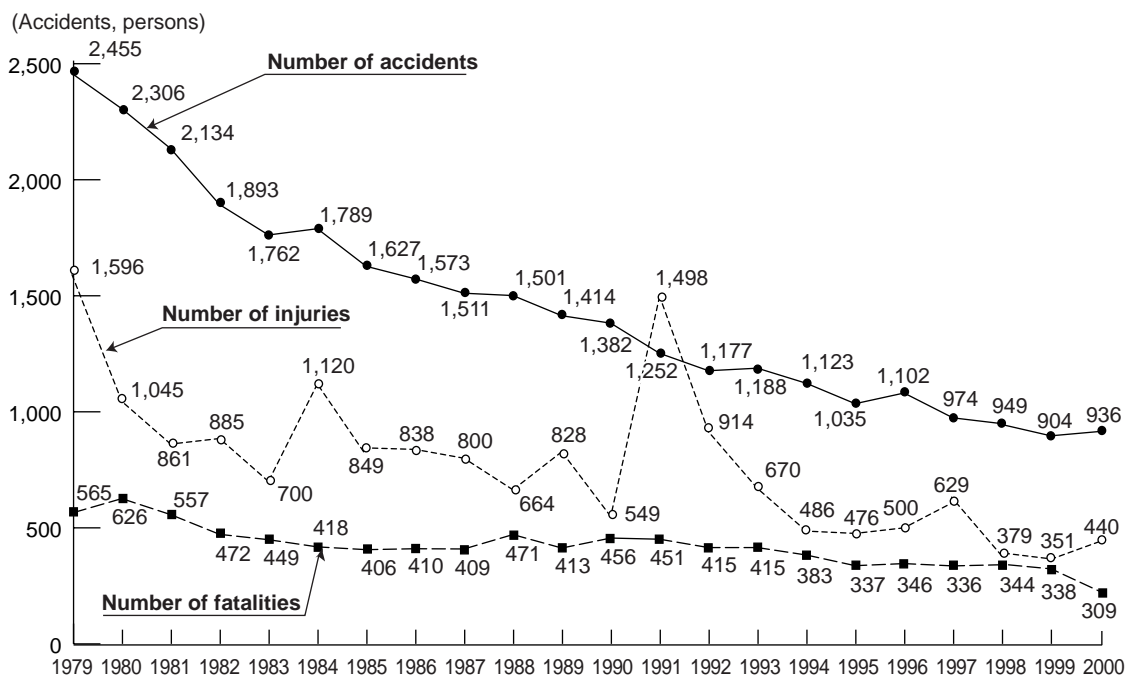
Looking at accidents by type, 47.4% involved obstruction on railway-crossings, 37.3% involved human obstruction and 11.3% involved obstruction on roadways.

Future directions in railway traffic safety measures

1. Improving accident investigation systems

To provide safer railway transport services, it is vital to prevent the recurrence of accidents, by learning and applying the lessons from past accidents and implementing effective policies that deal with the relevant problems. With the aim of improving systems to investigate and analyze

Figure 5 Changes in Railway Accidents and Casualties



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

railway accidents, a permanent body will be established to investigate railway accidents and to promote improved systems for carrying out necessary accident investigations.

Also, the 151st National Diet enacted a revision to the Aircraft Accident Investigation Committee Establishment Law, in order to reorganize the Aircraft Accident Investigation Committee as the new Aircraft and Railway Accident Investigation Committee.

2. Promoting accident prevention systems

The governments will review the accident reporting system used by railway transport companies in order to revise such details as the content of accident reports and the listing of offices to receive preliminary reports. They will also work to improve analysis of serious incidents. In this way, they will promote measures aimed at more effective prevention of accidents.

Furthermore, the governments will actively promote the disclosure of information about accidents.

3. Promoting measures to prevent railway-crossing accidents

Based on the Railway-Crossing Improvement Promotion Law, which was revised in March 2001, and the Seventh Comprehensive Crossing Accident Prevention Measures, which takes effect in FY2001, a set of measures will be introduced collectively and actively to achieve safe and smooth traffic flows at roads intersecting railway lines. The measures will include constructing overpasses and underpasses, promoting structural improvements, installing new safety equipment, conducting traffic controls, and promoting mergers and eliminations of crossings.

Chapter 2. Major Railway Safety Measures

1. Improving track facilities and operational safety equipment

While promoting improvements of railway track facilities and operational safety systems, the government is also working to cultivate more highly skilled railway crews by raising training standards for them. In addition, the government is assisting railway transport companies to develop faster and more accurate operation command systems.

2. Improving the earthquake resistance of railway facilities and equipment

The government is assisting railway transport companies to adopt the earthquake resistance design standards put together in November 1998 by the Earthquake-resistant Railway Structures Inspection Committee for the design of new railway infrastructure.

3. Taking measures to prevent reoccurrence of accidents, utilizing the lessons of the Eidan Hibiya line accident

After the train derailment and collision that occurred at Naka-Meguro Station on the Eidan

(Teito Rapid Transit Authority) Hibiya line in Tokyo, the government investigated the causes of the accident and formulated measures to prevent reoccurrence of any similar accidents. These measures cover five items, including monitoring of the static weights of carriage wheels and installation of derailment prevention guards. The government is instructing railway transport companies throughout Japan to follow the measures carefully.

4. Measures to prevent railway-crossing accidents

A variety of railway safety enhancement initiatives have been undertaken in accordance with the Sixth Comprehensive Crossing Accident Prevention Measures, including the construction of new overpasses and underpasses, structural improvements, and the installation of new safety equipment. Currently, efforts are in progress to consolidate roads intersecting railway lines.

Chapter 1.

Trends in Maritime Accidents and Future Directions in Traffic Safety Measures

Trends in Maritime Accidents

- 1) In 2000, a total of 2,201 vessels, an increase of 281 (15%) over the previous year, were involved in accidents that required rescue operations.

- 2) With the rapid growth in marine recreation in recent years, pleasure boats are making up a growing proportion of the vessels requiring rescue services after experiencing problems at sea. In 1997, for the first time, more pleasure boats than fishing vessels required rescue operations. In 2000, pleasure boats accounted for 47% of all rescue operations — the highest figure on record.

- 3) In 2000, 163 persons (out of a total of 8,230 persons on board) were killed or listed as missing in watercraft accidents requiring rescue operations. (See **Fig. 6**)

Future directions in maritime traffic safety measures

As maritime traffic conditions continue to become more hazardous, there is a clear need to promote comprehensive improvements to maritime traffic safety.

The Seventh Fundamental Traffic Safety Program aims to reduce to below 200 by 2005 the annual total of those killed or listed as missing as a result of accidents or falling overboard from vessels. Some of the new and more significant measures proposed in the program are given below.

1. Improvement of maritime traffic safety in congested seaways

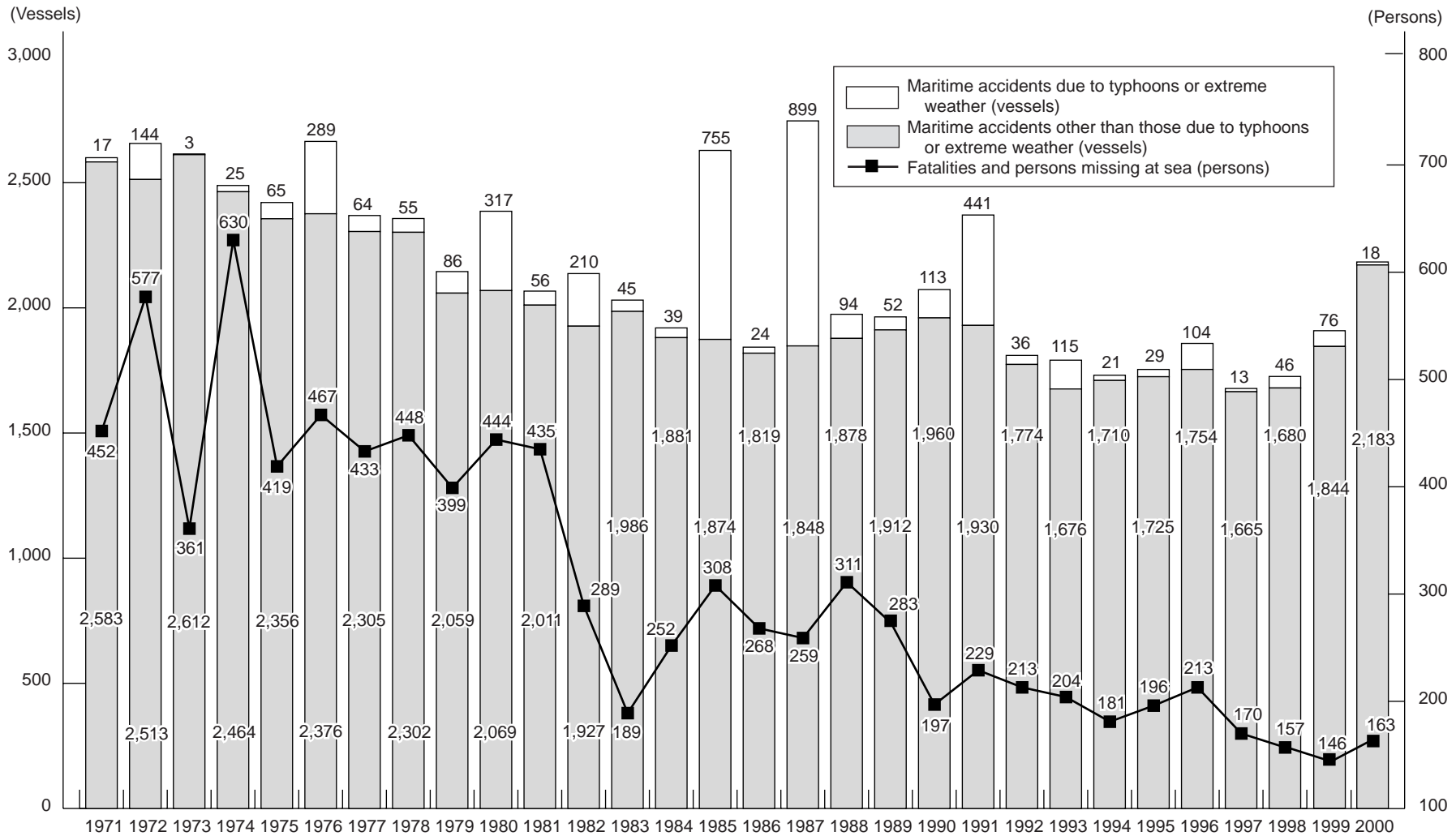
The program calls for the establishment of a Sailing Control System that will permit non-stop passage of controlled vessels through congested seaways such as Tokyo Bay, and enable all the various port procedures to be completed in one stop with use of a port EDI (Electronic Data Interchange) system.

Furthermore, the program calls for the active promotion of comprehensive measures to ensure maritime traffic safety, such as construction of “maritime seaway networks” to promote greater traffic safety in congested seaways.

2. Promotion of safety measures for pleasure boats

To address concerns over the increasing occurrence of accidents involving pleasure boats, it is important to cultivate greater safety awareness among the users of such boats. The program outlines measures to provide detailed guidance on maritime accident prevention according to the purposes of leisure activities, such as maritime accident prevention seminars and visiting boats at sea to provide guidance. In addition, the program calls for the promotion of a Marine Path Plan to provide environments for safe cruising of pleasure boats.

Figure 6 Changes in Numbers of Vessels Requiring Rescue, Fatalities and Persons Missing at Sea



Notes: 1. Source: Japan Coast Guard
 2. Maritime accidents that occurred in 1983 as a result of an earthquake in the Japan Sea are not included here.
 3. Maritime accidents that occurred in 1993 as a result of an earthquake in the Japan Sea that hit the southwestern coast of Hokkaido are not included here.

3. Promoting safety measures for fishing boats

To prevent maritime accidents involving fishing boats, the program aims to try and raise awareness about navigation safety among crews, through maritime accident prevention seminars and visiting boats at sea to issue guidance. In addition, the program aims to actively guide and educate crews to implement effective watch-keeping and other routines for the safety of fishing boats.

4. Promoting increased use of life jackets and improving rescue systems

Two effective ways to reduce the number of fatalities and people missing that occur as a result of maritime accidents or people falling overboard from vessels, are to encourage boat crews and passengers to wear life jackets, and to promote use of a secure means of communications, so that rescue services can be quickly contacted if somebody falls overboard from a vessel. In addition, the program promotes the use of life jackets to be worn all the time by all boat occupants, and the implementation of “self-rescue” campaigns for crews of fishing boats and pleasure boats. These campaigns would promote the use of continuous-wear life jackets, the provision of a secure means of communication, e.g. mobile phone, and the effective use of the “118” emergency telephone number.

Furthermore, the program calls for the construction of a system to dispatch patrol vessels to accident sites immediately after receiving accident information, and for greater utilization of helicopters for faster searching at sea and for lifting people out of danger.

5. Improvement of supervision for foreign vessels

The program calls for the implementation of port state control for foreign vessels that stop at ports in Japan, and measures to banish vessels that do not meet international standards from Japanese waters, based on international conventions such as the International Convention for the Safety of Life at Sea and the International Convention for the Prevention of Pollution from Ships.

Chapter 2. Major Maritime Traffic Safety Measures

1) The government has been working to improve rescue systems for pleasure boats and other vessels through better utilization of patrol vessels and aircraft in rescue systems, by improving systems for receiving maritime accident information, and by improving private rescue systems.

2) The government is promoting comprehensive measures to raise awareness of maritime accident prevention and providing safety-related guidance to crews of fishing boats and pleasure boats, by organizing maritime accident prevention seminars and visiting boats at sea to provide advice.

3) The government is improving beacons and channel marks to address changes in maritime traffic environments resulting from the continued development of ports, harbors and waterways,

and the increasing vessel speeds.

4) The government has introduced special traffic rules for busy maritime seaways and improved the Maritime Traffic Information System that is designed both to provide maritime traffic-related information and to control navigation. In addition, the government is working to improve marine charts and nautical publications, and to provide higher quality information on waterways and weather conditions.

5) Since oil spills from tanker accidents can result in massive damage, the government has ensured that funds are made available to pay damages to the victims of oil pollution, based on the Oil Pollution Compensation Guarantee Law and related agreements.

6) To keep vessels that do not meet the standards of international conventions out of Japanese waters, the government is exercising port state control for foreign vessels that stop at ports in Japan.

7) The government has amended Japanese maritime laws and regulations in light of the discussions held over international conventions by the International Maritime Organization. In addition, the government has taken measures to promote conformity to the requirements for “barrier-free” facilities, as specified by the Transportation Accessibility Improvement Law (“Barrier-Free” Law), through organizing briefing sessions and other activities. The government has also implemented a Comprehensive Vessel Safety Evaluation and put together measures to prevent recurrence of accidents such as that involving the fishing boat Daigo Ryuho-maru.

Chapter 1.

Trends in Aviation Accidents and Future Directions in Traffic Safety Measures

Trends in Aviation Accidents

Despite substantial growth in air traffic, the number of accidents involving civil aircraft in Japan has remained relatively stable, with only slight fluctuations in recent years. In 2000 there were 30 aircraft accidents in total. (See **Table 1**)

Future directions in air traffic safety measures

1. Promoting safety measures based on analysis of serious incidents

From February 2000, the government made it mandatory for aircraft captains to file reports of serious incidents (dangerous situations that might have resulted in accidents), and investigations into such incidents have now commenced.

2. Improving the safety of foreign aircraft

In recent years, a number of accidents in Japan involved foreign aircraft. At the same time, more and more Japanese people are using foreign airlines. For these reasons, public interest in the safety of foreign aircraft has grown considerably. In December 1999, Japan began to conduct ramp inspections of foreign aircraft at the New Tokyo International Airport, and by February 2001 such inspections were being conducted at nine airports around the country.

3. The next-generation air navigation system

To handle the growing volume and diversity of air traffic, the governments will work to increase air traffic capacity by making more effective use of airspace, without compromising the

Table 1 Changes in Aviation Accidents and Casualties (Civil Aircraft)

Aircraft type Year	No. of accidents								No. of casualties	
	Large aircraft	Small aircraft	Ultra-light aircraft	Helicopters	Gyroplanes	Gliders	Airships	Total	Fatalities	Injuries
1995	1	7	10	6	0	1	0	25	9	24
1996	5	11	5	8	0	4	0	33	23	206
1997	3	11	3	8	2	3	0	30	28	34
1998	3	14	5	6	1	6	0	35	21	54
1999	1	9	5	7	1	5	0	28	9	17
2000	3	5	5	11	1	5	0	30	9	20

- Notes:**
- Source: Ministry of Land, Infrastructure and Transport
 - All figures as of the end of December each year.
 - Includes accidents involving Japanese aircraft outside Japan (1 case in 1998, 3 cases in 2000).
 - Includes accidents involving foreign aircraft within Japan (1 case in 1995, 1 case in 1996, 1 case in 1998).
 - Numbers of accidents and casualties do not include deaths due to natural causes, or fatal or non-fatal injuries — self-inflicted or otherwise — on board an aircraft.
 - Fatalities are defined as deaths occurring within 30 days of the accident, and include those listed as missing.
 - Injury figures for 1999 and 2000 are provisional (owing to the fact that some accident investigation reports have been withheld).

priority of aircraft safety. This will be achieved by steadily promoting the development of a next-generation aviation safety system, which will be based on the Multi-functional Transport Satellite (MTSAT).

Chapter 2.

Major Air Traffic Safety Measures

- 1) Planned developments of airports and aviation safety facilities are proceeding in accordance with the 7th Seven-Year Airport Development Plan (FY1996-FY2002).
- 2) Concerns about the earthquake resistance of airports and aviation safety facilities are being addressed through efforts to upgrade existing facilities (e.g. inspection and renovation of buildings) and by duplication of air traffic control facilities and services (improvement of control function alternatives).
- 3) The government has worked to raise standards for all airport technology that directly affects the safety of aircraft operations. This effort includes measures to ensure air traffic safety, which is not compromised when construction work is in progress at airports; upgrading of airport signaling facilities; and special safety measures to be taken when aircraft overruns runways or is involved in other accidents on or near runways.
- 4) To help prevent accidents involving small aircraft, the government is calling for a comprehensive commitment to accident prevention through strict compliance to all safety related laws and regulations; ensuring the use of sound flight plans for all aviation activities, interpreting weather information more accurately, and implementing more rigorous and exhaustive training of pilots.
- 5) The government is guiding all aviation bodies involved in sky leisure activities on the promotion of safety education and skills training for aeronautic sports enthusiasts. The government is also working to improve safety by carrying out research into safety measures.

