



# **Traffic Safety and Policy in Japan**

**Yoshitaka MOTODA**

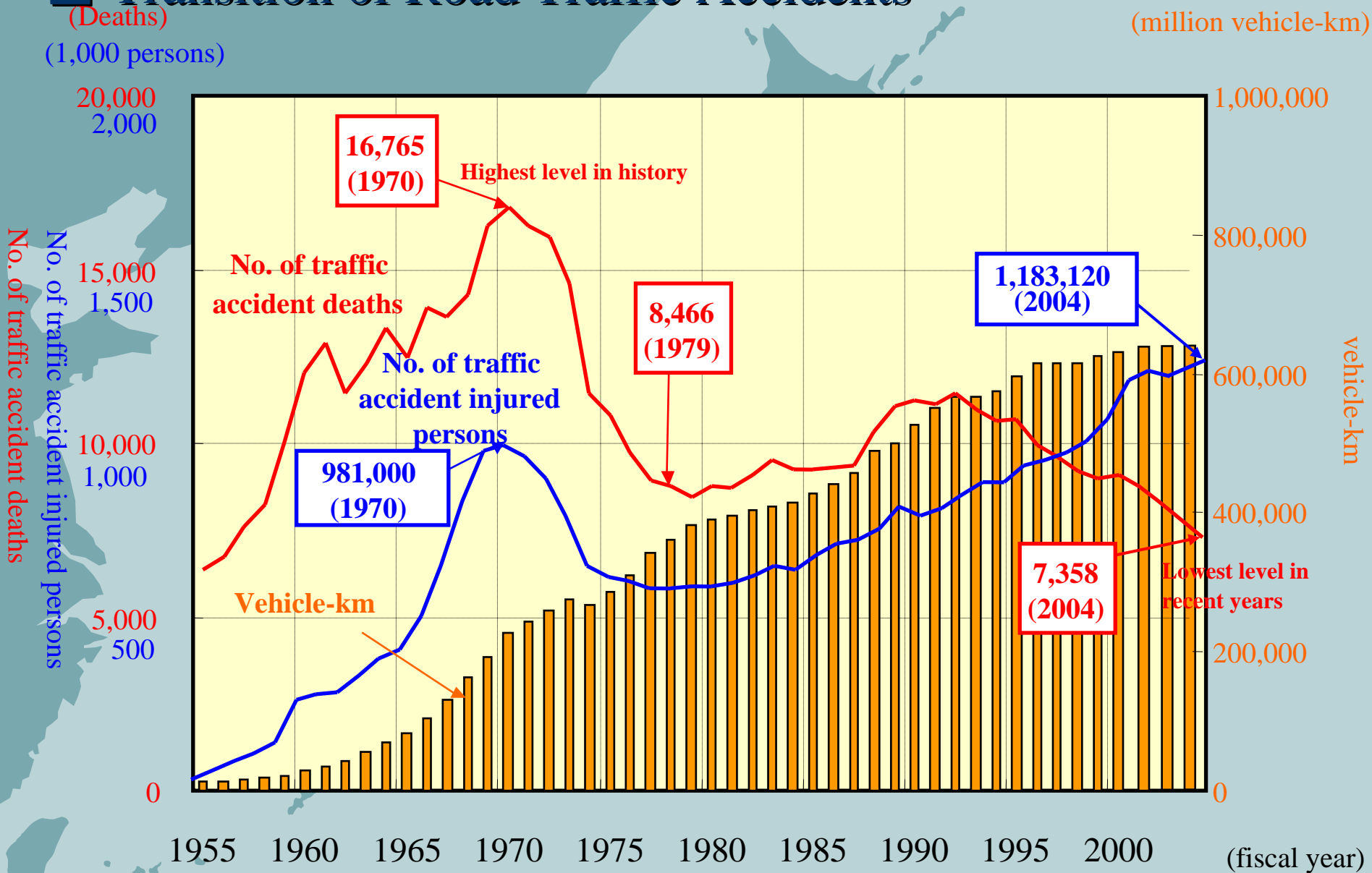
**Professor**

**Iwate Prefectural University**

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# Transition of Road Traffic Accidents



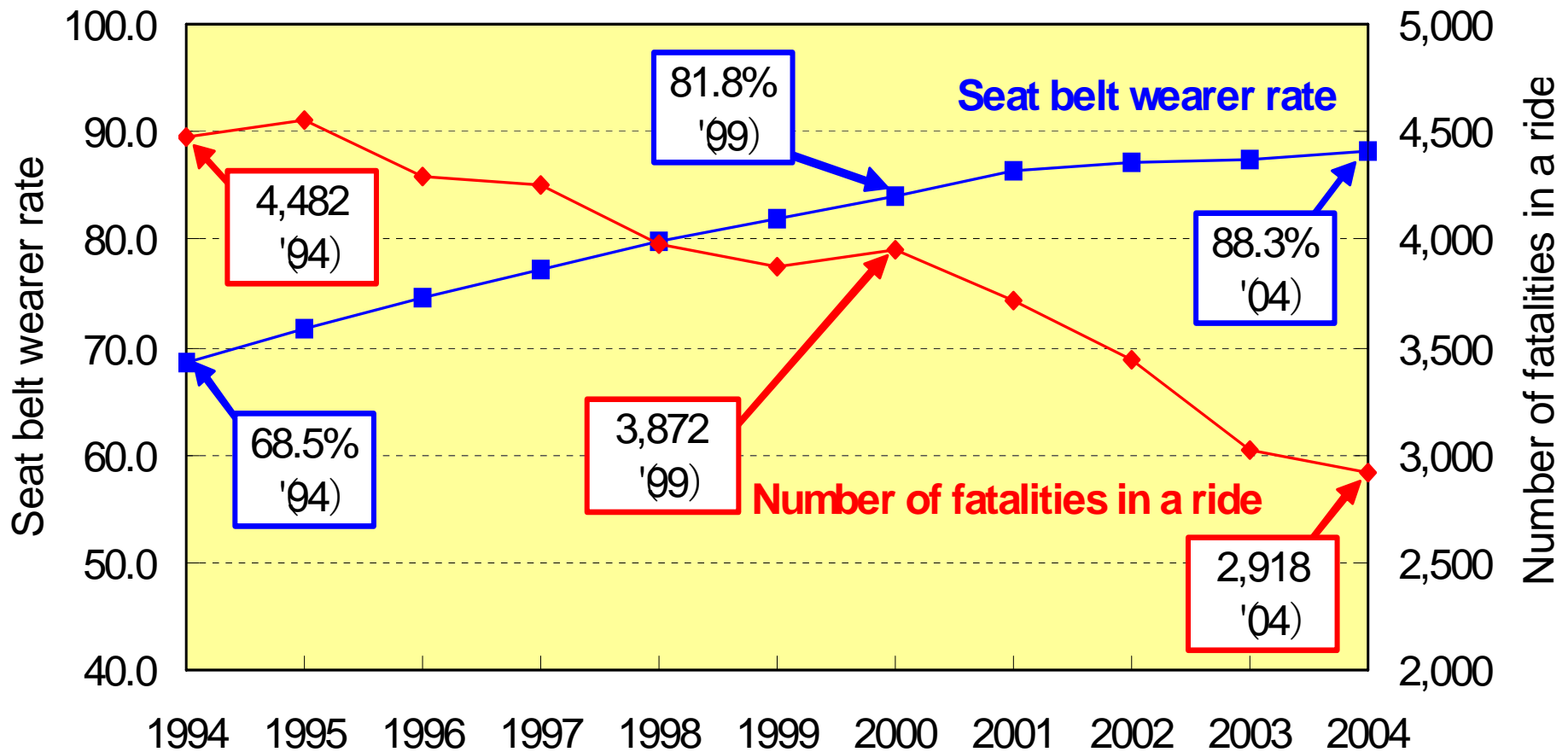
[Source : No. of traffic accident deaths and injured persons is from Traffic Statistics (National Police Agency)  
Vehicle-km is from Statistical Survey of Land Transport (Ministry of Land, Infrastructure and Transport) ]

# Recent Issues

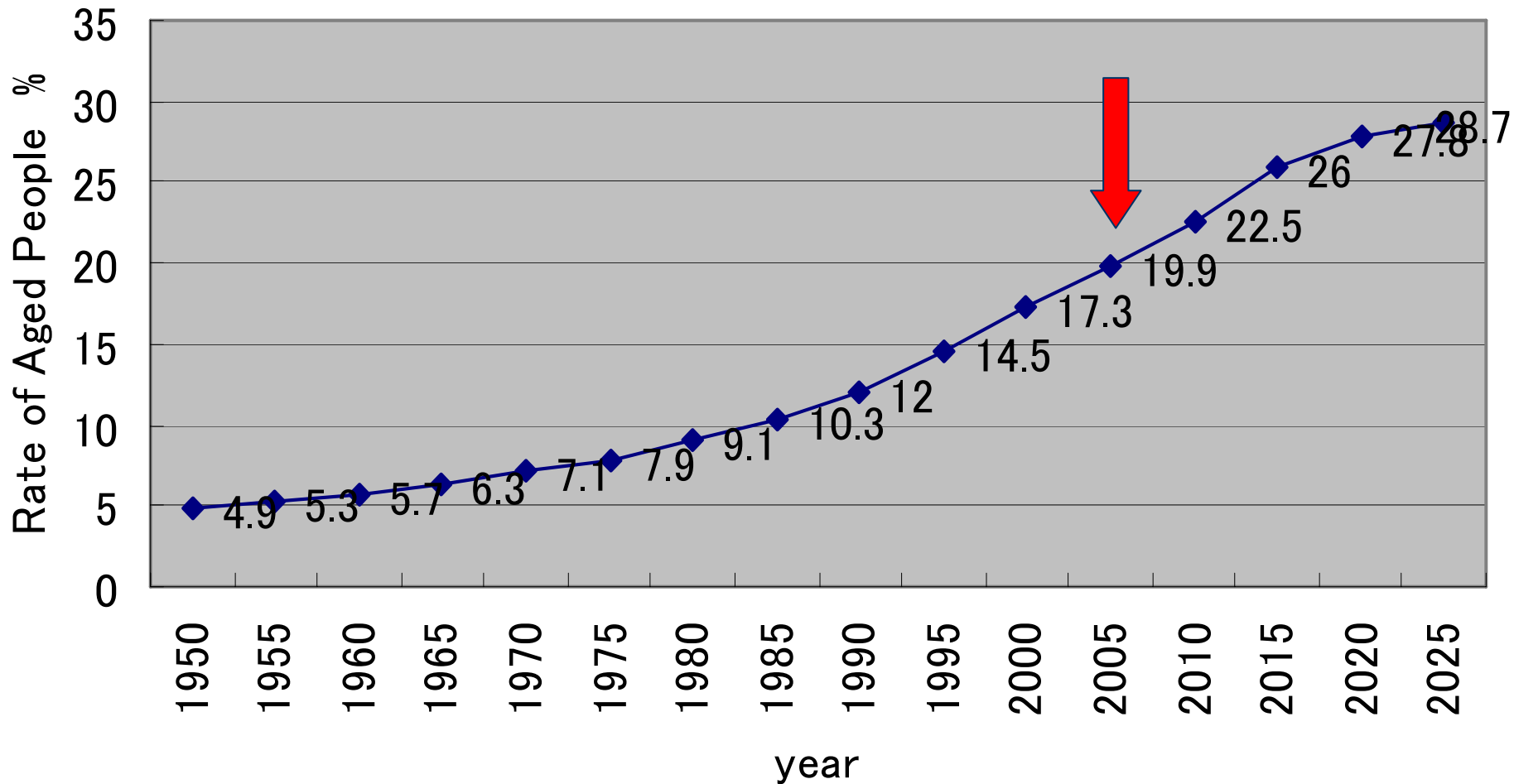
- **Decreasing Fatalities**
- **Still increasing Injuries (more than 1 mil.)**
- **High rate of Fatalities of Aged People**
- **Drinking Drunk**

# Seat Belt Regulation

Seat belt wearer rate and number of fatalities in a ride

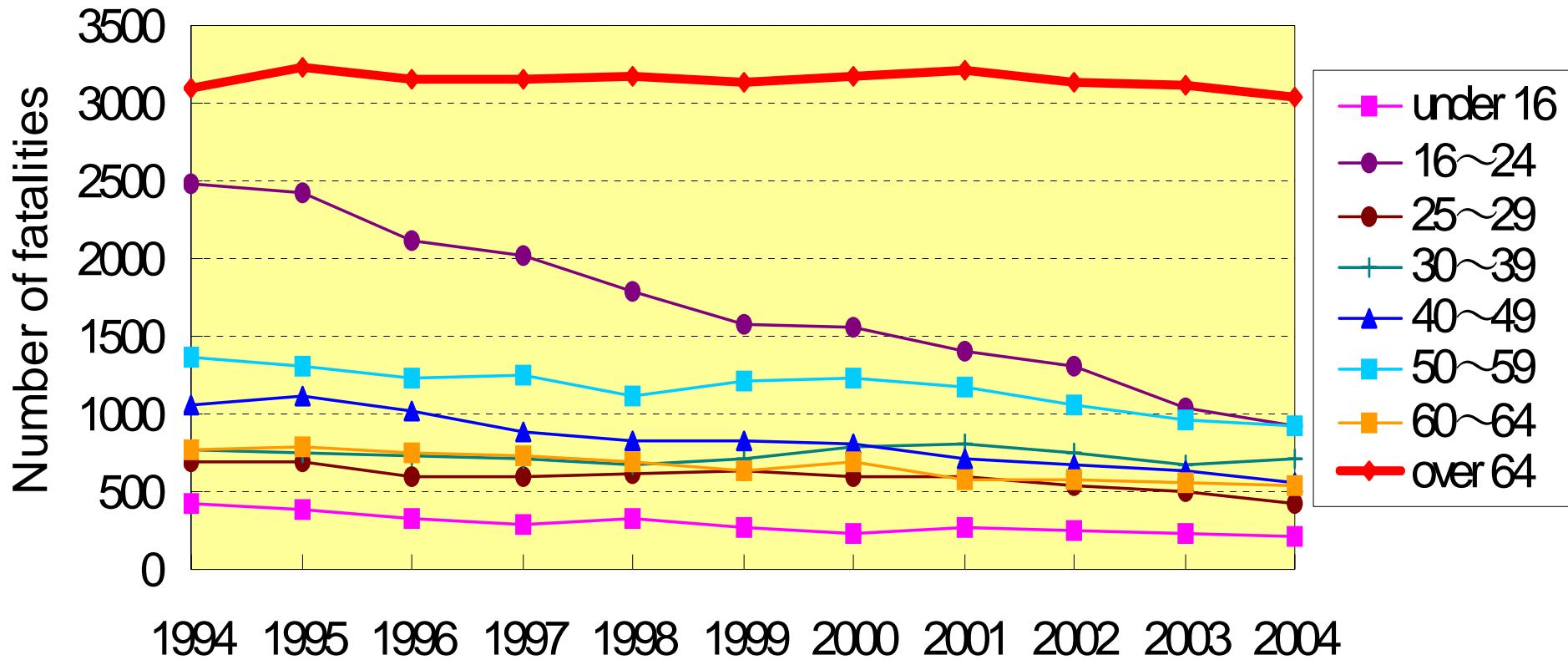


# Aging Society



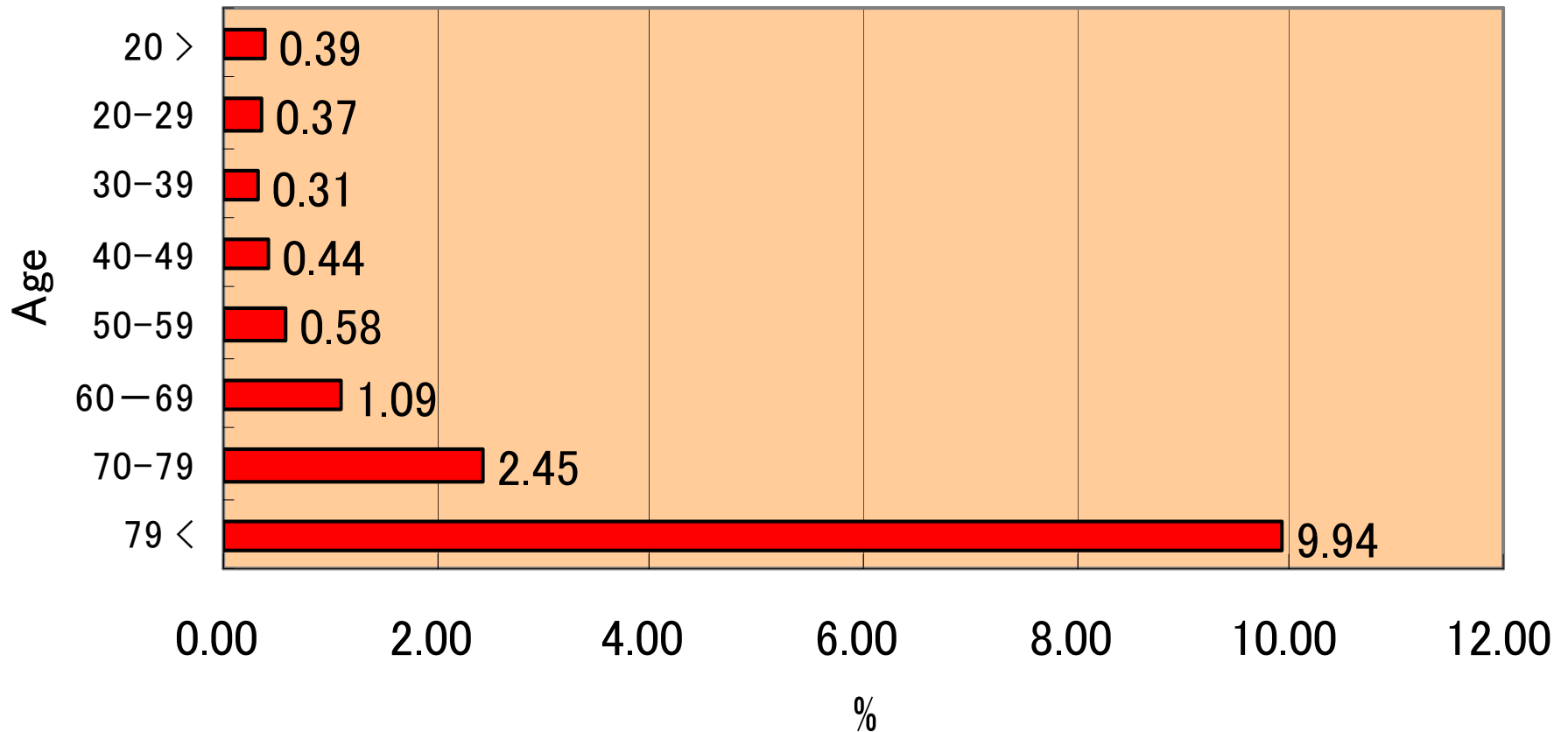
# Fatality of Aged People

Trend in number of fatalities by age



# Age and Fatality Rate

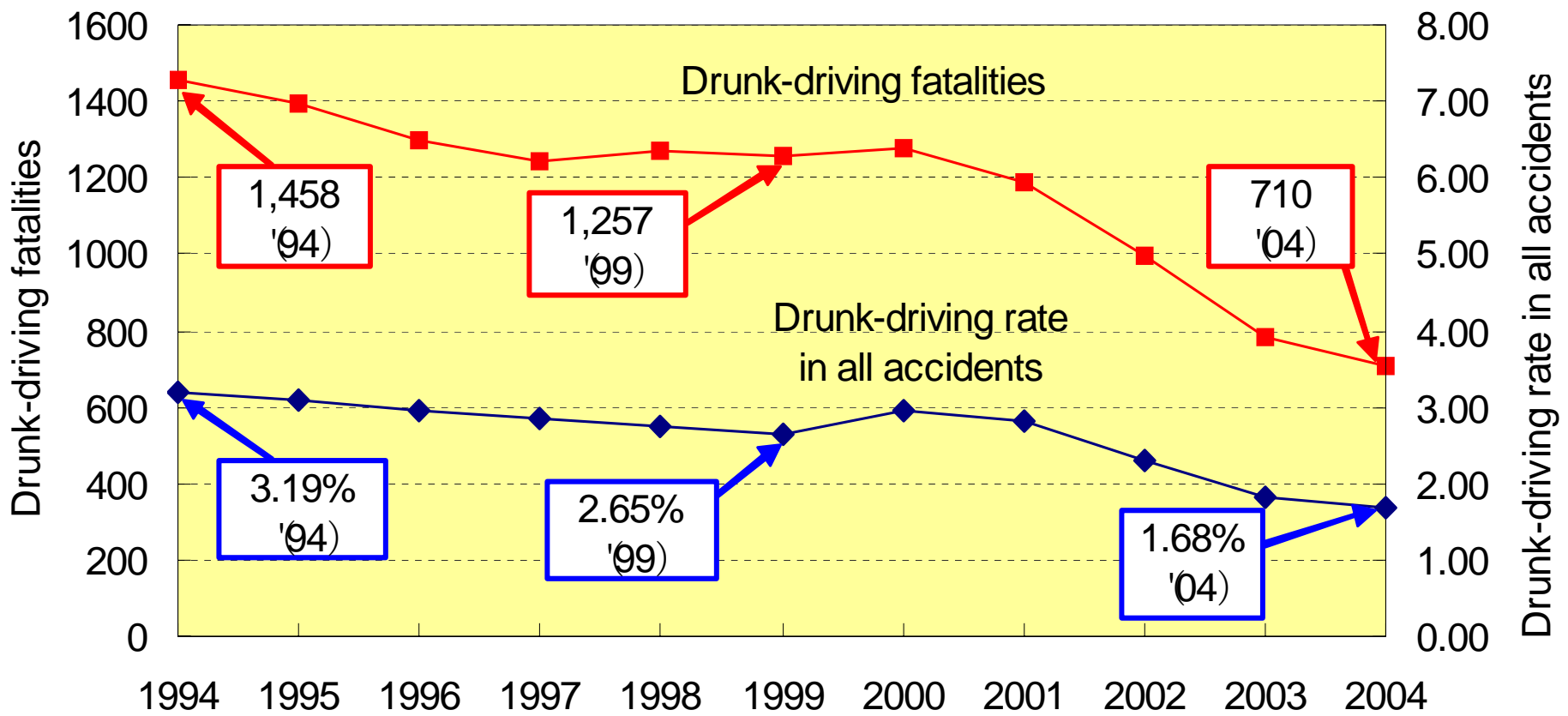
Fatality/Injury\*100 (2003)





# Tighten Penalty for Driving Drunk

Trend in number of accidents because of drunk-driving and drunk-driving rate in all accidents



# **Policy and Countermeasure (1)**

- **Target**
- **Law**
- **Organizations**
- **Improvement of road system**
- **National Five years Plan and Installation of Traffic Safety Facilities**
- **Research Activities**

# **Policy and Countermeasure (2)**

- **Integrated Traffic Accident Database**
- **Establishment of traffic accident data analysis center (ITARDA)**
- **Hazardous Spot Identification and Countermeasure**
- **ITS for traffic safety**
- **Others: Vehicle regulation, Enforcement of traffic law, Traffic safety education**

# Target

- **Traffic fatalities less than 5,000 by 2012 : Prime Ministers Speech in National Diet in 2002**
- **cf. 8,326 : Traffic Fatalities in 2002 (Death in 24 hours)**
- **40% reduction**

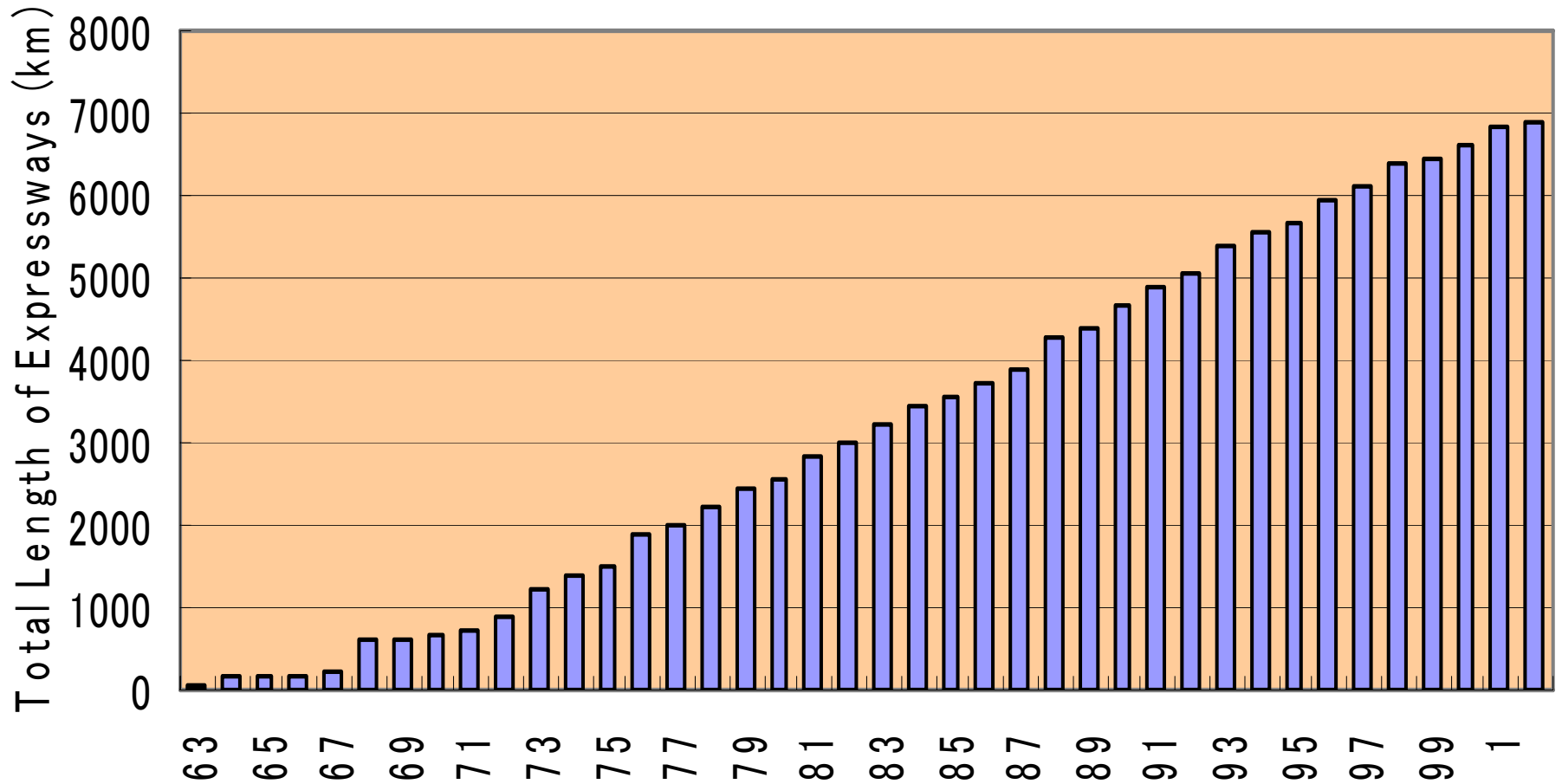
# Improvement of road system

<Comparison between accident rates on expressways and on other roads>

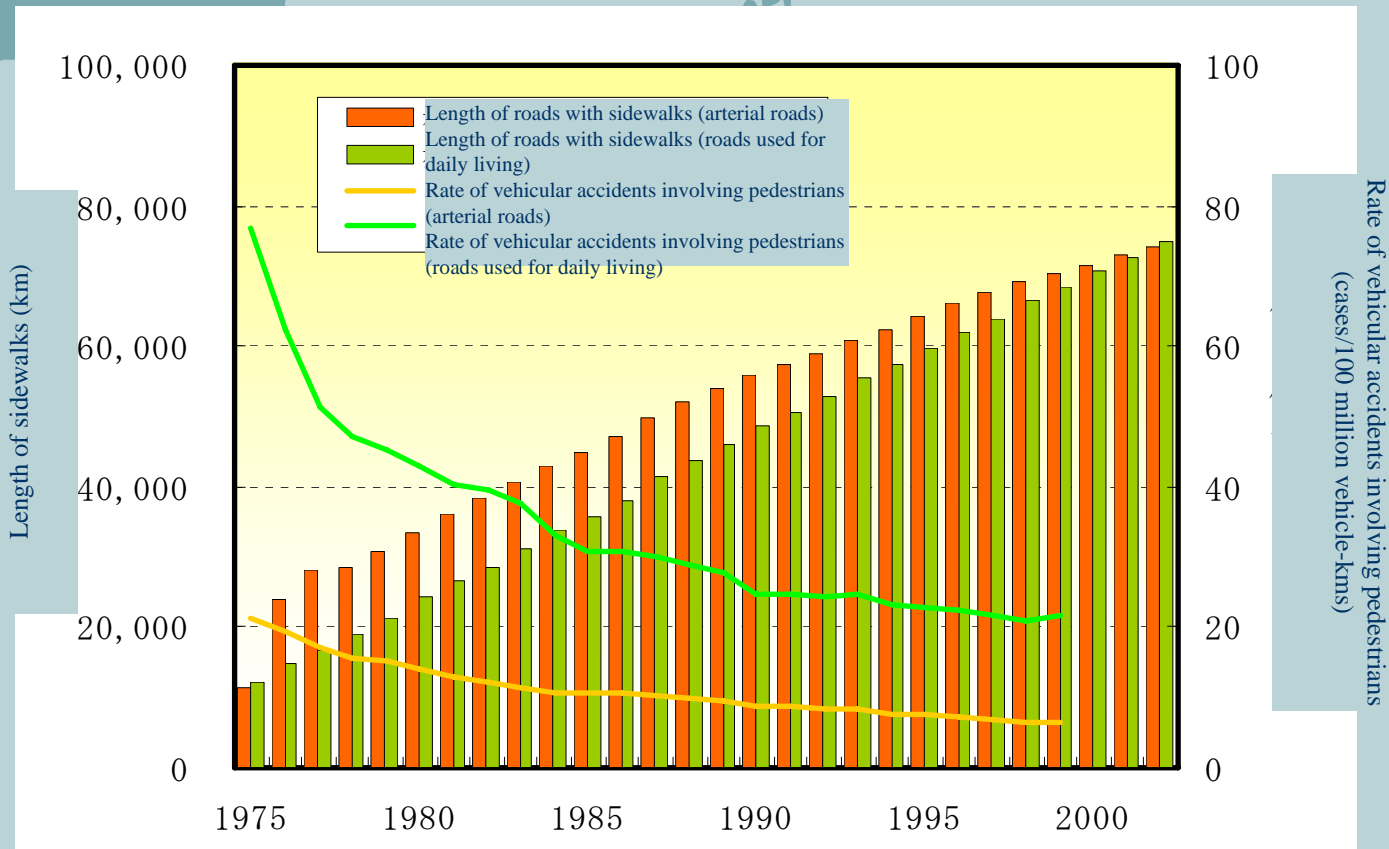
	<b>Traffic accident deaths and injuries (accidents/100 million vehicle-kilometers)</b>	<b>Traffic accident deaths (accidents/100 million vehicle-kilometers)</b>
<b>Expressways (A)</b>	11.69	0.37
<b>Other roads (B)</b>	132.13	1.21
<b>(A)/(B)</b>	approx. 1/11	approx. 1/3

Source: MICHI Roads in Japan 2002, Road Public Relations Center

# Development of Expressways

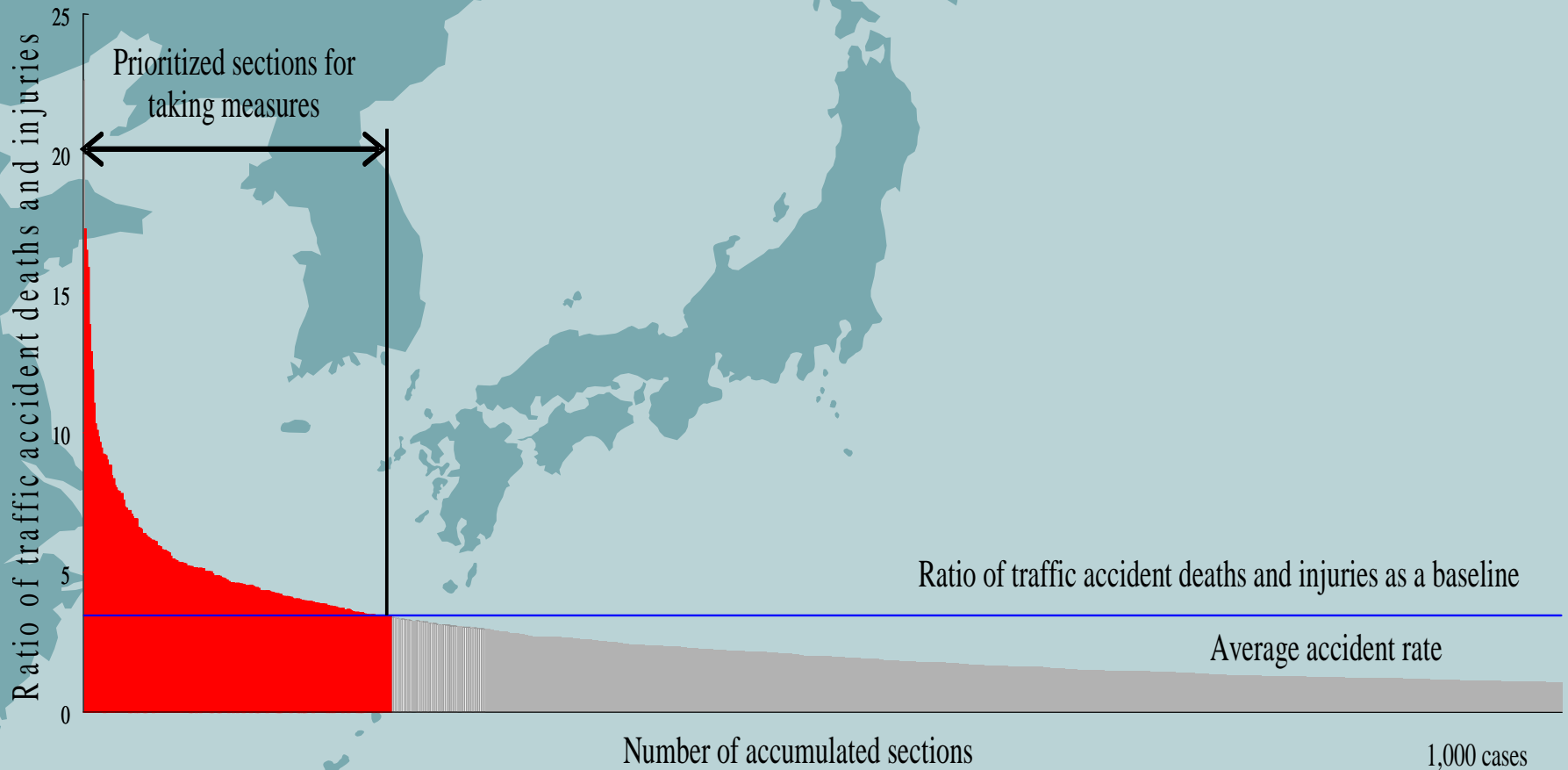


# Installation of Traffic Safety Facilities



Lengths of sidewalks and rates of vehicular accidents involving pedestrians

# Hazardous Spot Identification Analysis



Example of a method of indicating priority levels (curved line for accident rates)



# Countermeasures of Hazardous Spots

## Hazardous Accident Spot Countermeasures Council

consists of

- Road Administrators
- Public safety Committees

Study and analysis

NILIM

National  
Research  
Institute of  
Police Science

Institute for Traffic  
Accident Research and  
Data  
Analysis (ITARDA)

Support

Improvement of intersections

Laying electric cables  
in underground trenches

Construction of sidewalks

4,000  
hazardous spots

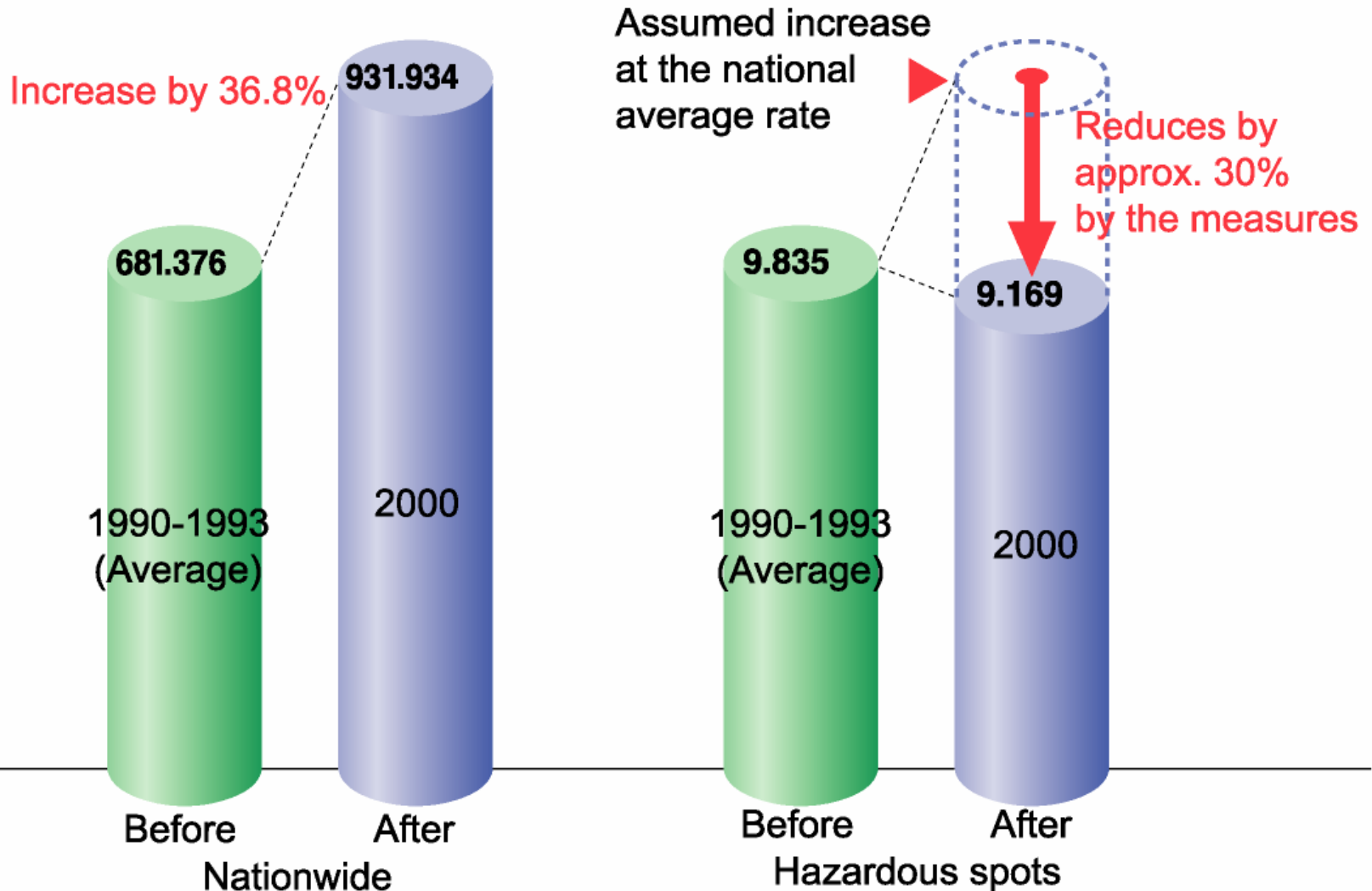
Widening roads

Improvement of sight distance

Installation of safety facilities

Reducing road  
accidents

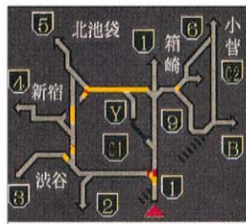
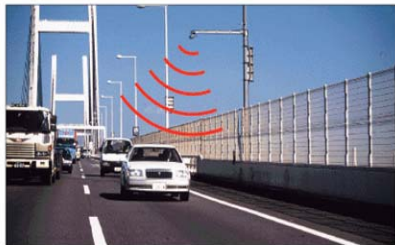
# Effects of Countermeasures



Survey locations: 1,665 locations where measures had been taken by the end of 1999.

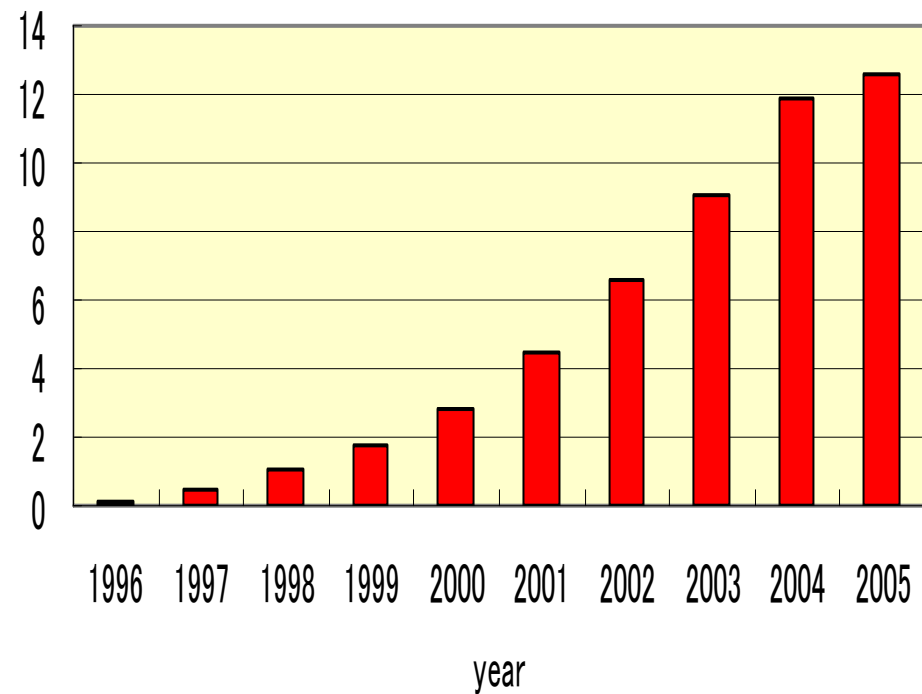
# ITS: VICS and ETC (1)

## Vehicle Information and Communication System



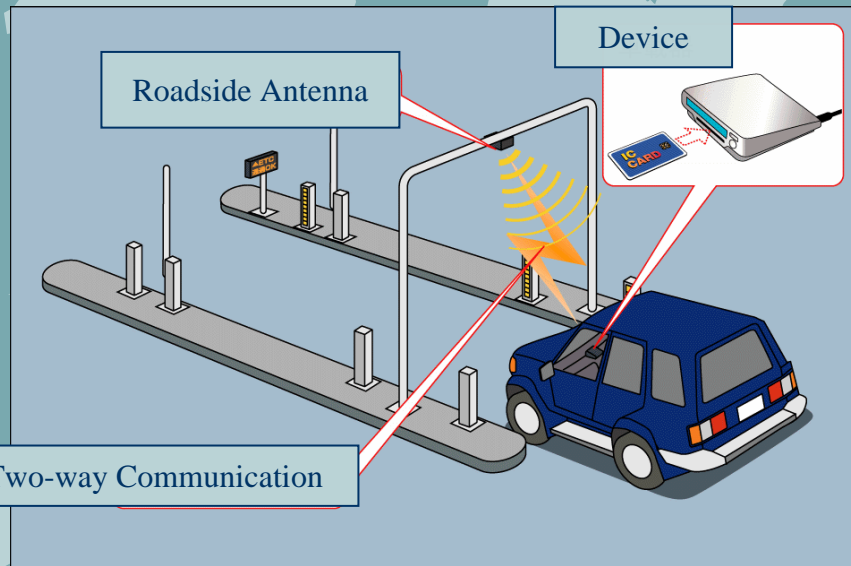
※VICS; Vehicle Information and Communication System

Accumulated Number of VICS Unit (million)

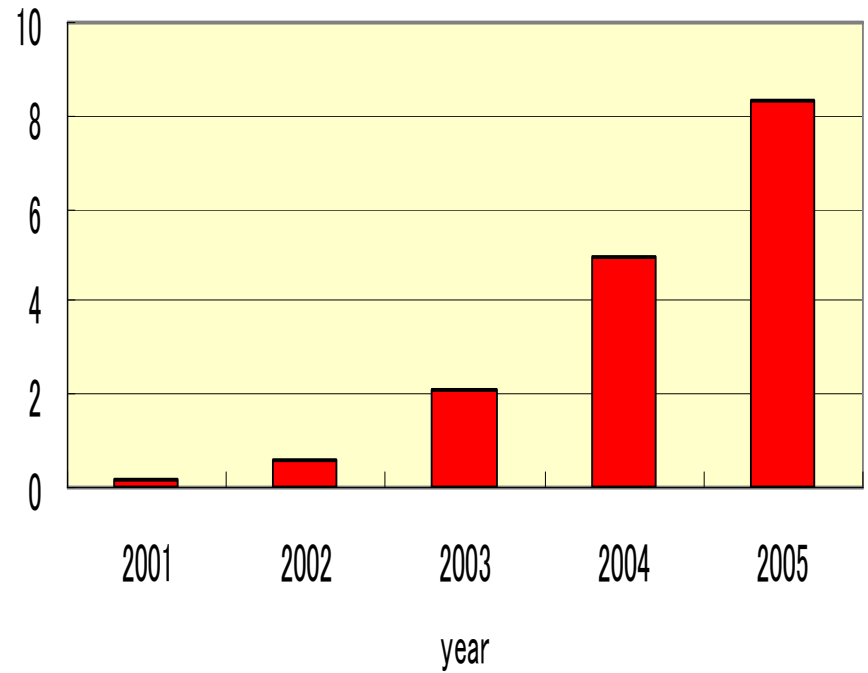


# ITS: VICS and ETC (2)

## Electric Toll Collection System



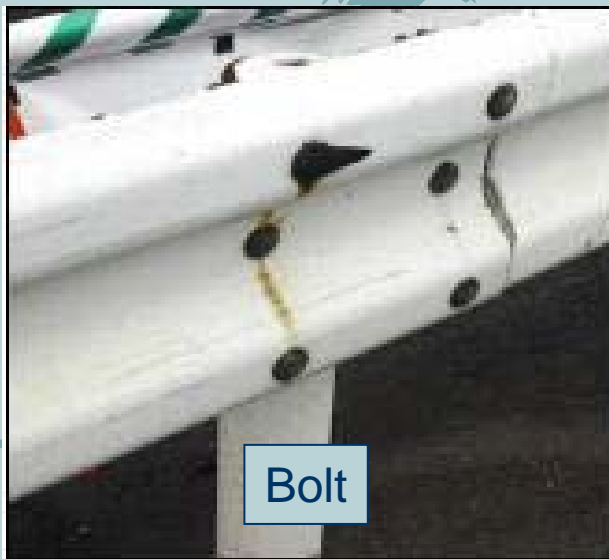
Accumulated Number of ETC Unit (million)



# Metal Pieces on Guardrail (1)

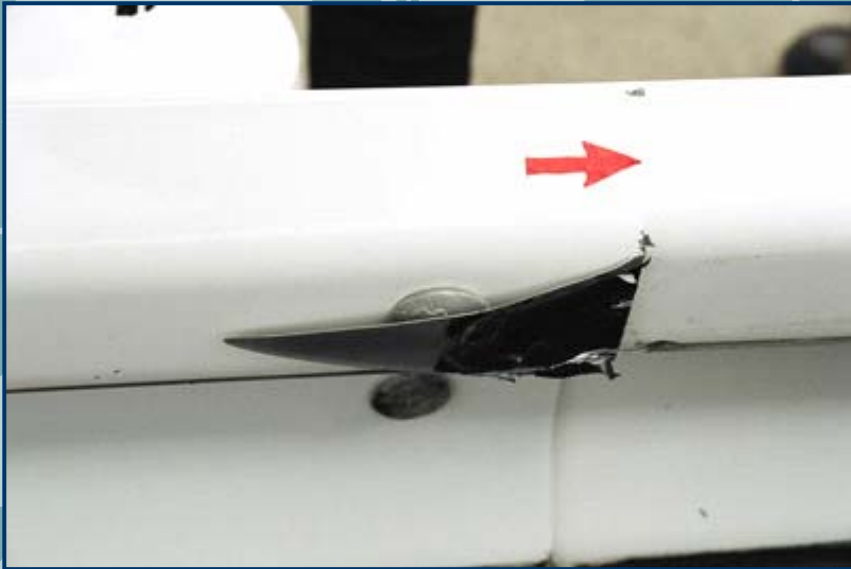
- Metal Pieces on Guardrail are found out at approx. 40,000 location
- Some of them injured bicycle riders

	Width		Length	
	Average	Standard Deviation	Average	Standard Deviation
Bolt	3.5cm	1.5cm	6.9cm	4.5cm
Joint	5.5cm	2.4cm	11.3cm	9.1cm



# Metal Pieces on Guardrail (2)

- Investigative Committee for Metal Pieces was organized
- The committee tried to find its cause
  - Statistics Data Analysis
  - Material Testing
  - Check Experiment
- Revealed cause: Shards of vehicle which touched the guardrail



A light blue background featuring a stylized map of East Asia, including the Korean Peninsula, Japan, and the Philippines. The map is rendered in a darker shade of blue.

Thank you

謝謝