History of Traffic Safety Measures: Relevant Legislation, Organization and Policy

November 27, 2012

Current Traffic Accident Conditions in Japan

Traffic Accidents in Japan (1) ～Change in Traffic Injuries and Fatalities

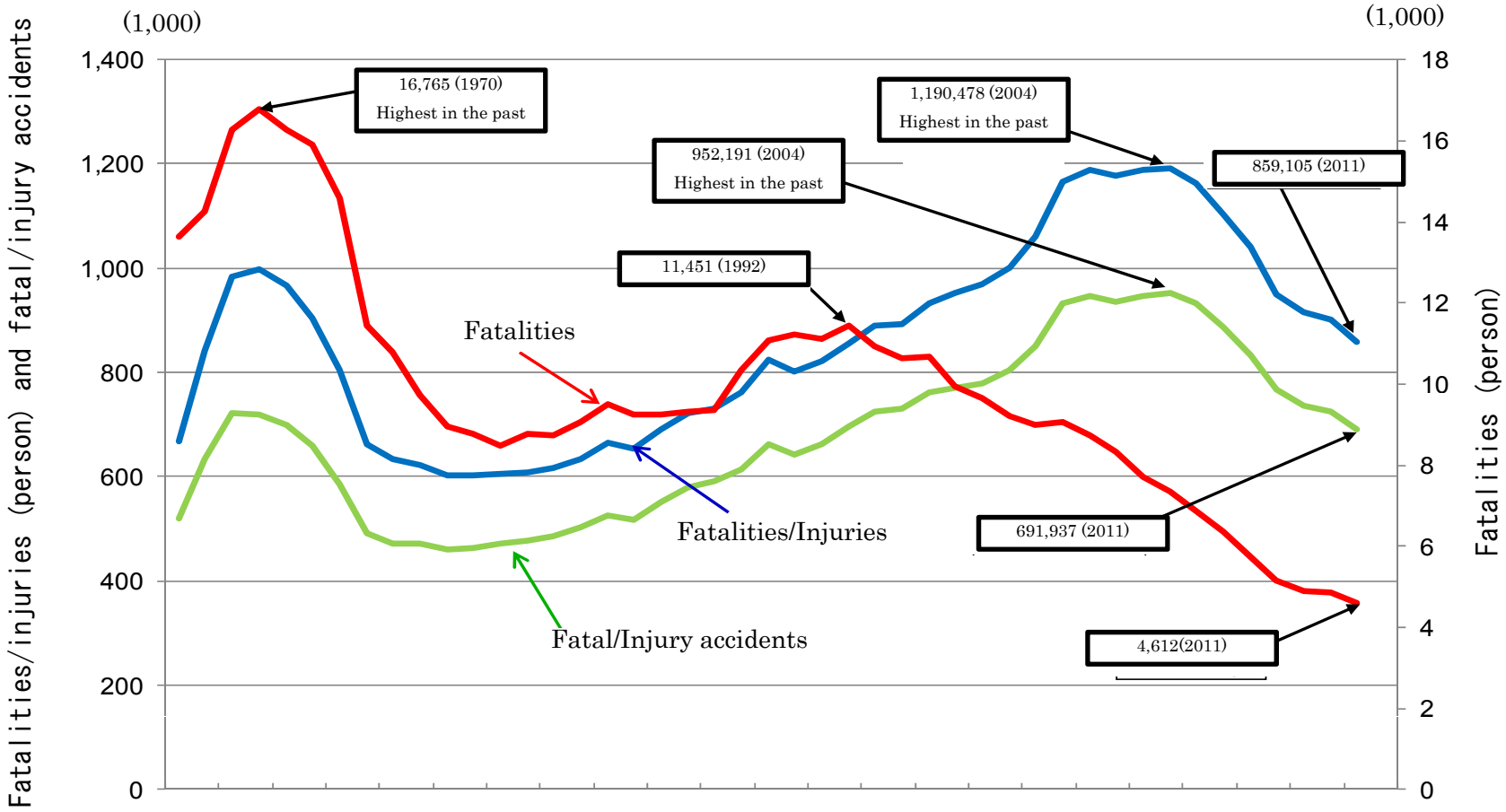
MLIT Ministry of Land, Infrastructure, Transport and Tourism

◆The "Traffic War,*" led by post-war motorization, became a social problem with fatalities reaching a record high of 16,765.

◆Since 1993 fatalities have decreased, while both fatal/injury accidents and fatalities/injuries increasing until 2004 and then taking a downward turn from 2005.

■Change in traffic fatalities and fatalities/injuries

*expression indicating a high number of deaths from traffic accidents



Note: the numbers exclude Okinawa Pref. before 1971.

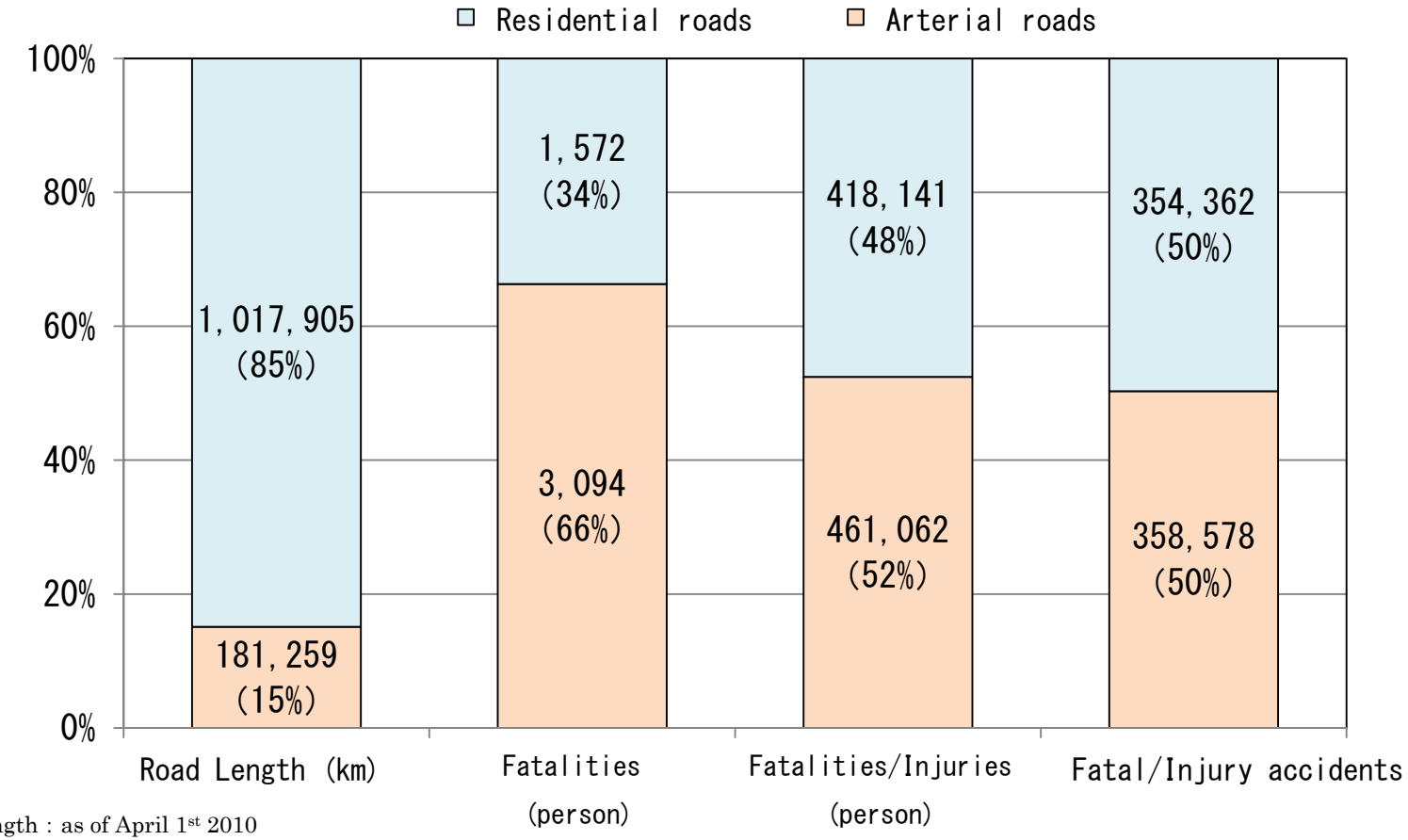
Data from the Police

Traffic Accidents in Japan (2) ～Arterial and residential roads①

◆2/3 of traffic fatalities take place on arterial roads

◆Half of the fatal and injury accidents occurred on residential roads

■Traffic accidents by road type



※Road length : as of April 1st 2010
※Fatal and Injury accidents : as of 2010
※Fatalities and Fatal/Injuries : as of 2010
※Arterial roads : National Highways, Principal Regional Roads, Prefectural Roads
※Residential Roads : Municipal Roads, and other (roads other than "public roads" determined in the Road Law such as farm roads and private roads)

Data from Annual Report of Road Statistics and ITARDA

Traffic Accidents in Japan (2) ～Arterial and residential roads②

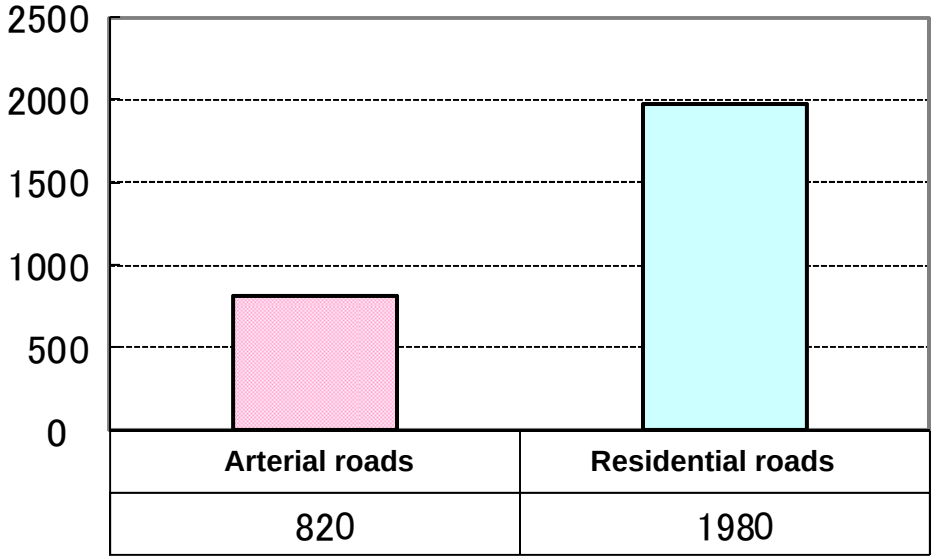
◆Compared to arterial roads, residential roads
- have 2.4 times higher fatal/injury accident rates → Higher chance of accident
- have 1/6 accidents per length → Harder to narrow down the hot spot

■Traffic accidents by road type (2009)

【Fatal/injury accidents】

1 : 2.4

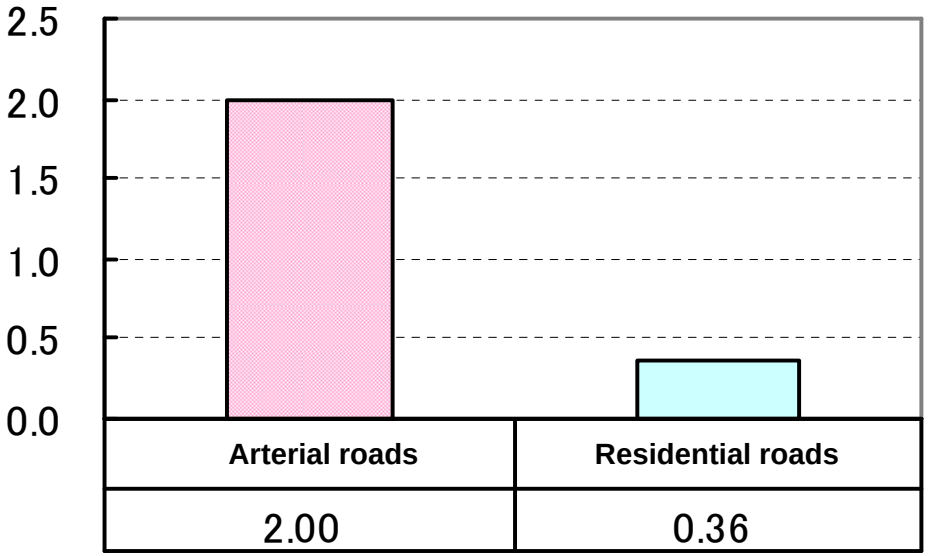
(accidents/billion vehicle km)



【Accidents per km】

5.6 : 1

(accidents/km)



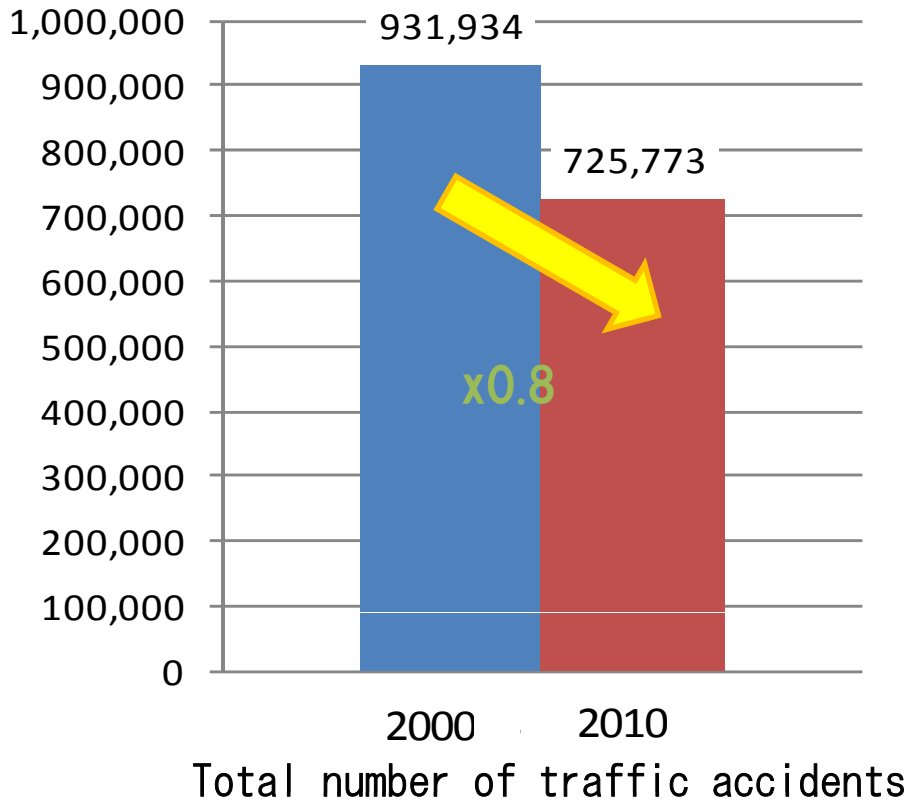
*Fatal/injury accident rate： Number of Fatal and Injury accidents per billion km of traffic by a vehicle

Data from the Police, Annual Report of Road Statistics and Annual Transport Statistics

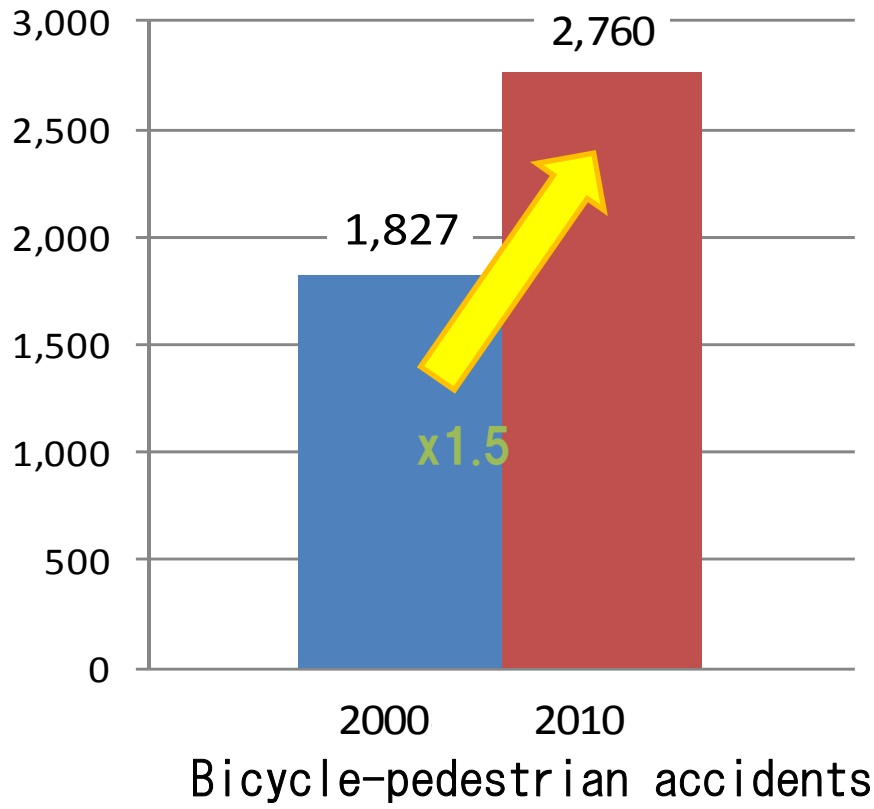
Traffic Accidents in Japan (3) ～Increase in bicycle-pedestrian accidents

MLIT Ministry of Land, Infrastructure, Transport and Tourism

◆Total number of traffic accidents decreased by 20% during the last decade, while bicycle-pedestrian accidents increased by 150%.



Total number of traffic accidents



Bicycle-pedestrian accidents

Data from the Police

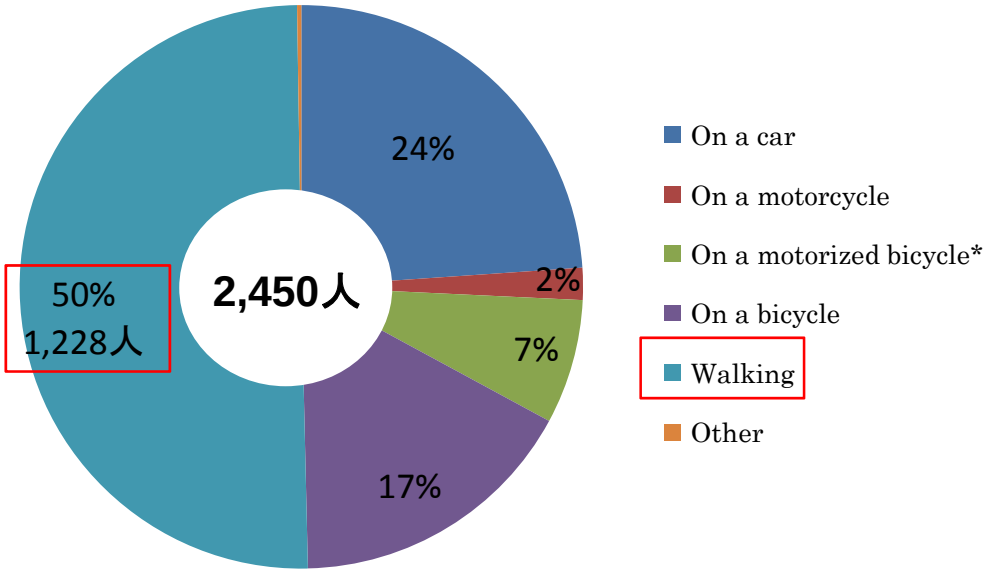
Traffic Accidents in Japan (4) ～Accidents involving the elderly

◆50% of elderly traffic accident deaths occur while the person is walking

◆72% of traffic accident deaths that occur while walking are the elderly

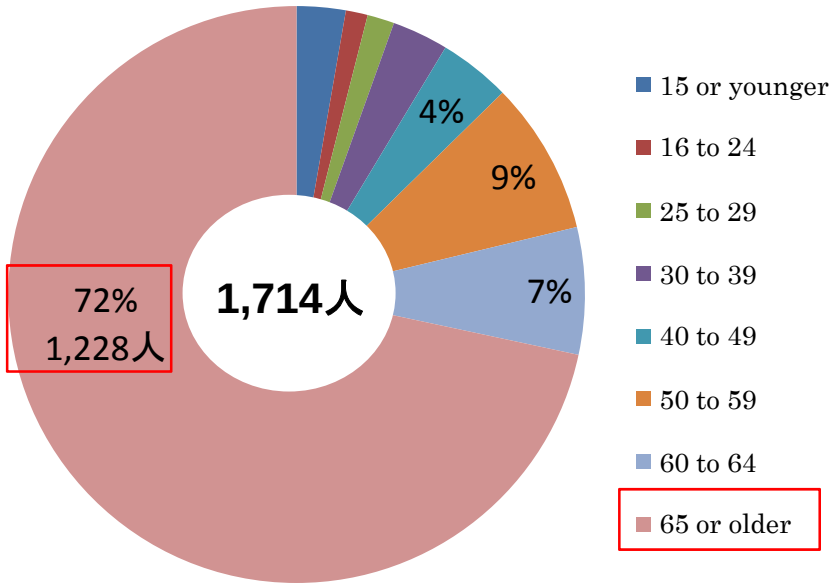
⇒ Fatalities of elderly while walking accounts for 25% of total fatalities.

■Elderly traffic accident deaths by situation (2010)



Data from the Police

■Traffic accident deaths while walking by age



Data from the Police

*with a displacement of less than 50cc

Road Traffic Safety Policy System

Road Traffic Safety Policy System (1)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

Traffic Safety Policies Basic Act (June 1, 1970 Act No. 110)

National Government

Fundamental Traffic Safety Program (the 8th program formulated on Mar. 14, 2006)

- National Traffic Safety Panel develops and recommends to PM (Article 22)
- Annual report to the Diet on the summary of the program and measures undertaken (Article 13) →White paper on Traffic Safety in Japan

Prefectural Government

Prefectural Traffic Safety Program (Article 25)

- Prefectural Traffic Safety Panel develops (Article 16)
- Formulates prefectural traffic safety program annually (Article 25)

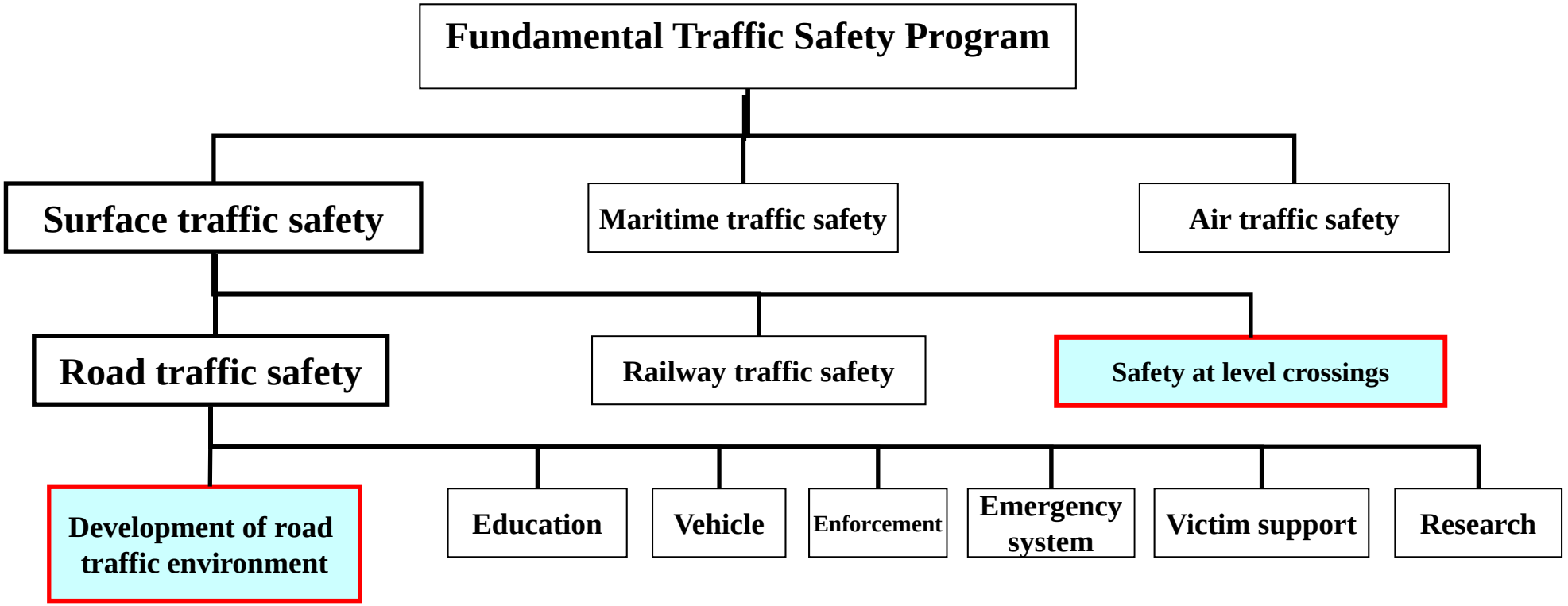
Municipal Government

Municipal Traffic Safety Program (Article 26)

- Municipal Traffic Safety Panel develops (Article 26)
- Formulates municipal traffic safety program as necessary (Article 26)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

- Fundamental Traffic Safety Program is developed every 5 years since 1971 as a comprehensive and long-term all-mode traffic security outline plan based on the Act on Traffic Safety Policy (enacted in 1970).
- The current program is the 9th program covering from 2011 to 2015.



Outline of the 9th Fundamental traffic Safety Program

Process: Discussions on the national Traffic Safety Panel since Feb. 2010 → Based on examination and discussion → The Panel developed the Program in Mar. 2011

5-year Period: 2011 to 2015

1. Basic Principles

-A society without traffic accidents should ultimately be realized with the thought that there are a number of people who lose their lives in traffic accidents and that traffic accidents are also costly socially and economically.
- Every measure should be made toward human-oriented traffic, considering vulnerable road users such as the elderly, physically challenged and children.

2. Road Traffic Safety

[Objectives Set for Road Traffic Safety]

1) To reduce the annual number of deaths resulting from traffic accidents within 24 hours after the incident to 3,000* or fewer so that Japan becomes the world's safest nation pertaining to road traffic. *if multiplied with the ratio of 2010's number of '24-hour deaths' and '30-day deaths', the number will be about 3,500.

2) To reduce the number of fatalities and injuries combined to 700 thousand or fewer.

[Measures for Road Traffic Safety]

<Viewpoints>Ensuring safety of 1) the elderly and children, 2) pedestrians and cyclists and 3) road users on residential and arterial roads.

<Pillars>1) Physical road infrastructure improvement, 2)Raising traffic safety awareness, 3) Ensuring safe driving, 4) Ensuring vehicle safety, 5) Enforcing road traffic rules, 6) Enhancing rescue and emergency services, 7) Promoting victim support, including a proper compensation system and 8) Enhancing R&D and study activities

3. Railway Traffic Safety

[Objectives Set for Railway Traffic Safety]

1)To achieve the number of passenger deaths to zero

2)To reduce the number of railway traffic fatalities

[Measures for Railway Traffic Safety]

<Viewpoints> 1) Prevention of serious accidents, 2) Prevention of passenger-involving accidents

< Pillars> 1) Improving railway traffic environment, 2) Raising traffic safety awareness

4. Traffic Safety at Level Crossings

[Objectives Set for Traffic Safety at Level Crossings]

1) To reduce accidents by 10% by 2015 compared to the number in 2010.

[Measures for Traffic Safety at Level Crossings]

<Viewpoints> Countermeasures based on each situation at the site.

< Pillars> 1) Replacement of level crossings with grade-separated crossings, improvement of grade separation facilities for pedestrians and 2) Improvement of level crossing facilities and enforcing traffic rules

5. Maritime Traffic Safety

[Objectives Set for Maritime Traffic Safety]

1)To reduce the number of vessels that needed rescue around Japan by 10% (i.e. 2,200 vessels) by 2015 compared to the average annual number during the 8th program.

2)To prevent large-scale accidents in congested sea areas that may involve the closure of a line or many fatalities/injuries and have a significant influence on society.

[Measures for Maritime Traffic Safety]

<Viewpoints> 1) Continually promote accident-prevention measures, 2) Enhancement of life-saving system

< Pillars> 1) Improvement of maritime traffic environment, 2) Raising awareness of maritime traffic safety

6. Air Traffic Safety

[Objectives Set for Air Traffic Safety]

1)Continue to hold the record of no fatal accidents caused by specified Japanese air carriers, which has been held since 1986.

[Measures for Air Traffic Safety]

<Viewpoints> 1) Recovering of trust on air traffic safety, 2) Establishment of safe and efficient system allowing increased air cargo capacity, 3) Introduction of National Safety Program.

< Pillars> 1) Shift to comprehensive safety management, 2) Improvement of air traffic environment

By 2015

Traffic fatalities: 3,000 or fewer

Traffic fatalities and injuries: 700,000 or fewer

（ If multiplied with the ratio of 2010's number of '24-hour deaths' and '30-day deaths,' the number will be about 3,500. ）

◆ In addition to the conventional safety measures as a basis, quick response to change in socioeconomic and traffic circumstances, **enhanced data-collection and analysis of real traffic accidents** and possibly effective new measures will be used for more efficient implementation.

◆ In order to improve measures, it will be necessary to **target the setting by measure to the fullest extent possible** and **effect evaluation after the implementation of the measure**.

◆ Considering the future socioeconomic and traffic circumstances, **the following viewpoints should be given serious consideration**;

1) To ensure elderly and child safety
2) To ensure pedestrian and cyclist safety
3) To ensure the safety of road users on residential and arterial roads

Organization Structure for Traffic Safety

National Traffic Safety Panel

Act on Traffic Safety Policy
Article 14
(Development of Fundamental Traffic Safety Program)

Chair : the Prime Minister

Member : Relevant 12 ministers

(Director-general Cabinet Secretary, minister for a particular field (traffic safety, Okinawa and Northern Territories Affairs), ,Chair of the National Pubic Safety Commission, minister for a particular field (finance), Minister of Minister of Internal Affairs and Communications, Minister of Justice, Minister of Education, Culture, Sports, Science and Technology, Minister of Health, Labor and Welfare, Minister of Agriculture, Forestry and Fisheries, Minister of Economy, Trade and industry, Minister of Land, Infrastructure and Transport and Minister of Defense)

Traffic Task Force

Decision of National Traffic Safety Panel

Enacted on Dec. 26, 2000
Partly amended on Dec. 8, 2005
Partly amended on Jun. 13, 2006

(Liaison and promotion of actual measures)

Chair : Minister for a particular field (traffic safety)

Member : Relevant 15 administrative vice-ministers

(Vice-minister of the cabinet office, Director General of NPA, Financial Services Agency Commissioner, Vice-minister of the public management, home affairs, posts and telecommunications, Director general of fire and disaster management agency, Vice-minister of Justice, Vice-minister of education, culture, sports, science and technology, Vice-minister of health, labor and welfare, Vice-minister of Agriculture, Forestry and Fisheries, Director-general of Fisheries Agency, Vice-minister of Economy, Trade and Industry, Vice-minister of Land, Infrastructure and Transport, Director-general of Metrological Agency, Director-general of Japan Coast Guard and Vice-minister of Defense)

Prefectural Traffic Panel

Decision of traffic safety task force (Aug. 9, 1961)
(Prefectural-wide initiative of traffic safety)

Prefectural Traffic Safety Panel

Article 16 of Act on Traffic Safety Policy
(development of prefectural traffic safety program)

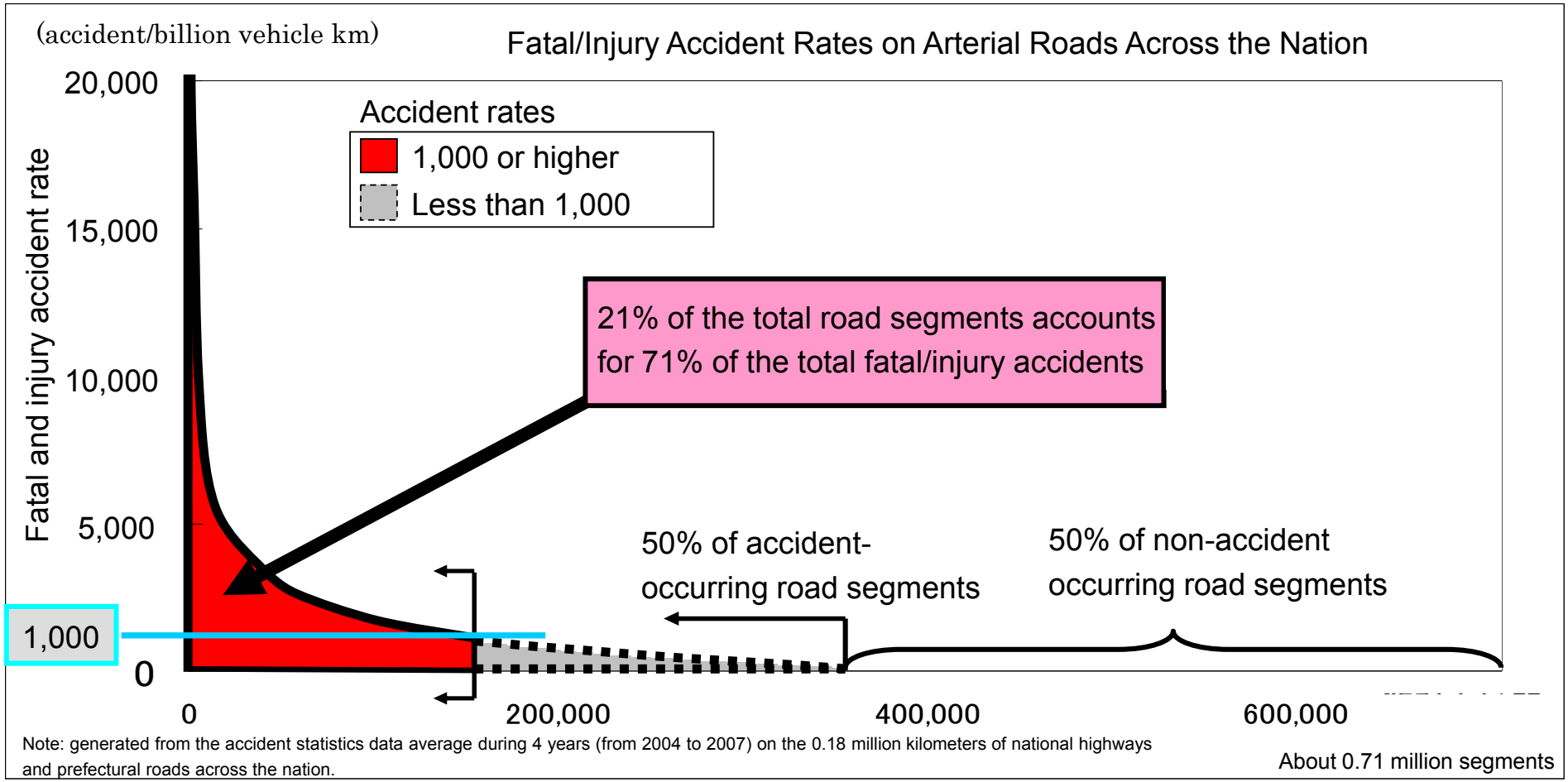
Municipal Traffic Safety Panel (on a voluntary basis)
Article 18 of Act on Traffic Safety Policy
(development of municipal traffic safety program)

Reference: MLIT based on the documents released by Cabinet Office

Traffic Safety on Arterial Roads

MLIT Ministry of Land, Infrastructure, Transport and Tourism

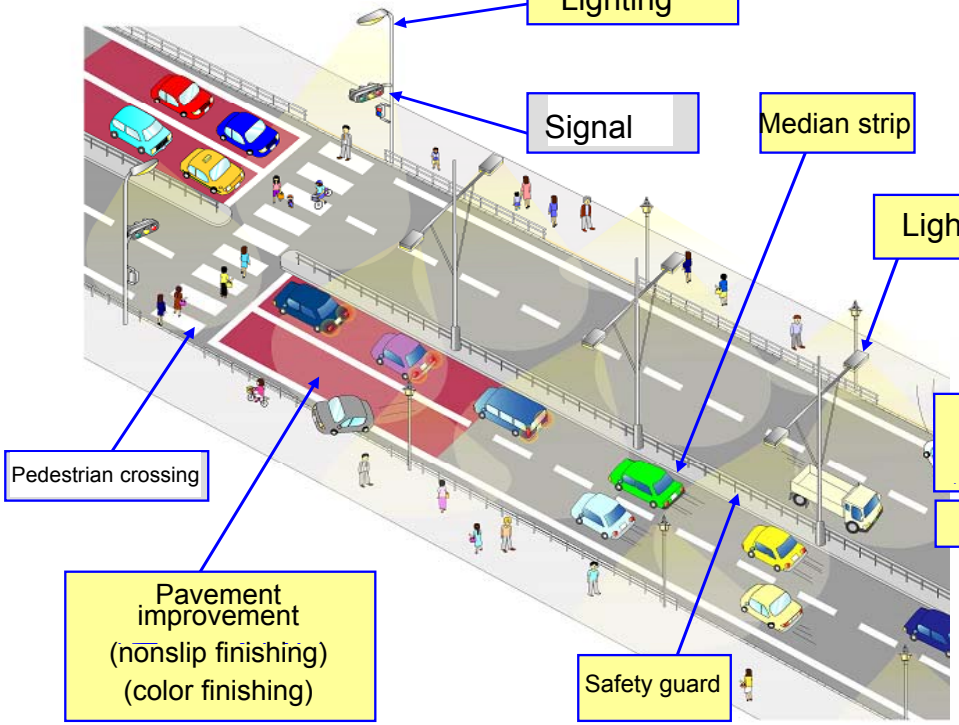
- ◆21% of the total road segments accounts for 71% of the total fatal/injury accidents, when all 0.71 million segments of 0.18 million kilometers of arterial roads across the nation are arranged in order of fatal/injury accident rate.



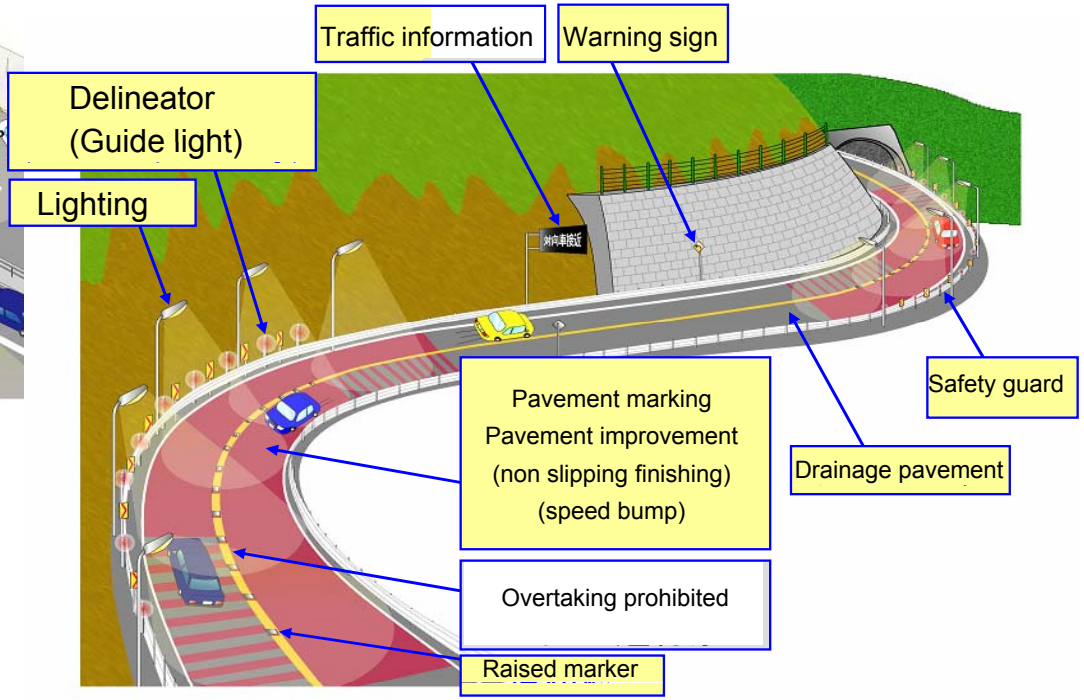
Note: generated from the accident statistics data average during 4 years (from 2004 to 2007) on the 0.18 million kilometers of national highways and prefectural roads across the nation.

Illustrative Description of Improvements at Black Spot (Basic Segment)

<Urban area>

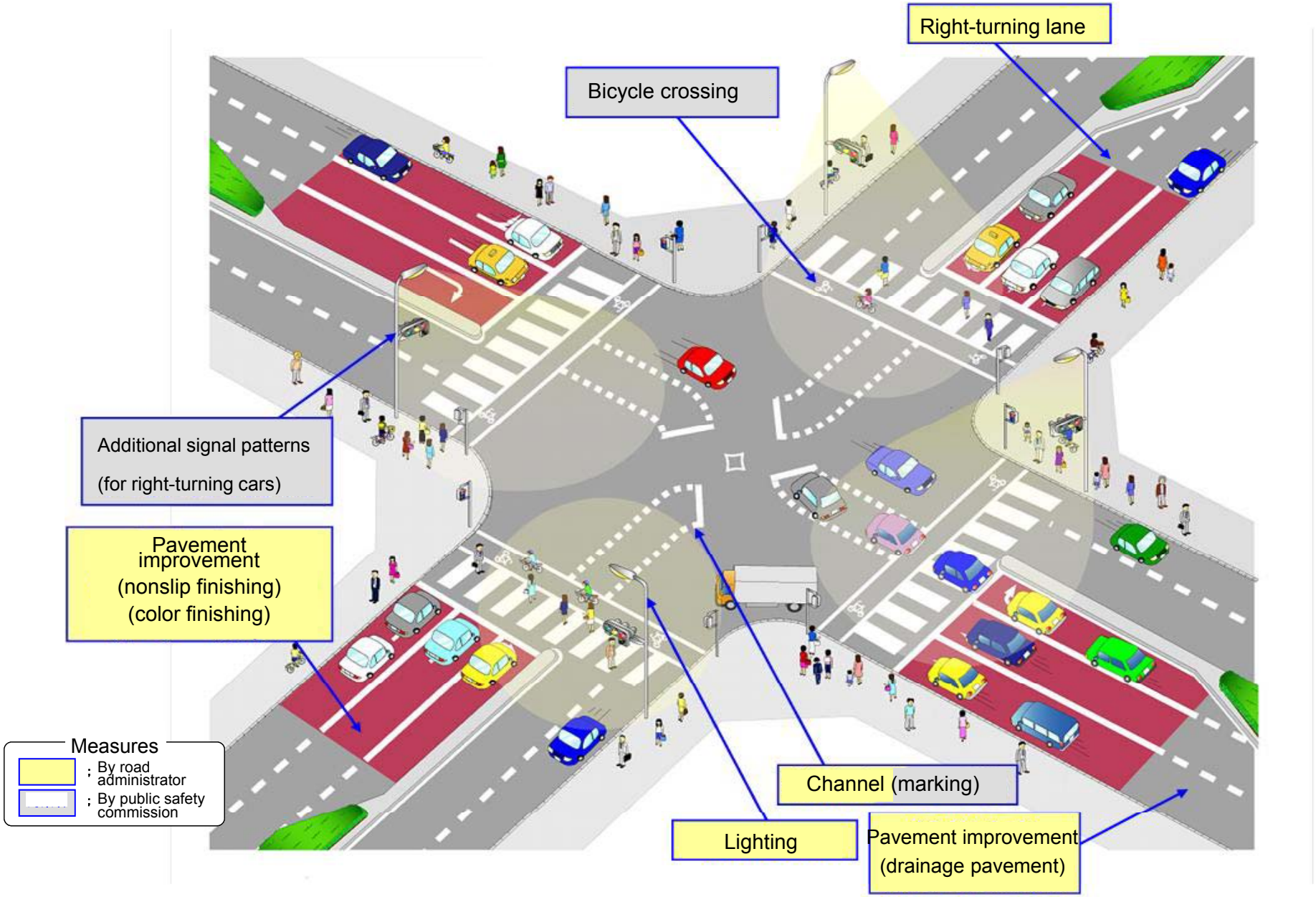


<Mountain area>



Measures
; By road administrator
; By public safety commission

Illustrative Description of Improvements at Black Spot (intersection)



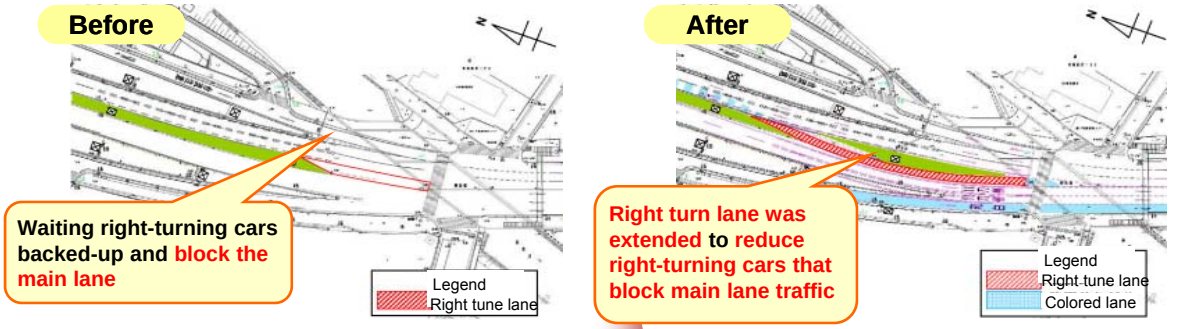
Example of Measures Taken at a Black Spot (Mishima Bridge on National Hwy 3)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

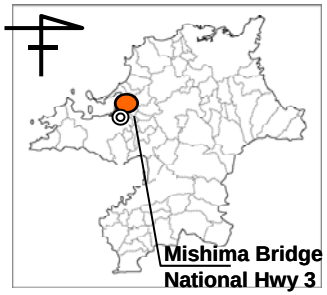
60% decline in rear-end accidents and accidents-when-turning with smoother traffic

- 40 fatal and injury accidents occurred from 2004 to 2007 (i.e. 4,000 accidents/billion vehicle km).
- Waiting right-turning cars block the cars going straight, causing rear-end accidents.
- As a countermeasure, the length of the right turn lane was extended and the pavement surface was colored, which reduced cars turning right from blocking cars going straight.

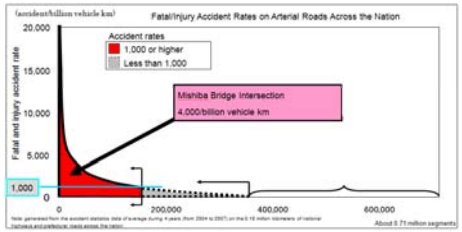
■Countermeasure (Extended right-turn lane and colored pavement)

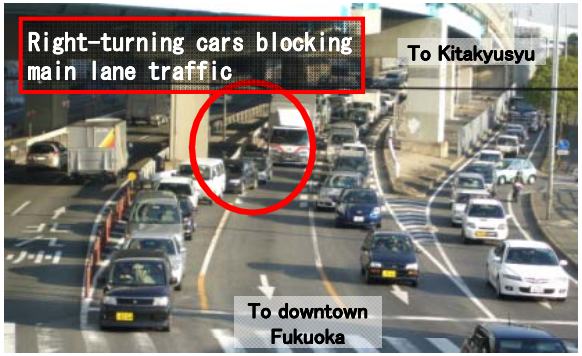


[Location]

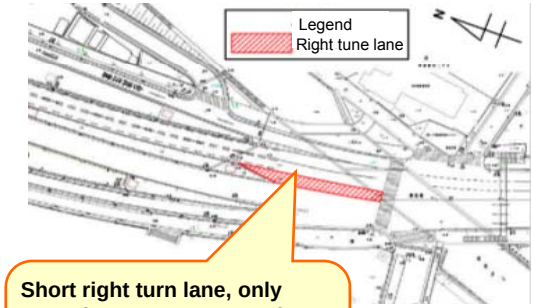


[Fatal and injury accident rates]

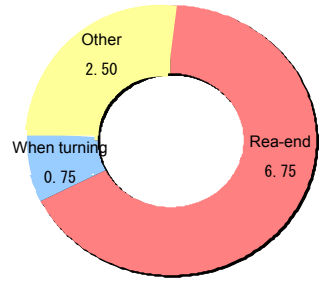




■Cause of accident

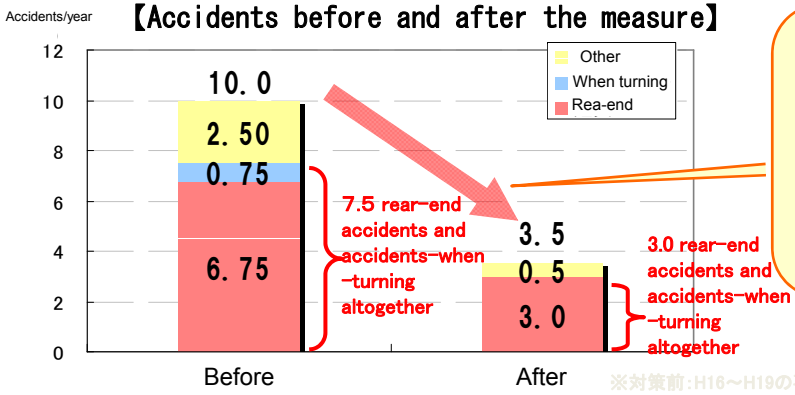


Short right turn lane, only 30m, does not accommodate enough cars. Overflowed right-turning cars block the traffic of cars going straight.



【Accidents at Mishima Bridge intersection by cause】

■Effect (60% decline in rear-end accidents and accidents-when-turning)



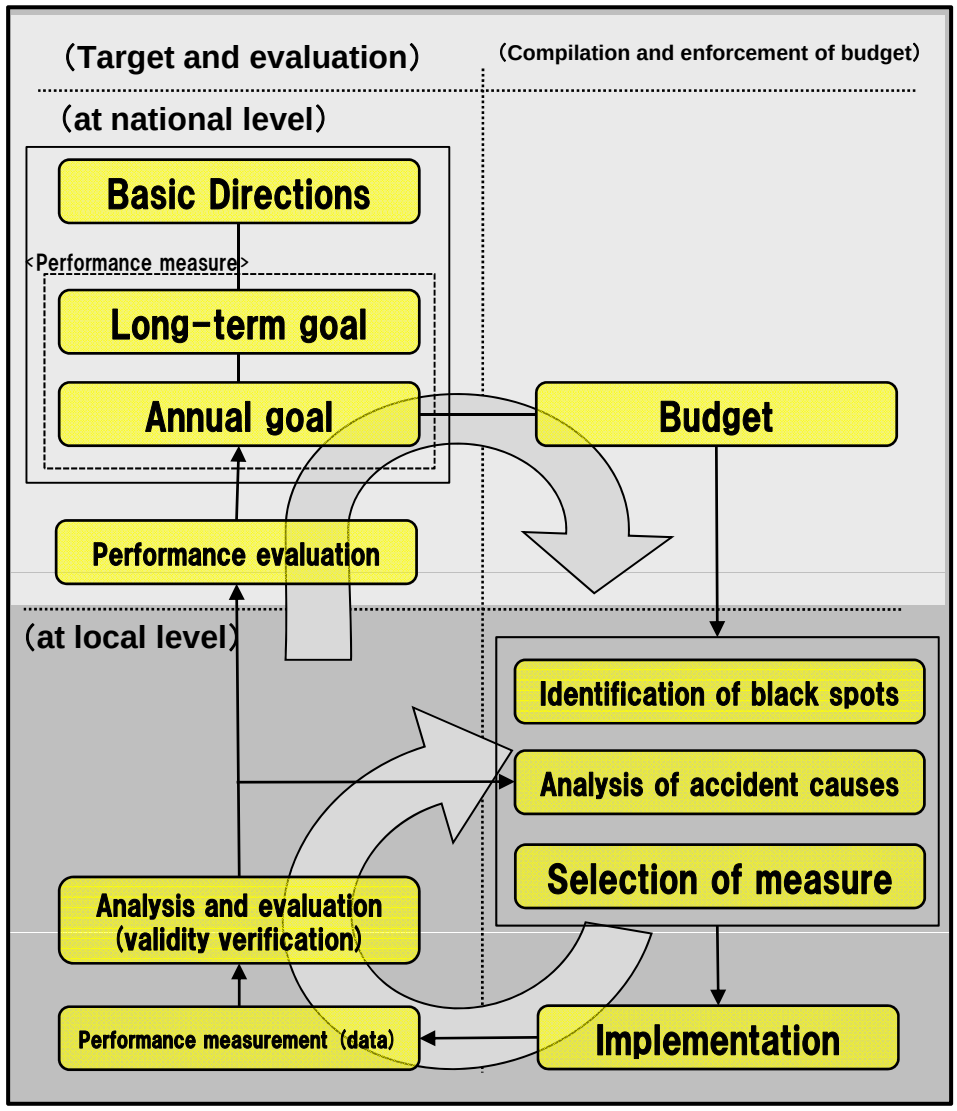
※対策前:H16～H19の事故件数の平均値
対策後:H20.4～H21.12の事故件数の平均値

60% decline in rear-end accidents and accidents-when-turning with reduction of cars blocing because of lengthened right turn lane.

Plan for the Elimination of Traffic Accidents (Focusing on Black Spots)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

- "The plan for the elimination of traffic accidents (focusing on black spots)" is being implemented by intensively and effectively tackling traffic accidents through the approach of "selecting and focusing" and "citizen participation and cooperation."



1. Identifying black spots ⇒ "selecting and focusing"

①black spots based on accident data

Fatal and injury accident rates, number of serious accidents

②Potentially dangerous spots

Identified by residents, road users and municipal governments

⇒ Identified 14,303 spots across the country (2010)

(Input from a committee consisting of academia and stakeholders)

2. Sharing information⇒ "citizen participation and cooperation"

※Change in behavior of residents and road users to increased awareness is also expected to prevent accidents.

①Publishing the locations of typical black spots

②Installing signs to draw driver's attention for added caution

③On-site observation with residents and related organizations

【 Efforts at Okayama National Highway Bureau】

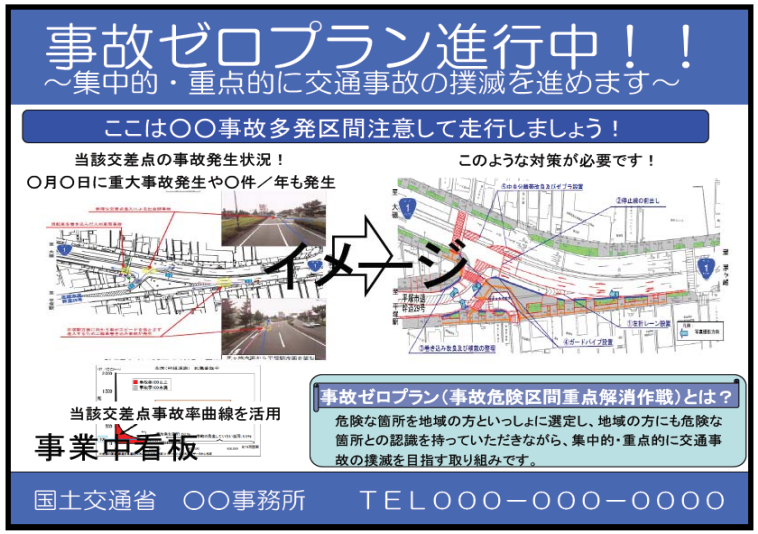
On-site observation and exchange of views by residents and related organizations

Installing Signs for Caution and Onsite-observation

MLIT Ministry of Land, Infrastructure, Transport and Tourism

- With the expectation that road users' increased awareness of black spots can reduce accidents, signs pertaining to the elimination of traffic accident plan (focusing on black spots) are installed onsite.
- Black spots, spots with serious accidents in recent years, school roads and particular spots that citizens are concerned with are inspected onsite by local interested parties and relevant organizations, such as the prefectural police.

【Example Caution Signs】



Note: the signs say "Danger, this is a black spot. Not traffic accident plan is ongoing"

【Onsite inspection】

事故多発の国道246号で現地点検

国交省

県内で交通事故が多発している国道区間の対策として、国土交通省は18日、裾野市内の国道246号沿いで現地点検を行った。県警や同市、地域の自治会などから関係者ら約30人が参加し、道路状況を確認しながら事故防止策を協議した。

国交省が所管の国道を対象に昨年、県警とともに策定した交通安全計画「県事故ゼロプラン」の一環。死傷事故が多く、利用者らが普段から危険と感じている県内229区間を「事故危険区間」に選定して周知を図るほか、信号機や標識の改良などの対策を継続的に講じていく。

現地点検を行った同市御宿の国道246号御宿北交差点では昨年、死亡事故や追突事故が発生した。参加者らは現場で車両の流れを見ながら、右折レーンの拡大やカラー舗装の施工などの対策案を話し合ったほか、ドライバーへの注意喚起を促す啓発看板も設置した。

事故危険区間として啓発用の看板を設置した現地点検＝裾野市御宿

Shizuoka Shinbun, Jan 19, 2011

Note: the newspaper article says on-site inspection was carried out on the black spot of National Hwy 246.

Accident Prevention in Residential Areas

Development of Safe Pedestrian Areas

MLIT Ministry of Land, Infrastructure, Transport and Tourism

−Road administrators work in cooperation with a public safety commission in an area-wide comprehensive accident prevention measure. For example, MLIT and the police designated hot spot areas as “Safe Pedestrian Areas” (796 areas in Jul. 2003 and 582 areas in Mar. 2009) where through-traffic tends to flow into the residential roads.

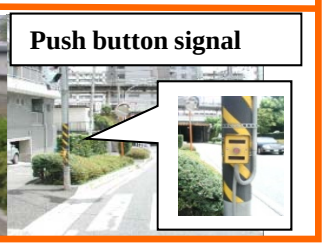
Development of pedestrian network with more sidewalks and signals

Reduce inflow through-traffic to residential roads with smoother surrounding arterial roads

【Development of pedestrian network】

Sidewalk

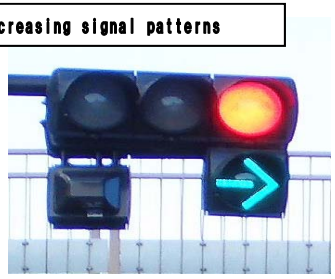
Push button signal



【Smoother surrounding arterial roads】

Adding right-turning lane

Increasing signal patterns



【Development of pedestrian/bicycle preference roads】

Installment of road hump

Speed control

<Legend>

Measure ; by road administrator

Measure ; by public safety commission

Development of pedestrian/bicycle preference roads with speed control and road hump

Effects of “Safe Pedestrian Area”

Effects of Safe Pedestrian Area

- **Traffic accidents were reduced by 17% in the areas where “Safe Pedestrian Area” measures were completed by 2009, among the designated areas in 2003 (8% reduction in accidents involving pedestrians and cyclists).**

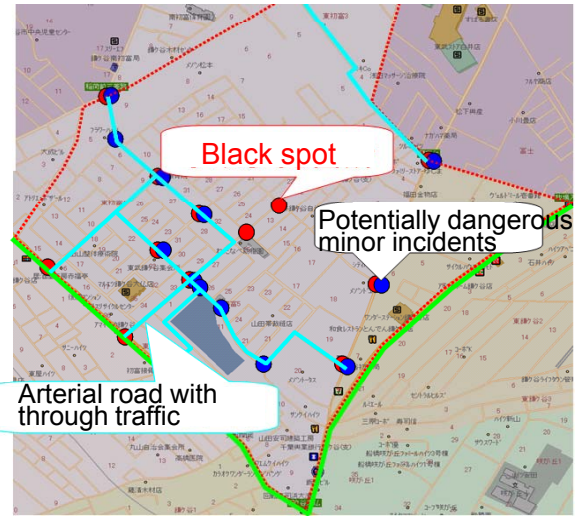
Reduction in fatal and injury accidents and reduction effect

Example of Development of a Safe Pedestrian Area (Kamagaya City in Chiba Pref)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

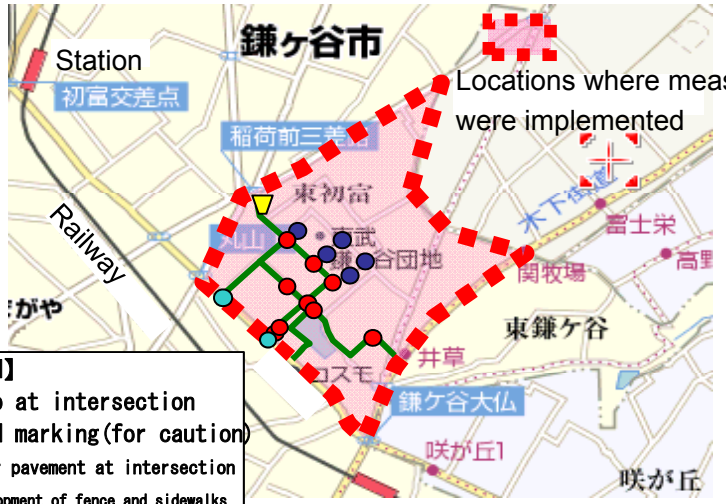
◆Involving residents through a workshop where specific measures will be decided using reports on potentially dangerous minor incidents.
◆Sidewalks, road narrowing fence, road hump at intersections are developed, which reduced traffic accidents by 75%.

<Location>

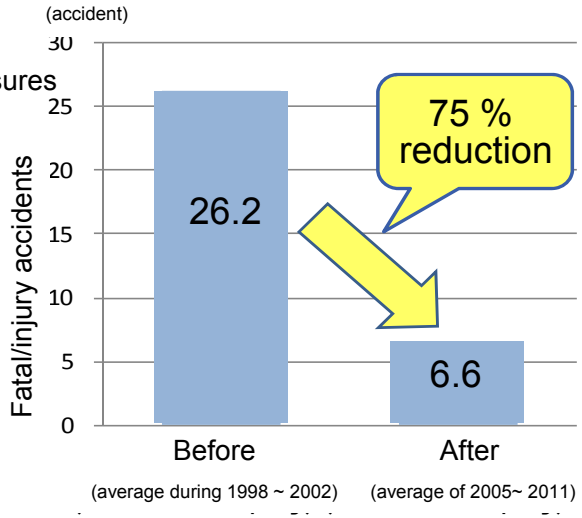


・Give priority in development to a black spot that is also prone to potentially dangerous minor incidents.

<Measures>



<Effects>



Note: excl. peripheral roads

<Discussion on measures>

【At workshop】


Sidewalk development


Color pavement at intersection


Road narrowing fence


Road marking for caution


Road hump at intersection

Traffic Accident Prevention on School Roads

Traffic Safety on School Roads

MLIT Ministry of Land, Infrastructure, Transport and Tourism

- Traffic accidents involving elementary school students on their way to and from school have increased over time.
- A meeting for ensuring traffic safety on school roads was held involving vice ministers of MLIT, MEXT and NPA on May 28th.

* MLIT: Ministry of Land, Infrastructure, Transport and Tourism
MEXT: Ministry of Education, Culture, Sports, Science and Technology
NPA: National Police Agency

【Decisions】

(1) Enhance cooperation at national level

Liaison conference between MEXT, MLIT and NPA will be held
(Input from experts and follow-up of urgent joint inspections)

(2) Develop cooperation between related organizations at regional level

○Develop cooperation between parents and residents in addition to school boards, road administrators and the police to ensure traffic safety on school roads.

(3) Carry out cooperative urgent inspections

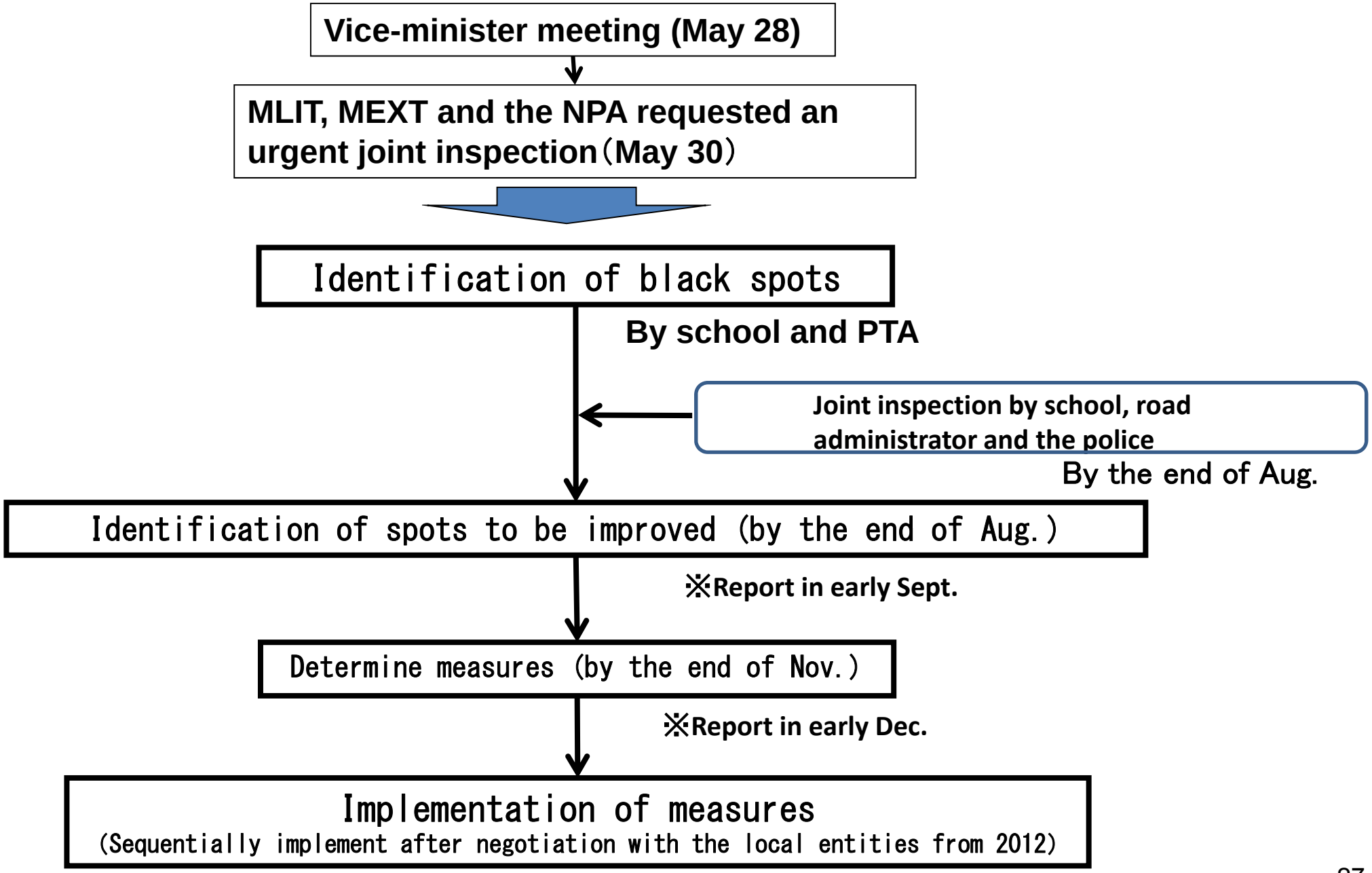
○Carry out cooperative urgent inspections of school roads with the team mentioned above by the end of August.

○Relevant players will cooperate to consider countermeasures based on the results of the inspection.

MLIT, MEXT and NPA requested urgent joint inspections to road administrators, school boards/schools and prefectural police (May 30th)

Work Flow of Urgent Joint Inspections for School Road Safety

MLIT Ministry of Land, Infrastructure, Transport and Tourism



Cooperative Safety Enhancement Measures for School Roads

MLIT Ministry of Land, Infrastructure, Transport and Tourism

【Involved parties】
- school board, school, PTA
- road administrators
- police
- road users

・Cyclists and students use the same road, which can cause accidents

＜*Countermeasure*＞
・*Traffic controlling by volunteers*

・Too narrow pedestrian space in grade crossing

＜*Countermeasure*＞
・*Grade crossing widening*

・Pedestrians sometimes have to enter the roadway to go around power poles.

＜*Countermeasure*＞
・*Undergrounding*

・Large vehicle on narrow residential roads

＜*Countermeasure*＞
・*Restrict large vehicles*
・*Narrow the road using a fence*

・A bus stop in the middle of narrow side walk

＜*Countermeasure*＞
・*Change of school route*

・Narrow side walk with gaps

＜*Countermeasure*＞
・*Sidewalk widening*
・*Barrier-free side wa*

:Designated route

:Points to be improved

Improvement of Environment for Cyclists

Background of Safe and Comfortable Environment for Cyclists

MLIT Ministry of Land, Infrastructure, Transport and Tourism

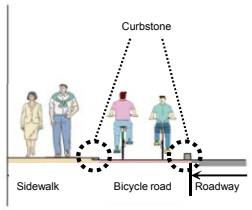
- Total length of road space for bicycle separated from cars and pedestrians is only 3,000km.

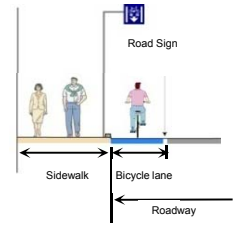
Entire roads length across the country: 1.2 million km

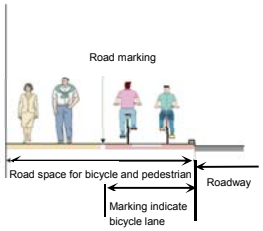
Road space for bicycle separated from cars and pedestrians 83,600km

Separated from pedestrians

Example configuration)







Bicycle road

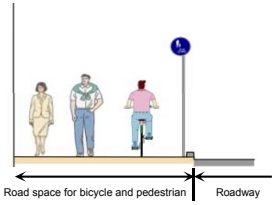
Bicycle lane

Bicycle lane marking within sidewalk

about 3,000km

Not separated from pedestrians

Example configuration)

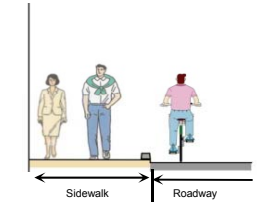


Road space for bicycle and pedestrian

about 80,600km

Other bicycle space 110万km

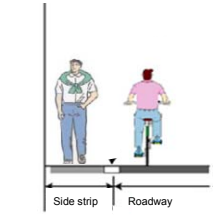
Example configuration)



Roadway with sidewalk

about 91,800km

Example configuration)



Roadway with no sidewalk

About 1million km

Note: road length (km) as of April 1st, 2010 [Data from MLIT and the Police]

Road Space for Bicycle (Development Types)

MLIT Ministry of Land, Infrastructure, Transport and Tourism

-Bicycle road

Bicycle-only road space structurally separated from roadway such as curb line.

-Bicycle lane

Bicycle-only lane that is designated through traffic regulation. Bicycle lane is visually separated.

-Roadway (not separated from roadway)

Road space for bicycles is not separated from cars. As necessary, colored road shoulder, belt-shaped marking or pictogram are used to indicate where cyclists are supposed to be.

Colored road shoulder

Pictogram

Belt-shaped road marking

MLIT Ministry of Land, Infrastructure, Transport and Tourism

Examples of integrated improvement for bicycle safety enhancement

①On-street parking

■Add space for cars in parking or loading/unloading operation beside bicycle road

■Install parking meters beside bicycle lane

■Development of on-street parking for bicycles

②Promotion of bicycle use

Creating and distributing bicycle map

■Advertise bicycle-friendly routes, spots that needs extra caution, parking spots for bicycles

【Reference：website of Niigata City】

Bicycle Rental

・Provided at public transport facilities and popular tourist spots for easy access to bicycles.

■Rental cycle station on road

■Rental cycle for tourists

【"Koto rin" a rental cycle system provided in Nara City】