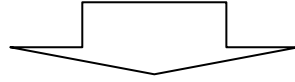


Chapter 3 Traffic Safety at Level Crossings

1. Achieving a Society with No Accidents at Level Crossings

- Although accidents at level crossings are on a decline in the long term, there are still level crossings that require improvements. The government will aim for a society with no level crossing accidents by continuing to promote measures to prevent level crossing accidents.



2. Objective Set in Traffic Safety at Level Crossings

To reduce the number of accidents at level crossings by 10% compared to 2010 by 2015



3. Measures for Traffic Safety at Level Crossings

<Viewpoint>

Promoting effective measures that take into account the conditions of each level crossing



<Four pillars>

- 1) Promoting replacement of level crossings with grade-separated crossings, structural improvements, and improvement of grade separation facilities for pedestrians
- 2) Improving level crossing maintenance facilities and implementing traffic regulations
- 3) Promoting streamlining of level crossings
- 4) Implementing other measures to ensure safe and smooth traffic at level crossings

Section 1: Achieving a Society with No Accidents at Level Crossings

Accidents at level crossings are on a decline in the long-term. However, almost half of railway operations accidents occur at level crossings, and there still remain level crossings that require improvements. In light of such conditions, the government will aim for a society with no level crossing accidents by continuing to comprehensively and actively implement measures to prevent level crossing accidents.

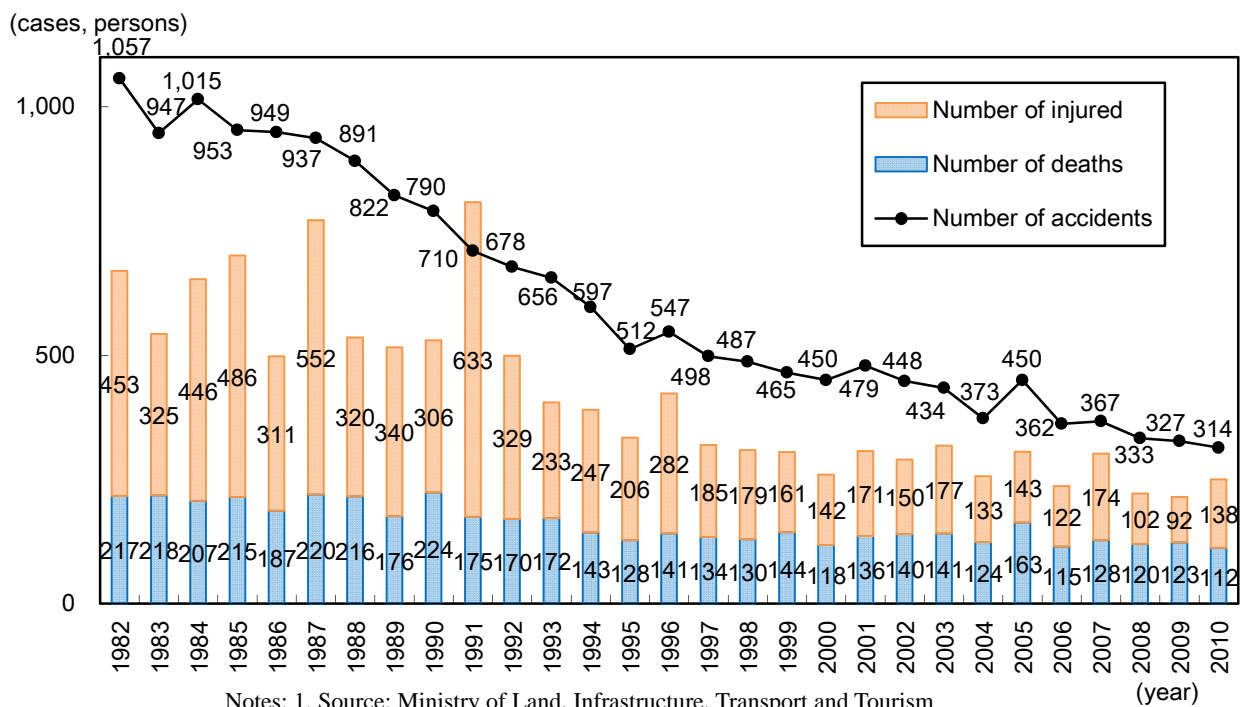
I. Current Status of Accidents at Level Crossings

1. Current status of accidents at level crossings

The number of level crossing accidents (referring to level crossing failures and any resulting railway accidents among all railway operations accidents) is continuing to decline in the long term with the number of incidents being 314, and the number of casualties being 250 people in the year 2010.

Accidents at level crossings are on a decline in the long-term, and active implementation of safety measures, such as improvements of level crossings, appears to have had a significant influence. However, almost half of the operations accidents still occur at level crossings, and there still remain level crossings that require improvements.

Changes in Accidents at Level Crossings, Casualties and Fatalities



2. Characteristics of accidents at level crossings in recent years

As for the characteristics of accidents at level crossings in recent years:

- 1) If characterized by cause, more than half of the accidents were caused by direct crossing, in addition, if characterized by impact subject, 50 percent of accidents were accounted for collision with motor vehicles and approximately 30% accounted for collision with pedestrians,
- 2) In terms of the types of level crossings, although the number of accidents that occurred at first-class level crossings (level crossings where flag-persons operate the crossing gate day and night, and level crossings installed with automated crossing gates) is the largest, the incidence rate, the

number of accidents per 100 level crossings, is the lowest among first-class level crossings.

II. Objective Set in the Fundamental Traffic Safety Program

To reduce the number of accidents at level crossings by 10% compared to 2010 by 2015

By comprehensively and actively implementing various measures set out in Section 2 with the understanding and cooperation of the people to facilitate smooth and safe traffic at level crossings, the government will strive to reduce the number of accidents at level crossings by about 10% by 2015, compared to the number in 2010.

Section 2: Measures for Traffic Safety at Level Crossings

I. Viewpoints in Considering Future Measures for Traffic Safety at Level Crossings

The declining trend in both the number of accidents at level crossings and the number of fatalities caused by these accidents indicates that the traffic safety measures at level crossings implemented based on the Eighth Fundamental Traffic Safety Program have had a certain effect.

However, a single accident at a level crossing can produce serious consequences such as many casualties, and in reality there still remain level crossings that require improvements such as grade separation, structural improvements, development of grade separation facilities for pedestrians, level crossing maintenance facilities, traffic regulations, and level crossing integration and elimination. Moreover, these measures will also contribute to the facilitation of traffic and environmental protection by reducing traffic congestion. Taking into consideration all of these things, the government will comprehensively and actively implement more effective measures, in view of the conditions of each level crossing, such as measures for non-opening level crossings.

II. Measures to Be Taken

[Priority measures and newly-introduced measures in the Ninth Program]

- Promoting replacement of level crossings with grade-separated crossings, structural improvements, and improvement of grade separation facilities for pedestrians (1)
- Improving level crossing maintenance facilities and implementing traffic regulations (2)
- Promoting integration and elimination of level crossings (3)
- Implementing other measures to ensure safe and smooth traffic at level crossings (4)

1. Promoting replacement of level crossings with grade-separated crossings, structural improvements, and improvement of grade separation facilities for pedestrians

As for “non-opening level crossings” for which it will take time to be replaced by grade-separated crossings, the government will urgently work on structural improvements to realize the effects of the measures in a short time and development of grade separation facilities for pedestrians.

In addition, in areas where there are a series of level crossings with especially long wait times and high traffic volume, or at level crossings where railway lines intersect with main roads, the government will promote elimination of the level crossings by replacing them with grade-separated crossings, which is one of the drastic traffic safety measures.

The government will urgently and intensively implement comprehensive measures with a two-pronged approach using “quick measures” via structural improvements mentioned above, and “drastic measures” via replacing existing level crossings with grade-separated crossings.

2. Improving level crossing maintenance facilities and implementing traffic regulations

Since level crossings with well-maintained crossing gates have the lower rate of traffic accidents in comparison to those with no crossing gates, the government will steadily install crossing gates, taking into account the use of level crossings, the road width, and the implementation of traffic regulations on the road.

In addition, records also show that level crossings that have longer wait times tend to have a larger number of accidents occurring. In view of this, in large urban centers and major regional cities, the government will promote equipping warning time control devices as needed at level crossings where trains pass through frequently and warning time varies according to types of trains, and try to reduce wait times as much as possible.

Furthermore, for level crossings that carry a high volume of motor vehicle traffic, the

government will promote installing necessary level crossing safety equipment that is more effective in preventing accidents, for example, obstacle detectors, overhead alarm equipment and large crossing gates, taking into account road traffic conditions and accident factors.

The government will implement traffic control measures at level crossings, i.e., passage prohibition for vehicles or oversized vehicles, and one-way traffic systems, in accordance with road traffic volume, width of roads intersecting railway lines, level crossing maintenance facilities and detour possibilities. At the same time, they will improve visibility by making road traffic signs larger and brighter.

3. Promoting integration and elimination of level crossings

Along with the implementation of improvement projects such as replacing level crossings with grade-separated crossings and improving level crossing structure, the government will proceed to integrate or eliminate level crossings located in proximity, on the condition that the integration or elimination of the crossings is supposed not to adversely affect the passage of local residents, in view of the use of the roads and detour possibilities. The government will also promote the integration and elimination of other level crossings in the same manner.

However, structural improvements that are necessary to build walkways or improve narrow ones at level crossings can be implemented without integration or elimination of level crossings in proximity, taking the urgency into consideration.

4. Implementing other measures to ensure safe and smooth traffic at level crossings

In order to make traffic on level crossings safer and smoother, the government will install level crossing notice signs and level crossing signals, and proceed with research and development to design more advanced traffic safety facilities related to level crossings by making use of information technology (IT), and will also actively regulate offenses by vehicles at level crossings.

Also, in view of the fact that many level crossing accidents are caused by pedestrians crossing in front of approaching trains or vehicles getting caught in railway tracks, it is necessary to improve safety awareness among motorists and pedestrians and familiarize them with emergency measures such as how to operate the emergency button when a level crossing problem occurs.

For this purpose, the governments will enhance their publicity activities and continue to promote education at schools and driving schools on how to pass level crossings safely.

In addition to these measures, the government will work not to generate disparity in the width of roads at level crossings, when they widen the roads that connect to level crossings.