Symposium
Transportation Culture and Safety: A new stage toward Vision Zero

Regional Decisions and Vision Zero

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The Tenth Five-Year Fundamental Plan for Traffic Safety
(Part 1: Land Transportation Safety)

1. **Toward a society without road traffic accidents**

Japanese Vision Zero

2. Goals

Effective measures yet to be established

1)Number of deaths occurring within 24 hours: 2,500 or fewer by 2020

2)Number of casualties: 500,000 or fewer by 2020

3. Countermeasures

Age groups

Transportation modes

- **Priority targets: "the elderly and children", "pedestrians and bicycles" and "community roads"**

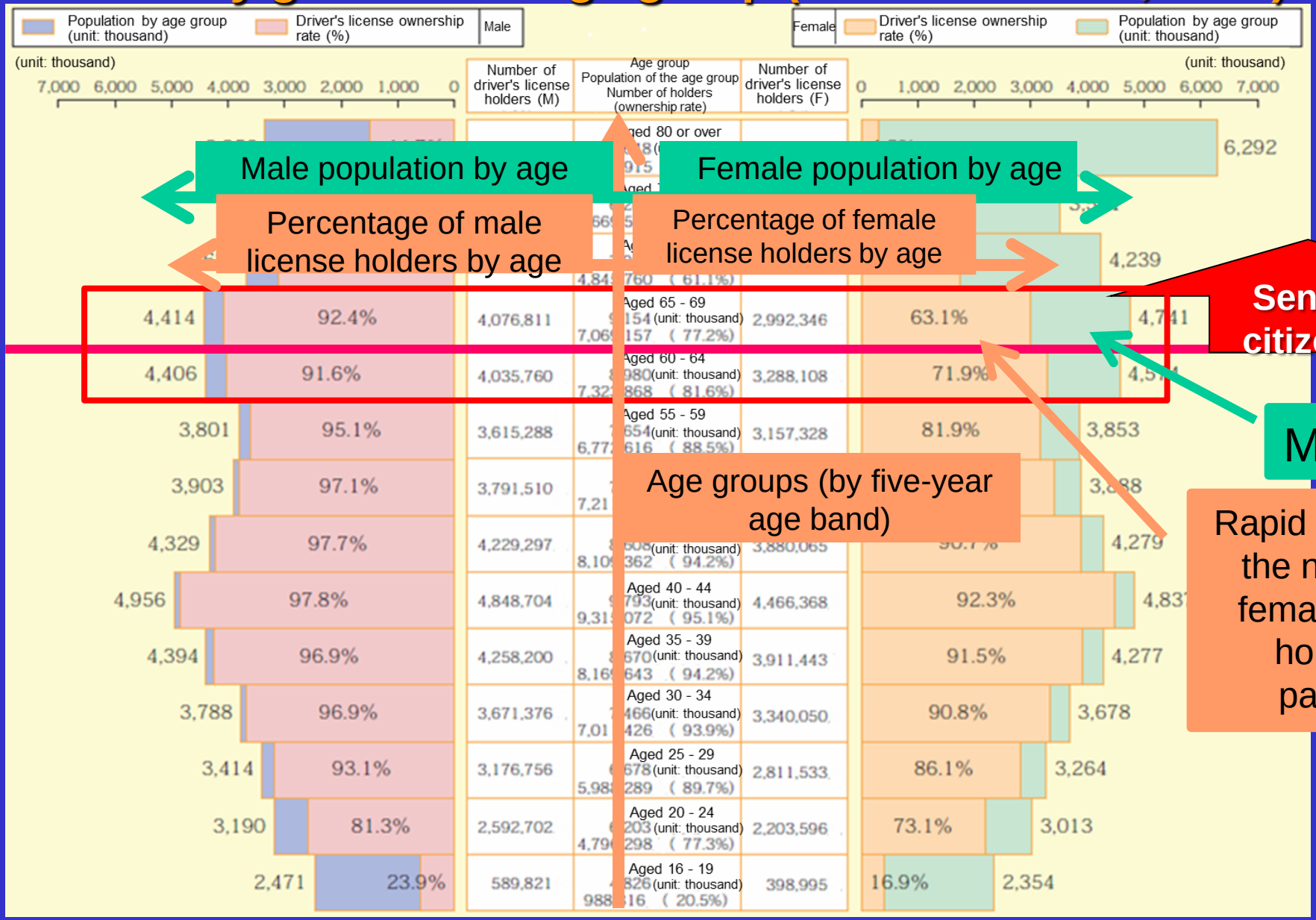
Space

- Eight pillars

1) Improving road traffic environment
2) Raising awareness of traffic safety
3) Ensuring safe driving
4) Ensuring safety of vehicles
5) Maintaining road traffic order
6) Enhancing rescue and first aid activities
7) Enhancing and promoting support for vict
8) Enhancing research & development and investigative research

- Reflecting the basic role of each ministry
- Being 'fundamental', these are not updated every 5 years

Population and percentage of driver's license holders by gender and age group (As of March 31, 2014)



Source: White Paper on Traffic Safety in Japan (2015)

Long-term prediction about road fatalities and goal setting

- **Long-term prediction**

If the current pace of shift in population, traffic situation and safety measures continues,

Explanatory factor	Predicted fatalities in 2020 [annual number]	Comment
Kilometers traveled by car	2,900 - 3,100	—
Population by age group	2,500 - 3,000	High reliability, based on the demographic composition
Accident rate for each generation	3,400 - 3,600	Higher reliability, explicitly reflecting the impact of the aging population

- Appropriately responding to the aging population **(-10% per year)**
→ **tough goal setting**

- Taking no action against the impact of the aging population

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52 elementary and junior high school students died, 12 on the way to/from school (2013) → Medium-term goal of "zero" !

1. Countermeasures

- **Priority targets: "the elderly and children", "pedestrians and bicycles" and "community roads"**

Characteristics of safety measures for community roads
- **Area-wide measures are efficient (the method is different from that used for intersections on main roads)**
- **Residents' interests are complex and often require accommodation**
- **Drivers' understanding and cooperation is also necessary in reducing through traffic**

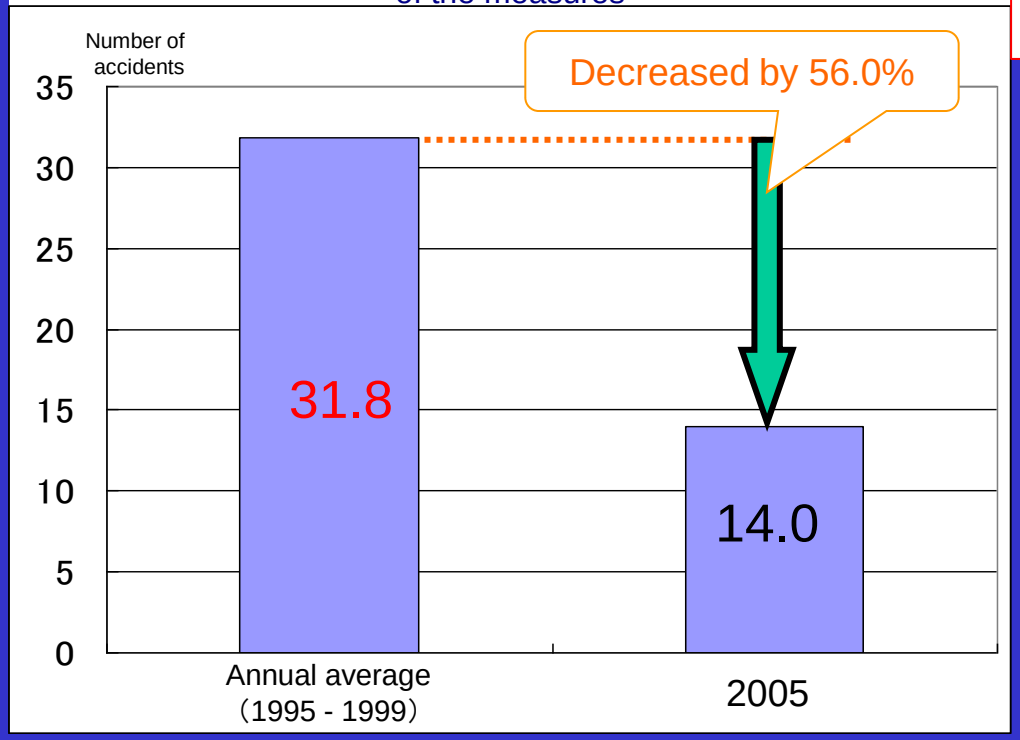
→ Building consensus about the measures through the participation of citizens (both data and skills are important)

Accident data now contains information about the latitude and longitude (since 2012).
Shortage of community roads officers or safety measures experts at the municipal level

Case study of area-wide measures for community roads in Kamagaya, Chiba

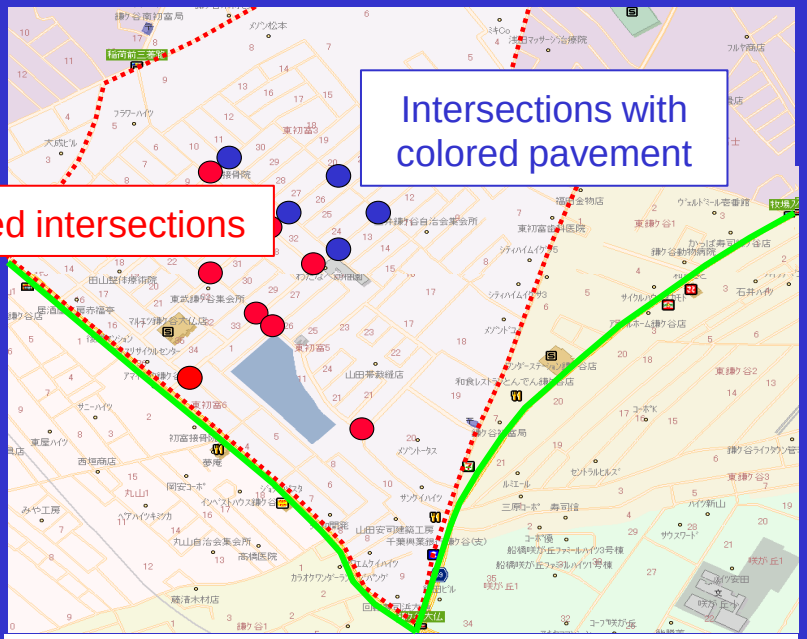
Speed controlling measures in Higashihatsutomi district

Accidents involving casualties before and after the implementation of the measures



* Source) Kamagaya Police Station (1995 to 1999)

Chiba Prefectural Police Headquarters' website (2005)



Raised intersections

[10 locations]

To achieve the goal of “2,500 or fewer deaths occurring within 24 hours by 2020"

1. **Accumulating established safety measures**
2. **Introducing new measures to the areas that are yet to be established**

1) Promoting use of advanced technology

- **Internet, mobile communication, GIS and probe (big) data**

2) Promoting elaborate measures considering the actual road conditions, etc.

- **Scientific analysis of traffic accidents data**
- **Safety measures, traffic planning and management, training and placement of town planning professionals**

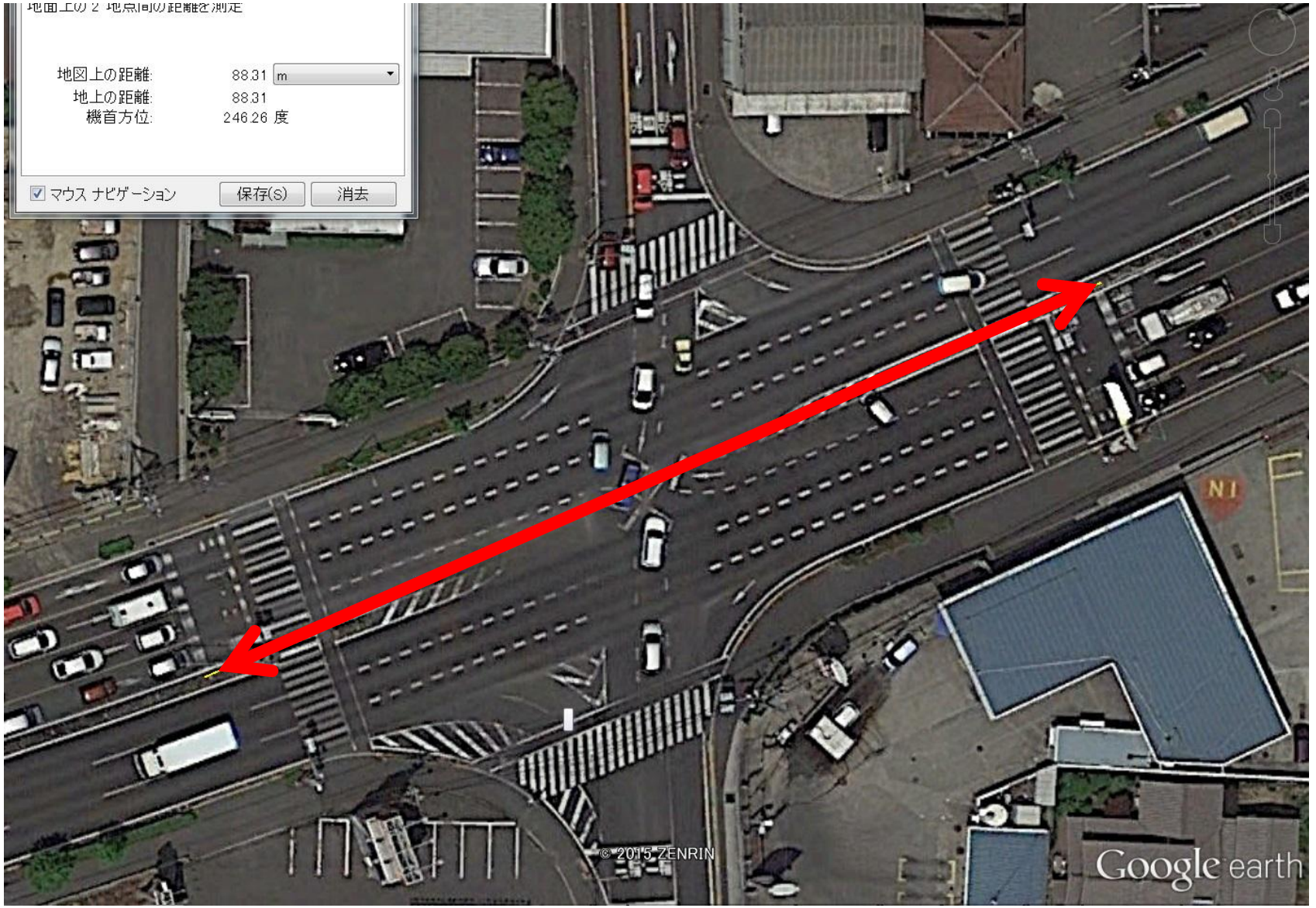
3) Traffic safety measures involving local communities

- **Framework for participation of citizens based on the 1) and 2) above → consensus building**

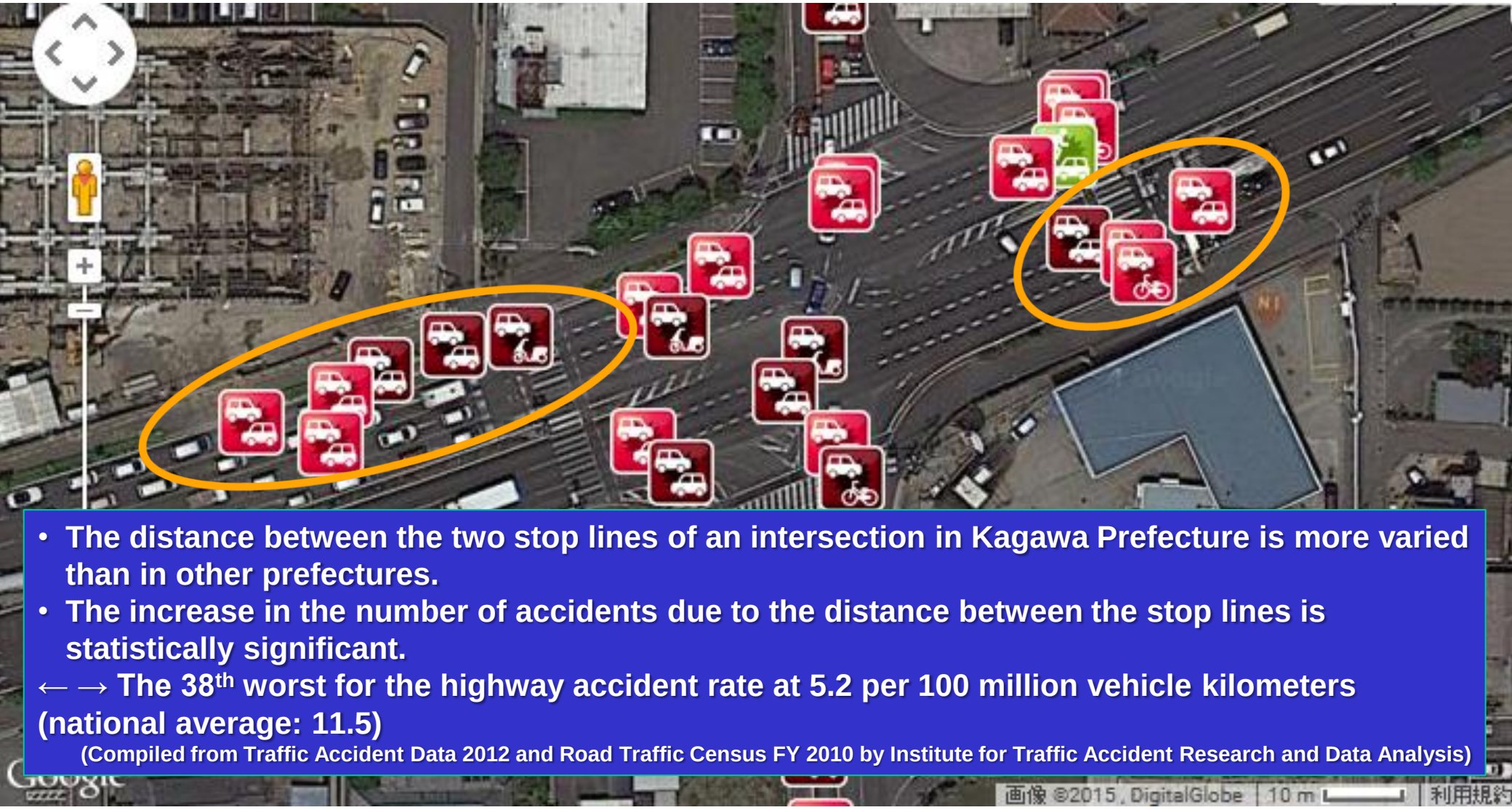
(← The Tenth Five-Year Fundamental Plan for Traffic Safety (Part 1: Land Transportation Safety)

An intersection with a distance of 90 meters between its stop lines (Kagawa)

Kagawa is ranked the second worst prefecture in Japan for the number of fatalities per 100,000 population at 5.43 (10/23)
(the worst in 2012, the 5th worst in 2013, the 9th worst in 2014 and the 7th worst in 2015)



Traffic accident occurrence (2011 - 2014)



- **The distance between the two stop lines of an intersection in Kagawa Prefecture is more varied than in other prefectures.**
- **The increase in the number of accidents due to the distance between the stop lines is statistically significant.**

← → The 38th worst for the highway accident rate at 5.2 per 100 million vehicle kilometers (national average: 11.5)

(Compiled from Traffic Accident Data 2012 and Road Traffic Census FY 2010 by Institute for Traffic Accident Research and Data Analysis)

Source) Kagawa Prefectural Police Traffic Accidents Information System

Final recommendations to Kagawa Prefecture about its traffic safety measures

International Association of Traffic and Safety Sciences (IATSS) Research Project:
"Kagawa Research - Analysis of Accident Factors and Recommendations on Countermeasures"
October 19, 2016

Recommendation 1

Road users, residents, and stakeholders and users of various roadside facilities should be encouraged to have a better understanding of the pros and cons of traffic safety measures proposed. The Citizens of Kagawa Prefecture should find a new balance between traffic safety levels and convenience and then reach a consensus about the measures to be implemented. Toward this end, the prefectural traffic safety authorities should even more proactively disclose and even more concisely explain the traffic accidents data, its analysis results and the results of evaluating the effects of the traffic safety measures to the citizens.

Recommendations 2 to 7

Strategic research project for the IATSS 50th anniversary - International Comparison: Target Setting for Road Traffic Safety and Road Traffic Culture

- #1601A “International Comparative Study on Technologies, Systems and Culture related to Road Traffic Safety” (2016-19)
  - Project Leader: Prof. Dr. Hideki NAKAMURA (Nagoya University)
  - Interdisciplinary project team consisting of 15 members incl. international cooperative members
  - to understand the background behind the regional difference in their traffic safety target settings objectively and systematically

- Major contents
  1) Preliminary literature review before the visits below
  2) Interviews, workshops, video surveys, questionnaire survey on traffic safety culture in various countries (approx. 2 regions/year)
     - Qatar, UAE (completed Sept. 2016), the Philippines (scheduled Dec. 2016)
     - Other countries (2017-)
  3) International comparison analysis
  4) Summary of some issues on the current road safety measures and suggestions

- Expected outcome
  - Objectively understand the positioning of road safety target setting, through the analysis and interpretation of the fact of road traffic and safety situation in each country based on its cultural, historical and religious background, technical standard and various related systems,
  - Present some issues in the current technologies and systems based on the statistical analysis and field surveys,
  - Share the prerequisite for the future international discussion on road safety measures through the international comparison of the analysis mentioned above, and
  - Enhance an international human network, and contribute towards enriching international activities of the IATSS in the near future.