

The FY2010 Road Traffic Census Results of the General Traffic Volume Surveys (Overview)

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1. Introduction

The Road Traffic Census is conducted roughly once every five years to ascertain actual conditions surrounding Japan's roads and road traffic. Given that FY2010 was a census year, NILIM took steps to further develop and bring greater efficiency to the census's surveys. These steps are described in NILIM's 2011 report. The results of the general traffic volume surveys (traffic volume survey, travel speed survey, and road conditions survey) were compiled and then jointly presented to the media by MLIT's Road Bureau and NILIM in September 2011. The following gives an overview of these results together with the results of subsequent studies.

2. Overview of survey results

Figure 1 shows changes in average traffic volume. On urban expressways, traffic volume decreased by 6.4% compared to FY2005 (2.6% decrease on all roads) due to traffic dispersal and other effects generated by network development. On the other hand, on national expressways, average traffic volume increased by 7.4% due to toll-free expressway trials and other reasons, while traffic volume on ordinary roads decreased by 5.8% and that on prefectural roads, etc., decreased by 4.3%. These outcomes suggest that traffic is shifting to national expressways.

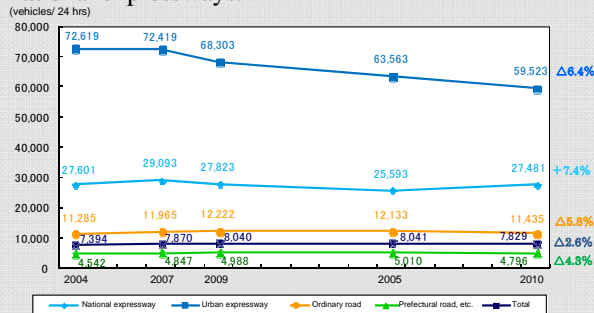


Figure 1. Changes in average traffic volume by road classification

Next, Figure 2 shows results obtained from a comparison of the travel times of congested and non-congested periods using newly introduced probe data from ordinary vehicles. The figure shows that, while there are large fluctuations in speed caused by temporal variations in traffic volume on expressways, speed differences caused by congestion on ordinary roads are small, remaining below several kilometers per hour. It is surmised that, in the case of ordinary roads, the dominant factor is the effect of traffic signals rather than changes in traffic volume. Additionally, differences in travel speed (service level) due to road classification are small on ordinary roads, indicating that stratification of road functions has not progressed. Thus, it will be necessary to reinforce the travel functions of ordinary roads in the future.

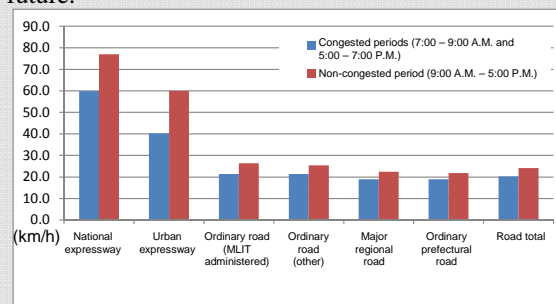


Figure 2. Comparison of travel speeds of congested and non-congested periods (DID)

The improvement of survey items in the road conditions survey has made it possible to engage in fundamental study toward the rebuilding of road spaces. This makes it easier to prepare road timetables aggregate survey and analysis results for individual municipalities by introducing traffic survey reference segments (new census segments) (see page A Road Traffic Survey Platform

Application of "Reference Road Segments and

Reference Intersections”). As an example, Figure 3 shows CO₂ emissions per one kilometer of road length that were calculated at the municipality level from the traffic volume and travel speed surveys (Figure 3).

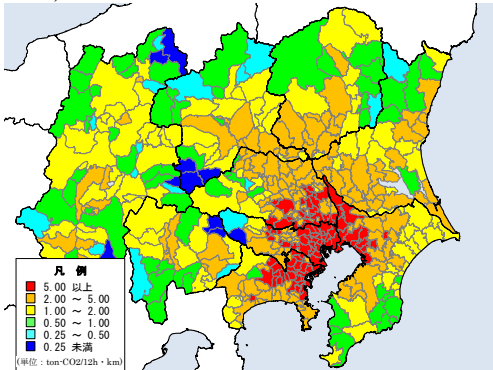


Figure 3.CO₂ emissions per 1-km road lengths by municipality

* Results of the FY2010 Road Traffic Census are available via the IR website of the Road Bureau, MLIT.
<http://www.mlit.go.jp/road/ir/ir-data/ir-data.html>