SPEED BASELINE SURVEY, CHINA

Date started: 2008 Date finished: Ongoing (2009)

Partners: Road Safety Research Center (RSRC) of Research Institute of Highway (RIOH), Ministry of Transport and GRSP

Cost/time/resources: 126,000 USD (GRSI funding)

Main result so far: Survey confirms speeding on selected stretches in Beijing and Guangxi Province

According to official statistics from 2004, more than 15 percent of the people dying on the roads in China relate to speeding, and speeding is a direct cause in most crashes. Driving above the legal limit and driving at inappropriate speed not only contributes to the number of crashes but also to the severity of injury.

Chinese authorities are in the process of developing a new speed limit guide to be integrated together with a speed management system in order to reduce the number of speed-related road crashes. This baseline survey provides important evidence and knowledge to be fed into the development of the national guidelines.

Summary project sheet.

Objectives and scope

The speed baseline survey is phase 1 of a larger speed management project. The main objective is to get a better understanding of speed-related issues in China. The outcome will be used for a new Chinese speed limit guideline and to implement interventions to reduce the numbers of road crashes. The GRSP developed speed management manual is used as a framework. The main activities of the survey was:

- chose a set of different types of roads in Beijing and Guangxi
- collect geometric features and traffic data including speed measures
- crash data collection and analysis (from police records)
- conduct 500 interviews with road users, in particular pedestrians and bicyclists
- determine the high-risk sections and risk factors

Activities

Researchers selected two stretches of highway (350 km) in Guangxi province, and 4 stretches (51 km) in districts of Beijing. Chosen highways had different elements of long linear stretches, routing through mountainous terrain with sharp curves and long grades, or going through villages. Expressways and suburban roads with many black spots were included too. Speeding seemed notable especially where the roads had good geometric alignment encouraging drivers to drive very fast.

Conclusion and main lessons learnt

The collected speed data shows large differences between the set limit and average speed for certain sections. It can seem that in some sections the limits are too low, in others too high. The interviews with vulnerable road users revealed that up to 77 percent of the people questioned in Beijing thought speed through the villages were too fast, and up to 86 percent thought it was necessary to control speed though villages. In Guangxi, 90 percent of the pedestrian and bicyclist interviewed thought it was necessary to control speed though towns.

Crash data was analyzed with the data obtained. Most common crashes were head-on/side and rear-end crashes or single vehicle crashes. About 70 percent of the crashes on one of the chosen roads in Beijing occur at intersections mainly due to high speeds and drivers driving too close or not yielding appropriately. Through towns, most crashes involve pedestrians and cyclists. In Guangxi where they use a different data classification system, most recorded causes were inappropriate maneuvers (60 percent). The highest number of crashes happened on the section with best geometric alignment, showing that higher operation speed adds to the severity in case of a crash.