

Drivers' decision-making supported by The Snow Visibility Information system

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SUMMARY

On winter roads in snowy cold regions, traffic hindrances caused by snowstorm-induced poor visibility and snowdrifts due to snowstorms frequently occur and have a significant social impact. To assist drivers' decision-making during snowstorms so that drivers can avoid being caught in snowstorms, the Snowstorm Visibility Information System website has provided road users with current and forecast snowstorm visibility information since February 2013. In December 2013, the Snowstorm Visibility Information System was made accessible to drivers on the road via smartphones, and a mail delivery service was started to provide poor visibility forecasts. The authors carried out an operation regarding the website information services in 2014/15 winter. To understand how the website's information affects drivers' travel behavior, the authors conduct a questionnaire survey to users of the website and of the mail delivery service. About 80% of the surveyed website users reported having changed their travel behavior as a result of the information on the website. Specifically, changing the departure time was the most common travel behavior change, followed by canceling the travel plans. Of the respondents whose main purpose in accessing the website is to check on snowstorms before going to hospital, shopping or traveling, many reported canceling their travel plans. About 60% of the respondents who were subscribed to the mail delivery service actively collected additional road weather information after they received an e-mail from the Snowstorm Visibility Information System.