

Title of Research Subject	Development of Risk Prediction Education Program for Motorcycle Drivers focusing on Speed Perception in the ASEAN Region
Background and Objective	<p>In the three-year 2041 project, we first attempted to develop a systematic understanding of the causes of motorcycle-related accidents, which account for the majority of traffic fatalities in the ASEAN region. In the second and third years, we clarified the necessity and social significance of a "traffic safety culture co-creation model" led by motorcycle manufacturers that encompasses government, local communities, and households, in collaboration with Honda Vietnam (Vietnam) and A.P. Honda (Thailand), which are working to promote safe driving in the region. This co-creation model also plays a role in making up for the lack of enforcement (of the 3E's), which is an issue in road safety measures in the ASEAN region. Still, it was highlighted that the manufacturer-led education and training content is not sufficient to curb excessive speeding.</p> <p>Therefore, in the social contribution phase, based on the analysis of the relationship between driving awareness and hazard prediction/avoidance of local motorcycle drivers conducted in 2041C (Year 3) and drone aerial photography of driving behavior around intersections, we will develop a hazard prediction education program for motorcycle drivers to improve their speed perception and provide it to the local community.</p>
Expected results	Although the lack of speed awareness among drivers in the ASEAN region is presumed to be one of the root causes of serious accidents, there has been no quantitative verification of this issue and no planning of countermeasure methods. In addition, in surveys conducted in previous years by the proposer, it was not possible to confirm the effect of the program on improving awareness of the dangers of excessive speed, despite the

fact that the hazard prediction program developed in Japan was utilized in the safe driving training programs conducted in Vietnam and Thailand. The reason for this is that local drivers lack awareness of the speed of approaching objects, i.e., they lack awareness of changes in the relative relationship between vehicle and vehicle (or person) along the time axis, making it difficult to demonstrate the effectiveness of the hazard prediction training.

Since speed cognition and relative relationship cognition depend on developmental experiences and education, and regional cultural differences are thought to affect speed and relationship cognition, an interdisciplinary approach is essential for verification and countermeasure planning. In this project, under an interdisciplinary organizational structure, we will understand and visualize the speed and relationship perceptions of motorcyclists in the ASEAN region and create a quasi-dynamic risk diagram based on drone aerial photography and motion pattern learning by AI. We will then attempt to develop a risk prediction education program that meets the actual situation together with local stakeholders. This kind of co-creation with the local community is expected to contribute to reducing the risk of serious accidents involving motorcycles.