

# Survey of residents' awareness of the environment surrounding trunk roads

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**KEY WORDS: Road traffic noise, Arterial roads, Residents' consciousness**

In recent years, the achievement of environmental standards in areas facing roads has been improved. On the other hand, many residents along arterial roads are still annoyed by road traffic noise. In this paper, focusing on roadside environments of arterial roads, we try to develop a hierarchical evaluation structure model of dissatisfaction with the roadside environments based on the free opinions of residents themselves. By deciphering the evaluation structure model, we can clarify the reasons for the dissatisfaction with road traffic noise and measures to resolve them, and comprehend the position of road traffic noise in roadside environments. These analyses also contribute to the verification of the validity and effectiveness of the model. We are sure that the understanding of these perspectives is important for solving the automotive noise problem.

Fig. 1 shows the evaluation structure model for roadside environment dissatisfaction obtained in this survey: the original evaluation items in the center, the upper concepts on the left, and the lower concepts on the right. The numbers in the figure indicate that of respondents. "Complaint on road traffic noise" is most frequent in the original evaluation items, followed by "Complaint on exhaust gas. In the lower concepts, "Lack of measures on source side" accounts for eleven respondents, followed by "Lack of measures on government side". Here, focusing on "Complaint on road traffic noise" in the original evaluation items, we confirmed that there was strong connection not with "Lack of measures on government side" but with "Lack of tangible measures on sound receiving points". On the other hand, "Psychological impact" in the upper concept, including "difficulty in concentration", "Anxiety", "Bother", etc., was the most frequent response. The next frequent response is "Impact on sleep", which is affected by only "Road traffic noise". Similarly, "Economic burden" in the upper concept is unique to "Complaint on road traffic noise".

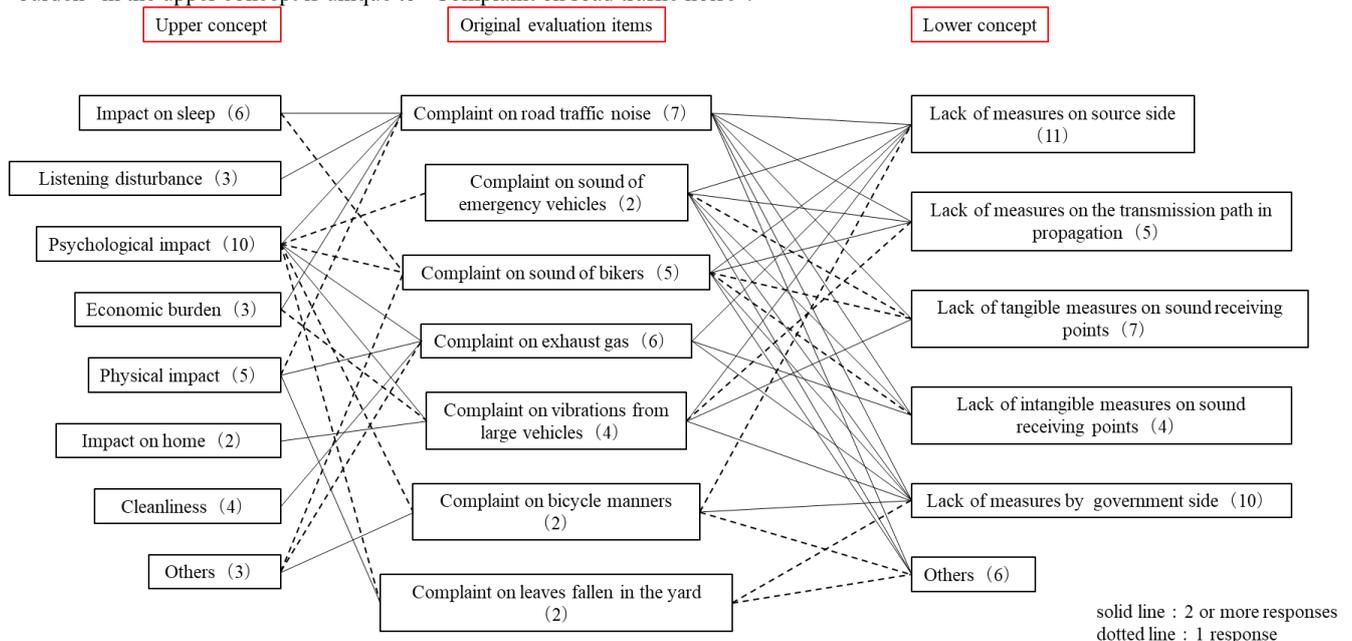


Fig.1 Evaluation structure model for roadside environment dissatisfaction