



Title	PRELIMINARY SURVEY ON COMMUNITY RESPONSE TO ROAD TRAFFIC NOISE IN HANOI
Author(s)	Sato, Tetsumi; Nishimura, Tsuyoshi; Yano, Takashi
Citation	Annual Report of FY 2003, The Core University Program between Japan Society for the Promotion of Science (JSPS) and National Centre for Natural Science and Technology (NCST). 2004, p. 148-149
Version Type	VoR
URL	<a href="https://hdl.handle.net/11094/13234">https://hdl.handle.net/11094/13234</a>
rights	
Note	

*The University of Osaka Institutional Knowledge Archive : OUKA*

<https://ir.library.osaka-u.ac.jp/>

The University of Osaka

# PRELIMINARY SURVEY ON COMMUNITY RESPONSE TO ROAD TRAFFIC NOISE IN HANOI

T. Sato<sup>\*1</sup>, T. Nishimura<sup>\*2</sup> and T. Yano<sup>\*3</sup>

<sup>\*1</sup>Department of Architecture, Hokkai Gakuen University, Sapporo 064-0926, Japan

<sup>\*2</sup>Department of Electronics and Computer Network, Sojo University, Kumamoto 860-0082, Japan

<sup>\*3</sup>Department of Architecture and Civil Engineering, Kumamoto University, 860-8555, Japan

## ABSTRACT

Toward a Japan-Vietnam joint study on community response to road traffic noise in Hanoi, 2004, a preliminary survey was carried out in Hanoi to find areas for the survey. 12 areas were selected as candidates for the survey.

## KEYWORDS

Community response; social survey; road traffic noise; motorcycle; annoyance; Hanoi

## OUTLINE

A lot of social surveys on road traffic noise have been conducted all over the world. From the cross-cultural point of view, the present authors carried out two international joint studies on community response to road traffic noise with Swedish and Thai researchers (Sato et al., 2000). Particularly accumulating social survey data from developing countries is very important for the discussion on the international noise policy.

On the other hand, the International Commission on the Biological Effects of Noise (ICBEN) has conducted an international joint study to construct comparable scales (Fields et al., 2001). Five-point verbal scale and 11-point numeric scale for noise annoyance were constructed in nine languages including the Japanese language. Thereafter the noise annoyance scales in the Vietnamese language were also constructed by the ICBEN method.

The authors and Prof. Pham Ngoc Dang of Hanoi University of Civil Engineering agreed to perform the joint study on community response to road traffic noise in Hanoi. The authors have just stood at the starting point to conduct social surveys on community response to noise in Vietnam and to compare the data precisely with those collected in developed countries.

Toward a Japan-Vietnam joint study in 2004, a preliminary survey was carried out in Hanoi, November 2003, to find areas for the survey under the cooperation with Prof. Dang and Dr. Le Van Nai of Center for Environmental Engineering of Towns and Industrial Areas, Hanoi University of Civil Engineering. The road traffic conditions in Vietnam are quite different from those in the developed countries because of a huge number of motorcycles. The authors do not know the study to investigate the effect of motorcycle noise on people. Considering the traffic volume and the number of houses along the roads, 12 areas were selected as candidates for the survey, as shown in Table 1. The target areas for the survey will be determined with several discussions among Japanese and Vietnamese researchers.

The outcome of this study will be useful for the noise policy in Vietnam and the other less developed countries.

## REFERENCES

Sato, T., Murase, S., Yano, T., Mjorkman, M., Rylander, R. and Dankittikul, W. (2000). Comparison of community response to road traffic noise in Sweden, Japan and Thailand. *Proceedings of the Seventh Western Pacific Regional Acoustics Conference*, 907-912.

Fields, J. M., De Jong, R. G., Gjestland, T., Flindell, I. H., Job, R. F. S., Kurra, S., Lercher, P., Vallet, M., Yano, T., Guski, R., Felscher-suhr, U. and Schumer, R. (2001). Standardized General-Purpose Noise Reaction Questions for Community Noise Surveys: Research and a Recommendation, *Journal of Sound and Vibration*, 242(4), 641-679.

Table 1 Number of houses in each area

No	road	length (m)	lane	traffic volume*			number of houses	
				motorcycle	passenger	heavy	detached and row	apartment (number of buildings)
1	Ton That Tung	650	2	3	3	3	44	176 (3)
2	Tran Hung Dao	500	2	4	4	prohibited	167	96 (10)
3	Tran Quang Khai	700	6	1	2	2	131	169 (6)
4	Le Duan	1100	4	1	2	2	183	-
5	Giai Phong	450	8	1	2	2	68	-
6	Lang	1000	2	3	2	2	308	-
7	Hoang Quoc Viet	550	4	1	2	2	72	-
8	Nguyen Trai	850	4	1	2	2	199	-
9	Lang Ha	900	4	3	3	3	104	216 (6)
10	Truong Chinh	500	2	1	3	2	212	-
11	Dai Co Viet	630	6	1	1	2	112	-
12	Quan Thanh (one way)	450	2	4	4	5	59	29 (6)
-	total	-	-	-	-	-	1659	686 (31)

\*1. very large 2. large 3. moderate 4. small 5. very small