

**Activity Report of EASTS IRG (International Research Group)  
IRG-10-2006**

**Date of Submission: 31/08/2007**

**1. Name of IRG:**

**Sustainable Neighborhood Transportation to Improve the Quality of Life in Developing Cities**

**2. List of research members:**

- 1) Prof. Hisashi Kubota, D.Eng., Saitama University, Japan (Representative)
- 2) Prof. Wimpy Santosa, Ph.D., Parahyangan Catholic University, Indonesia
- 3) Kunihiro Sakamoto, D.Eng., Saitama University, Japan
- 4) Yusak O. Susilo, D.Eng., the University of the West of England, United Kingdom
- 5) Anastasia Caroline Sutandi, Ph.D., Parahyangan Catholic University, Indonesia
- 6) Djoen San Santoso, Ph.D., Asian Institute Technology, Thailand
- 7) Tri Basuki Joewono, Parahyangan Catholic University, Indonesia / Saitama University, Japan

**3. Purpose and Mission of IRG:**

It is widely believed that the built environment of the individuals' residential area highly influences the way individual composes their daily travel pattern. Unfortunately, many transportation developments and planning for neighborhood in developing countries were hardly taken the built environment factors into account. Many of previous plannings are only considered the economic benefit that might be generated later by the car users, without considering other aspects of the quality of life of the local community itself. The ignorance of these factors has made the transportation condition and the quality of life of local communities in many developing cities is deteriorating.

In order to improve the synergy of infrastructure development with the development of local community's quality of live, some European cities have very strict urban policies which include a limitation of the car usage within the city centre, suppress the size of the cities, avoid a centralized development, distribute the activity centre between regions, empower the non-motorized and public transport system, and keep the shopping area in the city centre within a walkable distance. These practices are considered as a successful way to suppress car travel, support a sustainable development policy, revitalize the local economy activities, and increase the local's quality of life.

On the other side, the planning and development of residential areas earned a lot of attention in transport demand management, especially in developed countries, such as reducing through traffic, designing and installing traffic calming to reduce the speed and increase safety, selecting devices in order to reduce the noise, improving the environmental capacity of residential area, incorporating and improving residents participations, among others. The topic of sustainability and the quality of life of residential becomes the main focus in planning and designing the residential area.

In order to create such conditions, recently, several Asian cities have tried to apply some of those policies, such as starting to re-develop their local shopping centre become a car free pedestrian mall / street mall. In addition, several examples in introducing TDM measures for residential in

Japanese context can be also viewed as an early effort in improving the neighborhood. Although there are a lot of positive stories for such development in European cities, its compatibility with cities in developing countries has never been tested. The issues of whether this kind of development will reduce the amount of travel and revitalize the local economy or just another money factory for property developers and generate more congestion have never been examined before as well. The reservation of 'local value and characteristics' can also be questioned and explored for Asian context at the time the planners deal with neighborhood planning and design.

This research aims to develop an Asian type guide and practice in planning and designing a sustainable neighborhood which is able to improve the quality of life of the resident and community. This will be achieved by examining the impact of street-mall/pedestrian-mall development to the local community and exploring an appropriate residential transportation planning and design for developing cities that based on a sustainability concept, considering the quality of life of the local community, and empowering the local community's strength. The initial case study will be chose in one of the neighborhood area in Indonesian, Thailand, and Japanese cities, while other cities in Asian countries will be included in the following research stages. The questions that will be addressed in this research are as follows:

- i. how far the existence of the street-mall boost-up the quality of life of the local residence, as well as the neighborhood economy (e.g. nearby stores and businesses);
- ii. how far the mall development could reduce the amount of the regional traffic;
- iii. some possible negative impacts of the development also will be assessed, such as how far it will generate traffic congestions and pollutions and increase the crime rate;
- iv. how far this kind of development will empower the traditional market player, improve their role, and providing new neighborhood environment in urban down-town.
- v. what measures are appropriate to improve the transportation in residential area that is effectively reduce the through traffic, reduce speed, and increase safety;
- vi. what processes should be proceed to introduce, plan, implement, and evaluate the measures that ensure the efficiency and effectiveness; also
- vii. what kind of change in travel behavior of residential area exists, when the measures are applied.

It is expected that, at the end, this research would produce such as a complete description of the influence of pedestrian-mall/street-mall to the regional and neighborhood transportation condition and the local community's quality of live, as well as a guide in planning and designing transportation in residential areas.

This research group also functions as a forum for all stakeholders to share, to transfer, and to exchange experiences, technologies, and opinions regarding the sustainable neighborhood transportation planning from developed and developing cities, which will strengthen each other. It can be obtained by conducting a workshop or international seminar which is specifically dedicated for this theme. In addition, the research reports will be published in several methods, i.e. special session in EASTS conference, book, website, among others, while the result of analysis will be published in referred journal.

#### **4. Past Achievements**

This IRG group was just developed several months ago, i.e. November 2006. We have started the group meeting by online, as the members of this group are residing in separate places. The real research activity will be started in this year with a support funding from ICRA-EASTS. Although this group is still in infancy stage, a new member has enthusiastically attracted to join in a very recent time.

4.1 Paper, Report or Book: (Title, Authors, Year, Name of journal etc.)

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4.2 Seminar, Symposium or Special Session: (Title, Date, Venue & abstract)

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4.3 Group meeting: (Date, Venue & abstract)

- a. 23<sup>rd</sup> November – 5<sup>th</sup> December, Online group meeting,  
Abstract: to discuss an objective, goals, and approaches in studying the topic, including developing a list of activities
- b. 4<sup>th</sup> August- 30<sup>th</sup> August, Online group meeting  
Abstract: to discuss a detail list of activities and developed a proposal to get a financial support from ICRA to be submitted EASTS in 31<sup>st</sup> August.

4.4 Result of Application to other research funds: (Name & result)

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4.5 Promotional activities of your IRG: (Home page, Newsletter, Mailing list, etc.)

- a. Home page with an address as follows:  
<http://www.dp.civil.saitama-u.ac.jp/EASTS-IRG-10/>
- b. Mailing list using current e-mail addresses.

**Will you continue your IRG activity in next term (after September 2007) ?**  [ YES ]  NO ]

→ If “YES”, please answer the following questions.

- 5. Future research plan including time frame with the following items as appears in Table 1.**  
By referring to the plan of research as appears in the website, we arrange a detail working plan of research for the first two years. The following next two years will be prepared and decided in the next year, which has an aim to continue and wider the scope of research.

In general, this IRG will conduct two research topics, i.e.:

- a. Developing street-mall and pedestrian-mall with Asian context; which has two objectives, i.e. i) improving the condition of urban street by create a localization of street-mall and pedestrian-mall; ii) improving the quality of life of the urban communities by providing a livable and sustainable area.
- b. Improving the resident’s quality of life by implementing traffic calming measures in residential area, which will be started by researching the planning and design of traffic calming devices.

In addition, this group provides a big consideration to young researcher by involving two doctor students, which is also welcome for other participations in the future.

**Table 1 Future Research Plan**

| Activities   | Time Frame |       |       |       |       |       |       |       |
|--|------------|-------|-------|-------|-------|-------|-------|-------|
|  | 2007       |       | 2008  |       |       | 2009  |       |       |
|  | 09-12      | 01-03 | 04-06 | 07-09 | 10-12 | 01-03 | 04-06 | 07-09 |
| 1 First meeting in EASTS Conference in Dalian, China, 2007   |            |       |       |       |       |       |       |       |
| 2 Conducting research about design and planning of traffic calming devices by Farzana Rahman and Aya Kojima, doctoral students at Saitama University                         |            |       |       |       |       |       |       |       |
| 3 Developing a research scheme and research instrument to study the development of street-mall and pedestrian-mall with Asian context  |            |       |       |       |       |       |       |       |
| 4 Conducting site visit to several location in Asian countries (Indonesia, Thailand, and Japan) to study the appropriate characteristics of street-mall and pedestrians mall |            |       |       |       |       |       |       |       |
| 5 Conducting data collection by distributing questionnaire to the urban communities, and other related stakeholders  |            |       |       |       |       |       |       |       |
| 6 Analyzing the data collected and preparing academic papers for publication   |            |       |       |       |       |       |       |       |
| 7 Preparing special session / workshop in Indonesia and Japan to distribute the result of research.  |            |       |       |       |       |       |       |       |
| 8 Preparing research plan for the next two years (second term).  |            |       |       |       |       |       |       |       |
| 9 Special session at EASTS conference in 2009  |            |       |       |       |       |       |       |       |

## 6. Application for ICRA Grant

Will you apply for ICRA Grant?  YES  NO

➔ If “YES”, please choose one ICRA category among the two categories (A or B).

### A. ICRA for incubating research,

which aims to support academic research works or to assist research meetings.

### B. ICRA for publicity of achievement,

which aims to support publications, symposiums or seminars for the publicity of your IRG achievements.

Evaluation criteria of ICRA is based on “Internationality”, “Academic/Practical Novelty”, “Usefulness” and “Prospect” written in this activity report. Please reconfirm the features of this report.

If you choose “**A. ICRA for incubating research**”, please answer **6.A**, if “**B. ICRA for publicity of achievement**”, answer **6.B**.

### Budget for “A. ICRA for incubating research”

(Please note that the fund is for two years)

**Table 2 Research Budget Plan for 1<sup>st</sup> Phase (2007-2009)**

| No.          | Items   | Quantity              | Cost (JPY)           | Total Cost (JPY) |
|--------------|---|-----------------------|----------------------|------------------|
| a)           | Personnel – only for the part-time workers, not for researchers |                       |                      |                  |
|              | i. Survey coordinator<br>(1 coordinator for 2 month per city)   | 1 x 6 month           | 15,000**             | 90,000           |
|              | ii. Surveyor<br>(1000 questionnaires x 3 cities)                | 3000<br>questionnaire | 75***                | 225,000          |
| b)           | Equipment   |                       |                      |                  |
|              | i. Questionnaire (1000 set per city)                            | 3 cities              | 60,000 <sup>+</sup>  | 180,000          |
| c)           | Supplies – Consumables, such as CD-R disks, etc.                |                       |                      |                  |
|              | i. CD   | 30                    | 250                  | 7,500            |
|              | ii. Papers  | 3 rim (1500 sheets)   | 500                  | 1,500            |
| d)           | Travel for conduct of research, symposium seminar etc.          |                       |                      |                  |
|              | i. Travel for site visit in Indonesia                           | 2 persons             | 75,000 <sup>++</sup> | 150,000          |
|              | ii. Travel for site visit in Japan                              | 2 persons             | 75,000 <sup>++</sup> | 150,000          |
|              | iii. Travel for site visit in Thailand                          | 2 persons             | 75,000 <sup>++</sup> | 150,000          |
| e)           | Other items of expense (itemized)                               |                       |                      |                  |
|              | i. Cost for shipping material                                   | 1 lump sum            | 25,000               | 25,000           |
|              | ii. Cost of communication                                       | 1 lump sum            | 15,000               | 15,000           |
| <b>TOTAL</b> |   |                       |                      | <b>994,000</b>   |

\* Total amount requested – not to exceed 1,000,000 YEN (approximately 8,400 US\$)

\* Budget can not include researchers' salary.

\*\* unit cost per month per person

\*\*\* per surveyor per filled questionnaire

<sup>+</sup> 60 yen per set of questionnaire

<sup>++</sup> lump sum per person per visit