

Urban Environment Regeneration

YOSHIKAWA Katsuhide

Director of the Environment Department

YASUDA Yoshiya (Head), TANAKA Shinji (Researcher)

River Environment Division, Environment Department

1. Introduction

The environment that people can rely on and enjoy is sustained to a great extent by sound hydrological & material cycles and ecological systems in a watershed. Particularly in urban areas, however, such natural foundation of the watershed was collapsed by the overburden of population concentration and rapid economic growth, which led to breaking people's close tie to the above cycles and systems (Figure 1 shows an example) and to deteriorating urban living and natural environment. This situation gives rise to the urgent need for conservation and restoration of the entire watershed having urban areas, so that urban people can recover the lost tie.



Figure 1 Extinct rivers in Tokyo¹⁾

From this standpoint, NILIM launches the research project: Watershed/Urban Regeneration in Accord with Nature, aiming at the watershed restoration in terms of hydrological & material cycles and eco-systems for recovering sound urban environment. In this project, the study on consensus building and decision-making processes using cultural/social analysis & evaluation systems is emphasized as well as the study for grasping the actual environment, conserving forests and agricultural fields, and reserving/recovering the ecological network.

This paper provides the overview of our project, focusing on urban environment regeneration.

2. Framework of the project

The framework of the present project consists of three components.

(1) Development of urban environment restoration technology

The development is pursuing various working techniques immediately useful to urban environment regeneration by conducting two studies. One of them has a mission to develop the method for taking advantage of the local characteristics in town planning. The other aims at developing the method for using the remaining spaces of the urban area effectively, focusing on waterside spaces which are about 10% of the urban area in total. When public spaces of road spaces, parks, and green zones is included, they amounts to about 33%.

(2) Study on the method for urban planning in accord with nature

In this study, the following two points are evaluated in seeking for ideal urban areas.

- How the urban planning reflects considerations of the natural environment
- What type of index is used and what type of evaluation method is performed

(3) Study on urban regeneration scenarios

The objective of this study is to provide policy scenarios for reaching urban regeneration in accord with nature. To attain this objective, an attempt is being made to gain an insight into urban areas by following a comprehensive approach including historical and cultural aspects, providing the urban planners with a scheme of an ideal city in this study. In addition, we are conducting a survey on the process, procedure, and others required to build these cities from the standpoint of human social science.

3. Research results

Under the framework, NILIM obtained the following results by FY 2001.

(1) Study on the design method of facilities incorporating local characteristics

Aiming at reflecting in creating the attractive town incorporating the local characteristics, we evaluated the town planning cases that won the "Tezukuri Kyodo" Prize, prize for creating an attractive hometown incorporating its local characteristics through resident participatory approach. In the evaluation, we reviewed the method for grasping the local characteristics, the planning and designing processes, and the method for assessing the result of the urban renewal project. The result of evaluation showed that:

- the degree of consideration of local characteristics depends on the reviewed terms,
- Participation of the residents and experts in the urban planning in the project is important, and

- only a few cases evaluated the result of the project sufficiently.

In the light of this result of review, we are making survey on how to regenerate the urban areas using waterside spaces around them in 2002.

- (2) Study on the method for planning urban areas in harmony with the natural environment

We made a survey of the terms considered in planning and the objects for planning, the indexes for evaluating the object-attaining performance, and the relationship with other cities concerning urban environment planning methods of 20 cities throughout the countries. The terms, which were most commonly evaluated, include the green zones and the percentage of greening of the urban area. Other individual indexes were also evaluated, though they were not considered comprehensively from a macro viewpoint. On the other hand, some of them made a new attempt to evaluate the terms, which could not be measured quantitatively, for example using aquatic organisms as indexes for evaluating the water quality.

- (3) Study on urban area regeneration scenarios (Study Group of "Urban Environment Regeneration")

To renew the urban areas, the urban planning method must be surveyed from the standpoints of a wide range of fields such as architectonics, agronomics including greening, landscape designing including landscape and its cultural background, and others. For this reason, "Study Group of "Urban Environment Regeneration" was formed as a backbone of the study in cooperation with Prof. Mikiko ISHIKAWA (Keio Univ.) and Assistant Prof. Masami KOBAYASI (Meiji Univ.). We continue conducting the survey with the Study Group. This Study Group plays a role of the forum where researchers exchange their opinions and information on urban environment renewal and has been held once every 2-3 months since 2002.

In the Study Group, a wide range of issues is treated; introduction, question and answer, and discussion about the case studies and planning of open forums and symposiums described later. This group makes surveys from various academic aspects at all the levels from small rivers such as valleys in hill areas to the entire Kanto District including great rivers concerning watersheds and urban areas. The derivatives from the group will be published in the form of publication after being refined.

4. International symposium of urban regeneration

In addition to the activities of information sharing and exchange above mentioned, the Study Group held the open symposium on urban regeneration two times, in June 2002 and January 2003 aiming at providing the people interested in the issue of urban environment renewal with wide range of information.

At the symposium held in June, Prof. Carl Steinitz of Harvard Univ. spoke his special lecture on the method for urban designing and planning from a standpoint of landscape giving examples in US. The experts from various fields reported their own fields, urban planning, architecton-

ics, basin areas, and ecological system. In the final audience-participatory discussion, various opinions were exchanged actively on the issues:

- how the residents and visitors should participate in the decision making process,
- allotment of the national budget to individual local urban plans, and
- roles of the experts in conducting the resident-participatory project.

In the symposium held in November, Prof. Shiro ISHII of Tokyo Univ., a former member of the Council for Science and Technology Policy (CSTP, Cabinet Office), spoke his lecture on the matters necessary for urban renewal from a viewpoint of the Japanese social structure. Prof. Peter Rowe of Harvard Univ. and Prof. Tom Simons of Helsinki Univ., who spoke their key addresses, introduced and stated the current urban planning and urban projects, giving the transformation of highways into the underground type and the urban renewal project in Boston and the cases of the urban reorganization project in Helsinki as examples. In the workshop held in the afternoon, the students of Keio Univ. presented their urban renewal plan concerning the region around Imperial Palace and the Kamakura area. In the panel discussion about this representation, these issues were treated from a wide range of standpoints focusing on utilization of local resources and creation of urban environment:

- comparison of urban areas between Japan and Europe,
- relationship between the authorities concerned and the residents, and
- how to reserve green zones.



Figure 2 Scene of the international symposium (January 2003)

5. Conclusion

The issue of urban environmental regeneration, which attracts great attention by so many people and has significant influent, is positioned at a higher rank. NILIM will make a further survey on urban environment regeneration.

References

- 1) Source: "Urban regeneration and Kanda River", ISHIKAWA Study Room, Keio Univ., 2002