

Social Relations of Urban Design and Urban Form

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-No abstract

A Study on the Evaluation and Management of Rural Landscape Resources Considering the Rural Land Use in Republic of Korea

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The term of "landscape" includes not only natural and artificial environments but also social, cultural, and human activities reacting to them. The landscape has importance in visual as well as ecological and environmental aspects. In this study we defined and evaluated the rural "landscape" as a resource considering its influence on the quality of human life. This study classifies landscape units for supporting rural landscape planning in Republic of Korea(ROK), presents a rural landscape conservation and management map considering landscape quality and perceptual sensitivity, and suggests directions for developing and conserving the rural spaces in case areas.

Relationship between Strolling-behavior of Pedestrians and Visual Stimuli Perceived in Urban Spaces

Yuichi SUESHIGE & Mitsuo MOROZUMI

This study is to find out general guidance for urban design that could stimulate the strolling activities of citizens in a downtown shopping district, by observing the relationships between people's behavior while strolling around downtown shopping districts, and visual stimuli in each section of the streets. As an initial step of the study, this paper discusses the behavioral difference between newcomers to the site and residents who had visited the site many times, in terms of travel route, travel distance and their relation to the visual stimuli they were attracted to during the walk in the study area.

To observe people's behavior, the authors' lab developed a digital city model using the linked QTVR (cylinder-VR) technique. The authors conducted the experiment for 16 pairs of newcomers and 16 pairs of residents, asking them to exchange remarks on what they saw and what they thought, just as they would if they were really walking in the street. The observation suggests that: (a) quality of visual information observed from an intersection has an important influence on guiding people to each street, (b) the location of visual stimuli, in other words, the urban design arrangement, has a strong influence on vitalizing people's window shopping and strolling activities, © it is important to enable resident visitors to find something new whenever they visit, for example, seasonal changes or various events, because residents are attracted by visual element showing a change of the town.

Historical Study on the Process of Park and Open Space Planning in Wuhan city, China

Dai Fei, Takeshi KINOSHITA & Toshio KITAHARA

Chinese city's modernizing process of park and open space planning was at first impacted by the western planning system, then turned to the Soviet system in the 1950's, and then learned from the western again after the Reform and Open Policy initiated in 1980's. Comparing with most Asian cities with the continuous system, their developing trace was unique. Because of active planning practices, Wuhan city is a good example to learn how the city's park and open space planning absorbed concepts from the western and the Soviet planning systems and evolved in the past nearly one century.

In the period of the Republic of China, the western planning concepts were introduced to Wuhan's planning in three stages. The early stage (1911-1926): European classical park planning concepts were popular. The middle stage (1927-1936): The American park system was first practiced in 1929 and became mature in 1936. The latter stage (1937-1949): Greenbelts originating from Garden City and London's plan were proposed and parks began to come into the neighborhood unit.

In the period of the People's Republic of China, the Soviet planning concepts were introduced in the first stage of the 1950's and was mixed with the western concepts in the next stage from the 1980's: The early stage (1950-1959): The park's recreational function was stressed as the Soviet park planning by a park system of three-levels. Its environmental protection function also was strengthened by buffer greenbelts. The latter stage (1980-2002): A park system of four-levels and the network of green space were formed, mixing the Soviet and the western concepts. The backbone of green space system matched the city's topographical features better and better.

Restoration of Historic Stone Landscape in Downtown Izuhara, Tsushima

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& Kazuhiko ITO

Izuhara, a capital of Tsushima Island located between Pusan and Fukuoka, has an abundant inventory of historic stone walls in downtown since Edo period with some influence in designs from Korea. A field survey was conducted over Izuhara downtown to understand the extent and the cause of demolition of the stone walls in the past seven years. The result shows that motorization and change of land use are the major factors of the demolition, and application of comprehensive regulation for preserving existing stone walls with local citizens' support as well as promotion of skilled artisans are indispensable to maintain the unique stone landscape in Izuhara.

Historic Rural Landscape in Highly Transformed Areas Looking for Cultural Landscape in Kami Shiojiri

Matteo DARIO PAOLUCCI

The paper analyses the rural landscape of Kami Shiojiri, a small village of Nagano prefecture located along the historic Hokkoku Kaido road. In its territory, laying partly on a plain land and partly on a mountain area, extremely strong changes have undergone. The plain land has been almost entirely "urbanized" while the mountain area abandoned. The main issue is to read the landscape transformations in the past 110 years in order to find landscape relics. This has been possible thanks to historic maps from 1888 and aerial photographs from 1948. All the data have been rasterized and processed with CAD software in order to draw land use digital maps and calculate land use distribution for each period.

As main results the study produced land use maps for 1888, 1948 and 2001 situation. Out of their overlaying, then it has been possible to locate some areas where historic rural landscape managed to survive. The most valuable landscape relic has to be seen in a terraced field area where mulberry tree used to be grown until the first half of twentieth century in relation with the silkworm industry.

Further considerations on historic rural landscape preservation are then made presenting two cases with conservation problems similar to Kami Shiojiri. In the Italian rural areas of Cinque Terre and Sorrento terraced fields

have been preserved thanks to particular projects targeting a sustainable economical development fully respectful of the historic rural landscape.

A Study on the SD Evaluation of the Visual Cognition to the Urban Landscape

Hwang, Jee-Wook, Suh, Chung-Won, Hong,
& Cheol-Un

The color and structure of urban constructions is a factor of urban landscape and shows their characteristics. Hence the modern buildings deal with their materials and external appearance as an important factor, making up the urban image. But still yet, it was not easy to evaluate the value of visual landscape of buildings with objective measuring method. Most of all, it depends on the subjective estimation of a few talented or high educated experts with a sense of beauty. Such kinds of estimation can in some cases include arbitrary interpretation. In relation to this kind of problems, it is tried here in this study to analyze the human response of brain wave pattern (EEG) with use of SD method, while the tested persons watch the urban landscape scenery constructed in a visual reality.

The tested persons are 20 adult male and female with no color blindness and intact cognitive function. Light source with color filter is used for color environment in chamber room. The signal of EEG is analyzed digitally and grouped into the α and β waves. The result showed that relative power of α wave ratio increased in blue and green. From these results it is possible to evaluate the human response, which is affected by urban color and structure stimulation and it might be useful as an indicator of visual cognition amenity toward the design of urban construction environment.

Using Small Watershed units for Sustainable and Community-based Landscape Management

Yukiko KATAGIRI, Hideya YAMASHITA
& Mikiko ISHIKAWA

In the current system of Japan, there has not been enough consideration for the balance between the natural environment and urban functions. The watershed has been gathering a lot of attention as a basic unit of city and regional planning.

This paper reports our attempt to apply an evaluation method based on the watershed planning to municipal areas. The method was previously introduced as an evaluation method for a watershed of small and medium-sized rivers (Katagiri et al., 2005). The characteristic of this method is to set up the basic watershed unit on the city or district scale. We examined the generality and possibility of the method as a basis of sustainable and community-based landscape management in the context of the natural environment.

The first part this paper describes the preparation of the basic data of the survey area. The data consists of mapping of small and secondary watershed units and vegetation as well as transitional datasets of the landuse. The Second part investigates the distribution of green spaces and the tendency of urbanization by the watershed unit. In this investigation, small watersheds were classified into six groups by way of a cluster analysis. The third part evaluates the watershed units, from the viewpoint of water cycle in the survey area. The percolation ratio was used as an evaluation index. The rate of change of percolation ratio was used to evaluate the soundness of landscape by the small watersheds groups and the secondary watersheds. We conclude that the framework of the watershed unit enables the clarification of its characteristics as natural environment, its capacity to the environmental conservation, and problems of suburban areas at the reasonable scale of city or district.

Analysis of the Relationship between Urban Park Distribution and their use by Local Communities for Events using GIS: A Case study in Sapporo City Hokkaido

Akio SHIINO

The purpose of this case study was to analyze the relationship between the distribution of urban parks and their use by members of the local community for hosting events in Higashi Ward, Sapporo City, Hokkaido using GIS. Event-use in urban parks differed according to park type, of which block-, neighborhood- and district parks were identified. Information on the use of urban parks by neighborhood associations for events was obtained and analyzed by survey questionnaires from 268 neighborhood associations. When asked which urban park they selected for events, 32% of neighborhood associations responded that they used urban parks located outside their own districts. In addition, analysis of the relationship between neighborhood association areas and the distribution of urban parks revealed that 44% of neighborhood associations had no urban parks in their own areas. Analysis of the number of households within the areas of each neighborhood association revealed that, despite having more than 500 households, nine neighborhood associations did not have

parks located within their own districts. These results show that urban park distribution is not equitable at the level of the local community and that this impacts adversely on event use.

Study on the Practical Environmental Consideration System at the Planning Stage

Mihoko M. MATSUYUKI, Mizuo KISHITA,
& Sadatsugu NISHIURA

This paper aims to make clear the characteristics of Japanese environmental consideration systems to be applied at the planning stage, and what points of the systems should be strengthened to develop them to a real SEA. First, the SEA principles were set up as criteria for evaluating the existing environment consideration systems of local authorities. The principles set up were ‘Timing; to be conducted at the strategic decision making stage’, ‘Participation’ and ‘Transparency’, ‘Examination of alternatives’, and ‘Compatibility of environment with socio-economic condition’.

Next, based on the degree of fullness of SEA principles, the existing systems were classified according to the categorization as follows: The systems which are close to full-scale SEA, the ones that promote internal pre-adjustment among administrative divisions concerned at local authority level, and the last ones that promote environmental consideration as pre-stage of project EIA. Case studies were carried out for the four systems, namely those established by the governments of Tokyo, Saitama prefecture, Mie and Kobe. It was found out that the compatibility of environment with socio-economic aspects, participation, and transparency were the major points to be improved through the real world experiences of the quasi-SEA systems.

A Study of the Operations Selection for Adaptive Reuses of Public Unoccupied Spaces

Wann-Ming Wey & Wei-Ming Wang

The selection of different operations types for the adaptive reuses of public unoccupied spaces is a Multi-Criteria Decision Making (MCDM) problem. Prior research for the selection of different alternatives (in this case, it means operations types) does not reflect interdependencies among criteria and candidate alternatives. To consider alternative interdependent property provides valuable cost savings and greater benefits to public sections. When we evaluate alternative problems, we need to collect a group opinion because to know the interdependence relationship among criteria and criteria in considered alternative problems is very important. In order to collect group opinion for interdependent alternative problem, we use expert interview. In this paper, we suggest an improved operations type for

the adaptive reuses of public unoccupied spaces alternative selection methodology which reflects interdependencies among evaluation criteria and candidate alternatives using analytic network process (ANP) approach. In this research, we suggest such an approach for interdependent alternative selection for the operations types of the adaptive reuses of public unoccupied spaces alternatives selection problems using Fuzzy Delphi technique, and ANP concept. The application of the proposed methodology is illustrated through an example. Using this method we solve problems having multiple criteria and interdependence.