

Natural Environmental and Historical Effects on Land Use in the Inner Urban Area of Megacities -- The Case Study of Tokyo

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This paper examines Tokyo's local features through the investigation of the influences of both the natural environment and history on the inner urban area over time. We selected the natural -rivers, waterfront, and greenspaces -as well as historical -temples and shrines -components of urban space. Then we investigated how these components remained and disappeared vis-a-vis their related components: topography, traffic facilities, land use' and Daimyo landholding from the early Meiji Era through 1.0 the Heisei Era (1880-1995). We used GIS (Geographic Information System) software for ease of use in overlaying maps of different periods to analyze the components' qualitative and quantitative relations. Through this process, we found that: (1) transportation impacted the demise of waterways; (2) it is only due to city planning that greenspaces remain; and (3) temples and shrines have been preservers of greenspace. Finally, we consider the planning possibilities for sustainable development in the inner urban area of Tokyo.

Sustainable Land Use Strategies for Rural Area in Agropolitaion Regions : A Case Study Choongju in Korea

Hwang, Hee-Yun, Ryu Eul-Leal & Lee Kyung-Kee

45 agropolitan regions, which have been combined by cities and agricultural areas around the cities, were born with the implementation of a local autonomy system since January of 1995 in Korea. From this, each agropolitan region has been ruled by a local government unit. This paper performs a case study to present basic strategies for rural land use in agropolitan regions, one of the most pressing works that agropolitan regions have to do. The main purpose of the case study is to grasp an understanding of the situations of land use management, environmental management and an agropolitan policy from governmental documents and through citizen questionnaires in the Choongju agropolitan region of Chungbuk. Through the case study, this paper suggests development strategies, land use management strategies, and environmental management strategies from the viewpoint of sustainable development for rural areas in agropolitan regions.

Integrated Approaches to Urban Sustainable Development

Lee Yung-Jaan

This paper considers the patterns of urban development and major urban problems in Taiwan, and then presents an integrated sustainable development approach to the solution of these problems. Trends in the development of large cities and towns in Taiwan are considered. Enormous cities often generate gigantic and increasing problems. In Taiwan, inner city problems are prevalent in large cities; they include: poor housing, transport congestion, alienation, frustration, and poor environmental management. Some possibilities for alleviating these problems are outlined; however, none of them can be solved in isolation, using a piecemeal approach. Therefore, the principles of an integrated approach to urban planning and urban problems are presented in the latter part of this paper. The aspects considered include: sustainable development, "ekistics" and systems approaches. In the light of this approach, various possible futures for cities in Taiwan are considered, and some appropriate policies for future urban sustainable development are discussed.

Characteristics of Green Structure Plan as an Urban Strategy for Sustainable Development - A Case Study in Historic City KAMAKURA

Mikiko ISHIKAWA

Green Structure Plan (GSP) is a comprehensive master plan to conserve natural environment and to develop parks and open space system in city planning area. How to control the expansion of cities, and to bring a certain order between nature and city have been one of the most important theme in modern city planning. In Japan, we have a long history on this field from 1930' s. and up to today, two major plans. Green Master Plan and City Greening Plan carried out its role. In 1994, according to the reformation of Urban Open Space Conservation Law. GSP is established as a synthesis of above two plans. The characteristics of GSP could be said as follows. First, ecological planning is emphasized for enriching diversities of wild-lives, and lightening environmental loads. Second, mayors and town managers become decision-makers whereas in former plans prefectural governors had the right of decision-making. Third, citizen participation is encouraged in planning process. In this paper, I discuss the essence of GSP using the case of Kamakura City and pointed out that GSP gave a fundamental structure for the sustainable development.

Lessons from Recent Man-Made Disasters in Seoul

Jung, Chang-Mu

With the development of our modernization drive, the concentration of population and wealth in Seoul metropolitan areas has become more and more evident. In these days, a series of man-made disasters have increasingly aroused wide public attention to the urban emergency management. In view of the concentration of population, high-rise buildings and water, electricity and gas supplying network, Seoul metropolitan areas are highly prone to such natural and manmade disaster-causing phenomena such as typhoons, floods, landslides, conflagration, collapse, and breakdowns of urban life lines. While the risk of disasters is felt more and more keenly in Korean society, Korean society is going to elaborate an appropriate organizational and institutional framework for dealing with disasters and to review the country's present disaster management setups. The motivation for the paper stems from a series of recent disasters in Seoul Metropolitan areas. The paper is organized as follows. First, we introduced the outline of disaster preparedness of Seoul Metropolitan Government. We then described brief history of man-made disasters in Korea, and its social impact in terms of awareness of personal and social safety. Finally, we presented lessons from recent disasters in Korea and Seoul Metropolitan Government's elaboration of safety management system.

Autonomous Disaster - Preventive Local Environments and Community Commitment in Urban Residential Districts - Study in Eastern Part of KOBE City After Great Earthquake

Tsuyoshi FUJITA, Tohru MORIOKA & Shinobu GOTOH

Emergency living support activities immediately after the Kobe Earthquake in the Eastern Part of Kobe City are surveyed and analyzed to get planning principles for disaster-preventive autonomous local units in the urban residential area. Interview survey of emergency support spots were, firstly, made, living support activities were identified, and each activity level was estimated according to objective criteria. Active participation of community associations in emergency spot management was found as a factor to emphasize the function as an emergency community center. Correlation analysis was also made between emergency activity levels and characteristics of community groups in a quiet time. Subsequently, the idea of an autonomous community unit, named "community living sphere", is introduced and its living support system both in a disaster time and a quiet time is discussed. Finally, equipment and storage condition of an emergency community core was tentatively estimated to know the implementation feasibility of the

autonomous disaster-preventive community unit.

Local Institution Reforms for the Public Service Provision in Korea

Lee Man-Hyung, Lee Jae-Won & Park Byung-Ho

For the optimal conditions for the public service provisions, both economies of scale and externalities are commonly regarded as the most critical factors under consideration. Following these typical criteria, this paper intends to identify types and degrees of inefficiency in the current structure of the public service provisions among the local governmental units in Korea. From the case study of Cheongju Metropolitan Areas (CMA), it analyzes merits and demerits of consolidation and fragmentation policies and also devises alternative delivering systems of the public service provisions. In particular, this paper focuses on the practical policy options in order to facilitate management and operation of the public service facilities in the local governmental units.

A Study on Disaster Reconstruction Plan of OKUSHIRI From the Viewpoint of Livelihood

Kunihiro KISHI, Shin-ei TAKANO, Seiichi KAGAYA
& Keiichi SATOH

We surveyed the reconstruction of Okushiri Island, Hokkaido, since the Hokkaido Nansei-oki earthquake of July, 1993, which has been effectively implemented, and we examine the characteristics of the reconstruction plan. We also propose the scope of plans of disaster reconstruction. Fishery is the main industry in Okushiri and the reconstruction plan was based on the rehabilitation of the fishery industry. One of the features of the plan is that the main project program on which the reconstruction of the town is based is the Improvement Work for Fishing Community Environment (Fisheries Agency, Japan). This program enables improvement of the living environment more quickly and comprehensively than the land readjustment project, which is generally used for reconstruction after a disaster. How the residents were to reconstruct their houses and to resume their work were the problems. The Okushiri Town Office supplied subsidies for residents to reconstruct their houses and to resume their work. The disaster reconstruction plan of Okushiri has focused on the support of the livelihood of the residents. We propose that the concept of "livelihood" should be introduced into disaster reconstructions, as well as into city planning. In disaster reconstruction, residents starting their livelihood anew in the same place where they have always lived is important.

Conflict Management of Environmental Risk: A Strategic Planning Approach

Lin Chien-Yuan & Hung, Hung-Chih

With the idea of rational planning, it has long been believed that the result of urban planning should be a plan that different land uses are well-coordinated with maximal welfare for the public interest. In reality, environmental risk cannot be totally eliminated in urban planning and environmental conflict are normal to exist. Conflicts caused from facilities with environmental risk are often treated as NIMBY (Not in My Back Yard) or LULU (Locally Unwanted Land Use) problems. The purpose of this paper is to present a strategic planning approach of conflict management to deal with environmental risk problems. In addition, a set of environmental risk management strategies are formulated to deal with the spatial conflicts of industrial parks in Taiwan so that sustainable development can be hopefully achieved.

Institution of Urban Planning and the Decentralization

Hirofumi TERANISHI

This thesis proposes to present an overview of historical aspect of centralization and decentralization with respect to Urban Systems in Japan according to life evolution of Urban Administration. Japan has maintained a centralized government system since the Meiji Era, preferring it for reasons of efficiency. The centralized system that was established around 1940 was kept basically intact even after World War II. Today local autonomies are made up of 47 prefectures and 3,241 municipalities. In 1995, a Law to Promote the Decentralization of Powers was enacted by the Japanese Parliament. We can draw the following conclusions that it has been made clear that historical developments have evolved towards the reality of the decentralization of urban planning through the decentralization of urban planning within the context of incrementalism and the relationship between the bureaucracy and the public.

New Vision for Urban Management

Ko Suk-Chan & Park Kyung-Won

Traditionally, the rapid growth of major urban areas in a country has been considered a source of economic benefits and welcomed more jobs and more people without considering the carrying capacity of their infrastructure. Today, many have come to regard rapid urban growth as responsible for traffic congestion, a lack of affordable housing, environmental degradation, loss of open space, and high costs for additional infrastructure building and maintenance. However, public officials and city planners of the newly industrialized country such as Korea tend to rely on the conventional approaches to urban management to solve these chronic urban problems. These regulatory and rigid approaches often resulted in unintended consequences. The experience of Seoul Metropolitan Area growth management in Korea indicates that the conventional approaches, which emphasize the role of central government, the importance of efficiency, the provision of quantity-oriented physical infrastructure, regulatory measures, and the concept of carrying capacity, are not appropriate for the effective management of rapid urban growth and change in the 21st century. City planners and managers need to seriously consider to adopt new visions for effective urban management that can accommodate evolving needs for flexibility, sustainability, and high quality of life for its citizen.

Crisis and Dysfunction of Spatial Development and Management in Taiwan

Chou Tsu-Lung

Based upon the development mode of export-oriented industrialization (EOI), Taiwan has undergone a well known economic miracle especially since the 1960s, when the capitalist world entered a deep Fordist crisis. Nevertheless, the development mode of EOI was inherited with development contradictions, and led to a crisis and dysfunction in Taiwan's spatial development and management. The paper aims at analyzing the crisis and dysfunction from political economic perspectives. This is done by discerning how the state intervened in the spatial development and management along with the EOI development. It will become clear by the end of the paper that the crisis and dysfunction of the spatial mechanism had been manipulated by the state to meet political-economic requirements of Taiwan's EOI development. The development mode of the EOI did provide good environments for capital accumulation, but bad ones for people living.

Land Use Patterns to Promote Public Transport Usage for Sustainable Cities

Akinori MORIMOTO & Hirotaoka KOIKE

The purpose of this paper is to examine the relationship between land use and public transport and then propose some conditions of land use patterns to promote the public transport usage. As a result, it was found that there are the three conditions, which are location, density and type of building usage. We showed the consequence on promoting the public transport usage, one of which is the reinforcement in the central business district. And the improvement in high density area where high public transport service is provided gives the larger effect on the transport usage in comparison with the low density area.

The Impacts of the Traffic Demand Management Policies Across the Different Income Classes in Seoul

Lee Bun-Son & Lee Eui Seop

It is very costly to construct transportation facilities such as roads, bridges, tunnels, and public parking lots mainly because land price is very high in metropolis like Seoul. Private car owners use these facilities more extensively than public transportation users. However, the government does not impose proper charges for using these facilities. Such improper charge causes traffic congestion and then decreases social welfare in efficiency and equity. To solve such problem, many traffic demand management policies are used. Traffic demand management policies which are currently used or under consideration by the City Government of Seoul include the imposition of road tolls, increase of parking fees in public parking lots, increase of gasoline taxes, expanded implementation of bus only lanes, and Shipujae, which requires one(1) non-driving day for 10 calendar days. This study examined the impacts of such policies on the different income classes using simulation analysis. We found that the impacts of market-oriented policies such as the imposition of road tolls and the increase of gasoline taxes are regressive. Also, we found that while the low and middle income private car users have incentive for public transportation use after the implementation of such market-oriented policies, the high income private car users have no incentive for public transportation use in many cases.

The Experience of Technology City for Internationalization Development in Tainan City

Shih Hung-Chih, Chou, Shih-Hsiung & Hsieh, Hung-Nien

The purpose of this paper is to give a proposal to Tainan City regarding how to develop an international technology city as part of its role in the Asia-Pacific Regional Operations Center plan. It also gives suggestions for the future development of two technology-based parks in Tainan City: Science-based Industrial Park and Technology Industry Park. It is very important to create the opportunities of international competitiveness to gain the benefits of global economies. This paper will explore the global industrial development change and review the development experience and prospects of an international city.

Transportation Management for Sustainable City - Case of University as a Large Scale Traffic Generator

Seiji HASHIMOTO & Katsutoshi OHTA

Transportation is one of the most important elements for sustainable development. Large scale facilities, such as shopping center, hospital, and university have a possibility to generate large volume of traffic and have great effects on environment. Particularly, in the case of university, many people (students, university staffs, visitors, delivery services, and so on) come to the campus by car. So, transportation management at university is a major issue in sustainable urban

development. We have analyzed university transportation problems from two aspects: (1) location of the campus and (2) transportation management efforts of the universities. With respect to location, there are two kind of university. One is in urban area, and another is in suburbs. As for these new suburban campuses, we found that location decisions were based on the site available with cheaper land value and it caused not only difficult transport problems but also planning problems. As for transportation management at existing urban campuses, we have made questionnaire surveys of 13 universities in Japan and made hearing and field observation of some interesting cases from them including Hongo main campus of Univ. of Tokyo. From the result of questionnaire survey we find that in order to progress urban sustainable development, it's necessary to develop and apply transportation demand management measures in reducing vehicle use at university recognizing it as a major traffic generator in urban area.

The Role of Rural Land in Taiwan's Economy

Liu Hsiao-Lan & Chen Wei-Bin

In 1995, Government proposed "agricultural land release plan". The contributions of rural land to the natural environment are grossly ignored by regional planning officers. Therefore, we propose an ecological economics approach to examine and evaluate the relationship of rural land to Taiwan's economy. A new measure, energy, which represents the value of an input on a common basis, was used to evaluate contributions of rural land to the economy. From 1986 to 1990, we lost 4169.111E6 U.S. dollar from the decrease of rural land use. Therefore, the incorrect land use development and transformation will make the ecosystem lose a lot of energy which will influence the sustainable development of urban development.

A Study for Sound Development of Metropolis - Strategic Land Use Control System in Yokohama City

Hiroshi KISHIDA

Yokohama City has practiced its land use control system for a quarter century and, in conclusion, has made sound development. The land use control system consists of two pillars, Zoning System and Permission System. The Zoning System consists of three fields: Urbanization Control Area Zoning, Building Use Zoning and District Plan System. Permission System consist of Development Permission, Building Permission and Building Confirmation. They control the concrete content of development or building, cooperating with Building Lot Development Principle and Street Environment Design System. For sound urban development of 21st century, it is indispensable that we have clear image of future urban space and active will to promote citizen participation into planning.

Population Pattern Change and Urban Facilities Development

Masuo KASHIWADANI, Tohru FUTAGAMI & Yasuo ASAKURA

Urban public services are often behind the population increase when a city is growing rapidly. It is notable that city governments build schools less efficiently in urgent situations such as rapid increase of children, from the standpoint of a long term evaluation. In this paper we investigate the primary school building experience in Matsuyama city and discuss its efficiency. The city built twelve new schools in our study period of 1972-1995. Seven of these have been built since 1983, while the number of pupils in the city has been decreasing. We analyze the change of class number of schools. It is found that the number of surplus classes was 428 in 1995. This is more than 30 % of available classes. Some of these were produced because of the decrease in the number of pupils. Many classes became vacant by school district adjustment due to a new school opening. We conclude that primary school services have not been supplied

efficiently in the city. However, it is difficult to manage primary school services efficiently without population control.

Efficiency Analysis of Urban Production

Wang Dah-Lih

Throughout the human history, cities are the centre of human activities. Regardless their variations in size and shape, cities possess similar characteristics and are usually treated as integrated spatial units in the analysis of urban production. Noting that Data Envelopment Analysis (DEA) is commonly used to evaluate the performance of a group of decision-making units (DMUs). It assumes that if a given DMU can produce Y units of output with X inputs, then other DMU's shall be able to do the same when they were to operate efficiently. As the efficiency of urban production is critical to the design of sustainable development policy, then the objective of this paper is to apply DEA method to empirically examine the efficiency of urban production in Taiwan. According to the analysis result, most of the townships in Taiwan do not operate efficiently. Therefore, it indicates that there are great improvements to be made in urban production.

REORGANIZATION OF URBAN SPATIAL STRUCTURE AND REGENERATING URBANIZED AREA FOR RELOCATING INDUSTRY AND URBAN FACILITIES IN A LOCAL UNIFIED CITY

Kim Yeong & Moon Tae-Heon

An urban-rural integration concept has been an important issue for reorganization of urban spatial structures in recently 'urban-rural' unified cities of Korea. There is no exemption in local cities of Gyeongnam province in that their land-use plans should be entailed to implement urban comprehensive plans. The concept encourages us to reshape the existing urbanized area for relocating industry and urban facilities. Especially, new urban spatial structure of a city after integration, is needed to escalate quality of life and economic growth. It also includes multi-nuclear spatial structure maximizing equity with relocation of industrial parks and urban facilities: removing existing inner-city factories to new suburban industrial or research parks for environmental improvement and rearranging existing urban public facilities in downtown and removing them to new district or complex.

Moreover, not only regeneration strategies such as reinforcement of industry but also establishment such distribution centers as truck or container terminal, or shopping center including convention center are needed to correspond to recent trends toward urban development. On the other hand, new environment in which revitalization of local cities need to cope with municipal management should be also taken into consideration without enough supports to relocate or move those facilities. For example, the city should improve the environment for its own financial ability, if possible, taking advantage of some techniques: redevelopment of deteriorated urbanized areas such as vacant lands and abandoned open spaces in the city. This paper, therefore, aims at figuring out the inadequacy of existing urban land-use through their patterns, and the need of relocating the public facilities as well as the industrial parks, and the rehabilitation of deteriorated area. Finally, we suggest some alternatives of urban development strategies and encourage reshaping new spatial structure of a local city by relocating industrial parks and urban facilities to be a catalyst for its environmental and economic improvement as well as municipal efficiency and citizen's benefits.

Urban Landscape Management Based on Citizen Perception and Preference

Im, Seung-Bin

Urban landscape management cannot be successful without citizens' consensus and support because urban landscape management often involves limitation of property right. Diverse factors of urban landscape planning and management are discussed in this paper. Building height control (BHC) is one of the tools for urban landscape

management. The existing BHC in Korean cities does not really reflect citizen perception and preference. Most of the BHC relies on professional judgments. This study demonstrates a way of considering citizen perception and preference for BHC. For each slide with various heights, the scenic beauty and the psychological variables were measured by student subjects. From the relation between the height ratio and the degree of scenic beauty and psychological variables, three ranges of allowance limit were derived, i.e., acceptable, landscape impact assessment/review, and unacceptable.

Urban Development in Taiwan: System, Issues, and Strategies

Lai Tsung-Yu

Urban development is fundamentally a process of innovation that involves the entire society--its demographic, economic, social, political, environmental, and physical structure, as well as its value system and the quality of life. Taiwan's rapid urban development over the four decades has greatly influenced its urban landscape and land use patterns. Continuous economic growth has led to rapid urban expansion, resulting in development and growth that outpaced the provision of infrastructure in the urban areas. Worldwide increased attention has been paid to the repercussion between urban development and quality of life. Over the year, dramatic urban growth, along with ineffective governmental policies and unfettered land market in Taiwan, has led to people becoming increasingly dissatisfied with the declining quality of life. Although the government possesses the tools to regulate land development, these tools frequently are too weak to address market failures and to provide solid solutions. Thus, there is an urgent need for Taiwan to reevaluate its current system and develop effective strategies to manage urban development and to reshape its urban vision. This paper intends to explore the problems of urban development relevant to land use and public facility issues in Taiwan. It analyzes the impact of urban development on land use and provision of public infrastructure from a number of perspectives, including demographic, economic, environmental, political, planning, and institutional dimensions. The issues discussed in this paper indicate the need for Taiwan to modify its existing policy and planning framework along with institutional innovation and sustainable strategies. Finally, this paper attempts to provide a general view of which alternatives should be considered and how current problems can be solved.

Cultural Living Perimeter and Facilities

Ku Yu-Ling & Hsing Woan-Chiau

Under the fast change of the society, shortage of the spatial distance and the variety of activities etc., the cultural activities and the living recall are fading away. And due to the lack of feasible plan, be the barrier of cultural development, it had been difficult to offer the sufficient cultural facilities and exhibit room ages to promote the better quality of people's daily life. So after the discussion of the base concept of cultural perimeter, activities 'and facilities, this study suggest the 'cultural facilities service networks' and 'cultural centrality concept' should be a good idea for the development of cultural perimeter and facilities. And also derive the strength feasible, comprehensive, and substitution should be the correct principle for cultural facilities take use. At the end of conclusion, this study tries to analyze the concept of local self-development power and some plan tools for the culture development. It will serve to improve the cultural policy.

Town Planning in Nihon Taisho Mura with A Project Run by Volunteers fo the Aged

Reiji OBASE

This report will discuss about an unique town planning which has been held in a small town AKECHI in Gifu prefecture The town planning of the town originally started when inhabitants set [TAISHO MURA] project to make the town a theme park village of Taisho era (1912-1926) in order to create identity which attracts tourists. As an advanced aging society, whole works supporting the project has been held by volunteer activities of the retired aged people. With an abundant of staffs and firm financial support system, the project have made great success which brought continues number of tourists to an under populated town in a mountainous region and made the town lively In order to reveal real affection and sufficiency of this unique example, this report will look into some indicators of social-economical statistics which the [TAISHO MURA] project must made impact on.