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A New Model for Urban Development: Multifunctional Administrative City

The rapid urbanization, industrialization, and economic development since the 1960's have brought excessive concentration of political, economic and industrial activities in the Seoul Metropolitan Area (SMA). The consequent regional disparity between SMA and other regions has resulted in the unbalanced growth of the territory, which has led to the overall weakening of the national competitiveness. To remedy this situation and to scheme co-development and leap forward of SMA and other regions, the government has initiated a new plan for the territorial space, the construction of the Multifunctional Administrative City (MAC). The MAC will host main central government bodies which will serve as the city's central focus and around which industrial, educational, and cultural facilities will be built creating a city with a population of 500,000 on 73.14km^2 of land.

The Master Plan for the MAC construction has been promoted through a joint study primarily by the relevant academic associations and government-sponsored research institutes, since the enactment on March 18, 2005 of the 'Special Act on the MAC Construction in the Yeongi-Gongju Region', as a follow-up measure for the aborted New Administrative Capital project. The purpose of the Master Plan is to provide basic directions to a range of sub-plans and an international competition for the design ideas for the MAC to be promoted until the commencement of construction in July 2007, and thus keep all the plans consistent with each other.

As stipulated in Article 6 of the Act, the basic directions to the MAC construction are firstly, a self-sufficient city focused on administrations function that will lead a balanced national development; secondly, an environment-friendly city harmonizing nature and human beings; third, a people-oriented city with a convenient and safe living environment; and lastly, a cultural and information city where culture and high technology co-exist. Studies on strategies to promote construction have been going on based on these basic directions, and public hearings and discussions among related institutions had been completed by May, 2006. All that is left now is the last stage of the plan establishment, the confirmation of the Master Plan due in July, 2006.

International ideas competition for the MAC

The Master Plan for the MAC construction began with the international competition for design ideas for the MAC in May 2005. Titled the 'International Urban Ideas Competition for the MAC in the Republic of Korea', the competition was conceived to obtain new and original ideas for the future image, ideology and urban structure of the first city to be constructed in the 21st century, from professionals and non-professionals around the world. The entry registration was between June 1 through July 11, 2005, and the total entries to the competition amounted to 121 from 26 countries worldwide.

Top-class architects, urban planners, and urban theorists at home and abroad, were invited to participate as judges for the competition, so that the MAC construction could be publicized worldwide, and that the competition would attract many entries.

Winning Entries of the International Urban Ideas Competition for the MAC

The eight members of the Judging Committee are as follows: Prof. David Harvey from the U.S. (Anthropologist, Graduate Center at CUNY), Prof. Nader Tehrani from the U.S. (Co-representative of the Office dA, Harvard University Graduate School of Design), Arata Isozaki from Japan (Architect, Arata Isozaki & Associates), Winy Maas from the Netherlands (Architect, MVRDV), Prof. Sam-Ok Park (Geographer, Seoul National University), Prof. Hyun-Sik Min (Korea National University of Arts, School of Visual Arts), Prof. Young-Tae On (Kyeonghee University, Graduate School of Architecture and Landscape Architecture) and Prof. Geul Yoo (Kyeonghee University, Graduate School of Architecture). The five first tier prize winners and five honorable mentions were announced on November 15, 2005, and after a thorough examination, the ideas of the five winning entries will be reflected on the Master Plan.

Going through a series of expert consultations and discussions on the results of the competition, several significant and original ideas were selected as adoptable to the city. Most of all, the ideology on which the city will be constructed is a balanced and decentralized city. The best suggested idea for the city structure is a ring shape with a hollow center, which can accommodate the ideology while meeting other requirements such as environmental conservation. The large scale open space in the center will be shared by the general public, and is a symbol of the futuristic environment-friendly city.

As for the government complex, a major facility in the MAC, a people-friendly approach will be adopted to the buildings, going beyond the traditional authoritative and modern type of arrangement. An environment-friendly city will be pursued in the plan while preserving as much of the Geumgang River and hill areas as possible.

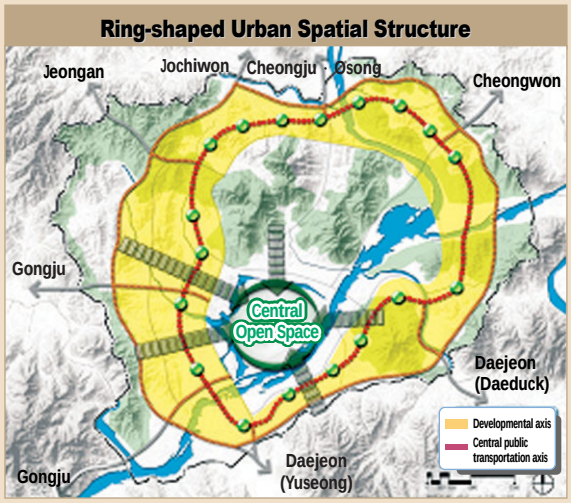
Basic directions to the MAC construction

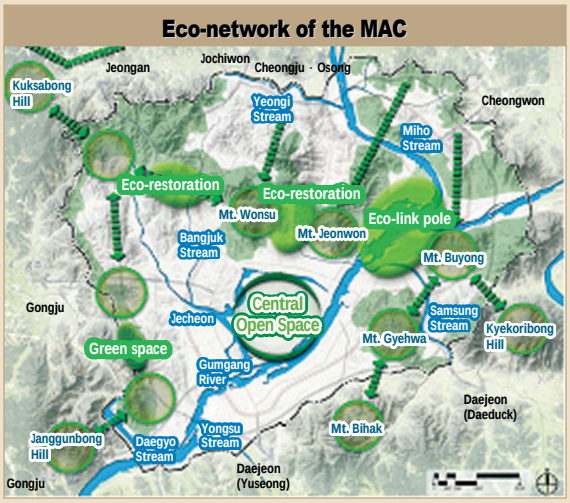
1. Decentralized arrangement of the urban function

The joint research team for the MAC construction suggested inducing a number of the following functions to the MAC, in order to achieve the goals of addressing the concentration in the Capital region and developing the territory in a balanced manner: central administration, international exchanges and culture, university and research, medical care and welfare, high-tech knowledge-based industry, etc. When the selected major functions of the city are distributed in the ring-shaped MAC, they will have to be spread across the city rather than concentrated in one location. This is the reflection of the ideology adopted at the international competition, a balanced and decentralized city. The sites for the buildings of different functions have been selected comprehensively, considering the status of the neighboring cities, geographic conditions, etc., and arranged in a way in which the major functions can be linked with each other through public transportation axis to be formed along the ring-shaped developmental axis.

2. Urban environment in harmony with nature

The methods that best utilize the surrounding natural environment are introduced to make the city environment-friendly. To be specific, an eco-network is planned to be built that combines a green network of the Kuksabong Hill and the Wonsu and Cheonwol Mountains, with a blue network of the Geumgang River and Miho Stream. In addition, the some 1 million pyeong, or 300ha open space in the center is the major park of the city where humanity meets nature. The basic directions to the development will be suggested in a way in which the space is utilized for leisure and sports, weekend farms and water-friendly spaces. And the green finger systems will be estab-





lished to link residential areas, surrounding mountainous areas and the central open space, so that the green space can be easily accessible from anywhere in the city.

3. Pleasant residential space of co-existence

The pleasantness of the housing environment can be considered from a qualitative and quantitative perspective. One of the most typical indicators for measuring the pleasantness from a quantitative perspective is the residential density of 300 persons/ha. This is approximately the same as or below the density of Chiba or Dama New Town of Japan in the 1960's, or 300~350 persons/ha. It represents the lowest level of residential density in the country. As for the qualitative perspective, design competitions have been planned so that each housing complex can be developed to have a unique residential feature. The neighborhood parks, green space, and facilities for culture, exercise, welfare and education will be installed while introducing a green corridor that links these facilities.

4. Sustainable transportation and telecommunications system establishment

According to the Master Plan, a public transportation axis will be formed along the ring-shaped structure of the city, and the axis runs along most of the city districts. The purpose of the axis is to secure the efficiency of public transportation, and establish a sustainable environment-friendly transportation system by encouraging people to use their cars less. At the same time, since the aim is to complete a futuristic city, another goal of the construction is to establish a comprehensive information system, so that various types of information can be accessed whenever and wherever in the city. Ultimately, the plan pursues a city where ubiquity is a concept that is felt in daily life.

An exemplary case of the future urban environments

A range of ideas and strategies suggested as basic directions to the MAC construction are the results of consultations and discussions among a number of experts. Therefore, it is expected that the MAC construction will be a model case for both local and overseas cities which aim at a livable urban environment. It will serve as a crucial starting point that will lead the discuss on urban development of the 21st century. Additionally, the city that is formulated through all these procedures will play a crucial role in leading the balanced territorial development and restructuring the centralized one-pole spatial structure of the country. The efforts to come up with innovative and reasonable plans will continue by reflecting more opinions and suggestions of experts in various fields at home and abroad.

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Public Agency Relocation and Innopolis Development in Korea

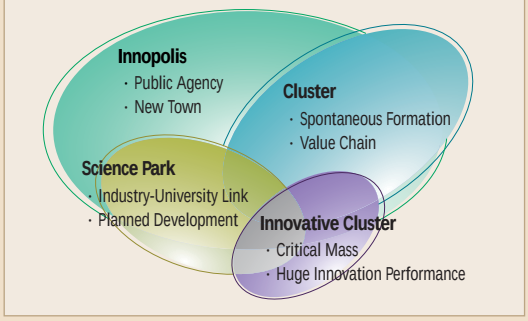
To address the excessive concentration in the capital region and promote balanced development of the territory, the country has recently initiated the plan for relocating public agencies to localities. In accordance, a number of Innopolis are planned to be built in regions which will accommodate the moving pubic organizations. In order for local governments and developers to have the correct understanding of the Innopolis project, and accordingly come up with the plans and start construction, it is necessary to provide them basic directions to the Innopolis development. Here, the basic directions can be divided into the following three categories: drawing up a handbook that includes the details of the Innopolis project. The book, which includes such information as the basic concept of Innopolis and its development directions, is intended to be used to help understand what Innopolis is; analyzing foreign cases of Innopolis such as the Technopolis, Technopole, Science Park, etc.; and planning the guidelines that are required for the Innopolis construction in Korea.

Basic concept of Innopolis

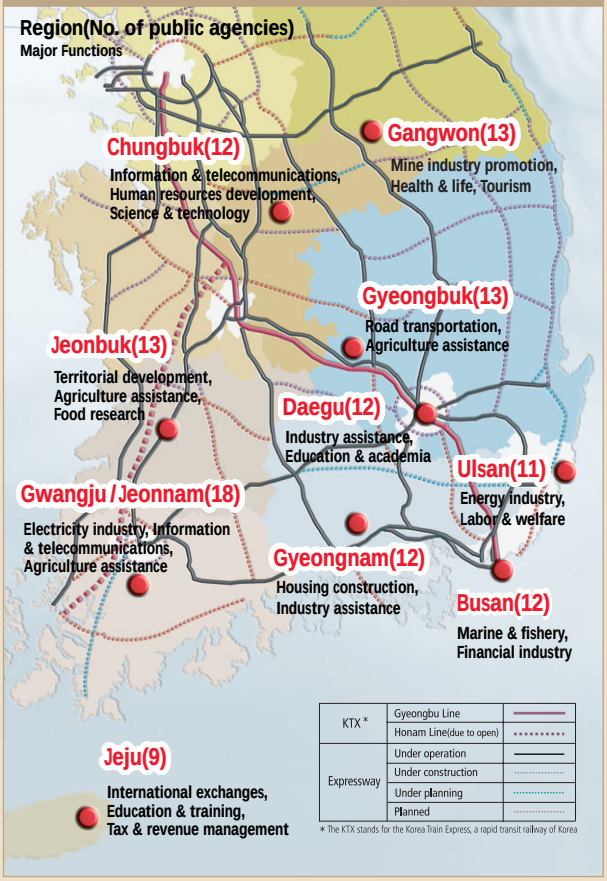
Innopolis means a new town or new district in a town that is to be built in metropolitan cities and provinces so that innovation is created and spread, and that a consequent regional development is promoted through an organic network among enterprises, universities and research institutes that are located in close proximity to each other, with the relocated public agencies working as a positive drive. It is the mixture of a Science Park, Innovative Cluster and New Town.

Ten metropolitan cities and provinces excluding the Capital region, Daejeon Metropolitan City and Chungnam Province, have been selected to host Innopolis. Based on the results of the Innopolis case studies, the size, location, type, function and facilities of the Innopolis have been recommended. The following Innopolis case studies have been referred to for this plan: the relocation of public agencies to localities and the formation of a Science Park; a Cluster formation through New Town development; research-oriented Research Park development; a

Concept of Innopolis



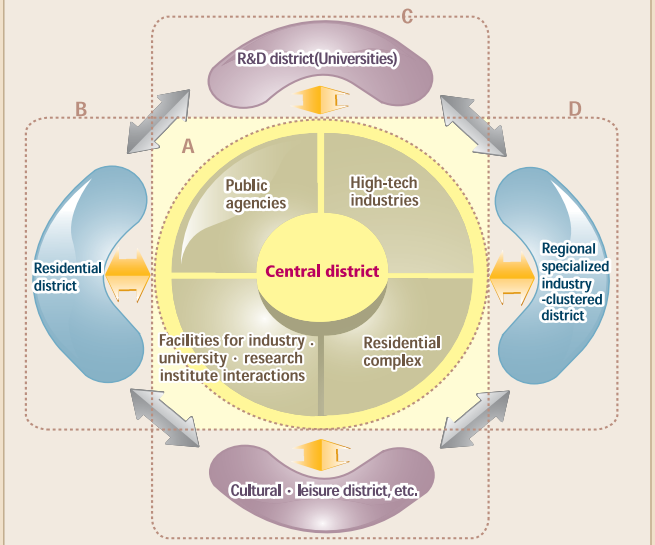
Relocation Plan of Public Agencies



multi-functional Science Park formation; spontaneous Cluster development; and a case of inner-city Cluster formation.

In the Innopolis, while a space of a new hub is created (*growth pole strategy)*, several relevant institutions will accompany the relocating public agencies *(value chain strategy)*. The Innopolis encourages to specialize in a specific industry and function *(specialization strategy)*, and a cluster strategy is recommended where businesses, research institutes, universities and other several related industries are linked with each other after agglomeration. In addition, New Town development strategies and strategies for decentralization and regional industrial specialization aiming at a self-sufficient region, are also included in the Innopolis development.

Spatial Structure of Innopolis



Directions to Innopolis development

The basic directions of the Innopolis development is providing policy assistance for facilitating the relocation of public agencies to localities; creating innovation environment for the main innovation actors of the industries, universities and research institutes; and inducing the growth of both the Innopolis and existing cities. The goal of the first phase Innopolis project is to complete the public agencies relocation by 2012, followed by the second by 2020 and the third by 2030. The Innopolis is categorized into two types: innovation district type and innovation city type, which is sub-divided into a New Town type and new-district-in-a-town type, and the function and scale of the Innopolis are decided upon according to the type.

An Innopolis is composed of several districts: central, R&D, regional specialized industry-clustered, residential, and cultural and leisure district, with each district equipped with the major facilities. However, it is suggested that each district will secure flexibility so that they can meet the needs of the customers and facilitate the cluster formation in the future. When developing the Innopolis, the developmental directions should be suggested sector by sector: land use, central district, industry · academia · research district, residential district, educational environment, environmental conservation, park and green space, public space, and cutting-edge information and telecommunications systems.

Innovative environment creation following Innopolis construction

The development and distribution of the hard infra do not complete Innopolis, which was the case in the industrial complex and New Towns in the past. It is suggested that, for the Innopolis to grow to become a competitive city after the construction, regional innovation capacity has to be strengthened through soft infra such as an innovative environment, expanded Innopolis' function, inducement and linkage among industry · university · research institute for the promotion of a successful Innopolis, business supporting service provision and methods provision for place marketing. In addition, for the continual development of the Innopolis, it has to be well-managed, and for this it is necessary to suggest the goals of the management and management operation. It is also recommended that a special act be established after reviewing the existing legal systems and relevant laws since, for the successful promotion of the Innopolis, legal ground is crucial that will help provide the financial assistance for the construction and management of the Innopolis.

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Plan for Honam High-Speed Railway

The Honam High-Speed Railway (HSR) construction is a major national transportation infrastructure project, which will be linked to the other major transportation axis of the country, or the Gyeongbu HSR. Also, it is a key national project that will support the balanced development of the country and innovative system construction in the Honam region, which will be achieved through the construction of Enterprise Cities and relocation of public agencies, as well as maximize the growth potential of the region. The construction is regarded as necessary and important as it is already included in the comprehensive national territorial plan and national transportation infrastructure network planning.

However, due to the failure in reaching an agreement among regions, the station where the Gyungbu HSR diverges to the Honam region has remained undecided in excess of 10 years, a major obstacle to the establishment of the master plan for the Honam HSR. Accordingly, there has been an urgent need for the selection of the diverging station, which will have to be decided through a reasonable settlement of the regional conflicts; and for the master plan to provide the basic directions to the efficient Honam HSR construction project. The plan will be formulated after calculating the demand for the railway, and conducting the economic and financial feasibility study of the construction by reflecting the changes in the circumstances in the country such as the Multifunctional Administrative City construction.

Previous plan

There have been several attempts to establish the master plan for the Honam HSR, as yet so far. The most recent attempt of the year 2003 had planned a route that begins at Suseo in Seoul, runs along with the Gyeonbu HSR near Hwaseong-si, or Hyangnam, diverges at several stations in the middle at Cheonan, Osong and Daejeon, and passes along Iksan and Gwangju to terminate at Mokpo. The results of the analysis on the demand and economic feasibility of the planned route show that, it is not desirable to construct the HSR for the whole section between Seoul and Mokpo in terms of economic feasibility and funding, since the demand is low due to the comparatively small population in the regions along the route.

Accordingly, the best suggested plan for the construction was to plan the route that would share part of the Gyeongbu HSR while utilizing the existing Honam Railway, and implement the construction by section and by stage. To be specific, during the first stage of the construction, the sections between Suseo, or Seoul, and Hyangnam (44km), and between the diverging station and Iksan (132km maximum) would be newly built by 2015. The second stage would be for the construction of the section between Hyangnam and the diverging station by 2020, with a maximum length of 101.4km. The plan suggested the construction of the section between Iksan and Mokpo be promoted depending on the demand for the railway after the completion of the first stage. The maximum cost for both the first and second stage of the construction, which would vary depending on where was selected as the diverging station, was estimated at 10 trillion, 378.6 billion won, and this was considered to be economically efficient.

Revision of the master plan & construction strategies

The 2003 plan for the Honam HSR construction reviewed was examined again for its demand size and the corresponding business potential after reflecting the changes in social and economic circumstances of the country since that time. The basic reason for the re-examination was the construction plan of the Multifunctional Administrative City in the Chungcheong region along the line, which was expected to cause an increase in the demand. In addition, it was necessary to review the estimation on the demand for the Honam HSR, reflecting the fact that since the partial opening of the Gyeongbu HSR in 2002, the demonstrated demand stood at half of the estimated demand.

Based on the 2003 plan, the route along Suseo, or Seoul, diverging station and Mokpo has been put up for review. After the demand and business potential

of the route were re-examined, it has turned out that, first, if Daejeon is selected as the diverging station, while the total length for the construction is minimized, and the demand is comparatively high with the construction cost remaining little, the economic and financial feasibility is expected to be low (B/C=0.58, R/C=0.66). Secondly, even if the section between Suseo and Hyangnam is built, the section between Gwangmyeong and the diverging station, which the Gyeongbu and Honam HSR will share, requires a total of 171 train runs as of 2045. This is less than the maximum number of the train runs, or 192 times, and there will be 21 extra runs on the railway.

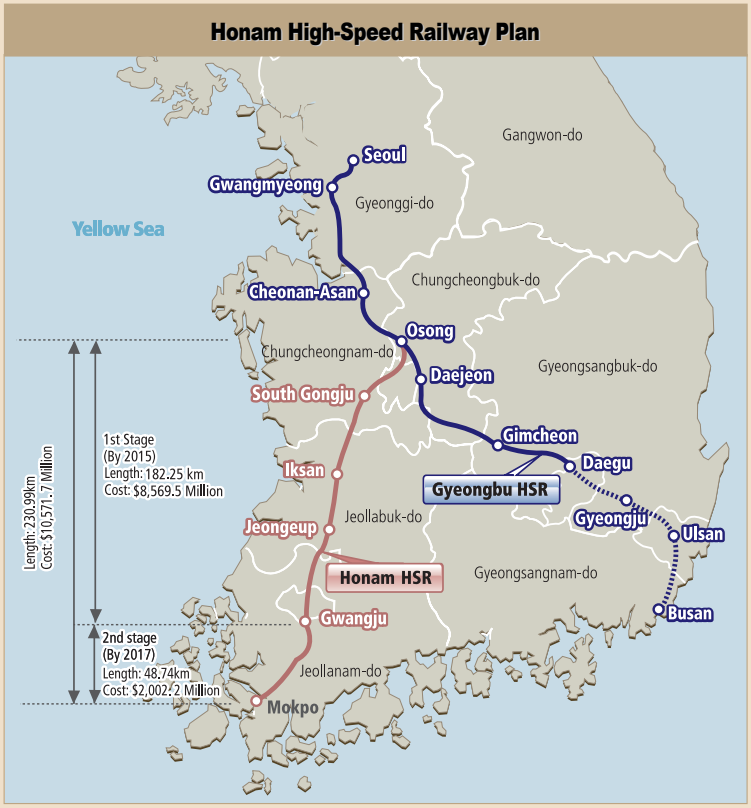
Therefore, based on the analysis, the base of the revision of the plan, and the directions to the master plan establishment were drawn up, the goals of which are to keep the total project cost minimum and to have the effect of the operation felt at an early stage. Finally, it has been decided that the section between the diverging station and Mokpo would be constructed for the Honam HSR project, except for the already reviewed section between Suseo and Hyangnam in the Capital region.

In order to select the diverging station, which had been the obstacle to the plan establishment, it was necessary to secure impartiality and objectivity during the assessment, and acceptance of the assessment results. Accordingly, prior to the assessment, the agreement among local governments was encouraged who were the direct stakeholders of the overall assessment process and assessment framework. They were also allowed to participate in the assessment process so that they could monitor whether the assessment was implemented in an impartial and objective manner.

In the meantime, a committee was constituted by experts recommended by each individual local government and academic associations, which would draw up the criteria for the assessment. After going through a number of discussions, detailed plans and procedures of the assessment criteria and the implementation were concluded upon. The committee selected a total of 5 basic assessment criteria and 19 detailed items for the assessment in the end, and, after having a public opinion poll taken by a professional surveyor, objectively determined the weight to each assessment item. In the end, an assessment panel composed of experts from every field implemented the assessment, choosing Osong in Chungcheongbuk-do as the diverging station.

Details of the Master Plan and expected effect of the project

The best suggested plan for the Honam HSR is to construct the section between Osong and Mokpo stepwise, excluding the section between Suseo and Hyangnam in the Capital region and keeping the construction period minimum. The first phase of the construction is for the section between Osong and Gwangju by 2015, with the second for the section between Gwangju and Mokpo by 2017. While the demand and business potential of the project are not high, it has been decided that the project is necessary



for the development of the Honam region and for the balanced development of the country. According to the assessment of the expected effects, the dissemination effects of the construction on the regional economy are as follows: the production inducement effect is 20.7 trillion won; wage increase effect, 4.2 trillion won; and an employment inducement effect of 172,000 persons. It is estimated that, once operated, the production inducement effect will be 40 billion won per annum depending on the intermediate input, and 29 billion per annum depending on the final demand.

Taking into account the study results, the Honam HSR should be initiated in a way in which the total project cost is kept at a minimum, and adopting investment-efficient methods. In conclusion, it must be proven that the efficiency of the Chulla Line between Iksan and Yeosoo will be improved by opening the Osong and Gwangju section of the Honam HSR as early as possible. Additionally, it will be necessary to demonstrate at an early stage that the travel hours can be reduced between the section of Seoul and Mokpo by one hour and four minutes, from two hours and fifty-eight minutes to one hour and fifty-four minutes including the stops.

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Planned Management of Rural Land Use in Korea

Nowadays, our rural communities are losing vitalities faced with a number of challenges such as the decreases in population, an increasing elderly population, and a growing income disparity between urban and rural families. Moreover, as the local agricultural market is open to foreigners, farming households are expected to lose their competitive edge and inevitably abandon farming or reduce the scale. This will lead to an increase in idle farmland, which will be degraded as time goes by.

If this happens, the demand for converting the idle farmland for other uses is expected to increase, and there will be heightened pressure on cancelling the designation of the agriculture promotion area. When these problems are left unaddressed, the country will have to cope with the degradation of the farmland and an indiscreet development of the rural area at the same time, which is certain to cause a serious inefficiency in the national land use management.

Current status of the rural land use management

Currently, rural land use management is implemented under the Act on Planning and Utilization of National Territory (APUNT), Agricultural Land Law (ALL) and other related laws such as the Rural Maintenance Law (RML). The APUNT enforces a city/county plan establishment. Under the Act, the national territory is categorized into four zoning areas: urban area, management area, agricultural & forest area and natural environment preservation area, with each zoning area regulated for the land use.

The rural land is mostly designated as the agricultural & forest area and management area. The agricultural & forest area accounts for 50.7 percent and management area accounts for 26.5 percent of the national territory as of 2004. The ALL enforces the designation of the agriculture promotion area and restricts the land use and conversion in that area. The RML and other related laws stipulate that a range of rural maintenance plans (RMPs) should be established and projects executed in accordance with the plans.

Problems with rural land use management

However, it has been pointed out that the present system for rural land use management has several problems. Firstly, while spatial planning is after all a matter of land use, the RMPs do not accompany the land use plan. Moreover, the hierarchy between the two plans is not clear, and they are not closely related. Further, the RMPs are complicated and confusing since they have been introduced under several different laws. The planned districts and contents of the plan are overlapping or inconsistent, and the plans are not really about the corresponding development projects.

Secondly, agricultural land is not the only example of the land use found in the rural areas, but, in quite a

few cases, non-agricultural land use is also necessary for settlements, factories, etc. However, the provisions of the APUNT that involve the planned management of rural land use are limited to the designation of the agricultural & forest areas under the city/county management plan.

Third, the Agricultural Land Committee and the concerned mayor and governor issue the confirmation and conduct the deliberation respectively of the application for the agricultural land conversion permission. The criteria for the confirmation and deliberation play the key role in granting the permission. However, in reality, there exist a range of restricted facilities that are not to be permitted in this matter, and accordingly, the scope of the permission is limited. As a result, regulations for activity restriction, criteria for confirmation and deliberation, and restricted facilities all influence the permission, which causes significant confusion.

Fourth, the average size of agricultural land conversion between the years 2000 and 2004, is small, or 0.2ha per case. However, all the existing institutions of the agricultural land conversion system, and the district-based planning system and development permission system under the APUNT are not effective enough to manage a small-sized development in a planned and collective manner. Therefore, it is very likely that this will lead to an indiscreet development of the rural area resulting from small scale agricultural land conversion in every corner of the territory.

Lastly, the area of idle farmland is estimated at more than 190,000ha across the country, and the question of how the land should be utilized has emerged as a crucial policy issue. However, under the current system, the maintenance project for marginal farmland districts is not clearly distinguished from the development project for individual marginal farmland. Other drawbacks of the present system are that the designated size of the marginal farmland maintenance district is unreasonable, and that it lacks the procedures and guidelines for the project operation.

Suggestions for the planned management of rural land use

In order to manage rural land use in a planned manner, the following suggestions have been provided that are to improve the current system. Firstly, the plans for rural land use have to be consolidated by integrating rural land use plans and RMPs. To be specific, the central government establishes the Comprehensive Rural Maintenance Plan at the national level with local governments responsible for Rural Maintenance Master Plan. The RMP, which is the integration of the rural land use plans and a range of RMPs, is formulated at the city and county level with diverse maintenance projects following the plans implemented at the town and township level. Coupled with this, the rural plans must be linked with the National Territorial Planning system of the country.

Secondly, in order to comprehensively and systematically manage rural land use, which is being promoted by diverse developers on a small scale, the zoning classification system for rural land use must be revamped. For the restructuring, both the agricultural and non-agricultural land use should be considered. Revamped zoning classification may be basic enough to provide methods to group small-scale agricultural land conversion cases and accommodate the multiple functions of the agricultural land.

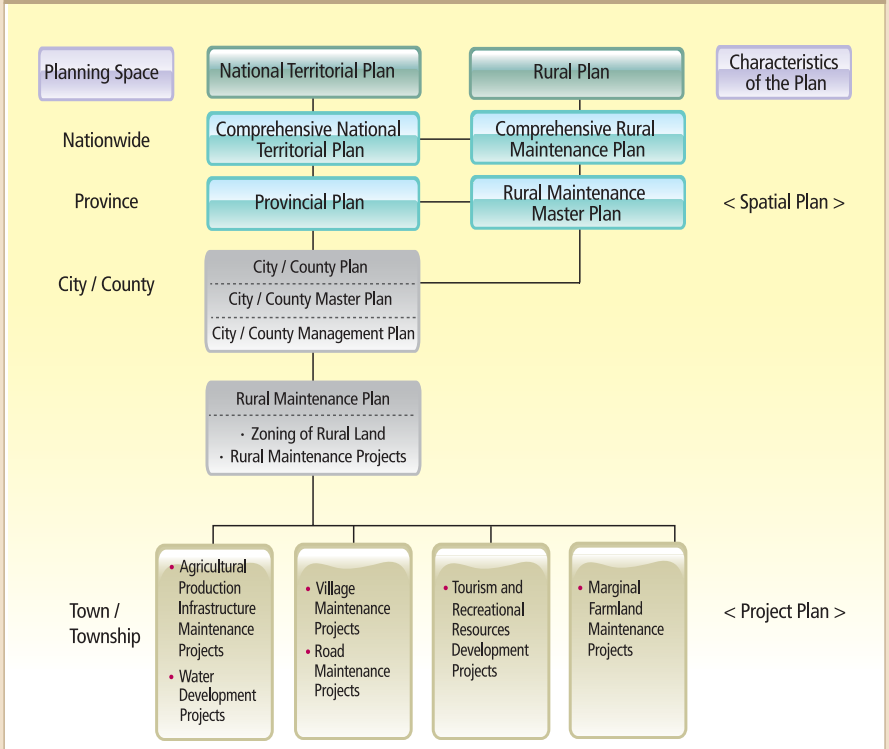
Third, in order to secure the effectiveness of the restructured planning system, the activity restriction should be set for each individual zoning. In addition to the basic activity restriction that is applicable to the agricultural & forest area, the productive man-

Zoning of the National Territory in Korea

year / zoning	Jan. 1994		Dec. 2004	
	Area (㎢)	%	Area (㎢)	%
Total	99,313.66	100.0	100,098.23	100.0
Urban area	13,708.81	13.8	15,721.40	15.7
Management area	28,005.49	28.2	26,537.16	26.5
Agricultural & forest area	50,634.48	51.0	50,717.93	50.7
Natural environment preservation area	6,964.88	7.0	7,121.74	7.1

Source : Ministry of Construction & Transportation, 2005 Annual Report on Planning and Use of National Territory

Proposal for the Rural Spatial Planning System Reform



agement area and productive green area under the APUNT, a more detailed activity restriction regulation should be provided concerning the zoning classification for the rural land use.

Fourth, agricultural land conversion should be regulated exclusively by the activity restriction and deliberation criteria. The existing restricted facilities that are not to be permitted should be included in the activity restriction or deliberation criteria. Then, the conversion will be permitted after reviewing the purpose, size, regional conditions, conservation value, etc., and as long as it does not go against each item of the activity restriction.

Lastly, it is necessary to clearly distinguish the maintenance project for marginal farmland districts from the development project for individual marginal farmlands, and have the former take care of medium to large scale projects and the latter specialize in small-sized projects. In addition, the guidelines for activating development projects for marginal farmlands, which is used as a kind of supplementary material, should be rearranged to be used as an executive ordinance.

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Integrated Development Strategies for the Gaeseong Industrial Complex

After the South-North Korea Summit in June 2000, the two Koreas entered full scale development for the Gaeseong Industrial Complex (GIC), which covers some 20 million pyeong, or 66.1km^2 with its surrounding cities included. The GIC is a venue for the experiment of the inter-Korean economic cooperation, and further, a bridgehead for the cooperation to prepare for the future economic integration of South and North Korea.

Development strategies for a successful GIC should be established from a macro-perspective, which will enhance long-term spatial integration on the Korean peninsula. In other words, it is necessary to sincerely consider the way the inter-Korean cooperation is promoted for the development of the GIC, not only for the sake of the GIC itself, but for that of the Korean peninsula. In this respect, at the first stage of the development, the GIC project must be linked with the

development of the Capital region of South Korea. Next, a stepwise linkage of the GIC with the regional development of North Korea should be promoted.

To achieve the goal of successful GIC development, both the micro-aspect, or the success of the complex itself, and macro-aspect, or the linkage with the surrounding regions must be considered at the same time. In particular, a comprehensive approach is crucial to the development which allows, through an active utilization of the geographical advantage of the complex, the activation of the economic cooperation between the two Koreas and a balanced development of the Korean peninsula. In accordance, systematic strategies must be implemented for an integrated development of the GIC and the Capital region, and for that of the GIC and the surrounding area in Hwanghae Province of North Korea.

Development potential of the GIC and its surrounding area

The Gaeseong area has geographical advantages as an economic cooperation pole, where South Korea's capital and technology can be combined with the labor force of North Korea. According to a survey by the Korea Research Institute for Human Settlements among local companies on the strengths of the GIC, the cheap and quality labor force was ranked first, or accounted for 65%, with the proximity to the Capital region coming in second, or accounting for 30%.

The population of North Korea is distributed mainly to Pyeongyang, South Pyeonan Province, and South and North Hamgyeong Province. This makes it inevitable to bring in the labor force from a distance if a large scale industrial complex is built in the Gaeseong region. This is expected to raise another problem of housing to be provided for the relocated workers. In addition, the region is not equipped with the infrastructure including water and electricity, which can be an obstacle to developing a large scale industrial complex in the region. On the other hand, Gaeseong and the northwestern area of Gyeonggi Province have abundant historical and cultural resources from Goryeo and Chosun Dynasty.

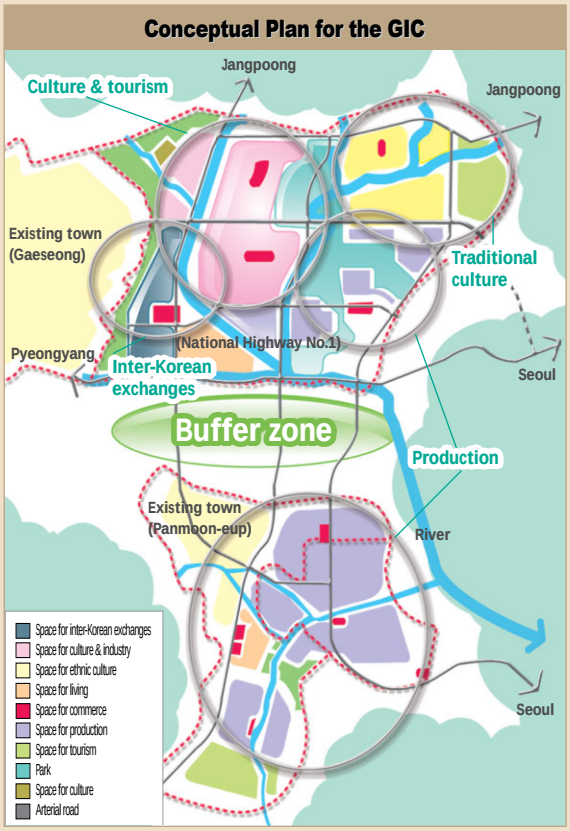
Integrated development strategies for the GIC and its surrounding regions

Considering the historical, political, economic and socio-cultural characteristics and the potential of the Gaeseong region, the GIC should not only be developed as manufacturing base, but as a hub of historical tourism and inter-Korean cooperation coexisting with manufacturing. The results of the survey among North Korea experts show that the GIC must be developed to become a multifunctional industrial complex, such as the manufacturing and logistics complex (43%) and manufacturing and tourism complex (31%), rather than an industrial complex focusing only on manufacturing (25%).

Also, considering the development potential, development demand, conditions for development and long-term vision of the GIC, the complex should be raised as a base for manufacturing labor intensive products targeting the South Korean market in the short-term. However, in the mid to long-term, a technology intensive cutting-edge industry should be promoted in the complex, dividing the role with the Capital region of South Korea.

In order to develop the GIC and its surrounding areas in the west coastal area of the two Koreas, the industrial linkage between Gaeseong and the Paju-Incheon region should be initiated, most of all. As for the infrastructure, it is necessary to complete the multi-line railway project for the Gyeongui Line between Gaeseong and Seoul as soon as possible, and to utilize them for tourism. In the long term, integration will have to be expanded to include the Hwanghae region which is based on the linkage

Location of the Gaeseong Industrial Complex (GIC)



among Gaeseong, Paju and Seoul · Incheon axis. To achieve these goals, the industrial linkage between Gaeseong and South Hwanghae Province must be promoted, while the raw and subsidiary materials are brought in to the GIC from Sareewon and Songrim.

Policy issues for the integrated development

Investment in the manufacturing and tourism in the GIC is considered to have a certain level of business potential, and therefore, it is necessary to finance the complex, attracting private investments such as foreign investment and project finance. As for the infrastructure development projects, which are strategically important for the integrated development of the GIC and the surrounding areas, it is required to induce private investment in the form in which the government guarantees a certain level of profits. In addition, an institutional reform must be implemented also, concerning the passage, logistics, labor management, streamlining of the administration system, and stable investment.

On the other hand, efforts must be made to address political issues such as strategic materials. In order to consistently maintain the some 200,000 North Korean workers within the complex, a technology education center must be established at an early stage, thus providing to businesses enough of a number of human resources with high-level skills. As for the housing of the North Korean workers, rural housing, for which the resources and labor force of North Korea can be utilized as much as possible, or a company dormitory can be an option. Or, a private company that promotes tourism around Gaeseong may construct a certain ratio of housing complexes for the North Korean workers and rent them for a long period, in return for the business right acquired by the company.

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Strategies for the Formation of the East Coast Rim Economic Zone

The Fourth Comprehensive National Territorial Plan of Korea sets the east coastal area as one of the open territorial axes of the country, an expression of the government's will to develop the area as an advance base for the South and North Korean exchange and the cooperative development of Northeast Asia. However, the political and economic situations in the East Coast Rim (ECR) area prevent an economic bloc from being formed, and, while the local governments along the east coast area have been promoting international exchanges and cooperation, fruitful results have not yet been rendered, due to the economic vulnerability in the area and discrepancy of interest among different stakeholders.

In this context, such factors as the development plan for the three northeastern provinces of China, construction of the facilities for energy transportation in the far eastern regions of Russia, and North Korea's move to adopt an open-door policy are expected to trigger changes in the security and economic environ-

ment in the ECR area. This raises the need for strategies to accommodate this change and expand the role of the east coastal regions along with those to achieve substantial outcomes from the fields that have potential for cooperation among the local governments

Changes in the Northeast Asia region

The countries in the ECR area still have their borders closed for the most part, and only a restricted level of trade and human exchanges are allowed in the area. However, in the long term, once a full scale cooperation is implemented among countries in the area surrounding the energy community or transportation system establishment, the ECR area will take a leading role for regional collaboration. In particular, such moves as the development of the three northeastern provinces of China and the transformation of Siberia and the Far East area into an energy export base will provide a positive drive for international economic cooperation in the ECR area.

Four potential scenarios can be envisioned for political and economic changes in Northeast Asia as shown in the table below. However, of the four, the practical choice for the ECR is to build, in the short to mid-term, a cooperative network around the regions close to the ECR area where the market is open, while keeping in mind the long-term scenario of the full scale opening of the market and development focusing on the regional public goods.

To be specific, first of all, the development of the three northeastern provinces of China will create the demand for industrial intermediate goods, which will increase the import and export logistics for intermediate and final goods, followed by a greater chance for part of them to use the trade route in the ECR area.

Next, if the Siberia oil pipe is linked to Perepoznaya, it is highly likely that a cluster of oil-related industries will be formed in the hub ports in the ECR area including Ulsan. Lastly, being stimulated with these moves, the chance for North Korea to open its market will grow, and in that case, the cities such as Najin, Sunbong and Wonsan along the east coast of North Korea can be revived as trade ports of the ECR area.

Development prospect for the ECR area

The ECR area is abundant in natural resources such as energy, minerals and agricultural and fishery products. Therefore, if the transportation infrastructure construction and trade barriers removal across the borders are brought earlier, it is possible for the area to play a role as the supply base for raw materials and logistics hub. Also, ecological and cultural tourism resources with regional characteristics are spread across the area; therefore, there exists considerable potential to develop tourism.

As for the industry, due to a fragile vulnerable economic base and incapability to finish the production within the region, difficulties exist for the area to develop without being linked to its surrounding areas. However, once a full-scale development is launched for the neighboring regions, including the three northeastern provinces of China, and the resource exploitation, production, transportation and trade increase in the area, it is likely that the area will serve as a hub for the resource processing and logistics industry.

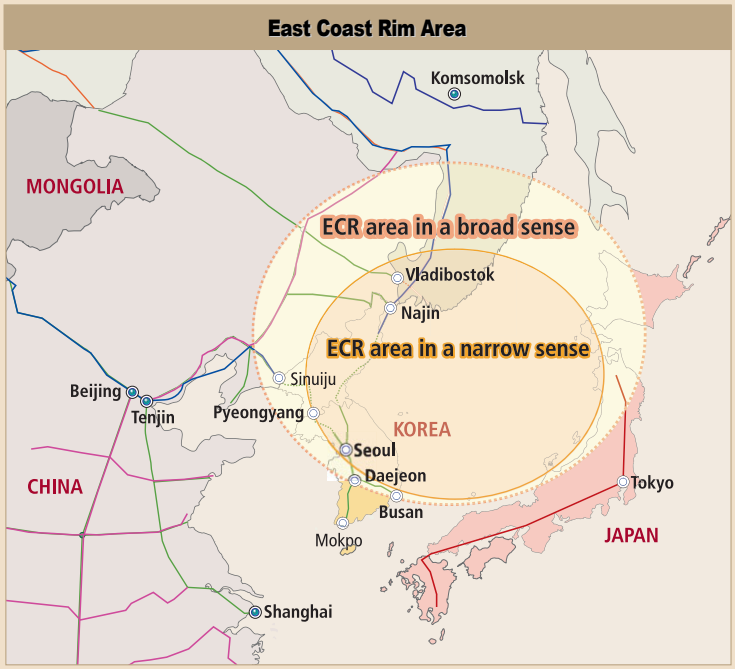
Status of the regional cooperation in the ECR area

The interactions and cooperation among the local governments have been promoted with the intent to enhance friendships and induce visitors and partial investment. Despite the leading efforts of some of the regional authorities, including Gangwon and North Gyeongsang Province of Korea and Nikata Prefecture of Japan, several factors are preventing a substantial economic bloc from being established in the area: the lack of openness of the region, discrepancy of interest among the local governments and their inability to accommodate the cooperation.

However, these efforts are considered to be encour-

Potential Scenarios for Political and Economic Changes in Northeast Asia

	Borders partially open	Borders totally open
Policy leading	Development focused on major regions that are open	Development focused on regional public goods
Market leading	Trade-oriented development	Trade/investment/technology exchange



aging in that they will bring about consensus for the interactions and cooperation in the ECR area and create the institutional basis. In order to continue and expand the base for exchanges and cooperation, it is crucial to link the ECR area with its neighboring regions. In addition, to address the discrepancy of interest among the coastal regions in the area, it is necessary to systematically provide information required for each other, and establish and implement concrete programs in the fields of common interest.

Base creation and strategies for the ECR economic zone establishment

The economic cooperation in the area should be promoted in a selective and strategic manner, considering the security environment in the region, the vulnerable economic base and limited capacity of local autonomous bodies. The strategic approaches mean firstly, multi-level approaches that incorporate efforts at the national and citizen level into those of local governments; secondly, promotion of a small scale leading project in the promising field; third, integration of different cross-border cooperative bodies formed at the local government level; and lastly, utilization of strategic concepts and tools such as the 'Free Economic Zone Network'.

The short to mid-term strategies that aim at the regional integration are to designate Free Economic Zones in the coastal region, and by establishing a network among them, activate exchanges and cooperation. Next, for expanded human exchanges in the ECR area, a visa-exemption system must be introduced for group tours while activating tourism that links multiple countries as well as that for a single nation. Since it takes time to build an axis for logistics and energy transportation that requires cross-border consultation over an extended period, it is necessary that the concerned local governments attract an industrial cluster that is related to the transportation axes construction in part of the ECR area. In the mid to long-term, an Asian highway should be built that will connect Busan, North Korea, China and Russia, by constructing the longitudinal highway along the east coast from Busan.

Top priority cooperative projects

Projects that are suggestible as leading projects for utilizing the regional potential and improving the economic cooperation in the ECR area, are those that have a high level of overlap among sectors with a significant ripple effect, and those that can be promoted over a short period. It is desirable to promote broad-area international cooperation through the associated body of concerned local governments.

By building a partnership among relevant organizations, central government and private sector by project, the implementation capacity for project promotion should be enhanced. The examples of the leading cooperative projects are the expansion of the ferry route among ports in the ECR area, partnership building in the fisheries, visa-exemption for tourists in group to the ECR area, and alternative energy development projects in the east coast region.

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International Cooperation

Officials from Japan Benchmark Korea's SEA Experience

The Head of the Strategic Environmental Assessment (SEA) team of Japan's Ministry of Environment visited KRIHS on March 8, 2006. The purpose of the visit was to have a chance to benchmark Korea's policy on the SEA, including the SEA system, assessment methods and experiences in the application of the system in Korea.

Visit of Delegation from Cambodia

Cambodian officials from the Ministry of Land Management, Urban Planning and Construction, who were involved in the GIS, visited the GIS Center of KRIHS on March 27, 2006. During the visit, three delegates, including Lim Voan, Director General of the Cadastral Register and GIS Bureau showed great interest in Korea's GIS policies and Land Management Information System, and expected continual exchanges and technical assistance from Korea.

Urban Development and Management Training Program for Iraqi Officials

From May 20 to June 3, 2006, KRIHS hosted a special training program for Iraqi officials on urban development and management. Conceived to contribute to the urban and regional development of Iraq by sharing Korea's experience in territorial development, the program provided several professional lectures on such topics as housing provision for low-income households and urban transportation systems, followed by study visits to relevant institutions.

A three-day field trip to major industrial and historical sites of the country was also included in the program, which provided a chance to experience and understand the current status of Korea's economic development and culture.

International Seminars on 'Livable City Making in Korea' and 'Innovation-driven City Development Strategies'

The Center for Urban Innovation at KRIHS held a couple of international seminars in June 2006: the 'Livable City Making in Korea,' on June 15-16 at the 63 City conference hall in Seoul, and 'Innovation-driven City Development Strategies,' on June 20-21, in the conference hall at Lotte Hotel in Seoul.

The former was conceived, aiming at implementing the Livable City making strategies in the country, to learn lessons from experiences of other countries whose urban policies include Livable City making in their basic paradigms. Four speakers from the U.S., U.K., and Japan, presented case studies of their countries, and a case study of Korea was also presented in the seminar followed by discussions among experts. The audience was comprised of both central and local government officials, academic circles, research institutes, press and the general public.

The latter, organized by KRIHS and sponsored by the Ministry of Construction and Transportation, Korea National Housing Corporation and Korea Land Corporation, was envisioned as an opportunity to refer to some successful examples of the Innovation-driven City around the world, thus helping to set the policy directions to the Innovation City construction in Korea, which is scheduled to commence as early as in 2008. Several case studies of the U.S., U.K., Italy, Sweden and Malaysia were presented by six speakers, and heated discussions followed by experts from every field during the two-day seminar. Many people from central and local governments, universities, research circles, private businesses, along with the general public appeared and showed interest in the seminar.

NEWS & ANNOUNCEMENTS

The Land and Housing Research Division of KRIHS held the 'International Conference on Housing Service and Housing Indicators' on December 9, 2005 at KRIHS hall, with six professionals from five countries of Korea, the U.S., U.K., Japan and the Netherlands attending. The housing service and housing welfare level of each country were presented, and the housing service indicators among nations were compared in the conference.

The 15th session of Co-representatives of the 21st Century Forum for Human Settlements was held on December 28, 2005 at the JW Marriott Hotel, adopting the 'Livable Territory under Balanced Development' its catch phrase for 2006. The catch phrase was the theme of the Forum's workshop convened in CG Construction Management Training Center in Cheongju, Chungbuk Province, on June 29 to 30, 2006, with some 90 experts in territorial development participating.

The joint research team for the Multifunctional Administrative City (MAC) construction comprising the KRIHS staff and others, held a total of 15 open seminars from January 25 to March 30, presenting and explaining to experts the details of the construction master plan that have been suggested so far for each individual sector of the plan: the city future image, government agency arrangement in the MAC, housing and infrastructure planning, methods for actualizing the cutting-edge information city, transportation planning, etc. Officials from relevant government bodies including the MAC Construction Agency, and other experts attended the seminars, and the proposals and opinions at the seminars will be reflected on the MAC construction master plan.

A workshop for developing indicators for the balanced national development and improving the system for the balanced development impact assessment was held on February 17-18, 2006, at Bogwang Phoenix Park in Pyeongchang-si. Eighteen members of the task force of KRIHS and 8 officials from the Ministry of Planning and Budget gathered for the workshop to discuss the methods for developing a model for assessing the ripple effect of regional investment and plan this year's research schedule of KRIHS.

The seminar of the 'Efficient urban flood management and the institutional reform', organized by KRIHS was held on June 15, 2006 at KRIHS Hall. With government workers of both central and local authorities and experts along with the general public attending, the seminar covered the topics of urban inundation prevention arising from the climate change and urbanization, and institutional reform suggestions.

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Korea Research Institute for Human Settlements (KRIHS) is a non-profit research institute established in 1978. It specializes in the fields of territorial planning, housing and land policies, transportation, regional development, urban design, environment and construction economy.
KRIHS seeks to improve knowledge and understanding of the conditions and problems of the nation's resources and their interactions with people, to assist the government in formulating long-range development plans and make policy recommendations on related matters, to collaborate with the international research community in solving theoretical and practical problems concerning human settlement issues and planning, and to provide research expertise and consulting services along with training programs for foreign governments and institutions.

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