

SPACE & ENVIRONMENT

August 2011, Vol. 44

The Vision and Strategies for the West Coast Region of the Korean Peninsula	1
National Territory Management towards Waterfront Area	4
Scheme for Consolidating Linkage between Housing and Transportation Policies	7
Development Plan for New Town Project in Rural Areas	12
KRIHS' International Collaboration	15
News & Announcements	18

SPACE & ENVIRONMENT is primarily intended to help foreign experts and professionals in relevant fields understand overall present situations of spatial planning and policy of Korea, and published bimonthly by KRIHS.

KRIHS is a government-sponsored research institute founded in 1978 to carry out research on territorial planning and policies of Korea.

The Vision and Strategies for the West Coast Region of the Korean Peninsula

As global political and economic developments have evolved over the past half-century, globalization and regionalization have triggered a paradigm shift in domestic policies. As a result, competitiveness among cities has become far more important than among countries. The importance of cross-border cooperation, e.g., cooperative regional development between countries, is more crucial than ever before.

Geo-economically, developing the West Coast region is ever more significant for the Korean Peninsula driven by the rapid growth of the Chinese economy and its increasing economic collaboration with North Korea and South Korea. That means that the development axis that served as Korea's economic growth is moving steadily toward the West Coast region.

With the assumption of continuing positive changes in Northeast Asia, comprehensive strategies and development priorities for developing the West Coast region based on cross-border cooperation will be presented in this article. Also potential development strategies of the West Coast region from the perspective of the relationship with North Korea and Northeast Asia will be analyzed.

Opportunities and Challenges

The West Coast region is located in the vicinity of the Yangtze River trade zone and the Pan-Bohai free trade zone, two of the largest economic zones in Northeast Asia. The region is a mere 90-minute flight from most major Chinese cities including Shanghai, Beijing and Tenjin. Also, Incheon and Pyeongtaek ports enable the region to efficiently access major ports in eastern China.

However, security problems are a key setback. As exemplified by North Korea's sinking of South Korea's naval ship Cheonan in March last year and its shelling last November of the island of Yeonpyeong, the West Coast region is the site of increasingly tense military confrontation between the North and the South.

The Northeastern region around China is emerging as a strong economic bloc, and this provides a big opportunity for Korea's West Coast region to further develop. When combined, the total population of Korea, China and Japan reaches 1.5 billion, creating a mega consumer base with fast economic growth. This combined market expansion in Northeast Asia provides a golden opportunity for companies in these countries to achieve economy of scale in terms of products.

According to a survey of experts conducted in October 2010, 67% of respondents said that the rising Chinese economy would provide a big opportunity for the West Coast region in Korea. At the same time, however, there are a number of negative factors in the region. The three pivotal nations in the region, China, Japan and Korea, are at odds with each other over issues such as sovereignty over the Diaoyu or Senkaku Islands between China and Japan, and the distortion of history. These problems all pose a threat to the development of the West Coast region. But of all, the biggest threat to the Korean Peninsula is North Korea.

Development Direction of Korea's West Coast Region

In a KRIHS preliminary study conducted in 2009, a model for a "Network Hub Korea" was presented. It put forth a vision of the Korean Peninsula as a leader of exchange and convergence in East Asia. It is from this vision that the future development of the West Coast region should be explored. Based on research analyzing the region's potential, its key development directions are as follows. Firstly, the West Coast region of both Koreas should be gradually integrated, and at the same time its linkage with neighboring countries should be strengthened. Secondly, an economic gateway to the Korean Peninsula should be built to encourage exchanges between the continent and the ocean. Thirdly, an industrial development corridor in the West Coast should be built in order to prepare for a unified Korean Peninsula. Fourthly, social networks between the Korean Peninsula and China should be strengthened to pursue joint development of Korea's West Coast region and Northeast Asia.

When considering the overall development landscape in the Korean Peninsula and the



NEA Gateway : Northeast Asia Gateway

development direction of the West Coast region, it is reasonable to form a spatial development structure as follows: the Pan Gyeonggi-Bay zone, centered on Seoul and Incheon, should be centered in the West Coast region with Saemangeum, Mokpo and Muan to the south, and Nampo, Pyongyang and Sinuiju to the north, making these cities gateways to the West Coast region. Then they should be linked with highways and railways, establishing spatial development structure to connect with other gateways and infrastructure corridors.

Strategies for Developing the West Coast Region

Fostering the Pan Gyeonggi-Bay Free Economic Zone centered in the metropolitan area

To strengthen competitiveness of the Korean Peninsula and bolster inter-Korean economic integration, the competitiveness of the metropolitan areas centered around Seoul should be improved. To this end, we envision a Pan-Gyeonggi-Bay Free Economic Zone encompassing the capital city of Seoul, Gyeonggi province, and some parts of the

Hwanghae province in North Korea. To make the Pan Gyeonggi-Bay Free Economic Zone successful, gradual development approaches are required: inter-Korean industrial clusters should be first formulated within the zone. They are then connected to comprehensive logistic networks established between China and the Pan Gyeonggi-Bay Economic Zone.

Developing free economic zones covering Sinuiju and Nampo

Unlike the existing trade free zones designed to simply secure investment, this study envisions a Northeast Asia Free Economic Zone that takes a different approach. It would be a special zone focusing on international cooperation, serving ‘small and common markets’ of major countries including China, Japan, Korea, Russia and the U.S. For example, a Sinuiju Special Zone would go further to link with Dandong, China, and eventually be developed into partnerships with the West Coast regions (inter-Korean cooperation), and the Pan-Bohai Free Economic Zone (China - North Korea cooperation).

Joint development of the Aplok river basin as a cross-border cooperation zone

The Aplok river basin has significant potential for future cooperation between China and the Korea Peninsula in such fields as heavy industry, infrastructure, the environment and energy resources. Thus, the Aplok river basin, beyond an internationally shared river, should be developed as a pilot cooperative zone between the Korean Peninsula and China. In this process, it is advisable to benchmark the case of the Greater Mekong Sub-region Program jointly developed by China and Myanmar.

Establishing inter-Korean integration transportation and logistics networks in the West Coast region

To maximize the development potential of the West Coast region, inter-Korean integration transportation and logistics networks should be created. Rail should be first built to systemize transportation and logistics that serve the inter-Korea and Northeast Asia routes. More specifically, the section of the

Gyeongui Railroad connecting Seoul with Gaeseong and Pyongyang should be modernized. To prepare for a possible expansion of inter-Korean trade volume, repairing and expansion of highways should be considered. Then, railways connecting Pyongyang and Sinuiju should be modernized and new highways built. In addition, railways need to be converted into double-track systems in the mid- to longer term.

Establishing an integrated transportation and logistics network in the Pan-Yellow Sea area

In order for the West Coast to lead exchange and cooperation with the Pan-Yellow Sea economic zone, integrated international logistic networks should be built. The Yellow Sea, a landlocked sea between the Korean Peninsula and China, needs to be collaboratively and effectively managed by the Koreas and China in the highest way. Transportation modes, especially the train-ferry, should be developed.

An analysis of the expected effects on the economy created from building infrastructure based on the above-mentioned development schemes was made. With an investment of about 5.3 trillion won during the first phase from 2011 to 2020, it is predicted that around 13 trillion won in total product inducement will be generated during construction : 7 trillion won and 6 trillion won in South Korea and North Korea, respectively. When investing another 6 trillion won during the second phase from 2021 to 2030, the economic effect from construction investment is predicted to be even greater than the first phase, at 14.8 trillion won: 4.1 trillion won for South Korea and 10.7 trillion won North Korea each in economic spill-over effects.

An International Cooperation to Realize the Development Scheme of the West Coast

To develop the development scheme of the West Coast region, a two-track approach was proposed in pursuing international cooperation. One approach is to adopt a “Top-Down” scheme in which thorny issues affecting the Korean Peninsula are resolved within the framework of multilateral international cooperation. The other one is a “Bottom-Up” approach, based on inter-Korean cooperation, in which the development schemes are developed into

a framework to establish multilateral international cooperation. The most realistic measure is to focus on the Pan-Yellow Sea region through cooperation between Korea, China and Japan. Beside an institutionalized effort is needed to form “the Pan Yellow Sea Economic Cooperative Committee” (tentatively named), a 3 plus 1 mechanism involving China, Japan and South Korea, plus North Korea.

Using both the top-down and bottom-up

approaches, a Joint Development of the Aplok River is proposed from the environment management perspective.

Lee Sang-jun (sjlee@krihs.re.kr)

Chung Il-ho (ichung@krihs.re.kr)

Kwon Young-sub (yskwon@krihs.re.kr)

Ahn Hong-ki (hkahn@krihs.re.kr)

Seo Min-ho(mhseo@krihs.re.kr)

National Territory Management towards Waterfront Area

Paradigm Shift Centered on the Waterfront Area

The scope of activities for Korean city dwellers has been extremely limited in terms of utilization of the waterfront area due to inundations caused by flood. The waterfront area has been viewed as a place to be observed from far away, and spaces adjacent to the waterfront were mostly used for natural land preservation rather than urban use. Activities centered on the waterfront area have had to be established in a severely limited manner. Note, however, that waterfront areas typically have high potential for development, as seen in Europe and the U.S., and it has played a role in increasing quality of life.

Social interest in a project seeking to form waterfront areas districts linked with the four-river

project is gradually increasing. The project aims at systematically planning and developing the areas around national rivers and preventing wasteful development, under the Special Act on Waterfront Land Use. In particular, the project is designed to prevent small-scale, lot-centered, unsustainable development around national rivers with high development potential and to encourage the systematic management of the surrounding areas. It intends to seek a new paradigm on the waterfront and to prepare for a turning point. Furthermore, the project seeks to create a comprehensive access system for the waterfront area, encourage civic use of the waterfront, and promote an environmentally and socially robust city.

The waterfront area is faced with the demands of contemporary users in its role as an important amenity.

Figure 1: Problems and Features of Korea's Waterfront Area Formation



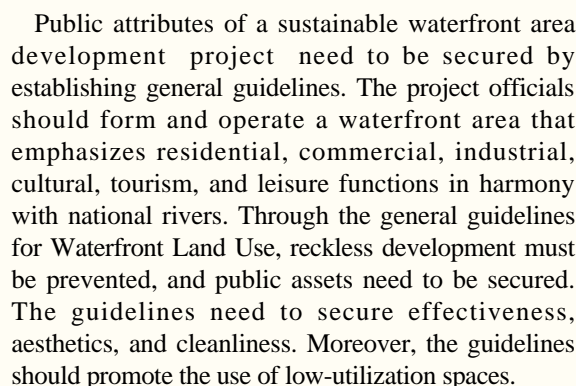
Waterfront area severed by embankment road



City center linked with the waterfront area severed by railway site

Eco-Management of Waterfront Area

In addition, the impermeable areas resulting from waterfront area development should avoid any links with sewers or rivers. Most profits of the waterfront area development (90%) should be collected by the government and re-injected into securing water supplies to cope with climate change, and into river-related construction and maintenance/repair to increase protection from floods.



Cooperation between the central and local governments is vital. The stimulation of regional and local neighborhoods should be one of the main purposes of the project. It should be used as a means to restore declining provincial cities. Along with the cooperative system, ecosystem restoration should be encouraged, and collaboration with green growth policy projects should arise through local residents' active participation.

Category	Implementation Direction by Field	Remarks
Main purpose	<ul style="list-style-type: none"> • To prevent the unplanned development of the waterfront area and encourage eco-use • To prepare cooperative programs to cope actively with and creat waterfront area water management 	
Composition system	• Water environment planning considering the river	Five factors for waterfront area formation plan ① Waterfront activities ② Land use ③ Landscape formation ④ Transportation system ⑤ Environmental preservation
	• Ecosystem space formation plan to induce environmental protection	
	• Spatial plan for waterfront area in harmony with rivers	
	• Landscape plan in harmony with waterfront environment	
	• Transportation plan of waterfront area where waterfront use is convenient	

Category	Implementation Direction by Field	Remarks
Main purpose	<ul style="list-style-type: none"> ・ To prevent the unplanned development of the waterfront area and encourage eco-use ・ To prepare cooperative programs to cope actively with and creat waterfront area water management 	
Composition system	・ Water environment planning considering the river	Five factors for waterfront area formation plan ① Waterfront activities ② Land use ③ Landscape formation ④ Transportation system ⑤ Environmental preservation
	・ Ecosystem space formation plan to induce environmental protection	
	・ Spatial plan for waterfront area in harmony with rivers	
	・ Landscape plan in harmony with waterfront environment	
	・ Transportation plan of waterfront area where waterfront use is convenient	

Figure 3: Cases of City Restoration for the Waterfront Area



Dusseldorf, Germany (left) and Lyon Confluence, France (right)

Five Principles for Managing Waterfront Areas

Securing the sustainability of a waterfront land formation project requires the following five principles:

First, use low-impact development techniques to minimize impacts on the existing water system, i.e., reduce the volume and speed of storm water outflow and minimize water pollution as much as possible. Likewise, minimize river flux through the water circulation system. To reduce the direct discharge of rainfall, build permeable pavements and non-point source pollution reduction facilities; secure a natural drainage system linked with initial-stage rainfall storage facilities, and build wetlands for water quality management, reduction of flood impacts, and recycling of rainfall. Manage rainfall through storage or permeable management facilities, with rain penetration facilities recommended to minimize the underground water level change before and after development.

Second, design the ecosystem so as to induce environmental preservation. The waterfront ecosystem's biological habitat should be secured, and should be armed with core, buffer, and passage areas as biological habitat spaces. Biodiversity also needs to be encouraged. In cooperation with residents, form waterfront green space by researching and analyzing waterfront transition zones and waterfront ecology. Create land preservation plans reflecting the historical, cultural, and ecological characteristics.

Third, encourage land use and spatial plans for river recreation. To do so, secure accessibility using a

waterfront area. In the waterfront area, roads should not be built. When a road is unavoidable, pedestrian accessibility needs to be improved. When there is restriction in accessibility because of the waterfront area's separation from the river, build linking tributaries. Design all eco-waterfront facilities in harmony with the existing ecosystem.

Fourth, establish a landscape plan in harmony with the existing waterfront environment. The plan should encourage the consolidation of public attributes so that the waterfront value can be recognized as a unique asset. Open spaces and vistas should be available from the existing town and city center. Furthermore, the waterfront landscape should reflect local identity. Even artificial landscapes can reflect the local character and waterfront areas features.

Lastly, build a convenient and eco-friendly transportation system to serve the waterfront area. Interlink public transportation with pedestrian and bicycle walkways and provide a bicycle parking lot, if possible. The area adjacent to the waterfront area should be used as pedestrian space; the road should be reduced, pedestrian-oriented signal systems should be operated, and walkways around the waterfront area should be made.

Recreation of National Territory through Waterfront-Centered Reorganization

An effective waterfront area will create new opportunities for urban spatial creation so that Korea's urban rivers can be revitalized. As seen in foreign cases, various ripple effects can be created

by revitalization of waterfront areas. In particular, a vibrant waterfront area creates new jobs and stimulates nearby communities. Economic and social improvement is expected, not just physical and environmental improvement. Moreover, it has added value such as a pleasant quality of life with a small amount of investment.

Waterfront-centered city reorganization needs an accompanying perception shift regarding how to deal with water resources in city spaces. A new agreement is necessary to re-evaluate the value of spaces that have been deserted because of inundation. Waterfront-centered city reorganization is with a major task, especially when a city does not utilize its river as well as it does other amenity spaces. Many of the world's major cities have perceived the importance of waterfront area, conducted waterfront-centered city reorganization projects, and now enjoy

the effects. This is a key trend and a philosophy in city restoration and sustainable growth.

To apply waterfront reorganization such that it is in line with Korean cities' features, it needs to be implemented as a pilot project. It can eventually become a concrete strategy to help solve the problems faced by the nation, including economic crisis and a low population growth era. Waterfront development has almost been forgotten in Korea's national psyche, yet it can serve as an opportunity to restore the entire nation. It can contribute to the Korean people's quality of life, global reputation and local economies.

Lee Bum-hyeon (bhlee@krihs.re.kr)

Scheme for Consolidating Linkage between Housing and Transportation Policies

In the past, Korea's housing and transportation policies were implemented by supplying large-scale housing first. This was done through new town development centered on the suburban areas surrounding the city center in metropolitan city regions. Housing construction occurred on relatively

easily secured development areas, followed later by mega-regional transportation facilities to fulfill the commuting needs of those areas' residents. In other words, the policy was "housing development first, transportation development later." However, some critics argue that this led to unavoidable urban sprawl

Figure 1: Changes in Housing Policy in the Seoul Metropolitan Area

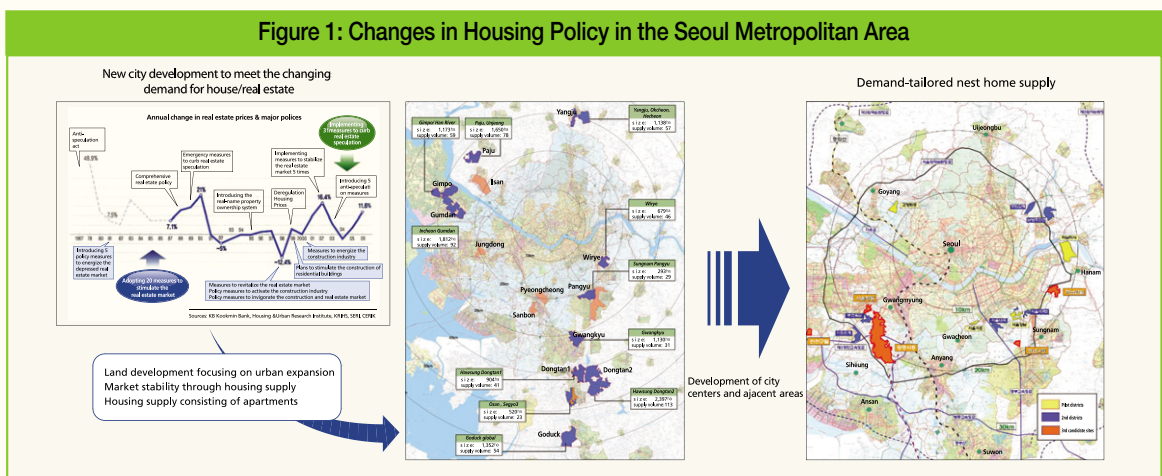
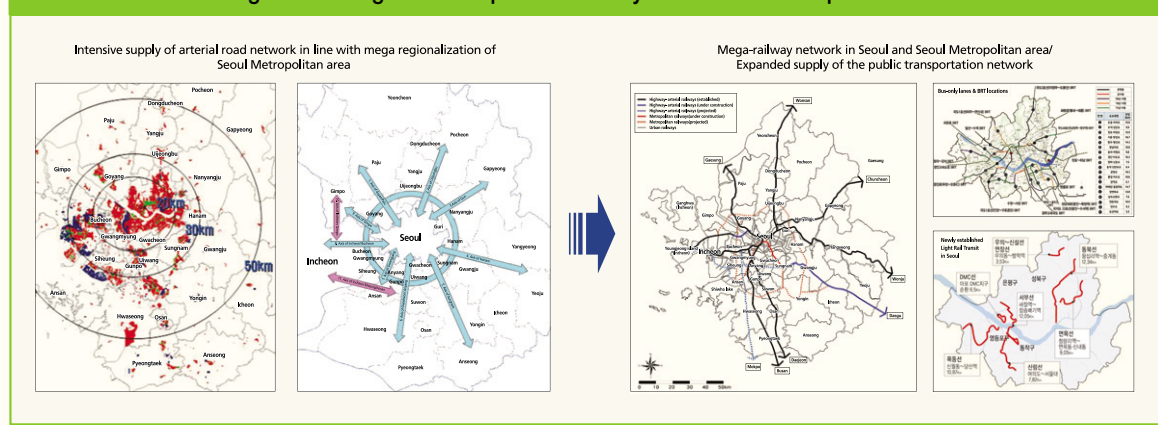


Figure 2: Changes in Transportation Policy in the Seoul Metropolitan Area



and the increase in commuting distances. These in turn led to higher social costs, such as more traffic congestion and deteriorating air quality.

With that in mind, the government is now focusing on the expansion of the public transportation network, including buses and railways, within large city regions. It is also focusing on changing the traditional policy into a demand-tailored housing supply policy. This includes city restoration projects and nest home supply (low-cost housing units). For these projects to be successful, a housing supply policy reflecting each household's commuting pattern, along with consumers' stated preferences with regard to residential location and home type choice, is required, given the very high correlation between the two factors and income level and age group.

Residential Locations in the Seoul Metropolitan Area and Change in Traveling Pattern

To examine the relationship between residential locations and traveling patterns in the Seoul Metropolitan Area, origin and destination trip data was analyzed between 2002 and 2007. The analysis found that average traveling distances in the Seoul Metropolitan Area decreased, while traveling frequency rose. In other words, there was a trend of multiple trips over a short distance. The average traveling distance decreased by approximately 8% from 9.1 km in 2002 to 8.3 km in 2007. The bus use rate was 40% when traveling within the region and 20% when traveling between regions. Note, however, that the difference in subway use rate was offset by increased use of a personal vehicle.

The relationship between residential location and traveling mode in the Seoul metropolitan area was analyzed by using the raw data of the Seoul Metropolitan Area Household Traveling Status Survey from 2002 to 2006. The results are presented as follows.

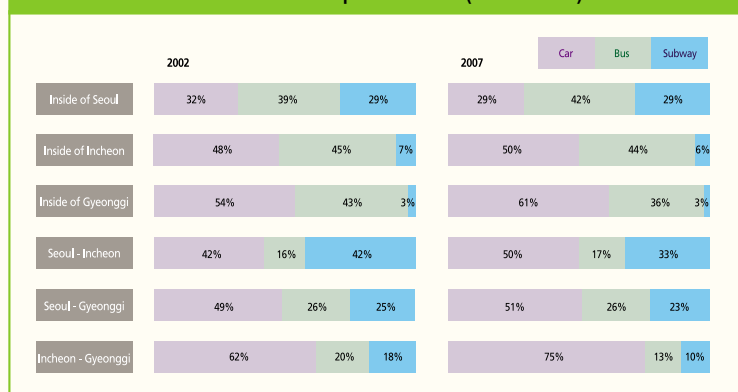
First, according to the analysis on the relationship between job-housing balance, defined as an equivalence of employment opportunity and workforce population, and commuting distance within the region, a negative correlation was noted. That means that traveling distance decreased when the job-housing balance ratio improved.

Second, although there was a high preference for subway as a means of commuting, its actual use rate was lower than the bus use rate in Incheon/Gyeonggi, because of the difference in service supply density. Subway use rate was higher among those with higher incomes. This might be due to the fact that low-income populations do not tend to live around subway stations, where land and housing prices are higher.

Third, people with higher incomes, typically home-owners, tended to have much longer commutes. The traveling destination distribution pattern was very different between the low- and high-income brackets. Whereas the commutes of those in the high-income bracket mostly headed for city centers (Joong-gu, Gangnam, etc.) in Seoul, the low-income bracket's traveling destinations tend to be concentrated in the northeastern districts of Seoul (Dongdaemun, Gwangjin, Dobong, Gangbuk, etc.).

In summary, an improvement of regional balance between job and housing (no. of employees/

Figure 3: Changes in Transport Usage Rate in the Seoul Metropolitan Area (2002~2007)



population) can contribute to easing the dependence on Seoul as a primary work destination and decreasing long distance commuting, thus solving the transportation problems in the Seoul metropolitan area. Likewise, the supply of residential land associated with activity hubs by income bracket may maximize the linkage effect between housing and transportation policies. In particular, the low-income bracket, with its high dependence on public transportation, values punctuality and linked accessibility rather than mobility. Therefore, efforts to expand public transportation with a focus on punctuality in areas where low-income residents are clustered should be effective in enhancing the residential location suitability for each household.

Impacts of Transportation Factors on Residential Location Choice

KRIHS conducted an Stated Preference (SP) survey of 501 households residing in the Seoul Metropolitan area on residential movement features. It considered each household's characteristics and factors in relation to residential location choice.

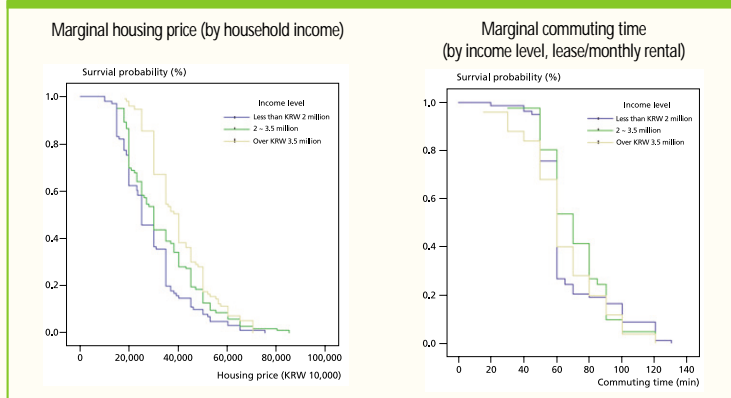
The SP survey results found a difference in transportation accessibility according to income bracket: the high-income bracket resided in better residential locations in terms of public transportation and personal vehicle accessibility

compared to the low-income bracket. In terms of access to public transportation facilities, a statistically significant difference was noted in the distance from home to a bus stop or a subway station, according to the income level. Those with higher income levels had greater access to public transportation facilities. Specifically, higher-income brackets lived within approximately 110 m from a bus or subway station, while lower-income brackets lived approximately 160 m from a bus or subway station.

Second, a transportation mobility analysis found that a difference in transportation mobility depended on income level. Those with lower incomes had longer traveling times, with a lot of transfers. Meanwhile, higher-income residents tended to drive their own cars, take short trips on public transportation, and have fewer transfers.

Third, about 50% and 80% of the low-income bracket (less than 2 million won monthly household income) had no intention of buying a house priced at about 240 million won and 350 million won, respectively, based on an analysis. They preferred lesser-priced homes in areas with better transportation conditions. Meanwhile, around 50% and 80% of the high-income bracket (over 3.5 million won monthly household income) had no intention of buying a house priced at about 380 million won and 490 million won, respectively. For the low-income residents who rented, the intention to buy houses was considerably

Figure 4: Marginal Housing Price and Commuting Time by Household Income Level



low when commuting time was 45 minutes or more. Clearly the preference was for a residential location that enables shorter commuting times.

Lastly, the analysis found that the marginal commuting time of elderly couples (over 55 years of age) and young couples (under 34 years of age) was relatively shorter than that of other age groups. The commuting times of semi-middle-aged (35-44) and middle-aged (45-54) couples were relatively longer. This indicates a change in marginal commuting time according to a person's life cycle, i.e., residential preference changes from city centers to suburban areas and then back to city areas for young couples, semi-middle-aged/middle-aged couples, and elderly couples, respectively.

According to the analysis results, the following policy implications can be drawn:

First, a policy to supply affordable homes for those in the low-income bracket in areas that offer close proximity between job and housing is required. The marginal utility analysis on residential location found that those in the low-income bracket preferred residential locations that enable short commuting times and offer lower-priced houses. According to the status analysis, however, a residential location with good public transportation conditions (accessibility and mobility) typically has higher-priced houses. Therefore, those in the high-income bracket reside in such residential locations, not those in the low-income bracket. Based on the result of the marginal commuting time analysis, a typical commuting time should be limited to 60 minutes for those in the low-income bracket. Further, when the low-income residents live in rental situations, it is important to secure commuting times of no more

than 45 minutes.

Second, housing and transportation policies that consider the typical life cycle are necessary. That is, younger couples with a few children or none and elderly couples whose children do not live with them preferred living in the city center. Semi-middle-aged/middle-aged households preferred the suburban areas. More specifically, low-income young and elderly couples preferred residential locations within 10km of the city center, whereas elderly couples in the high-income bracket tended to choose suburban areas 20km and 30km away from the city center. Even within the same life cycle, there was a difference in the preferred residential location according to income bracket. Considering Korea's aging population, where there is an increasing number of elderly residents, the supply of more smaller houses in residential locations with good public transportation mobility is desirable. This requires a policy to supply affordable houses for elderly couples in the low-income bracket.

Measures to Consolidate Linkage between Housing and Transportation Policies

The results of the impact relationship analysis examining transportation factors in terms of residential location, traveling mode, and residential location choice in the Seoul metropolitan area can be generalized as follows: Consolidating the linkage between housing and transportation policies requires establishing policy principles to create a good match between job and housing. Then an increase in social cost caused by the inefficiency between urban spatial structure and commuting and traveling can

Figure 5: Principles to Consolidate Linkage between Housing and Transportation Policies

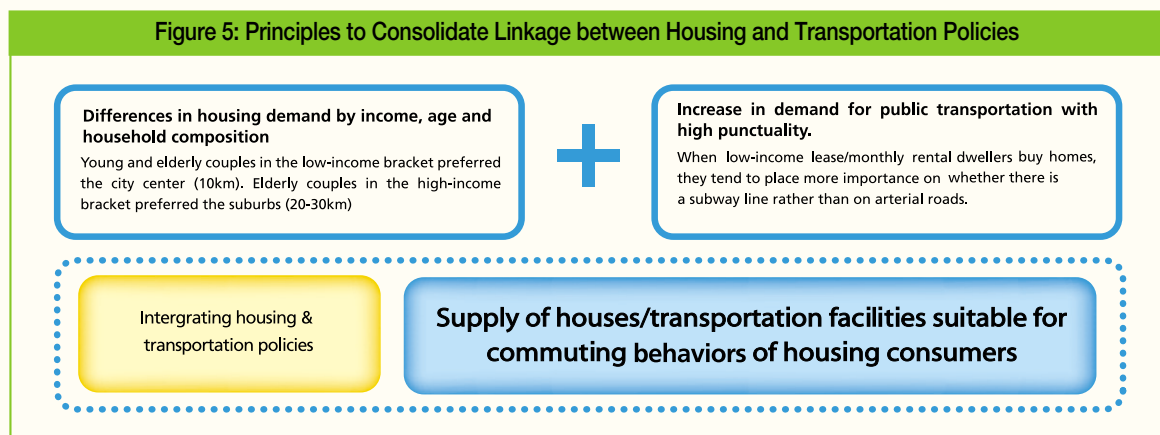
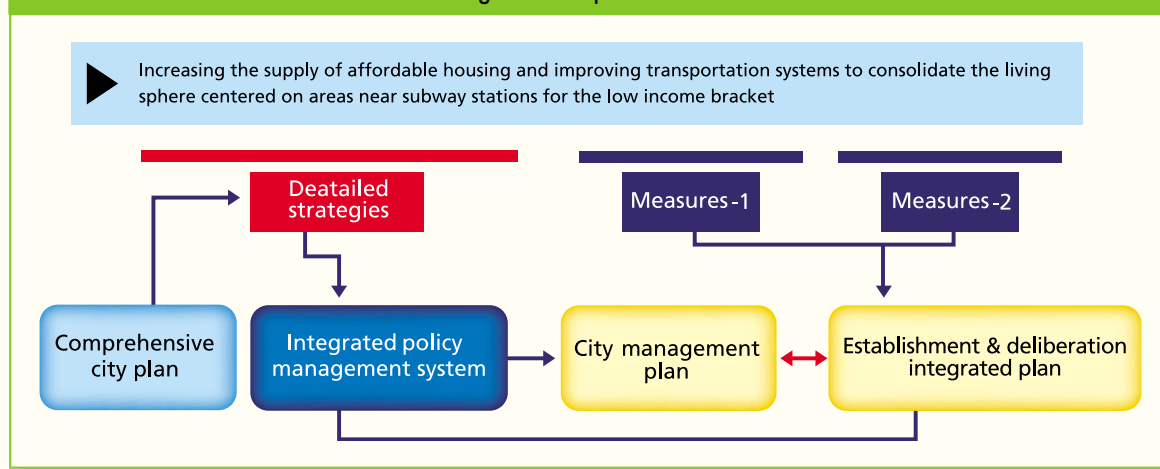


Figure 6: Example of Establishment/Deliberation System of Integrated Urban Planning Related to Housing and Transportation Policies



be minimized. Specifically, there is a need to change the existing principle of “housing development first, transportation facility supply later” into the idea of securing integrated linkage between housing and transportation policies.

In the short term, there is a need to supply more urban houses and stable and affordable residential areas for members of the low-income residents with no homes in areas with easy access to public transportation (i.e. subways). For the majority, there is a need to supply considerably long-term rental units close to the city center, in re-development and restoration areas with good public transportation accessibility, including internal circulation within the residential complexes. In the areas near subway stations or intersections of principal roads, land should be used as efficiently as possible, coupled with mixed use development schemes. More affordable, small house in the city center, where low-income young and elderly residents can live, should be supplied. Various mixed residential developments, particularly mixed-age and mixed-income types of homes, need to be encouraged.

To encourage building of urban homes with better proximity to the workplace, it may be necessary to allocate certain amounts of floor space in increments to building small homes. This should be done according to mandated district designations and with offering incentives. At the same time, the consolidation of linkage between housing and transportation policies should begin with improvements in the legal and institutional system. In particular, the establishment

and implementation of urban planning guidelines are required to move forward.

From the mid- and long-term perspective, the following need to be implemented:

- A better housing subscription system that can reflect both the internal living sphere and the commute between job and housing
- A neighborhood transportation system that offers a mobile living sphere
- More supply of public houses centered in living sphere that meet various types of residential demand

In particular, there should be incentives offered to encourage people to settle in each living sphere. The supplied complexes will need to be more compact than the existing ones in order to broaden availability of houses within the living sphere.

Once a convenient, effective neighborhood public transportation system centered on the living sphere is supplied, the potential related to demand and needs should be reviewed from the mid-and long-term perspective. These should be pedestrian access, commercial density, restricted auto traffic and more public transportation options.

Creating a vibrant community requires a dense population that lives there 24 hours a day. Toward this end, a review needs to be conducted on how new residential locations can better respond to the various demographics of households.

Chung Il-ho (ichung@krihs.re.kr)
Seo Min-ho(mhseo@krihs.re.kr)

Development Plan for New Town Project in Rural Areas

The quality of life in Korea's rural areas is lower than that in cities because of deficiencies in basic everyday life infrastructure, such as housing, water supply and sanitation, as well as transportation, health and welfare and educational conditions. Rural income levels are also lower than that of cities. For all these reasons, the young rural generation is drawn to cities; hence the continually decreasing and aging population in rural areas. Aside from declining agricultural productivity, the retention of community order is a matter of concern. When rural areas become impoverished, economies of scale are difficult to apply to public services. That will make it difficult for the area to maintain the existing service level, let alone increasing the supply of service.

As one of the 100 major national tasks and one of

the five future strategic tasks for rural policy the Ministry of Agriculture, Forestry, and Fisheries (MAFF) adopted a rural new town project as an innovative rural area development model.

The government is implementing a rural new town project, cognizant of all these issues. In other words, the government is trying to attract youth talent back to rural areas by developing and offering pleasant settlement spaces equipped with good educational and living conditions.

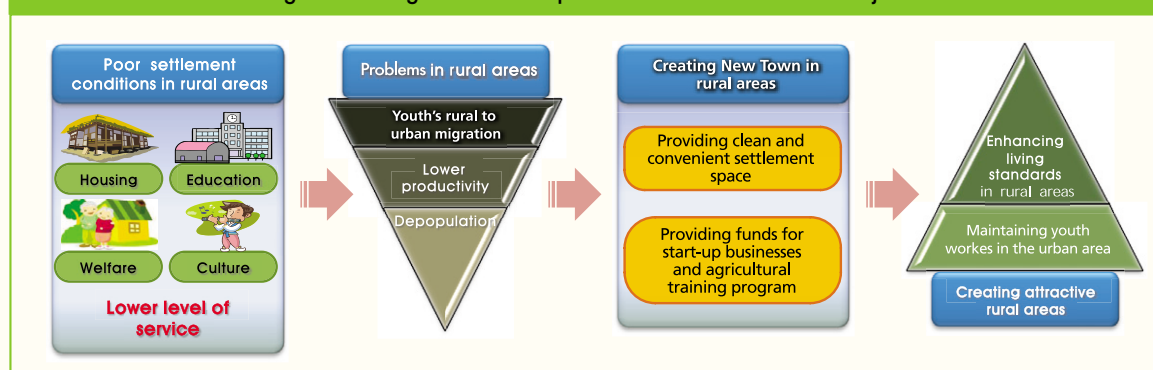
Policy Directions and challenges

Prior to the full-scale deployment of the rural new town project, MAFF implemented a pilot program. In January 2009, MAFF selected five pilot project

Table 1: Status of Settlement Conditions in Rural Areas

Service level	Cities	Rural areas
Home ratio meeting the minimum residence criteria	92.3%	77.9%
Water supply ratio	97.6%	63.0%
Road pavement ratio	98.2%	73.5%
Multiple-grade class ratio of elementary school	1.7%	28.6%
Medical institution (doctor)	91.4%(93.9%)	8.6%(6.1%)
Child care facilities and local child care center	In each dong*	Not found in 454 eup and myeons* Not found in 879 eup and myeons

Figure 1: Background and Purpose of the Rural New Town Project



*Eup, Myeon: Local small town with populations of 5 to 10 thousand

*Dong: It is the primary division of districts(gu) and the smallest level of urban government to have its own office and staff.

Figure 2: Top Five Future Strategic Tasks in Rural Policy



districts, and it plans to invest 114.8 billion won between 2009 and 2011 (national treasury's portion = 90 billion won; local government's portion = 24.8 billion won). MAFF plans to embark on the main project in 2012 if the pilot project succeeds. Concerning the main project, MAFF plans to form 53 districts by 2017 as the first stage; about 1 trillion won is expected to be invested.

In the pilot project, a total of 700 houses will be constructed, with 100-200 households per pilot project district. As of November 2010, the cost reached 23 ~ 49 billion won per pilot project district, with a local government budget of more than 10 billion won forecast to be invested. The guns (counties) are the clients of the pilot project; some guns administer the project, whereas other guns entrust the pilot project to Korea Rural Community Corporation (KRCC). The constructed homes are sold or rented; all the constructed homes are for sale in some districts, but homes are simultaneously sold and rented in the other districts. The selling price is between 99 million won and 180 million won, depending on the project district. For the rental homes, key funds range from 12 million ~ 54 million won; the monthly rent differs according to the key funds.

Note, however, that some problems have emerged in the process of implementing the pilot project.

First, the districts in the pilot project meet the rural service criteria. Note, however, that these are the minimum criteria necessary for basic livelihood; medical, educational, and cultural aspects that attract youth should be considered.

Second, there are fears of the original policy goal being obscured because of the burden of unsold homes. There is a need to consider realistic demand for those who return to the rural areas, and to consider occupant selection criteria in which local residents do not feel a sense of alienation. Ways to address project size to attract urban youth should be devised.

Third, inefficiency, including duplicate investments and overlap of authorization and permission procedures, is a matter of concern because the unit pilot projects may be individually executed without a comprehensive plan. Hence the need to implement any rural new town project plans in package mode by reflecting the relevant projects in a comprehensive way.

Fourth, the pilot projects may be delayed because local government expenses are not promptly subsidized when the project cost is huge, given the fact that financially struggling cities and guns are the project clients. Smooth project implementation can also be difficult owing to the lack of effective leadership.

Fifth, the land purchasing cost is excessive since a pilot project merely depends on new village construction. Therefore, the burden of the pilot project cost is increasing because the estimated project cost is lower than the actual project cost.

Sixth, demand for the constructed homes is not huge, owing to the low economic power of those who want to return to rural areas and the uncertainties of settlement. Moreover, home sale prices are relatively high; this gives rise to concerns over the unsold homes.

Future Development Measures

Possible ways to solve the problems found in the pilot project implementation process and to expand the rural new town projects can be set as follows:

First is the rationalization of each project object. Offer pilot project districts a certain level of public services, and devise measures to encourage the young city labor force to settle in rural areas.

Second is the enhancement of implementation efficiency. Make a systematic approach considering the rural areas' settlement systems from the mid- and long-term perspectives, and make the process more efficient.

Third is the management of projects. Make sure that the project cost is not excessive, and create realistic budgets. Allow flexibility to respond to any change in the project conditions.

The specific development measures for all of these are presented below.

First, locate the eup and myeon offices in the pilot project district in the short term to enhance public accessibility in the project district. From the long-term perspective, accommodate the existing local residents and retirees from cities through comprehensive redevelopment, including the existing villages. In that case, consider the reorganization of existing central places.

Second, expand the occupant object scope of rural new towns to minimize unsold homes. Offer stability to those who want to return to rural areas but face weak demand and uncertainties. In doing so, assign priorities among the occupant objects. Priorities need to be given to young people who reside in cities and want to return to rural areas in line with the original policy goal.

Third, establish mid- and long-term comprehensive plans for the systematic management of rural spaces with devise roles, project goals, implementation direction, and strategies for rural new towns. By linking the plan with the overall urban basic plan, the pilot project sites should reflect the land use patterns of cities and guns. In addition, consult with the ministries in charge by including them on relevant projects in advance. Discuss project selection, plan establishment, and co-existence with other relevant projects.

Fourth, allow KRCC, which is armed with stable funds, ample project experience and specialists, to participate in the pilot projects. The cities/guns set such criteria as location selection and housing construction, but KRCC needs to take charge of implementation by sharing in those roles.

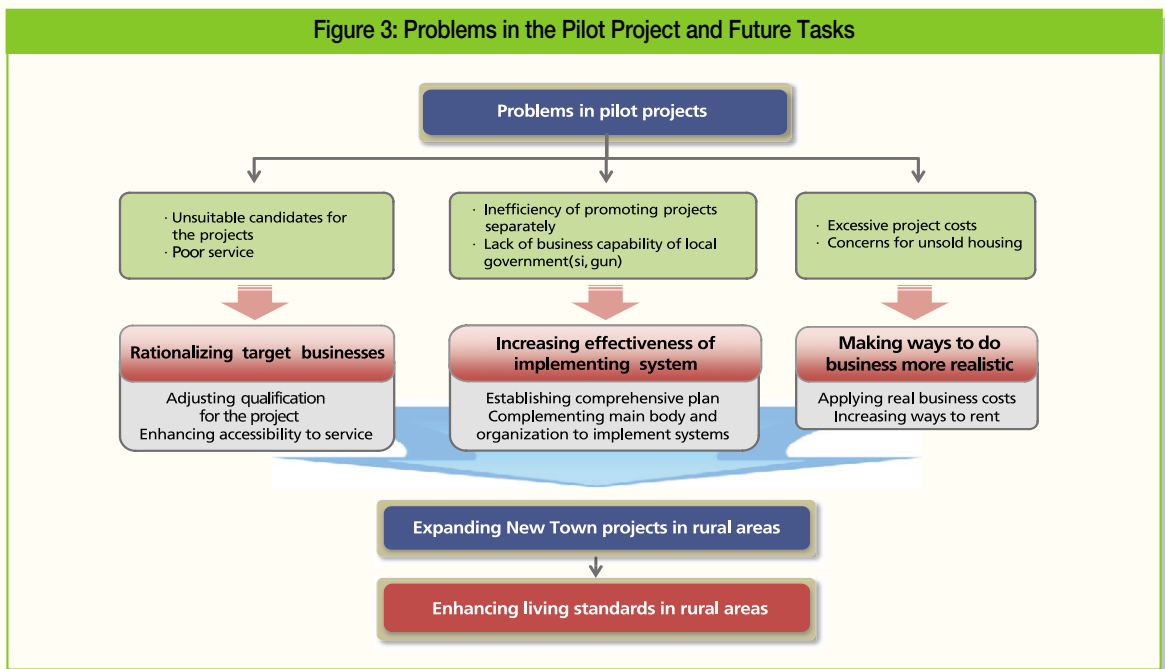
Fifth, use a re-plotting method to reduce land purchasing expenses. In cases of the existing village's expansion or comprehensive redevelopment from the long-term perspective, the application of this method can contribute to the reorganization of the settlement system. Likewise, realistically raise the standard project cost, which should be lower than the actual cost. Set an adequate size of land area by researching on demand prior to basic plan establishment.

Lastly, try to accurately predict the demand for the homes in advance to avoid unsold homes and ease the financial burden on cities and guns. According to the survey results, sales and rentals need to be carried out properly and simultaneously. In particular, use installment rentals or Jeonse (key money is paid for a lease) rentals, considering the economic capacity or settlement situation of those who want to occupy the homes in a rural new town.

Choe Hyeok-jae (hjaechoi@krihs.re.kr)

Kim Jae-ho (jakkim@krihs.re.kr)

Figure 3: Problems in the Pilot Project and Future Tasks



KRIHS' INTERNATIONAL COLLABORATION

KRIHS-WB Signed UKP Agreement



On July 1, 2011, KRIHS president Park Yang-ho and the World Bank Group's manager of the urban development unit Abha Joshi-Ghani signed an Urbanization Knowledge Platform (UKP) agreement. Under the deal, the two organizations will jointly conduct research, facilitate activities related to UKP, and share information and knowledge so as to improve settlement environments and help build sustainable urbanization for developing countries. KRIHS will serve as a hub institution dedicated to UKP in the East Asian region and create collaborative partnerships with working-level officials from the World Bank's East Asia region. The UKP aims to better direct ways of urbanization in developing countries and share cutting-edge knowledge with policy-makers, scholars, and companies all over the world.

Major institutions participating in the UKP activities include the World Bank, CISCO, McKinsey & Company, PENN Institute for Urban Research, USAID, and KRIHS.



KRIHS-WB Held its UKP Launching Seminar



Jointly hosted by KRIHS and the World Bank, the Urbanization Knowledge Platform (UKP) launching seminar was held at COEX, Seoul, starting June 30. The two-day event was attended by 43 participants, including renowned scholars, experts, and working-level officials from Asian countries such as China, Mongolia, the Philippines, Laos, Indonesia, Vietnam, and the US. The seminar focused on ways to facilitate competitive and substantial cities from a land, market, infrastructure, and spatial planning perspective.

The first day of the seminar began with an opening speech by Ms. Abha Joshi-Ghani, head of the Urban Development and Local Government Unit of the World Bank, followed by a welcoming address by KRIHS president Park Yang-ho and congratulatory remarks by Mr. Jung Do-ahn, director of the Ministry of Land, Transport and Maritime Affairs. In his keynote speech, Prof. Edward Glaeser, an economist at Harvard, discussed the importance of cities as well as a variety of problems arising from the process of urbanization in such fields as transportation, population, and health and education.

The first day's activities focused on three main themes: institutions, data, and tools for effective urban management; reorienting cities effective land use planning policies (policies and regulations); and reorienting cities effective land use planning policies (markets and incentives). Meanwhile, the second day featured

three sessions discussing how to integrate land use planning and infrastructure; slums and social equity; and the role of land use planning strategies for low-carbon green cities. Also, video conference was held to share the contents discussed during the two days with the participating countries.

2011 OECD-KRIHS Seminar on National Urban Policies and Planning of Korea



On July 13, 2011, the Organization for Economic Cooperation and Development (OECD) and KRIHS held a joint seminar on National Urban Policies and Planning of Korea. The seminar comprised two sessions: Challenges in Korean Urban Policies and Cities and Green Growth. Six presentations were made, including “Recent Trends in Urban Issues and Policies” by Dr. Kim Sang-jo, research fellow of KRIHS, and “Trends in Urbanization in Korea within an International Comparative Perspective” by Mr. Adam Ostry, counselor for Regional Development Policy, GOD/RDP, OECD. Moderated by Dr. Kim Hyun-sik, senior research fellow of KRIHS, the ensuing discussion session was attended by 12 experts in the field of urban policy, including Mr. Lee Jae-joon, deputy mayor of Suwon city, Dr. Kang Sik, research fellow of the Gyeonggi Research Institute, Mr. Choi Su-young, manager of the Environmental Protection Headquarters of the Seoul Metropolitan Government, and all OECD participants. The discussion focused on examining the contents and results of analyses presented in “OECD urban policy reviews: Korea” before its publication.

KOICA Commissioned Training Course on Urban and Regional Development Policy



The KRIHS-affiliated Global Development Partnership Center (GDPC) conducted a three-week training course entitled “Urban and Regional Development Policy” from May 18 through June 3, 2011. Commissioned by the Korea International Cooperation Agency (KOICA), the training course hosted by 14 experts in territorial planning and urban development sectors who work at local governments and public organizations from Bhutan, Cambodia, Ecuador, Guatemala, Indonesia, Jordan, Kazakhstan, Kenya, Mongolia, Morocco, and Nepal. The training course featured a variety of programs, including eight lectures and visits to Seoul Metro and Dongtan U-city control center as well as field trips to Jeonju Hanok Village. The training course, marked by self-direct learning and tailored education, earned high praise from the participants.

International Seminar on Korea-China National Territorial Policy

The 2011 international conference on Korea-China Territory Policy, jointly hosted by KRIHS and the China Land Surveying and Planning Institute (CLSPI), was held from May 23 to 27 in Beijing, China. The conference was attended by researchers from KRIHS and the CLSPI, and presentations were made on national territory planning schemes and official land prices in both South Korea and China. Researchers from the two institutes discussed the differences of their respective national



territory-related systems, and engaged in lively discussions. The CLSPI expressed its keen interest in Korea's territorial plans carried out over the last 40 years as well as the country's official land price systems, calling for continuous exchange and cooperation in the field to share and learn from each other's experience and practices. The forum served as an opportunity to develop a mutual understanding of land ownership systems in each country and is expected to bring positive results by shedding new light on problems in operating land-related systems and drawing implications. Started in 2009, this forum is held annually, alternating between South Korea and China.

KRIHS-IOER Joint Workshop on Urban Planning Paradigm for Sustainability



On July 5, 2011, KRIHS held a workshop entitled "Urban Planning Paradigm for Substantiality" in conjunction with the Leibniz Institute of Ecological and Regional Development (IOER) in Germany. Attended by researchers from KRIHS and IOER as well as Prof. Jang Hun, Yonsei University, the

workshop offered presentations introducing each institution and their respective policies on cities. The ensuing discussions centered on the U-city. Dr. Shin Dong-bin, research fellow of KRIHS, delivered a presentation on Korea's National Spatial Data Infrastructure (NSDI) while Dr. Kim Kirl, research fellow of KRIHS, discussed Korea's U-city policy. From the IOER side, Dr. Marc Wolfram made a presentation on Germany's smart city policy; Dr. Marin Behnisch presented on monitoring Germany's residential areas; and Dr. Marin Behnisch discussed Germany's development policy of open space. KRIHS plans to invite IOER to the U-City World Forum, slated for October 2011, to conduct joint research in U-city and spatial analysis.

Special Lecture by Harvard University Professor Edward Glaeser



Prof. Edward Glaeser, a renowned urban economist at Harvard University, was invited to deliver a lecture on June 28, 2011. In his lecture entitled "Innovation, Urbanization, Housing and Infrastructure," Prof. Glaeser claimed that the city is one of the greatest modern inventions. He emphasized the city's innovative values instead of its negative aspects, such as problems arising from transportation, poverty, and environmental degradation. KRIHS researchers including Dr. Park Yang-ho, president of KRIHS, and Dr. Sohn Kyung-hwan, vice-president of KRIHS, attended the lecture. Recently, Prof. Glaeser published a book entitled "Triumph of the city," which has been translated into Korean.

NEWS & ANNOUNCEMENTS

GDPC Opens Multi-language Website



In May 2011, the Global Development Partnership Center (GDPC), an affiliate of KRIHS, launched a multi-language website in Spanish and French, following its initial development of its homepage in English and Korean. The multi-language homepage makes it possible to promote the GDPC across the world, expanding its networks with nations in South America and Africa.

The GDPC's website (<http://www.gdpc.kr>) introduces the organization to visitors, including its main activities, publications issued by the GDPC, and a wide range of information necessary for trainees in GDPC Research Training Programs, including materials for lectures, ordinances of Korean urban planning, photos, and video clips. The website also allows trainees to participate in GDPC training courses, encouraging their continuous networking with one another even after returning to their home countries. As such, the website serves as a community venue where training program participants including trainees, lecturers, and experts share information and communicate with one another, thereby strengthening networks between the GDPC and developing countries.

Meeting on Comparative Infrastructure Development Assessment of Thailand and Korea

The kick-off meeting of the research project entitled "Comparative Infrastructure Development Assessment of the Kingdom of Thailand and the

Republic of Korea" was held at the Korea Eximbank on May 16, 2011. The research was coordinated by the Asian Development Bank (ADB) and jointly conducted by Korean and Thai TA teams under the leadership of Mr. Mohiuddin Alamgir, ADB infrastructure specialist. Dr. Chung Il-ho, senior research fellow at KRIHS (transport); Dr. Kim Chong-won, senior research fellow at KRIHS (water supply) and Prof. Yoon Won-cheol from Hanyang University (energy) participated in the meeting as Korean sectoral experts. Mr. Mohiuddin Alamgir, Ms. Nuanprae Patramai, policy analyst of the Thai prime minister's office, Dr. Surasak Taweessilp, managing director of TEAM Logistics and Transport Co., Ltd., and other experts from ADB and Thailand also attended. During the meeting, participants improved their understanding of the research framework and discussed on how to compare both nations' infrastructure performances as well as combine them to draw substantial lessons and recommendations. Mr. Alamgir emphasized that it was essential to identify the linkage between infrastructure development and economic growth and that the research should promote sectoral, authoritative, and regional collaboration in the implementation of infrastructure development. The result of the research is expected to benefit other developing Asian countries seeking to establish their own infrastructure development policies.



Thailand Ombudsman Delegation Visits GDPC

The Global Development Partnership Center (GDPC), affiliated with KRIHS, invited a delegation



from Thailand Ombudsman's Office consisting of eight individuals, including Prof. Siracha Charoenpanij and Ms. Panit Nitihaprapas. During a seminar welcoming the delegation, Dr. Jo Jin-cheol, vice director of the GDPC, introduced KRIHS to the delegation; Dr. Kim Dong-ju, director of the National Territorial Planning and Regional Research Division, Dr. Kang Ho-je, associate research fellow, and Dr. Wang Kwang-ik, associate research fellow, also delivered presentations on Korean territory plans, infrastructure policy, and green growth and green city, respectively. In the ensuing Q&A session, both sides engaged in lively discussions about issues associated with global development cooperation. On June 10, the delegation treated KRIHS members to dinner to show their appreciation. After returning to their country, the delegation sent a letter to express their gratitude for the warm hospitality and cooperation of KRIHS members.



GDPC Held National Territory & Land Policy Consulting

The Global Development Partnership Center (GDPC) conducted a consultation program on national territory and territorial policy for experts in relevant fields from Kazakhstan from June 13 through 17. Attended by Mr. Artem Gushev, Mr. Baurzhan Kaldybayev, and Mr. Karlygash Muldagailyev from the Department of Geo Information Systems and Town-Planning in the Cadaster, Astana, office of Kazakh State Planning and Experiments Institute of Earthquake-Proof Construction and Architecture, the 5-day program



was a follow-up measure to promote further cooperation between both institutions as discussed when KRIHS researchers led by Dr. Sagong Hosang, director of the GDPC, visited Kazakhstan. The program featured lectures to share Korea's know-how and experience on national territory and geography information and its territory and new town planning as well as visits to relevant institutions and field trips. The delegation team showed keen interest in the Sejong city promotion center and its construction site as their country has also moved its capital city from Almaty to Astana.

Vice President of PPS Invited to Lecture at AURI



On May 17, the Architecture & Urban Research Institute (AURI), an affiliate of KRIHS, invited Ms. Cynthia Nikitin, vice president of Project for Public Spaces (PPS), to give a special lecture entitled "Placemaking in Cities and Best Practices." According to Ms. Nikitin, placemaking is the creation of a built environment that generates community, stimulates interaction, encourages entrepreneurship, fosters innovation, and nurtures humanity. Using Spain, Los Angeles, and New York City as examples of effectively creating public spaces, Ms. Nikitin explained experiences and implications to KRIHS and AURI researchers to

help them set future directions for creating public spaces in Korea. PPS is a nonprofit planning, design, and educational organization dedicated to helping people create and sustain public spaces that build stronger communities.

1st AURI Construction & Urban Forum



On May 2, 2011, AURI held its 1st AURI Construction & Urban Forum, entitled “A New Perspective for Housing Policy” and sponsored by the Space Group. The forum began with an opening statement by Son Se-gwan, director of AURI, followed by motivational remarks by Lee Un-koo, president of the Architecture Institute of Korea, who discussed the problems inherent in the housing culture centered on apartment houses. The forum featured three presentations, including Challenges and Tasks of the Current Housing Policies by Mr. Huh Eui-do, CEO of The Economists, a Korean monthly business magazine. The ensuing discussion session, moderated by Prof. Ha Sung-gyu from ChungAng University, was attended by a number of experts in the relevant fields.

KRIHS President Reappointed for Second Term

Dr. Park Yang-ho was reappointed for his second term as president of KRIHS. In his remarks at the inauguration ceremony held on June 20, 2011, he focused on the drive to become a vanguard for customers by developing creative policies. As part of the organization's efforts, the president presented six strategies: enhancing territorial research for leading customers; increasing convergence and integration activities inside and outside the institute; changing systems to convert KRIHS into a creative and leading institute; preparing thoroughly and in a speedy manner to move its office complex to Sejong city; advancing into a think and act tank to fit in the G20 era; and creating an organizational culture by strengthening its unity. In addition, he presented a vision for leading creative national territorial policies domestically conducive to laying the foundation for strengthening national power and ensuring the welfare of the people while internationally turning into a major global think tank.



KRIHS GAZETTE August, Vol. 44

Korea Research Institute for Human Settlements (KRIHS) is committed to improving knowledge and understanding of the conditions and problems of the nation's resources and their interactions with people. It assists the government in formulating long-range development plans and makes policy recommendations on related matters.

KRIHS carries out various activities to collaborate with the international research community in solving theoretical and practical problems concerning human settlement issues and planning. Also, it provides research expertise and consulting services along with training programs for foreign governments and institutions.

Copyright © August 2011

Korea Research Institute for Human Settlements

254 Simin-daero Dongan-gu Anyang-si Gyeonggi-do, 431-712, Korea

TEL: 82-31-380-0164 FAX: 82-31-380-0474

E-Mail: gazette@krihs.re.kr

Homepage: www.krihs.re.kr

Publisher: Park Yang-ho

Editor: Kim Hyun-sik

Editorial Committee:

Chung Jin-kyu, Jo Jin-cheol, Kang Mi-na, Kim Eun-jung,

Kim Kirl, Kim Myung-soo, Lee Yoon-jeong,

Lim Jeong-chun, Seo Yeon-mi, Yoon Ha-jung