



## SPACE & ENVIRONMENT

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*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 quarterly by KRIHS.*

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

## Message from the President

Since its inception in 1978 as a non-profit organization, KRIHS has been carrying out comprehensive research on spatial policies of Korea, thus contributing to territorial development, economic growth and quality of life improvement of the nation. Entering the 21st century, KRIHS is making continuous efforts to cope with a variety of challenges facing the global community today.

This year marks the 30th anniversary of the founding of KRIHS and the beginning of another thirty years to come, as well. We'd like to take this occasion to thank experts at home and abroad, and foreign governments for their unceasing interest and support for KRIHS over the years. KRIHS intends to take itself a step further, however, and endeavor to be reborn as a 'super excellent' research institute to spearhead the formulation of creative territorial policies of Korea, along with the establishment of a Korean model of territorial development.

On the occasion of the 30th anniversary, this edition of *Space and Environment* features the 60 years of territorial development of Korea, presenting the summary of the four sectors: territorial development, housing, transportation and construction industry. We hope this will provide the readers with an opportunity to enhance their understanding of Korea's footsteps in territorial development over the years, which they can refer to for their study and practice in spatial planning.

Lastly, KRIHS will continue to make efforts for international cooperation with foreign governments and experts. I believe that *Space and Environment* will remain as a good intermediary for the cooperation for a long time to come. Thank you.



Park Yangho, Ph. D.  
President

## Spatial Development of Korea: from Infrastructure Building towards Creative Territory

### Significance of Territorial Development in Korea

**K**orea, a small country with high a population density, requires a mechanism highly efficient in developing territory in order to compete with countries with bigger land and population, and more natural resources. In this regard, a series of Comprehensive National Territorial Plans (CNTPs) of Korea have played an important role in enhancing the country's territorial efficiencies, as well as improving people's quality of life over the past decades. For example, industrial complexes and expressways constructed under the CNTPs have contributed to raising the competitiveness of companies by lowering locational costs. In addition, new towns and dams built under the plans have offered a high level of amenities for a quality life. In brief, the territorial plans have been credited with transforming Korea into a global economic powerhouse from a poverty-stricken peripheral country after the Korean War in the 1950's.

Since the initiation of spatial planning in the nation, balanced territorial development has been one of the two pillars of the ideology of spatial policies of Korea, along with competitiveness. Balanced development enables people to enjoy a quality life regardless of where they live. The fundamental responsibility of the government has been, therefore, to have the fruits of economic

prosperity shared among regions by reducing the disparities accumulated in the course of rapid urbanization and industrialization in Korea.

### Footsteps of Territorial Development over Last 60 Years

The liberation from the Japanese colonial rule in 1945 brought freedom to Korea. However, it resulted in the division of the country into two, the South and the North, destroying the territorial integrity of the Korean Peninsular. The economic base of South Korea collapsed, causing shortages in energy and natural resources, as well as reduction in industrial activities. The Korean War virtually demolished the infrastructure which had been in short supply already, such as railways, roads, ports, factories and houses, not to mention the loss of lives.

The territorial development in the period between the truce in 1953 and the early 1960's focused on the restoration of the destructed facilities from the war. The government initiated the First Five-year Economic Development Plan in 1962, placing emphasis on water resource development, which was intended to increase agricultural production, as well as on the construction of the physical infrastructure as a base for industrialization. In terms of space, the development was concentrated

Selected Indicators of Territorial Development of Korea

Indicators	1970	1980	1990	2007
GDP per Capita (USD)	254	1,645	6,147	20,045
Population (In thousands)	32,241	38,124	42,869	48,456
Urbanization Rate (%) *	49.8	66.7	79.5	86.7 (in 2005)
Manufacturing Firms (In thousands)	24.1	30.8	68.9	119.2 (in 2006)
Expressways (In kilometers)	551	1,225	1,551	3,368
Electric Power Production (In GWh)	9,167	37,239	107,670	403,124
Export (USD in millions)	835	17,505	65,016	371,489
Housing Stock (In thousands)	4,360	5,319	7,357	13,534 (in 2006)

\* Urban areas refer to cities and county towns with population of more than 20,000.

on a few selected areas with superior locational advantages such as the Seoul-Incheon corridor, which were designated as the Special Development Area.

The 1970's marked a territorial modernization in Korea. The comprehensive and long-term spatial plan, the First CNTP (1972-1981) was implemented in 1972, followed by a buildup of related policies and ordinances. The 1970's were characterized by the acceleration of industrialization. Accordingly, the focus of territorial development was placed on the construction of large industrial complexes and selected growth poles, and the accumulation of strategic social overhead capitals. This successfully contributed to laying the foundation for a strong economic development, but resulted in spatial disparities across the country.

The territorial policies in the 1980's and 1990's, therefore, were geared to addressing the problems caused by the strategies for a concentrated development in the earlier period. Other areas of concern regarding spatial development during the 1980's include a response to the widening gap in regional development, control of reckless growth of the capital region, relaxation of land use control, and development of the west coastal region towards communist countries including China. To be specific, the Second CNTP (1982-1991) sought to achieve the following four objectives: guidance towards settling in provincial regions, expansion of the possibility of development into the entire country, enhancement of people's welfare, and conservation of the natural environment. Under the

plan, a total of fifteen growth pole cities were selected throughout the country: three first-tier and twelve second-tier growth poles.

The territorial policies of the 1990's were charged with the tasks of addressing the emerging socio-economic issues such as economic globalization, political decentralization and high-technology in the industries. The two most important concerns in the territorial development were reduction in the disparity between the capital and the other regions, and expansion of the physical infrastructure to embrace for the growth of the economy. The objectives of the Third CNTP (1992-1999) are as follows: to create a decentralized spatial structure, establish a productive and resource-saving land use system, improve people's welfare and conserve the environment, and construct a territorial foundation for reunification of South and North Korea. Under the plan, the concept of a new industrial space was introduced in order to promote development of the west coastal and the central regions, which were falling behind compared to the capital and the southeast regions.

The important key terms of the territorial policies of Korea in the 2000's include borderless globalization, global sustainability and environment, quality of life, innovation, knowledge economy, decentralization and deconcentration. Under this backdrop, the current territorial development policies of Korea aim to enhance a regional creativity by nurturing intangible factors such as quality of life and competence of the region.

Two more CNTPs have been formulated since

Comparison: Comprehensive National Territorial Development Plans

	1st CNTP(1972 -1981)	2nd CNTP(1982 - 1991)	3rd CNTP(1992 - 1999)	4th CNTP(2000 - 2020)
Objectives	<ul style="list-style-type: none"> <li>• Establishment of efficient land use system</li> <li>• Construction of bases for territorial development</li> <li>• Resource development &amp; natural conservation</li> <li>• Improvement of living environment</li> </ul>	<ul style="list-style-type: none"> <li>• Relocation of population to provinces</li> <li>• Expansion of development possibility</li> <li>• Enhancement of welfare</li> <li>• Conservation of natural environment</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of decentralized territorial structure</li> <li>• Set-up of productive and resource -saving land use system</li> <li>• Welfare improvement and environmental conservation</li> <li>• Foundation of base for reunification</li> </ul>	Ideology: Integrated territory for 21st century
				Objectives: Balanced, green, open, and unified territory
Characteristics	Development of growth pole	Control of Seoul and Busan, and promotion of growth pole cities	Creation of new industrial spaces	Phi-shape territorial structure and ten area-wide development regions

the beginning of the 21st century. The first one is the Fourth CNTP for the years from 2000 to 2020. The basic ideology of the plan is creation of an integrated territory for the 21st century. Here, the integrated territory has four dimensions as follows: integration of development and environment, integration of regions across the country, integration of South and North Korea, and integration of the Korean Peninsula and the rest of Northeast Asia.

According to the ideology, the plan set four objectives to accomplish as follows: a balanced, green, open and unified territory. The major strategies of the plan for achieving the above goals include: formulating an open territorial structure, enhancing regional competitiveness, creating a healthy and pleasant living environment, establishing a high-speed transportation and information network, and constructing bases for cooperative exchanges between South and North Korea.

The fourth plan was revised to reflect the new policy paradigm of the government in the mid 2000's, which placed the highest priority on balanced national development. The strong policy initiatives by the administration include the construction of new cities to accommodate relocating central government departments and public agencies to provincial regions from the Seoul capital region. This revised Fourth CNTP (2006-2020) aims to create a dynamic and integrated national territory. The objective of the plan is to achieve a balanced, open, welfare, green, and unified territory.

## Future Directions of Territorial Policy of Korea

Few would disagree that territorial policies of Korea have played a crucial role in transforming the nation into a modern industrialized country within half a century. Now, Korea is faced with more challenges that are complicated and tough to surmount, which the diverse segments of the society pose for the territorial development of the nation. The change in the characteristics of the CNTP of Korea from a plan consisting of specific development projects to a strategic and indicative plan, makes it difficult for the plan to provide a short-term solution regarding spatial issues.

The criticism against the CNTP has largely focused on the fact that the plan is too idealistic and lacks the linkage to the financial system of the government, which is essential in tackling diverse spatial problems including spatial disparity. In addition, numerous spatial plans that are formulated by different government agencies are competing with each other, downplaying the importance of the CNTP, the nation's foremost territorial plan. Therefore, one of the nation's most urgent tasks in spatial planning is to clarify relations among different spatial plans and divide the roles so as to reduce redundancies and strengthen the national territorial planning system.

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Before and After Construction of Changwon Industrial Complex



Source: Korea Industrial Complex Corporation ([http://news.e-cluster.net/main/php/search\\_view.php?idx=177](http://news.e-cluster.net/main/php/search_view.php?idx=177)).

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## Modernization of Housing: from Shabby Thatched Houses to High-rise Apartments

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### Introduction

Over the past 60 years, Korea has introduced a variety of housing policies and the basic goal has been housing stability. As a result, the housing supply ratio of Korea has greatly improved to 108.1% in 2007 from 74.4% in 1975. Also, the average area of residential room per person marked 26.2m<sup>2</sup> in 2005, a significant improvement from 7.9m<sup>2</sup> in 1975. In other words, such achievements are the results of a total of 61 specific housing schemes by the government over the past six decades. However, the plans did not necessarily play a positive role. That is, in many cases, they were used as a supplementary tool to boost the economy, with the original intention watered down. They were also the cause of periodic instability in the housing market and an increase in the housing burden. After all this, recently, the nation is endeavoring to bring a change to its housing policy directions towards housing market stability, better housing welfare for the working poor, and creation of a new housing culture.

### 1950's: Liberation, War and Relief Housing Construction

After liberation from the Japanese colonial rule in 1945, diverse types of housing construction were attempted on the war-torn Korean peninsula. In some cases, the government directly involved itself in building houses. In other cases, housing was supplied by the private sector with foreign aid and overseas loans. Also, makeshift houses, and relief housing called 'reconstruction housing' and 'rehabilitation housing' were built in metropolitan cities including Seoul, to meet the housing demand amid the population surge following the decolonization and the Korean War. The term, apartment was first used in this period in 1957.

Immediately after attaining independence, Korean people abroad returned home and many people migrated from North Korea. This caused the population of South Korea to grow by more than 2

million at a time from 1,624,000 in 1944 to over 20 million in 1949, aggravating the housing shortage problem. In addition, approximately 600,000 houses were destroyed during the Korean War, further worsening the housing shortage. However, the nation did not have a clear solution to this since the national budget was concentrated in relief projects such as food distribution. Little investment was made in the housing sector. It was in 1951, one year after the breakout of the Korean War when the government began to get directly involved in housing supply. From 1951 to 1956, a total of 522,000 houses were built nationwide with a total of 87,000 houses provided every year. Of them, relief housing that amounted to approximately 143,000 houses (27.4%) was built and supplied directly by the government.

### 1960's to 1970's: Housing Policy Set Aside Amid Miracle on Han River

The astonishing economic growth of Korea, dubbed as the 'Miracle on the Han River,' began in earnest in the 1960's with the 'Five-year Economic Development Plan.' The plan was aimed at a self-sufficient economy against the ruins of the war. Up to the early 1970's, the investment in the housing sector was comparatively low since the national policies were focused on physical growth of the economy supported by diverse development plans.

During the First and Second Five-year Economic Development Plan, more than 12% of the total capital accumulation was put into the housing sector, and approximately 320,000 houses during the first round, and approximately 540,000 during the second round of the development plan were constructed. However, the housing supply ratio dropped to 78.2% in 1970 from 82.5% in 1962. This shows that the increase in population, collapse of the traditional extended family system, and urban population influx were dramatic in this period.

It was also in this period that the problem of real

estate speculation came to the surface in earnest with property prices going beyond the economic growth rate. The urbanization ratio, which remained only 28% in 1960, soared to 50% in 1970. This led to a significant shortage in urban land and urban housing, and consequently caused housing prices to skyrocket. To address this, the government implemented policies aimed at reining in real estate speculation since the mid 1970's. The housing issue was dealt with as an economic development policy for the first time in the Third Five-year Economic Development Plan (1972~1976). Additionally, the 'Ten-year Plan for Housing Construction (1972~1981),' the long-term plan to tackle urban squatters and to increase housing supply ratio, was established and pushed ahead.

## 1980's to Late 1990's: Housing Policy at Experiment Stand and Dream of Home Ownership

The demand for housing was explosive in this period amid continuing influx of population into cities, accelerating nuclearization of families, growth of national income and growing desire for enhanced quality of life. The housing shortage was a serious social problem; so much so that it was a regular issue of the rallies for democratization in those days. By the time the Sixth Republic (1988~1993) started in

1988, the housing investment remained low while the demand had been consistently increasing. In other words, the average annual supply of 200,000 houses could not catch up with the demand. Accordingly, the housing supply ratio dropped to 69.2% in 1987 from 70.5% in 1981.

To tackle this, the government announced the 'Two Million Units Housing Construction Plan (1988~1992)' in May 1988, and concluded the mission by completing approximately 2.14 million houses in 1991, one year ahead of the original goal year. The completion greatly improved the housing supply ratio of the nation, and enabled the government to continue to supply 500,000 to 600,000 houses on a yearly basis.

In the meantime, the 1980's marked the beginning of the full-scale fight against property speculation. To be specific, a variety of strong measures for anti-speculation were prepared and put into force such as the Special Measure for Property Registration and restrictive measures on the holding of property for non-business purposes. Propped up by these innovative measures of increasing housing supply and restraining fictitious demand, the nation's housing supply ratio rose to 92% in late 1997 from 69.8% in 1985. The housing prices turned to a stable downward trend in May 1991. Since then, the trend continued, and even recorded a minus growth of 0.2% in 1995.

Transformation of Korea's Housing over Past Decades



### **From 1998 to 2008: Housing Welfare and New Housing Culture**

The 1997 financial crisis of Korea dramatically changed the situations surrounding the housing market. The economic conditions of households worsened, leading to a significant drop in the housing demand and collapse in housing prices. The government tried to tackle the situations and revive the economy through a pump-priming package for the construction industry. Thanks to the more than ten deregulatory measures during the first two years (1998~1999) of the ex-president Kim Daejung government, the housing market gradually recovered, and the positive effects of deregulations continued until 2000.

However, since 2002, the war against property speculation has intensified. Expressing a strong willingness for anti-speculation, the following Roh Moohyun government strived to control property speculation announcing a series of related measures thirteen times from 2003. The typical policy tools used for the anti-speculation war include the introduction of the Comprehensive Real Estate Tax and Capital Gains Tax, and strengthened financial restrictions involving the Loan to Value Ratio (LTV) and the Debt to Income Ratio (DTI).

Coupled with this, housing welfare policies for the working poor were implemented. The supply of a house matching the income level, or customized housing represents the policies. Basically, housing welfare policy for the working class puts the first priority on the housing stability of the target households. However, in this period, policies aimed at creating a new concept of housing were also promoted, and the following two initiatives well display the intention of the policies. One is, the construction of rental housing for reserve for the middle-income class. This is designed to expand the beneficiaries of rental housing policies to the middle-income class.

The other is a move to supply a sufficient amount of long-term public rental housing and transform people's awareness of housing from ownership-oriented to residence-oriented. This policy direction has been set after a thorough consideration of the tendency for people to desperately wish to own housing with the lack of proper measures of alleviating housing instability in the past.

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## **60 Years of Transportation Network Building: Nationwide Travel Time Reduced to Half a Day**

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### **Retrospect on Transportation Infrastructure Policy**

Over the past six decades, policies for the supply of transportation infrastructure including roads, railways, ports and airports have continuously changed in close relationship with the situations of the times. After liberation from Japanese colonial rule and the following Korean War, the nation's transportation infrastructure was in a very poor condition. However, the economic growth under the five 'Five-year Economic Development Plans' from 1962 to 1991 rapidly increased the demand for passenger and freight transport.

Entering the full-scale economic growth in the 1970's, the Gyeongbu Expressway was built as a

preemptive measure for the estimated increase in the demand for passenger and freight transport following regional development. The Gyeongbu Expressway construction served as an occasion to build a nationwide road network system later on. Recognizing the limitation that roads alone could not solve traffic congestion in urban areas, in the 1980's, the nation also focused on the construction of urban railways, thus laying the foundation for public transportation infrastructure in metropolitan cities.

In the 1990's, the construction of the Gyeongbu High-speed Rail was initiated with the intent to resolve the difficulties in transporting passengers and freights on the road axis between Seoul and Busan. The construction of the Incheon

International Airport and the development of the Busan and the Gwangyang Port were an inevitable choice for the state, which was under the social pressure to strengthen national competitiveness by meeting the demand for the skyrocketing international passengers following liberalization of overseas travel in 1988, and by facilitating the handling of import and export freights. However, the experience of the IMF assistance following the 1997 financial crisis provided the nation with an occasion to reassess large scale national projects for infrastructure investment and improve its investment assessment guidelines, thereby more closely examining the effectiveness of such investments.

In retrospect, it has not been long since the transportation services of the nation became modernized. It is regarded that the expressway construction in the 1970's and the construction of urban railways fully initiated in the late 1980's marked a full-scale supply of transportation facilities in the nation. In contrast, inter-regional railway construction was partially achieved except for the construction of the Gyeongbu High-speed Rail, and the construction and expansion of ports and airports were small in terms of investment. In particular, failing to supply transportation facilities in advance on the basis of predictions on transportation demand and on future vehicle ownership, since the 1990's, the nation has suffered serious traffic congestion in inter-regional transportation, as well as in metropolitan cities.

Transportation difficulties arising from rapid increase in import and export volume and from traffic jams in metropolitan cities, went beyond simple traffic congestion and evolved into a social and economic loss when factoring in congestion costs and logistics costs. However, it was as late as in 1994 when the Special Accounts for Transportation Facilities was earmarked with a view to securing investment funds in a stable

manner. This means that it has been less than 15 years since the nation committed a full investment in transportation facilities.

### Transformation of Transportation Infrastructure by Sector

The infrastructure having the biggest impact on the current transportation network construction of the nation is the Gyeongbu Expressway completed in 1970. The opening of the expressway, along with the Gyeongin Expressway completed in 1968, provided a decisive occasion to gradually transform the then railway-centered transportation system into a road-centered system.

Despite oppositions, the nation concentrated national efforts and hastily completed the Gyeongbu Expressway totaling 428km in length in two and a half years. The construction was intended to brace for the forthcoming age of road transportation of passenger cars, and to lay the infrastructure that would dramatically improve the national logistics flow by building arterial roads connecting capital region with industrial complexes in the Busan · Gyeongnam region including Ulsan and Pohang. It would help the nation to join the ranks of export-led industrialized countries. Since the Gyeongbu Expressway construction, projects for expanding the nationwide expressway network have been consistently promoted, completing the Central, the West Coastal and the Inland Central Expressway. Currently, the nationwide expressway network, more than 3,000km long in total, are assuming the role and functions of national arterial transportation facilities.

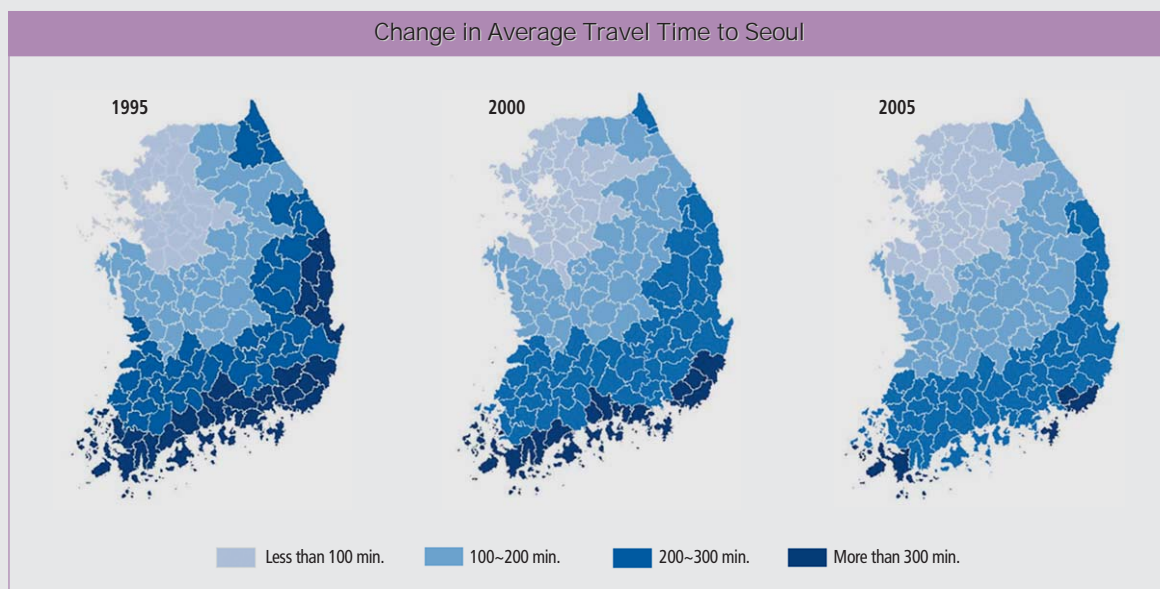
According to the results of the estimation on a variety of impacts of expressway construction on the national economy and on people's quality of life improvement<sup>1)</sup>, the direct impact on the economy of the entire expressway network of the nation completed up to 2005 is 139 trillion won annually, or 17.2% of the GDP. In addition, the results show

Impact of Expressway Construction (as of 2005)

Division	Direct Impact	Total Travel Time Saved	Total Travel Distance Saved
For Entire Routes in 2005	App. 139 trillion won/ year	App. 21 million hours/ day	80 million km/ day
For Each Vehicle	9.05 million won/ year	84 mins/ day	5.2km/ day

Note: The impact on the entire routes has been calculated based on the number of the registered vehicles in 2005.

Source: Kim, Hojung & Jung, Sunyoung (2007). New frontier policy required for highway construction, *Policy Brief* Vol. 136.



Source: Kim, Hojung & Jung, Sunyoung (2007).

that the expressway network has the effect of saving 9.05 million won and 420 liters of petrol a year, and 84 minutes and 5.2km-travel distance a day for each vehicle. In particular, regarding the average travel time to Seoul, the number of the nationwide cities and counties with more than 300 minutes of travel time to Seoul on average has significantly reduced since 1995, indicating the contribution of the expressway network to a balanced regional development.

The construction of the expressway network also proved to have the impact of psychological distance reduction in territorial space among the people<sup>2)</sup>. To be specific, it has been estimated that the impact of psychological distance reduction among people from expressway construction and the following road connection is approximately 16%. For a direct connection by means of expressways, the psychological distance reduction impact has been analyzed as approximately 60%.

The railways, which once played a key role in land transport after liberalization in 1945, failed to make a major breakthrough until the 1990's compared to the roads. Most of the railway projects until the 1990's were limited to transforming

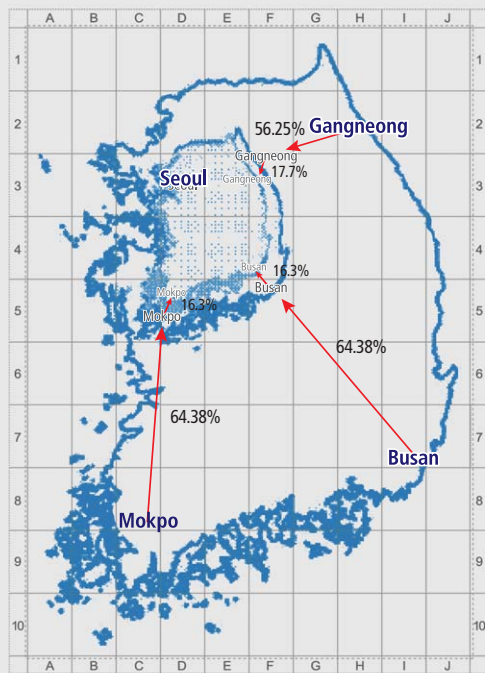
existing railways to double-tracked railways and rail transits, and construction of industrial railway tracks, with the investment in new arterial railway network construction remaining very low. Such a low investment in railways was due to the fact that basically, railways were less competitive than roads. Then, investments were fully made for urban railways prior to inter-regional railways because entering the 1980's, the rapid urbanization turned daily traffic congestions into a social issue primarily in metropolitan cities. In the meantime, the construction of the Gyeongbu High-speed Rail, conceptualized with the intent to address the congestions on the Gyeongbu Axis, was commenced in 1992 and partially opened in 2004, with the era of high-speed rail fully unfolding.

The liberalization of overseas travel in 1988 significantly increased the demand for international passenger transport, and raised the recognition of the capacity limitation of the Gimpo International Airport, providing the occasion to promote the construction of the Incheon International Airport. In addition, entering the 1980's, the Busan Port, which had been handling most of the container freights from across the nation in the export-oriented

1) Kim, Hojung & Jung, Sunyoung (2007).

2) Kim, Hojung & Chung, Ilho (2008). Highway network construction and psychological distance of territorial space. *Policy Brief* Vol. 192.

Change in Distance Reduction Impact  
Following Expressway Network Construction



Source: Kim, Hojung & Chung, Ilho (2008).

economy of Korea, was experiencing serious delays in shipping and freight transportation. On top of that, the container terminal of the Busan Port

equipped with seven berths at that time was falling behind its rival ports from Hong Kong, Singapore and Taiwan in terms of facilities, causing major large shipping companies to avoid the port, and consequently lowering the competitiveness of the import and export freights of the nation. In response to this, the nation made a decision to promote the Busan-Gwangyang two-port system in 1991 and made heavy investment. As of the end of 2007, a total of seven berths are operating in the New Busan Port and 16 in the Gwangyang Port.

Reflecting on the development of the transportation infrastructure of the nation over the past 60 years, it seems as if we were separated by an age. The transportation infrastructure, which began to be built to prop up the economic reconstruction of the nation amid the ruins after Korean War, during which even the transportation infrastructure established under the Japanese colonial rule for exploitation was destroyed, has now developed so much so that now people can feel the benefits in their daily life. This can be assessed as a noteworthy accomplishment attained with national efforts and surmounting numerous hardships. Now, the task that lies ahead of us is to construct transportation infrastructure to brace for future circumstantial changes.

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## 60 Years of Construction Industry of Korea: from Drastic Change towards Partnership and Amalgamation

### Birth of Construction Industry of Korea

The passage of the 「Draft Act on Construction Business」 with 8 Chapters and 48 Articles at the plenary session of the National Assembly on February 12, 1958, provided an institutional tool to promote the construction industry at the governmental level. The number of construction companies scattered across the nation at that time

was approximately 1,500<sup>1)</sup>. Later, design and engineering-related license, registration and reporting systems were introduced, and various business sectors of the construction industry were formulated. Ever since, the 「Act on Construction Business」 has played a crucial role in the growth and development of Korea's construction industry, leading and observing the drastic change Korea has experienced over the past 60 years.

1) Construction Association of Korea (1997). *Fifty-year history of Construction Association of Korea*.

### Construction Industry-related Laws and Regulations of Korea

- Framework Act on the Construction Industry (Act on Construction Business): Mar. 11, 1958 (Total revision on Apr. 15, 1999)
- Building Act: Jan. 20, 1962
- Certified Architects Act: Dec. 16, 1963
- Electrical Construction Business Act: Feb. 23, 1963
- Act on Information and Telecommunication Construction Business Control (Telegram and Telephone Equipments Work Business Act): Jan. 22, 1971 (Total revision on Feb. 5, 1999)
- Engineering Technology Promotion Act (Act on Promotion of Technological Services): Feb. 5, 1973
- Construction Technology Management Act: Oct. 24, 1987 (Total revision on Jan. 13, 1997, Jan. 16, 2001)
- Special Act on the Safety Control of Public Structures: Jan. 5, 1995 (Total revision on Jan. 29, 1999, Mar. 21, 2008)
- Framework Act on the Architect: Dec. 21, 2007

### Tumultuous 60 Years: Growth and Development of Korea's Construction

Until 1958 when the construction industry began to be formulated following the enactment of the 「Act on Construction Business」, construction businesses had suffered a poor reputation due to wrong practices of the past. Among people, the construction industry was known as a hotbed of irregularities and corruption. Accordingly, it is no exaggeration to say that for Korea's construction industry, the past six decades were characterized by a war against irregularities and corruption. Ironically, the response to this was the introduction of the American-type construction system, or the so-called general contract, under which the contractor is given a contract in bulk. In addition, it is notable that competition has been introduced for construction project bidding, along with bidding procedures. Needless to say, there were limitations

in rooting out irregularities and corruption; however, through these efforts, the nation could establish a modernized delivering system for construction projects over the years. Additionally, it is not too much to say that the policy and system change for the construction industry over the past 60 years has been a process of improving and restructuring this delivering system.

In the 1960's and 1970's, as these institutional tools took root, a modernized construction system was formulated. In the meantime, large-scale construction accidents frequently occurred due to fraudulent work, which will happen in the process of industrialization. In other words, this period had both dark and bright sides of rapid growth of the construction industry of Korea. In this period, the fever of economic development just began to engulf the nation. The biggest beneficiary was the construction industry, which fully served as an engine for economic growth of the country.

Expansion of Gyeongbuk Railway Line (1966)



Source: Construction Association of Korea (1997).

Banweol Industrial Complex Groundbreaking (1977)



Great Man-made River Project of Libya in 1980's



Source: Construction Association of Korea (1997).

During this period, the Seoul-Incheon and the Seoul-Busan Expressway were successfully completed with construction companies of Korea playing the leading role. However, rapid growth entailed construction blunders, as well. On April 8, 1970, the Wawoo Apartment Building in Mapo, Seoul collapsed. This large accident dealt a massive blow to the construction industry, as well as the people, and provided an occasion to reflect on the construction industry of Korea. The government began to change its policy directions towards protection and nurturing of the industry by directly and indirectly intervening. For example, the government strengthened the licensing system for the construction industry, so that the Public Procurement Service may solely assume the task of bidding and contracting of government facility construction, which had been under the control of individual government ministries and offices.

The crucial turning points for Korea's construction industry are the inroads into the Middle East market in the 1970's through the 1980's, and the opening of the local construction market prior to the financial crisis in the late 1990's. On the occasion of the entering into the Middle East construction market, the local construction industry began to fully make inroads into global construction markets. Most importantly, it provided the chance to promote the development of new construction technologies, and introduce advanced techniques for construction management. Also, it greatly helped the nation to respond to the construction market opening following the Uruguay Round agreement. Entering the 21st century, it significantly contributed to the

Seohae Bridge Built with Korea's Technology (2000)



commencement of another boom of overseas construction and to the export of local construction industry to overseas construction markets.

The financial crisis by which Korea was hit hard in the late 1990's delivered the knockout blow to the local construction industry. Responding to this, the government endeavored to surmount the crisis by strengthening the fundamentals through deregulation and globalization, instead of assistance with relief funds. Also, the government took strong actions to correct the chronic sector-oriented philosophy, regional nepotism and wrong practices including bid rigging among construction companies, and improve unfair practices.

A great change after the financial crisis was that the government took the initiative and tried to strategically improve the construction system in consideration of the environment and conditions of the local construction industry. The government established and pushed ahead the first 'Master Plan for Promotion of the Construction Industry' in 1998, and the second plan in 2002. In 2007, it set up the third 'Master Plan for Promotion of the Construction Industry,' which is currently under promotion. The consistent promotion of the plans is intended to restructure the local construction system according to global standards, secure effectiveness, fairness and transparency, and raise the industry to become a global brand. All of this is aimed to improve the contribution of the industry to the national economy.

The rapid change over the past 60 years illustrates that, in order for the construction industry to continue to grow and develop, it should break from

convention and prepare strategies to grow and develop on its own. In other words, the past six decades of drastic changes in the construction industry show that, in order to grow to become a global brand, the industry should try not to stay under government protection but strive to take off on its own.

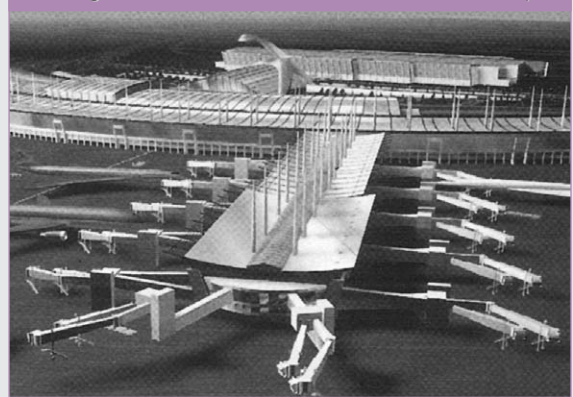
### **Preconditions of Construction Industry Prosperity: Partnership and Amalgamation**

The construction industry of Korea will continue to play a key role in creating symbolic structures of the time and leading a sea change in the national territory. It will continue to provide engineering services and play the role of the designer for diverse national plans, as well as the role of the contractor upon ordering construction projects under the plans. Therefore, it is expected that people and the government will remain interested in the construction industry as it was in the past and as it is now. In this regard, it is time to reflect on the 60-year path of the construction industry of Korea, and prepare for another take-off. That is, we need to keep the progressive and creative aspect of the industry, as shown in the industry's attempt to make inroads into overseas markets in the past. On the other hand, we need a policy decision to drastically scrap the regressive and negative practices of trying to secure orders from the local construction market only.

To this end, first of all, the construction industry should make contributions to maximizing the user value. In other words, the construction industry should go beyond better productivity and better competitiveness, and try to identify and provide what customers want. To achieve this, it is necessary to create a new culture of construction, or partnership and amalgamation. Furthermore, it is crucial to turn the construction industry into a cultural industry of the 21st century, and further, into a luxury brand.

Second, the future construction industry should come up with measures for green growth to face and respond to changes in external environment in a more efficient and more effective, trans-national and international manner. That is, in order for the industry to continue to grow and develop in the future, it is important to provide measures of strengthening its role as an engine for 'green

Passenger Terminal of Incheon International Airport



Source: Construction Association of Korea (1997).

growth' of the national economy.

Third, in order to transform the construction industry into a high-quality high value-added industry, it is necessary to streamline the structure of the construction industry and improve productivity. Employment should be also directed towards increasing the use of high value-added services of the technicians from marginal labor of the past. Accordingly, future policies for the construction industry should be directed towards strengthening the social and cultural role rather than the economic role of the industry.

And lastly, it is important to utilize the expertise and technologies the industry has accumulated to date, so as to support for economic growth and prosperity of global developing countries. In brief, a major task of the future policies for the construction industry is to combine the valuable experiences and expertise Korea has obtained in the process of territorial development to date, and develop the industry into a luxury brand, one that the global community tries to seek in the era of global economy. Already, our construction industry has become a global industry, and the influence the local construction industry exerts on overseas construction markets is growing. Considering this, what the construction industry of Korea needs to do now is to create a construction culture of green growth, and partnership and amalgamation geared towards the welfare of the entire global community.

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## INTERNATIONAL COOPERATION

### KRIHS-RIHN Joint International Symposium

A joint international symposium, organized by the Transportation Research Division, was held at KRIHS Hall on June 12. Under the theme, 'Urban Sustainability in Asia: Urban Planning, Environment & Transportation,' the symposium was jointly hosted by KRIHS and the Japanese Research Institute of Humanity and Nature (RIHN). In order to help Asian cities better respond to recent global issues of global environmental problems and the protocol on climate change, experts from Korea and Japan offered presentations and discussions on policy directions towards eco-friendly and sustainable development. The symposium was specially organized to commemorate the 30th anniversary of KRIHS inception and the signing of the MOU between KRIHS and the RIHN.



### MOU Signed with University of Maryland

Recently, KRIHS has concluded the MOU on reciprocal exchange and research collaboration with the University of Maryland of the U. S. A. Under the agreement, the two institutions will promote cooperation in fields of common interest, carrying out diverse cooperative activities such as the exchange of scholars for academic meetings, exchange of scholarly publications and other information, and joint research activities. The completed MOU document was received from the University of Maryland on June 30.

### OECD EDRC Delegation's Visit

Three delegates from the OECD Economic and Development Review Committee (EDRC) Mission visited KRIHS on July 9, and held an inquiry session with KRIHS researchers on the effects of the nation's real estate policies and future policy directions. The mission was on a visit to Korea to meet with public authorities and experts in the relevant fields and collect data, in preparation for the Korea EDRC meeting slated for November this year in France. The delegates made inquiries on the goals and directions of the nation's housing policies and the policy effects, and member of the KRIHS staff including Dr Chae, Director of the Land and Housing Research Division, answered those questions, helping the delegates understand recent policy efforts for housing development of Korea.

### Visiting Researcher Seminar on Livable City

The Urban Research Division held a seminar on livable cities on August 20, under the title, 'Livable Cities in a Global Era - Seoul in International Comparative Perspective.' At the seminar, Prof. Mike Douglass from the Dept. of Urban and Regional Development, University of Hawaii, offered a presentation, and active discussions followed the presentation on the concept of livable cities and the current status of urban spatial change in Seoul and East Asia.

A world-renowned authority on urban studies and urbanization in Asia, Prof. Douglass stayed with KRIHS through August, conducting a joint research under the KRIHS Visiting Researcher Program. Pointing out that as globalization proceeds, urban space is being increasingly restructured in the interest of international capitals, Prof. Douglass claimed that a livable city is a city in which the inhabitants take the initiative in making themselves happy living in their city. The seminar provided an occasion to reflect on the making of livable cities in Korea from a global perspective.

# **N**EW & ANNOUNCEMENTS

## Forum on Public Architecture Design

The 4th meeting of the Forum on Public Architecture Design was held on May 20 at the Korea Tourism Organization, organized by the KRIHS-affiliated Architecture and Urban Research Institute (AURI). The AURI is hosting the forum with the intent to establish common ground among different social groups on the future of public architecture of Korea. With experts on nursery facilities participating, the forum took place under the specific theme of 'Nursery Facilities through Children's Eyes.' The forum provided a venue to revisit the need for a comprehensive and interdisciplinary research that involves administrators, management, infant experts and architects altogether, along with the need for consistent communication among them.

## Hi-tech Transportation Forum



The fifth meeting of the Hi-tech Transportation Forum was held on May 29 at the KRIHS Hall. Many people from ITS-related industries, academia, research circles and government participated in the forum, with the attendance reaching approximately 140 persons. The forum, held under the theme, 'Measures of Reviving Projects for Driving Continuing Momentum for ITS Development,' offered presentations and discussions on a variety of sub-themes including ITS policy issues, new technologies, standardization, strategies for public relations, and measures of exporting the ITS.

## 2008 New Trends in Urban Planning

The Urban Innovation Center is currently carrying out an overseas training program titled, 'New Trends in Urban Planning' among related public workers and urban experts, to provide education on trends and experiences in urban planning, development and renewal by industrialized countries. Following the programs in May in Japan and in the U. S., the Overseas Training Program was provided from June 1 to 11 in Europe. During the program, participants visited several cities in Europe including London and Paris. They visited relevant institutions and held seminars on public design, sustainable cities, eco-friendly urban renewal and new town development.

## Inauguration of 12th KRIHS President

On June 19, Dr Park Yangho was inaugurated as the 12th KRIHS President. In his inauguration speech, Dr Park expressed his vision to 're-model' the KRIHS as a 'super excellent research institute of Korea' to lead the development of the territorial policies of the nation. In addition, Dr Park encouraged the entire staff to make special efforts, on the occasion of the 30th anniversary of the institute's inception, so as to enhance the trust of the government and the people, and explore creative and pragmatic policies for territorial development.

## Forum on Urban Studies

On July 4, the Forum on Urban Studies was held at KRIHS Conference Room under the theme of spatial structure and urban growth. At the forum, Dr Lee Bumsoo, Professor of the University of Illinois at Urbana-Champaign, offered a presentation on the results of his research on 'Urban Structure and Growth in U. S. Metropolitan Areas', which explored how the size of a city affects the linkage between the urban structure in metropolitan areas and urban economic growth. The presentation was followed by discussions on the research contents.

# **N**EW & ANNOUNCEMENTS

## 2nd Meeting of Architecture and Urban Forum



The KRIHS-affiliated Architecture and Urban Research Institute (AURI) is holding the Architecture and Urban Forum throughout the year of 2008, under the theme, 'Urban and Architecture, the Productive Communication.' On July 25, the AURI held the second meeting of the forum at the AURI Conference Hall, under the title, 'Interdisciplinary Communication in the District Unit Plan.' Many people attended the forum with keen interest, and presentations were offered primarily on recent issues in the District Unit Plan and future possibilities. The AURI will continue to hold the Architecture and Urban Forum in the future. Through the forum, the AURI intends to share issues with various aspects which arise at the boundaries between urban and architecture, and broaden discussions in the field of architecture and urban space.

## 30th Anniversary Celebration Events

October 4, 2008 marks the 30th anniversary of KRIHS inception. A variety of celebration events are currently taking place including international seminars by each individual research division of KRIHS throughout the year. One of the main events is the anniversary ceremony due on October 1, at which the new KRIHS CI will be announced and the newly organized KRIHS Choir will have its first official performance in celebration of the anniversary.

On the same day, KRIHS is hosting an international seminar titled, 'Global Challenge and Territorial Strategies,' inviting several world-renowned scholars and experts on spatial planning including Prof. Capello of the Politecnico di Milano, Italy, Prof. Koh of the Wageningen Uni., the Netherlands, and Prof. Sasaki of the Osaka Uni., Japan. On the occasion of the seminar, KRIHS is eager to re-create itself as a 'super excellent research institute of Korea,' to lead territorial policies of the nation.

Among other events is the release of a couple of special publications including the 'KRIHS 30 Years History.' The publications are designed to reflect on the 63-year history of territorial development of Korea, and the 30-year history of KRIHS respectively. The publications are planned to be available both in English and in Chinese respectively for widespread distribution.

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*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.*

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