



## Consultant's Report

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Project Number: S75194  
September 2012  
Final Consultant Report

### TA-7566-REG: Strengthening and Use of Country Safeguard Systems

### Legal and Regulatory Framework for Compensation Valuation in the Republic of Korea

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## ABBREVIATION

ADB	– Asian Development Bank
CAMA	– Computer-assisted Mass Appraisal
IR	– Involuntary Resettlement
LR	– Land Readjustment (Project)
KAB	– Korea Appraisal Board
KAPA	– Korea Association of Property Appraisers
KLIS	– Korea Land Information System
Korea	– Republic of Korea
KRIHS	– Korea Research Institute for Human Settlements
LAR	– Land Acquisition and Resettlement
Acquisition and Compensation Act	– Act on the Acquisition of Land etc. for Public Works and the Compensation Thereof (2002)
Land Appraisal Act	– Public Notice of Values and Appraisal of Land Act (1989)
MLTM	– Ministry of Land, Transport, and Maritime Affairs
PMD	– Publically Noticed Values of land
PNV of land	– Publically Managed Development (Project)
PNV of real estate	– Publically Noticed Values of real estate
Real Estate Appraisal Act	– Public Notice of Values and Appraisal of Real Estate Act (2005)
SAP	– Standards of Appraisal Practice (2012)
SCVP	– Standards of Compensation Valuation Practice
Special Compensation Act	– Act on Special Cases concerning the Acquisition of Lands for Public Use and the Compensation for their Loss (1975)
SPS	– Safeguard Policy Statements



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## EXECUTIVE SUMMARY

1. This Study, *Legal and Regulatory Framework for Compensation Valuation in the Republic of Korea (Korea)*, presents the evolution of the legal, regulatory and institutional framework for compensation valuation which has been developed in Korea over the past 50 years. It also reviews recent practice and experience of compensation valuation in the context of Korea's economic, social and political development as well as the country's urban development. It then compares key compensation valuation provisions in Korea's legal framework with the Involuntary Resettlement Safeguards Requirements of the Asian Development Bank's (ADB) Safeguard Policy Statement (SPS). Based on Korea's experience, it provides recommendations to inform the development of a sustainable legislative, regulatory, and institutional framework for compensation valuation with an appropriate international standard in developing Asian countries and identifies key challenges to establish and implement such a system.

### Background of Korean Compensation Valuation

2. **Need for Urban Development.** Korea has been urbanized and industrialized for an exceptional short period; the rate of urbanization increases from 37% in 1960 to 90% in 2010. Rapid urbanization and industrialization greatly expanded the demand for urban land uses, particularly for infrastructure, industrial estates, and residential sites. This demand required a substantial increase in the supply of urban land. The stock of urban land in 2010 more than doubled compared to 1975. However, the private sector could not afford to develop and supply land at scale, at least at the initial stage of urbanization and industrialization. There were various reasons for this: private development markets were not yet established and the financial resources of the private sector were very limited. Also land for urban infrastructure facilities were not available at the required scale and, being public services, were primarily a public sector responsibility. On the other hand, urban land had to be developed within the framework of national physical and economic development plans; laissez faire market might lead to reckless development without adequate consideration of natural and built environments. The government played an important role in overcoming these problems by drawing up development plans, formulating and imposing regulations to promote urban expansion and investing in infrastructure. The government and public enterprises became involved in large scale urban development projects. To facilitate the government's involvement in urban development, the government enacted relevant urban planning laws, including the Urban Planning Act (1962), the Act on Comprehensive Plans for Construction in the National Territory (1963), the Act on the Utilization and Management of the National Territory (1972) and the National Land Planning and Utilization Act (2002); and also relevant urban development laws, including the Land Compartmentalization and Rearrangement Project Act (Land Readjustment Act, 1966), the Housing Site Development Promotion Act (1980) and the Urban Development Act (2000).<sup>1</sup>

3. **Need for Land Acquisition and Resettlement.** As the government's role became dominant in carrying out urban development, compulsory land acquisition and resettlement (LAR) became important, because under the freehold ownership system private individuals own most of the land in Korea. Thus, when the government needs to acquire land for urban development, it exercises its power of eminent domain by first contacting landowners in advance and negotiating the conditions for land acquisition. If they fail to reach an agreement,

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<sup>1</sup> *The English translation of Korean Acts and other technical terms is provided by the Korea-English Glossary of Legal Terms published by the Ministry of Government Legislation (2009).*

the government compulsorily acquires the area. But compulsory acquisition has been a last resort. To enable the government to acquire the land for urban development, the government enacted relevant LAR laws. The Land Expropriation Act (1962) was a general statute for LAR. To encourage the process of negotiated purchase, the Act on Special Cases concerning the Acquisition of Land for Public Use and the Compensation for their Loss (Special Compensation Act, 1975) was enacted. In 2002, both the Land Expropriation Act and the Special Compensation Act were merged into the Act on the Acquisition of Land etc. for Public Works and Compensation (Land Acquisition and Compensation Act).

4. **Need for Just Valuation.** The Land Acquisition and Compensation Act regulates the process of providing compensation in line with the principles of the Constitution of 1948. The Constitution explicitly stipulates the principles of due process of law and just compensation. Just compensation might be defined similar to market value. However, in most cases, public work operators and the affected persons have different understanding in the conception of "market" and "value". In addition, the negotiation power between project operator and the affected person has not been balanced contrary to the negotiation power in the market place, where real estate property is dealt through free negotiation without compulsion between the willing sellers and buyers in an arm-length transaction. Local government officials had valued compensation amount of land and structures until the early 1970s, the value of which hardly reflected market value. Consequently, compensation conflicts had arisen. To mitigate these compensation conflicts and set up criteria for compensation valuation, the government introduced the Basic Land Prices (BLP) system pursuant to the Act on the Utilization and Management of the National Territory (1972). The BLP had been used as a standard for compensation valuation, which system developed into the Publically Noticed Value (PNV) of Land system (1989), and eventually the PNV of Real Estate system (2005). To assess the BLP, Certified Public Appraiser was introduced in 1973. Since then compensation value for land and building acquired for public works have been assessed by qualified private appraisers, not by government officials.

5. Even if methodology and process of valuation are similar to all appraisals, compensation valuation has its own characteristics compared to other appraisals such as taxation assessment. On the one hand, compensation valuation should be conducted in the line of protecting the affected person's private ownership which is guaranteed by the Constitution, and also of at least restoring the affected person's level of livelihood after handing their land and property over for public works. That is the reason why many international financial institutions including ADB emphasize the principle of compensation at full replacement cost rather than at the simple market value. On the other, the level of compensation is obviously connected to the feasibility of public projects. Excessive compensation may increase the project costs, thus making the project less feasible; the government's capability to implement urban development is constrained by a limited budget. Thus, compensation valuation needs to keep a balance somewhere between the need for restoring the affected person's livelihood and the need for considering the government's financial capability for carrying out public works.

6. In Korea, at the early days of urbanization and industrialization in 1960s~1970s, efficient implementation of public works were more emphasized to drive economic development; just compensation, the tenet of the Constitution, was translated as "comparable compensation" and the amount of compensation was calculated even within the budget of public works. Insufficient compensation intrigued the affected persons to refuse to sell their land through negotiated process and oppose the implementation of urban development. The result was delays in project implementation, increase in overall costs, and a loss of the reputation and legitimacy of government among the general public. Project operators including government became to realize that a strong social safeguard, including just compensation, was eventually beneficial to



project outcome as well as to the national economy. As Korean society became democratized since the mid-1980s, just compensation has been translated as "complete compensation" by both the state and society. The limitation of government finance and project budget could not be the excuse any more not for providing just compensation. Both the government and the public widely recognized that public works have to be postponed or cancelled if adequate project financing were not secured. Hereafter, the scope of resettlement policies has been expanded, from providing just compensation in property expropriation to providing relocation measures since mid-1970s, and further to furnishing the affected person with livelihood measures since the early 1990s.

## **Legal System and Institutions for Compensation Valuation**

7. **Legal Basis for Compensation Valuation.** The Constitution (1948) explicitly stipulates the principles that due process of law and just compensation must follow in the case of expropriating private property. Land Acquisition and Compensation Act (2002) stipulates scope of public works, methods and criteria of compensation, procedure of compensation, grievance redress, etc. Particularly, the Act prescribes the standard, methods, procedures and time of compensation valuation on land and other property, while the Public Notice of Values and Appraisal of Real Estate Act (Real Estate Appraisal Act, 2005) stipulate those of general appraisal on land and other property. Based on regulations of the Enforcement Rule of Land Acquisition and Compensation Act, the Standards of Compensation Valuation Practice (SCVP) was established to cover the procedures and methods of compensation valuation for land, business loss, graveyard, and fishing rights. However, there had been argument against the legal status of SCVP, since SCVP were established by the Korea Association of Property Appraisers (KAPA), a private membership-based organization composed of certified appraisers. To redress this challenge, the government made the Draft of Standards of Appraisal Practice (SAP) in 2011. The contents of SAP include Standards of Compensation Valuation Practice and Standards of (General) Appraisal Practice. The Draft is scheduled to be confirmed by 2012. The Real Estate Appraisal Act (2005) is a general statute for real estate appraisal. Unless another Act stipulates a special provision, this Act must be complied in all cases of real estate appraisal. The Appraisal Regulations of the Act is independently established to stipulate method, criteria, procedure of general appraisal. Compensation valuation is also included.

8. **Organization for Compensation Valuation.** Land Bureau of the Ministry of Land, Transportation and Maritime Affairs (**MLTM**) is in charge of management and supervision on appraisal market; Land Policy Division is responsible for compensation valuation issues and Real Estate Valuation Division for general appraisal issues. **Qualified appraiser** system was introduced at 1972 pursuant to the Act on the Utilization and Management of the National Territory. At that time, "a land assessor", as certified professional license, was initially introduced to take charge of public market valuation such as compensation valuation and taxation valuation. A year later, in 1973, another certified license, namely "a certified appraiser", was introduced pursuant to the Appraisal Act. A certified appraiser generally assumed private market valuation such as collateral valuation for financial or banking institutions. Even if appraisal license system was operated in a dual form under the related Acts and by different Ministries (Ministry of Construction and Minister of Finance), both licenses were fundamentally identical in terms of their main role as valuation. For this reason, land assessor and certified appraiser were merged into "certified public appraiser" as one qualification system under the Public Notice of Values and Appraisal of Land Act (Land Appraisal Act, 1989), which was evolved to the Real Estate Appraisal Act (2005). The Korea Association of Property Appraisers (**KAPA**), established in 1989, is a non-profit private association composing of certified

appraisers. The Korea Appraiser Board (**KAB**), founded in 1969, is a semi-public corporation, the most important tasks of which are to support the Publically Noticed Value of Real Estate system and to make survey and management for a variety of public statistics. Most **valuation-related committees**, as a permanent organization, are established and operated at the KAPA and KAB. Of them, the Valuation Review Committee, Valuation Feasibility Deliberation Committee, and Appraiser Recommendation Committee are main ones.

### **Subject and Object of Compensation Valuation**

9. **Valuation by Private Qualified Appraiser.** By the early 1970s, most compensation valuation was conducted by public officials who were in charge of taxation. At that time, public officials calculated compensation amount on the basis of recorded taxation standard for land and property. To guarantee expertise, fairness and objectivity of compensation valuation, the qualified appraisal system was introduced in 1972 and since then, qualified private appraisers have taken charge of compensation valuation.

10. **Time of Choosing Appraiser.** One of compensation appraiser's roles is to attend the Compensation Council and thus explaining valuation method for calculating compensation amount to the affected persons and also listening to the affected person's opinions. Therefore, project operator should choose appraisers before holding the Compensation Council.

11. **Method of Choosing Appraisers.** Since the early of 1960s, compensation valuation has been committed by two appraisers recommended by project operator under the Land Expropriation Act (1962). To reflect the demand for just compensation argued by the affected persons and NGOs, the Land Acquisition and Compensation Act was amended in 2003 so that landowners could recommend one appraiser. Since then until May 2012, compensation amount has been determined by taking arithmetic mean of valuation estimated by 3 appraisers. However, some problems were raised; The Board of Audit pointed out that over-compensation rather than just-compensation had prevailed resulting in waste of public budgets, which was caused by the landowner's appraiser recommendation practice. On the other hand, unbalance in selecting appraisers was pointed out, too; why projector operator should recommend two appraisers while landowners recommend only one appraiser. In the wake of long discussion at the National Assembly, the Land Acquisition and Compensation Act was revised in May 2012 that more than three appraisers shall conduct compensation valuation, one recommended by project operator, another by landowners and the third by the head of local government, where the target land is located and Compensation Council is established in order to strengthen neutrality of compensation valuation. If the difference between the highest and lowest valuation is more than 10%, then project operator selects another appraisers to re-value them.

12. **Objects of Compensation Valuation.** The objects of compensation valuation are all properties affected by land acquisition for public works, including (i) land and its rights other than ownership thereof, (ii) standing trees, buildings, and others fixed on land, and other rights than ownership thereof, which are required for public works together with land, (iii) mining rights, fishing rights or the right to use water, and (iv) rights over the soil, stones, sand or gravel belonging to land. During the last 14 years from 1998 to 2011, a total of 84.52% of total amount of compensation paid was compensation for land. Compensation for buildings, agricultural loss, and business loss respectively accounted for 11.14%, 1.37% and 1.04%. Compensation for relocation measures accounted for 0.3%. Whereas land acquisition costs increase year by year, compensation for farming and fishery losses continues to decrease, mirroring changes in Korea's industrial structure.

## Compensation Valuation and Publically Noticed Value of Real Estate System

13. **Assessment of Compensation Rates.** In principle, compensation valuation is made on the basis of market value. For this reason, sales comparison approach is mainly used in compensation valuation and to enhance the properness of the valuation, cost and income approaches are complimentary used. To utilize sales comparison approach, it is important to collect enough sales data with comparability to the subject. However, this prerequisite was not established by the mid-1990s in Korea. To overcome such limitations, the government introduced the BLP system in 1972, which developed into PNV of land system (1989), and PNV of real estate system (2005). Benchmark PNV is determined by certified appraisers, who choose and utilize the most appropriate approaches among sales comparison, cost and income approaches. Then, they draw normal market value of other properties by comparing the characteristics of the benchmark and subject properties. PNV of real estate is widely utilized in both public and private valuation market.<sup>2</sup> In public valuation market, PNV is used as base of imposing national and local taxes. For example, taxation standard of property tax is calculated as about 80% of PNV of real estate. PNV is also used as criteria for imposing various charges such as development charge, for estimating compensation valuation, for calculating the rent base of government owned real estate, and for verifying the reported prices of real estate transaction. For instance, compensation valuation is estimated based on PNV of real estate. In private valuation market, PNV is also utilized as estimation criteria for collateral valuation.

14. **Mass Valuation Technique.** To survey and value the entire land and housing is impractical for reasons such as the costs of getting the information compared with the potential benefits. To save those costs for a relatively small sacrifice in accuracy, PNV system is managed as a kind of computer-assisted mass appraisal (CAMA) in that it extracts samples of land and building, makes survey and estimation of these samples, and then estimates other individual property by using CAMA techniques. The number of sample or benchmark in PNV of land system is 500,000 parcels (1.3% of entire parcels of land), representing the total of 38 million parcels of national land. Among them, a total of 46.56% of benchmarks is distributed to urban area and 53.44% to non-urban area. A total of 41.25% of benchmarks is allocated to the site for buildings. Benchmark for paddy field, dry field and forest are followed in sequence. Benchmark for these four land use categories amounts to 96.76% of the entire benchmark numbers. To maintain a high level of consistency and continuity, the benchmark will only be altered when the characteristics of benchmark have changed seriously such as changed land use zoning. The number of benchmark in PNV of detached house system is 190,000 units of houses (4.6%), representing the total of 4.16 million units of houses. PNV of apartment with 10.33 million units is valued by complete enumeration survey rather than valued by a sample survey method.

15. **Standard and Individual Real Estate Valuation.** PNV of benchmark property is surveyed and valued by two appraisers following the market analysis every year. To determine individual property's value, price comparison table is developed through mathematical analysis of market data. The survey table for land characteristics consists of 23 items such as land use zoning, acreage, land use status, road conditions etc., and that for housing characteristics composes 20 items such as building structure, ceiling structure, special supplementary installations, rooftop structure, underground, annexed buildings, supplementary use, extension

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<sup>2</sup> *Public sector and private market valuation are classified from valuation practices rather than from legal definition. There are two criteria; one is who is client of valuation service (government vs. private sector), the other is purpose of valuation service (taxation & compensation vs. bank's collateral etc.). Valuation criteria and approaches are basically common in both public and private market valuation.*

and remodeling of buildings etc. To support quick and exact survey and valuation, the whole process for inputting the relevant data, analyzing statistics, and drawing the estimation of land and housing price is computerized. All the computerizing system, which was transformed into the Korea Land Information System (KLIS) in 2006, is utilized by each local government.

16. **Verification of Publically Noticed Value of Real Estate.** The current land price automated mapping was conducted for 1997~2000. The price automated mapping allows appraisers to see the position of each property, to visualize the relative and absolute values of individual property in a locality, to check the price differences of neighboring properties, and thus reducing greatly the inconsistent valuation and raising the preciseness and reliability of PNV of each parcel of land. The price automated mapping is shown in the KLIS, thus allowing the general people also to access the system. It contributes to improving transparency of the PNV of real estate system.

17. **Opening Up All Information to the Public.** All PNV of benchmark land and housing are possibly accessed at the homepage of the MLTM (<http://www.mltm.go.kr/>) throughout the year. The general people are also able to check the PNV of individual real estate provided by each local government through electronic government site (<https://www.korea.go.kr/>). Most land and housing information including prices can be obtained through remote online system. All these computerization enhances transparency of PNV of real estate system.

### Standard of Compensation Valuation

18. **Date of Compensation Valuation.** When land is acquired through negotiation, then date of valuation shall be the date of consultation; when land is acquired through compulsory expropriation, then date of valuation shall be the date of expropriation adjudication under the Land Acquisition and Compensation Act. Due date of valuation report is within 30 days after requesting for valuation. If valuation report is written in a flawless way, amount of compensation shall be estimated by taking valuation results in the arithmetic mean of two or more appraisers. If difference between highest and lowest valuation is more than 10%, then project operator selects another appraisers to re-value them. If contract for acquiring land is not made within one year after valuation, project operator shall ask another two or more appraisers to estimate amount of compensation again. Project operators shall accompany and guide appraisers in field survey. To secure reliability of valuation, project operator should inform landowner and stakeholder of survey date and time, and thus enabling consultation between landowners and appraisers.

19. **General Principle of Compensation Valuation.** Compensation value shall be determined on market value in principle. Valuation is conducted principally on the basis of current utilization status and of public restrictions on the subject as of date of valuation. Unitary amount of valuation is calculated for one subject in principle. But, lump-sum, distinctive or partial valuation may be conducted for special conditions.

20. **Valuation Standard for Land Compensation.** Compensation valuation for land is conducted on the basis of objective situation as general utilization method at date of valuation without considering landowners' subjective value or premising to be used for special use. Compensation valuation for land is based on actual utilization status at the date of valuation. The compensation valuation shall be principally implemented by subject in an individual way. Compensation valuation shall be conducted as a vacant state or site if buildings on the land or rights other than ownership are created. Compensation valuation shall be estimated by

excluding the fluctuation of land value after plan or implantation of the pertinent public works is publicly notified or announced. Compensation valuation is based on the PNP of benchmark land.

21. **Valuation Standard for Land by Special Cases.** Land under public restrictions shall be estimated in consideration of such restrictions. But if public restrictions are caused by implementation of public project, such restrictions shall not be considered. Site with unauthorized buildings shall be estimated in consideration of utilization status at point of time when unauthorized buildings were built with excluding created value of land or improvement cost. Land, which is illegally modified in the shape of land without any authorization or report under the related regulations, shall be estimated in consideration of utilization status at point of time when shape of land was modified.

22. **Compensation Valuation for Fixtures.** Fixtures such as buildings, structures, installations, standing tree, other goods, etc. shall be compensated for transfer cost in principle. Herein, whether it is possibly transferred is judged by economic side rather than physical or technical side. If fixtures are present on the land, compensation shall be basically made for land and fixtures in a respective way. But in case that land and buildings are customarily transacted together, such fixtures shall be estimated together with the land and such fact shall be written in the valuation report. In principle, buildings shall be estimated by cost approach. The cost approach establishes the upper limit of what the market would normally pay for a given property as new. Thus, for older buildings, some allowance for various forms of accrued depreciation is deducted to estimate a price that approximates market value. Thus, the Korean approach to estimate buildings is like a *depreciated replacement cost approach*. For residential buildings, if the estimated amount of valuation by sales approach exceeds that by cost approach, the estimation shall be determined by sales approach. To ensure the residential security, another scheme shall be provided to the displaced persons through relocation measures.

23. **Compensation Valuation for Other Rights.** Mining rights are not exterminated even if a project operator acquires the land. For a mine with production record of minerals, which is currently operated or temporarily suspended, compensation valuation is to subtract remaining value of installments to be transferred or changed in use from estimated amount of a mine considering future profitability with addition of transfer cost. Compensation for fishing damage loss shall compensate damage by decreasing or losing future expectation profit owing to limitation, suspension, etc. of fishing rights. Valuation for loss in business discontinuation is estimated in consideration of operating profit (including wages), period of business suspension, amount of value loss in selling fixed asset for business, etc.

### **Review and Verification System for Compensation Valuation**

24. **Review and Verification System.** All valuation service needs to secure fairness and reliability. Securing fairness and reliability is more significant to compensation valuation. Thus, the government regulates a series of verification process for compensation valuation, which follows three steps; (i) internal review within appraisal company in which the appraiser is employed; (ii) outer review within the Valuation Review Committee established under the KAPA; and (iii) internal verification by project operator. This verification process helps compensation valuation reflect market price more properly. This process also helps project operator obtain credibility from the affected persons. As a result, most of the affected person had agreed with the level of compensation valuation; during the last 30 years, about 93% of the total area for all public projects was acquired through negotiated settlement and the remaining 7% was acquired through compulsory acquisition.

## Comparative Analysis of Korean Practice and ADB's Principles

25. **ADB Principles.** ADB's IR Safeguards aim (i) to avoid or minimize IR wherever possible, (ii) to enhance or at least restore the livelihoods of all displaced persons, and (iii) to improve the standards of living of the displaced poor and other vulnerable groups. For that purpose, ADB has basically three principles of compensation valuation. Primarily, compensation valuation shall be calculated at *full replacement costs*, which imply the consideration of (i) fair market value of compensation, (ii) transaction cost, (iii) interest accrued, (iv) transitional and restoration costs, and (v) other applicable payments, if any. Secondly, in applying such full replacement cost method, depreciation of structures and assets should not be taken into account. Finally, qualified and experienced experts shall undertake the valuation of acquired assets.<sup>3</sup>

26. **Korean Practice.** The Korean legal framework is equivalent to the ADB IR Safeguards to a considerable extent. Compensation valuation has been conducted by private certified appraisers since the early 1970s. PNV of real estate, which is basis of compensation valuation, has been also estimated by qualified appraisers. The adequateness of compensation valuation shall be continuously verified through a variety of verification process. This verification process helps compensation valuation reflect market price more properly and obtain credibility from the affected persons.

27. One of the reasons why ADB adopts the full replacement cost method is that in many developing countries, land and real estate markets are not active. If any, the market is in immature stage, at least at the early stage of economic development. If land and housing markets do not exist or are not mature enough, it is very hard to find fair market value. In Korea, however, land and real estate market has actively worked. Consequently, the estimated amount of compensation valuation based on market value within such active market might be almost similar to valuation result from replacement cost method suggested by ADB.

28. One legitimacy of ADB replacement cost principle is that any transaction costs such as taxes must not be paid by the affected persons in the process of receiving cash payment and acquiring replacement land. If such tax is paid by the affected persons, then the amount of cash payment actually decreases so that it is impossible to acquire land similar to those of previously held. In Korea, transfer tax (capital gains tax to the seller), acquisition tax and registration tax (to the buyer) are imposed in real estate transaction. However, if the affected person acquires replacement real estate within one year after transferring his/her real estate to public operator, then acquisition and registration tax are exempted; similar to the ADB's policy. In the past, capital gains tax was exempted for the affected persons, too. There was big change since the early 1990s, when the amount of compensation began to fully reflect market value. Moreover, relocation measures were provided and livelihood measures were continuously extended. Some issues were raised; additional tax benefit might be against the equity principle of taxation, comparing with general sellers who had to pay for capital gains tax. Act on Regulation of Tax Reduction and Exemption was revised in 1990 to raise fairness and neutrality of taxation. Exemption of capital gains tax for the affected persons became reduced continuously. Currently, if the affected person receives cash compensation, then capital gains tax is reduced by 20%. If the affected person receives bond compensation, then capital gains tax is reduced by 40%. If the affected person has cultivated farmland directly for 8 or more years, then capital gains tax is exempted. As for capital gains tax for housing, discounted rate is applied to the affected person from 24% (for 3 years) to 80% (for 10 years and more) by holding period. This implies that the transaction cost of taxation is minimized to the affected persons.

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<sup>3</sup> ADB. 1995. *Involuntary Resettlement Policy*. Manila ; ADB. June 2009. *Safeguard Policy Statement*. Manila.

29. ADB replacement cost principle stresses that compensation payment shall be paid immediately by project operator. If the payment is delayed, the affected person suffers from the additional loss accrued due to bank's interests or price inflation. Just compensation shall make up for any loss given to the affected person due to delayed compensation payments. In Korea, compensation shall be paid immediately after consultation is completed or expropriation adjudication is judged. If not paid immediately, consultation or expropriation adjudication loses its legal force accordingly; project operator loses its power of eminent domain to acquire or expropriate land. If project operator acquires the land through negotiation settlement, compensation is paid by price at time of consultation. If consultation is made in one year after compensation valuation is conducted, then compensation valuation shall be conducted again. If project operator acquires the land through compulsory purchase process, compensation is paid by price at time of expropriation adjudication. Finally, compensation valuation is conducted on the basis of PNV of real estate. This PNV is surveyed and valued by private qualified appraiser every year in order to reflect the changes in market situations in a timely and proper way. Time gap between the dates of PNV and compensation amount is corrected by using inflation index; either monthly land price fluctuation rate surveyed by qualified appraisers and issued by the MLTM, or monthly producer inflation rate announced by Bank of Korea. By setting up such adjustment mechanism, Korean government guarantees that the affected person does not bear transaction cost accrued due to delay in compensation payments.

30. **Gaps between Korean Practice and ADB Standard.** In general, Korean practices of compensation valuation reflect most policy principles of ADB. A critical gap between Korean and ADB policy principles is that ADB emphasizes on replacement of alternate land if land is acquired for public works, which is limitedly applied. In Korea, cash compensation is the underlying principle in LAR. Compensation with land is alternatively allowed by request of the affected person. That is, the order of compensation method, either replacement of land or cash payment, is different between ADB and Korea; ADB gives a priority to land replacement, and cash compensation is a second option when replacement of land is impossible. On the contrary, in Korea, cash compensation is the first option, option of replacement of land is an alternative.

31. More critical gap is related to valuation principle. ADB clearly specifies the valuation principle at full replacement cost, by which depreciation of buildings shall not be considered in compensation valuation. In comparison, the Korean practice of compensation valuation is mostly focused on fair market valuation, so that depreciation is considered in compensation valuation for buildings. It is a kind of *depreciated replacement cost* method. This principle is stipulated in most laws including the Constitution, the Land Acquisition and Compensation Act, and Korean Standards of Appraisal Practice, etc. In Korea, complete compensation for the affected persons and warranty for their residential stability are treated distinctively so that residential stability is achieved through relocation measures.

32. ADB replacement cost includes fair market prices and other incidental transaction costs. So any transaction costs such as taxes must not be paid by the affected persons in the process of receiving cash payment and acquiring replacement land. In Korea, if the affected person acquires replacement real estate within one year after transferring his real estate to public operator, then acquisition tax and registration tax is exempted, same to the ADB policy. There is some gap in transfer tax. For farmland with direct cultivating for 8 or more years, transfer tax (capital gains tax) shall be fully exempted. Other land get only 20~50% tax exemption effect. Except for those gaps, results of compensation valuation of both ADB and Korean principles are quite similar; since Korean land and housing market are mature enough, PNV of real estate is

annually updated, compensation valuation is conducted by private qualified appraisers, and the affected person's burden of transaction cost is minimized.

### **Policy Implication of Korean Experience**

33. **Establishment of Legal Foundation.** In designing and conducting compensation valuation, it is necessary to minimize the discretionary power of relevant government officials and stakeholders including project operators, the affected persons and appraisers, and to enhance the predictability of the procedure and provisions for valuation. In Korea, most principles of just compensation are stipulated within relevant Acts such as the Constitution and the Land Acquisition and Compensation Act etc., and most due procedures and methods of compensation valuation are prescribed within relevant regulations including the Real Estate Appraisal Act and the Standards of Appraisal Practice, etc.

34. **Capability Development for Neutral Qualified Appraisers.** There is a need for fostering neutral qualified experts who are in charge of appraising, in an objective and fair way, the value of affected property and the cost of land acquisition and resettlement for by urban development. In Korea, public (tax) officials appraised compensation value before 1972, which raised questions about the neutrality and expertise of valuation. Subsequently, Korea introduced the Certified Public Appraiser system to be carried out compensation appraisal and minimize conflicts over compensation rates.

35. **Establishment of Land Information System.** To achieve an articulated valuation result, it is necessary to establish an articulated information network, including cadastral information such as land registry and cadastral map; ownership information such as property ownership and other concerned rights registry; land use regulation information such as land use zoning and building code; and also other amenity and service information such as road and water supply infrastructure, etc. It is because appraising property value contains a series of process to identify the various factors which influence the level of property value. In Korea, most related information are established and provided through computerized information systems, such as Korea Land Information System, Korea Urban Information System, National Spatial Data Information System and so on. Appraisers and also general people can access to such information. As such information network becomes established, compensation valuation achieves more precise appraisal result, which in turn provides the government with more trust and confidence from the affected persons.

36. **Establishment of Neutral Process of Valuation.** Many stakeholders participate in compensation valuation process, each of whom has different perspectives over just compensation. Thus, it should be guaranteed that valuation is fairly conducted throughout the process of compensation valuation. In Korea, three appraisers shall conduct compensation valuation, one recommended by project operator, another by the affected, and the third by the head of local government. The amount of compensation is determined by computing the mean average of the appraised amounts of the appraisers. If the highest and lowest appraisal shows a difference of 10% or more, another appraiser is selected and the amount of compensation is re-appraised. If an agreement about the amount of compensation fails to reach, such amount shall be adjudicated in the Land Expropriation Committee. To identify fairness of adjudicated amount, the Valuation Advisory Sub-committee established under the Land Expropriation Committee deliberates and verifies the propriety of compensation valuation in advance to adjudicate expropriation.



37. **Establishment of Verifying Process.** The key issue in compensation valuation is how to keep balance between the need for acquiring land for public use and just compensation for loss of the dispossessed. The loss should be compensated at least to restore the livelihood of the affected persons before disposing of that land and property. That is the reason why valuation should be conducted as precise as can be. Accordingly, compensation valuation should observe proper valuation procedures and reflect market value exactly. For this reason, Korean practice of compensation valuation emphasizes the need for following the verification process; reviewing appraisal by another appraiser, then checking again at the Valuation Review Committee under the KAPA, and one more reviewing appraisal by a project operator whether compensation valuation is duly conducted in accordance with the related regulations. The verification system has contributed that compensation value reflects market value relatively properly and consequently, more than 90% of land for public project could be acquired at time of consultation.

38. **Need for Enhancing Transparency.** In most cases, conflicts regarding compensation valuation come from the price imbalance between his/her own property and the neighboring properties as well as from insufficient reflection of market value. Thus compensation valuation shall keep prices balance between the corresponding real estate and neighboring property together with reflecting market value properly. In Korea, the price automated mapping allows appraisers to see the position of each property, to visualize the relative and absolute values of individual property in a locality, to check the price differences of neighboring properties, and thus reduce greatly the inconsistent valuation and raise the preciseness and reliability of appraisal of each property. The price automated mapping is open to the KLIS, thus allowing the general people also to access the system, which contributes to improving transparency of compensation valuation, and thus helping mitigate conflict over compensation valuation. In addition, in order to enhance transparency of compensation valuation, appraisers attend the Compensation Council, explain valuation method to the affected persons, and listen to the affected person's opinions. Such procedure for enhancing openness and transparency help obtain public trust and credibility of appraisal system.

39. **Establishment of Specialized Research Institute.** Compensation valuation requires highly specialized expertise based on appropriate research and teaching capacity. Accordingly, an independent research institute is required to theoretically and practically support public officials and institutions, as well as other stakeholders, to enable the efficient conduct of compensation valuation. By founding and supporting independent research institutes, such as the Korea Research Institute for Human Settlements and the Korea Legislation Research Institute, the Korean government has sought ways to study appraisal issues and improve related systems. It is furthermore necessary to develop teaching functions in these research institutes in order to train a cadre of public officials with a detailed understanding of the legal, economic, social and administrative aspects of compensation valuation who will serve their various government institutions in the planning and conducting of compensation in public projects.

40. **Rethinking the Nexus between Urban Development Schemes and Compensation Valuation.** At the early stage of urbanization and industrialization, the Urban Planning Act (1962) had already established two urban development schemes: One is land readjustment (LR), the other is Publicly Managed Development (PMD) which involves expropriation. However, between the 1960s and the early 1980s most urban development was executed by means of LR. Eminent domain powers were used in a limited way to install infrastructure or build industrial estates. There were various reasons for the government to depend mostly on LR schemes to implement urban development projects. One reason was that urban development at that time

meant mostly re-development to improve the old and dilapidated physical environment of the existing inner-city areas. Considering the costs for acquiring land and buildings, LR, as a joint development project between the government and landowners was more efficient because extensive LAR was not required. Accordingly, very articulated techniques for compensation valuation were not urgently required. Another reason was that the government at that time did not have enough money to finance resettlement for urban development and LR required significantly lower outlays than compulsory acquisition.

41. The more critical reason, however, was that the land and real estate market were not established yet at that time. If land and housing market do not exist or are not matured enough, it is very hard to find fair market value. This precondition was not satisfied during the early era of urbanization in Korea: neither the government nor private sector could conduct compensation valuation based upon market evidence. As the economy grew, real estate market became mature, and thus comparable sales appeared, compensation valuation system became articulated, at which time the expropriation scheme of PMD became viable. All these factors articulated to inform Korea's process of compensation valuation. Thus, developing countries need to consider their social and economic conditions and objectives when they select an appropriate mode of land acquisition.

42. **Compensation Valuation in Transition Period of LAR System Setup.** It is likely that most developing nations have inactive real estate market, at least, at early days of urbanization and industrialization. Hence, the application of sales comparison approach has some limitations for realizing just compensation. Even if they have some real estate market, farmland or pasture is rarely transacted. Thus, it is hard to implement compensation valuation. Introduction of basic land price (BLP) system might be recommended as Korea employed it in the early 1970s, when real estate market seldom existed in rural area except for some big cities and budget restraint prevented government from surveying land price across the nation. This BLP system shall be more helpful in nations such as Mongol where large-scale urban development project is not urgent. The government may estimate and announce BLP only around the development proposed area rather than to the entire land. The small number of samples shall be required for estimating BLP, because most pasture or forest show similar price level.

43. **Negotiable vs. Fixed Amount of Compensation Valuation.** Based on the estimated value by certified appraisers, the amount of compensation may be determined through consultation with landowners. Many problems are likely to happen in managing this approach. It would take long time to reach agreement with landowners and thus public works are likely to be delayed. Also it would increase the amount of compensation remarkably. In addition, social reliability for compensation valuation shall be plunged. The similar cases are found in Japan, where project operators have discretion to set the amount of compensation on the basis of the estimated value. As a result, compensation consultation was delayed so that public works had difficulty in making smooth progress.

44. In Korea, the estimated value by certified appraisers is not negotiable price but fixed amount of compensation. If having any objections in negotiation step, the affected persons are able to seek grievance procedure through expropriation adjudication, objection adjudication and administrative litigation. Separate compensation valuation is scheduled at each grievance redress stage. The amount of compensation valuation is likely to increase but each valuation is based on situations at time of respective valuation so that it is not guaranteed that the estimated value at the following stage must exceed that at the previous stage

## I. INTRODUCTION

### A. Purpose of the Study

1. This Study of the Legal and Regulatory Framework for Compensation Valuation in the Republic of Korea (Korea) presents the evolution of the legal, regulatory and institutional system for compensation valuation and related social safeguards provisions implemented in Korea over the past 50 years. It also reviews recent practice and experience of compensation valuation in the context of Korea's economic, political and social development as well as urban development. It then conducts a comparative analysis of key compensation valuation provisions in Korea's legal framework with the involuntary resettlement (IR) safeguards requirements of the ADB's Safeguard Policy Statement (SPS). The study is framed within the context of the values, concerns, and requirements embodied in the ADB's IR policy in 1995<sup>4</sup> and SPS in 2009,<sup>5</sup> documents that describe the objectives of ADB's safeguards, present ADB's policy principles, and outline the delivery process for ADB's safeguards policy. Based on the experience of Korea, this Study provides recommendations to inform the development of a sustainable legislative, regulatory, and institutional framework for compensation valuation with a strong IR safeguards system for urban development in developing Asian countries and identifies key challenges to establish and implement such a proposed system.

2. Rapid urbanization and industrialization in many Asian countries necessitates a better understanding of the nexus between urban development, changing land acquisition legislation, compensation valuation, and the role of social safeguards to protect displaced persons' interests. It is an opportune time to conduct a case study of the social safeguards provisions in the legal and regulatory systems for compensation valuation in Korea, because the country has experienced very rapid urbanization in recent decades and thus needed to institutionalize LAR policies, including compensation valuation for IR. The Korean experience provides an opportunity to review the interdependent processes of urban development and legal change relating to compensation valuation legislation. It offers valuable lessons to Developing Member Countries (DMC) of ADB seeking to strengthen their country safeguards systems. DMCs might seek a better understanding of international valuation standards for IR to incorporate social safeguards into their legal framework, and require greater knowledge of international experiences with compensation valuation in the context of urban development. This study seeks to transfer knowledge about Korean experiences with IR, compensation valuation, and urban development to DMCs.

### B. Research Method

#### 1. Scope of the Study

3. The time frame of this study is the period from the independence of Korea in 1948 to the present. Special attention is given to the period since 1970s, when the Korean government initiated its economic development strategies and thus compensation valuation became increasingly important.

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<sup>4</sup> ADB. 1995. *Involuntary Resettlement Policy*. Manila

<sup>5</sup> ADB. June 2009. *Safeguard Policy Statement*. Manila.

4. The spatial scope is the Republic of Korea. Special attention is given to urban and urban fringe areas, where urbanization and industrialization has been concentrated and where compensation valuation scheme has gradually led to strengthening of country safeguards systems.

5. The content scope is public works to which the government's power of eminent domain can be applied. Special attention is paid to urban development projects, because they in particular present the nexus between urban development, changing LAR, and the role of just compensation provisions.

## **2. Method of Analysis**

6. A legal system analysis is conducted vertically and horizontally. The legal analysis comprises the historical evolution of compensation valuation and includes a description of the Act on the Utilization and Management of the National Territory (1972), the Public Notice of Values and Appraisal of Land Act (Land Appraisal Act, 1989), the Public Notice of Values and Appraisal of Real Estate Act (Real Estate Appraisal Act, 2005) and Standard of Appraisal Practice (2011) as well as the Constitution (1948), the Land Expropriation Act (1962), Special Compensation Act (1975), Land Acquisition and Compensation Act (2002) and judicial precedents on compensation valuation decided by the Supreme Court (before 1987) and the Constitutional Court (after 1988).

7. An empirical analysis presents statistics on land acquisition and compensation over the last 30 years. To examine how compensation valuation provisions are implemented, it also incorporates case studies on new town development, the Wirae District Housing Site Development Project implemented by the Seoul Housing (HS) Corporation during 2005~2014.

## **C. Organization of the study**

8. The study consists of seven chapters, including Introduction part. Chapter Two outlines compensation valuation laws and regulations as well as the institutional arrangements for conducting compensation valuation. Chapter Three presents the subject and objects of compensation valuation, valuation procedure and achievements of compensation valuation. In Chapter Four, the Public Noticed Value (PNV) of Real Estate system is introduced. Most compensation valuation for land and buildings is based on PNV of real estate. It is a unique system of Korean computer-assisted mass appraisal. Size of samples, characteristics of items surveyed, appraisal modeling, reference table and verification of modeling outputs are discussed. Chapter Five describes standard procedures for compensation valuation. It shows the procedure, report and method of compensation valuation. Compensation valuation should be estimated as clear as possible since it influences largely on society and economy. Chapter Six describes verification of compensation valuation, which is to obtain public trust and confidence in compensation valuation. Chapter Seven presents policy implications of this study. It conducts a comparative analysis of Korean principle with ADB's principle in compensation valuation, proposes policy recommendations to developing countries and identifies challenges to establish and implement compensation valuation system.

## II. LEGAL SYSTEM AND INSTITUTIONS FOR COMPENSATION VALUATION

### A. Background of Korean Compensation Valuation

9. **Need for Urban Development.** Korea has been urbanized and industrialized for an exceptionally short period; the rate of urbanization increases from 37% in 1960 to 90% in 2010. Rapid urbanization and industrialization have greatly expanded the demand for urban land uses, particularly for residential sites, industrial estate and urban infrastructure, including road & railroad, electricity & telephone, gas & water supply, school & neighborhood park, and so on. Urban land had to be developed and supplied on a massive scale to accommodate this increasing demand. However, the private sector did not develop and supply all the urban land required, at least at the initial stage of urbanization and industrialization. There were various reasons; a private land market was not yet established, the financial resources of the private sector were very limited, the land for urban infrastructure facilities was not supplied at the scale acquired by the private sector, being public services. On the other hand, urban land had to be developed within the framework of national physical and economic development plans; laissez faire market mechanism might lead to reckless development without adequate consideration of natural and built environments. The Korean government played an important role in overcoming these limitations by drawing up development plans, formulating and imposing regulations to promote urban expansion, and investing in infrastructure. To facilitate the government's involvement in urban development, the government enacted relevant urban planning laws, including the Urban Planning Act (1962), the Act on Comprehensive Plans for Construction in the National Territory (1963), the Act on the Utilization and Management of the National Territory (1972) and the National Land Planning and Utilization Act (2002); and also relevant urban development laws, including the Land Compartmentalization and Rearrangement Project Act (Land Readjustment Act, 1966), the Housing Site Development Promotion Act (1980) and Urban Development Act (2000).

10. **Need for Land Acquisition and Resettlement.** As the government's role became dominant in carrying out urban development, compulsory land acquisition and resettlement (LAR) became important, because under the freehold ownership system private individuals own most of the land in Korea. In 1975, when statistics began to be opened up to the public, land owned by the government was only about 15% of the nation's land and so the government had to obtain land from private landowners to execute public works. Thus, when the government needs to acquire land for urban development, it exercises its power of eminent domain by first contacting landowners in advance and negotiating the conditions for land acquisition. If they fail to reach an agreement, the government compulsorily acquires the area. But compulsory acquisition has been a last resort. During the last 30 years, about 93% of the total area for all public projects was acquired through negotiated settlement and the remaining 7% was acquired through compulsory acquisition.

11. To enable the government to acquire land for urban development, the government enacted relevant LAR laws, including the Land Expropriation Act (1962), the Act on Special Cases concerning the Acquisition of Lands for Public Use and the Compensation for their Loss (Special Compensation Act, 1975), and the Act on the Acquisition of Land etc. for Public Works and the Compensation thereof (Land Acquisition and Compensation Act, 2002). The Land Expropriation Act of 1962 was to ensure both the promotion of public works and the protection of private property rights at the same time. The government changed Korea's industrial policy from labor-intensive light industry to capital-intensive heavy and chemical industry (HCI) in 1973. To implement this new industrial policy successfully, expropriating a large amount of land was

necessary to build the industrial parks and install industrial infrastructure required for HCI. Until then, the government used two ways to acquire land for public works; one was compulsory acquisition according to the Land Expropriation Act, the other negotiated purchase according to the Civil Law. To encourage the process of negotiated purchase, the Special Compensation Act was legislated in 1975. Until the end of the 1990s, LAR had been operated in two ways; compulsory acquisition carried out under the provision of the Land Expropriation Act, and negotiated purchase according to the Special Compensation Act. To resolve the overlapped regulations over equivalent subject matter covered by the two Acts, the Land Acquisition and Compensation Act was enacted in 2002 by merging the existing two Acts. The Land Acquisition and Compensation Act is a general statute for LAR, which prescribes principles and rules regarding land acquisition, compensation and relocation. Unless another Act stipulates a special provision, the Land Acquisition and Compensation Act must be abided by in all cases of LAR.<sup>6</sup>

12. **Need for Just Valuation.** The Land Acquisition and Compensation Act regulates the process of providing compensation in line with the principles of the Constitution of 1948. The Constitution explicitly stipulates the principles that due process of law and just compensation must follow in the case of expropriating private property. Just compensation might be defined as similar as market value. However, in most cases, public work operators and the affected persons had different understanding in the perception of "market" and "value". In addition, the negotiation power between project operator and the affected person has not been balanced contrary to that of the market place, in which real estate property is dealt through free negotiation without compulsion between the willing sellers and buyers at an arm-length transaction. Finally, until the early 1970s, local government officials had valued compensation amount of land and structures, which hardly reflected market values. Compensation conflicts had inevitably arisen. To mitigate these compensation conflicts and set up criteria for compensation valuation, the government introduced the Basic Land Prices (BLP) system pursuant to the Act on the Utilization and Management of the National Territory (1972). The BLP used as a standard for compensation valuation was developed into the Publically Noticed Value (PNV) of Land system (1989), and eventually the PNV of Real Estate system (2005). To assess the BLP, Certified Public Appraiser was introduced in 1973. Since then compensation value for land and building acquired for public works have been assessed by qualified private appraisers, not by government officials.

13. Even if the methodology and process of valuation are similar to all appraisals, the compensation valuation has its own characteristics compared to other appraisals such as taxation assessment. For instance, in taxation assessment, keeping balance with neighboring property is relatively more significant rather than estimating precise market value. And thus, fairness is emphasized in tax rate assessment. In comparison, compensation valuation more underlines just compensation, thus it should be conducted in the line of protecting the affected person's private ownership which is guaranteed by the Constitution, and also of at least restoring the affected person's level of livelihood after handing their land and property over for public works. That is the reason why many international financial institutions including ADB emphasize the principle of compensation at full replacement costs rather than at the simple market value. On the other, the level of compensation is obviously connected to the feasibility of public projects. Excessive compensation may increase the project costs, thus making the project less feasible; the government's capability to implement urban development is constrained by a limited budget. Thus, compensation valuation needs to keep a balance

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<sup>6</sup> Jung, H.H. et.al. 2008. *Policy Tasks to Improve Compensation System for Mitigation of Conflicts in Public Works*. KRIHS.

somewhere between the need for restoring the affected person's livelihood and the need for considering the government's financial capability for carrying out public works.

14. The concept of just compensation is a relative notion, being defined by the spirit of era and social common notion. In the process of realizing the principle of just compensation, it is necessary to seek proper harmony between public interest and private one and to keep balance between the need for smooth implementation of public works and the need for ensuring private ownership. In Korea, at the early days of urbanization and industrialization in 1960s~1970s, efficient implementation of public works were more emphasized to drive economic development; just compensation, the tenet of the Constitution, was translated as "comparable compensation" and the amount of compensation was calculated even within the scope of budget in public works. Most compensation conflicts rooted in the level of compensation. Insufficient compensation intrigued the affected persons to refuse to sell their land through negotiated process and oppose the implementation of urban development. The result was delays in project implementation, increase in overall costs and a loss of the reputation and legitimacy of government among the general public. Project operators including government became to realize that a strong social safeguard, including just compensation, was eventually beneficial to project outcome as well as to the national economy. As Korean society became democratized since the mid-1980s, just compensation has been translated as "complete compensation" by both the state and society. The limitation of government finance and project budget could not be the excuse any more not for providing just compensation. Both the government and the public widely recognized that public works have to be postponed or cancelled if adequate project financing were not secured. Hereafter, the scope of resettlement policies has been expanded, from providing just compensation in property expropriation to providing relocation measures since mid-1970s, and further to furnishing the affected person with livelihood measures since the early 1990s.

15. In short, it is inevitable sometimes for the government to purchase land and property from the affected persons through negotiation and/or expropriation in implementing public works. Even if project operators suppose they provide just compensation, the affected persons may have different opinions about the level of compensation provided to them. Therefore, social consensus has to be reached in the areas of the level of just compensation and the proper procedure for valuation. Such consensus has to be embodied in the related laws and regulations in order to enhance the predictability for valuation procedure and to obtain social trust and confidence on valuation results.

## **B. Legal System for Compensation Valuation**

16. **Constitution (1948).** The Constitution is the highest legal instrument stipulating the conditions of compensation valuation in Korea. The Constitution, Article 23, Section 3 states, "expropriation, use or restriction of private property for public needs and compensation thereof shall be governed by Act: provided, that in such a case, just compensation shall be paid in advance." With respect to the definition of just compensation, the Constitutional Court adjudicated that just compensation is equivalent to complete compensation. "Where property rights infringement is an individual infringement occurring within the established law and order, the compensation for loss, by principle, should be complete compensation according to objective assessment of the property rights breached. And thus there must be no restrictions whatsoever in the amount of compensation as well as the timing or the procedure of

compensation.”<sup>7</sup> Compensation for loss reimburses specific loss of property rights of an affected person. This permits the achievement of certain public needs while still upholding the primary principle of property rights protection. Thus, according to the current Constitution, compensation is not only limited to the objective worth of the infringed property, but also includes concomitant losses following the principle of “complete compensation”.

17. **Land Acquisition and Compensation Act (2002).** The Act stipulates matters of indemnity for any loss incurred by the acquisition or use of the land etc. required for public works through negotiated settlement or compulsory expropriation. The Act stipulates scope of public works, methods and criteria of compensation, procedure of compensation, grievance redress etc. Particularly, the Act prescribes the standard, methods, procedures and time of compensation valuation of land and other property, while the Public Notice of Values and Appraisal of Real Estate Act (Real Estate Appraisal Act, 2005) stipulate those of general appraisal of land and other property. The Enforcement Rule of Land Acquisition and Compensation Act specifies method of compensation valuation in detail, including land to be expropriated and used, building and structures, and other rights such as mining rights, fishing rights, and business loss, etc. Based on these laws and rules, each public enterprise such as Korea Land and Housing (LH) Corporation and SH Corporation establish its own internal regulations including land acquisition and management regulation, resettlement measures regulation, etc.

18. **Standards of Appraisal Practice (2012).** Based on regulations of the Enforcement Rule of Land Acquisition and Compensation Act, the Korea Association of Property Appraisers (KAPA) had established, improved and promulgated Standards of Compensation Valuation Practice (SCVP) for the guidance and education of appraisers and users of appraisal services. SCVP includes procedures and methods of compensation valuation for land, business loss, graveyard, and fishing rights. However, there had been argument against the legal status of SCVP, since SCVP were established by the KAPA, a private organization which membership composes of private certified appraisers. To redress this challenge, the government made the Draft of Standards of Appraisal Practice (SAP) in 2011. The contents of SAP include Standards of Compensation Valuation Practice and Standards of (General) Appraisal Practice. The Draft is scheduled to be confirmed by 2012. Other practical issues about compensation valuation are stipulated by each project operators such as the Korea Land and Housing Corporation, which includes the Land Acquisition and Management Regulation and the Resettlement Measure Regulation, etc.

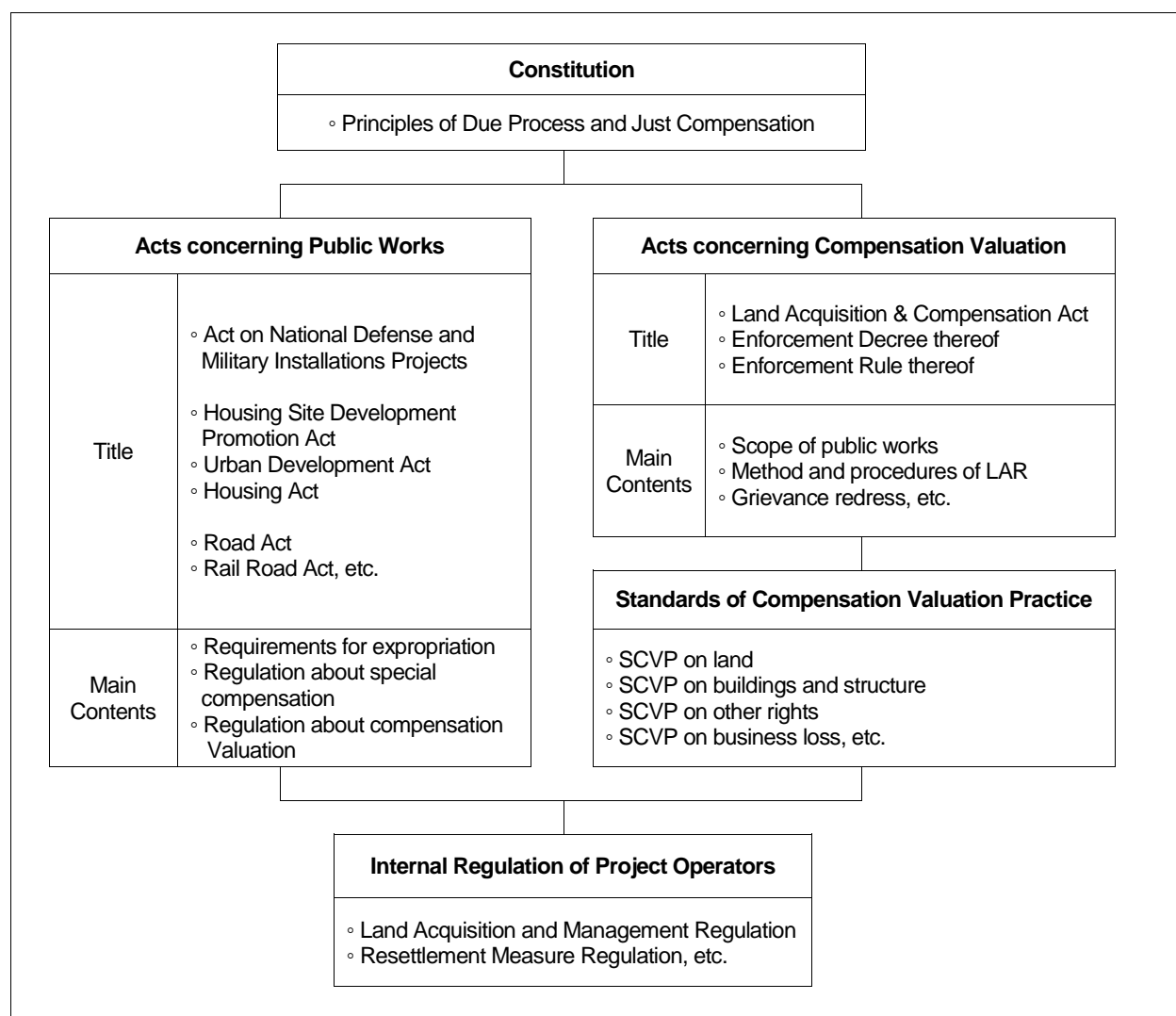
19. **Real Estate Appraisal Act (2005).** The Real Estate Appraisal Act is a general statute for real estate appraisal. The Act prescribes principles and rules regarding method and criteria of general appraisal, subject and restrictions of appraisal task, qualification and management for appraisers and appraisal companies, and Real Estate Appraisal Committee, etc. Unless another Act stipulates a special provision, this Act must be abided by in all cases of real estate appraisal. The Appraisal Regulations of the Act is independently established to stipulate method, criteria, procedure of general appraisal. Compensation valuation is also included.

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<sup>7</sup> Constitutional Court. 1990.6.25. Adjudication No 89 Heonma 107.



&lt;Table II-1&gt; Legal System of Compensation Valuation



## C. Organization for Compensation Valuation

### 1. Ministry of Land, Transportation and Maritime Affairs

20. Land Bureau of MLTM is in charge of management and supervision on appraisal market; Land Policy Division is responsible for compensation valuation issue and Real Estate Valuation Division for general valuation issues. Pursuant to the Real Estate Appraisal Act, MLTM has as its focus a supervisory role over appraisers and appraisal business. MLTM establishes minimum education, experience, and other criteria for certification of qualified appraisers. In practice, MLTM assigns some of its supervisory roles to the KAPA and Korea Appraisal Board (KAB). For instance, on behalf of MLTM, the KAPA performs tasks of selecting and training of qualified appraisers, managing registration of appraisers and appraisal companies. The KAPA performed functions with respects of establishing, improving and promulgating Standards of Compensation Valuation Practice for land (1993), business loss (1993), fishing rights (1995), and mining rights

(1995). These Standards were merged into the Draft of Standards of Appraisal Practice in 2011 covering compensation valuation and also general appraisal, which will be finalized by 2012.

## 2. Certified Public Appraiser

21. **Introduction of Qualified Appraiser System.** Qualified appraiser system was introduced at 1972 pursuant to the Act on the Utilization and Management of the National Territory. At that time, "a land assessor", as certified professional license, was initially introduced to take charge of public market valuation such as compensation valuation and taxation valuation, etc. The following year, another certified license, namely "a certified appraiser", was introduced pursuant to the Appraisal Act. A certified appraiser generally assumed private market valuation such as collateral valuation for financial or banking institutions.<sup>8</sup> Even if appraisal license system was operated in a dual form under the related Acts and by different Ministries (Ministry of Construction and Minister of Finance), both licenses were fundamentally identical in terms of their main role as valuation. For this reason, land assessor and certified appraiser were merged into "certified public appraiser" as one qualification system under the Public Notice of Values and Appraisal of Land Act (Land Appraisal Act, 1989), which was evolved to the Real Estate Appraisal Act (2005)

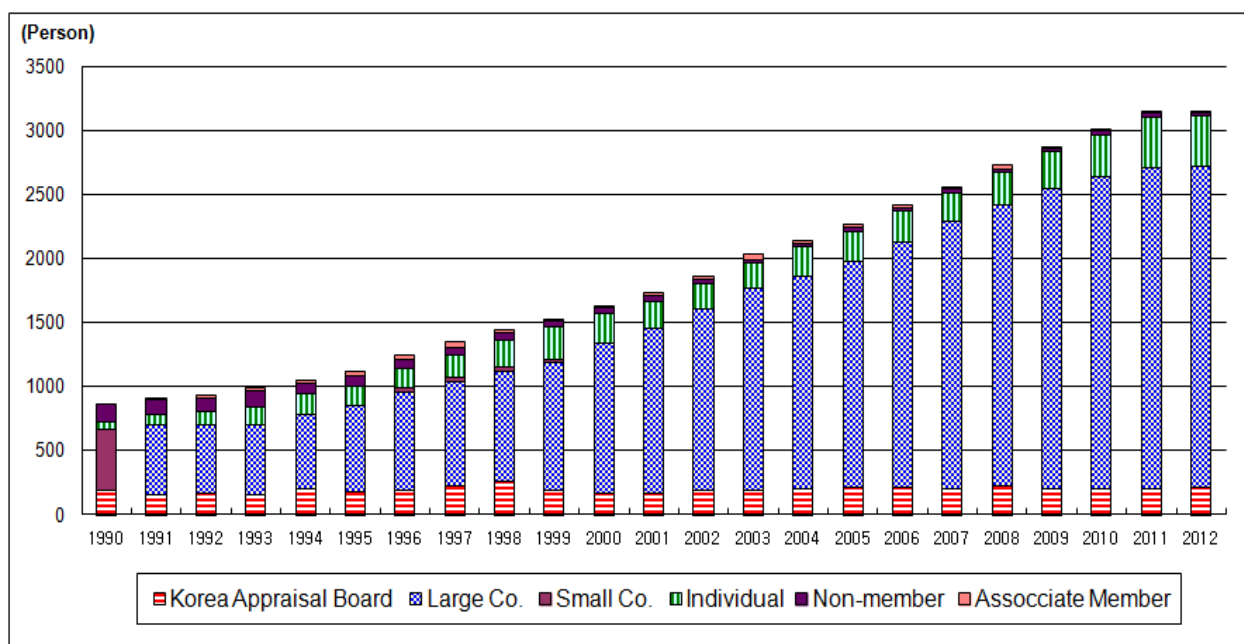
22. **Main Tasks of Appraisers.** Certified appraisers play a supporting role by providing valuation services and information to others who need to make a property related decision. The decision usually involves the value of real estate and other property. The appraisers' job is to research and analyze property market activity so that they are able to estimate that value. What certified appraisers take charge of making appraisal are all property rights assigned by clients' request, including immovable (land, building, structure, etc.) and movables; rights such as copyright, fishing, mining or other rights similar as real right; mining and factory (juridical) foundation under the Factory and Mining Foundations Mortgages Act (1961); other assets such as standing tree, construction machineries, automobile, ship, aircraft etc., which are registered under the related regulations; and securities etc.

23. **Appraiser Qualification.** The Real Estate Appraisal Act stipulates criteria for certification of qualified appraisers. The applicants must take and pass state examinations, and complete qualified experience over a minimum of one year. As of the end of July 2012, total number of certified public appraisers is 3,287. Among them, 3,256 appraisers have occupations at appraisal companies etc.

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<sup>8</sup> *Public sector and private market valuation are classified from valuation practices rather than from legal definition. There are two criteria; one is who is client of valuation service. If the clients are government, local government and public organizations, then it is regarded as a public valuation. If the clients are civilians and private organizations, then it is regarded as a private valuation. The other is purpose of valuation service. If the purposes are for taxation, public compensation, etc., then it is called as a public valuation. If the purposes are for bank's collateral, general property transaction, etc., then it is called as a private valuation. Valuation criteria and valuation approaches are basically common in both public and private market valuation. But as seen in Standard of Compensation Valuation of Chapter 5, there are some differences in conducting compensation valuation such as exclusion of development gains generated by the relevant project*

&lt;Figure II-1&gt; Changes in the Number of Appraisers



Source: Korea Association of Property Appraisers. 2012.

### 3. Korea Association of Property Appraisers

24. The KAPA, established in 1989, is a non-profit private association composed of certified appraisers. The basic purpose of the KAPA is to support appraisers in conducting appraisal services. The tasks of the KAPA include setting ethic code for members, arbitrating conflicts among members, providing mutual-aid program and welfare work for members, managing registration of appraisers, conducting collaboration and information exchange with domestic and international appraisal institutions, researching R&D on real estate consultancy, and others. The KAPA, one of major institutions in real estate industry, also supports real estate policy and conducts research on appraisal. The Korea Real Estate Research Institute as an annexed institution of the KAPA conducts surveys and researches on appraisal system, appraisal theory, and appraisal technique; publishes magazines and reports for developing professional appraisal technique; and operates occupational and professional training courses for its members.

25. The KAPA conducts some tasks assigned from the government. The assignments include verification on valuation amount, guidance for appraisal business, registration for the certified appraiser, management of professional training to the new appraiser, registration of opening and change report of appraisal office, and acceptance for subscribing guarantee insurance or mutual-aid program members etc.

### 4. Korea Appraiser Board

26. The KAB, founded in 1969 under the Act on the Contribution in-Kind of State Property, is a semi-public corporation jointly invested by the government, the Korea Finance Corporation, and commercial banks. The KAB was regarded as one of appraisal companies in 1989 under the Land Appraisal Act; designated as one of professional compensation agencies in 2003

under the Land Acquisition and Compensation Act; and became a quasi-market type public corporation in 2007 under the Act on Management of Public Institutions. The most important tasks of the KAB are to support the Publically Noticed Value of Real Estate system and to make survey and management for a variety of public statistics. In addition, the KAB conducts compensation tasks commissioned from the public sector. According to the recent government Policy for Advancing the Public Institutions of 2009, the KAB stopped conducting private market valuation, such as valuation for collateral, auction and litigation etc. The KAB is commissioned from the government to take charge of supplementary task related to appraisal. The main commissioned tasks are as follows; survey for PNV of real estate, survey of market price of apartment, commercial building and studio, other objects; survey and estimation for land and housing price fluctuation rate, provision of real estate transaction information, construction and management of housing price information system, compensation valuation assigned by the governments and public sector, management of urban regeneration project, certification of housing performance grade, certification of eco-friendly housing, research for real estate policy, survey and research for supporting real estate and taxation policy, survey and research for valuation technique, issuance of price data, development of real estate statistics index, verification for land and housing transaction report price etc.

## **5. Concerned Sub-Committees**

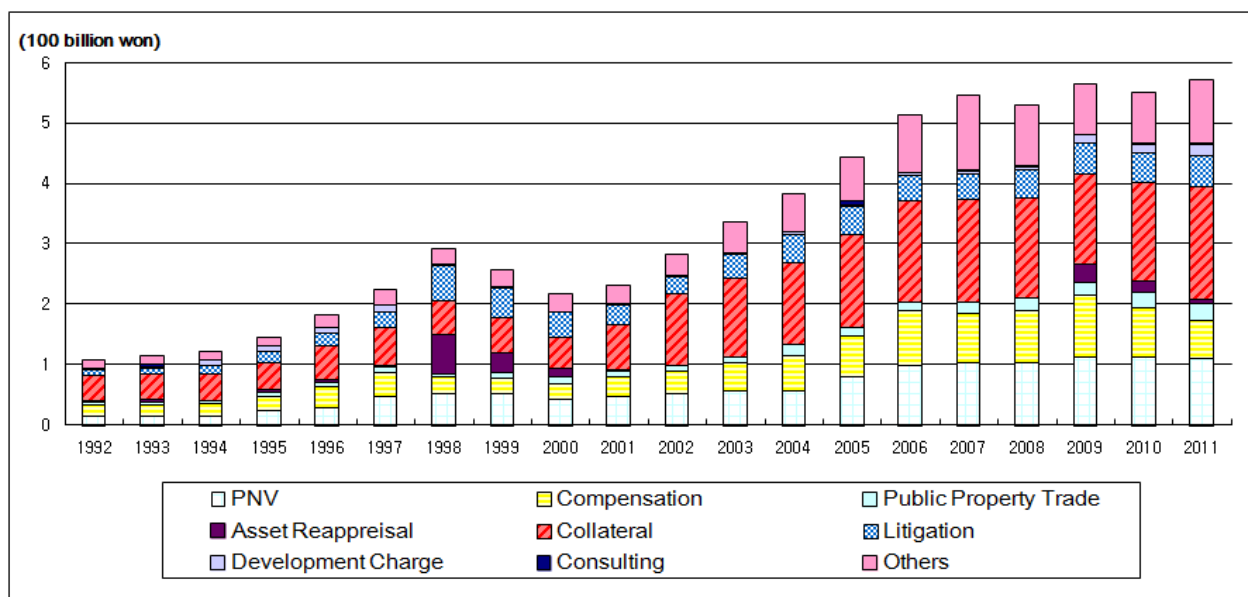
27. Most valuation-related committees are founded and operated at the KAPA and the KAB. Of them, the Valuation Review Committee, Valuation Feasibility Deliberation Committee, and Appraiser Recommendation Committee are main ones. The Valuation Review Committee is to review propriety and fairness of valuation upon the request from appraiser and before providing the valuation report to the client. The Valuation Feasibility Deliberation Committee is to deliberate the feasibility of valuation after providing the valuation report by the request from MLTM and local governments, the Land Expropriation Committee, and other stakeholder. The Appraiser Recommendation Committee is to set criteria for choosing and recommending appraiser, to judge rightness of choice and recommendation of appraiser, and to judge integrity of appraisal institutions. There are also other councils and committees, including the Real Estate Survey and Valuation Council, Lease Case Survey and Valuation Council, Land Price Fluctuation Rate Survey and Valuation Council etc.; and also the Ethic Committee, Training Committee, International Committee, Information Committee, Mutual-aid Committee, Legal Committee, Reward and Punishment Committee, etc.

### III. SUBJECT AND OBJECT OF COMPENSATION VALUATION

#### A. Subject of Compensation Valuation

28. **Valuation by Private Qualified Appraiser.** By the early 1970s, most compensation valuation was conducted by public officials who were in charge of taxation. At that time, public officials calculated compensation amount on the basis of recorded taxation standard for land and property. To guarantee expertise, fairness and objectivity of compensation valuation, the qualified appraisal system was introduced in 1972 and since then, private qualified appraiser has taken charge of compensation valuation. The appraiser has worked both for the private market and the public sector; Valuation services for private market are such as collateral valuation for financial banks and other consultant service for investment decision etc. Valuation services for the public sector include valuation for PNV of real estate and compensation valuation. During the last 20 years, about 15% of all valuation assignments to appraisers have been public-purposed ones including compensation valuation.

<Figure III-1> Changes in the Share of Valuation Fees by Valuation Purposes



Source: Korea Association of Property Appraisers. 2012.

29. **Time of Choosing Appraiser.** One of compensation appraiser's roles is to attend the Compensation Council and thus explaining valuation method for calculating compensation amount to the affected persons, and listening to the affected person's opinions. Therefore, project operators should choose appraisers before holding the Compensation Council.

30. **Method of Choosing Appraisers.** Since the early of 1960s, compensation valuation has been committed by two appraisers recommended by project operator under the Land Expropriation Act of 1962. To reflect the demand for just compensation argued by the affected persons and NGOs, the Land Acquisition and Compensation Act was amended in 2003 so that landowners could recommend one appraiser if they satisfy certain requirements. Herein, the

requirements are landowner have consents with more than half of the corresponding land area and consents by more than 50% of numbers of landowners. Thus, since then until May 2012, compensation amount has been determined by taking arithmetic mean of valuation estimated by 3 appraisers. However, some problems were raised; The Board of Audit pointed out that over-compensation rather than just-compensation had prevailed resulting in waste of public budgets, which was caused by the landowner's appraiser recommendation practice. Moreover, delay of public works and over-competition between certified appraisers became problematic. Finally, unbalance in selecting appraisers was pointed out, too; why projector operator should recommends two appraisers while landowners recommend only one appraiser. To redress these problems, government proposed an alternative to consign the neutral third party to select compensation appraisers. In the wake of long discussion at the National Assembly, the Land Acquisition and Compensation Act was revised at May 2012, stipulating that more than three appraisers shall conduct compensation valuation, one recommended by project operator, another by landowners and the third by the head of local governments where the target land is located and Compensation Council is established in order to strengthen neutrality of compensation valuation. That is, from December 2012, the one appraiser shall be selected by Mayor instead of by project operator. If the difference between the highest and lowest valuation is more than 10%, then project operator selects another appraisers to re-value them.

## **B. Objects of Compensation Valuation**

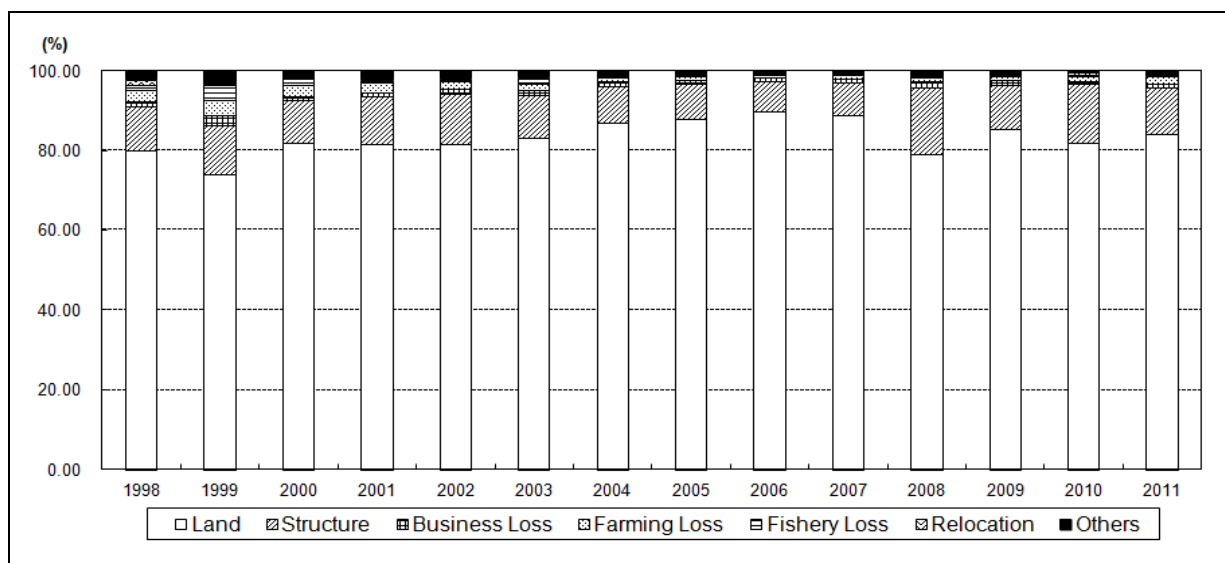
31. The objects of compensation valuation are all properties affected by land acquisition for public works, including (i) land and its rights other than ownership thereof, (ii) standing trees, buildings, and others fixed on land, and other rights than ownership thereof, which are required for public works together with land, (iii) mining rights, fishing rights or the right to use water, and (iv) rights over the soil, stones, sand or gravel belonging to land.

32. During the last 14 years from 1998 to 2011, the governments and public institutions had spent approximately 235 trillion Won (200 billion US\$<sup>9</sup>) for compensation, annually 16.8 trillion Won (14.3 billion US\$). A total of 84.52% of the total amount of compensation paid was compensation for land. Compensation for buildings, agricultural loss, and business loss respectively accounted for 11.14%, 1.37% and 1.04%. Compensation for relocation measures accounted for 0.3%. Whereas land acquisition costs, which account for most of compensation, increase year by year, compensation for farm and fishery losses continues to decrease, mirroring changes in Korea's industrial structure.

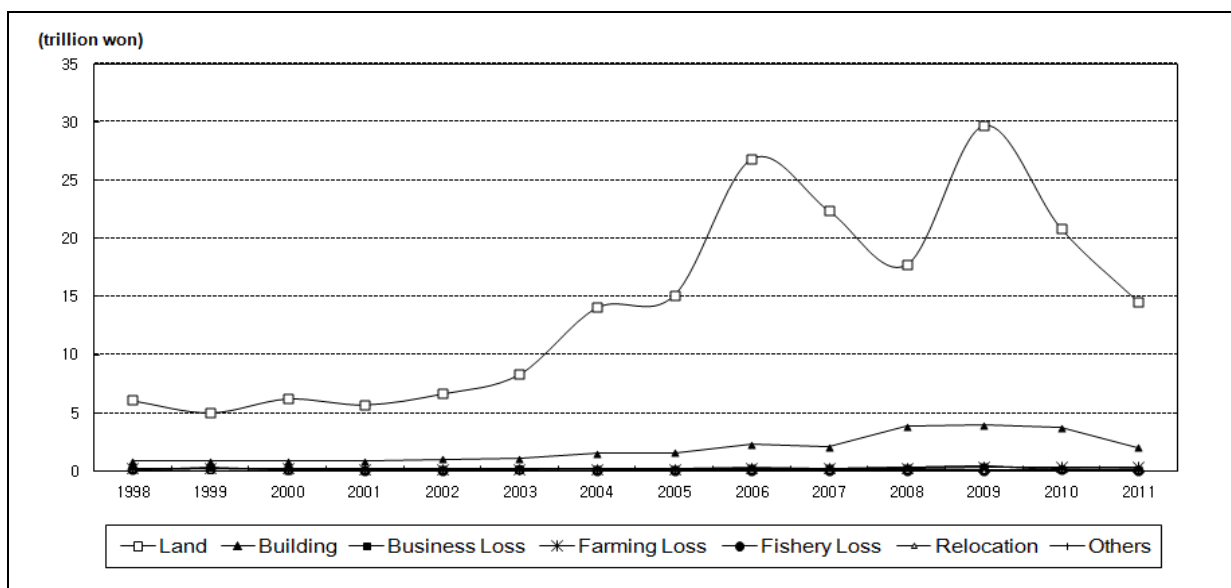
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<sup>9</sup> As of May 31, 2012, the foreign currency exchange base rate is 1,177.80 Won per 1 US\$.

<Figure III-2> Weights of the Amount of Compensation by Objects



<Figure III-3> Changes in the Amount of Compensation by Objects



Note: Compensation for farming loss means compensation for crops loss, sale loss of agricultural equipment, etc.  
 Source: MLTM. 2012. *Annual Report on National Land Planning and Utilization*.

**C. Procedures of Compensation Valuation**

33. **Procedures of Compensation Valuation.** Compensation valuation is one process in LAR procedures. In general, LAR proceeds in the following order; (i) determination of public works planning, (ii) preparation of protocols of land and other properties, (iii) public announcement and perusal of LAR plan, (iv) estimation of amount of compensation, (v) consultation in the Compensation Council, and (vi) grievance redressing in expropriation

adjudication or judicial litigation. In this process, compensation valuation proceeds in the following order; (i) proposal for compensation valuation, (ii) determination for basic specifications related to compensation valuation, (iii) establishment for plan in conducting compensation valuation, (iv) identification for the subject, (v) data collection and sorting, (vi) data review and analysis for price formation factors, (vii) selection and application of valuation method and (viii) determination and representation for the amount of compensation. On the basis of estimated amount of compensation project operator has consultation with the affected person. If an agreement failed to reach, expropriation adjudication is followed. If any objections about expropriation adjudication are raised, objection adjudication or administrative litigation is to be followed.<sup>10</sup>

34. **Verification Procedures of Compensation Valuation.** Whether valuation really reflects market value determines the success or failure of compensation valuation. For this reason, the various stages of verification process are prepared in Korean compensation valuation practice. First of all, project operator does not select the appraiser directly, but requests the Appraiser Recommendation Committee under the KAPA to recommend a relevant appraiser for compensation valuation. It is to guarantee the fairness in selecting the appraiser.

35. Secondly, as a prior review system of compensation valuation, the Public Valuation Review Committee had been established under the KAPA. The purpose of establishing this Committee was to raise objectivity, fairness and propriety of valuation, to redress the possibility of false or excessive valuation, and thus to obtain the public trust and credibility of valuation. Upon the request from the appraiser, the Committee judges fairness of valuation before determining valuation result. This Committee was re-named as the Valuation Review Committee in 2009 to apply to all valuation tasks. Since then not only compensation valuation but other valuation has been reviewed by this Committee.

36. The last one is the posterior checking system of compensation valuation. After receiving the valuation result, project operator verifies rightness of compensation valuation through review by more than one or more qualified staffs. To supplement non-specialty of project operator staffs, the MLTM recently established regulations, in May 2012, which may consign review task of valuation report to specialized institution.

37. The MLTM and local governments, the Land Expropriation Committee, project operator and any stakeholder may request the KAPA to review whether compensation valuation is suitable. Then the Valuation Feasibility Deliberation Committee under the KAPA deliberates the feasibility of valuation. Finally, the Land Expropriation Committee sets up its own Valuation Advisory Sub-committee to verify the valuation result in advance to adjudicating expropriation.<sup>11</sup> The verification system for compensation valuation will be discussed more in Chapter 6.

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<sup>10</sup> *The Enforcement Rule of Appraisal. Article 8.*

<sup>11</sup> *Land Expropriation Committee. The Operation Regulation on Valuation Advisory Sub-committee*



#### IV. COMPENSATION VALUATION AND PUBLICALLY NOTICED VALUE OF REAL ESTATE SYSTEM

##### A. Publicly Noticed Value of Real Estate System

38. **Background of Introducing Publicly Noticed Value of Real Estate System.** The Publicly Noticed Value (PNV) of Land system was officially introduced in the 1970s. At that time, when the government made every effort to push forward with the third Economic Development Plan (1972-1976) and the first Territorial Physical Development Plan (1972-1981), it was very urgent to acquire land necessary for implementing large-scaled public works. Also it was necessary to stabilize land market, because land prices increased very fast at the adjoining area of the urban development project sites.

39. To confront these challenges, the Ministry of Construction (currently the MLTM) introduced the Standard Land Price system under the Act on the Utilization and Management of the National Territory (1972). The Standard Land Price was mainly utilized as criteria in valuing land acquired for creating heavy & chemical industry complex. And, the Ministry of Internal Affairs (now the Ministry of Public Administration and Safety) amended the Local Tax Act and introduced the Taxation Standard Market Price system to be used as criteria in assessing real estate for local taxes such as property tax, acquisition tax and registration tax in 1975. In 1978, the National Tax Service, by amending the Income Tax Act, the Corporation Tax Act and the Inheritance Tax Act, introduced a Standard Market Price system to be used as criteria for levying national taxes such as capital gains tax. In addition, the Ministry of Finance (presently the Ministry of Strategy and Finance) enacted the Appraisal Act in 1973 and introduced the Land Market Price or Appraisal Market Price system, which was used as criteria for collateral valuation for commercial banks.

40. As government Ministries established the different land price systems for their own policy purposes, various policy problems were raised. Most of all, there were not any objective and neutral criteria in valuing land prices. There were little mutual relations among those various land prices. Therefore, it was hard to gain public trust and credibility about valuation result. As each Ministries conducted surveys and estimates of land price for its own objectives, budget was enforced in duplicate and accordingly administrative waste was criticized. Thus, from the early 1980s, the government tried to unify various land price public notice systems into one single price system. After collecting various opinions for several years, the government finally enacted the Public Notice of Values and Appraisal of Land Price Act (Land Price Appraisal Act) in 1989, the structure of which was based on the Act on the Utilization and Management of the National Territory (1972) and the Appraisal Act (1973). The public notice land prices, including the Standard Land Price (by the Ministry of Construction), the Taxation Standard Market Price (by the Ministry of Internal Affairs), the Standard Market Price (by the National Tax Service), and Land Market Price or Appraisal Market Price (by the Ministry of Finance), were merged into one single Publicly Noticed Value (PNV) of Land since then.

41. By introducing the PNV of land system in 1989, all publically noticed land prices were unified into one. But building valuation systems were still diversified. The Ministry of Internal Affairs used a Taxation Standard Market Price (TSMP) as estimation criteria for levying local tax such as property tax, which was determined by "Estimation Base of Building Standard Market Price", while the National Tax Service used a Standard Market Price (SMP) as an estimation base for levying national tax such as capital gains tax, which was determined by "Estimation Method of Building SMP". Both building SMP were calculated principally on the basis of unit

price of newly-built buildings. This cost approach had some inherent problems. Above all, the unit price of newly-built building could not reflect the actual market price of the existing houses. There were big gaps between taxation standards and actual market prices. The gaps even became enlarged as times went because the existing housing prices inflated every year. The taxation inequality by locations and by housing types had prevailed. Thus, the demand for changing building valuation system was widely recognized. Finally, the government decided to extend the PNV of land system into the PNV of real estate (housing) system in 2005. The Land Price Appraisal Act (1989) was eventually developed into the Real Estate Appraisal Act (2005). Since then, the PNV of real estate system is operated in dual forms as PNV of land system and PNV of housing system.

42. PNV of non-residential real estate such as shops and factories is scheduled to be introduced. The KAB conducted the feasibility study on introducing the PNV of non-residential property system in 2007~2008 by the request of government. Based on the study, the KAB implemented pilot projects for 17 sample areas in 2009 and 6 sample areas in 2010. Currently, the KAB is analyzing practical problems found from the pilot project to propose proper solutions. For example, each non-residential property has strong individual characteristics which are not easy to be standardized. Thus, the KAB is reviewing which method for appraising PNV is more applicable between total enumeration survey and sample survey. On the other hand, government is preparing to amend the Real Estate Appraisal Act to introduce the PNV of non-residential real estate system.

43. **Application Scope of Publicly Noticed Value of Real Estate.** PNV of real estate is widely utilized in both public valuation market and private one. In public valuation market, PNV of real estate is used as base of imposing national and local taxes. For example, taxation standard of property tax is calculated as about 80% of PNV of real estate. PNV of real estate is also used as criteria for imposing various charges such as development charge, for estimating compensation valuation, for calculating the rent base of government owned real estate, and for verifying the reported prices of real estate transaction. For instance, compensation valuation is estimated based on PNV of real estate. In private valuation market, PNV of real estate is also utilized as estimation criteria for collateral valuation.<sup>12</sup>

44. **Appraisal Method of PNV.** In estimating PNV, typical valuation techniques, such as sales comparison approach, cost approach and income capitalization approach, are used. Sale comparison approach is based on marketability to calculate price and rents of the subject property transacted in the open market. It considers the sales and rents of similar and substitute properties and related market data, and establishes a value estimate by processes involving comparison. Cost approach is based on investment cost. It considers the possibility that, as a substitute for the purchase of a given property, one could construct another property that is either a replica of the original or one that could furnish equal utility. In practice, the approach involves an estimate of depreciation for older and/or less functional properties that would be paid for the appraised property. Replacement cost approach which ADB and WB recommend in conducting compensation appraisal is one of cost approaches, which emphasizes that the depreciation value for older and/or less functional properties should not be reflected. (Depreciated or non-depreciated) replacement cost approach used to be an acceptable surrogate method for deriving a market related value of limited market and specialised properties where relevant data are scarce or non-existent. Income capitalization approach is based on profitability. It considers income and expenses data related to the property appraisal

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<sup>12</sup> Jung, H.N. et.al. 2010. *Publicly Noticed Price System for Multi-unit House and its Competent Agency for Price Survey and Notice Function*. KRIHS. pp.13-18..

and estimates value through a capitalization process, composing of capitalization rate and yield/discount rate. Market Based valuation normally employ one or more of the three valuation approaches by applying the principle of substitution.

45. In principle, compensation valuation is made on the basis of market value for estimating the loss caused by public works and public acquisition. For this reason, sales comparison approach is mainly used in compensation valuation. In order to enhance the properness of the valuation, cost and income approaches are complimentary used. To utilize sales comparison approach, it is important to collect enough sales data with comparability to the subject. However, this prerequisite was not established by the mid-1990s in Korea. It was not mandatory to register real estate transaction until 1995 when Act on the Registration of Real Estate under Actual Title Holders' Name was enacted. It was not mandatory, either, to report actual transaction price of real estate until 2005 when Business Affairs of Licensed Real Estate Agents and Report of Real Estate Transaction Act was enacted. Thus, it was difficult to find sales data and to apply sales comparison approach in estimating compensation valuation because transaction price was behind closed doors.

46. PNV of real estate system was introduced in 1989 to overcome such limitations and to correct unreasonable factors in general sales data. Benchmark PNV is determined by certified appraisers, who choose and utilize the most appropriate approaches among sales comparison, cost and income approaches. Then, they draw normal market value of other properties by comparing the characteristics of the benchmark and subject properties. Thus, it may be said that PNV of real estate system is a kind of sales comparison method. Since 2006, actual transaction price has been reported. It would be easier to secure reliable sales data. Accordingly, it is expected that sales comparison approach would be more utilized in conducting compensation valuation in the future, when reliable sales data would be compiled enough to draw normal market price directly from reported sales price. But currently, sales data are not compiled enough. And sales data are not found in some areas and some types of land, such as forest land in mountainous area, where real estate is seldom transacted. That is the reason why PNV of real estate system has been continuously maintained.

## **B. Survey and Valuation of Publically Noticed Value of Real Estate**

47. **Mass Valuation Technique.** It is very imperative to make survey and appraisal of PNV of real estate in an exact way since it is utilized widely in both private and public valuation markets. As of 2011, national land composes 38 million parcels and housing tallies up 14.49 million units, comprising 4.16 million units of detached house and 10.33 million units of apartment buildings. To survey and value the entire land and housing is impractical for reasons such as the costs of getting the information compared with the potential benefits. To save those costs for a relatively small sacrifice in accuracy, PNV of real estate system is managed as a kind of computer-assisted mass appraisal (SAMA) in that it extracts samples of land and building, makes survey and estimation of these samples, and then estimates other individual property by using SAMA techniques.

48. **Number of Samples.** The number of sample or benchmark in PNV of land system has increased from 300,000 parcels in 1994 and 450,000 parcels in 1995 into 500,000 parcels (1.3% of entire parcels of land) in 2003. Among them, a total of 46.56% of benchmark is distributed to urban area and 53.44% to non-urban area. A total of 41.25% of benchmark is allocated to the site for buildings. Benchmark for paddy field, dry field and forest are followed in sequence. Benchmark for these four land use categories amounts to 96.76% of the entire

benchmark numbers. To maintain a high level of consistency and continuity, the benchmark will only be altered when the characteristics of benchmark have changed seriously such as land use zoning is changed. The number of benchmark in PNV of detached house system is 190,000 units of houses (4.6%), representing the total of 4.16 million units of detached houses. PNV of apartment with 10.33 million units is valued by complete enumeration survey rather than valued by a sample survey method.<sup>13</sup>

49. **Standard Real Estate Value.** PNV of benchmark property is decided by the following procedures; (i) request for making survey and valuation of benchmark property, (ii) assignment of valuation tasks to appraisers (by the KAB), (iii) selection of benchmark property, (iv) survey and valuation, (v) deliberation by the Central Real Estate Valuation Committee, (vi) public notice of benchmark value, (vii) receipt of owners' objection and adjustment, and (viii) confirmation of PNV of benchmark. Two appraisers take part in making survey and valuation of benchmark following the market analysis every year. The date of survey and valuation of benchmark is the 1st day of every January. The date of public notice for such result is the last day of every January for benchmark house and every February for benchmark land. The PNV of benchmark real estate is announced by the Minister of the MLTM.

50. **Individual Real Estate Value.** PNV of each Individual real estate is determined by the following order; (i) survey of characteristics of each property, (ii) selection of benchmark to be compared with the corresponding property, (iii) comparison between the corresponding property and benchmark in terms of characteristics to calculate price difference rate, and (iv) multiplying PNV of benchmark by the price difference rate. Individual property value is publically announced by the following sequence; (i) survey and valuation of individual real estate by each local government's officer, (ii) verification by private appraisers, (iii) peruse and opinion delivery by owners, (iv) deliberation at the Real Estate Valuation Committee in each local governments, (v) public notice of individual property value, (vi) receipt of owners' objection and adjustment, and (vii) confirmation of PNV of each land and housing. The date of survey and valuation of individual property is the 1st day of every January. The date of public notice for such result is the last day of every April for housing and every May for land. The PNV of individual real estate is announced by the head of each local government.

51. **Peruse and Opinion Delivery by Owners.** PNV of benchmark real estate is used as criteria for calculating compensation valuation and also for guiding transactions in real estate market. PNV of individual property is utilized as criteria for levying taxes and development impact fees. In other words, PNV of real estate system influences private ownership very much. To protect private owners' interests, multi-staged procedures proceed in determining PNV. Firstly, the head of local government places peruse book of PNV at bulletin board of each local governments for more than 20 days before determining PNV of individual property. Landowners and other stakeholders who have objections to PNV can deliver opinion to the head of local governments within the assigned period of 30 days. The head of local governments should reviews the opinion within 30 days of the cutoff date of opinion delivery and notify the owners of the result by written paper.

52. **Deliberation at Real Estate Valuation Committee of Local Government.** Real Estate Valuation Committee (REVC) is established under the head of local governments. The major function of REVC is to deliberate the agenda of determining PNV of real estate and the delivered objections from property owners. The members of REVC are ranged from 10 to 15 persons including chairman, who is usually a deputy mayor or deputy governor of each local

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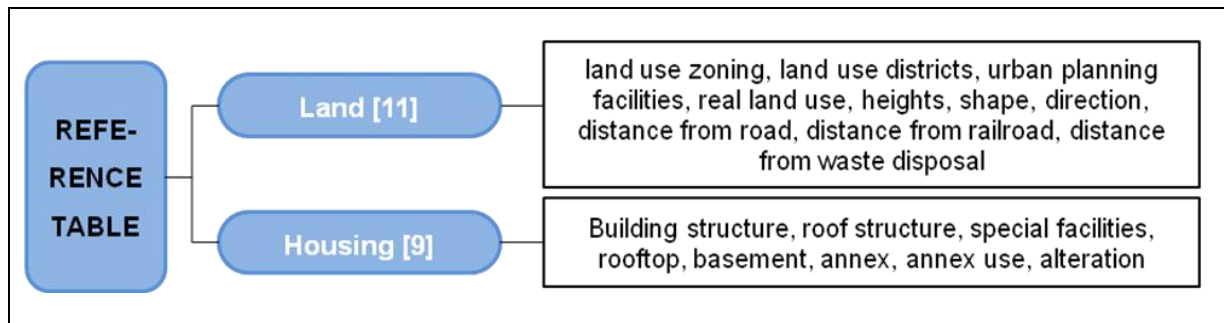
<sup>13</sup> MLTM. 2012. *Annual Report on National Land Planning and Utilization*.

government. Each member is appointed by the head of local governments among persons who are familiar with local community, are recommended by civil groups, and have academic background and expertise about PNV of real estate and valuation.

53. **Objections and Administrative Litigation on PNV of Real Estate.** Anyone who has objections to determined PNV can raise objections to the head of local governments within 30 days of the notification date of PVN of real estate. The head of local governments should reviews the opinion within 30 days of the cutoff date of opinion delivery and notify the owners of the result by written paper. If objections are judged to be valid, the head of local governments should adjust PNV and notify the revised PNV again. Anyone who is dissatisfied with the result of objection treatment can take legal action within 90 days of recognition date of objection treatment result or within 1 year of objection delivery date or determination date of PNV. Even if the period of filing objection is passed so that PNV of real estate is determined, separate administrative litigation is possibly filed if the affected persons have objections to compensation valuation, taxation disposition, etc. which is calculated based on PNV of real estate.

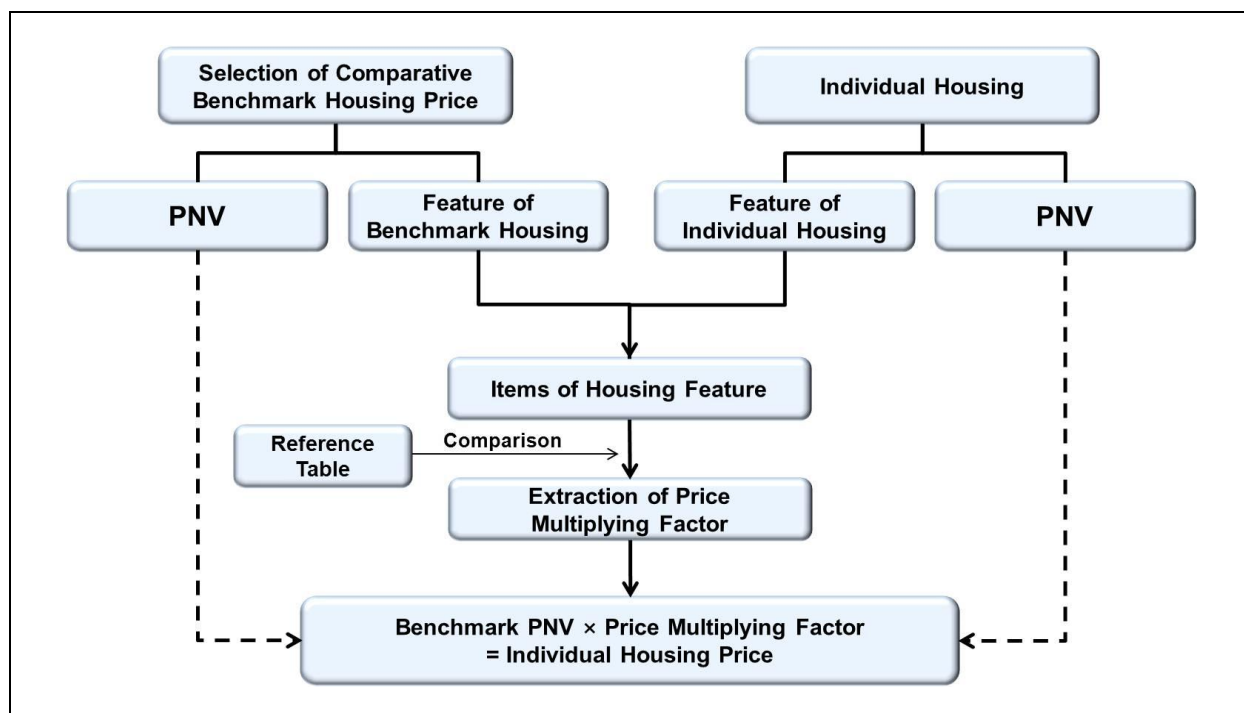
54. **Survey Table for Real Estate Characteristics and Price Comparison Table Thereof.** Survey table is to make survey on characteristics of individual property, which is applied in utilizing SAMA techniques. The survey table for land characteristics consists of 23 items such as land use zoning, acreage, land use status, road conditions etc., and that for housing characteristics composes 20 items such as building structure, ceiling structure, special supplementary installations, rooftop structure, underground, annexed buildings, supplementary use, extension and remodeling of buildings etc. <Fig. IV -1> illustrates components of housing price comparison table. Items in the price comparison table are chosen from items in survey table for real estate characteristics, which are regarded to have a strong influence on the price of real estate. Herein, 11 items for land price comparison table are selected from 23 items in survey table for land characteristics, and 9 items for building price comparison table are chosen from 20 items in survey table for building characteristics. Price comparison table is yearly updated to reflect the price influencing factors of real estate and tis degree of influence.

<Figure IV-1> Composition Diagram of Housing Price Comparison Table



55. To determine individual property’s value, price comparison table is developed through mathematical analysis of market data. The Table is made by (i) analyzing mathematical correlations between the price and characteristics (price formation factors) of benchmarks, (ii) drawing the major price formation factors by each sub-market, (iii) developing a valuation model (formula) for valuing each individual property, and (iv) compiling statistics by multiple regression analysis whereby the variable of value is compared to another variable sets (price formation factors). <Fig. 4-2> illustrates estimation method of individual housing price.

&lt;Figure IV-2&gt; Estimation Method of Individual Housing Price

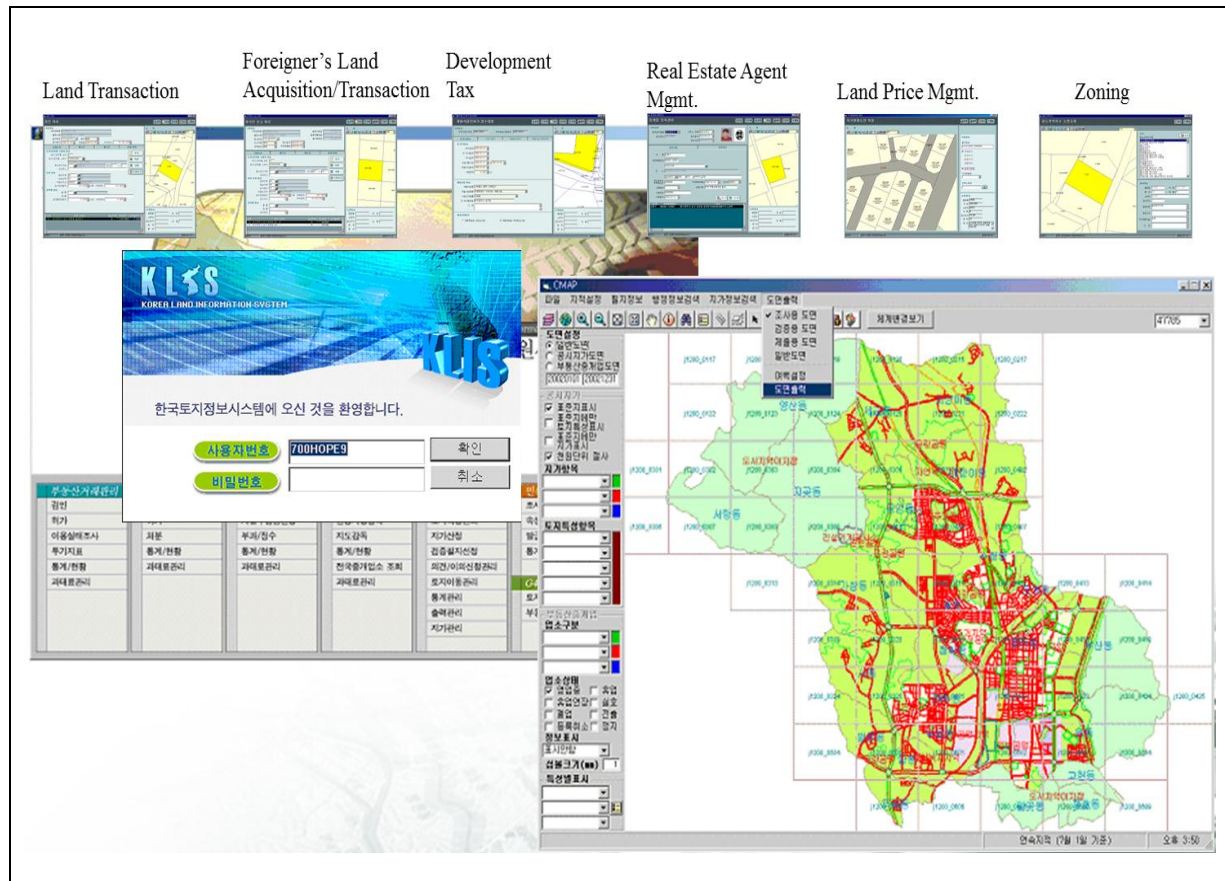


56. **Computerization of Survey and Estimation.** To support quick and exact survey and also valuation, the whole process for inputting the relevant data, analyzing statistics, and drawing the estimation of land and housing price is computerized. The computerizing system includes the Automatic Individual Land Price Appraisal System (ALPA), the Individual Housing Price Appraisal System (HPAS), and the Benchmark Housing Price Treatment System (HP2011). All these sub-systems, which were transformed into the Korea Land Information System (KLIS) in 2006, are utilized by each local government. The computerized system helps accumulate all information of prices and characteristics of individual property and computerize all related documents, thus contributing to make quick and precise estimation of individual real estate, to save a great deal of labor forces and costs, and also to further enhance trust and credibility of PNV of real estate system.

### C. Verification of Publicly Noticed Value of Real Estate

57. **The Current Land Price Mapping.** Computerization of the current land price automated mapping was conducted during 1997~2000. It includes the total 30.93 million parcels of private land which is subject to taxation. The price automated mapping allows appraisers to see the position of each property, to visualize the relative and absolute values of individual property in a locality, to check the price differences of neighboring properties, and thus reducing greatly the inconsistent valuation and raising the preciseness and reliability of PNV of each parcel of land. The price automated mapping is displayed in the KLIS, thus allowing the general public also to access the system. It contributes to improving transparency of the PNV of real estate system.

<Figure IV-3> Korea Land Information System: Example of Price Mapping



58. **Verification of Publicly Noticed Value of Individual Real Estate.** PNV of individual property is calculated by local government officials by using the SAMA system. The results are verified by private appraiser using reports and the price automatic mapping etc. The value is verified again through field survey, if landowners present different opinions during the peruse period or raise objections after determination of individual PNV. Such verification process helps obtain trust and credibility of the system from the general public.

59. **Opening Up All Information to the Public.** All the PNV of benchmark land and housing can be found on the homepage of the MLTM (<http://www.mltn.go.kr/>). The general public is also able to check the PNV of individual real estate provided by each local government through electronic government site (<https://www.korea.go.kr/>). Most land and housing information including prices can be obtained through remote online system. All these computerization enhances transparency of the PNV of real estate system.



## V. STANDARD OF COMPENSATION VALUATION

### A. Valuation Procedure and Method

#### 1. Request for Compensation Valuation

60. **Request for Compensation Valuation.** If project operators want to estimate the amount of compensation, they shall request two or more appraisers with valuation request form written in the following specifications including the lists of land and fixtures thereof:

- (i) Representation of subject
- (ii) Date of valuation
- (iii) Due date of valuation report
- (iv) Distinction of acquiring or using subject
- (v) Distinction of transferring or acquiring fixtures on the land
- (vi) Distinction of discontinuation or suspension for business loss
- (vii) Prior collection of opinions for valuation
- (viii) Other valuation conditions and references

61. **Date of Valuation and Due Date of Valuation Report.** Date of valuation is a date of estimating amount of compensation. In case that date of valuation is proposed by a project operator, such date shall be the date of valuation. But if date of valuation is not indicated, date of valuation shall be the date of survey completion for subject. When land is acquired through negotiation, then date of valuation shall be the date of consultation; when land is acquired through compulsory expropriation, then date of valuation shall be the date of expropriation adjudication under the Land Acquisition and Compensation Act. Due date of valuation report is within 30 days after the request, except for special cases in terms of subject or contents. If it is inevitable to delay presentation of valuation report, prior consultation and approval from the project operator shall be necessary before the due date.

62. **Guide Appraiser to the Field.** Project operators shall accompany and guide appraisers in field surveys. If difference from request lists is identified or contents are mistaken or omitted, then additional request for valuation shall be followed without delay. To secure reliability of valuation, project operator should inform landowner and stakeholder of survey date and time, and thus enabling consultation between landowners and appraisers.

63. **Estimation of Compensation Amount and Effective Date.** If valuation report is written in a flawless way, amount of compensation shall be estimated by taking valuation results in the arithmetic mean of two or more appraisals. If difference between the highest and lowest valuation is more than 10%, then project operator selects another appraisers to re-value them. If contact for acquiring land is not made within one year after valuation, project operator shall ask another two or more appraisers to estimate amount of compensation again. The amount of compensation in re-valuation shall be decided in the arithmetic mean.

#### 2. General Principle of Compensation Valuation

64. **Market Value-Based Valuation.** Compensation valuation shall be determined based on the market value in principle. In case of determining the amount of compensation on the basis of non-market value, the following facts shall be included in the valuation report;

- (i) The fact that amount of valuation is based on non-market value



- (ii) Evidence of valuation based upon non-market value
- (iii) Properties and characteristics of the corresponding non-market value

65. **Present Condition-Based Valuation.** Valuation is conducted principally on the basis of current utilization status and of public restrictions on the subject as of date of valuation. For temporary or illegal use of the subject, the valuation is conducted as follows:

- (i) In case that the present condition of the subject is under the highest and best use (HBU) such as temporary use or like, valuation shall be conducted on the basis of HBU with including transfer cost to HBU.
- (ii) For illegal use in the present condition of the subject, valuation shall be conducted on the basis of reasonable utilization with including transfer cost to reasonable utilization

66. **Individual-Based Valuation.** Unitary amount of valuation is calculated for one subject in principle. But, lump-sum, distinctive or partial valuation may be conducted for one of the following cases:

- (i) Lump-sum valuation: Unitary amount of valuation for multiple subjects may be calculated under which they are transacted in a bundle and inseparably related to each other in terms of use.
- (ii) Distinctive valuation: The amount of valuation may be separately calculated in case that one subject is clearly divided into multiple different values.
- (iii) Partial valuation: For special purposes or reasonable grounds, the amount of valuation for a part of one subject may be calculated.

### 3. Valuation Report

67. **Principle of Developing Valuation Report.** Appraiser shall develop a valuation report and submit it to project operator in the wake of conducting valuation under the procedures of valuation. Valuation report shall be written in a clear and consistent way, not to lead the clients and other interest groups ("clients") to misunderstand it. The report shall include a great wealth of information to make the clients understood completely. The valuation report shall include the following specifications:

- (i) The title of office or company of appraiser
- (ii) The name of client
- (iii) The subject (address, kind, quantity, others)
- (iv) The presentation evidence of a list of the subject
- (v) The purpose of valuation
- (vi) The condition of valuation
- (vii) The date of valuation, the period of survey and the date of development
- (viii) The reason if field survey is omitted
- (ix) The contents if conducting on non-market value, which are possibly substituted to the related regulations, if any
- (x) The amount of estimated value
- (xi) The evidence of the estimated value and comments about its determination
- (xii) The contents of consultation if accompanied with other professional consultation
- (xiii) Other items regulated by the Standard of Appraisal Practice

68. **Completion of Valuation Report.** The valuation report is completed under signature and seal of each following sub-paragraph:

- (i) Signature and seal of the assigned appraiser

- (ii) Signature and seal of CEO for appraisal company
- (iii) Signature and seal of internal reviewer

69. **Presentation and Preservation of Valuation Report.** Appraiser shall directly present the completed valuation report with the clients before the scheduled date written in the appraisal request form. The original copy of valuation report shall be preserved for more than 10 years from presentation date and related data shall be preserved for more than 5 years. Appraiser shall present related contents among valuation report necessary to build real estate information system to an institution, which operates the real estate information system.

## B. Compensation Valuation for Land

### 1. Valuation Standard for Land Compensation

70. **Objectivity-Based Valuation.** Compensation valuation for land is conducted on the basis of objective situation as general utilization method at date of valuation without considering landowners' subjective value or promising to be used for special use.

71. This means that actual utilization status, geographical location and surroundings of the appropriate land at date of valuation are objectively considered. Thus, value formation factors, such as development possibility or locational characteristics which are widely accepted and possibly realized, should be reflected in conducting compensation valuation to find an objective market value. That is, compensation valuation shall be estimated in such an objective way that normal person having common sense and utilization capacity can use the land with reasonable and legal method. In this sense, owners' subjective value is not considered. Subjective value was once considered in conducting valuation by England in the 1800s when it initially introduced the LAR system. The practical experience told that reliability of valuation, fairness with neighboring land, and technical possibility of quantifying subjective value should be considered in compensation valuation. Since then, most countries, including Britain, estimate amount of compensation valuation on the basis only of objective value

72. **Existing Use-Based Valuation.** Compensation valuation for land is principally based on actual utilization status at the date of valuation except for one of the following cases:

- (i) In case of being admitted as temporary utilization status
- (ii) Site with unauthorized buildings or illegally-shape modified land
- (iii) Uncompensated land, which was designated as project site for other public works but was not expropriated due to, for instance, cancelation of that project.
- (iv) Other regulations which admit exceptions of existing use-based valuation

73. In fact, this principle aims to protecting landowners' interests. In Korea, all land is classified as 28 land use categories.<sup>14</sup> The category of land can be changed principally by the request of landowners. Land taxation is levied according to the land category. For this reason, landowners are sometimes hesitant to change their land's category to be matched to actual utilization status. For instance, landowners can keep their land's category as paddy field for tax

<sup>14</sup> *Act on Land Survey, Waterway Survey and Cadastral Records, Article 67 (Classification of Land Categories) : Land categories shall be determined by classifying them into dry paddy field, paddy field, orchard, pasture, forestry, mineral spring site, saltern, (building) site, factory site, school site, parking lot, gas station site, warehouse site, road, railway site, bank, river, ditch, marsh, fish farm, water supply site, park, gymnastic site, recreation site, religion site, historic site, graveyard and miscellaneous land.*

evasion, even if the land is used for residential. The principle of existing use-based valuation implies that, if there is discrepancy between land use category in cadaster book and actual utilization status, compensation valuation is based on actual utilization status rather than land category in cadaster book. Thus, if the appropriate land is utilized as residential use different from farmland in cadaster book, compensation valuation is conducted on the basis of "(building) site" rather than "dry field" in land category

**74. Individual-Based Valuation.** The compensation valuation shall be principally implemented by subjects in an individual way. For the next cases, lump-sum valuation, distinctive valuation or partial valuation are possibly conducted:

- (i) Lump-sum valuation: If more than two lots of land is used without distinction, then valuation shall be conducted in a bundle way, except that value for each lot is clearly divided as land category, land use zone, etc. or landowners for each land are different each other.
- (ii) Distinctive valuation: In case that one lot of land is in use with more than two kinds of uses, then valuation is estimated by each actual uses, except that where the value of other use is similar to that of main use or the area of other use is clearly smaller than that of other use and thus usually transacting on the basis of price for main use.
- (iii) Partial valuation: In case that part of one lot of land is entered in the public works, valuation is conducted on the basis of total land at the entry time, provided that value of the entered part is possibly based if the value of the entered part is different from that of residual one.

**75. Vacant Land-Based Valuation.** Compensation valuation shall be conducted as a vacant state or site if buildings on the land or rights other than ownership are created all but the following cases:

- (i) Land and building are estimated in a bundle considering its precedent or sales data
- (ii) Rights other than ownership and the corresponding land is distinctively estimated upon the request of a project operator
- (iii) In case that owner of land is different from that of building estimated by sales comparison method, the corresponding land is estimated in considering unfavorable situation in using, making profit of, and disposing of the land.
- (iv) In case of estimating land where partitioned surface right is created for public works such as electric line with high voltage, oil pipeline, etc. in ground or underground space.

**76. Vacant Land** is a land where buildings are not located and thus rights other than land ownership are not created. The reason why compensation valuation is based on the status of vacant land is to estimate the value of appropriate land on the basis of highest and best use (HBU) state. Herein, HBU is defined as the most probable use of a property which is physically possible, appropriately justified, legally permissible, financially feasible, and which result in the highest value of the property being valued. Thus, even if current utilization status is agricultural, modification to other use is objectively expected in consideration of locational status or surroundings of the appropriate land, then the transition situation shall be reflected in valuation. And if there are improvements on the land which are used less than HBU state, the appropriate land shall be valued on the basis of HBU state. This principle also aims to warrant landowners' right to receive complete compensation. In fact, if there are buildings on the land or rights other than land ownership are established, then the land is usually under-valued because the appropriate land has some limitations to exercise land ownership. Therefore, to protect owners' interests more perfectly, the appropriate land is estimated on the basis of vacant land state.

Moreover, only 5% vacant-state land is generally necessary in public works in that most buildings on the land are the subject for transfer. Vacant-state valuation principle specifies that lands with same location shall be estimated by the same criteria.

**77. Valuation without Considering Value Fluctuation by Corresponding Public Works.**

Compensation valuation shall be estimated by excluding the following fluctuation of land value.

- (i) Fluctuation of land value after plan or implantation of the pertinent public works is publicly notified or announced.
- (ii) Fluctuation by installation, modification, release etc. of land utilization planning under a procedure by implementation of the pertinent public works.
- (iii) Other fluctuations occurred from beginning of the public works to completion thereof.

78. The precedent at both Constitutional and Supreme Court explain why development gain is excluded from compensation valuation as follows: a) development gain is generated from investment of project operators so that it becomes unearned income not caused from landowners' effort or capital; b) development gain is realized at the completion of project so that it is hard to accept it at the stage of compensation; c) fairness problem with neighboring land which enjoys development gain shall be redressed separately by applying the redemption of development gain system. In considering the precedent at Constitutional Court and Supreme Court, the principle of excluding development gain in compensation valuation is judged to be widely accepted in Korean society. This principle is limitedly applied only to that caused from the appropriate public works. Therefore, development gain generated from other public works in the neighboring is definitely reflected in compensation valuation.

**79. Publicly Noticed Value of Land-based Valuation.** Compensation valuation is based on the PNP of benchmark land. Valuation shall be made at a reasonable price in consideration of utilization plan of the corresponding land under the related Act from the cutoff date to the date of valuation, the fluctuation rate of land price prescribed by Presidential Decree for the area where the price of the area is not affected by the relevant public works, the producer price index, and others regional and individual factors reflecting location, shape, environment, utilization status, etc. of the corresponding land.

Compensation amount = the PNV of benchmark land × correction of point of time (fluctuation rate of land price, producer prices index, etc.) × comparison of regional factors × comparison of individual factors × correction of other factors

<Appendix 1> shows how the above formula is applied in actual case of Wiraе District Residential Site Development Project. <Appendix 2> specifies concrete items in regional factors and individual factors.

## 2. Valuation Standard for Land by Cases

80. **Valuation of Land under Public Restrictions.** Land under public restrictions implies that the use of land is restricted under the related Acts and other statues. Land under public restrictions shall be estimated in consideration of such restrictions. For example, land within national park or development restriction zone shall be estimated under the public restrictions. But if public restrictions are caused by implementation of public project, such restrictions shall

not be considered. For instance, in case of designating an urban planning facility district as a site for road construction, the corresponding land shall be estimated under no public restrictions.

81. **Site with Unauthorized Buildings.** Unauthorized buildings mean that the buildings are deemed to be built or changed in use under authorization or report pursuant to the related regulations but actually built or changed in use without being authorized or reported. Sites with unauthorized buildings shall be estimated in consideration of utilization status at the point of time when unauthorized buildings were built with excluding created value of land or improvement cost.

82. **Illegally Shape-Modified Land.** Land, which is illegally modified in the shape of land without any authorization or report under the related regulations, shall be estimated in consideration of utilization status at the point of time when shape of land was modified.

83. Site with unauthorized buildings built before January 24, 1989 and illegally shape-modified land modified before January 7, 1995 were compensated on the actual utilization status. That is, those lands were estimated on the actual utilization status before these specific dates. This caused the unauthorized buildings or illegal shape modification to increase for the purpose of compensation speculation. Some criticism arose that compensation for illegal activities was contradictory to the rule of law; why the government had to compensate for the value increment generated by illegal activities, instead preventing such illegal activities to defend the constitutionalism. Finally, Land Expropriation Act was revised not to reflect land value increment created by illegal activities for the sake of preventing land from being developed illegally. However, this rule is applied only to the land, site with unauthorized buildings and illegally shape-modified land. The buildings, which were built unauthorized but built prior to the cutoff date, are still the subject for compensation, which values are estimated on the basis of actual utilization status.

84. **Private Road Site under the Private Road Act (1962) and Actual Private Road Site.** Private road site under the Private Road Act shall be estimated to be 20% or below in comparison with the amount of neighboring land. Actual private road site shall be estimated to be about 1/3 or below compared with the neighboring land.

85. **Reclamation Cost.** Reclamation is referred to all kind of modification activities to transform useless land to farmland and thus raising value in use for that land. Reclamation cost shall be estimated as indispensable cost or its equivalent for reclamation at date of valuation including improvement cost.

86. **Remaining Land.** Remaining land is generated when only part of the land belonging to the same landowner is expropriated to public works. Upon the request of determining the amount of loss owing to price decrease of remaining land, the amount of loss shall be calculated by deducting the price of remaining land subsequent to expropriation from the price of remaining land prior to expropriation, in the premise that the price of remaining land prior to expropriation is not influenced by the relevant public works. In determining the amount of loss in remaining land, date of valuation shall be the point of consultation or adjudication for the amount of loss, in which public restrictions, utilization status, etc. in remaining land after being expropriated are based on date of valuation.

87. **Farmland.** Economic efficiency in producing crops shall be primary concern in estimating farmland with the following details:

- (i) Classification of nature of soil and fertility

- (ii) Irrigation and drainage status
- (iii) Presence/absence and degree of damages caused by drought and inundation
- (iv) Convenience in management or cultivation
- (v) Amount of average harvest in unit square
- (vi) Accessibility to village and place of shipment

88. **Orchard.** In estimating orchard, sales comparison method shall be primarily considered. If having difficulty or insufficient to applying sales comparison method, cost method may be substituted for young trees, and income capitalization method may be utilized for other cases.

89. **Pasture.** Pasture land created by authorization under the Grassland Act (1969) shall be estimated on the basis of benchmark land with similar utilization status to subject land. Without PNV of benchmark land having similar utilization status to the corresponding land in the neighborhood, pasture land shall be estimated by adding reasonable price on the basis of PNV of benchmark land for the previous land to cost in creating pasture land including land modification. In cultivating feeding crops in pre-existed farm land all but being not pasture created under the Grassland Act, the land shall be estimated as farmland.

90. **Forest.** Forest shall be classified into two sectors, one for forest land the other for standing tree on forest land. Valuation for forest land shall depend on valuation method applied to general land. Natural environment shall be primarily taken into account in estimating forest land with the next checklists:

- (i) Natural status such as altitude, topology, etc.
- (ii) Status of layer
- (iii) Sunshine, temperature, humidity, etc.
- (iv) Status of road between forests
- (v) Convenience in securing labor force

91. In estimating standing tree, sales comparison method shall be primarily considered. If it is hard or improper to apply sales comparison method owing to the absence of sales data, one of the following method is possibly applied:

- (i) Young forest : cost method (forest plantation cost valuation method)
- (ii) Growing standing tree: Glaser method (standing tree expectation valuation method)
- (iii) Standing tree in a final age: market-value reverse calculation method

92. One of the following cases shall be estimated in a bundle way of forest land and standing tree. Sales comparison method shall be main approach in estimating lum sum value of forest land and standing tree. If being hard or improper to apply sales comparison method, forest cost valuation method or forest expectation valuation method may be substituted.

- (i) Forest where market-based price with forest land and standing tree transacted in a batch form is possibly calculated
- (ii) Forest where price of standing tree is insignificant in comparison with that of forest land
- (iii) Forest where density of stocking is 30% or below
- (iv) Fruit tree area

### C. Compensation Valuation for Fixtures

93. **Compensation Principle of Fixtures.** Fixtures on the land mean the goods not directly necessary for the corresponding public works such as buildings, tree etc. on the land. Fixtures

thereof shall be compensated for transfer cost in principle. The following cases shall be compensated on the basis of price in acquisition:

- (i) It is difficult to transfer buildings, etc. or such transfer makes it impossible to re-use them for customary use
- (i) The transfer cost of buildings etc. exceeds acquisition price thereof
- (ii) The project operator acquires them for direct use in the public works.

94. Herein, whether it is possibly transferred is judged by economic side rather than physical or technical side. If fixtures such as buildings, structures, installations, standing tree, other goods, etc. are present on the land, compensation shall be basically made for land and fixtures in a respective way. But in case that land and buildings are customarily transacted together, such fixtures shall be estimated together with the land and such fact shall be written in the valuation report.

95. **Compensation Valuation for Buildings.** In principle, buildings shall be estimated by cost approach. For residential buildings, if the estimated amount of valuation by sales approach exceeds that by cost approach, the estimation shall be determined by sales approach.

96. Building shall be estimated by cost approach. The cost approach establishes the upper limit of what the market would normally pay for a given property as new. Thus, for older buildings, some allowance for various forms of accrued depreciation (physically deterioration, functional or technical obsolescence, and economic or external obsolescence) is deducted to estimate a price that approximates market value. Thus, the Korean approach to estimate buildings is like a *depreciated replacement cost approach*. If the estimation does not reflect depreciation cost, then the amount would unreasonably exceed the likely price that would be paid for the appraised building. This would lead to precipitate compensation speculation.

97. To ensure the residential security, another scheme shall be provided to the displaced persons, including relocation measures. Relocation schemes, in addition to compensation for legitimate houses, include a choice by physically displaced persons of one of the following: (i) a housing site, (ii) housing, and (iii) grant of a relocation allowance. Where it is impractical to develop a separate relocation site, for example, regarding construction projects for roads, a relocation allowance is granted to the displaced persons. In addition to the relocation allowance, a special allowance for livelihood stabilization is provided to people displaced by dam construction projects. A relocation site must include basic public utilities such as roads, water and sewage. Costs incurred in the establishment of these infrastructure facilities must be borne by the project operator. In addition, moving expenses to temporary housing must be paid to the owners or tenants of residential housing. Displaced persons are also eligible for preferential provision of credit from the National Housing Fund, with interest lower than market rates, for financing construction expenses.

98. **Compensation Valuation of Unauthorized Building.** Unauthorized building built prior to the cutoff date is compensated. Therefore, unauthorized buildings themselves are normally estimated on the basis of current use status. This is different from the site on which unauthorized buildings are built. To prevent land from being developed in an unauthorized or illegally way, the site with unauthorized buildings shall be estimated in consideration of utilization status at the point of time when unauthorized buildings were built with excluding created value of land or improvement cost. In real world, many unauthorized buildings are built by low income groups. To protect these people, residential relocation cost, moving cost, settlement support fund, etc. are paid in addition to providing compensation for unauthorized

buildings. For tenant residing in unauthorized buildings, compensation for business loss, residential relocation cost, etc. are paid, too.

**99. Compensation Valuation for Remaining Buildings.** In case that price of the remaining buildings is reduced or other damages occur because a part of buildings belonging to the same building owner is acquired or used, such damages shall be compensated. In case that the aggregate of reduced price of the remaining buildings and repairing expenses is larger than price of the remaining buildings, a project operator may purchase the remaining buildings. When it is remarkably difficult to re-use the remaining buildings for their original purposes, such building owners may request a project operator to purchase them. Damages of the remaining buildings shall be calculated by deducting price of the remaining buildings after being expropriated in the public works from that of the remaining buildings prior to expropriation.

**100. Compensation for Structures.** Structures are defined as reservoir, driven well, catch basin, sheath, bridge, other installations, etc. Structures shall be the subject for valuation, if they keep objective utility. Utility and economic value of the structures shall be estimated in consideration of their frame, use, utilization status, surroundings, installation purpose, etc. in a comprehensive way. Provided that the following cases shall not be estimated:

- (i) In case that no economic value is found because use of structures, etc. is abolished or their function is not operated such as reservoir
- (ii) In case that value of structures, etc. is fully reflected to land to be compensated, the price of the land is increased such as sheath or dyke to protect land or saltern
- (iii) In case that a project operator installs alternative facilities for structures to be expropriated in public works.

## **D. Compensation Valuation for Other Rights**

### **1. Compensation Valuation for Mining Rights**

**101.** Mining rights are the right to dig and acquire minerals. Mining rights are possibly the subject for transfer, inheritance, mortgage, coercive collection and compulsory execution as respective right other than land ownership, and thus mining rights are not exterminated even if a project operator acquires the land.

#### **102. Valuation for Extermination of Mining Right.**

- (i) For a mine with a record production of minerals, which is currently operated or temporarily suspended, subtract remaining value of installments to be transferred or changed in use from estimated amount of a mine considering future profitability with addition of transfer cost.

Amount of compensation = Estimated amount of mine - Remaining value of installments to be transferred or changed in use + Transfer cost

- (ii) For one of the following cases, subtract remaining value of installments to be transferred or changed in use from investment cost in developing the corresponding mine and the estimated amount of current installments with addition of transfer cost,



(i) in case of beginning probing; (ii) in case that probing is identified; and (iii) in case that plan on digging is approved but no amount produced is reported.

Amount of compensation = Investment cost in developing the corresponding mine and the estimated amount of current installments - Remaining value of installments to be transferred or changed in use + Transfer cost

(iii) For no probing or no approval for planning on digging in the wake of registering probing rights, just refer to registering cost.

Amount of compensation = registration cost

103. Mining rights is distinct from land ownership so that separate approval for planning on digging is necessary to dig and acquire minerals from local governments. In gaining approval for planning on digging, it is necessary to get approval or authorization under related Acts including Mining Industry Act and landowners' consent. Therefore, without approval for planning on digging, mining rights is just potential and abstract right so that it is impossible to produce minerals and accordingly, it is hard to judge future value. It is general under international practices that, in estimating damage due to the unlawful acts, restoration to the state without such illegal act is assumed, and thus future expected profit is basically included. However, in estimating loss compensation due to the legal acts, future expected profit is not reflected to the compensation in principle. Therefore, it is enough to compensate investment cost at time of expropriation.

## 2. Compensation Valuation for Fishing Rights

104. **Compensation Valuation for Fishing Damage Loss.** Compensation for fishing damage loss is to compensate damage by decreasing or losing future expectation profit owing to limitation, suspension, etc. of fishing rights.

(i) Valuation for fishing cancellation loss shall be relied on one of the following formula;

Licensed fishing: Amount of compensation = Average amount of annual profit ÷ yearly interest rate (12%) + Residual value of installments, etc.  
 Permitted or declared fishing: Amount of compensation = Average amount of profit during the last 3 years + Residual value of installments, etc.

Note: Yearly interest rate (12%) in valuation for fishing rights is capitalization rate. It was determined by adding interest rate of time deposit (9.8%) (as of the end of 1996 when Fishers Act was revised) to risk premium for fishing. As interest rate dropped to around 4.5% as of the end of 2011, it is under consideration to revise capitalization rate.

(ii) Valuation for boat, gear and residual of installments shall be estimated by cost method, provided that sale comparison approach may be substituted if not proper in applying cost method.

105. **Compensation Valuation for Fishing Suspension Loss.** Valuation for fishing suspension loss shall be based on one of the following formula:

Licensed fishing: Amount of compensation = Average amount of annual profit x Suspension period + Amount loss by moving and collecting installments, goods farmed, etc. + Common fixed cost during suspension period

Permitted or declared fishing: Amount of compensation = Average amount of profit during the last 3 years x Suspension or mooring period + Common fixed cost during suspension period

## E. Compensation Valuation for Business Loss

### 1. Valuation for Business Discontinuation Loss

106. Valuation for loss in business discontinuation is estimated as follows:

Amount of compensation = Operating profit (income for self-employed business) x Term of compensation (for 2 years) + Amount of value loss in selling fixed asset for business + Amount of value loss in selling inventory assets

- (i) Calculation of operating profit: calculation of operating profit in valuating for loss in business discontinuation is based on average operating profit in the past 3 years prior to date of valuation in the corresponding business. But in case that operating profit is decreased owing to announcement or publicly notification of planning or implementation of public works, average operating profit for 3 years prior to announcement or publicly notification shall be reflected in the calculation.
- (ii) Calculation of loss in sale: the amount of value loss by sale in estimating loss due to business discontinuation is calculated by sorting out fixed assets for business and inventory assets in the following criteria:
  1. For assets which are possibly separated and disposed from a business office such as machineries, equipment, etc., the amount of value loss shall be calculated by deducting the amount of sale from the estimated amount of valuation or value on books ("present value") of the corresponding assets.
  2. For inventory assets, it shall be calculated by deducting the amount of sale from the present value.

### 2. Valuation for Business Suspension Loss

107. In case that a business office is forced to move due to the implementation of public works, compensation for loss by business suspension shall be estimated as follows:

Amount of compensation = (Operating profit x Term of suspension) + Fixed cost like labor cost, etc. + Moving cost of business facilities, raw materials, goods and products ("business facilities, etc.") + Amount of value loss by moving the business facilities + Other auxiliary expenses like promotion, opening, etc.

Note: Fixed cost is the cost expected to spend during suspension or repair period for continuing business activities. It is calculated by adding the following costs: a) labor cost for minimum workers who normally work during suspension or repair period; b) tax and utility bill directly related to the appropriate business; c) rent to be spent without stop under contract; d) depreciation cost for intangible assets and tangible assets; e) insurance premium such as fire insurance, etc.; f) marketing fee to be spend without stop under contract; and g) other expenses to be used without pause during suspension period.

## VI. REVIEW AND VERIFICATION SYSTEM FOR COMPENSATION VALUATION

108. **Review and Verification System.** The purpose of setting review and verification procedure is to secure fairness and objectivity of compensation valuation. Review system of compensation valuation consists of three steps; (i) an appraisal company having the corresponding appraiser for compensation valuation conducts internal review; (ii) the Valuation Review Committee under the KAPA again makes review for compensation valuation with 15 billion Won (about 12.7 million US\$) or more worth in estimated amount of valuation. The result of reviews in the Review Committee is sent to the corresponding appraisal company and a project operator; (iii) a project operator conducts its own internal review on valuation result and requests re-valuation if the result of compensation valuation is judged to be unreasonable.

### A. Internal Review within Appraisal Company

109. Compensation valuation is principally conducted by a best-run appraisal company. One of requirements to be designated as a best-run company by the MLTM is the presence of audit and review department within the company. Accordingly, all appraisal companies establish audit department at headquarter to implement review of valuation report for compensation valuation. Internal review within the company aims to enhance quality of valuation report, prevent valuation-related accidents prematurely and strengthen public trust and reliability of the company. Internal review for compensation valuation is conducted by two steps; (i) internal review by examiner and (ii) internal review by the Valuation Deliberation Committee system.

110. **Examiner of Appraisal.** All the valuation report shall be reviewed by an examiner prior to submit the report. The CEO in the appraisal company nominates the examiner who fully undertakes review task to raise efficiency of the review. The examiner is classified as a general examiner and a senior examiner. The general examiner is appointed among appraisers with 5 or more years in valuation career and the senior examiner is appointed among appraisers with 10 or more years in career. The CEO in the company shall appoint at least eight examiners at HQ and two examiners at branch office.

111. **Internal Review by Examiner.** All valuation reports submitted under the name of an appraisal company are subject to internal review by examiner. The examiner at branch office checks the following items; (i) valuation method and price, (ii) valuation data, and (iii) other necessary items related to reviewing valuation result. The examiner at HQ identifies the next specifications, (i) client, purpose of valuation, completion date of survey and date of valuation, (ii) presence of data for price calculation evidence, (iii) valuation conditions, and (iv) attachment of related public documents. The examiner at HQ takes careful review of mistaken-typing, erroneous calculation, improper description, accordance with public documents, propriety of valuation price, price calculation method, etc.

112. **Internal Review for Compensation Valuation.** For more than 5 billion Won (4.3 million US\$) in estimated amount of compensation valuation, the valuation report shall be subject to passing internal review at HQ as well as passing internal review at branch office. Not less than two examiners should sign and seal the review report. The examiner should review the following items in case of compensation valuation; (i) feasibility of choosing PNV of benchmark land, list of the chosen benchmark lands, land price fluctuation rate, local factor, individual factor, and other factor corrections, (ii) if other factors are corrected, then list of other factor correction and feasibility thereof, (iii) accordance or difference with public documents and location, and (iv) the

presence of illegally shaped modification of land. Review opinion of the examiner shall be presented as to be proper or improper. For improper opinion, the corresponding appraiser may complement the related data or adjust the estimated amount of valuation, and then request the internal review again. For this case, the examiner shall review the valuation report again.

**113. Internal Review by Valuation Deliberation Committee.** The Valuation Deliberation Committee is established at HQ and branch office in order to help deliberate valuation method, make efficient implementation of price survey and determine reasonable price for raising fairness and reliability of valuation result. For general valuation, the following cases are subject to passing internal review by the Committee; (i) two or more branch offices including HQ bring for discussion on belief of potential significant influence to the appraisal company, and (ii) the CEO judges that it is necessary to be taken up for discussion. For compensation valuation, the following cases shall be reviewed by the Committee; (i) for more than 50 billion Won in the estimated amount of valuation, and (ii) more than 1 billion Won in estimated amount of valuation which is requested by landowners' recommendation.

114. The Deliberation Committee deliberates and makes conclusion of valuation method and price, valuation-related data, etc. The Committee reviews basically the related documents. Field survey is possibly carried out simultaneously, if necessary. The Committee makes conclusion with attendance of two thirds or more of total members and a concurrent vote of two thirds or more of the members present. Any member who has interest in the corresponding discussion case shall be excluded from deliberation of the corresponding case. If the corresponding case is not passed or rejected in the Committee, the relevant appraiser complements data or adjusts the estimated amount of valuation to make request of deliberation again. Through deliberation, if it is found that the relevant appraiser or related staff hide truth or make false statement by intention or gross negligence so that the estimated amount of valuation is remarkably different from market price as of date of valuation or the corresponding company suffered any loss from such behavior, the concerned appraiser shall be punished under the related regulations.

## **B. Outer Review and Verification within the KAPA**

115. The Korean government announced the Measures against Inadequate Valuation to prevent inadequate and excessive valuation in 2007. Based on this Measure, the KAPA had established the Review Committee for Public Valuation as a prior check system for compensation valuation. The purpose of the Review Committee is to check problems related to inadequate or excessive valuation prematurely through independent adjustment system within private sectors of appraisal business for uplifting public reliability of valuation together with raising objectivity, fairness and adequateness of valuation and strengthening autonomous purification function within private sectors. This prior review system applied for public purposed valuation was extendedly applied to all the valuation tasks and the Committee was re-named the Valuation Review Committee in 2009. The Committee reviews adequateness of valuation in advance before a valuation report written under the Land Acquisition and Compensation Act and related regulations is submitted to the clients.

**116. Composition of Review Committee.** The Review Committee comprises 32 appraisers as internal members and 3 external members including one president, one vice-president and three administrative secretaries. Members in the Review Committee are chosen from appraisers with more than 10 years of valuation careers. External professionals are invited to secure fairness and objectivity of the Review Committee. The Review Committee is convened by the president and a case shall be passed with attendance of a majority of total members and

concurrent vote of a majority of the members present. But the review member is not able to take part in reviewing valuation report which is written by the attached appraisal company. The main role in the Review Committee is to check reasonableness of valuation report and valuation fee about public-purposed valuation, education on public-purposed valuation related task and other operation and management about public-purposed valuation.

**117. Subject for Review of Review Committee.** The followings shall be reviewed at the Review Committee; (i) the entire project with more than 15 billion Won in estimated amount of compensation valuation under the Land Acquisition and Compensation Act, (ii) litigation valuation submitted after compensation consultation, (iii) the case which is chosen or recommended by the KAPA, and (iv) the case that appraisal company requests to review and the president of the Committee approve for review.

**118. Review Specifications for Compensation Valuation.** Review members make identification of adequateness of the following specifications in the valuation report; (i) reasonableness of selecting the benchmark property, (ii) reasonableness of other factor's corrections calculation process, (iii) reasonableness of estimated amount of valuation for buildings and fixtures, (iv) reasonableness of valuation fee calculation, (iv) reasonableness of price difference between the estimated amount of compensation valuation and PNV of individual land, and (v) other necessary details to judge reasonableness of valuation. What the Review Committee put emphasis on is whether mandatory description lists are all filled up and valuation results are reached with fairness and adequateness. Review members can request the appraiser to submit the concrete evidence of valuation calculation and to ask partial correction and supplementation of valuation report, if necessary. The Review Committee submit the review opinion to the president. Then the president sends review result to the corresponding appraisal institutions and project operators.

### **C. Final Review and Verification within Project Operator**

**119. Internal Verification by Project Operator.** A project operator specifies internal regulations, which stipulates the procedures for requesting compensation valuation and conducting its own internal reviews about legitimacy and reasonableness of valuation result. Project operator's internal review judges whether the compensation valuation is conducted pursuant to the related Act and the statues and adequateness thereof is kept. In this case, the project operator let valuation report reviewed by specific institution, which is designated by the MLTM.

**120. Procedures and Details of Internal Verification.** The example of the Korea Land and Housing Corporation, one of the main project operators in urban development, is illustrated afterwards. A branch manager of LH Corporation shall review faithfully whether the compensation valuation is legally conducted under the related regulation. If the estimated amount of compensation valuation is more than 10 billion Won or necessity for other professional review is acknowledged, the branch manager shall request, without delay, the Review Committee for Compensation Valuation, which is established at HQ, to review the valuation report. The Review Committee is composed of 10 or below members of LH Corporation staffs. The members shall make review in a faithful and fair way, and review the valuation report on the basis of related regulations, objective verification data, and concrete evidences. If unduly fact is found, the member shall not intentionally hide and connive it.

121. **Disciplinary of Internal Verification.** If review result shows that compensation valuation is implemented in an illegal or unduly way, then a project operator may request re-valuation to the corresponding appraisal company. A project operator may punish the corresponding appraiser for his/her negligent appraisal work, if the case falls into the following cases; (i) there is violation of related regulations, (ii) there is unduly valuation found by internal review, (iii) there is collusion with interest party including the affected persons, or other unjust method is applied to valuation, (iv) there is remarkable damage to the public project occurred from errors in valuation report, deficiency in development of valuation report, and non-observance to deadline for report submission, (v) there is disclosure of valuation-related contents to other than the clients, and (vi) there is violation of trust and good faith principle in conducting valuation. Any appraiser who is regarded as the negligent appraiser may be prohibited in conducting valuation for one year or less or is possibly disciplined by the MLTM under the regulation of the Real Estate Appraisal Act.

#### **D. Effect of Verification System for Compensation Valuation**

122. All valuation service needs to secure fairness and reliability. Securing fairness and reliability is more significant to compensation valuation. Thus, the government regulates a series of verification process for compensation valuation, which follows three steps; (i) internal review within appraisal company in which the appraiser is employed; (ii) outer review within the Valuation Review Committee established under the KAPA; and (iii) internal verification by project operator. This verification process helps compensation valuation reflect market price more properly. This process also helps project operator obtain credibility from the affected persons. As a result, most of the affected person had agreed with the level of compensation valuation; 90% or more of land for public works had been acquired through mutual agreement at the consultation stage during the past 20 years. Less than 10% of the land was acquired through compulsory expropriation or judicial judge.

## VII. CONCLUSION : POLICY IMPLICATIONS OF KOREAN EXPERIENCES

### A. Comparative Analysis of Compensation Valuation Principles between ADB and Korea

#### 1. ADB Principles of Compensation Valuation

123. **ADB Principles.** International financial institutions, including ADB and World Bank (WB), have established principles of compensation valuation in preparing and implementing LAR program from the early 1990s. ADB has suggested basically three principles of compensation valuation. Primarily, compensation valuation shall be calculated at full replacement costs, which implies the consideration of (i) fair market value of compensation, (ii) transaction costs, (iii) interest accrued, (iv) transitional and restoration costs, and (v) other applicable payments, if any. Secondly, in applying such full replacement cost method, depreciation of structures and assets should not be taken into account. Finally, qualified and experienced experts shall undertake the valuation of acquired assets.<sup>15</sup>

124. **WB Principles.** WB also presents similar principles of compensation valuation. Thus, in case of expropriating land for public works, compensation shall be done by replacement of lost assets so far as possible. Cash payment shall be made when replacement of land is not available. In selecting cash compensation method, compensation shall be calculated at full replacement costs. In applying such method, depreciation of structures and assets should not be taken into account. The replacement cost shall be calculated by adding fair market value and transaction cost. Herein, fair market value is transaction value actually transacted in market rather than book value such as taxation standard. Replacement cost addresses tangible assets only such as land, buildings, etc.; replacement cost valuation cannot be established for intangible assets. Replacement cost includes cost of any registration and transfer taxes. Replacement cost includes interest accrued to offset inflation if payment of compensation is significantly delayed.<sup>16</sup>

#### 2. Korean Principles of Compensation Valuation

125. Compensation valuation in Korea shall be mainly based on fair market value rather than replacement cost. But there are quite similar results in compensation valuation calculated between Korean standard and ADB standard.

126. **Replacement Cost vs. Depreciated Replacement Cost.** ADB and WB stress that depreciation of buildings shall not be considered in application of full replacement cost method. This is to realize complete housing welfare for the affected persons. Also this aims to restoring the affected persons' residential level to the previous state or better than such state.

127. In Korea, compensation valuation is based on market value in principle. Accordingly, buildings are estimated by cost approach with considering depreciation. For housing, the amount of compensation is determined by sales comparison approach if value of sales comparison approach exceeds that of cost approach. In case that newly-built cost is considered without depreciation, it may cause excessive compensation which boosts speculation and gives

<sup>15</sup> ADB. 1995. *Involuntary Resettlement Policy*. Manila.; ADB. June 2009. *Safeguard Policy Statement*. Manila.

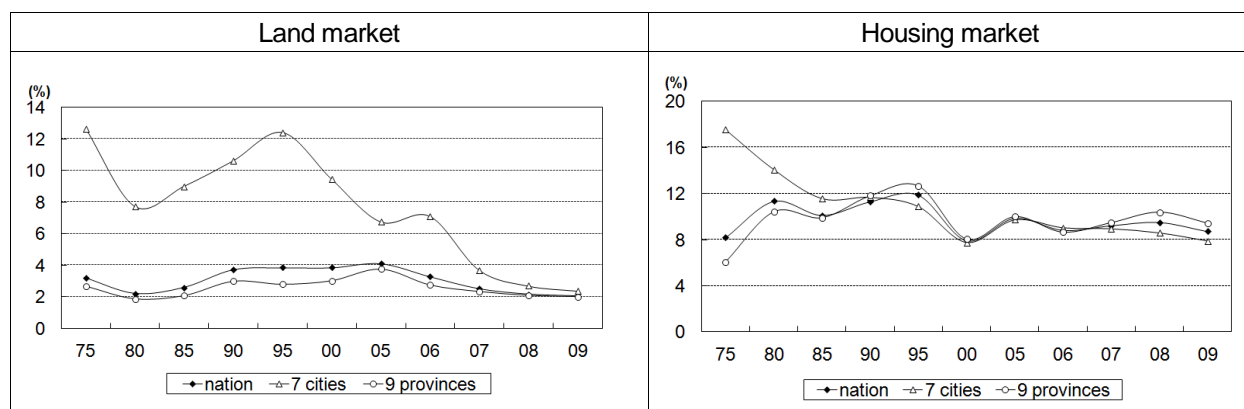
<sup>16</sup> WB. 2004. *Involuntary Resettlement Sourcebook*. Washington D.C.

unexpected damages to third party in good faith. In other words, in Korea, complete compensation for the affected persons and warranty for residential stability are distinctive issues so that residential stability is achieved through relocation measures. To secure residential stability for the affected persons, settlement village is built and basic infrastructure for the village is constructed at the expense of project operator. r

128. **Presence of Active Real Estate Market.** One reason why ADB and WB adopt replacement cost method is that in many developing countries land and real estate market are not there, or the market is in immature stage, if any, at least at the early stage of economic development. If land and housing market do not exist or are not matured enough, it is very hard to find fair market value.

129. In Korea, however, the land and real estate markets have been robust. For instance, average 4% of national land and 10% of total housings have been annually transacted during the past 40 years. It implies that, at average, land ownership has changed for every 25 years and house owner has changed for every 10 years. The land and housing markets are too much active. Along with this rapid transaction of real estate, the trading volume of the real estate market has expanded as much. The trading volume of land market in 1976 was 3.2 trillion Won, which expanded to 373 trillion Won in 2005. The trading volume of housing market grew similarly; the trading volume of housing market in 1976 was 2.1 trillion Won, which expanded to 239 trillion Won in 2005. The flow market of real estate with 612 trillion Won in 2005 matched equity market with 655 trillion Won and bond market with 721 trillion Won and 4.5 times as many as government total budget with 135 trillion Won. Consequently, the estimated amount of compensation valuation based on market value within such active market might be almost similar to valuation results from the replacement cost method suggested by ADB.

<Figure VII-1> Changes in Transaction Frequency of Real Estate



Source: Ministry of Public Administration and Security. Each year. *Yearbook of Cadastral Statistics & Yearbook of Local Taxation*.

130. **Transaction Cost of Taxes.** One of legitimacy of ADB replacement cost principle is that any transaction costs such as taxes must not be paid by the affected persons in the process of receiving cash payment and acquiring replacement land. If such tax is paid by the affected persons, then the amount of cash payment actually decreases so that it is impossible to acquire a land similar to previous holding. This result does not meet the fundamental principle of



involuntary resettlement to sustain previous living standard for the affected person after dispossessing of their land.

131. In Korea, transfer tax (capital gains tax) for sellers, acquisition tax and registration tax for buyers are imposed in making disposal and acquisition of real estate. When we dispose of real estate, we have to pay for 6~35% capital gains tax, if capital gains occur. In the past, capital gains tax was exempted for the affected persons. It was because expropriation was against owner's will. More importantly, loss compensation was behind complete compensation. Tax benefit had to be given to supplement their loss. There was big change since the early 1990s. The amount of compensation began to fully reflect market value. Moreover, relocation measures were provided and livelihood measures were continuously extended. Compensation speculation became pervasive. Some issues were raised; on one hand, giving additional tax benefit might be excessive compensation under the circumstances where complete compensation for property rights was provided. On the other, additional tax benefit might be against the equity principle, comparing with general sellers who had to pay for capital gains tax. Finally, Act on Regulation of Tax Reduction and Exemption was revised in 1990 to raise fairness and neutrality of taxation. Exemption of capital gains tax for the affected persons became reduced continuously. Currently, if the affected person receives cash compensation, then capital gains tax shall be reduced by 20%. If the affected person receives bond compensation, then capital gains tax shall be reduced by 50%. If the affected person has cultivated farmland directly for 8 or more years, then capital gains tax shall be exempted. As for capital gains tax for housing, discounted rate is applied to the affected person from 24% (for 3 years) to 80% (for 10 years and more) by holding period. When we acquire and register real estate, we have to pay for 2% acquisition tax (1% for housing) and 2% registration tax respectively. But, if the affected person acquires replacement real estate within one year after transferring his real estate to public operator, then acquisition tax and registration tax is exempted. This implies that the transaction cost of tax is minimized to the affected persons.

132. **Transaction Cost of Delayed Compensation.** ADB replacement cost principle stresses that compensation payment shall be paid immediately by project operator. If the payment is delayed, the affected person would suffer from the additional loss accrued due to bank's interests or price inflation. Just compensation shall make up for any loss given to the affected person due to delay of compensation payment.

133. In Korea, compensation shall be paid immediately after consultation is completed or expropriation adjudication is judged. If not paid immediately, consultation or expropriation adjudication loses its legal force accordingly; project operators lose its power of eminent domain to acquire or expropriate land. If project operator acquires the land through negotiation settlement, compensation shall be paid by price at time of consultation. If consultations are made in one year after compensation valuation shall be conducted, then compensation valuation shall be conducted again. If project operators acquire the land through compulsory purchase process, compensation is paid by price at time of expropriation adjudication. Finally, compensation valuation is conducted on the basis of PNV of real estate. This PNV is surveyed and valued by private qualified appraiser every year in order to reflect the changes in market situations in a timely and proper way. Time gap between the dates of PNV and compensation amount is corrected by using inflation index; either monthly land price fluctuation rate surveyed by qualified appraisers and issued by the MLTM, or monthly producer inflation rate announced by the Bank of Korea. By setting up such adjustment mechanism, the Korean government guarantees that the affected person does not bear transaction cost accrued due to delay in compensation payment.

134. Compensation Valuation by Private Qualified Experts. ADB recommends that cash compensation shall be calculated by private qualified experts. Many developing countries do not reflect market value properly since they usually estimate the amount of compensation on the basis of taxation standard, etc. Moreover, such taxation standard is not periodically updated so that it does not reflect the changes in market value adequately.

135. In Korea, compensation valuation has been conducted by private certified appraisers since the early 1970s. The PNV of real estate, which is basis of compensation valuation, has been also estimated by the appraisers. The adequateness of compensation valuation shall be continuously verified through a variety of verification systems, e.g., internal review within appraisal companies, outer review within the Valuation Review Committee established under the KAPA, and internal verification by the project operator. This verification process helps compensation valuation reflect the market price more properly and obtain credibility from the affected persons.

### **3. Gaps between Korean Practice and ADB Compensation Valuation Standard**

136. In general, Korean practices of compensation valuation reflect most policy principles of ADB. A critical gap between Korean and ADB policy principles is that ADB emphasizes on replacement of alternate land if land is acquired for public works, which is limitedly applied. In Korea, cash compensation is the underlying principle in LAR. Compensation with land is alternatively allowed by the request of the affected person. That is, the order of compensation method, either replacement of land or cash payment, is different between ADB and Korea; ADB gives a priority to land replacement, and cash compensation is a second option when replacement of land is not available. On the contrary, in Korea, cash compensation is the first option, and option of replacement of land is followed.

137. Which method of compensation system, i.e., cash compensation or replacement of land, is appropriate depends on circumstances of each nation. For example, in Mongol which has enough state-owned land with insufficient government finance, replacement of land might be more desirable. If designating land at the outskirts of a city for replacement of land and establishing development plan for this area, the affected persons might receive such land at the exchange of their lands. As urbanization proceeds and thus the received land is transferred to urban site, the price of the received land would be likely to rise. This would be eventually beneficial to the affected person. At any case, the affected persons shall be given an option to choose which kind of compensation is favorable to them. And monetary gaps between both compensation types shall be minimized.

138. In Korea, most lands are owned privately. State-owned land composes of very small portion of total land. It is not efficient for government to buy the replacement of land and provide such land to the affected person in driving public works quickly and harmoniously. Thus, Korea selected a cash compensation scheme instead of a replacement of land way. To supplement the cash compensation scheme, Korean government has increased the stock of public rental housing. It also introduced a replacement of land system in 2007. It is to provide the created housing and commercial site for the affected persons rather than give farmland for continuous farming. This is a kind of land substitution style of land readjustment project. On the other hand, it established a land banking system in 2009 to expand government capacity for implementing public works with a minimal use of eminent domain

139. Another gap is related to valuation principle. ADB clearly specifies the valuation principle at *full replacement cost*, by which depreciation of buildings shall not be considered in compensation valuation. In comparison, the Korean practice of compensation valuation is mostly focused on fair market valuation, so that depreciation is considered in compensation valuation for buildings. It is a kind of *depreciated replacement cost* method. This principle is stipulated in most laws including the Constitution, the Land Acquisition and Compensation Act, and Korean Standards of Appraisal Practice, etc. In Korea, complete compensation for the affected persons and warranty for their residential stability are treated distinctively so that residential stability is achieved through relocation measures.

140. ADB replacement cost includes fair market prices and other incidental transaction costs. So any transaction costs such as taxes must not be paid by the affected persons in the process of receiving cash payment and acquiring replacement land. In Korea, if the affected person acquires replacement real estate within one year after transferring his real estate to public operator, then acquisition tax and registration tax is exempted, same to the ADB policy. There is some gap in transfer tax. For farmland with direct cultivating for 8 or more years, transfer tax (capital gains tax) shall be fully exempted. Other land get only 20~50% tax exemption effect. Except for those gaps, results of compensation valuation of both ADB and Korean principles are quite similar; since Korean land and housing market are mature enough, PNV of real estate is annually updated, compensation valuation is conducted by private qualified appraisers, and the affected person's burden of transaction cost is minimized.

## **B. Policy Implication of Korean Experience**

141. **Establishment of Legal Foundation.** In designing and conducting compensation valuation, it is necessary to minimize the discretionary power of relevant government officials and stakeholders including project operators, the affected persons and appraisers, and to enhance the predictability of the procedure and provisions for valuation. In Korea, most principles of just compensation are stipulated within relevant Acts such as the Constitution and the Land Acquisition and Compensation Act etc., and most due procedures and methods of compensation valuation are prescribed within relevant regulations including the Real Estate Appraisal Act and the Standards of Appraisal Practice, etc.

142. **Capability Development for Neutral Qualified Appraisers.** There is a need for fostering neutral qualified experts who are in charge of appraising, in an objective and fair way, the value of affected property and the cost of land acquisition and resettlement for by urban development. In Korea, public (tax) officials had appraised compensation value until 1972, which raised questions about the neutrality and expertise of valuation. Subsequently, Korea introduced the Certified Public Appraiser system to be carried out compensation appraisal and minimize conflicts over compensation rates.

143. **Establishment of Land Information System.** To achieve an articulated valuation result, it is necessary to establish an articulated information network, including cadastral information such as land registry and cadastral map; ownership information such as property ownership and other concerned rights registry; land use regulation information such as land use zoning and building code; and also other amenity and service information such as road and water supply infrastructure etc. It is because appraising property value contains a series of process to identify the various factors which influence the level of that property value. In Korea, most related information is established and provided through computerized information systems, e.g., Korea Land Information System (KLIS), Korea Urban Information System (KUIS), National Spatial

Data Information System (NSDIS) and so on. Appraisers and also general public can access to such information. As such information network becomes established, compensation valuation achieves more precise appraisal results, which in turn provides the government with more trust and confidence from the affected persons.

**144. Establishment of Neutral Process of Valuation.** Many stakeholders participate in compensation valuation process, each of whom has different perspectives over just compensation. Thus, it should be guaranteed that valuation is fairly conducted throughout the whole process of compensation valuation. In Korea, three appraisers shall conduct compensation valuation, one recommended by the project operator, another by the affected, and the third by the head of local government. The amount of compensation is determined by computing the mean average of the appraised amounts of the appraisers. If the highest and lowest appraisal shows a difference of 10% or more, another appraiser shall be selected and the amount of compensation is re-appraised. If an agreement about the amount of compensation fails to reach, such amount shall be adjudicated in Land Expropriation Committee. To identify fairness of adjudicated amount, the Valuation Advisory Sub-committee established under the Land Expropriation Committee deliberates and verifies the propriety of compensation valuation in advance to adjudicate expropriation.

**145. Establishment of Verifying Process System.** The key issue in compensation valuation is how to keep balance between the need for acquiring land for public use and just compensation for loss of the dispossessed. The loss should be compensated at least as to restore the livelihood of the affected persons before disposing of that land and property. That is the reason why valuation should be conducted as precisely as possible. Accordingly, compensation valuation should observe proper valuation procedures and reflect market value exactly. For this reason, Korean practices of compensation valuation emphasize on following the verification process; reviewing appraisal by another appraiser, then checking again at the Valuation Review Committee under the KAPA, and one more reviewing appraisal by a project operator whether compensation valuation is duly conducted in accordance with the related regulations. The verification system has contributed to the fact that compensation value reflects market value relatively properly and consequently, more than 90% of land for public project could be acquired at time of consultation.

**146. Need for Enhancing Transparency.** In most cases, conflicts regarding compensation valuation come from the price imbalance between his/her own property and neighboring properties as well as from insufficient reflection of market value. Thus compensation valuation shall keep price balance between the corresponding real estate and neighboring property together with reflecting market value properly. In Korea, the price automated mapping allows appraisers to see the position of each property, to visualize the relative and absolute values of individual property in a locality, to check the price differences of neighboring properties, and thus reducing greatly the inconsistent valuation and raising the preciseness and reliability of appraisal of each property. The price automated mapping is open to the KLIS, thus allowing the general public also to access the system, which contributes to improving transparency of compensation valuation, and thus helping mitigate conflict over compensation valuation. In addition, in order to enhance transparency of compensation valuation, appraisers attend the Compensation Council, explain valuation method to the affected persons, and listen to the affected person's opinions. Such procedures for enhancing openness and transparency help obtain public trust and credibility of the appraisal system.

**147. Establishment of Specialized Research Institute.** Compensation valuation requires highly specialized expertise based on appropriate research and teaching capacity. Accordingly,

an independent research institute is required to theoretically and practically support public officials and institutions, as well as other stakeholders, to enable the efficient conduct of compensation valuation. By founding and supporting independent research institutes, such as the Korea Research Institute for Human Settlements and the Korea Legislation Research Institute, the Korean government has sought ways to study appraisal issues and improve related systems. It is furthermore necessary to develop teaching functions in these research institutes in order to train a cadre of public officials with a detailed understanding of the legal, economic, social and administrative aspects of compensation valuation who will serve their various government institutions in the planning and conducting of compensation in public projects.

**148. Rethinking the Nexus between Urban Development Schemes and Compensation Valuation.** At the early stage of urbanization and industrialization, the Urban Planning Act (1962) had already established two urban development schemes: One is land readjustment (LR), the other is Publicly Managed Development (PMD) which involves expropriation. However, between the 1960s and the early 1980s most urban development was executed by means of LR. Eminent domain powers were used in a limited way to install infrastructure or build industrial estates. There were various reasons for the government to depend mostly on LR schemes to implement urban development projects. One reason was that urban development at that time was mostly re-development to improve the old and dilapidated physical environment of the existing inner-city areas. Considering the costs for acquiring land and buildings, LR, as a joint development project between the government and landowners was more efficient because extensive LAR is not required. Accordingly, very articulated techniques for compensation valuation were not urgently required. Another reason was that the government at that time did not have enough money to finance resettlement for urban development and LR requires significantly lower outlays than compulsory acquisition.

149. The more critical reason, however, was that the land and real estate markets were not established yet at that time. If land and housing markets do not exist or are not matured enough, it is very hard to find fair market value. This precondition was not satisfied during the early era of urbanization in Korea: neither the government nor private sector could conduct compensation valuation based upon market evidence. As the economy grew, the real estate market became mature, and thus comparable sales appeared, compensation valuation system became articulated, at which time the expropriation scheme of PMD became viable. One reason to introduce PMD was to redress the inherent problem of LR; development gain mostly belonged to landowners which intrigued social conflicts. All these factors articulated to inform Korea's process of compensation valuation. Thus, developing countries need to consider their social and economic conditions and objectives when they select an appropriate mode of land acquisition. If complete compensation for landowners gets priority for policy-making, land substitution type of LR project might be desirable. If restitution of development gain gets the highest priority, then expropriation type like PMD project might be desirable.

**150. Compensation Valuation in Transition Period of LAR System Setup.** It is likely that most developing nations have inactive real estate market at early days of urbanization and industrialization. Hence, the application of sales comparison approach has some limitations for realizing just compensation. Even if they have some real estate market, farmland or pasture is rarely transacted. Thus, it is hard to implement compensation valuation. Various alternatives are suggested.

151. Introduction of basic land price (BLP) system might be recommended. In Korea, real estate market seldom existed in rural area except for some big cities until 1970s. Budget

restraint prevented governments from surveying land price across the nation unlike current PNV of real estate system. Considering such limitations, BLP system was introduced to mostly apply to development proposed area, such as urban planning project, industrial complex, national housing complex, public facility project rather than to the entire land. Among the applied area, some sample land with proper size was extracted and price survey was implemented for such sample land. BLP was estimated by private appraiser, confirmed by Central Land Expropriation Committee, determined and announced by the Minister of Construction (now MLTM). The BLP was utilized as criteria in estimating amount of compensation by government to purchase or expropriate public site. It was also used as standard in transaction and negotiation for private real estate market. There were some problems in BLP system in Korea, however, since it was not periodically updated. To mitigate these problems, PNV of benchmark land has been yearly updated by certified appraiser since 1989.

152. For developing nations which get inactive real estate market and have difficulty in grasping sales data owing to opacity of transaction information, BLP system shall be utilized for compensation valuation or general transaction. This BLP system shall be more helpful in nations such as Mongol where large-scale urban development project is not urgent. The government may estimate and announce BLP only around the development proposed area rather than to the entire land. The small number of samples shall be required for estimating BLP, because most pasture or forest show similar price level. The BLP system shall raise efficiency of compensation valuation by minimizing finance expenditure

153. For farmland or pasture which has rare transaction records, income approach might be recommended instead of sales comparison approach. The amount of compensation is estimated by multiplying income generated from farmland or pasture by certain multiplier. For forest which does not generated any income, price of neighboring farmland or pasture possibly becomes standard in estimating such forest.

154. **Negotiable vs. Fixed Amount of Compensation Valuation.** Based on the estimated value by certified appraisers, the amount of compensation may be determined through consultation with landowners. But many problems are likely to happen in managing this approach. Most of all, it would take long time to reach agreement with landowners and thus public works are likely to be delayed. Also it is possible to increase the amount of compensation remarkably. At the early stage, this method may be operated successfully but social cost will be multiplied if negotiation meets with a difficulty. In addition, social reliability for compensation valuation shall be plunged so that public works are likely to be stopped. The similar cases are found in Japan, where project operators have discretion to set the amount of compensation on the basis of the estimated value. As a result, compensation consultation was delayed so that public works had difficulty in making smooth progress.

155. In Korea, the estimated value by certified appraisers is not negotiable price but fixed amount of compensation. If having any objections in negotiation step, the affected persons are able to seek grievance procedure through expropriation adjudication, objection adjudication and administrative litigation. Separate compensation valuation is scheduled at each grievance redress stage. The amount of compensation valuation is likely to increase but each valuation is based on situations at time of respective valuation so that it is not guaranteed that the estimated value at the following stage must exceed that at the previous stage

156. As mentioned before, it is important in compensation valuation to keep balance between parcels within the subject area, and also to secure public reliability about the result of compensation valuation. Expertise and capability of certified appraisers have to be promoted by

providing intensive training etc. and thus to lead to minimize price gaps between appraisers. The process and method of valuation also have to be articulated at the early stage of introduction of compensation valuation system to obtain public credibility.

**157. Compensation for Legitimate Expropriation and Compensation for Illegal Damage.**

Compensation for public works is to compensate loss incurred by acquiring land, i.e., directly expropriated to the public works. Compensation for damage is to redress damage happened to landowners in the neighborhood of mining field. Project operator for mining has responsibility to prevent contamination so that this loss by unlawful activity shall be redressed by compensation. In Korea, damages by sound, vibration, contamination, etc. are redressed through compensation. But compensation for damage is posterior treatment method. It is difficult to demonstrate interrelationship between source of contamination and damages. Some measures are proposed to solve this difficulty.

158. One is, project operators, i.e., mine operators, are recommended to acquire neighboring land as business site, which is expected to be directly damaged. The other is, government approves mining rights with the condition or reservation that the company agrees with neighboring landowners on compensation for expected damage. In Korea, business rights are permitted in the premise of consent between the persons involved. To promote settlement between the persons concerned, conflict mediation system shall be operated, where government official, private professional and civil group join together. To establish standards for contamination prevention is also needed to head off posterior conflict; if violating these regulations, legal compensation shall be imposed.

159. To calculate the size of compensation, valuation method for contaminated property is applied. It considers direct and indirect value decrement part. Direct value decrement part includes income decrease and restoration cost for original state. Indirect value decrement part includes the loss incurred by decline of marketability owing to stigma effect against contamination. The degree of loss by contamination is likely to be estimated by using sales comparison approach, which compares the contaminated subject area with that of comparable innocuous area. Measuring stigma effect is difficult, however, thus requires technical consultation from professionals.

## **Appendix A: Examples of Compensation Valuation**

### **A. Purpose of Valuation**

1. This is compensation valuation for land and structures fixed on the land within the Wirae District Residential Site Development Project implemented by the Seoul Housing (SH) Corporation.

### **B. Valuation Standard and Method**

#### **1. Valuation Standard**

2. This valuation shall be in compliance with the procedures prescribed by the Land Acquisition and Compensation Act, the Real Estate Appraisal Act and other regulations, and with the valuation theory.

#### **2. Valuation Method**

##### **a. Valuation for Land**

3. Compensation valuation for land is based on PNV of benchmark land in neighboring areas having similar use values to the individual target lands. In valuing the land, the following factors are comprehensively considered;

- (i) Time adjustment from the date of PNV notification to the date of valuation
- (ii) Comparison in regional and individual factor
- (iii) Compensation cases or precedents for similar land, and
- (iv) Other factors influencing value.

4. Compensation valuation for land is based on the existing use status without considering temporary or illegal utilization status and without considering landowners' subjective value or premising to be used for special use, but with general and objective utilization method.

5. Actual Private Road shall be estimated pursuant to regulations in Article 26 of the Enforcement Rule of the Land Acquisition and Compensation Act. The estimation of amount has proportionally calculated in comparison with that of neighboring similar land.

6. Even if land use zone of the Project Site is described as the Tertiary General Residential Zone in the Land Use Plan Confirmation, it is judged, pursuant to Paragraph 2 of Article 26 in the Enforcement Rule of the Land Acquisition and Compensation Act, to be the Development Restriction Zone because land use zone (the Tertiary General Residential Zone) was changed owing to the corresponding Project.

#### **7. Other considerations**

- (i) Vacant land within Development Restriction Zone, which is unable to be used for residential purpose, is valued by reflecting the administrative conditions under related regulations and precedents.
- (ii) Co-owned land is valued by average price without considering location of the co-owned land upon the request from the SH Corporation.



- (iii) Such fact is taken into account in valuation as Benchmark Land (A) is in the Military Facility Protection District at date of PNV notification as of January 1, 2008, and Benchmark Land (B) is infringed on Urban Planning Road by 20% and in the Military Facility Protection District at date of PNV notification as of January 1, 2008.

#### **b. Valuation for Goods Fixed on the Land**

8. Building and structures are estimated on the basis of transfer cost within the price of goods and in consideration of such characteristics as structure, material, degree of construction, management status, utilization status, acreage, life span, transferability and difficulty thereof and other price influencing factors. In case of having difficulty in transferring or not possible in using for previous purpose, they shall be estimated as acquisition price of goods.

### **3. Other References**

9. The address, lot number, land use category, acreage, current utilization status, etc. of the land are presented by the SH Corporation. Date of valuation is on May 1, 2012 as a consultation date.

## **C. Local Situation Briefs**

### **1. Overview of Project District**

#### **10. Overview of Project**

1. Name of Project: Wirae District Housing Site Development Project
2. Location: Geoyeo-dong, Jangji-dong in Seoul City; Changkok-dong, Bokjeong-dong in Seongnam City in Kyunggi Province; and Hakam-dong, Kami-dong in Hanam City in Kyunggi Province
3. Project Area : 6,788,331 m<sup>2</sup>
4. Period of Project: Date of approval of development plan ~ 2014.12
5. Estimated Population: 115,000 person (46,000 households)

#### **11. Project Schedule**

- (i) Dec. 27, 2005: Determination of development plan in Song-pa Geo-yeo District
- (ii) Jul. 21, 2006: Notification of scheduled development site designation [Public Notification of Ministry of Construction and Transportation : 2006-272]
- (iii) Jul. 25, 2007: Consultation request for changing the Urban Management Plan
- (iv) Aug. 5, 2008: Notification of development plan approval [Public Notification of MLTM : 2008-393]
- (v) Sep. 2009: Notification of implementation plan approval [Public Notification of MLTM : 2010-754]
- (vi) Dec. 2013: Project is scheduled to be completed

### **2. Brief Situation of the Valuation Subject**

#### **12. Location and Surroundings of Project Site.**

This Project Site, locating 3km distant from the CBD of Seongnam City, is placed around Geoyeo-dong, Jangji-dong in Seoul City; Changkok-dong, Bokjeong-dong in Seongnam City;

and Hakam-dong, Kami-dong in Hanam City in Kyunggi Province. Surroundings are used as agricultural, forest and residential. Some commercial facilities are located around Wunam Road in the southern edge of Project Site.

### 13. Transportation Situation

Accessibility and transportation network of Project Site are quite favorable. The western part of Project Site is adjacent to Seongnam Boulevard and Bokjeong Subway Station. The southern part is adjacent to Wunam Boulevard. There are external circulation road and Seongnam-Suseo Express in the neighboring location.

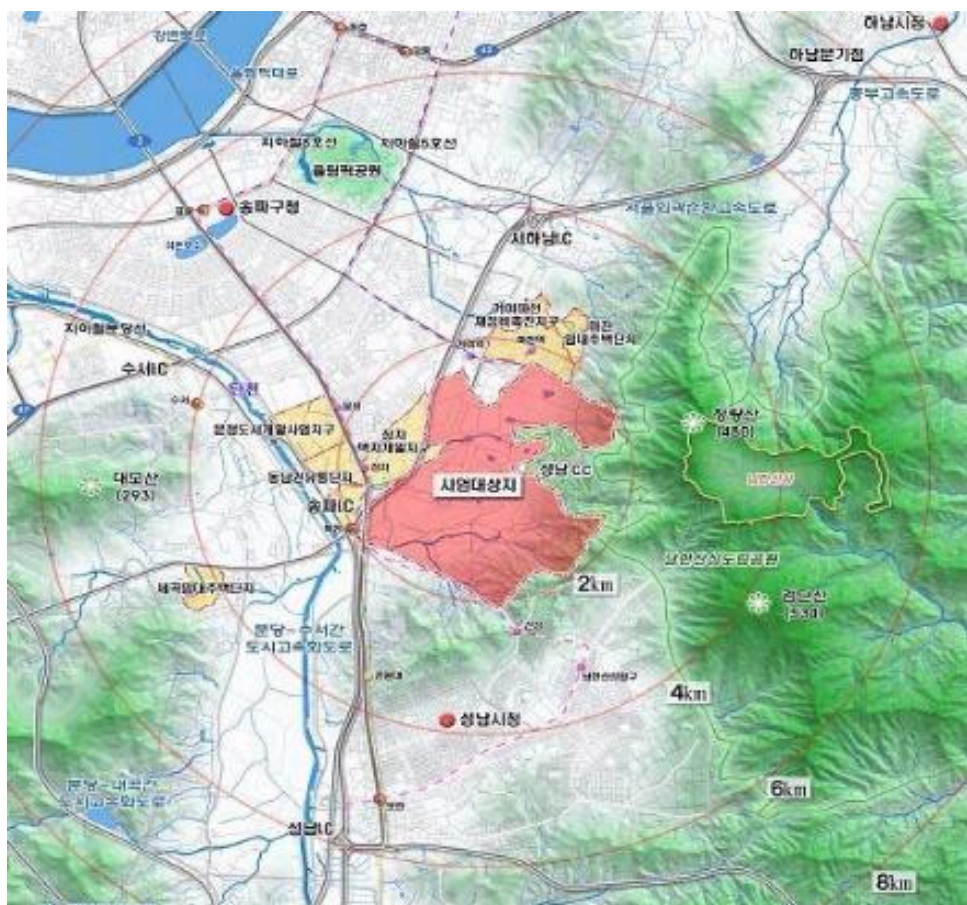
### 14. Current Utilization Status, etc.

Most land is flat land with irregular form. They are used as farmland, miscellaneous ("misc.") land and site for buildings.

### 15. Land Utilization Plan and Public Restrictions, etc.

The project district is designated as Natural Green Zone (and Development Restriction Zone), and partially designated as Primary General Residential Zone (and Primary Exclusive Residential Zone).

<Figure Appendix A-1> Location Map of Project Site



## D. Calculation Evidence for Land Price

### 1. Criteria for Selecting Benchmark Land

#### 16. Selection of Benchmark Land

Benchmark land is chosen in considering

- (i) Land use zoning is identical or similar to that of the target land
- (ii) Price formation factors are identical or similar, including land use category, current land use status, public restrictions, surrounding environments, and
- (iii) Geographically, it is located in the neighborhood as near as possible.

What takes the land use zoning priority as criteria for selecting benchmark land is that the land use zoning makes the greatest influence on price formation. Herein, land the use zoning is the former zoning before the land use zoning was changed by the corresponding project. It is to reflect the causality that the current land use zoning was changed because of the corresponding project, and also to apply the rule of exclusion of development gain incurred by the project.

#### 17. Selection of PNV of Benchmark Land

Development plan of the Project was approved on August 5, 2008 by Public Notification of MLTM 2008-393. Thus, benchmark PNV is selected as that on January 1, 2008 pursuant to the related regulations that "benchmark PNV shall be selected on the nearest date to notification date of development plan approval among NPVs which were published prior to the date of project approval notification".

### 2. Current Situation of Benchmark in Project Site

18. There are 12 cases of benchmark land within Project Site. Changes in PNV of benchmark land in project site can be summarized as follows;

<Table Appendix A-1> Changes in PNV of Benchmark Land in Project Site

Serial No.	Address	Land Use Category	Current Use Status	Land Use Zone	PNV of Land (Unit: 000 Won)			Change Rate (%)	
					2006(A)	2007(B)	2008(C)	B/A	C/B
1	X-1	Dry Field	Dry F.	GB, NG	312	410	532	31.4	29.8
2	X-2	Paddy F.	Dry F.	GB, NG	269	370	490	37.5	32.4
3	X-3	Paddy F.	Paddy F. (Green House)	NG	-	570	740	-	29.8
4	X-4	Misc.	Dry F. (Storage Yard)	GB, NG	380	500	700	31.6	40.0
5	X-5	Dry F.	Dry F.	GB, NG	-	-	512	-	-
6	X-6	Paddy F.	Dry F.	NG	689	900	1,000	30.6	11.1
7	X-7	Dry F.	Dry F.	NG	585	760	840	29.9	10.5
8	X-8	Paddy F.	Dry F.	GB, NG	295	384	500	30.2	30.2
9	X-9	Paddy F.	Dry F.	NG	1,270	1,500	1,720	18.1	14.7
10	X-10	Paddy F.	Dry F.	NG	-	-	972		

11	X-11	Site for Building	Detached House	GB, NG	1,340	1,600	2,190	19.4	36.8
12	X-12	Forest	Natural Forest	GB, NG	-	-	190		

Note: GB = Development Restriction Zone (Greenbelt) , NG = Natural Green Zone.

19. The fluctuation rate of benchmark land in and around Project Site can be summarized as follows;

**<Table Appendix A -2> Changes in PNV of Benchmark Land in and around Project Site**

Fluctuation (%)	Weighted mean of fluctuation in benchmark land						Weighted mean of fluctuation in benchmark land within Songpa district (%)			
	Within Seongnam city (%)			Outside Seongnam city (%)			Difference between in & around (a/b)	NG	GB NG	Average
	NG	GB NG	Average (a)	NG	GB NG	Average (b)				
2008/2007	13.6	31.7	15.4	13.3	-	13.3	1.16	15.4	21.0	16.3
2007/2006	23.0	32.7	26.4	11.1	28.3	22.7	1.16	20.2	25.2	21.5
2008/2006	39.2	77.5	57.3	45.6	-	45.6	1.26	34.1	51.5	36.7

Note: GB = Development Restriction Zone (Greenbelt) , NG = Natural Green Zone

## 20. Analysis of PNV Fluctuation of Benchmark Land

Fluctuation rate of benchmark PNV in Project Site between 2006 and 2008 is as above summarized. The average mean of fluctuation rate of in and around Songpa District is similar to each other. In considering time gap between designation date of district and notification date of project approval of both Seongnam City and Songpa District, annual price fluctuation of benchmark in Project Site is quite similar to that of around Project Site. However, fluctuation rate of PNV in Project Site is higher than that of PNV of the entire Songpa District, being presumed that some of potential development profits are already reflected in PNV in Project Site.<sup>17</sup> In fact, in neighboring this Project Site, other development projects have been implemented, such as Jangji Housing Site Development Project, Macheon Regeneration Promotion Project, Munjeong Urban Development Project, South-Eastern Area Circulation Complex Creation Project, Macheon District Rental Housing Development Project, etc. Thus, it might be natural that fluctuation rate of PNV in development project areas is higher than that of other areas without such development projects.

21. By judging the previous analysis in a comprehensive way, it is probable that PNV of benchmark land within Project Site contains development gain. Considering such facts that this Project Site is the last development site in Seoul Metropolitan City and the neighboring area has been currently developing, land price in Project Site has some development gain with more than natural increment rate due to having potential development benefits and high demands caused by neighboring development project and relative superiority of location. Accordingly, development gain shall be excluded in this valuation, by utilizing previous compensation

<sup>17</sup> This is to judge, by comparing the weighted mean of fluctuations of benchmark land located both in and around the project site, whether PNV of benchmark in project site has the development gain incurred by the corresponding project.

precedents without having development gain and applying estimate of correction calculated in comparison with applied benchmark land.

### 3. Selection of Benchmark Land

22. Among the 12 benchmark lands as seen <Table Appendix-1>, 4 benchmarks are selected as criteria for valuing the individual land.

<Table Appendix A-3> Selection of Benchmark Land

Serial No	Add.	Acreage (m <sup>2</sup> )	Land Use Category	Current Use	Land Use Zone	Road (width:m)	Shape Topography	PNV (1000 Won/m <sup>2</sup> )	Urban Plan Facility	Other Restrict
A	X-1	3,577	Dry Field	Dry Field	GB, NG	2~3	Irregular, Low ground	532	-	Military
B	X-4	2,723	Misc.	Dry Field (storage Yard)	GB, NG	4	Irregular, Low ground	700	Conflict with road (20%)	Military
C	X-11	188	Site for Building	Detached House	GB, NG	4	Rectangular, Flat	2,190	-	-
D	X-12	9,666	Forest	Natural Forest	GB, NG	N/A	Irregular Steep	190	-	-

Note: GB = Development Restriction Zone (Greenbelt) , NG = Natural Green Zone

### 4. Time Adjustment

#### a. Land Fluctuation Rate

#### 23. Review of related Acts and other statutes for Excluding Development Gain

The paragraph 2 of Article 37 in Enforcement Decree of the Land Acquisition and Compensation Act describes in the following sentence. "In case that price of subject land is changed by the corresponding project, apply land price fluctuation rate in neighboring local government without being influenced by the corresponding project." Therefore, it is necessary to judge whether land price fluctuation is influenced by the corresponding project.

#### 24. Review of Land Price Fluctuation Rate in Songpa District and Seoul City

To judge whether land price in Songpa District including the subject land is changed by the corresponding project, compare average land price fluctuation rate in Seoul City including Songpa District with aggregate land price fluctuation rate in Songpa District during subsequent six months (Aug. 2008 ~ Jan. 2009) from month having notification date of project approval or previous six months (Nov. 2011 ~ Apr. 2012) from one month earlier than month having date of valuation to judge the presence of development gain by the corresponding project.

**<Table Appendix A-4> Fluctuation of Benchmark Land**

Standard	Fluctuation rate in NG at Songpa District	Fluctuation rate in NG at Seoul City	Reference
Based on date of project approval (2008. 8~2009. 1)	-5.951%	-5.198%	
Based on date of valuation (2011. 11~2012. 4)	1.004%	0.445%	

Note: NG = Natural Green Zone

25. Since land price fluctuation rate in Songpa District having the subject land is 5% or below on the basis of date of project approval or that of valuation, it is concluded that land price in local government having the subject land is not changed by public announcement or notification of plan or implementation of public works. Accordingly, land price fluctuation rate in Natural Green Zone of Songpa District having the subject land is applied.

26. Land price fluctuation rate is calculated as follows;

**<Table Appendix A-5> Calculation of Land Price Fluctuation Rate**

Period	Fluctuation rate in NG at Songpa District	Reference
Jan. 1 ~ Dec. 31, 2008	-1.329%	
Jan. 1 ~ Dec. 31, 2009	1.147%	
Jan. 1 ~ Dec. 31, 2010	0.377%	
Jan. 1 ~ Dec. 31, 2011	0.497%	
Jan. 1 ~ Mar. 31, 2012	0.421%	
Apr. 1 ~ May 1, 2012	0.289% × 31/31	
Aggregate (2008. 1. 1~2012. 5. 1)	1.393%	

Note: 1) Fluctuation rate after April 2012 is not notified and thus it is extended from that of March 2012. 2) The land market of Korea as a whole, as well as the case studied area, has been stagnant owing to the influence of global financial crisis triggered by the U.S. subprime mortgage incident in the latter half of 2008.

### b. Producer Price Index (PPI)

27. PPI of Dec. 2007 was 104.1 and that of Mar. 2012 was 125.4. Thus, producer price was increased by 20.46% during that period.

Fluctuation rate of PPI	125.4	≙ 1.20461 (Increment by 20.46%)
	104.1	

### c. Determination of Time Adjustment

28. PPI indicates price fluctuation of general goods so that time adjustment is determined as land price fluctuation rate notified by the MLTM, which makes proper reflection of change in land price at the corresponding area (1.01393: increment by 1.39%)

#### 5. Comparison of Local Factors

29. The subject land and benchmark land are placed respectively in neighboring area so that local factors between both lands are deemed to be identical.

#### 6. Comparison of Individual Factors

30. Characteristics of individual land are compared in separate price calculation evidence (See the Table of Calculation and Evidence of Land Price attached)

#### 7. Correction of Other Factors

31. **Necessity of Correction of Other Factors.** It is necessary to reflect other factors' influence pursuant to the regulations of Article 17 of the Appraisal Regulation (MLTM Notice No 30241-36538, Dec. 28, 1991) and the precedents of Supreme Court (Adjudication No 92 *Nu* 16300, Sep. 10, 1993; Adjudication No 98 *Du* 6067, Jul. 10, 1987). Other factors are corrected on the basis of previous compensation cases in the neighboring area.

Correction rate	Unit price of benchmark land based on compensation precedents : (Compensation precedent × fluctuation rate of land prices × local factor × individual factor)
	Unit price of benchmark land based on PNV : (PNV of benchmark × fluctuation rate of land prices × local factor (1) × individual factor (1))

#### 32. List of Compensation Cases in the Neighboring Area.

Serial No	Purpose	Project	Add.	Land Use Zone	Land Use Category	Amount of valuation (Won/m <sup>2</sup> )	Date of valuation	Valuation Company	Applied Benchmark
a	Expropriation Adjudication	Macheon District Rental Housing Construct.	Y-1	GB NG	Dry F.	903,750	Apr. 26, 2007	XXX	X-1
b	Consultation	"	Y-2	GB NG	Misc.	1,215,667	Sep. 2, 2006	XXX	X-4
c	Expropriation Adjudication	"	Y-3	GB NG	Site for Building	2,474,700	Apr. 26, 2007	XXX	X-11
d	Consultation	"	Y-4	GB NG	Forest	472,333	Sep. 2, 2006	XXX	X-13

### a. Benchmark Land X-1 and Compensation Case Y-1

#### 33. Selection of Compensation Case

Serial Number (a) is chosen which is located in the neighboring area of this Project Site with similar land use zone, current utilization status, and having no development profit influenced by the corresponding project.

#### 34. Time Adjustment

Period	Change Rate (%) (Green Area Zone in Songpa District)	Reference
Apr. 26, 2007 ~ May 1, 2012	6.128	

Note: Fluctuation rate after April 2012 is not notified and thus it is extended from that of March 2012.

#### 35. Comparison of Individual Factors

Condition s	Items	Difference Rate		Reference
		Case (Y-1)	Benchmark (X-1)	
Access Condition	Access to transportation	1.00	0.91	Benchmark land is inferior to compensation case in terms of convenience and distance to transportation and other facilities
	Access to shop	1.00	0.91	
	Access to public and convenience facilities	1.00	0.91	
Nature Condition	Sunshine, etc.	1.00	1.00	Identical
	Natural Environment	1.00	1.00	Identical
	Neighboring Environment	1.00	1.00	Identical
	Status of supply and treatment facility	1.00	1.00	Identical
	Hazard, aversion facility, etc.	1.00	1.00	Identical
Site Condition	Area, Contact Surface, Width, Depth, Shape, etc.	1.00	1.00	Identical
	Direction, Height, etc.	1.00	1.00	Identical
	Status of Contact Road	1.00	1.00	Identical
Admin. Condition	Degree of administrative regulation	1.00	1.00	Identical
Others	Others	1.00	1.00	Identical
Total		1.00	0.91	

Note: The value of difference rate is determined by the appraisers who compare individual factors between the case and the benchmark land by fixing the value of the case as 1.00. The aggregate value of difference rate is calculated by multiplying each value of the respective conditions. For instance, in the Table,  $0.91 = 0.91(\text{Access condition}) \times 1.00(\text{Nature Condition}) \times 1.00(\text{Site Condition}) \times 1.00(\text{Administrative Condition}) \times 1.00(\text{Other Condition})$ . This approach is applied to the following tables in the same way.



### 36. Corrections of Other Factors

Corrections of other factors for the subject land is determined to be 1.60 (increment by 60%) on the evidence of difference between estimated price based on PNV of benchmark land and that of benchmark land based on compensation case.

	Address	Price (Won/m <sup>2</sup> )	Time adjustment	Difference		Estimated price	Difference Rate (B/A)
				Local factor	Individual factor		
Compensation Case (a)	Y-1	903,750	1.06128	1.000	0.910	872,810	1.618
Benchmark Land (A)	X-1	532,000	1.01393	1.000	1.000	539,411	1.618

### b. Benchmark Land X-4 and Compensation Case Y-2

### 37. Selection of Compensation Case

Serial Number (b) is chosen, which is located in the neighboring area of this Project Site with similar land use zone, current utilization status, and having no development profit influenced by the corresponding project.

### 38. Time Adjustment

Period	Change Rate (%) (Green Area Zone in Songpa District)	Reference
Sep. 20, 2006 ~ May 1, 2012	11.592	

Note: Fluctuation rate after April 2012 is not notified and thus it is extended from that of March 2012

### 39. Comparison of Individual Factor

Condition	Items	Difference Rate		Reference
		Case (Y-2)	Benchmark (X-4)	
Road Condition	Width, Structure, etc. of Road	1.00	1.05	Benchmark land is superior to compensation case in that width of benchmark is wider than compensation case.
Access Condition	Access to transportation	1.00	0.96	Benchmark is inferior in terms of convenience and distance to transportation.
	Access to shop	1.00	0.96	
	Access to public and convenience facility	1.00	0.96	
Nature	Sunshine, etc.	1.00	0.97	Benchmark is somewhat inferior in terms

Condition	Natural Environment	1.00	0.97	of neighboring environment.
	Neighboring Environment	1.00	0.97	
	Status of supply and treatment facility	1.00	0.97	
	Hazard, aversion facility, etc.	1.00	0.97	
Site Condition	Area, Contact Surface, Width, Depth, Shape, etc.	1.00	1.00	Identical
	Direction, Height, etc.	1.00	1.00	
	Status of Contact Road	1.00	1.00	
Admin. Condition	Degree of administrative regulation	1.00	1.00	Identical
Others	Others	1.00	1.00	Identical
Total		1.00	0.978	

#### 40. Corrections of Other Factors

Corrections of other factors for the subject land is determined to be 1.80 (increment by 80%) on the evidence of difference between estimated price based on PNV of benchmark land and that of reference land based on compensation case.

	Add.	Price (Won/m <sup>2</sup> )	Time adjustment	Difference		Estimated price	Difference Rate (B/A)
				Local Factor	Individual factor		
Compensation Case(b)	Y-2	1,215,667	1.11592	1.000	0.978	1,326,742	1.814
Reference Land(B)	X-4	700,000	1.01393	1.000	1.000	731,044	1.814

#### c. Benchmark Land X-11 and Compensation Case Y-3

#### 41. Selection of Compensation Case

Serial Number (c) is chosen, which is located in the neighboring area of this Project Site with similar land use zone, current utilization status, and having no development profit influenced by the corresponding project.

#### 42. Time Adjustment

Period	Change Rate (%) (Green Area Zone in Songpa District)	Reference
Apr. 26, 2007 ~ May 1, 2012	6.128	

Note: Fluctuation rate after April 2012 is not notified and thus it is extended from that of March 2012

#### 43. Comparison of Individual Factor

Condition	Item	Sub-item	Difference Rate		Reference
			Case (Y-3)	Benchmark (X-11)	
Road Condition	Width, Structure, etc.	Width, Pavement	1.00	1.10	Benchmark is superior in that width of benchmark is wider than compensation case.
		Route and continuity	1.00	1.10	
Access Condition	Access to main road	Distance and convenience of main road and main transportation	1.00	1.00	Identical
	Access to village	Distance and convenience to neighboring village	1.00	1.00	Identical
	Access to public and transportation	Distance and convenience to kindergarten, elementary school, park, public office, etc.	1.00	1.00	Identical
Nature Condition	Neighboring Environment	Neighboring environment and Utilization status of neighboring land	1.00	1.30	Benchmark is superior to compensation case in terms of neighboring environment and utilization status of neighboring land
	Status of supply and treatment facility	Water, Drainage, Gas	1.00	1.30	
	Hazard, aversion facility, etc.	Distance from substation, sewage purifier, special wire with high voltage	1.00	1.30	
Site Condition	Area, Contact Surface, Width, Depth, Shape, etc.	Surface, Width	1.00	1.00	Identical
		Height, Slope	1.00	1.00	
Admin. Condition	Degree of administrative regulation	Land Use Zone, etc.	1.00	1.00	Identical
		Others (Height restriction, etc)	1.00	1.00	
Others	Other	Future prospect, etc.	1.00	1.00	Identical
Total			1.00	1.430	

#### 44. Corrections of Other Factors

Corrections of other factors for the subject land is determined to be 1.65 (increment by 65%) on the evidence of difference between estimated price based on PNV of benchmark land and that of benchmark land based on compensation case.

	Add.	Price (Won/m <sup>2</sup> )	Time adjustment	Difference		Estimated price	Difference Rate (B/A)
				Local Factor	Individual factor		
Compensation Case (c)	Y-3	2,474,700	1.06128	1.000	1.430	3,755,679	1.691
Benchmark Land (C)	X-11	2,190,000	1.01393	1.000	1.000	2,220,507	1.691

#### d. Benchmark Land X-12 and Compensation Case Y-4

#### 45. Selection of Compensation Case

Serial Number (d) is chosen, which is located in the neighboring area of this Project Site with similar land use zone, current utilization status, and having no development profit influenced by the corresponding project.

#### 46. Time Adjustment

Term	Change Rate (%) (Green Area Zone in Songpa District)	Reference
Sep. 20, 2006 ~ May 1, 2012	11.592	

Note: Fluctuation rate after April 2012 is not notified and thus it is extended from that of March 2012

#### 47. Comparison of Individual Factor

Condition	Items	Difference Rate		Reference
		Case (Y-4)	Benchmark (X-12)	
Access Condition	Access to transportation	1.00	0.77	Benchmark is inferior in terms of convenience and distance to transportation.
	Access to shop	1.00	0.77	
	Access to public and convenience facility	1.00	0.77	
Nature Condition	Sunshine, etc.	1.00	0.90	Benchmark is inferior in terms of neighboring environment.
	Natural Environment	1.00	0.90	
	Neighboring Environment	1.00	0.90	
	Status of supply and treatment facility	1.00	0.90	
	Hazard, aversion facility, etc.	1.00	0.90	
Site	Area, Contact Surface, Width,	1.00	0.75	Reference is inferior in terms of area,

Condition	Depth, Shape, etc.			slope, etc.
	Direction, Height, etc.	1.00	0.75	
	Status of Contact Road	1.00	0.75	
Admin. Condition	Degree of administrative regulation	1.00	1.00	Identical
Others	Others	1.00	1.00	Identical
Total		1.00	0.520	

#### 48. Corrections of Other Factors

Corrections of other factors for the subject land is determined to be 1.40 (increment by 40%) on the evidence of difference between estimated price based on PNV of benchmark land and that of benchmark land based on compensation case.

	Add.	Price (Won/m <sup>2</sup> )	Time adjustment	Difference		Estimated price	Difference Rate (B/A)
				Local Factor	Individual factor		
Compensation Case (d)	Y-4	472,000	1.11592	1.000	0.520	273,891	1.422
Benchmark Land (D)	X-12	190,000	1.01393	1.000	1.000	192,647	1.422

## E. Calculation and Evidence of Compensation Valuation

S/N	Land Use Category	Current Land Use	Land Use Zone	Area (m <sup>2</sup> )	Benchmark		Time Adj.	Local F.	Individual Factors							Other F.	Unit Prices	
					Lot	PNV (000 Won)			Rd.	Access	Nature	Site	Admin.	Other	Aggregated		Estimated	Applied
1	Misc.	Misc.	GB	586	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	1,276,274	1,276,300
2	Misc.	Road	GB	229	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	421,171	421,100
3	Site	Site	GB	87	C	2,190	1.01	1	0.95	0.9	0.9	0.87	0.69	1	0.462	1.65	1,692,692	1,692,700
4	Site	Site	GB	1491	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	1,802,607	1,802,600
5	Site	Road	GB	10	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	594,860	594,800
6	Site	Site	GB	1079	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	1,802,607	1,802,600
7	Site	Road	GB	48	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	594,860	594,800
8	Site	Site	GB	1408	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	1,802,607	1,802,600
9	Site	Road	GB	422	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	594,860	594,800
10	Misc.	Misc.	GB	1100	B	700	1.01	1	1	0.97	1	0.98	1.03	1	0.979	1.8	1,250,723	1,250,700
11	Misc.	Road	GB	1	B	700	1.01	1	1	0.97	1	0.98	1.03	1	0.979	1.8	412,739	412,700
12	Misc.	Misc.	GB	2237	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	1,276,274	1,276,300
13	Misc.	Road	GB	256	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	421,171	421,100
14	Misc.	Misc.	GB	1988	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	1,276,274	1,276,300
15	Misc.	Road	GB	308	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	421,171	421,100
16	Misc.	Misc.	GB	1279	B	700	1.01	1	0.9	0.95	1	1	1.03	1	0.881	1.8	1,125,523	1,125,500
17	Misc.	Misc.	GB	1543	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	1,276,274	1,276,300
18	Misc.	Road	GB	24	B	700	1.01	1	1	0.97	1	1	1.03	1	0.999	1.8	421,171	421,100
19	Dry F.	Dry F.	GB	1349	A	532	1.01	1	1	1.03	1	1	1	1	1.03	1.6	888,949	888,900
20	Misc.	Misc.	GB	1666	B	700	1.01	1	0.9	0.95	1	1	1.03	1	0.881	1.8	1,125,523	1,125,500
21	Misc.	Misc.	GB	2965	B	700	1.01	1	0.9	0.95	1	1	1.03	1	0.881	1.8	1,125,523	1,125,500

22	Misc.	Misc.	GB	2122	B	700	1.01	1	0.9	0.95	1	1	1.03	1	0.881	1.8	1,125,523	1,125,500
23	Misc.	Misc.	GB	1228	B	700	1.01	1	1	0.95	1	1	1.03	1	0.979	1.8	1,250,723	1,250,700
24	Misc.	Road	GB	8	B	700	1.01	1	1	0.95	1	1	1.03	1	0.979	1.8	412,739	412,700
25	Site	Site	GB	2314	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	1,802,607	1,802,600
26	Site	Road	GB	425	C	2,190	1.01	1	1	0.9	0.9	0.88	0.69	1	0.492	1.65	594,860	594,800
27	Misc.	Misc.	GB	1225	B	700	1.01	1	1	0.95	1	1	1.03	1	0.979	1.8	1,250,723	1,250,700
28	Misc.	Road	GB	349	B	700	1.01	1	1	0.95	1	1	1.03	1	0.979	1.8	412,739	412,700
29	Misc.	Misc.	GB	1273	B	700	1.01	1	0.95	0.95	1	0.95	1.03	1	0.883	1.8	1,128,078	1,128,100
30	Forest	Forest	GB	1970	D	190	1.01	1	1	1.43	1.25	1.72	0.99	1	3.044	1.4	820,983	821,000
31	Forest	Road	GB	48	D	190	1.01	1	1	1.43	1.25	1.72	0.99	1	3.044	1.4	270,924	270,900
32	Graveyard	Graveyard	GB	840	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
33	Paddy F.	Paddy	GB	2529	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
34	Paddy	Paddy	GB	1118	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
35	Paddy	Paddy	GB	761	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
36	Paddy	Paddy	GB	992	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
37	Paddy	Paddy	GB	992	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
38	Paddy	Paddy	GB	662	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
39	Paddy	Paddy	GB	992	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
40	Paddy	Paddy	GB	825	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
41	Paddy	Paddy	GB	375	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
42	Paddy	Paddy	GB	375	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
43	Paddy	Paddy	GB	2165	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
44	Paddy	Paddy	GB	2774	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
45	Paddy	Paddy	GB	183.5	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
46	Paddy	Paddy	GB	183.5	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300

47	Paddy	Paddy	GB	183.5	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
48	Paddy	Paddy	GB	183.5	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
49	Paddy	Paddy	GB	275.3	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
50	Paddy	Paddy	GB	183.5	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
51	Paddy	Paddy	GB	1264	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
52	Paddy	Paddy	GB	300	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
53	Paddy	Paddy	GB	300	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
54	Paddy	Paddy	GB	600	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
55	Paddy	Paddy	GB	164	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
56	Paddy	Paddy	GB	109	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
57	Paddy	Paddy	GB	109	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
58	Paddy	Paddy	GB	109	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
59	Paddy	Paddy	GB	109	A	532	1.01	1	1	1.03	1	1	0.99	1	1.02	1.6	880,318	880,300
60	Paddy	Paddy	GB	945	A	532	1.01	1	1	1.05	1	1.02	0.99	1	1.06	1.6	914,841	914,800
61	Misc.	Misc.	GB	395	B	700	1.01	1	1	0.97	1.05	1	1.03	1	1.049	1.8	1,340,152	1,340,200
62	Site	Site	GB	165	C	2,190	1.01	1	1	0.9	0.9	0.93	0.99	1	0.746	1.65	2,733,222	2,733,200
63	Paddy	Site	GB	16.2	C	2,190	1.01	1	1	0.9	0.9	0.93	0.94	1	0.708	1.65	2,593,996	2,594,000
64	Paddy	Paddy	GB	83	A	532	1.01	1	1	1.07	1	1.02	0.99	1	1.08	1.6	932,102	932,100
65	Paddy	Site	GB	16.2	C	2,190	1.01	1	1	0.9	0.9	0.93	0.94	1	0.708	1.65	2,593,996	2,594,000
66	Paddy	Paddy	GB	83	A	532	1.01	1	1	1.07	1	1.02	0.99	1	1.08	1.6	932,102	932,100
67	Paddy	Paddy	GB	996.6	A	532	1.01	1	1	1.07	1	1.02	0.99	1	1.08	1.6	932,102	932,100
68	Site	Site	GB	411	C	2,190	1.01	1	1	0.9	0.9	0.93	0.99	1	0.746	1.65	2,733,222	2,733,200

Note: 1) The estimated unit price is calculated by multiplying in the following formula: PNV of benchmark land x time adjustment x regional factor x individual factor x other factor.

2) The applied unit price is decided by adjusting the broken number. At the moment, the way how to justify the broken number is not clearly defined yet. The widely accepted method is as follows: a) If there is a request from the clients, then follow the client's request; b) in case for PNV of benchmark land, writing two significant digits for less than 100,000 won and three digits for 100,000 won or more by rounding off; c) in case for compensation valuation, rounding off two integers to show three integers pursuant to the guidance of the Central Land Expropriation Committee.



**APPENDIX B: REGIONAL AND INDIVIDUAL FACTORS IN VALUATION**

**<Table Appendix B-1> Regional and Individual Factor in Commercial Zone**

Regional Factor			Individual Factor			
Condition	Item	Sub-item	Condition	Item	Sub-item	
Road Condition	Width, structure, etc. of road	Width	Road Condition	Width, Structure, etc. of Road	Width	
		Pavement			Pavement	
		Pedway			Pedway	
		Route and continuity			Route and continuity	
	Status of block	Uniformity of block			Route and continuity	
		Status of block facility				
Access Condition	Access to transportation and public facility	Convenience of neighboring transportation	Access Condition	Convenience to central commercial zone and transportation facility	Access to central commercial zone	
		Number of passengers of neighboring transportation				
		Maintenance of parking lot			Distance with neighboring transportation and convenience thereof	
		Degree of traffic regulation such as one-way traffic and no-parking area				
		Access to public facility				
Environment Condition	Arrangement status for commercial and business facility	Number and total floor area of department store and mega-mart	Environment Condition	Suitability to customers' liquidity	Suitability to customers' liquidity	
		Number and total floor area of nation-wide shop and office				
		status of gallery or convention facility				Neighboring environment
		Status of improper facility such as factory, warehouse, house, etc.	Adeptness to utilization status in neighboring land			
		Other customer inducing facilities, etc.	Site Condition	Area, Contact Surface, Width, Depth, Shape, etc.	Nature Environment	Ground base, topography, etc.
		Population of hinterland				Area
		Scope of hinterland				Contact surface and width
		Purchasing power of customer				Depth
						Unspecified Form Site

	Degree of competition and managers' competence	Specialization and collectivization of shop			Triangular Form Site		
		Utilization degree of high-rising building			Back-typed site		
	Degree of prosperity	Traffic volume of customer			Land without road		
		Coalition status of shop		Direction			
		Length of operation hour		Height			
		Frequency of crime		Slide			
		Natural environment		Land ground, nature of soil	Corner lot		
	Administrative Condition	Degree of administrative regulation		Land use area, district, zone, etc.	Administrative Condition	Degree of administrative regulation	Land use area, district, zone, etc.
				Limitation against floor area ratio			Limitation against floor area ratio
				Limitation against height			Limitation against height
Other regulation			Other regulation such as restriction against cubic utilization, etc.				
Others	Others	Future prospect	Others	Others	Future prospect		
		Others			Others		

&lt;Table Appendix B-2&gt; Regional and Individual Factor in Residential Zone

Regional Factor			Individual Factor		
Condition	Item	Sub-item	Condition	Item	Sub-item
Road Condition	Width, Structure, etc. of Road	Width	Road Condition	Width, Structure, etc. of Road	Width
		Pavement			Pavement
		Pedway			Pedway
		Route and continuity			Route and continuity
Access Condition	Distance to downtown and status of Transportation facility	Convenience of neighboring transportation	Access Condition	Access to transportation	Distance and convenience of neighboring public transportation
		Access to downtown of neighboring transportation		Access to shop	Distance and convenience to neighboring shop
	Arrangement status of shop	Convenience of neighboring shop		Access to public and convenient facility	Distance and convenience to kindergarten, elementary school, park, hospital, public office, etc.
		Quality of neighboring shop			
Arrangement status of public and convenient facility	Access to public facility				
Environment Condition	Weather	Sunshine, moisture, temperature, ventilation, etc.	Environment Condition	Sunshine, etc.	Sunshine, ventilation, etc.
	Natural Environment	View, landscape, ground, topography, etc.		Natural Environment	View, landscape, ground, topography, etc.
	Social Environment	Resident's vocation, age, etc.		Neighboring Environment	Utilization status of neighboring land
		School group, etc.			suitability to utilization status of neighboring land
	Status of lot	Standardized area of lot		Status of supply and treatment equipment	Waterwork
		Orderliness of lot			Drainage
		Density of building			Gas, etc.
		Utilization status of surroundings			Presence of substation, gas tank, sewage purifier, etc.
	Status of supply and treatment equipment	Waterwork		Hazard, aversion equipment, etc.	Distance to special wire with high voltage, etc.
		Drainage			
		Gas, etc.			
	Hazard and unpleasant facility	Presence of substation, gas tank, sewage purifier, etc.		Site Condition	Area, Contact Surface, Width, Depth, Shape, etc.
Direction, height, etc.					
Status of contact road					

		Penetration of special wire with high voltage			Degree of administrative restriction
					Others
	Degree of damage generation	Inundation, landslide, precipice destruction, etc.		Direction, Height, etc.	Back-typed site
					Land without road
	Degree of pollution generation	Noise, vibration, air contamination, etc.		Status of Contact Road	Direction
					Height
					Slope
					Corner lot
					Land with two sides
					Land with three sides
Administrative Condition	Degree of administrative regulation	Land use area, district, zone, etc.	Administrative Condition	Degree of administrative regulation	Land use area, district, zone, etc.
		Other regulations			Others
Others	Others	Future prospect	Others	Others	Future prospect
		Others			Others

&lt;Table Appendix B-3&gt; Regional and Individual Factor in Industrial Zone

Regional Factor			Individual Factor			
Condition	Item	Sub-item	Condition	Item	Sub-item	
Road Condition	Width, Structure, etc. of Road	Width	Road Condition	Width, Structure, etc. of Road	Width	
		Pavement			Pavement	
		Route and continuity			Route and continuity	
Access Condition	Location relation with market such as sale and raw material purchase	Access to downtown	Access Condition	Distance to transportation facility	Distance and convenience to neighboring transportation	
	Difficulty in securing labor force	Access to harbor, airport, railway, highway, industrial road, etc.			Service line for exclusively railway use	
		Access to neighboring transportation			Exclusive harbor	
	Relation with related industry	Location with related industry and cooperative companies				
Environment Condition	Status of supply and treatment facility	Power resource	Environment Condition	Status of supply and treatment	Power resource	
		Industrial water			Industrial water	
		Factory drainage			Factory drainage	
	Danger of pollution generation	Quality of water, air contamination, etc.	Natural Environment	Site Condition	Area, Shape, etc.	Ground, topography, etc.
						Area
Natural Environment	Ground, topography, etc.				Shape	
Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion	Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion	
		Degree of regulation			Degree of regulation	
		Other regulations			Other regulations	
Other Condition	Others	Trend of factory establishment	Other Condition	Others	Future prospect	
		Future prospect			Others	

		Others			
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&lt;Table Appendix B-4&gt; Regional and Individual Factor in Farmland(Dry Field) Zone

Regional Factor			Individual Factor			
Condition	Item	Sub-item	Condition	Item	Sub-item	
Access Condition	Convenience of transportation	Access to village	Access Condition	Convenience of transportation	Access to village	
		Access to collection place for shipping			Status of farm road	
		Status of farm road				
Natural Environment Condition	Weather	Sunshine, moisture, temperature, ventilation, rainfall, etc.	Nature Environment	Sunshine, etc.	Sunshine, ventilation, etc.	
					Topography	Direction of slide Degree of slide
	Soil, quality of soil	Superiority of soil and quality of soil		Irrigation, drainage		
					Irrigation, drainage	Superiority of irrigation Superiority of drainage
	Danger of disaster	Danger of flood damage Danger of other damage		Site Condition		
					Danger of disaster	Danger of flood damage Danger of other damage
	Danger of disaster	Danger of flood damage Danger of other damage		Site Condition		
					Danger of disaster	Danger of flood damage Danger of other damage
	Danger of disaster	Danger of flood damage Danger of other damage		Site Condition		
					Administrative Condition	Degree of administrative promotion and regulation
Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion such as subsidy, loan, etc. Degree of regulation	Administrative Condition	Degree of administrative promotion and regulation		
					Others	Others
Others	Others	Others	Others	Others		

&lt;Table Appendix B-5&gt; Regional and Individual Factor in Farmland(Paddy Field) Zone

Regional Factor			Individual Factor				
Condition	Item	Sub-item	Condition	Item	Sub-item		
Access Condition	Convenience of transportation	Access to village	Access Condition	Convenience of transportation	Access to village		
		Access to collection place for shipping			Status of farm road		
		Status of farm road					
Natural Environment Condition	Weather	Sunshine, moisture, temperature, ventilation, rainfall, etc.	Nature Environment	Sunshine, etc.	Sunshine, ventilation, etc.		
		Topography		Direction of slide	Soil, quality of soil	Superiority of soil and quality of soil	
	Degree of slide			Irrigation, drainage		Superiority of irrigation	
	Soil, quality of soil	Superiority of soil and quality of soil			Danger of disaster	Danger of flood damage	
		Irrigation, drainage		Superiority of irrigation		Danger of other damage	
	Danger of disaster			Danger of flood damage	Site Condition	Area, Slide, etc.	Area
		Danger of other damage		Slide			
	Administrative Condition	Degree of administrative promotion and regulation		Degree of promotion such as subsidy, loan, etc.	Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion such as subsidy, loan, etc.
				Degree of regulation			Degree of regulation
	Others	Others		Future prospect	Others	Others	Future prospect
Others			Others				



&lt;Table Appendix B-6&gt; Regional and Individual Factor in Forest Zone

Regional Factor			Individual Factor		
Condition	Item	Sub-item	Condition	Item	Sub-item
Access Condition	Convenience of transportation	Access to neighboring station	Access Condition	Convenience of transportation	Access to neighboring station
		Access to neighboring village			Access to neighboring village
		Arrangement, width, structure, etc. of forest road			Arrangement, width, structure, etc. of forest road
		Access to neighboring market			Distance to point of departure
					Distance from point of departure to market
Natural Environment Condition	Weather	Sunshine, temperature, rainfall, fog, snowfall, etc.	Natural Environment Condition	Sunshine, etc.	Sunshine, ventilation, etc.
	Topography, etc.	Altitude		Topography, directive, etc.	Altitude
		Degree of slide			Direction
		Bending of slide			Slide
					Location of slide surface
	Soil, quality of soil	Superiority of soil and quality of soil			Bending of slide
				Soil, quality of soil	Superiority of soil and quality of soil
Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion	Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion
		Regulation of national or provincial park, forest reserve, designation of			Regulation of national or provincial park, forest reserve, designation of

		debris preventer, etc.			debris preventer, etc.
		Other regulations			Other regulations
Others	Others	Future prospect	Others	Others	Future prospect
		Others			Others

&lt;Table Appendix B-7&gt; Regional and Individual Factor in Prearranged Zone for Urban Development

Regional Factor			Individual Factor		
Condition	Item	Sub-item	Condition	Item	Sub-item
Access Condition	Distance to downtown and status of transportation facility	Access to neighboring transportation facility	Access Condition	Access to transportation facility	Distance to neighboring shop and convenience thereof
		Characteristics of neighboring transportation facility			Distance to neighboring transportation and convenience thereof
		Access to downtown of neighboring transportation			
	Arrangement status of shop	Access to neighboring market		Access to public and convenient facility	Distance to kindergarten, elementary school, park, hospital, public office, etc. and convenience thereof
		Quality of neighboring shop			
	Arrangement status of public and convenient facility	Kindergarten, elementary school, park, hospital, public office, etc.		Status of ambient street	Distance to ambient trunk line, classification of street, etc.
	Status of ambient street	Access to ambient trunk line, classification of street, etc.			
Environment Condition	Weather	Sunshine, moisture, temperature, ventilation, etc.	Environment Condition	Sunshine, etc	Sunshine, ventilation, etc.
	Nature Environment	View, landscape, ground, topography, etc.		Nature Environment	View, landscape, ground, topography, etc.
	Status of supply and treatment	Difficulty in installing water supply, drainage, gas, & electricity, etc.		Status of supply and treater	Difficulty in installing water supply, drainage, gas, & electricity, etc.
	Surroundings	Characteristics and size of neighboring existing area		Hazard and unpleasant facility	Presence of substation, gas tank, sewage purifier, etc.
					Distance to special wire with high voltage
	Degree of urbanization	Degree of urbanization in progress	Site Condition	Area, shape, etc.	Area
	Size, characteristics, etc of city	Population, finance, society, welfare, culture, education, etc. in city			Shape
Hazard and unpleasant	Presence of substation, gas tank,				

	facility	sewage purifier, etc.			Penetration of special wire with high voltage
		Penetration of special wire with high voltage			Direction
	Danger of damage generation	Inundation, landslide, precipice destruction, etc.		Directive, height, etc.	Slide
	Degree of pollution generation	Noise, vibration, air contamination, etc.			Height
Site Creation Condition	Difficulty and usefulness in site creation	Difficulty in site creation and degree of necessity thereof		Difficulty and use in site creation	Difficulty in site creation and degree of necessity thereof
		Effective utilization degree of site			Effective utilization degree of site
Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion	Administrative Condition	Degree of administrative promotion and regulation	Degree of promotion
		Land use area, district, zone, etc.			Land use area, district, zone, etc.
		Other regulations			Other regulations
Others	Others	Future prospect	Others	Others	Future prospect
		Others			Others