

Korea Environmental Policy Bulletin (KEPB)

Environmental Impact Assessment System

<Contents>

1. Background
2. Changes of Environmental Impact Assessment Acts and Regulations
 - 2.1. Introductory Period; started with prior consultation system
 - 2.2. Developing Period; enactment of Environmental Impact Assessment Act
 - 2.3. Leaping Period; introduction of Strategic Environmental Assessment
3. Environmental Impact Assessment System
 - 3.1. Strategic Impact Assessment System
 - 3.2. Environmental Impact Assessment System
 - 3.3. Small Scale Environmental Impact Assessment System
4. Related Parties of Environmental Impact Assessment
 - 4.1. Ministry of Environment
 - 4.2. Professional Review Organization
 - 4.3. Licensed EIA Consulting agents
5. Suggestions

Environmental Impact Assessment System

I . Background

- Environmental Impact Assessment(EIA) System has been implemented since July 1977 with the revision of Environmental Conservation Act. In 1993, the Environmental Impact Assessment Act was enacted as a separate act and improved to an independent system for environmental policy measures.
- Many trial and errors, and problems occurred due to the gap with reality.
- As can be seen from the changes of basis legislation of environmental impact assessment from 「Environmental Conservation Act」 to 「Framework Act on Environmental Policy」 , 「Environmental Impact Assessment Act」 , 「Act on Assessment of Impacts of Works on Environment, Traffic, Disasters, etc.」 and again 「Environmental Impact Assessment Act」 , EIA has continuously been improved to be appropriate for the social condition and environmental management conditions in Korea.
- For EIA to play the role as the important political tool for sustainable society rather than an obstacle for development, a fundamental change of direction is required for the acknowledgment and operation of EIA.
- EIA system is operated differently according to the social structure and system, the major environmental management area, and citizen's level of environmental awareness.
 - Reviewing the characteristics of EIA system in Korea can suggest much for the EIA in the developing countries.

II . Changes of Environmental Impact Assessment Acts and Regulations

1. Introductory Period; started with prior consultation system

- Korea has achieved economic growth through 5-year economic development plans: the first phase in 1962 and the second phase in 1967. As a side effect of the

economic growth in 1970s, environmental pollution was recognized as a problem.

- Then, the need for prevention of environmental pollution was raised from a stand point different from the previous focus on sanitary problems. As a result, a Pollution Section was organized in the Sanitary Department, Ministry of Health and Social Affairs, in 1973.
- In 1977, 「Environmental Conservation Act」 was enacted which became the basis for the introduction of Environmental Impact Assessment System. Article 5 in the 「Environmental Conservation Act」 stipulates a prior consultation with the Minister of Health and Social Affairs is required for national projects such as urban development, industrial site development, and energy development. It paved the road for Ministry of Health and Social Affairs to get involved in pollution problems by development projects but the concept of EIA was not directly introduced, for example, the regulation for detail evaluation report was not prepared and no opportunity was provided for public participation.
- With the establishment of Ministry of Environment in 1990, the 「Environmental Conservation Act」 was abolished and a system to reflect public opinion in the final assessment report after a draft report was prepared.

2. Developing Period; enactment of Environmental Impact Assessment Act

- Industrialization in 1980s caused environmental pollutions: automobile exhaust gas, sewage and garbage problems in urban areas, destruction of green area and natural ecosystems, and other consumption pollution problems. As a result, the Office of Environment was founded in 1980 and the Environmental Conservation Act was revised in 1986, which extended the scope of target projects for EIA and the project owner was extended from public sector to private sector.
 - This is related to the large scale development projects in the private sector at the time, which had significant meaning in that the environmental administration started direct involvement to the development projects in private sectors.
- 1990s is a period when national desire for a better quality of life increased with the increase of national income. In addition, national interest in the environmental problems increased through the incidents such as phenol contamination of Nakdong

River in 1991.

- Hence the authority in charge of environmental administration was raised to the Ministry of Environment in 1994.
- In 1990, the 「Framework Act on Environmental Policy」 was enacted to cover environment related acts and to present the long term vision of the environmental policy.
 - Article 4 (Environmental Impact Assessment) of the 「Framework Act on Environmental Policy」 includes preparation and review of environmental impact statement(EIS) and post management. It also required preparation of the draft EIS before collection of resident opinions.
- With the enactment of 「Environmental Impact Assessment Act」 in 1993, the framework for the EIA system was prepared. In 1997, Korea Environment Institute(KEI) was founded as a professional review organization for the evaluation of EIS. Also, a full scale framework, such as introduction of designated assessment agency system, was prepared for the EIA system .

3. Leaping Period; introduction of Strategic Environmental Assessment

- Beginning 2000s, various environmental policy programs were prepared and much effort was made to balance the development and environment, when the framework for preventative environmental policy was prepared rather than previous post environment management.
- Preventative functions were focused to consider the environment from the beginning stage of plans through the introduction of the EIA Scoping System and Prior Environmental Review System(PERS).
- EIA emphasized the measures to reduce environmental impacts by the development project at the implementation stage when the project plans are fully developed, which limited the evaluation for appropriateness and feasibility of location and plans prior to the detailed stage plans were made. To overcome this problem, the Prior Environmental Review System was introduced to evaluate the appropriateness of plans and feasibility of location at the concept development stage before the EIA.
- The PERS was partially introduced in 1993 in pursuant to the enforcement decree of the 「Framework Act on Environmental Policy」 and it was fully implemented through

the revision of 「Framework Act on Environmental Policy」 and Enforcement Decree of the Act in 2006.

- PERS introduced the concept of Strategic Environmental Assessment(SEA), which is an advancement of the EIA System in the aspect that it reviews the environment in the conceptual design stage of the administrative plan and development project.
- In the revised Environmental Impact Assessment Act in 2012, the PERS was renamed to the SEA.
- As a result, EIA systems in Korea are divided into three types as shown in <Table 1> which are Strategic Impact Assessment, EIA, and Small Scale EIA.

<Table 1> Types of environment evaluation

Types of environment evaluation	Manor targets
Strategic Environmental Assessment (SEA)	1. policy master plan: mid/long term master plans established by the central government and governments 2. development master plan: Conceptual design plan for detail development projects
Environmental Impact Assessment (EIA)	· large scale development project such as urban development project, road construction project, port construction project
Small Scale Environmental Impact Assessment	· small scale development project in the area where conservation is necessary or difficult development is concerned

Ⅲ. Environmental Impact Assessment System

1 Strategic Environmental Assessment System

1.1 Purpose

- The purpose of the SEA is to review the appropriateness of the pertinent plan and feasibility of a location from an environmental stand point by checking its conformance with the environment conservation plan and analysis of alternatives when a policy or plan affecting the environment is proposed.

1.2 Target projects

- Administrative plans that are targets of SEA are divided into the policy plan and

development master plan considering the characteristics of the plan.

- Policy plan is a mid to long term plan generally proposing basic direction and guidelines for the development and conservation in the entire or some portion of the nation.
- Development master plan is a plan established prior to the implementation plan such as designation of detailed development areas or independent ordinance, which is the basis of the implementation plan.
- There is no screening procedure to determine the target plan and the Enforcement Decree set 15 plans in 8 areas including urban development and road construction for policy plan, and 86 plans in 17 areas for development plan.

<Table 2> Examples of Strategic Environmental Assessment target projects

Areas	Policy plan (master plan)	Development master plan
Urban development	Distribution industry development master plan, etc.	City, Gun management plan, designation of corporate city development district, corporate city development plan, designation of station influence area development and project plan, etc.
Road construction	Road improvement master plan, etc.	Farming and fishing village roads master plan, Road construction project plan, etc.
Railway construction	National railway network construction plan, etc.	Urban railway master plan, railway construction mater plan, etc.
Forest development	Basic plan of forest, master plan for mountain villages, etc.	Forestry promotion plan, mountain village development project plan, etc.
Port construction	–	Fishing port master plan, Port master plan, etc.
Tourist complex development	Tourism development master plan, Hot spring improvement comprehensive plan, etc.	Designation of tourist sites, hot spring development plan, determination of Do and Gun Park plans, etc.
Collection of soil · sand · gravel · mineral	–	designation of proposed aggregate collection sites

A. Policy plan

① Prior Assessment Stage

- Head of an organization to establish a policy plan should prepare a Prior Assessment Report and determines the target area, proposed land use, alternatives, assessment items and scope of the SEA through the review by the EIA Council. The EIA Council consists of public officials, related experts, and private professionals such as representative of residents or citizen group designated by the chief of the council, chief of planning organization, and chief of approval organization. Contents decided after the review are open to the public by the chief of administrative agency and reflected in the SEA Report.

② Strategic Impact Assessment Report Stage

- The planning organization prepares and submits the SEA Report to the approval organization. The chief of the approval organization must request an agreement from the Minister of Environment(MOE) prior to approval. The Ministry of Environment reviews the appropriateness of the plan for the requested SEA Report and can demand complementary measures or adjustment, and the MOE can request KEI or related experts for a field survey or can ask for their opinions.

B. Development master plan

① Prior Assessment Stage

- The chief of the administrative agency who wants to establish development master plan should prepare a Prior Assessment Report and determine the items and scope of SEA through the review by the EIA Council. Contents decided after the review are open to the public by the head of administrative agency and reflected in the Draft SEA Report.

② Draft SEA Stage

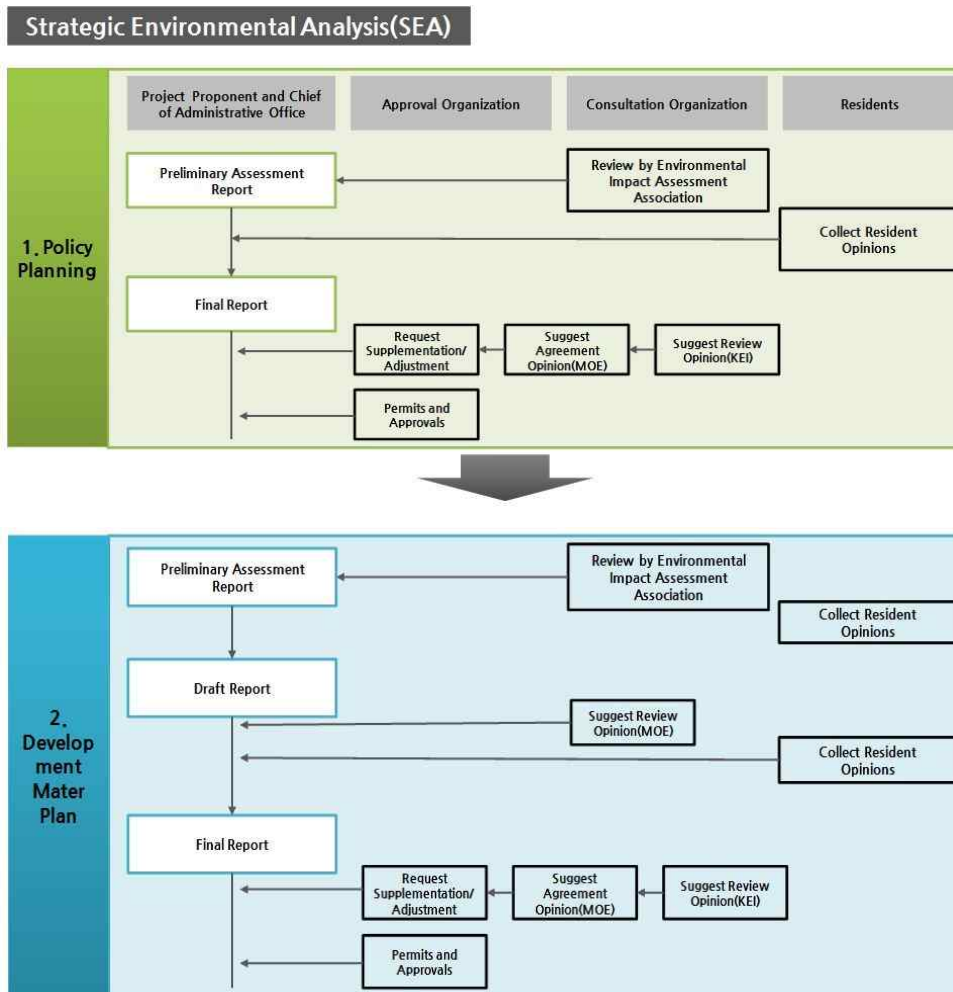
- The chief of the administrative agency prepares a Draft SEA Report including items for strategic environmental assessment and collects resident opinion through public notice, public inspection, presentation, or public hearing. Also, he should submit a draft and ask for opinions of the Minister of Environment, chief of the approval

organization, and chief of administrative agency.

③ Strategic Environmental Assessment principal stage

- The chief of the administrative agency prepares a Draft SEA Report reflecting resident opinions, and should obtain approval from the approval organization after submission of the report. The approval agency must request an agreement of the Minister of Environment prior to approval. Ministry of Environment reviews the requested SEA Report on the proper procedure for collection of resident opinion and contents of the SEA Report, and can demand complementary measures or adjustment to the chief of the administrative agency or chief of the approval organization, and the MOE can request KEI or a related expert for a field survey or can ask for their opinions.

1.3 Procedure



3.1.4 Assessment subjects

- Strategic Environmental Assessment for policy plan performs the evaluation on the conformity with the environment conservation plan, continuity, consistency, appropriateness, and sustainability of the plan.

<Table 3> Subjects for Strategic Environmental Assessment (「Environmental Impact Assessment Act」 Enforcement Decree, Attached Table1)

Policy Plan	Development Master Plan
1. Environment conservation plan과의 conformity 1) national environmental policy 2) international environmental trend, agreement, and standard 2. Connectivity · consistency of the plan 1) Connectivity with higher plan and related plans 2) Consistency with objective and content of the plan 3. Appropriateness · sustainability of the plan 1) appropriateness of the spatial plan 3) sustainability of the environmental capacity 2) appropriateness of demand and supply	1. Appropriateness of the plan 1) connectivity with higher plan and related plans 2) appropriateness of the alternatives and analysis 2. Validity of the location 1) conservation of natural environment (1) biodiversity · habitat conservation (2) conservation of topography and eco axis (3) effect on the surrounding natural landscape (4) conservation of aquatic environment 2) Stability of living environment (1) conformity with environmental standard (2) appropriateness of wastewater treatment facilities (3) efficiency of resource and energy circulation 3) Harmony with socioeconomic environment

3.1.5 Opening of information and resident participation

- The procedure for the opening of information and resident participation at the SEA stage is different for the policy plan and the development master plan. The policy plan omits the procedure for collection of resident opinions in the draft assessment report because it is difficult to set the scope of residents due to extensive range of the area. Only the resident participation in the development master plan is reviewed here.
- Determined content of the evaluation subjects is posted for more than 14 days on the information network and information support system of the City, Gun, or Gu(i.e administrative classification units) that has jurisdiction of the target area of the SEA or the administrative agency that plants to establish SEA plans.
- Draft Strategic Impact Assessment Report should be published in the daily newspaper and local newspaper with the summary of plan, public opening period and location, and opinion submission deadline and methods, and should be publicly opened to the

target residents for more than 20 days and within 40 days.

- In addition, after the public notice, public inspection, presentation or public hearing, the results of the resident opinion should be posted on the information network of the City, Gun, or Gu that has jurisdiction of the target area and information support system of the EIA for more than 14 days.
- However, the restriction of resident participation only to local residents rather than general citizen should be improved in the future.

3.1.6 Status of operation

- In 2011, 452 cases of SEA Report (previously Prior Environmental Review Report) were prepared. Among which, urban development had the most, 156 cases, followed by road construction 33, industrial complex 33, ports 39, and public water surface 36.
- Unfortunately, the SEA of policy plan was not reflected as the target plan including Urban Master Plan with the objection from development offices. However, the development master plan includes most of the plans related to EIA projects, which advanced the evaluation start time about a year compared to the previous EIA. This means the environment is considered from the beginning stage of a plan.

3.2 Environmental Impact Assessment System

3.2.1 Purpose

- The purpose of the EIA is to secure an environment friendly and sustainable development, and healthy and pleasant national life through the prediction and evaluation of environmental impact by plans and projects and preparation of environment conservation measures, when a plan or a project that can affect the environment is implemented.
- Therefore, the EIA is to provide environment conservation measures and alternatives that are economically and technically available for sustainable development based on the results of scientific survey and prediction. If a plan or project is concentrated at a specific location or time, the cumulative effect is to be considered.
- In addition, the results of the EIA should be prepared concisely and easy for residents and decision makers to understand. The law states that sufficient information

on the target plan and project of EIA should be provided to everyone so that residents can actively participate in the process of EIA.

3.2.2 Target projects

- In general, methods to determine target projects are divided into two.
 - First, requirement of EIA can be determined individually by screening as in the United States and United Kingdom.
 - Second, target projects are defined in advance by the type and size of a project
- Korea belongs to the latter case. Target projects of EIA are preset by the type and size of the project by the law, which makes it easy for project owner to predict and secure legal stability. Types of target projects for Environmental Impact Assessment are 78 projects in 17 areas as shown in <Table 4>.

<Table 4> Environmental impact assessment target areas and unit projects example
(「Environmental Impact Assessment Act」 Enforcement Decree Attached Table 3)

Item	Target projects	Size (greater than)
Urban development project	Urban development project Housing construction project Housing site development project station influence area development project	250,000 m ² 300,000 m ² 300,000 m ² 250,000 m ²
Industrial sites and industrial site development project	Industrial site development project	150,000 m ²
Energy development project	Seabed mining development project Mining Electrical equipment installation projects 1) power plant 2) transmission line (345 kV or greater)	300,000 m ² 300,000 m ² 100,000 kW 10 km
Port construction project	Port facility Dredging project	counter facilities length 300m or public water surface 30,000m ² , mooring facilities 30,000m ² 100,000 m ² or dredging amount 200,000 m ³
Road construction project	Road construction project	New 4km, extension of 2 or more lanes, 10km
Water resources development project		maximum water surface area 2 million m ² or reservoir capacity 20 million m ³
railway construction project	Railway or high speed railway construction project	4km or 100,000 m ²

Airport construction project	Airport development project	Airport, runway 500m
Stream use and development project	Stream construction project	10km
Land reclamation and public waters reclamation project	Public waters reclamation project	reclamation 300,000m ² , reclamation and cultivation 1 million m ²
Tourism complex development project	Tourist attractions and tourism complex development project	300,000 m ²
Mountain area development project	Mountain area project	cemetery & enshrinement 250,000 m ² , meadow 300,000 m ² , mountain area 200,000 m ²
Specific area development project	Regional comprehensive development project	200,000 m ²
Sports facility construction project	Sports facility construction project	250,000 m ²
Waste treatment facility, excreta treatment facility and manure excreta treatment facilities	Waste treatment facility construction project	Landfill area 300,000 m ² or volume 3.3 million m ³ , incinerator 100 tons/d
Defense, military facility construction project	Defense, military facility construction	330,000 m ²
Collection of soil · sand · gravel · mineral	Collection of soil in mountain area	100,000 m ²

A. Prior Assessment Report Stage

- Project owner prepares the Prior Assessment Report and determines the target areas of EIA, alternatives of environment conservation measures, and items, scope, and methods of EIA through the review by the EIA Council. Contents decided after the review are open to the public on the information support system for the EIA to collect resident opinions.
- The opportunity for resident opinion in the scoping stage was first started in 2012 with the revised law. Before then, there was no collection of resident opinions in the scoping stage and evaluation items were determined only with review by the EIA Council.

B. Draft Assessment Report Stage

- Project owner prepares Draft EIS reflecting resident opinions and submits it to the administrative agency, approval organization, consultation organization, and regional environmental office within the jurisdiction for their reviews. Also, resident opinions need to be collected through public notice, public inspection, presentation, and public hearing.

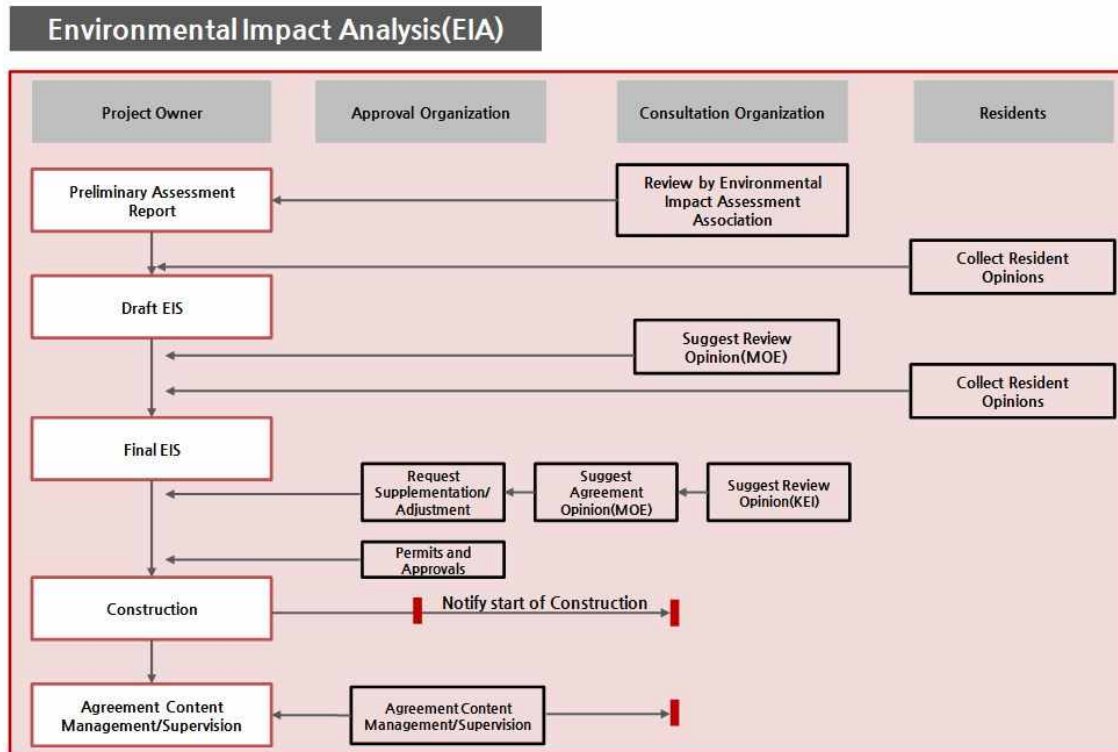
C. Assessment Report principal stage

- Project owner should prepare the EIAS and submit it to the approval organization. The approval organization must request agreement of the Minister of Environment(MOE) prior to approval. Minister of Environment can suggest opinions after reviewing the procedure of resident opinions and the contents of the EIS.
- When, the MOE reviews the EIS, he can ask KEI and other experts opinions or ask for a field survey. The approval organization can request the project owner for supplements and adjustments.

D. Post Environmental Impact Assessment stage

- Project owner must notify the Minister of Environment and approval organization of the starting of the construction. He must designate a chief manager to maintain the implementation of the agreements and notify it to the Minister of Environment and approval organization.
- The approval organization is in charge of the supervision of the agreements and if an agreement is not fulfilled, he must order the required actions or stop the construction in its entirety or a portion of it. Also, project owner must monitor the effect of the project on the surrounding environment after the start of construction and notify the Minister of Environment and the chief of the approval organization.

3.2.3 Procedure



3.2.4 Assessment subjects

- EIA is conducted in 6 areas including natural environment, living environment, socioeconomic environment, and the specific items are described in <Table 5> (「Environmental Impact Assessment Act」 Article 7)

<Table 5> Environmental impact assessment subjects (「Environmental Impact Assessment Act」 Enforcement Decree Attached Table1)

Area	Assessment subjects			
Natural Ecological Environment	1) animal · plant	2) natural environment asset		
Air Environment	1) meteorology	2) air quality	3) odor	4) greenhouse gas
Water Environment	1) water quality (surface and ground)	2) Hydraulic and hydrology	3) marine environment	
Soil Environment	1) land use	2) soil	3) topography, geology	
Living Environment	1) environment friendly resource circulation	2) noise, vibration 6) sunlight	3) recreation, landscape	4) sanitary, public health

	5) Electromagnetic Interference	shadow	
Social Environment, Economic Environment	1) population	2) housing	3) industry

3.2.5 Opening of information and resident participation

- In the EIA stage, any decision made including EIA subjects should be posted for more than 14 days on the information network of the City, Gun, or Gu in the jurisdiction of the target area or the information communication network of the approval organization and the information support system for the EIA.
- Draft EIA Report should be published in the daily newspaper and local newspaper within 10 days of receipt. Mayor, Gun governor, and chief of Gu office should publish project summary, public opening period and location, opinion submission deadline and methods, and should be publicly opened to the target residents for more than 20 days within and 60 days.
 - Then, the results of the resident opinion review must be posted for more than 14 days on the information network operated by the City, Gun, Gu or the information communication network of the approval organization and the information support system for the EIA prior to the confirmation of the project, same as the SEA.
- Resident participation can be done by the submission of opinion on the contents of public notice and public inspection after determination of the assessment items and preparation of the draft report or through the presentation or public hearing
- One of the characteristics of public information in Korea is the use of an information system on the internet, and the EIA Support System (EIASS) is an internet service that provides EIA related information to the project owner, assessment agency, and the general public with the purpose of securing transparency by providing information to prepare the assessment report and opening of information.
 - The EIASS home page (<http://eiass.go.kr>) provides environmental assessment information (agreement opinions and review reports for SEA, Small Scale EIA, PERS, EIA, and Post EIA), current status of assessment, statistics related to assessment, assessment geographic information as well as legislation and ordinance information, terminologies related to EIA, and research reports on EIA, the status

of assessment agents, and other required information.

3.2.6. Operation

- A total of 412 cases of EIA were prepared in 2011. Similar to SEA, 42 urban developments, 64 road constructions, and 92 industrial complexed accounted for most part of the cases. One peculiar point was that the substantial portion of 25 tourism complexes and 29 sports facilities were golf course construction projects, representing a unique condition of Korea.

3.3 Small Scale Environmental Impact Assessment System

3.3.1 Purpose

- Small Scale EIA is aimed to evaluate the environmental condition for the project areas smaller in size than projects for environmental impact assessment and need planned development in an area where conservation is required or difficult development is concerned.

3.3.2 Target projects

- Small scale EIA targets small scale projects which need planned development considering the environment where the conservation is necessary or difficult development is concerned. Target areas are 19 areas by the 12 ordinances including 「Act on Planning and Use of National Territory」, 「Natural Environmental Conservation Act」, and the size of each target area is defined by the enforcement decree.

<Table 6> Small scale environmental impact assessment target areas and unit projects example (「Environmental Impact Assessment Act」 Enforcement Decree Attached Table 4)

Item	Target Projects	Size (greater than)
「Act on Planning and Use of National Territory」 applied area	A. management area 1) conservation management area 2) production management area 3) planning management area B. agricultural area C. natural environment conservation area	5,000m ² 7,500m ² 10,000m ² 7,500m ² 5,000m ²
「Management of Mountainous Districts Act」 applied area	Mountainous districts for public use Mountainous districts except for public use	10,000m ² 30,000m ²
「Natural Parks Act」 applied area	Park Nature Conservation District Park Natural Environment District and Park Cultural Asset District	5,000m ² 7,500m ²
「Wetlands Conservation Act」 applied area	Wetlands Conservation Area Wetlands Neighborhood Management Area Wetlands Improvement Area	5,000m ² 7,500m ² 7,500m ²

3.3.3 Procedure

- The owner of the target project for small scale EIA prepares the Small Scale EIA Report and requests the Minister of Environment for agreements. A review can be requested to the Korea Environment Institute(KEI) or relevant expert, if needed, but there is no procedure for resident participation.

4. Related Parties of Environmental Assessment

4.1. Ministry of Environment

- Ministry of Environment(MOE) is an administration organization that manages the conservation of natural environment and living environment and protection of environmental pollution. It is consisted of the Ministry of Environment headquarter, 4 Basin Environmental Offices (Yeongsan River, Guem River, Nakdong River, and Han River), and 3 Regional Environmental Offices (Wonju, Daegu, and Jeonju). Major tasks are as described below.

- First, assumes the consultation of environmental assessment. The chief of the

- approval organization must request agreement of the MOE for the target projects of EIA prior to approval. Therefore, the MOE reviews the status of the procedure for resident opinions related to the environmental assessment and contents of the assessment report, and requests supplements and adjustments if needed. In particular, if environmental damage is expected in the SEA, he can disagree with the plan. In the early stage of a development project, he can provide consulting to the project owner on the appropriateness of location through prior consultation.
- Second, supervise post monitoring of the EIA. MOE supervises and manages the implementation status of EIA agreements, pre-construction activities before the agreement of EIA, Post EIA, and can order required actions.
 - Third, MOE prepares and supplies assesment guidelines, preparation standards, and checklists of the EIA to improve the objectivity, science, and preactivity of the EIA.
 - Currently there are about 50 guidelines and regulations, and major guidelines and regulations include 「Environmental Impact Assessment Agency Cost Calculation Standard」, 「Guideline for Environment Friendly Road Construction」, 「Regulation on Major Items for Prior Environmental Review in Golf Course and Review Method」, 「Guideline for Prior Environmental Review Report on Small Scale Development Projects including Factories」, 「Standard Operating Procedure for Review and Evaluation of Health Effect Items」, 「Guideline for greenhouse Gas Environmental Impact Assessment」, 「Guideline for Environmental Impact Assessment Report Preparation by Business Type」, 「Guideline for Environmental Condition Evaluation for Urban Development Projects」.
 - In addition, the standard to estimate the cost of the Environmental Impact Assessment agent is prepared to help the project owner conduct EIA at a reasonable cost. KEI often performs research to prepare these guidelines.

4.2. Professional Review organization

- One of the major characteristics of Korean EIA System is that there is a professional review organization. Korea Environment Institute(KEI) is a government - supported research institute under Prime Minister's Office and conducts research related to environmental policy and review of environmental assessment reports.
- The review of environmental assessment reports is defined in the Environmental

Impact Assessment Act, and the MOE can ask for a review opinion of the KEI, a professional agency, while reviewing SEA Reports and EIS. Therefore, the KEI reviews the assessment reports requested by the MOE and returns its opinion to the Ministry of Environment, and then the Ministry of Environment can adjust, supplement or agree on the project plan based on the review.

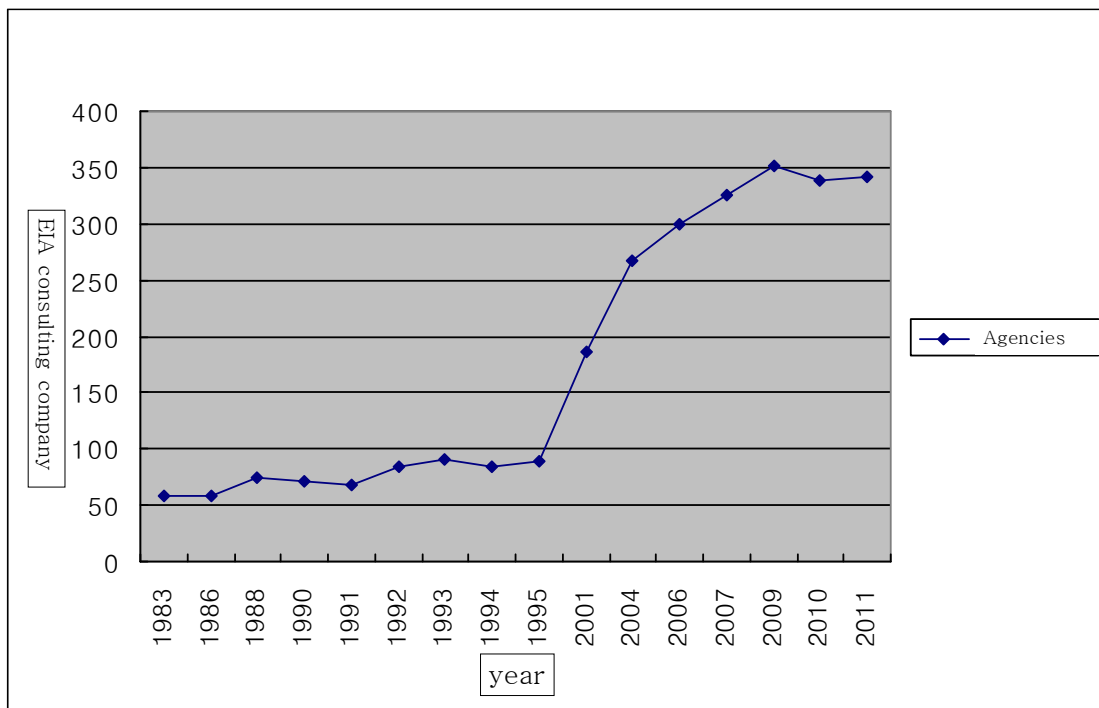
- Environmental assessment departments in the KEI include one Research group and two review groups with 25 PhD holders. Research group conducts studies on environmental assessment systems and guidelines and the Review group prepares review opinions for EIS.
- The KEI started the review work from 1997. Prior to that, opinions were requested to experts including professors for each project. However, their opinions were significantly different by the person even for similar projects in many cases. Also, experts in one individual area emphasized only his area among others and sometimes had little comprehension of the project. Some experts even did not have understanding of the EIA, which caused difficulty in preparing agreement opinion for the MOE.
- On the contrary, professional reviewers who dedicate to environmental assessments were produced with the review process started by the KEI, which resulted in much progress in terms of consistency and professionalism of the review opinion

4.3. Licensed EIA Consulting agents

- The licensed EIA consulting company acts as a proxy to prepare the draft and final EIS, Post EIA reports, and simplified assessment reports.
- To perform environmental assessment agency, one must register at the Ministry of Environment with the following requirements; technical manpower and equipment for EIA consulting company, registration form, project owner's registration card, status of technical capacity and qualification documents, facility and equipment specifications. All work performed for EIA must be reported to the MOE by January 31 each year.
- EIA consulting business is divided into two classes by the grade of technical manpower and facilities and equipments. Class 1 business can prepare assessment reports but Class 2 can perform limited assessment in the field of natural ecological environment.
- Qualifications for Class 1 EIA business require an EIA agentt or an equivalent expert

as the overall manager and at least one profession engineer in the area of natural ecological environment, living environment and other related areas, and two professional engineers in soil and land environment.

- In 2012, the EIA Agent System was prepared. It is a licensed at the professional engineer level, and is a system certified by the governments for EIA professionals. The EIA Agent performs environmental condition surveys, environmental impact prediction and analysis, evaluation of environment conservation measures, and preparation and maintenance of EIS. Improvements in the EIS are expected through the enforced authority and responsibility of the preparing person.
- The number of environmental assessment businesses was 58 in 1983 and drastically increased after 1995, and 351 businesses were registered in 2009. There are 331 agencies as of 2012 <Figure 1>.



<Figure 1> Status of environmental assessment businesses

4. Suggestions

- We have reviewed the EIA System in Korea and major entities, and unique characteristics of the Korean system compared to other advanced countries are

summarized below.

- First, the EIA System was prepared by the stage and size of a plan. SEA in the policy plan stage and development master plan stage, EIA in the development project and Small Scale EIA are prepared, which differentiates the assessment procedure and contents by the level and size of the plan. In particular, the SEA System is very important considering the fact that there are only few countries that stipulate strategic impact assessment in the policy stage.
- Second, target plans and projects are clearly specified without the introduction of screening. The introduction of screening is different by country, while scoping, draft, final, and post monitoring are commonly practiced procedures in most countries. Countries where EIA systems are well developed by the municipal ordinance often introduced screenings in the EIA by law. On the contrary, the environmental assessment in Korea clearly defines the target projects by type and size of the project by law as the EIA system by the municipalities in Korea is still insignificant.
- Third, the central government, the Ministry of Environment, has a big authority and responsibility with the consultation function for the projects by municipalities or private projects. The foundation of the professional review agency, KEI, made it possible to provide efficient review of assessment reports in the aspect of consistency and professionalism.
- We believe that the characteristics can provide a positive suggestion to the systems in developing countries.
- For the EIA System to be a political tool for sustainable development, the roles and responsibilities of planning organization and approval organization should be reinforced. In the EIA System in Korea, the roles and responsibilities of the Ministry of Environment is well defined, but there is still a lack of environmental assessment departments or professionals in the planning organization and approval organization.
- As a result, some cases happen when the conception or direction of a plan is not environmentally friendly, which causes continuous conflict with the environment.
- Environmental assessment cannot have good results just by the efforts of MOE or environmental experts. Planning organization and approval organization should change the perception on the process and continue to practice.