

연구논문

Strategic Environmental Assessment and Integration of Development and Environmental Planning in Korea

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(Manuscript received 14 September 2007; accepted 6 November 2007)

전략환경평가와 개발계획 및 환경계획의 통합

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(2007년 9월 14일 접수, 2007년 11월 6일 승인)

Abstract

환경영향평가는 대규모 개발사업을 대상으로, 계획 확정후 사업 실시단계에서 개발사업 시행에 따른 환경영향 저감방안을 중점 검토하는 제도인데, 사전환경성검토는 행정계획과 환경상 민감지역의 소규모 개발사업을 대상으로, 계획 확정 이전단계에서 환경적 측면에서 입지나 개발의 적정성·타당성을 사전에 검토하는 제도이다.

사전환경성검토는 2006년 6월부터 대상 행정계획을 구체적 개발사업의 상위 행정계획으로 확대하고, 계획의 적정성, 입지의 타당성을 미리 검토할 수 있도록 하고, 검토과정에서 주민, 전문가, 시민단체 등 이해관계자의 의견수렴을 거치도록 하는 전략환경평가 체제로 개편됨으로써, 환경갈등이나 사회·경제적 문제를 예방할 수 있는 기반을 보다 강화하였다. 환경부 주관의 사전환경성검토가 전략환경평가를 강화하는 동안 건설교통부가 중장기기본계획에 대한 전략환경평가를 시행하기 시작하였다.

우리나라의 전략환경평가는 건설교통부와 환경부가 전략환경평가를 별도로 운영하는 데 따른 비효율성, 국토계획과 환경계획의 연계성 부족, 선거공약으로 제안된 대규모 개발계획 등에 대한 객관적 환경평가의 어려움 등의 문제를 가지고 있다.

따라서 본 연구는 전략환경평가제도의 정립을 위해, 환경정책패러다임의 변천, 환경영향평가와 사전환경성검토의 발전, 전략환경평가의 현황과 선거공약으로 제안된 대규모 개발계획에 대한 전략환경평가의 한계 등을 고찰한 후, 전략환경평가제도의 발전방향과 개발계획과 환경계획의 연계통합 방안을 모색하고자 한다.

주요어: 환경영향평가(Environmental Impact Assessment, EIA), 사전환경성검토(Prior Environmental Review System, PERS), 전략환경평가(Strategic Environmental Assessment, SEA)

I. Introduction

In Korea, the environmental impact assessment (EIA) on large scale development has been carried out since 1981. Such “project” EIA could not sufficiently solve the environmental problems brought by large scale developments, because the EIA process is undertaken after policies, plans, and strategic decisions have been already fixed.

In order to solve the problems of “project” EIA, the Prior Environmental Review System (PERS) has been introduced as a preconsideration of the environmental impact of administrative plans directly concerned with large scale development projects, and the small scale development projects in environmentally sensitive area. Based on the Framework Act on Environmental Policy Amendments of 1999, PERS can be implemented with a legal foundation.

The Framework Act on Environmental Policy Amendments of 2005 has strengthened the characteristics of Strategic Environmental Assessment (SEA) such as: the increase of number of administrative plans, the earlier implementation of environmental assessment on the development plan, and the introduction of public participation into PERS.

In addition to PERS and EIA by the Ministry of Environment (MOE), the Ministry of Construction and Transportation (MOCT) has adopted SEA on the Mid and Long-term master plan controlled by MOCT. The SEA of MOCT means macroscopic and qualitative estimation of the impact, assessment of multiple alternatives and suggestion of the best alternative for the sustainable development of national territory (Ministry of Construction and Transportation, 2006).

But SEA in Korea has still some problems such as: inefficiency due to dual SEA of MOE and MOCT, independent implementation of develop-

ment plan and environmental plan, and failure in taking control of large development by presidential campaign pledges.

In this paper, the paradigm change of environmental policy, the evolution of EIA and SEA, the present EIA and SEA system, and the inconsistency between presidential campaign pledge and SEA or EIA will be described and analyzed. Then will be suggested the integration of environmental assessment (EA) system and the linkage and integration of development planning and environmental planning.

II. Evolution of EIA and SEA in Korea

1. Paradigm Change of Environmental Policy

The goal of the environmental policy has evolved from abatement of pollution, through harmony between environment and economy, to balanced development among environment, economy and society. The sub-goal has changed from pollutants treatment after generation, through prevention of pollution by resource demand management, to receptor-oriented integrated management based on environmental carrying capacity.

The measures of the environmental policy have developed from environmental regulation and public investment, through economic incentives and environmental technology, to EIA System and environmental management self-controlled by the enterprise. The policy type has developed from central government-oriented, through cooperation between central and local government, to new governance (Table 1).

2. Evolution of Environmental Assessment System

In 1977, the Environmental Preservation Act

was enacted with the article on Prior Review Regulation on Preparation of EIA Statement was System based on individual laws. In 1981, the established, so EIA can be implemented substan-

Table 1. Paradigm Change of Environmental Policy in Korea (1993-2007)

Category\Year	1993~1997	1998~2002	2003~2007
Goal	Abatement of pollution	Harmony between environment & economy	Balanced development among environment, economy and society
Sub-Goal	Pollutants treatment after generation	Prevention of pollution by resource demand management	Receptor-oriented Integrated Management based on Environmental Carrying Capacity
Key Issues	More supply of treatment facilities	Higher efficiency of environmental management	Prevention and resolution of Environmental Carrying Capacity
Measures	<ul style="list-style-type: none"> • Environmental regulation • Public investment 	<ul style="list-style-type: none"> • Economic incentives • Environmental technology 	<ul style="list-style-type: none"> • EIA system • Self-control environmental management of enterprise
Policy Type	Central government-oriented	Cooperation between central and local government	New governance

Source: Ministry of Environment, 2007a, Environmental Policy Report from the Standpoint of Demand Side, p.5.

Table 2. Evolution of EA in Korea

Environmental Policy Paradigm	mon/yr	Ministry of Environment (MOE)		Ministry of Construction and Transportation (MOCT)
		EIA	PERS [†] ("lower" level SEA) [‡]	"higher" level SEA
	Dec/77	Environmental Preservation Act : Prior Review System (PRS) based on individual laws		
	Feb/81	Regulation on the Preparation of EIA Statement → EIA can be implemented	Prior Review System based on individual laws	
	Jun/90	Framework Act on Environmental Policy (FAEP) of 1990		
Abatement of Pollution (1993~1997)	Jan/93		Instructions of Prime Minister under Framework Act on Environmental Policy (FAEP)	
	Jun/93	EIA Act		
Harmony between Environment and Economy (1998~2002)	Dec/99	Act on the Assessment of Impacts of Works on Environment, Transportation, Disasters, etc.	FAEP Amendments of 1999	
Balanced Development among Environment, Economy and Society (2003~2007)	Dec/04			Regulations for SEA
	Jun/06		FAEP Amendments of 2006 : strengthening of SEA	

[†] PERS: Prior Environmental Review System

[‡] The plans assessed by PERS are "lower" level ones than those assessed by SEA of MOCT.

Source: Ministry of Environment, 2006, Environmental White Book, pp.313-325.

Ministry of Construction and Transportation, 2006, Regulation for SEA.

Lee, Jong Ho and Cho, Jae Heon, 2005, pp.123-124.

tially. In 1990, the Framework Act on Environmental Policy including the articles on EIA was enacted.

In 1993, PERS substituting Prior Review System was implemented based on the Instructions of Prime Minister under the Framework Act on Environmental Policy, and the EIA Act, the first legislation on only EIA was established. Since 1999, PERS has been implemented not based on the Instructions of the Prime Minister but on the Framework Act on Environmental Policy Amendments of 1999, and has been enacted the Act on Assessment of Impacts of Works on Environment, Transportation, Disasters, etc, which includes traffic impact assessment and disaster impact assessment in addition to EIA for saving time and cost.

In 2004, MOCT enacted the Regulation for SEA, which is not an "Act". The regulation defines SEA so that it might assess macroscopically and qualitatively the impact of mid or long-term master plan devised by MOCT, analyze

multiple alternatives, and suggest the best alternative for ESSD of the national territory.

Table 2 shows that the evolution of EA reflects the paradigm change of the environmental policy. Especially, the strengthening of SEA of MOE and Regulations for SEA of MOCT seem to be directly related with the paradigm change of the environmental policy: namely balanced development among environment, economy and society.

III. Present EIA and SEA in Korea

1. Comparison of EIA with PERS

EIA is based on the Act on Assessment of Impacts of Works on Environment, Transportation, Disasters, etc., while PERS is based on the Framework Act on Environmental Policy, and SEA is based on the Regulations for SEA. The objects assessed by EIA are mainly large development projects, and those assessed by PERS are administrative plans and the small development projects in conservation area, and those assessed

Table 3. Comparison of EIA with PERS

	MOE		MOCT
	EIA	PERS (SEA)	SEA
Law	Act on the Assessment of Impacts of Works on Environment, Transportation, Disasters, etc	Framework Act on Environmental Policy	Regulations for SEA
Objectives assessed	• large development projects	• administrative plan • small development projects in conservation area	• Mid and Long-term Master Plan
Period	• After administrative plan and before approval of implementation plan for development projects	• before decision of administrative plan and development plan	• before decision of mid and long-term plan
Main Contents	• prediction and assessment of the impact of the development project	• appropriateness of plan • location feasibility	• macroscopic and qualitative prediction and assessment of the impact of mid and long-term plan
Public Participation	citizen participation included	citizen participation included (Jun, 2006)	citizen participation included

Source: Ministry of Environment, 2006, Prior Environmental Review System, p.15.

Ministry of Construction and Transportation, 2006, Regulation for SEA.

Table 4. PERS recently revised

Category	Previous PERS	PERS recently revised
Objectives assessed	<ul style="list-style-type: none"> • 36 administrative plans (AP) • small development projects 	<ul style="list-style-type: none"> • 83 AP • small development projects
Alternatives	Not required	Required
Scoping	Not required	Required
Public participation	Not required	Required
Relation with “project” EIA	Not clearly divided	explicit role of SEA

Source: Ministry of Environment, 2006, Prior Environmental Review System, p.6.

by SEA of MOCT are mid and long-term plans. EIA is carried out after decision of the administrative plan and after approval of the implementation plan for development projects, while PERS is carried out before decision of the administrative plan and development plan, and SEA of MOCT is carried out before decision of the mid or long-term plans.

EIA mainly reviews prediction and assessment of the impact of development projects on natural, living and socioeconomic environment, PERS focuses on the appropriateness of plan and, the location feasibility. Citizen participation is included in the EIA process, but it has been included in PERS since Jun. 2006 (Table 3).

2. Review of PERS recently revised

Since June 2006, the objectives assessed by PERS increased from 36 administrative plans to 83 plans, and suggestion of alternatives, scoping, and public participation have been required. Before PERS was revised, there was not explicit linkage between PERS and “project” EIA, but now PERS has higher position over “project” EIA. Therefore, the items already assessed by PERS could be omitted in “project” EIA (Table 4).

3. SEA and EIA System

Figure 1 shows the relationship among 1) SEA on the mid or long-term master plans of MOCT,

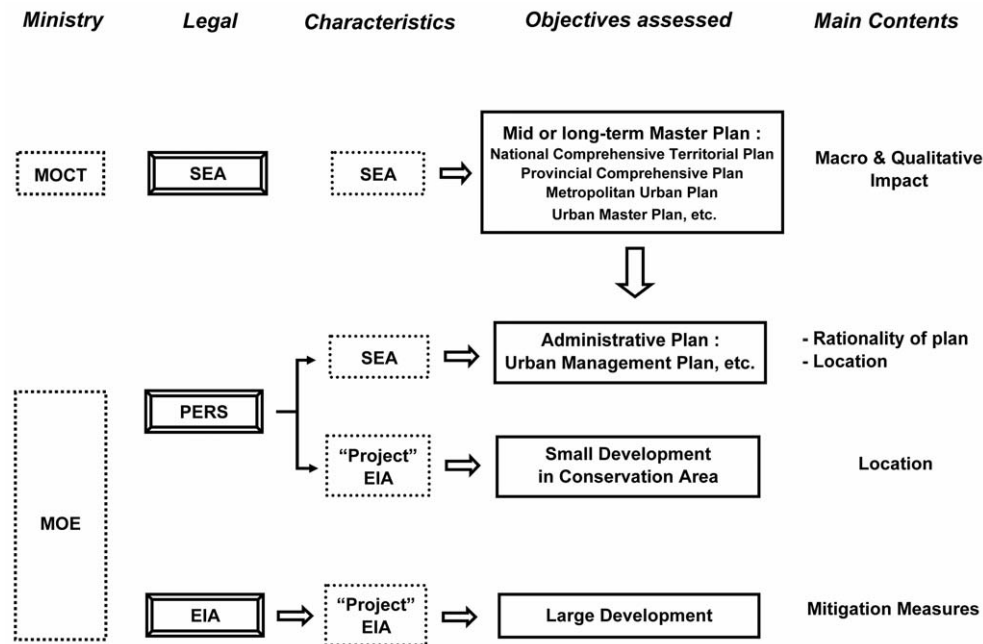
and 2) PERS of MOE, which consists of (1) SEA on the administrative plans under the mid or long-term master plans and (2) “project” EIA on the small scale development in conservation area and 3) “project” EIA of MOE on large scale development.

SEA of MOCT deals with the mid or long-term master plans, which are above the administrative plans assessed by PERS of MOE. Therefore the SEA based on the Regulation for SEA of MOCT is higher than SEA included in PERS of MOE. So the SEA in Korea is “dually” implemented by two ministries. As seen before, SEA on the mid or long-term master plans of MOCT assesses the impact of the plans, analyzes multiple alternatives, and suggests the best alternative for ESSD of national territory.

In case of SEA on administrative plan, the rationality (legality, consistency with other plans and sustainability) of plan and location are very important assessed items. When small development in conservation area is assessed, the feasibility of location should be mainly considered together with the mitigation measures.

4. SEA and Presidential Campaign Pledge

In Korea, there have been great debates and enormous costs brought by plans or large developments, which were suggested during the presidential election. They are: the Saemangeum



MOCT: Ministry of Construction and Transportation; MOE: Ministry of Environment

Source: MOE, 2006, Prior Environmental Review System, p.14.; Lee, Jong Ho and Cho, Jae Heon, 2005, p.127.

Figure 1. Present SEA and EIA System

Reclamation Project, the Cheonseong Mt. Tunnel, the Multifunctional Administrative City, and the Korean Peninsula Canal. The last has been promised by one president candidate (Table 5).

During the presidential campaign period, high level development plans and very large scale developments were proposed for winning the election in a region where the support for a candidate is not prevalent, without sufficient feasibility analysis of the environmental and socio-economic cost.

Even though the process of EIA or PERS on the development plan based on presidential campaign pledge has been completed after presidential election, the implementation of the development plan has brought many problems such as: environmental pollution and enormous social cost, including environmental conflicts or various strong resistances from residents, NGO's and

related specialists. Many residents and NGO's have requested more detailed environmental survey, and at some times sued against the plans.

In case of the tunnel construction penetrating the Cheon-seong Mt., the conservation of the salamanders' habitat was a hot issue. The Naewon temple is located on the mountain, where many salamanders were living. NGO's insist that the tunnel's construction for Seoul-Busan High Speed Railway might destruct the salamanders' habitat. At the beginning of the suit, the Naewon Temple, NGO's and the salamanders were the accusers. but later the salamanders were excluded from the accusers by the Court. The Supreme Court has sentenced the permission of the tunnel's construction, emphasizing the continuity of the national policy. The result of the presidential campaign pledges brought the worst result. The delaying costs were too much,

Table 5. Process of Super Development Projects by Presidential Campaign Pledges (PCP)

Category\PCP		Saemangeum Reclamation Project	Cheon-seong Mt. Tunnel	Multifunctional Administrative City	Korean Peninsula Canal
Goal		National Territory and Farmland Enlargement	Seoul-Busan High Speed Railway	<ul style="list-style-type: none"> • Solving Capital Region Concentration • National Balance Development 	<ul style="list-style-type: none"> • National Balance Development • Transportation Cost • Employment
Area		401 km ²	-	73 km ²	
Length		33 km (sea wall)	13.28 km		
Population				300,000 people	
Process	Feasibility Analysis	Mar. '87 ~ Nov.'87	Jun.'90	'79 (Cancelled)	
	EIA/PERS		Nov.'94		
	Presidential Election	Dec.'87	Dec.'02	Dec.'02	Dec.'07
	EIA/PERS	'89 ~ '91(EIA)		'06 ~ Jan.'07(PERS)	
	Environmental Survey	'99 ~ '00	Aug.'04		
	Suit	Jul.'03 ~ Mar.'06	Apr.'04 ~ Jun.'06	Oct.'04 ~ Nov.'05	
	Target Year	2011	2010	2012-2030	
Delaying Month [†]		30	9.5		
Delaying Cost [‡]		750 million \$	2,516 million \$		

[†]The Korea Chamber of Commerce & Industry, 2006, Problems and Policy Subject on Conflict Management related Act of Public Institute.

[‡]JoongAng Ilbo 21 Feb, 2007.

and all citizen should pay much more tax than before.

In case of Multifunctional Administrative City, Multifunctional Administrative City Metropolitan Urban Plan and Multifunctional Administrative City Construction Master Plan should pass through SEA process, while Multifunctional Administrative City Development Plan should pass through PERS process, based upon the Special Law to Construct the Multifunctional Administrative City (Table 6). But the SEA process and PERS process could not consider sufficiently the impacts of those plans on the political, socio-economic aspects of the future Korea, especially the reunification of the Korean Peninsula (Lee, Jong Ho, 2004).

There are many empirical studies on the factors contributing to SEA impact on decision-mak-

ing: flexible SEA that fits into the decision-making context, stakeholder participation, transparency of the SEA process, binding character of SEA, quality of the assessment, values reflecting values in policy context, and openness of decision-makers to environment/sustainability etc. (Hens Runhaar and Peter P. J. Driessen, 2007)

But, in Korea, SEA on the development plans originating from the presidential campaign pledges have not carried out their role sufficiently, because the pledges focused on the development for direct economic interests, overwhelmed SEA or EIA process, and the manual on PERS does not sufficiently cover such political policies or development plans from the presidential campaign pledges except for the Multifunctional Administrative City Plan (Ministry of Environment, 2006b; Korea Environment Institute, 2007). Most

SEA has carried out a passive role to pass or justify the development plans, which were proposed as the presidential campaign pledges, but do not have something to do with the National Comprehensive Territorial Plan or the Provincial Comprehensive Plan. For the stable continuity of national policies, the presidential campaign pledges should be devised, based on the National Comprehensive Territorial Plan or the Provincial Comprehensive Plan, and the National Comprehensive Environmental Plan, etc.

IV. Future of Environmental Assessment in Korea

1. Integration of Environmental Assessment System

1) Integrated EIA System of PERS and EIA

Figure 2 shows the integrated EIA system of PERS and EIA of MOE. For the integrated EIA system, MOE has the plan to establish the "Integrated EIA Act," containing all articles or provi-

sions related with PERS and EIA, which are at present contained in the Framework Act on Environmental Policy and the Act on Assessment of Impacts of Works on Environment, Transportation and Natural Disaster, etc. (Ministry of Environment, 2007b, p.78).

Under the "Integrated EIA Act," the environmental impact of the administrative plans and the small and large development projects could be evaluated in very closely linked state. As seen before, the appropriateness of a plan, the location feasibility, the harmonization of development with environment, and reasonable land use plan could be sufficiently considered, and therefore SEA and "project" EIA could be closely interlinked.

2) Integrated EA System of PERS & EIA of MOE and SEA of MOCT

The plans to which SEA or PERS is applied, could be classified into five categories such as Type A, B, C, D and E (Table 6). The plans to which both SEA and PERS are applied, are: the Dam Construction Long-term Plan, the Road

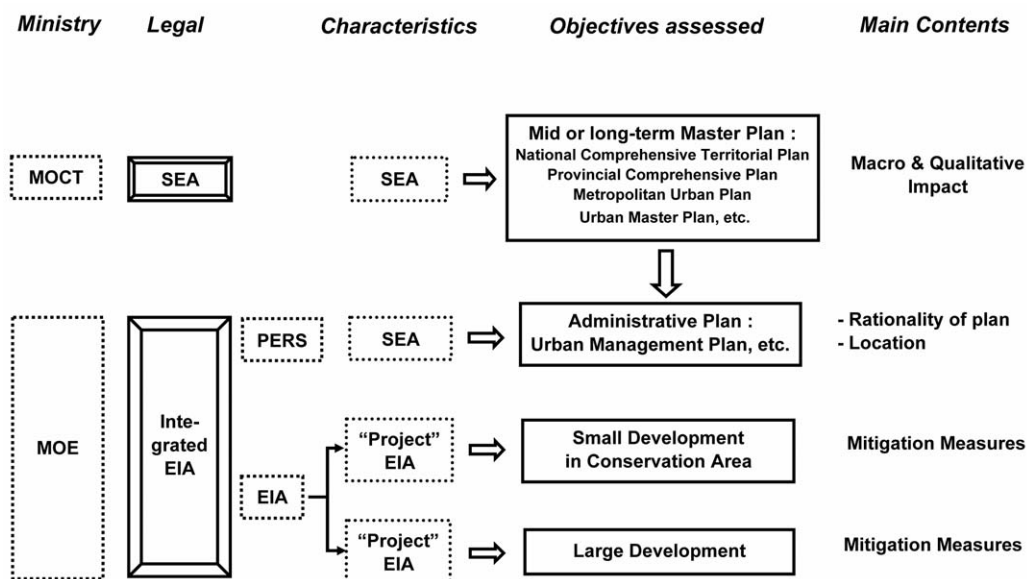


Figure 2. Integrated EIA System of PERS & EIA

Table 6. Plans to which SEA and PERS are applied

Category	Mid and Long-Term Plans to which SEA of MOCT is applied	Administrative Plans to which PERS of MOE is applied	Related Laws	Type (Relation between both plans)
National Territorial and Urban Plan	National Comprehensive Territorial Plan		Framework Act on National Territory	A
	Provincial Comprehensive Plan		"	A
"	Capital Metropolitan Region Readjustment Plan		Capital Region Readjustment Planning Act	A
"	Metropolitan Urban Plan	Urban Management Plan	Act on Planning and Use of National Territory	C
"	Urban Master Plan			
"	Multifunctional Administrative City Metropolitan Urban Plan	Multifunctional Administrative City Development Plan	The Special Law to Construct the Multifunctional Administrative City	C
"	Multifunctional Administrative City Construction Master Plan			
"	Housing Comprehensive Plan		Housing Act	A
"	Industrial Sites Supply Plan	<ul style="list-style-type: none"> • Assignment of Major Industrial Estates • Assignment of Small and Medium Industrial Estates • Assignment of Urban High Technology Industrial Estates • Assignment of Rural Industrial Estates 	Industrial Sites and Development Act	D
SOC	Aggregate Demand-Supply Mater Plan	Assignment of Planned Site for Aggregate Collection	Aggregate Collection Act	D
"	Water Resource Long-term Comprehensive Plan		River Act	A
"	Dam Construction Long-term Plan	Dam Construction Long-term Plan	Act on Dam Construction and Assistance, etc. to Neighborhood Area	B
"	Ground Water Management Master Plan		Underground Water Act	A
"	Road Adjustment Master Plan	Road Adjustment Master Plan	Road Act	B
"	National Railway Restructuring Master Plan	National Railway Restructuring Master Plan	Railroad Construction Act	B
Transport and Freight Distribution	National Intermodal Transportation Plan		Transport System Efficiency Promotion Act	A
"	National Freight Distribution Mater Plan		Freight Distribution Promotion Act	A
"	Airport Development Mid and Long-term Comprehensive Plan	Airport Development Mater Plan	Civil Aviation Act	C
"	Distribution Complex Comprehensive Development Plan	Assignment of Distribution Complex	Distribution Complex Development Promotion Act	D
		plans to which only PERS of MOE is applied		E

Source : Ministry of Environment, 2006, Manual on Prior Environmental Review System.

Ministry of Construction and Transportation, 2006, Regulation for SEA.

Type A: Only SEA(of MOCT) is applied

Type B: Both SEA(of MOCT) and PERS are applied

Type C: Mid and Long-Term plans have higher hierarchy than administrative plans.

Type D: Administrative plans are the detail of mid and long-term plans(of MOCT)

Type E: Administrative plans assessed by only PERS

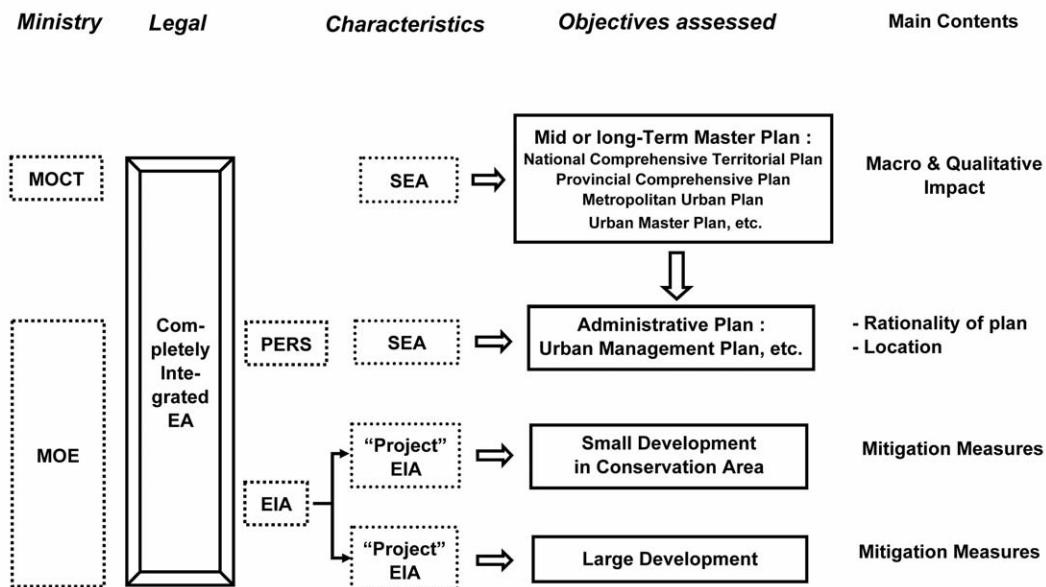
Adjustment Master Plan and the National Railway Restructuring Master Plan (Type B). So, the Type B-plans had better be assessed by SEA or by PERS. But it is recommended that the Type B-plans be assessed by PERS.

The plans which SEA or PERS are applied to, and have hierarchical relationship between them, are as follows (Type C): ① the Metropolitan Urban Plan, the Urban Master Plan and the Urban Management Plan; ② the Multifunctional Administrative City Metropolitan Urban Plan, the Multifunctional Administrative City Construction Master Plan and the Multifunctional Administrative City Development Plan; ③ the Airport Development Mid and Long-Term Comprehensive Plan and the Airport Development Master Plan. Judging from the characteristics of Type C-plans, the administrative plans assessed by PERS, had better be assessed by SEA of MOCT.

And there are administrative plans the detail of the mid or long term plans, which SEA of

MOCT are applied to. The Assignment of the Major Industrial Estates, the Small and Medium Industrial Estates, the Urban High Technology Industrial Estates, and the Rural Industrial Estates are included in the Industrial Sites Supply Plan to which SEA of MOCT is applied. Likewise the assignment of the Planned Sites for Aggregate Collection is included in the Aggregate Collection Master Plan. And the assignment of the Distribution Complex is included in the Distribution Complex Comprehensive Development Plan (Type D).

As seen above, many plans are now implemented by MOCT and by MOE. In order to integrate SEA, PERS and EIA, it is desirable that the Regulations for SEA of MOCT and the "Integrated EIA Act" of MOE be integrated into the "Integrated EA Act" of MOE. Figure 3 shows the completely integrated EA system of PERS and EIA of MOE and SEA of MOCT.



Source: Lee, Jong Ho and Cho, Jae Heon, 2005, p.129; Lee, Jong Ho, 2007, p.7.

Figure 3. Completely Integrated EA System of PERS & EIA of MOE and SEA of MOCT

2. Integration of Development Planning and Environmental Planning

1) Development Planning and Environmental Planning

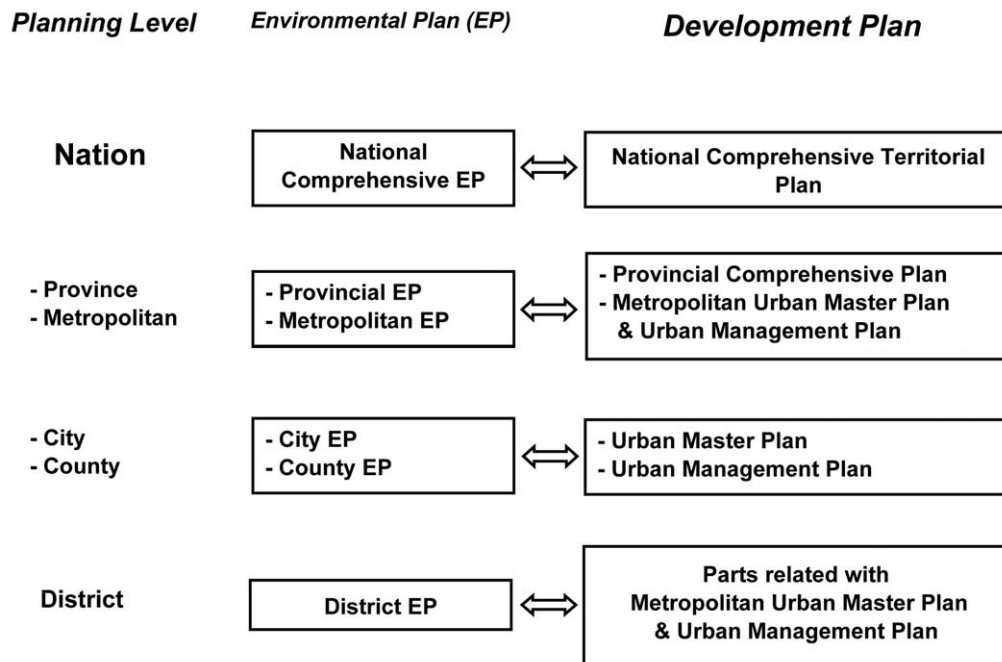
Figure 4 shows the relationships between development plan and environmental plan at national, provincial or metropolitan, city or county level and district level. Recently most development plans have the ESSD concept and must pass the SEA process. So the development plan has a very close relationship with the environmental plan toward ESSD. But, if the development plan, which has already passed the SEA process, is implemented independently from the environmental plan, the environmental plan toward ESSD cannot fully carry out its role. Therefore it is very important to integrate the development planning and the environmental planning, which has the same meanings or result

with SEA on the development plan.

There are some studies on the integration of development plan and environmental plan (Lee, Chang Woo, 2004; Ban, Young Woon, 2005). The studies emphasize that the planning period and contents of environmental plans coincide with those of development plans, and then the integration of development plan and environmental plan could be “formally” realized. In addition to such studies, studies on the introduction of SEA into the Environmental Preservation Plan also have been done (Jung, Jong-Gwan and Park, Chang Seok, 2005).

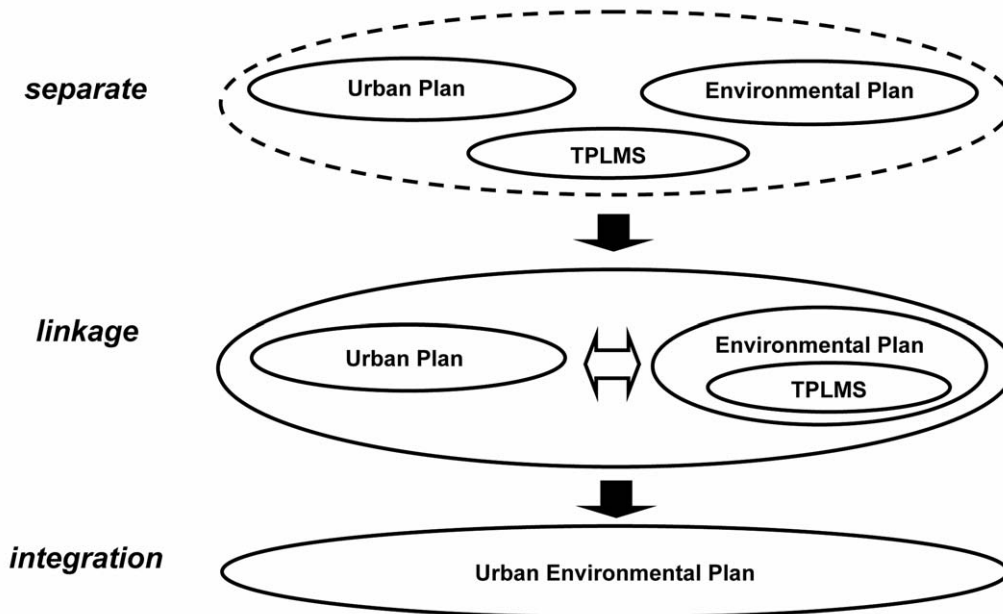
2) Example: Integration of Urban Plan and Environmental Plan

As the period and contents of environmental management of urban plans are at present inconsistent with those of environmental plans, the



Source: Ministry of Environment, 2006, Guide to the Establishment of Local Government Environmental Plan, p.6.

Figure 4. Environmental Plan and Development Plan



TPLMS: Total Pollution Load Management System

Figure 5. Integration of Urban Plan and Environmental Plan

two plans are separate or not closely interrelated. In the case a partial and special plan such as the Total Pollution Load Management System (TPLMS) Implementation Plan is devised and implemented independently of the urban plan or the urban environmental plan, the linkage and integration of all related plans are very important for their effective and efficient implementation.

If the environmental plan includes or reflects the TPLMS Implementation Plan, it could have very good results in environmental management. In the linkage state, the period and contents of the the environmental plan and the TPLMS Implementation Plan will become consistent with those of the urban plan. In the integration stage, the urban plan and the environmental plan including the TPLMS Implementation Plan, will become the urban environmental plan. The integrated urban environmental plan could be more effective than the urban plan which has finished

the SEA process (Figure 5).

V. Conclusion

Since June 2006, PERS has strengthened its characteristics of SEA such as: the increase of the number of administrative plans, the earlier implementation of environmental assessment on the development plan, and the introduction of public participation. In addition to PERS and EIA of the Ministry of Environment (MOE), the Ministry of Construction and Transportation (MOCT) has adopted SEA on the mid or long-term master plans controlled by MOCT. The SEA of MOCT means macroscopic and qualitative estimation of the impact of the mid or long-term master plans, assessment of multiple alternatives and suggestion of the best alternative for the sustainable development of the national territory.

Though the sea (ocean) receives and purifies

most pollutants from mankind activities, SEA can not contain and can not make most policies, plans, and programs environmentally friendly. SEA is in itself not a panacea but one initial part of the development planning process. The SEA system in Korea has still some problems such as: the inefficiency due to the dual SEA system by both MOE and MOCT, the independent implementation of development plan and environmental plan, and a passive role to justify the presidential campaign pledges.

Especially EIA or SEA on the development plans from the presidential campaign pledges have not carried out their role sufficiently, because the Manual on PERS does not sufficiently cover such political policies or development plans originating from presidential campaign pledges except for the Multifunctional Administrative City Plan. Therefore SEA have a passive role to pass or justify the development plans, which were proposed as presidential campaign pledges, but do not have something to do with the National Comprehensive Territorial Plan or the Provincial Comprehensive Plan. From now on, the presidential campaign pledges should be devised, based on the National Comprehensive Territorial Plan or the Provincial Comprehensive Plan, and the National Comprehensive Environmental Plan, etc for the stable continuity of national policies.

It should be emphasized that the development plan have the concept of ESSD from the beginning, then the development plan and the environmental plan be in a close linkage state, and finally the two plans can be integrated. The integration of the development planning and the environmental planning, which could be interpreted as the SEA process, should be realized

together with SEA carried out during the development planning process.

References

- Ban, Young Woon, 2005, Linkage and Integration of Urban Plan and Environmental Plan for Sustainability, Cheongju Sustainability Implementation Committee, Workshop for Sustainability of Land Use Plan in Cheongju City.
- Jung, Jong-Gwan, and Park, Chang Seok, 2005, Introduction of SEA into Environmental Preservation Plan, Chungnam Development Institute.
- Korea Chamber of Commerce & Industry, 2006, Problems and Policy Subject on Conflict Management related Act of Public Insitute.
- Korea Environment Institute, 2007, Study on Efficient Implementation Techniques of SEA System Establishment, Ministry of Environment.
- Lee, Chang Woo, 2004, Linkage of Seoul Urban Plan and Environmental Plan, Seoul Development Institute.
- Lee, Jong Ho, 2004, New Capital City Construction and Saemangeum Reclamation Project and Presidential Election, Environment and Future, 51, Association for Environment and Pollution.
- Lee, Jong Ho and Cho, Jae Heon, 2005, From Prior Environmental Review System to Strategic Environmental Assessment in Korea, *Journal of Urban Management*, 18(3), Korea Urban Management Association.

- Lee, Jong Ho, 2007, Development of SEA in Korea - with special reference to Urban Planning, *Social Science Research*, 28(2).
- Ministry of Construction and Transportation, 2006, Regulation for Strategic Environmental Assessment.
- Ministry of Environment, 2006a, Environmental White Book, 313-325.
- Ministry of Environment, 2006b, Manual on Prior Environmental Review System.
- Ministry of Environment, 2006c, Guide to the Establishment of Local Government Environmental Plan, 6.
- Ministry of Environment, 2006d, Prior Environmental Review System.
- Ministry of Environment, 2007a, Environmental Policy Report from the Standpoint of Demand Side, 5.
- Ministry of Environment, 2007b, 2007 Task Plan.
- Multifunctional Administrative City Construction Agency, 2006, Prior Environmental Review System Report on Multifunctional Administrative City.
- Runhaar, Hens and Driessen, Peter P. J., 2007, Impact Assessment and Project Appraisal, 25(1), International Association for Impact Assessment, 2-14.

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