

연구논문

## Social Impact Assessment on National Development Projects in Korea\*

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(Manuscript received 25 October 2009; accepted 13 April 2010)

### 대형 국책사업에 대한 사회영향평가\*

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(2009년 10월 25일 접수, 2010년 4월 13일 승인)

### Abstract

새만금사업, 신행정수도(행정중심복합도시, 세종시), 한반도 대운하사업(4대강 살리기사업) 등과 같은 대형국책사업은 대통령 선거공약으로 제시되었다. 그러한 대형국책사업이 국가의 이익을 위해 꼭 필요한 것으로 제시되었다 하더라도, 그 결과는 좋은 의도와는 다르게 나타날 수도 있다. 대통령 선거후 환경정책기본법과 환경영향평가법에 따라 대형국책사업에 대한 사전환경성검토(전략환경평가)와 환경영향평가가 이뤄졌지만, 예상하지 못했던 정치적, 사회경제적, 환경적 갈등이 발생하였다.

이러한 개발 및 환경 갈등의 원인은 여러 측면에서 찾을 수 있겠지만, 사회경제적 항목을 중심으로 하는 사회영향평가의 미흡을 그 원인으로 제시하는 연구가 많다.

대규모 국책사업을 둘러싼 개발 및 환경 갈등을 해소하기 위해, 우리나라와 외국의 사회영향평가의 현황과 연구 동향을 고찰하고, 국책사업의 주요 쟁점의 분석을 통하여 사회영향평가의 중요성과 필요성을 강조하였다. 그리고 사회영향평가의 도입, 강화, 지침 마련에 대해 다음과 같이 제안하였다.

첫째, 현재의 사전환경성검토(전략환경평가)시에 사회적 통합, 경제적 측면(B/C분석, 비용, 고용 등), 법적 측면, 한반도 통일이나 국가균형발전 등과 같은 사회경제적 항목을 평가항목에 추가함으로써 사회영향평가를 도입하고; 둘째, 환경영향평가 시에 공공시설, 교육, 교통, 문화재, 경제적 타당성, 고용, 토지이용을 현재의 사회경제평가항목에 추가시켜 사회영향평가를 보다 강화시키고; 셋째, 한국의 환경적, 정치적, 경제적, 사회적, 문화적 상황을 반영하여「사회영향평가의 원리와 지침(가칭)」을 마련하도록 한다.

주요어 : Social Impact Assessment (SIA), Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), Environmental Conflicts, Prior Environmental Review System (PERS)

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\* This is the revision of the paper which was published in the Proceedings: Vietnam Association for EIA and Korean Society of EIA, 2009, Vietnam-Korea Workshop (Hochiminh City, Vietnam, 21st August 2009): Vietnamese and Korean Experiences in Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA).

## I. Introduction

The Saemangeum Reclamation Project, the Multifunctional Administrative City, and the Pan-Korea Grand Waterway were suggested during the three times preceding presidential elections. These national development projects have been carried out after Prior Environmental Review System (PERS) and Environmental Impact Assessment (EIA) based on the Framework Act on Environmental Policy and the Environmental Impact Assessment Act. The projects resulted in the political, socioeconomic and environmental conflicts unexpected.

Especially the Saemangeum Reclamation Project and the Multifunctional Administrative City had to change their original goals, objectives and contents (Hong, Wk-hee, 2004; Lee, Jong Ho, 2004).

The Pan-Korea Grand Waterway: the latest presidential campaign pledge was suggested to go through the entire Korean Peninsula, from Busan to Seoul, making possible inland water transportation on a grand scale (Gyeonggi Research Institute, 2008). It had been the most controversial issue between the proponents and the opponents until spring 2008. The Pan-Korea Grand Waterway project has stopped faced with very strong opposition, and has to change its goals and contents from waterway to the Four Major Rivers Restoration Project

Even though the purpose of the projects might be indispensable for the national interests or for the welfare of the people, the result could be different from the good intent.

It has been pointed out that these kinds of problems could be prevented by the fortified implementation of the strategic environmental assessment (SEA). Korean government has lately

improved the contents and process of SEA. Furthermore many researchers have suggested that Social Impact Assessment (SIA) should be introduced into the SEA and EIA process (Burdge, 2003; Vanday, 2003).

The purpose of this study is to suggest introduction of SIA into SEA, strengthening SIA in EIA process, and preparation of the principles and guidelines for SIA which reflects environmental, political, economic, social and cultural situation in Korea in order to prevent the unexpected and undesirable result from grandiose national development projects.

This study investigates and compares the conflict processes and controversial issues of the three grandiose national development projects originated from the presidential campaign pledges, and emphasize the importance of socioeconomic issues compared with the assessment items of SIA. It suggests how to strengthen the function of SIA in the SEA and EIA on the national development projects, and propose preparation of the principles and guidelines for SIA not yet explicitly developed in Korea.

## II. Social Impact Assessment in SEA and EIA

SIA is focused on the documentation and processing of a broad range of social, cultural, demographic and economic consequences of activities and possible alternatives to all major stakeholders-individuals, groups, communities, and sectors of society that have an interest in, or are likely to be affected by a proposed action (Burdge, 2004).

There are two broad schools of thought on the basic purpose of SIA. The first school focuses on using SIA to make predictions about social

change. The second focuses on using SIA to facilitate public involvement in decision-making through systematic identification of affected parties, documentation of community view-points, and convening of forums to share and debate these data. Many SIA practitioners, however, regard the predictive and participatory model of SIA as complementary and advocate an integrated approach through which both community viewpoints and quantitative data contribute to public debate over the nature and magnitude of social impacts and the best ways to manage them (Lockie, *et al.*, 2008).

There have been carried out some researches on the controversial debates on the development projects in connection with SIA. For example, a review explores the ways in which SIA, EcIA (Economic Impact Assessment) and community participation have been deployed during a recent period of growth (Lockie, *et al.*, 2008).

The Prior Environmental Review System (PERS) in Korea is defined as reviewing the environmental suitability and location feasibility of administrative plans and development projects by establishing, analyzing and assessing the alternatives of the plans and the projects. Therefore, PERS has both the function of SEA and that of EIA.

According to the article 2 of EIA Act, the term "assessment of environmental impacts" means devising a plan for avoidance or reduction of harmful impacts on the environment by investigating, forecasting and assessing environmental impacts from the execution of projects when making the plan of operation for projects subject to the assessment of environmental impacts under Article 4.

Though SIA is not explicitly but implicitly

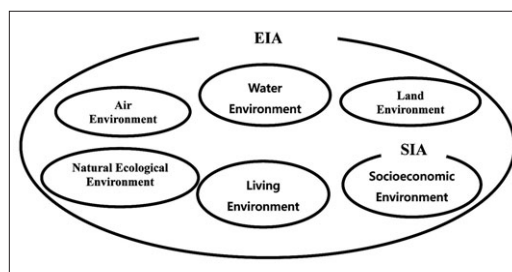


Figure 1. Relationship between EIA and SIA in Korea  
Lee, Jong Ho, 2008, p. 31.

included in PERS, SIA has been, partially or in the limited level, implemented in PERS. The items on socioeconomic environment such as population, housing, and industry are assessed explicitly in EIA (Ministry of Environment, 2008; Figure 1). The items such as public facilities, education, transportation and cultural assets had been included explicitly in the previous Guideline on Environmental Impact Statement Documentation (Ministry of Environment, Republic of Korea, 2004). The public participation mentioned in the EIA Act could be interpreted as a means for SIA.

### III. National Development Projects and SEA and EIA

Even though PERS or EIA on the development plan based on the presidential campaign pledge were implemented, the development projects have brought about such problems as environmental pollution, enormous social cost, and significant environmental conflicts with various strong resistances from residents, NGOs and related specialists. In some cases, the residents and NGOs have requested the more detailed environmental survey and have sued against the proponents of the projects (Table 1).

The Saemangeum Reclamation Project has raised

Table 1. National Development Projects and PERS (SEA) and EIA

Category	Saemangeum Reclamation Project	Multifunctional Administrative City	Pan-Korea Grand Waterway	Four Major Rivers Restoration Project*	
Goal	National Territory and Farmland Enlargement	<ul style="list-style-type: none"> <li>○ Solving Capital Region Concentration</li> <li>○ National Balance Development</li> </ul>	<ul style="list-style-type: none"> <li>○ National Balance Development</li> <li>○ Transportation Cost</li> <li>○ Employment</li> </ul>	<ul style="list-style-type: none"> <li>○ Securing abundant water resources</li> <li>○ Implementing comprehensive flood control measures</li> <li>○ Improving water quality and restoring the ecosystem</li> <li>○ Creation of multipurpose spaces for local residents</li> <li>○ Regional development centered on rivers</li> </ul>	
Process	Feasibility analysis	Mar. 1987 ~ Nov. 1987	1979 (cancelled)	-	-
	Period suggested	Dec. 1987	Dec. 2002	Dec. 2007	Dec. 2008
	PERS (SEA)	-	2006 ~ Jan. 2007	-	~ Jun. 2009
	EIA	1989 ~ 1991	2005 ~ 2007	-	~ Nov. 2009
	Post-Environmental survey	1999 ~ 2000	-	-	-
	Law suit	Jul. 2003 ~ Mar. 2006	Oct. 2004 ~ Nov. 2005	-	Nov. 2009 ~
	Target year	2011	2012 ~ 2030	withheld	2012

Source: Lee, Jong Ho and Cho, Jae Heon, 2007; Koo, Jakon and Lee, Muchoon, 2008, p.7; \* Ministry of Land, Transport and Marine Affairs, 2009.

three main issues: economic aspects, water quality, and water resource. The disputes were focused upon the economic value of foreshore versus enlargement of national land and increase of agricultural products, which are not the main assessment items of EIA but those of SIA (Table 2).

The key issues of the Multifunctional Administrative City Plan are opinion and legal

aspects, reunification of Korean Peninsula, national security, and national balanced development, which are the main assessment items of SIA (Table 3). But, PERS on the Multifunctional Administrative City Plan did not consider sufficiently its impacts on the political, socioeconomic aspects (Multi-functional Administrative City Construction Agency, 2007). Hence, it could be

Table 2. Issues of the Saemangeum Reclamation Project

Issues	Proponent	Opponent
Economic aspect	<ul style="list-style-type: none"> <li>○ Enlargement of national land</li> <li>○ Increase of agricultural products</li> <li>○ Employment</li> </ul>	<ul style="list-style-type: none"> <li>○ Loss of foreshore (Function of foreshore: marine habitats and production, purification of pollutants, natural disaster control)</li> </ul>
Water quality	improved by treatment facilities, sewerage facilities, and buffer zone	<ul style="list-style-type: none"> <li>○ Water pollution</li> <li>○ Damage to marine ecology</li> </ul>
Water resource	able to secure	useless polluted water resource

Source: Korea Research Institute for Haman Settlements, 2006; Hong, Wk-hee, 2004.

Table 3. Issues of Multifunctional Administrative City

Issues	Proponent	Opponent
Opinion and legal aspect	○ construction of various and characteristic regional society	○ without people's agreement ○ inconsistent with the Constitution ○ illegal to equity right
Reunification of Korean Peninsula and national security	○ for National Security	○ Reunification of Korean Peninsula not significantly considered
National balanced development	○ inevitable	○ entailing regional disparity ○ impossible to solve the congestion of Seoul Metropolitan ○ weakening the competitive power of Seoul

Source: Lee, Jong Ho, 2004.

Table 4. Issues of the Seoul- Busan Canal

Issues	Proponent	Opponent
B/C ratio	2.3	0.05 ~ 0.26
Cost	16 Trillion Won	50Trillion Won
Employment	300,000 People	380 People
Transport ceiling	17,663,000 ton	5,600,000 ton
Transport time	24 hours	72 hours
Ecosystem	Disturbance can be negligible	disturbed by mixing water
Flooding	easily controlled by lowered water level by dredging and digging	more frequently flooded by heightened water level and straightened river
Water quality	improved by increased water volume	worsened by increased detention time
Water supply resources	new water supply sources development	threatened

Source: Gyeonggi Research Institute, 2008.

argued that SIA has not been fully implemented in the PERS.

The disputes about Seoul-Busan Canal, a major part of the Pan-Korea Grand Waterway, were focused on the items on socio-economic impact assessment: the B/C ratio, cost, employment, transport ceiling, transport time and so forth. Of course, the assessment items such as ecosystem, flooding control, water quality, and water supply resources are included in the main issues of the disputes (Table 4). These disputes has not been done legally according to PERS, but can be considered to have implemented the substantial role of SEA and SIA.

#### IV. Introduction and Improvement of SIA

As seen above, the core issues of the national development projects are the socioeconomic items such as economic and legal aspect, transportation, and national development. Therefore the introduction of SIA into SEA, strengthening SIA in EIA process, and preparation of the principles and guidelines for SIA will be suggested as follows.

##### 1. Introduction of SIA into SEA

In case of grandiose national development projects, PERS has been implemented focused on environmental suitability, location feasibility and

public participation, but it has not prevented social conflict and its subsequent enormous economic cost. It could be explained by the fact that PERS did not sufficiently consider the insistence of the opponent on economic aspect, legal aspect, water resource and water quality, ecosystem, and national balanced development etc.

Therefore in the SEA process should be emphasized the socio-economic assessment items such as the social consensus among related regions, interested political parties or groups and various income groups; economic aspects (B/C ratio, cost, employment etc.), legal aspects, and political aspects such as the possibility of Korean Peninsula reunification, regional disparity, and national balanced development.

## 2. Strengthening SIA in EIA Process

According to Youngkin *et al* (2003), a big benefit of the integration of EIA and SIA is social learning by the proponent, agency planners and the community. The outcome is the successful implementation of the project or program. As Edelstein points out (Edelstein, Michael R. 2003), SIA is a “means for balancing the technocratic bias with critical social learning” and giving “consideration to the potential victims of progress.” However, in defense of engineers and planners, many support participatory social assessment because it is the only way to obtain project approval (Burdge, 2003).

According to the Guideline on EIS Documentation, the items of the socioeconomic environment are population, housing and industry (Ministry of Environment, 2008). In Korea, SIA is superficially and formally implemented in the EIA process. But the social consensus could not be attained by such three items. Therefore in

addition to the above population, housing and industry, not only the items lately excluded such as public facilities, education, transportation, cultural assets, but also such items as economic feasibility, employment, and land use should be included in the socio-economic items. It is important to enlarge the scope of SIA items in order to strengthen SIA.

## 3. Preparation of the Principles and Guidelines for SIA

The International Principles for SIA are the output of a formal International Association for Impact Assessment (IAIA) project, initially approved as a project by the IAIA Board in 1998, with the final document being endorsed in early 2003. It is a statement of the core values of the SIA community together with a set of principles to guide SIA practice and the consideration of ‘the social’ in environmental impact assessment generally. It is a discussion document for the impact assessment community to be used as the basis for developing sector and national guidelines (Vanclay, 2003).

Based on the “International Principles for SIA”, it is necessary to make the SIA manual, namely ‘Principles and Guidelines for Social Impact Assessment’ which specifies the principle and guideline for SIA on policy, grandiose national development projects from presidential campaign pledges, plan and development project. The SIA manual should reflect environmental, political, economic, social, cultural situation.

As pointed out, the SIA manual should emphasize the social consensus in SEA process and widen the scope of SIA items in addition to population, housing and industry based upon social impact variables. And the manual should contain the introduction of SIA into SEA, and

integration of EIA and SIA.

## V. Conclusion

The political, socioeconomic and environmental conflicts have resulted from the national development projects suggested during the period of preceding presidential elections. The Saemangeum Reclamation Project and the Multifunctional Administrative City have to change their original goals, objectives and contents after the disputes and environmental conflicts.

In order to prevent such conflicts, it has been pointed out that PERS should be implemented, focused upon the environmental suitability, location feasibility of administrative plans and development projects, and the public opinion.

Though PERS on the grandiose national development project has been implemented according to the Framework Act on Environmental Policy, the socioeconomic items such as social consensus, economic, legal, political aspects have not been sufficiently considered, and they have not been discussed open to the public resulting in socioeconomic and environmental conflicts.

To solve the present problems of PERS and EIA, this study emphasizes that various socioeconomic items be assessed in the SEA process as means for introducing SIA into SEA, and it suggests strengthening SIA in EIA process by enlarging the scope of SIA items as means for integrating EIA and SIA. Finally, it suggests preparation of the principles and guidelines for SIA which reflects environmental, political, economic, social and cultural situation in Korea.

In summary, the integration of SIA and SEA and that of SIA and EIA could make social, economic and political conflicts be prevented and

then enormous social cost also decreased.

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