

연구논문

Comparative Analysis of EIA Systems of Algeria and Korea

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알제리와 한국 EIA 제도 비교 분석*

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Abstract

환경영향평가(Environmental Impact Assessment : EIA)는 대규모 개발사업에 관련된 의사결정의 효과성을 향상시킬 수 있는 제도이다. 알제리와 한국의 EIA 제도를 비교분석하여 특징 및 장단점을 파악하여 다른 계획관련 정부기관과 환경관련 기관과의 조정 및 협조 수준의 차이점을 연구하였다. 알제리와 한국의 EIA 제도는 의사결정 절차에 관련된 규정에서는 유사하지만 주민참여 수준에서는 한국이 발달되어 있다. 스크리닝 제도에서는 프랑스의 영향을 받은 알제리의 제도가 비교적 잘 발달되어 있다.

주요어 : EIA, EIA Notice, Local Authorization, Algeria, Korea

I. Introduction

Korea has adopted EIA early from 1977 with the enactment of the Environmental Conservation Act and introduced in full scale in 1981 when the "Regulations on Preparing the EIA Report" was legislated. In MENA (Middle East and North Africa) countries, the first nation that enacted an enabling legislation was Oman in 1982, followed by Algeria and Turkey in 1983.

The evaluative framework developed for comparing the EIA systems between Algeria and Korea is adapted from several studies (Karma El-Fadl et al., 2004 ; Christopher, 1995). This study consists of comparing the formal legal procedures as well as the arrangements for their application and practice in their implementation. This study compares the legislative frameworks between Algeria and Korea based on the criteria devised by Ahmad and Wood (2002).

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Table 1. EIA evaluation criteria (modified from Ahmad and Wood, 2002)

Comparative analysis of
<p>EIA legislation:</p> <ul style="list-style-type: none"> - Year of enactment of enabling EIA legislation. - Status of EIA regulations - Provision for appeal - Specification of time limits - Formal provisions for SEA
<p>EIA administration:</p> <ul style="list-style-type: none"> - Competent authority for EIA and environmental acceptability - Review Body for EIA - Specification of sectoral authorities responsibilities in the EIA process - Level of coordination with other planning and pollution control bodies - Existence of guidelines
<p>EIA practice</p> <ul style="list-style-type: none"> - Specified screening categories - Systematic screening approach - Systematic scoping approach - Requirement to consider alternatives - Specified EIA report content - Systematic EIA report review approach - Public participation in EIA process - Systematic decision-making approach - Requirement for EMP - Requirement for Impact mitigation - Requirement for impact monitoring

The information presented in the Table 1 has been compiled and analyzed from many articles, reports and papers identified from computer-based and books. According to this information and data, this study aims to review EIA legislation and system of Algeria and Korea through a comparative analysis to determine its strength and weakness.

II. EIA in Algeria

1. General information about Algeria

Algeria is located in North Africa. In terms of land area, it is the largest country on the Mediterranean Sea and the Africa continent and the tenth-largest country in the world. Algeria is bordered in the northeast by Tunisia, in the east by Libya, in the west by Morocco, in the south-west by Western Sahara, Mauritania, and Mali, in

the southeast by Niger, and in the north by the Mediterranean Sea. Its area is almost 2,400,000km², and its population is about 35.7 million in 2010. The capital of Algeria is Algiers. The climate is arid to semiarid; mild, wet winters with hot, dry summers along coast; drier with cold winters and hot summers on high plateau; sirocco is a hot, dust/sand-laden wind especially common in summer. The rainfall varies from 1200 mm in the wetlands of the north-east, rainfall <50 mm in the area of the Great Erg Sahara.

2. EIA history in Algeria

EIA has an important role to play in resolving environmental problems through environmentally sound and sustainable development (Asian Development Bank, 1997). Algeria has recognized the importance of incorporating EIA processes into development planning.

Algeria has taken interests in environment for 12 years after its independence, by establishing of the National Council of Environment (NCE) in 1974. At that time there was no Environmental conservation Act or Environmental Impact Assessment Decree. With the Establishing of National Environmental Protection Agency (NEPA) in 1983 the 1st Environmental conservation Act has been introduced, and 7 years later the 1st EIA Decree has been established (in 1990) as a tool mandatory and required for any project which by its magnitude, size or its effects, may directly or indirectly affect environment. Since 1996, the EIA administration has been under the General Direction of Environment (GDE). Establishing of the Ministry of Land Development and the Environment in 2000, the real age of Environmental Impact Assessment started as the review of EIA became under its responsibility.

In 2003, the 1st Environmental Conservation Act has been amended to the 2nd Environmental conservation Act N° 03-10 of July 19th, 2003, and in 2007 a new EIA Decree N° 07-145 of May 19th, 2007 determining the scope, the content and methods of study and approval environmental impact report (statement) have been introduced too.

3. EIA process in Algeria

EIA is the process of identifying the future consequences of a current or proposed action. The “impact” is the difference between what would happen with the action and what would happen without it (www.iaia.org). The EIA process in Algeria is composed of two stages. The first stage : a proponent submit an assessment report to Environmental Department (PED) to review and to make the 1st decision which

include a opening of public inquiry by displayed and announcement to local residents to collect their opinion, The second stage : an assessment report and public opinion of local residents are collected and submitted for approval of the project by the Environmental Ministry (MOE).

The main stakeholders in the Algeria EIA process are the proponent (Development Project), Ministry of Environment(MOE) which is the final decision-maker, Environmental Agency which prepares EIA report will be approved by MOE, and Provincial Environmental Department(PED) which is the 1st decision-maker and initiate the public participation.

In Algeria, there are two kinds of Environmental Assessment dependent on size and type of project such as the project which requires EIA Notice and the project which requires a full EIA.

The Figures 1 and 2 shows the different EIA processes in Algeria.

The Algerian EIA process can be summarized as follows:

- A. A proponent who is required to prepare EIA for his project should consult PED to make the first proposal screening (to be sure if the project required EIA, EIA notice, or EIA is not required), and to give to him a list of Environmental Agency to help him to prepare EIA report.
- B. The Environmental Agency(EA) chosen by the proponent organizes a meeting with the PED to revise again the screening of the proposal. The EA Prepare the TOR and the Environmental report (Article 4), the content of Environmental report should meet their established in Article 6.
- C. After the Environmental report has been prepared, the EA should be submitted to PED for review.

D. After the Environmental report has been prepared, the EA should submit it to PED to review.

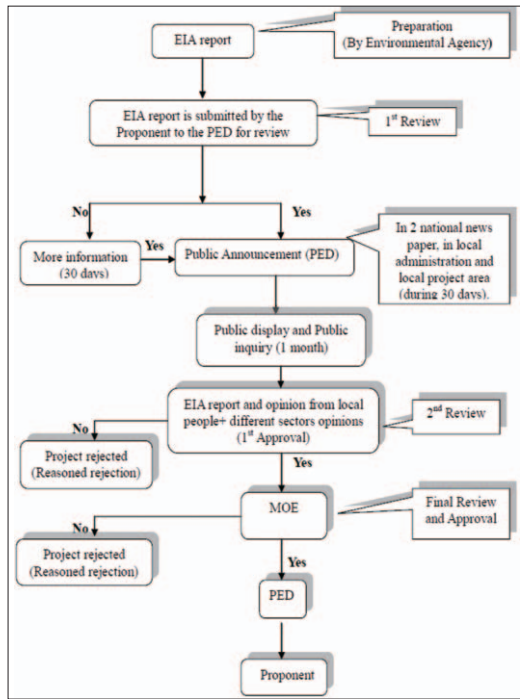


Figure 1. EIA process in Algeria

Source: Karma El-Fadl, Mutasem El-Fadel, 2004, Comparative Assessment of EIA Systems in MENA Countries.

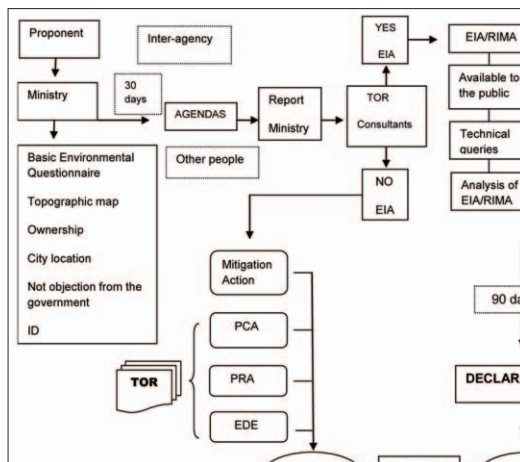


Figure 2. EIA Notice process in Algeria

Source: Karma El-Fadl, Mutasem El-Fadel, 2004, Comparative Assessment of EIA Systems in MENA Countries.

E. The PED should consult and examine the environmental report and make the 1st decision. If it is yes, the PED will proceed to public announcement. If it need more information, the proponent or the EA should answer within 30 days.

If the content of the report is in compliance with the legislation (Article 6) the 1st decision will be establish and the PED will ask for a public display and inquiry (during 30 days).

G. When the opinion from local people and from different sectors are collected, the PED submit all the documents (EIA report, 1st decision, local opinion and the opinion of different sectors) to the MOE if the project require EIA. But if the project require EIA Notice, the PED will make the final review and decision.

H. The Environmental Ministry notifies the PED for the projects which EIA is mandatory.

I. Notification of the proponent by the PED.

The main difference between EIA process and EIA Notice process is the final review and approval stage. For EIA, the MOE makes the final review and approval. For EIA notice, the PED makes the final review and approval.

III. Comparison of EIA Systems of Algeria and Korea

1. Comparative analysis of EIA legislation

1) Status of EIA Legislation

Korea enacted an enabling EIA legislation in 1977, followed by Algeria in 1983, thus both countries have an enabling legislation and execu-

tive regulations specific to EIA. Despite that Algeria has implemented 28 years experience in EIA field, the enactment of a new law or Decree remains insufficient. Although the first EIA Decree was established in 1990 (Decree N° 90-78), however it was amended only 17 years later in 2007 by the enactment of 2nd EIA Decree (Decree N° 07-145).

In Korea since 1977, five Acts have been established to introduce and develop EIA: Environmental Conservation Act (1977), Framework Act on Environmental Policy (1990), Environmental Impact Assessment Act (1993), Impacts Assessment Act on Environment, Transportation and Natural Disaster (1999), Environmental Impact Assessment Act (2008). And five Presidential Decrees has been established to enforce each Act. This shows the great interests to the Environmental Impact Assessment field by the Korean government.

Algeria EIA Decree (Decree N° 07-145) contents 6 chapters with 24 Articles. However Korean Environmental law provides EIA Decree and EIA Enforcement Decree, which leads to greater understanding and implementing of the EIA law.

2) Provision for appeal

The presence of appeal provision in EIA system proves that the EIA process is made to protect future generations without compromising the development of countries. Algeria EIA Decree provides in the Article 19 a legal provision for appeal. So in case of rejection of EIA report without prejudice by the decision making authority, the project executor (proponent) can submit to the Environmental minister an application accompanying with the information to explain and enable its choice for the EIA report contents and request reconsideration for his project.

However, Korean EIA Decree (January 1st, 2009) in its Articles 20, and in the Korean Enforcement EIA Decree (N° 21445, April 21st, 2009) in the Article 27 a legal provision for appeal has been provided. So a person who intends to file a protest against the details of consultation, shall present a statement of protest including:

- Details and reasons of a formal objection;
- Details of consultation which are intended to be changed;
- Analysis on environmental impact by change of the details of consultation.

And give it to the Environmental Minister, within 90 days from the date when he has been notified of the details of consultation.

3) Specification of time limits

It is important to specify the time limits for approving or rejecting EIA report by the decision-makers, also to specify the time for public hearing, the both legislation provide that. In Korean the Approval Agency should request the EIA report to MOE for review within 10 days from the receipt date of the EIA report (Article 23 of the Korea EIA Enforcement Decree). And the period of consultation is 45 days which may be extended to 60 days in cases the head of a consulting agency has extended the period for consultation by an unavoidable reason (Article 25 of the Korea EIA Enforcement Decree).

The Algerian EIA Decree does not provide time limits for a pre-review of EIA report, but provide it if the Provincial Environmental Department team require more information about the project, in this case the proponent should answer within 30 days. For a final review, the legislation provides 4 months after the date the

public inquiry has been closed (Decree N° 07-145 of May 19th, 2007, chapter V, Article 17).

4) Formal provisions for SEA

In Algeria, the concept of SEA has not yet been clarified. The framework of strategic environmental assessment would not be yet adopted as formal and regulated process. However, in 1994 SEA was introduced in Korea by Prime Ministerial Decree and its foundation supported by Framework Act on Environmental Policy in 2000.

5) EIA administration

As described in the Table2 the both countries have established competent authorities to conduct and to review the EIA process. In Algeria there are Environmental Ministry (MOE) and Provincial Environmental Department (PED), while in Korea there are Environmental Ministry (MOE) and Korea Environmental Institute (KEI).

The level of coordination with different plan-

ning and pollution control bodies are weak in the two countries. However the guidelines of Korea are more developed than that of Algeria.

2. Comparative analysis of EIA practices

1) Screening

A screening is a very important step in the EIA process; whether EIA is required or not. As summarized briefly in Table3, in Algeria all the projects are subject to EIA, according to the Decree of classified installation (N° 07-144) which provides a long list of projects subject to 4 types of authorizations according to the project size and thresholds (MA, PA, LA, and D).

For the projects of MA (requires Ministerial Authorization) and PA (requires Provincial Authorization) categories the EIA is mandatory, and the final review and decision making will be made by the MOE. However for the projects of LA (require Local Authorization) category EIA

Table 2. Comparative analysis of EIA administration

EIA administration	Algeria	Korea
Competent authority for conduct and review of EIA	Yes	Yes
Review body for EIA	MOE and PED	MOE and KEI
Level of coordination with other planning and pollution control bodies	Weak	Weak

Table 3. Comparative analysis of EIA practice

Analysis of EIA practice	Algeria	Korea
Specified screening categories	Yes	Yes
Systematic screening approach	Thresholds	Yes
Systematic scoping approach	No	Yes
Requirement to consider alternatives	Yes	Yes
Specified EIA report content	Yes	Yes
Systematic EIA report review approach	Yes	Yes
Public participation in EIA process	Yes	Yes
Systematic decision-making approach	Yes	Yes
Requirement for Environmental Management Plan (EMP)	Yes	Yes
Requirement for Impact mitigation	Yes	Yes
Requirement for impact monitoring	Yes	Yes

Notice is required and the final review and decision making will be made by the Provincial Environmental Department (PED), the 4th category is projects of D category which requires only declaration within the local administration.

Additionally the EIA Decree (N° 07-145) provides a list of planning projects subject to EIA and to EIA Notice. However the Algerian EIA Decree does not provide a list of project which is not subject to EIA for emergency measures. In Algeria the screening is determined by the Environmental Agency (private or public Agency approved by MOE) and by the Provincial Environmental Department.

In Korea, not all projects are subject to EIA, and the projects which require EIA are listed in Article 4 of EIA Act (January 1, 2009), and in Table 1 of its Enforcement Decree (N° 21445, April 21, 2009), but the legislation provides cases whereby the EIA is not required for such projects as emergency measures and military projects. Additionally, the Korean EIA Decree (Chapter V, Article 30) and the Korean EIA Enforcement Decree (Chapter V, Article 36) provide a special case for projects which require simplified EIA.

2) Scoping

The scoping is the stage whereby the term of references (TOR) should be prepared, and used after in the preparation of EIA report. The scoping is a very important step in the EIA process. In Algeria, there is not systematic scoping approach; however there is the scoping process in Korean SEA.

3) Consideration of alternatives

The consideration of projects alternatives is required for the both countries EIA system, the comparison among the alternatives may help to

find the best ways to implement and to achieve the objectives of proposals while reduce or eliminate the negative impacts.

4) Impact mitigation

Early links should be established between the EIA decision making and project design teams to identify mitigation opportunities and to incorporate them into consideration of alternatives and design options. The both countries provide the mitigation impact measures.

Algerian EIA regulations Article 6 requires the proponent to provide a mitigation measures to avoid and to minimize impacts. However the Korean EIA Enforcement Decree in its Article 12 provides that the proponent should take in consideration the mitigation of impacts, during the preparation of a final EIA report.

5) Requirement for Environmental Management Plan (EMP)

An EMP is a document created by companies to provide a framework for dealing with the pollution risks associated with their site and activities. In many cases, it simply formalizes practices already undertaken on site. Once a company has an EMP, it has an advantage as far as knowing the legal requirements and managing pollution risks according to best practice. EMPs can also help companies increase efficiencies and reduce costs (www.arc.govt.nz). The both countries require the preparation of EMP. In the Algerian EIA system, the Article 6 (11) stipulates the proponent should prepare an EMP. In Korea, the Article 12 of Decree for the Enforcement of Environmental Impact Assessment Act requires the preparation of EMP.

6) EIA report content

The EIA report or EIA statements the docu-

ment prepared by the proponent or by the approved environmental agency, EIA report is a very important document in the EIA process. It includes all the term of reference established in scoping phase. The legislation of two countries provides a preparation and content of EIA report.

In Algeria, there is only one EIA report prepared by approved environmental agency, and submitted to the Provincial Environmental Department by the proponent. The project executor should submit 10 copies of EIA report for review to the competent authority. The contents of EIA report is provided by the EIA Decree N° 07-145 of May 19th, 2007, Article 6.

However, in Korea the proponent should prepare two EIA reports: a draft EIA report and a final EIA report. Firstly the project executor should prepare a draft EIA report, to be hold in the public hearing or meeting to collect their opinions. And the final EIA report is prepared according to the EIA legislation and should include the public opinions. Comparing the preparation of EIA report between the two countries we can conclude that by using the draft EIA report we can save money and time, because its contents is simple and can be understood by peoples who have a little knowledge about environment. Also if the proposal is rejected, because the people living in the area subject to the implementation of project are against the implementation of a proposal, or if the proposal has a high negative impact on the environment, the proponent will not lose lots of money.

However in Algeria EIA system there is only final EIA report which includes environmental terms, which is not easy to be understood by general people. And in case whereby the proposal is rejected, the project executor will lose money

and time.

7) EIA report review approach

EIA report review approaches are widely different from each other country. The Algeria EIA system has a simple EIA review approach, so the content of the report should be in consistent with the EIA Decree. In Korea, the review of draft and final EIA report is well developed in the Korean EIA Decree and its Enforcement Decree.

8) Public participation in EIA process

Public participation or public involvement is the way which allows to the people who are directly or indirectly affected by the implementation of this proposal, to give their opinions about the project. In Algerian EIA system the public cannot participate in the early stage of EIA system, they can only participate when a final EIA report is prepared and reviewed by the PED. So the public involvement is required in Algerian EIA system when the public inquiry is open.

However in Korea, the public can participate in the early stage of EIA process, by preparing the Draft EIA report by the proponent and by holding an explanatory meeting or hearing. This way allows the decision making authorities to know more about the initial environment where the project will be implemented and the opinions of local residents. So if the Approval Authority or MOE reject the proposal, the proponent will not lose money and time to prepare a final EIA report.

9) Systematic decision-making approach

The decision making is the approach to approve or reject the proposal, which can be different among countries. In the Algerian EIA system, there are two decision-making involved in projects (MOE and PED) at each stage and an

implicit or explicit decision will be made on whether or not the proposal is acceptable and can be justified environmentally. The Algerian EIA Decree provides (Articles 7, 8, 9, 16, 18) systematic decision-making approach.

In Korea, there are two competent decision making authorities, The Approval Agency and MOE, The Article 23 (2) and the Article 26 of the Korea Enforcement Decree of the EIA Act provide who should review and make a decision of the EIA report. The Approval Agency should notify the proponent within 30 days from the date when they approves, authorizes, permits, or licenses the project (Article 26 of the Korea Enforcement Decree of the EIA Act).

10) Monitoring

The Environmental Impact Assessment follow-up is the management, evaluation and the monitoring of the environment in which the proposal is implemented. In Algeria the environmental follow-up consists of two processes the monitoring and the auditing. The monitoring is conducted by Provincial Environmental Department (PED) and provided by the legislation in Decree N° 07-145 of May 19th, 2007, Article 20. Algeria adopted the environmental auditing legislation (Decree N° 98-339 and N° . 08-198) in order to reduce the harmful consequences of the companies' actions that had affected the environment.

In Korea, the project operator should implement details of consultation (mitigation measures) reflected in the plans of operation for projects. In order to implement details of consultation conscientiously, the project operator should record the implementation condition and the management ledger containing the details of consultation and keep it in the construction site (Article 23 of the Korea EIA Act).

IV. Conclusion

The analytic comparison of the EIA systems of Algeria and Korea indicates that the two countries have done many progresses in the EIA field. But it's not enough more things should be making too. The Korean EIA legislation has longer history than the Algerian EIA legislation; in 1980 Korea established the authority administrative of the central government which promulgated the regulation of the drafting of EIA statement. However Algeria enacted the EIA Decree in 1990 and established the Ministry of Environment in 2000.

By comparing the EIA processes of the two countries, this study concludes that there are some common points as the penal provisions that are provided by the two countries, and the status of EIA regulations which are formal in the two countries.

The both regulations provide a public involvement but the level of participation is different. In Korea the public hearing (collection of residents opinions) is taken early in the EIA process, before the preparation of final EIA report, that leads to saving of time and money, however in Algerian EIA process the proponent should prepare the final EIA report to submit it to review in Provincial Environmental Department, and after taking the 1st decision, the public is called for inquiry and participation. And when the public oppose to the implementation of the project, the PED rejects the proposal, which cost money and time.

The screening stage is more developed in Algeria than Korea, in Algeria all the projects (public or private) are subject to EIA, but according to the thresholds the type of EIA will change to become, EIA Notice or simple declaration (hazardous product report) within the local authority. However the Algerian EIA Decree pro-

vides another list of proposed development of land and project planning, which are subject to EIA or EIA Notice.

In Korea only 74 projects in 18 areas are subject to EIA, which let the windows open for many projects to escape from the EIA. The important stage in the EIA process is the preparation of the EIA report, thus the content of this report should be simple, clear and enclose all the term of reference (TOR) established in the scoping stage.

In Algeria, when the Environmental Agency prepare the EIA report, sometimes they based on old data base and information, which could affect the review of EIA report and the final approval. And this is the result of the weakness of link among that Agency and the different universities and institutions. However in Korea the information contents in the EIA report are up-dated and recent. In Algerian EIA system the final approval is made either by the MOE or the PED (depends on types of EIA), and in Korea the final approval is undertaken by the approval agency, which take in consideration the opinion of MOE and KEL.

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