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## **An Evaluation of the Environmental Impact Assessment System in Turkey: Practitioners View**

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**Abstract:** This study provides an evaluation of the current Environmental Impact Assessment (EIA) system in Turkey in the context of legal and administrative arrangements, procedures and practical implementation. In order to assess the current status of the EIA system, a total of 105 specialists involved in EIA activities such as conducting, reviewing, training and consulting were interviewed in different parts of Turkey. These respondents believed that among the key activities of the EIA process, monitoring and auditing, prediction and evaluation of impacts, mitigation and assessment of alternatives were being conducted very poorly or poorly. Adequacy of technical guidance was mostly rated as poor by the respondents as well. Despite the recent improvement in Turkish EIA legislation, the EIA system is still evolving.

**Key words:** Environmental impact assessment, Turkey, EU EIA directives, procedures, practical implementations

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### **INTRODUCTION**

Although the EIA in Turkey was formally introduced in 1983 through the Environmental Act No. 2872 (Official Gazette 18132, 1983), the implementation of the EIA as a tool for protecting the environment and achieving sustainable development wasn't started until the publication of the EIA Regulation in Official Gazette No. 21498 (1993) Amended, 1997; Official Gazette No. 23028 (1997). Following almost a decade of experience under this Regulation, the Turkish EIA system entered into a new developmental stage when the European Council approved Turkey as a candidate state to join the EU in December 1999 in Helsinki.

After the decision of the Accession Partnership by the Council on March 8, 2001 (EC, 2001), Turkey started to fulfill its obligations to adopt and implement the EU acquis in the short and also long-term run. Respectively, the Turkish Government announced the National Programme for Adoption of the Acquis (NPAA) on March 19, 2001 (Palabıyık, 2004). As stated in the NPAA, the adoption of the EU EIA Directives (85/337/EEC and 97/11/EC) was planned to have been completed by the end of 2001. However, this adoption did not occur until June 2002 (Official Gazette 24777, 2002) and the EIA Regulation was then later revised in December 2003 (Official Gazette 25318, 2003). The current EIA Regulation became completely harmonized with the EU EIA Directives (85/337/EEC and 97/11/EC), except for the transboundary requirements of the EIA (Innanen, 2004; EC, 2005). This study presents an evaluation of the current EIA system in Turkey in the context of legal and administrative arrangements, procedures and practical implementation.

### **MATERIALS AND METHODS**

A total of 105 EIA specialists were interviewed in the study. Respondents were selected for their experience related to conducting EIA studies and their involvement in the reviewing process. Other

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factors for selection included previous EIA training/consulting experience, representing EIA regulators in the Ministry of Environment and Forestry and EIA practitioners and trainers from other government agencies and universities and consultants. Interviews were conducted in five major provinces in Turkey namely Adana, Ankara, Kocaeli, İstanbul and Mersin in 2003.

A questionnaire was prepared based on the International Study of the Effectiveness of Environmental Assessment Survey (Sadler, 1996) and was used to collect information from the EIA specialists. The first part of the questionnaire was designed to gather general information about the respondents. Questions in the second part covered the EIA system in Turkey in terms of the adequacy of the administrative and legal setting, progress on scientific and methodological basis, performance on key assessment activities and the benefits of EIA. Likert scale-type, multiple choices and open-ended questioning formats were used in the questionnaire.

## **ADMINISTRATIVE AND LEGAL FRAMEWORK FOR EIA**

### **Administrative Framework**

Before the establishment of the Ministry of Environment in 1991 (Official Gazette 20967, 1991), a General Directorate of Environment had been created under the Prime Ministry in 1978. Until 2003, the Ministry of Environment was the principle environmental management and protection authority in Turkey. In 2003, the Ministry of Environment merged with the Ministry of Forestry. Currently, the Ministry of Environment and Forestry (MoEF) established with Act No. 4856 in 2003 (Official Gazette 25102, 2003), is responsible for EIA implementation through the General Directorate of Environmental Impact Assessment and Planning. This establishment of an integrated MoEF reinforced its administrative capacity. Provincial Directorates of the MoEF have been established in all 81 provinces.

### **Legal Framework**

The legal basis for the EIA is provided in the Environmental Act No. 2872 of 1983, which includes basic provisions for environmental management and protection. However, the implementation of the EIA had to wait until 1993 because of the establishment of its supporting EIA Regulation published in the Official Gazette No. 21498/1993 based on Article 10 of the Environmental Act. After the implementation of the EIA in 1993, several improvements were made to carry out more effective EIA implementation until late 2003. The implementation of the EIA started in Turkey with the publication of the EIA Regulation in Official Gazette No. 21498 in 1993 (Table 1). The regulation consisted of 33 articles and five annexes. The list of activities and the sensitive areas where the EIA was mandatory were classified in Annex I and II, respectively. Annex III listed the activities where a preliminary EIA study was required. Annex IV presented the checklist for a preliminary EIA study. Finally Annex V described the general format of an EIA report. The EIA procedure under Regulation 1993 is given in Fig. 1. This regulation was replaced in 1997 by a revised EIA Regulation which was published on June 23, 1997 in Official Gazette No. 23028.

In the Council Decision (2001/235/EC) of the Accession Partnership for Turkey, the adoption of the EIA Directives was expected to be completed by the end of 2001. Also, it was declared that the

Table 1: Development of EIA legislation in Turkey

Time	Acts, decree and regulations
1983	Environmental Act, No. 2872/1983
1991	Establishment of Ministry of Environment, Decree No. 443/1991
1993	EIA regulation, Official Gazette No. 21498/1993
1997	EIA regulation, Official Gazette No. 23028/1997
2002	EIA regulation, Official Gazette No. 24777/2002
2003	Establishment of Ministry of Environment and Forestry Act, No. 4856/2003
2003	EIA regulation, Official Gazette No. 25318/2003

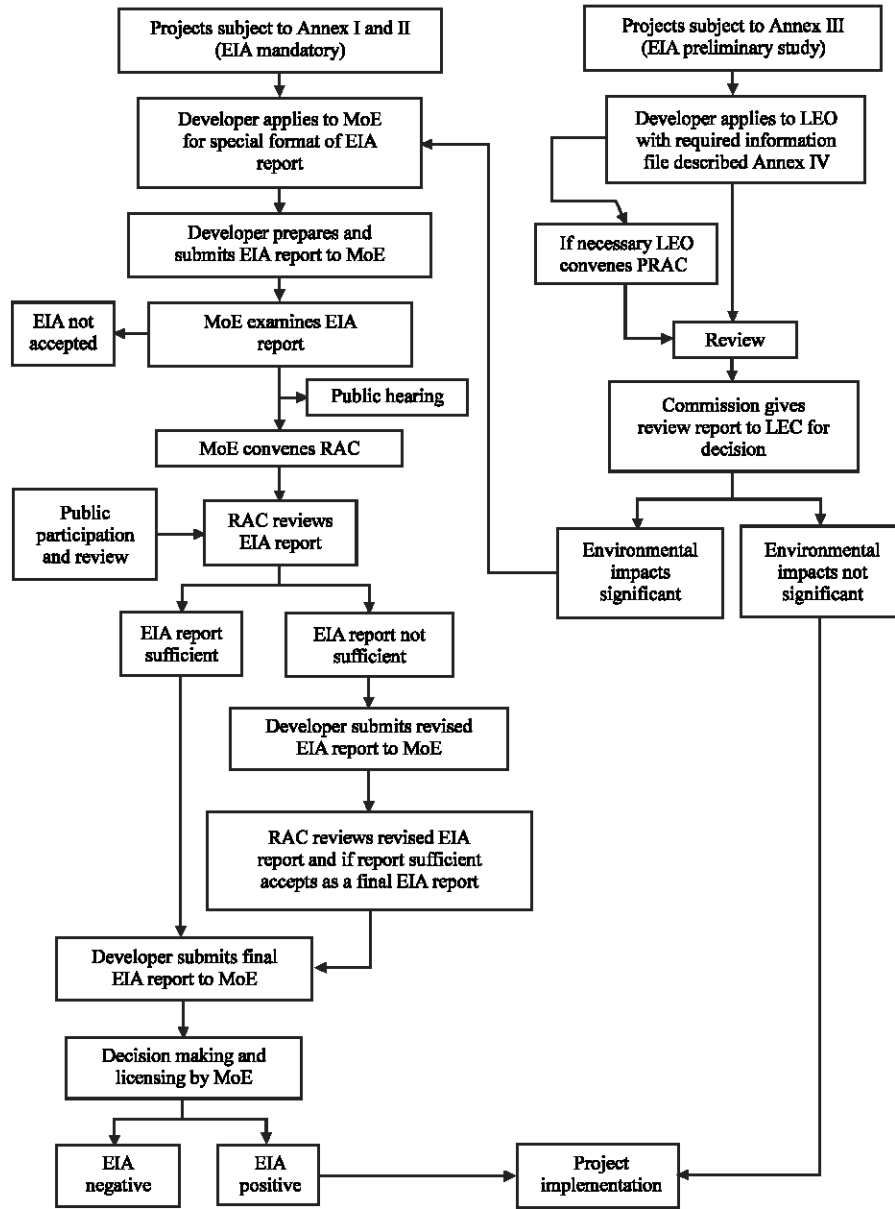


Fig. 1: EIA procedure under government regulation 1993. RAC: Review and Assessment Commission; LEO: Local Environmental Office; PRAC: Preliminary Review and Assessment Commission; LEC: Local Environmental Council

adoption of the EU Directives (85/337/EEC and 97/11/EC) for the EIA is a national priority in the NPAA of Turkey. This adoption took place in mid 2002 by an amended EIA Regulation which was published on June 6, 2002 in Official Gazette No. 24777. The EIA Regulation was revised on December 16, 2003 and published in Official Gazette No. 25318. The EIA Regulation of 2003 was fully harmonized with the EU EIA Directives, except for issues related to transboundary EIA that are

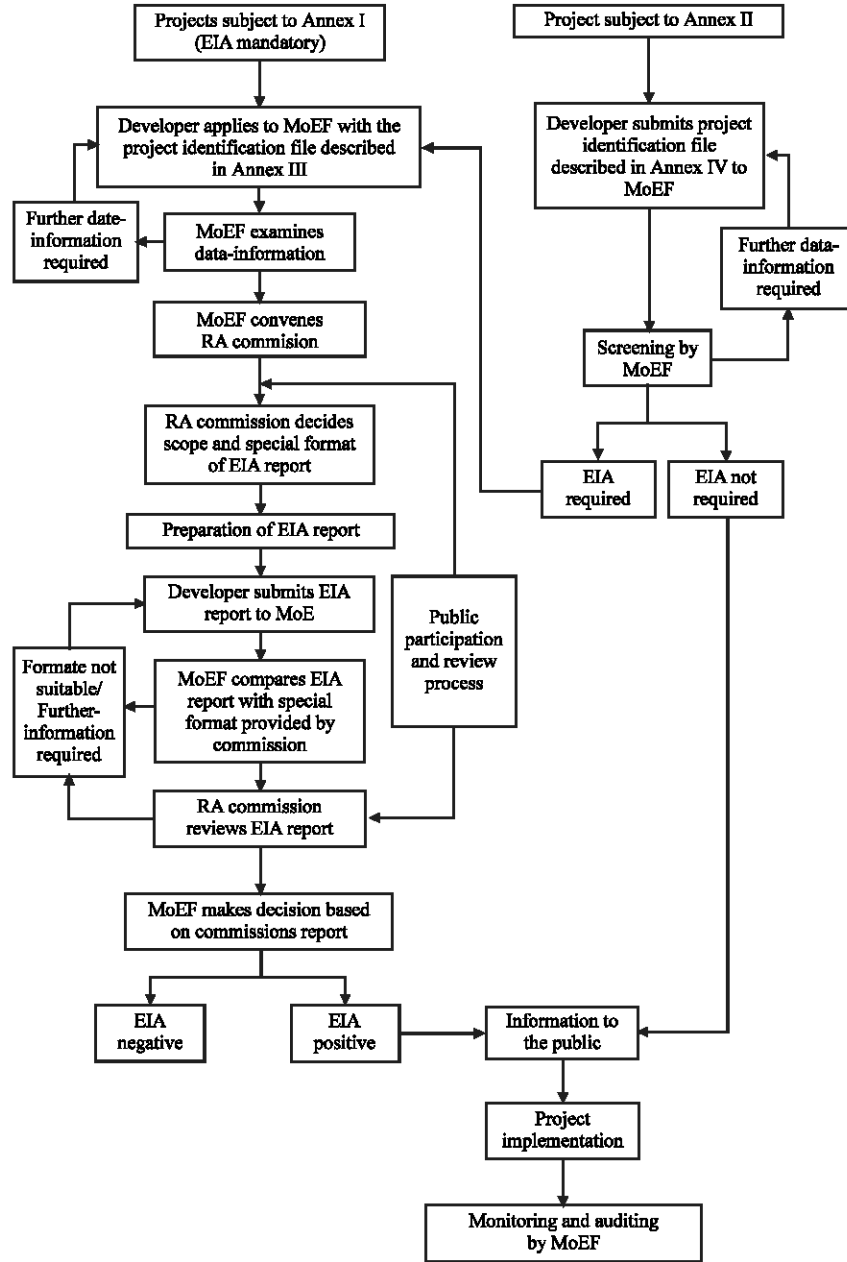


Fig. 2: EIA procedure under government regulation 2003

stated in Article 7, Directive 97/11/EC (Innanen, 2004). The EIA procedure under Regulation 2003 is given in Fig. 2. The Regulation consists of 31 articles and five annexes. Annex I provides lists of mandatory activities subject to EIA study and Annex II provides lists of activities subject to a screening process. Annexes III and IV define the general format of project identification for activities subject to Annex I and several selection and elimination criteria for activities subject to Annex II. Annex V provides a list of sensitive areas that must be taken into account in the EIA process.

## EVALUATION OF EIA SYSTEM

### General Characteristics of Respondents

All of the respondents had at least university degrees and the majority of them (71.2%) had received formal EIA training (Table 2). Almost 40% of the respondents had been involved both in conducting EIA studies and serving as a member of the Commission in the review process.

### Administrative and Legal Basis

The institutional setting, legal basis and procedure of the current EIA system were mostly rated satisfactory (Table 3). As indicated before, Turkey had considerably improved its legislative framework of the EIA system between 1997 and 2003 in terms of the adoption of the UE EIA Directives. Additionally, the Strategic Environmental Assessment (SEA) Regulation was drafted and released for public review by the MoEF in 2005. However, the key international conventions that are related to the EIA such as the Aarhus Convention on Access to Information, Public Participation in Decision Making, Access to Justice in Environmental Matters and the Espoo Convention for EIA in a Transboundary Context have not been ratified at this time of writing. As stated in the Regular Report (EC, 2004), to strengthen the administrative capacity of the EIA, some measures were taken that resulted in the merging of the Ministry of Environment and the Ministry of Forest in 2003. In this respect, there has been some degree of progress in enhancing the overall administrative capacity of the MoEF, such as addressing the issue of overlapping responsibilities, implementation and human resources.

The adequacy of technical guidance was rated as poor or very poor by more than two-thirds of the respondents. Technical guidelines for EIA implementation at the general and sectoral level are lacking in Turkey (METAP, 2001; Ahmad and Wood, 2002; Innanen, 2004). There is a clear need to develop the EIA general and sectoral guidelines and sourcebooks. The EIA Centre, which has been planned to be established by the MoEF, would better help the implementation of the EIA legislation in terms of preparation of sectoral guidelines as well as continued national and regional training.

Table 2: General characteristics of respondents

Characteristics		Respondent (%)
Education level	University degree	34.60
	M.Sc.	31.70
	Ph.D	32.70
Work experience	Average (years)	8.43
Organization	Minister of Environment and Forestry	22.10
	Other government agencies	20.20
	Universities	49.00
	Private sectors	7.70
EIA background	Formal EIA training	71.20
	Informal EIA training	28.80
Involvement in EIA	Conducting EIA studies	24.10
	Worked as a member of the commission in review process	28.80
	Both of above	39.40
	Other	7.70

Table 3: Respondent perceptions on administrative and legal basis of EIA system

Types	No. of respondent	Modes	Means	Standard deviations
Legal basis	102	3	2.95	0.894
Institutional setting	103	3	2.35	0.893
EIA procedure	104	3	2.89	0.869
Adequacy of technical guidelines	100	2	2.05	0.892
Consistent impartial administration	100	2	2.51	1.096

For all items 5-point Likert scales were used: Very poor (1) - excellent (5)

Table 4: Progress on scientific and methodological basis of EIA

Types	No. of respondent	Modes	Means	Standard deviations
Methods and techniques	103	2	2.56	0.763
Training opportunities	102	3	2.84	0.767
Data sources	104	3	2.77	0.779
Information system	101	3	2.89	0.835
Multidisciplinary approach	101	3	2.68	0.787
Supporting research	99	3	2.60	0.684

For all items 4-point Likert scales were used: significantly weakened (1) - very strengthened (4)

Table 5: Respondent views on performance of key activities of EIA

Activities	No. of respondent	Modes	Means	Standard deviations
Baseline study	103	3	2.70	0.850
Scoping	103	3	2.92	0.926
Impact prediction and evaluation of impacts	101	2	2.56	0.853
Mitigation	103	2	2.74	0.939
Assessment of alternatives	102	2	2.12	0.904
Preparation of EIA report	103	3	2.90	0.834
Public participation	103	3	2.31	1.039
Review	102	3	2.72	0.982
Decision making	101	3	2.78	0.901
Monitoring and auditing	102	1	1.70	0.818

For all items 5-point Likert scales were used: Very poor (1) - excellent (5)

### **Progress on Scientific and Methodological Basis of EIA**

Six major factors were determined to rate the progress on the scientific and methodological basis of EIA (Table 4). Respondents were asked to rate the progress on the scientific and methodological basis of EIA on a four-point Likert scale. As seen in Table 4, except for analytical methods and techniques used in the EIA, respondents commonly indicated that the major factors of the scientific and methodological basis of the EIA have been strengthened. Analytical methods and techniques were mostly rated as having changed little or none by the respondents. Among these factors, information systems and training opportunities have relatively high means.

The results demonstrated that the overall progress of the scientific and methodological basis of the EIA have risen to a satisfactory level during the ten-year implementation period. However, the results also show that there is a lot of room for improvement. The factors of the scientific and methodological basis of the EIA such as analytical methods and techniques, supporting research and multidisciplinary approach need more attention.

### **Practicing EIA**

A five-point Likert scale with the endpoints very poor and excellent was used to measure performance of the different stages of the EIA process (Table 5). Monitoring and auditing were rated the lowest of the ten stages of the EIA process. They were considered to be performed very poorly. Also, the practitioners believed impact prediction and evaluation of impacts, mitigation and assessment of alternatives were conducted poorly. The other stages of the EIA process were rated satisfactory by the respondents. In general, ratings of performance of the key activities of the EIA process ranged from very poor to satisfactory. None of the stages of the EIA process was rated as good or excellent.

The current EIA system performance in providing valuable information for decision makers and considering all environmental impacts was evaluated as being more successful than in predicting and evaluating regional and global effects and predicting and evaluating cumulative effects (Table 6). However, the overall success of the current EIA system on the key issues identified was considered as somewhat or no by the majority of the respondents.

Table 6: Degree of success on some key issues of EIA identified by respondents

Key issues	No. of respondent	Yes	Somewhat	No
Considering all environmental impacts	104	26.9	54.8	13.8
Predicting and evaluating cumulative effects	102	11.8	49.0	39.2
Predicting and evaluating regional and global effects	101	8.9	48.5	42.6
Providing valuable information for decision makers	100	29.0	51.0	20.0

## CONCLUSIONS

Despite the adoption of the formal implementation of the EIA that began in 1993, the development of the EIA procedures in Turkey only really accelerated following the approval of its candidacy by the Helsinki European Council. As stated by Innanen (2004), the compatibility between the EU and Turkish EIA provisions significantly increased between 1997 and 2003. This recent development of the Turkish EIA system has overcome many of the legislative, administrative and practical problems. However, there are still some shortcomings in the EIA system in terms of the procedural and practical implementation of the EIA.

From the perspective of the practitioners, the following conclusions may be drawn.

- The institutional setting, legal basis and procedure of the current EIA system are close to satisfactory level.
- The adequacy of technical guidance is mostly poor. Technical guidelines for EIA implementation at the general and sectoral levels are lacking in Turkey.
- The scientific and methodological basis of the EIA have been strengthened during the ten-year implementation period. However, there is a lot of room for improvement. Factors of the scientific and methodological basis of the EIA such as analytical methods and techniques, state of relevant sciences, supporting research and multidisciplinary approach need more attention.
- Performance on monitoring and auditing are very poor. In addition, impact prediction and evaluation of impacts, mitigation and assessment of alternatives are conducted poorly. The overall, ratings of performance of the key activities of the EIA process range from very poor to satisfactory. None of the stages of the EIA process was rated as good or excellent.
- The overall success of the current EIA system on the key issues which are identified in Table 6 was generally considered to be unsuccessful.

Although recent developments reinforced the Turkish EIA system in terms of the legislative, administrative and practical implementation through the harmonization and implementation of the EU EIA Directives, the EIA system is still evolving. It is expected that the adoption of the remaining provisions such as Espoo Convention on Transboundary EIA and SEA Directive (2003/35/EC) will be completed in the near future. Therefore, the greatest effort should be given to its practical implementation. It should be noted however that the degree of harmonization in practice depends on the countries national characteristics such as culture, history, political and social dynamics, attitude toward the environment and the general level of environmental awareness (Glasson and Bellanger, 2003). As suggested by Innanen (2004), besides the inclusive harmonization of the EU EIA Directives in legislation, a proper approach to enforce and implement them in practice should be generated.

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