



**THE EFFECTIVENESS OF THE ENVIRONMENTAL IMPACT  
ASSESSMENT SYSTEM IN PALESTINE**

By  
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Supervised By  
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**Birzeit University**  
**Faculty of Engineering**  
**Urban Planning and Design Master Degree Program**

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## TABLE OF CONTENTS

ACKNOWLEDGMENTS	I
LIST OF ACRONYMS	II
TABLE OF CONTENTS	IV
LIST OF TABLES	VI
LIST OF FIGURES	VII
ABSTRACT (English)	XI
ABSTRACT (Arabic)	XIII
CHAPTER ONE: INTRODUCTION	
1.1 Introduction	1
1.2 Research Questions	3
1.3 Research Objectives	3
1.4 Organization of the Study	3
1.5 Environmental Setting in Palestine	3
1.5.1 The institutional Structure	7
1.5.2 Laws and Regulations	10
1.5.3 Plans and Strategies	20
1.6 Literature Review	23
1.6.1 Definition and Goals of EIA	25
1.6.2 Historic Development of EIA	27
1.6.3 The EIA Process	30
1.6.4 The Role of EIA in Planning	40
1.6.5 Effectiveness of the EIA Process	43
CHAPTER TWO: METHODOLOGY	
2.1 Approach and Methodology	49
2.2 Data Collection	50
2.3 Analysis	53
CHAPTER THREE: RESULTS AND DISCUSSION	
3.1 Introduction	56
3.2 Systemic measures performance	56
3.2.1 EIA legislation	57
3.2.2. EIA administration	63
3.2.3 EIA Procedure	68
3.2.4 Public participation	86
3.2.5 Other procedural determinants	89
3.3 Foundation measures performance	93
3.3.1 Existence of EIA guidelines	93
3.3.2 EIA system monitoring	95
3.3.3 EIA expertise and availability of resources	97
3.4 Practical implementation issues	103
3.5 Effect of international factors	121
3.6 Ranking of EIA Improvement Aspects	132

**TABLE OF CONTENTS (CONTINUED)**

CHAPTER FOUR: CONCLUSIONS		
4.1	Introduction	137
4.2	Systemic measures shortfalls and improvement	137
4.3	Foundation measures shortfalls and improvement	141
4.4	Implementation modality	144
4.5	International Support	145
REFERENCES		147
APPENDICES		
1	Appendix One: Research Questionnaire #1	151
2	Appendix Two: Research Questionnaire #2	158
3	Appendix Three: Land Use Zones according to the Palestinian Emergency Natural Resource Protection Plan (ENRPP) / West Bank	164
4	Appendix Four: List of projects subjected to EIA or Environmental Review according to the ENRPP / West Bank	165
5	Appendix Five: Summary of the Palestinian Environmental Law	170

## LIST OF TABLES

### CHAPTER ONE

1	Sectoral ministries and other bodies with mandates related to the environment	9
2	Sectoral laws with environmental implications and relevance	12
3	Clauses of article 12 on environment protection in appendix 3 of Washington Convention 1995	14
4	West Bank Land use zones	16
5	Tools used at the different planning scales for Environmental considerations	40

### CHAPTER THREE

6	Experts' answers on a question "What best describes the administrative framework of EIA system?"	65
7	Experts' answers on a question "To what extent are interagency coordination mechanisms for EIA implementation in place?"	66
8	Developers' answers on two questions "Have you conducted scoping studies?" and "Have you received ToR from the competent authority?"	72
9	Experts' answers on a question "What is formally included in the requirements of the EIS?"	74
10	Experts' answers on a question "Have roles been defined and proper actors assigned for carrying them out?"	81
11	Experts' answers on a question "Are there formal EIA compliance monitoring programs in place?"	85
12	Experts' answers on a question "Are EIA decisions effectively enforced?"	86
13	Experts' answers on a question "Do the public have formal channels to participate in the EIA procedure?"	88
14	Time limits within the Palestinian EIA process	90
15	Experts' answers on a question "Have relevant EIA guidelines been developed locally?"	94
16	Experts' answers on a question "Are necessary measures put in place for capacity building in the nongovernmental sector?"	99
17	Experts' answers on a question "Are there adequate physical resources for EIA implementation?"	102
18	Experts' answers on a question "Is there real commitment of governmental staff to implement EIA?"	103
19	Experts' answers on questions "Are educational and environmental awareness bulletins being regularly issued?" and "Are there incentives for proponents and their consultants for best EIA studies prepared?"	119
20	Experts' and developers' answers on questions "Do political factors have effect on the EIA system?"	121
21	Experts' and developers' answers on questions "Do local NGOs have effect on the EIA studies?"	128
22	Experts' answers on a question concerning the availability of technical and international support for EIA	129



## LIST OF FIGURES

CHAPTER ONE		
1	Organization structure of the EQA	9
2	EIA Process Schematic	31
3	PPA framework linked to the EIA Process	39
4	Integration of EIA with the Project Cycle	41
5	The seven categories of the EIA Evaluation Model	47
CHAPTER TWO		
6	Composition of research survey sample #1 by institution type	51
7	Composition of research survey sample #2 by type of industrial establishment	51
CHAPTER THREE		
8	Palestinian EIA Process Flowchart	57
9	Experts' answers on a question "Is EIA Implemented through primary legislation?" (Number and percentage)	58
10	Experts' answers on a question "Is EIA Implemented through administrative arrangements?" (Number and percentage)	59
11	Experts' answers on a question "Is there a secure legal basis for compliance monitoring and enforcement?" (Number and percentage)	60
12	Experts' answers on a question "Is EIA Implemented retrospectively?" (Number and percentage)	61
13	Experts' answers on a question "Is there a legal basis for appeal and dispute settlement?" (Number and percentage)	62
14	Experts' answers on a question "Is there a legal basis for Strategic Environmental Assessment ?" (Number and percentage)	62
15	Experts' answers on a question "Is there a core environmental agency responsible for the development and management of the EIA system ?" (Number and percentage)	65
16	Experts' answers on a question " Do the EA review bodies have a veto power over the decision-making?" (Number and percentage)	67
17	Experts' answers on a question " Is screening formally included in the EIA procedure?" (Number and percentage)	68
18	Experts' answers on a question " Is scoping formally included in the EIA procedure?" (Number and percentage)	71
19	Experts' answers on a question "Is there an established mechanism for the involvement of independent parties for review purposes?" (Number and percentage)	75
20	Experts' answers on a question "are review bodies independent from the project proponent?" (Number and percentage)	76
21	Experts' answers on a question " Is the publicity of the EIA decisions and results formally adapted?" (Number and percentage)	77
22	Experts' answers on a question " Is the proponent formally obliged to provide explanations and reply on public queries?" (Number and percentage)	78

### LIST OF FIGURES (CONTINUED)

23	Experts' answers on a question "Is the proponent formally required to revise the EIA report based on the EQA comments?"	78
24	Experts' answers on a question "Is there an established mechanism for appeal and dispute settlement?" (Number and percentage)	81
25	Experts' answers on a question "Is there time limits for each step of the EIA procedure?" (Number and percentage)	89
26	Developers' answers on a question "Have you used the services of consultants at the application stage?" (Number and percentage)	91
27	Developers' answers on a question "Have you used the services of consultants at the study preparation stage?" (Number and percentage)	92
28	Experts' answers on a question "Is the use of consultants a mandatory requirement in the EIA procedure?" (Number and percentage)	93
29	Experts' answers on a question "Are EIA reports subjected to auditing?" (Number and percentage)	96
30	Experts' answers on a question "Is the EIA system as a whole subjected to auditing?" (Number and percentage)	96
31	Experts' answers on a question "Is there an accreditation system for EIA consultants?" (Number and percentage)	98
32	Experts' answers on a question "Are necessary measures put in place for capacity building in the governmental sector?" (Number and percentage)	100
33	Experts' answers on a question "Is there any list at the EQA containing subject experts that can be called on for consultation?" (Number and percentage)	101
34	Experts' answers on a question "Are information and tools fully accessible by the public and interested stakeholders?" (Number and percentage)	103
35	Experts' answers on a question "Are decisions highly affected by EIA results?" (Number and percentage)	105
36	Experts' answers on a question "Are project proposals adapted to EIA findings?" (Number and percentage)	106
37	Experts' answers on a question "Are EIAs started at project feasibility stage?" (Number and percentage)	107
38	Developers' answers on a question "Do you think that linking the EA with permitting procedure contributes to pollution control?" (Number and percentage)	108
39	Developers' answers on a question "Have alternate options been studied in the conducted assessment?" (Number and percentage)	109
40	Developers' answers on a question "Has the public been involved in the study?" (Number and percentage)	110
41	Developers' answers on a question "Whom of the public were involved in the Study?"	110
42	Developers' answers on a question "When were the public involved in the Study?"	111

### LIST OF FIGURES (CONTINUED)

43	Developers' answers on a question "What were the aims of involving the public?"	111
44	Developers' answers on a question "What aspects were covered in your EIA study?"	112
45	Developers' answers on a question "Is the establishment being subjected to environmental inspection?" (Number and percentage)	113
46	Developers' answers on a question "How do you assess the level of coordination between relevant authorities?" (Number and percentage)	113
47	Experts' answers on a question "Is environmental protection given priority over economic development activities?" (Number and percentage)	115
48	Developers' answers on a question "Is environmental protection given priority over economic development activities?" (Number and percentage)	116
49	Developers' answers on a question "Do you think that linking the EA with permitting procedure forms a heavy financial burden on developers?" (Number and percentage)	116
50	Developers' answers on a question "Do you think that linking the EA with permitting procedure causes delays to the permitting process?" (Number and percentage)	117
51	Experts' answers on a question "Do you think that there is public awareness and readiness to take part in the EIA process?" (Number and percentage)	118
52	Developers' answers on a question "Do you think that there is public awareness and readiness to take part in the EIA process?" (Number and percentage)	118
53	Expert' answers on a question "Do you think that there is public awareness and readiness to take part in the EIA process?" (Number and percentage)	120
54	Experts' answers on a question "Has the development of the EIA regulations been influenced by regional agreements?" (Number and percentage)	123
55	Experts' answers on a question "Has the EIA practice been influenced by international conventions?" (Number and percentage)	123
56	Experts' answers on a question "Has the EIA practice been affected by the requirements of donor agencies?" (Number and percentage)	124
57	Experts' answers on a question "Have the EIA guidelines of donor agencies affected the development of the Palestinian EIA regulations?" (Number and percentage)	125
58	Experts' answers on a question "Is there involvement of donor agencies in local EIA cases?" (Number and percentage)	126
59	Experts' answers on a question "Are international donor agencies involved in EIA compliance monitoring/enforcement?" (Number and percentage)	126
60	Experts' answers on a question "Is there any effect for international NGOs on local EIAs?" (Number and percentage)	127

**LIST OF FIGURES (CONTINUED)**

61	Experts' answers on a question "Has the relevant authorities benefited from international assistance?" (Number and percentage)	129
62	Experts' answers on a question "Has the EIA practice been influenced by international pressures?" (Number and percentage)	131
63	Developers' answers on a question "Has the EIA practice been affected by the donor agencies?" (Number and percentage)	132
64	Ranking of EIA system aspects in need for improvement according to experts' feedback	133
65	Ranking of EIA system aspects in need for improvement according to the developers' feedback	134
66	Experts' answers on a question "Do you think that achieving compliance between the Palestinian EIA system and international adopted EIA systems would augment its efficiency?" (Number and percentage)	135

### خلاصة

تقييم الأثر البيئي هي العملية التي يتم من خلالها دراسة الآثار البيئية لمشاريع التطوير لئتم أخذها بعين الاعتبار في عملية صنع القرار. إن نظام تقييم الأثر البيئي يشتمل على المراحل الإجرائية لعملية تقييم الأثر البيئي، إضافة الى القوانين والتشريعات الموطئة والترتيبات الإدارية والخبرات والقدرات المؤسساتية المشاركة في العملية.

إن نظام تقييم الأثر البيئي الفلسطيني لم يخضع منذ نشأته لعملية مراجعة تحليلية لتقييم أدائه وتحديد مدى فاعليته والتعرف على نقاط ضعفه وبالتالي الخلوص بما يمكن أن يسهم في تحسين النظام ورفع فاعليته. يتناول البحث جوانب مختلفة لفاعلية نظام تقييم الأثر البيئي الفلسطيني من خلال مراجعة تحليلية لمكونات نظام تقييم الأثر البيئي الفلسطيني من تشريعات وترتيبات ادارية ومراحل اجرائية لعملية التقييم وغير ذلك من العوامل المؤثرة على النظام من حيث تطوره و أدائه.

يتضمن البحث دراسة الوثائق ذات العلاقة بنظام تقييم الأثر البيئي الفلسطيني خاصة التشريعات والقوانين، وجمع وتحليل المعلومات التي تم الحصول عليها من خلال استبيانيين وزعا على مجموعتين من الخبراء البيئيين الفلسطينيين وكذلك المطورين من أصحاب ومدراء مشاريع إضافة الى الزيارات الميدانية لمجموعة من المنشآت الصناعية. يعرف البحث الوضع القائم لنظام تقييم الأثر البيئي الفلسطيني بشكل مفصل ويسلط الضوء على نقاط الضعف في النظام والاجراءات التي من شأنها تحسين الأداء وزيادة فاعليته. تشير نتائج البحث الى أن نظام تقييم الأثر البيئي الفلسطيني يستند الى أساس قانوني راسخ يضمن المرجعية القانونية لجوانب هامة في سياق دراسات تقييم الأثر البيئي ومنها على سبيل المثال النواحي الرقابية المتعلقة بتنفيذ توصيات دراسات تقييم الأثر البيئي اضافة الى التدقيق البيئي للمشاريع والمنشآت القائمة و المشمولة في قانون تقييم الأثر البيئي. الا أن هذه الجوانب كما تبين من خلال البحث تعاني من ضعف في التطبيق والممارسة العملية لها والنابع من الأحوال السياسية الطاغية وعواقبها على المستوى الداخلى خاصة فيما يتعلق بالجو السائد من عدم احترام سيادة القانون وعدم وجود آليات راسخة لتطبيقه.

يظهر البحث أن الجوانب الاجرائية الخاصة بعملية تقييم الأثر البيئي الفلسطيني ومراحلها تتوافق وتلك المتعارف عليها عالميا ولا تنضوي على نواقص جوهرية من شأنها أن تقوض سير العملية. كما أنها تتماشى و عجلة النمو الاقتصادي والتطوير السائدة في فلسطين و التي تعاني من كساد حاد تزامن مع بداية انتفاضة الأقصى وحتى وقتنا هذا. الا أنه عند أخذ ضمان فاعلية نظام تقييم الأثر البيئي الفلسطيني المستقبلية بعين

الاعتبار وخاصة عندما تستعيد حركة التطوير والنمو الاقتصادي وضعها الطبيعي وتقوم دولة فلسطينية قابلة للحياة، فان عددا من الاجراءات التحسينية تصبح ضرورية كتلك المرتبطة بترسيخ معايير الشفافية والموضوعية في النظام وكسب ثقة الأطراف المشاركة بعملية تقييم الأثر البيئي بما ينعكس بالايجاب على تفاعل وتجاوب مختلف الأطراف مع مجريات عملية التقييم البيئي والقرارات المستندة الى نتائجها. ومن أهم تلك الاجراءات تحقيق مشاركة مجتمعية فاعلة خلال سير عملية تقييم الأثر البيئي وفي مراحلها المختلفة.

يسلط البحث الضوء أيضا على مجموعة من معايير ضبط الجودة والنظم الداعمة في أنظمة تقييم الأثر البيئي والتي هي اما متوفرة بشكل جزئي أو غير موجودة في نظام تقييم الأثر البيئي الفلسطيني وأهمها النظم الساندة للمتابعة والتدقيق على كل من مستويي عملية تقييم الأثر البيئي للمشاريع التطويرية ونظام التقييم البيئي ككل، اضافة الى بناء القدرات والتدريب المتخصص في تقييم الآثار البيئية للمشاريع التطويرية.

ويحث البحث أخيرا على الاستفادة من الوعي العالمي المتنامي بضرورة تحقيق تقدم على صعيد اجراءات ودراسات تقييم الأثر البيئي في الدول النامية كمتطلب مكمل لتلك النجاحات المتحققة في الدول المتقدمة على هذا الصعيد في سبيل صون بيئة كوكب الأرض ككل، وذلك باستجلاب مزيد من الدعم الدولي لتطوير البيئة الفلسطينية والنهوض بنظم ادارتها والحفاظ عليها استمرارا لذلك الدعم الذي تلقتة البيئة الفلسطينية في السنين السابقة ولكن في سياق مستقل عن ربط هذا الدعم مع تحقيق تقدم في العملية السلمية السياسية المجمدة.

## ABSTRACT

Environmental Impact Assessment (EIA) is a process in which the environmental effects of development projects are studied so as to integrate the interest of the environment in the decision making process. An EIA system consists of the followed assessment procedure itself, the enabling and supporting legislations, the administrative arrangements and the institutional capabilities available within the country in terms of both technical and financial resources.

Concerning the Palestinian EIA system, no comprehensive review have been undertaken before for the different system components and how they relate to the effectiveness of the EIA process in actual implementation.

This research addresses the procedural, substantive and trans-active aspects of the effectiveness of the Palestinian EIA system through an analytical study of its various components and other external influential factors affecting its development and performance.

It involves a study of relevant documentation, collection and analysis of data through questionnaires distributed among local environmental experts and developers (project owners and managers), and site visits to enterprises and industrial establishments. It benchmarks the current standing of the system in an analytical perspective and identifies shortfalls and potentials for improvements and up scaling performance.

The main findings of the research have shown that the Palestinian EIA system has a secure legal basis that provides the required enabling framework for crucial aspects in the context of environmental impact assessment such as compliance monitoring and enforcement and retrospective implementation of the EIA. However, those same aspects were found to suffer from real weakness in actual implementation

and achievement of their intended goals due to reasons that are mostly stemmed from the prevailing political conditions and their local internal consequences especially the loss of the overall law enforcement atmosphere.

The research has also shown that the Palestinian EIA procedure itself does not have major shortfalls as pertaining to the adopted process stages and requirements and can satisfactorily cover the current pace of economic growth and development which is at severe recession. However, for the future guarantee of effectiveness and up scaling the performance of the EIA as a major environmental management tool especially when normal economic growth is recovered and a livable Palestinian State comes into existence, several improvement potentials are identified especially those emphasizing measures of objectivity, transparency and confidence in the process and its results as would be perceived by the different stakeholders and thus reflected in their involvement and interaction with the EIA process. Such measures mainly pertain to proper adoption and enactment of public participation and appeal sub-system.

The research also identifies several EIA best practice and quality assurance support measures that are lacked. Those mainly relate to follow up support systems (at both the micro -project- and macro -EIA system- levels) and EIA focused technical capacity building. Availability of financial resources is a major requisite for implementing corrective actions in this regard.

Finally, the research urges to utilize the increasing global awareness of the need to achieve progress on the EIA front in developing countries so that those achievements in the developed countries meet their global objectives of protecting the earth environment. This would be a continuation of previous international support that the Palestinian environmental system has received but under another context apart from that linked to political commitments under the frozen peace process.



## **Chapter 1: Introduction**

### **1.1 Introduction**

Palestine is a unique place where environmental conditions accompanied by the largely fluctuating political events and conflicts result in a complex matrix of interrelations that needs careful and intelligent ways of adaptation and management.

Following the Oslo I (1993) and Oslo II (1995) peace agreements between the Palestinian Liberation Organization and Israel, the concern was to accommodate the anticipated stage of rapid transformation that would be the result of accelerated economic, physical, and social developments. The threat was that these anticipated rapid developments would create unsustainable patterns of development since there had been a continuing concentration for development activities within municipal boundaries. At that time, the shortage of administrative, legislative, and technical planning expertise even increased the effects of that threat.

After the outbreak of Al Aqsa Intifada (2000), the concern has been shifted to Israeli sever aggression against the Palestinian environment, which constitutes a major threat for any economic or social development opportunities, and an inevitable obstacle in the way of encouraging environmental sustainable development patterns, while some incomplete successes addressing aspects of technical expertise, institutional capacity, and legislations have been achieved in relation to environment.

In this ever changing context of development and politics in Palestine, the aim was to account for economic growth for the increasing Palestinian population while minimizing any adverse effects on the natural resources and maintaining good quality living conditions for the citizens. Still, the efforts towards that were hindered by the

shortage of administrative, legislative, and technical planning expertise in fields relating to the environmental protection and natural resource conservation.

The adoption of the Environmental Impact Assessment (EIA) as a planning tool in Palestine, like many other developing countries, is considered premature in comparison to other pioneers in this arena, while the efficiency of the system as a whole and the effectiveness of implementation for the tool are questioned. A serious necessity exists for evaluating the EIA system components, and identifying both shortfalls and potentials for up scaling the performance of the system.

One thing that should be mentioned is that the aim of accounting for the environment interest in decision making itself was not of priority at all times, which is considered part of the problem itself, and which in turn suggests an increasing necessity for reinforcing the understanding and appreciation of the role of EIA in development and giving special attention to public awareness.

## **1.2 Research questions**

The research will try to answer the following questions:

- What indicators can be utilized to evaluate the EIA system in Palestine?
- How much developed are the enabling environmental policies and legislations and how do they contribute to the EIA implementation?
- What is the status of the Palestinian institutional capabilities and technical expertise supporting the implementation of the EIA?
- What are the shortfalls of the Palestinian EIA System?
- What are the potentials for the improvement of the EIA system in Palestine and what aspects should be given priority?

### **1.3 Research objectives**

In view of the above questions, the main research objectives are:

- To define the dimensions of EIA systems' effectiveness that can be utilized in the Palestinian case through reviewing EIA techniques and procedures, EIA effectiveness aspects and recent trends that have exhibited efficiency in implementation
- To assess the current status of the EIA system components in the Palestine, and draw conclusions on shortfalls and implementation gaps.
- To suggest measures that would help bridge gaps and upscale the overall EIA system performance.

### **1.4 Organization of the study**

Chapter 1 provides introduction on the research subject covering the objectives of the study, a brief on the environmental setting in Palestine pertaining to the laws, regulations and main strategies and policies, and reviews literature on Environmental Impact Assessment, its development, process milestones, its role in development planning and ways of dimensioning its effectiveness. Chapter 2 presents the study methodology. Chapter 3, which is the core of the study, provides an analytical review of the Palestinian EIA system and discusses the various factors that affect the system in view of the aggregated feed back from the different research methods . Chapter 4 draws conclusions and implications for EIA efficiency augmentation.

### **1.5 Environmental Setting in Palestine**

The Palestinian Environment has been suffering from a wide set of problems that are now embodied in apparent degradation of its physical tangible components.

Following to the establishment of the state of Israel in the year 1948 on about 75% of the lands of Palestine, accompanied by the adoption of the transfer policy that made 714,000 Palestinians loose their lands and properties, the series of brutal degradation began. The West Bank was annexed to Jordan, while Gaza was annexed to Egypt. Israel did not stop at controlling 75% of Palestine, but invaded the West Bank, Gaza and parts of Egypt (Sinai), and Syria (Golan Heights) in the year 1967 and took control of them (ARIJ, 1997).

During Israel occupation of Palestine, it adopted policies that resulted in deterioration, negligence, and abuse of the Palestinian Environment, including:

1. Absolute control over land, water and other natural resources.
2. Land confiscation.
3. Dedicating little and inadequate amounts of investment in the Palestinian infrastructure in the areas controlled by Israel but inhabited by Palestinian people.

Israel utilized a set of tools to achieve the goals of these policies, including:

1. The establishment and expansion of colonies all around Palestine.
2. Introducing new regulations in the form of military orders that aim at strengthening Israel control over land and resources and hindering development efforts among the Palestinians.
3. Military Practices and mainly the establishment of military bases on the Palestinian lands or the declaration of certain lands as military restricted areas.

4. Declaration of lands owned by Palestinians who are resident outside Palestine as “State Lands” and assuming the Israeli State ownership of these lands which would eventually be turned into either colonies or military bases.

During these years of occupation, the Palestinian Liberation Organization (PLO) kept a low profile in relation to Palestinian environmental matters, since all their focus was shifted towards political considerations.

Both the declaration of principles signed by Israel and the PLO on 1993 and the proceeding interim agreement of the year 1995, which resulted in the creation of the Palestinian National Authority (PNA), were supposed to set a well established course for ending the successive eras of abuse for the Palestinian environment. The Environment was an issue addressed explicitly and specifically in the articles and clauses of the agreement.

Chapter 4 of the agreement addressing the cooperation between the two parties, and in the paragraphs of articles 22 to 26 refers to Annex 3 “Protocol Concerning Civil Affairs” and Annex 6 “Protocol Concerning Israeli-Palestinian Cooperation Programs” (Interim Agreement between Israel and the Palestine Liberation Organization, 1995).

In Annex 3, article 12 is dedicated for environmental protection where it outlines the roles and responsibilities of the two sides. Issues in relation to fisheries (article 13), forests (article 14), energy (article 15), natural reserves (article 25), transportation (article 38), water and sewage (article 40)...etc; are addressed in this annex too, while reference is always made to article 12 for environmental concerns in relation to these topics (Interim Agreement between Israel and the Palestine Liberation Organization, 1995).

In Annex 6, article 5, clause 3, the environment is set as a main sector for cooperation between the two parties while the objective of achieving environmental protection is emphasized as a main result for that cooperation (Interim Agreement between Israel and the Palestine Liberation Organization, 1995).

However, the output of the whole process did not meet the expectations or let say the ambitions of the Palestinian side since many of the articles and clauses contained in the agreement were based on hidden agendas for Israel having at their core the issue of security and the continuation of Israeli control over land and resources.

Israel also worked on integrating the occupation policies adopted prior to the Declaration of Principles into the signed interim agreement. This was apparent from the Israeli unilateral actions aiming at creating de facto realities on the ground that would consolidate those interim arrangements into permanent ones. The set of actions adopted by Israel towards achieving its agenda includes:

1. Designating areas within the Palestinian Territories for by pass roads and natural reserves and thus denying Palestinian access to these areas.
2. Continuing the building and expansion of settlements in the Palestinian Lands.
3. Continuing the confiscation of Palestinian lands, and demolishing of Palestinian houses.
4. Noncompliance with several items of the signed agreements and mainly scheduled redeployments and transfer of authority aiming at maintaining the geographic discontinuity between the Palestinian controlled areas. (Hosh and Issac, 1996)

5. Continuous closures on the Palestinian districts and restriction on freedom of movement
6. The segregation wall that is considered a disaster for the Palestinian environment by its self and also due to its contribution to the earlier mentioned actions and their adverse consequences on the environment.

This entire context making the Palestinian Environment a hostage of the signed agreements was combined with the fact that the PNA after signing the interim agreement inherited the Environment in its degraded condition accompanied by the high population densities and growth, shortage and pollution of resources, geographic discontinuity, dispersion of environmental issues between many institutions with no coordination, and added to all that the negligence and lack of public interest and awareness.

### **1.5.1 The Institutional Structure**

During the occupation years and till the year 1995, all environmental responsibilities were held by the Israeli assigned Civil Administration. Those responsibilities were mainly limited to inspection activities and practiced by the Environmental Health Department under the Israeli Ministry of Health. In the year 1993, the Israeli Ministry of Environment was established, where consequently, a Department of Environmental Officer was created in the Israeli Civil Administration of the occupied Palestinian territories. In the context of this arrangement, the municipalities were considered the main providers of environmental services in the fields of solid waste, liquid waste and others (UNEP, 2003).

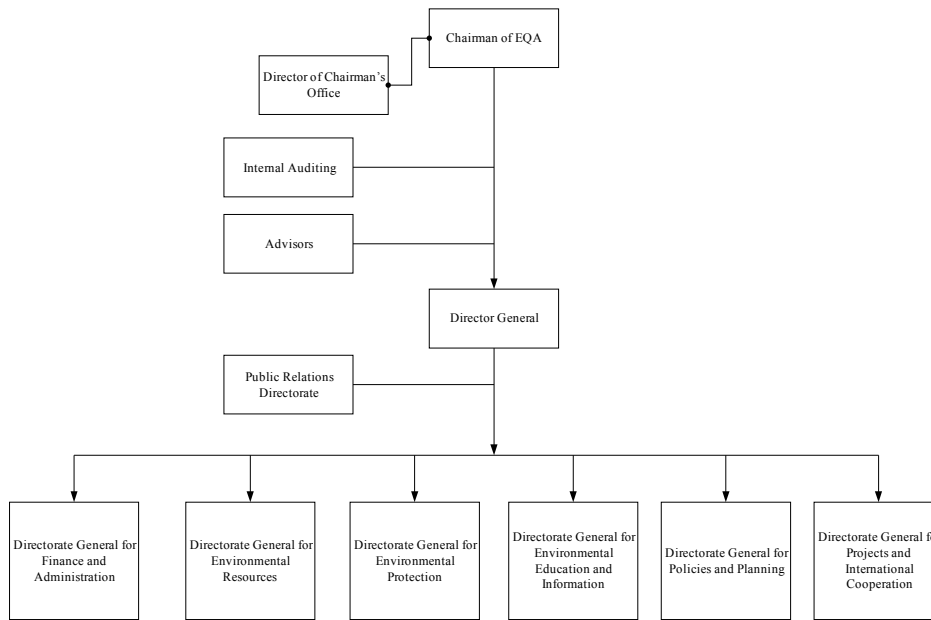
In the year 1994 following the declaration of principles (Oslo I), an Environmental Planning Directorate (EPD) was established in the Palestinian established

Ministry of Planning and International Cooperation (MOPIC). This directorate became responsible for issues related to planning, management and implementation in the environment sector. Following to Oslo II (1995), more Palestinian ministries were established. In the year 1996, the Palestinian Environmental Authority (PEnA) was established to which the responsibilities of the EPD of MOPIC were transferred in the year 1997 after a one year overlapping period.

In the year 1998, the presidential decree No. 2 was issued that appointed a Minister of State for Environmental Affairs. Following that a Ministry of Environmental Affairs (MEnA) was established. Again it was one year till the responsibilities of the PEnA were completely transferred to the MEnA in the year 1999.

In the year 2002, the presidential decree No. 6 was issued that established the Environmental Quality Authority (EQA) to replace the former MEnA. The EQA is considered the current Palestinian environmental competent authority. Figure 1 presents the organization structure of the EQA.





(Figure 1: Organization structure of the EQA (EQA, 2003)

As seen in the above, several bodies have been successively established to take the responsibility of the environment sector covering the planning, implementation, management, monitoring and evaluation, and to achieve the main objective of the environmental protection. Those successive bodies, and lastly the EQA which inherited their mandate from one another, yet with some overlapping and contradiction during times where two bodies were still in existence, are meant to have the central authority in the environment sector. This is envisioned in view of the fact that other governmental bodies, mainly ministries, have had sectoral mandates related to the environment. Table 1 lists the major bodies in this regard:

Table 1: Sectoral ministries and other bodies with mandates related to the environment (MEnA, 1999).

Ministries and bodies	Mandate and involvement
Ministry of Planning	Land use planning and formulation of national and regional development plans
Higher planning council	Land use planning

<b>Ministries and bodies</b>	<b>Mandate and involvement</b>
Ministry of Local Government	Solid waste management
Ministry of Health	Control and management of medical waste in addition to water and food quality, wastewater and solid waste and pest control
Ministry of Industry	Hazardous waste and industrial pollution control and management, and industrial zoning and safety
Ministry of Agriculture	Environmental management in the use of agro-chemicals, protection of nature and biodiversity
Ministry of Transport	Environmental aspects of traffic and transport infrastructure
Ministry of Tourism	Protection and management of cultural heritage
Ministry of Education	Environmental education and awareness building
Palestinian Water Authority	Environmental aspects of water and wastewater infrastructure
Palestinian Energy Authority	Environmental aspects of energy delivery and distribution
Ministry of Interior	Enforcement of Environmental Law
Municipalities and Villages Councils	Environmental aspects related to the delivery of basic infrastructure in cities, towns and villages
UNRWA	Environmental aspects related to the delivery of basic infrastructure in refugee camps
NGOs	Various forms of involvement related to carrying out studies, research, and increasing public awareness
Environmental Sector Working Group	Coordination between donor and funding agencies in matters relating to the environment

### **1.5.2 Laws and Regulations**

As a result of the successive administrations that ruled in Palestine in its recent history starting from the Ottomans and till the Israeli occupation, a unique and non regular legal context has been created that strongly influenced the current situation.

The Israeli direct military rule of the West Bank and Gaza contributed much to this situation. The first military orders, and namely military order number two of the year 1967 vested the all authorities in the occupied land to the Israeli military, and following that to the established Israeli civil administration while declaring that laws to be enacted are those that existed prior to the occupation (Jordanian Law in the West Bank and

Egyptian Law in Gaza Strip) as long as those are not in contradiction to any issued military order and would be subjected to modifications and amendments as per orders to be issued. However, and as have been outlined previously, these military orders were used as an effective tool by the Israelis to implement their agendas towards the full control of people, land and resources of the occupied lands.

The later has produced the current situation, where that hybrid Israeli legal system applies to certain areas of the occupied land (where powers and responsibilities were to be gradually transferred from the Israeli side to the Palestinians according to the Oslo II Accord but never happened; or the so called C Areas), while the Palestinian laws are applicable in other areas; namely those denoted A and B areas.

In regard of the environment, the legal system was not in a better condition than that of the whole legal atmosphere where the inheritance was also a mix of residuals of the previous ruling systems which is also fragmented, sector based, and overlapping with others.

The first Palestinian environmental law came into existence in the year 1999 after being approved by the late PA president Mr. Yasser Arafat after passing in the Palestinian Legislative Council (PLC) and is called "Law No. 7 on the Environment". It is actually a general legal framework for environmental protection, comes in five sections, includes eighty two articles, and covers environmental protection and management aspects.

In addition, a set of laws with relevance to environment matters have been enacted by the PLC, which are basically sector based laws but covers environmental

protection matters in their scope of relevance in that specific sector. Table 2 shows examples on these laws with their year of enactment:

*Table 2: Sectoral laws with environmental implications and relevance (PLC, 1997 - 2004)*

<b>Law</b>	<b>Year of Enactment</b>
Law no. 20 of Public Health	2004
Law no. 3 of Agriculture	2003
Law no. 3 of Water	2002
Law no. 1 of Natural Resources	1999
Law no. 8 of Livestock Protection	1998
Law no. 15 of Industrial Estates and Free Industrial Zones	1998
Law no. 1 of Local Bodies Councils	1997

Concerning the specific context of environmental impact assessment, Palestine has what is considered as a framework enabling law for the EIA system which is the Palestinian Environmental Law of the year 1999, and a more detailed specific law or regulation, which is the Palestinian EIA Policy of the year 2000.

In addition to these two legislative provisions, Palestine has a commitment to what have been agreed upon in the Oslo II accords with Israel in relation to environmental protection and specifically adopting EIA as an effective environmental protection management tool.

Yet, an earlier emergency natural resource protection plan was formulated that linked land use zoning with a set of classified requirements for using EIA to obtain environmental approvals for development projects.

The following paragraphs provide insight on these laws and regulations in relation to the EIA system in Palestine according to their order of issuance and adoption.

- **Article 12 of Washington Convention (1995) on the protection of environment**

This article in annex 3 "Protocol Concerning Civil Affairs" is considered the main article addressing the issue of environmental protection and reference is made to it in other articles tackling subjects that have implication in relation to the environment like energy, transportation, water and wastewater and so on.

The article contains two sections, where the first addresses the transfer of authority and power in the environment sector from Israel to the PA and the specialties of this transfer according to areas A, B, and C.

The second section includes 22 clauses, where the first clauses (3-6), provided as introductory ones, address the obligation of both the Palestinians and Israelis, while exploiting natural resources to pursue development, to act for environmental protection (covering soil, water, air, etc) by adopting and ensuring compliance with international norms and standards pertaining to level of pollutants discharged through emissions and effluents, ways of treating liquid and solid waste, dealing with hazardous substances and control of other pollution types like noise, odor, and pests.

In an explicit and direct way, clauses (7 & 8) state the responsibility of both parties to conduct comprehensive EIA for major development projects and programs, covering:

- Power plants (including gas turbines, substations and super tension lines).
- Quarries and mines (including expansion of existing quarries and mines).
- Waste water treatment plants including main sewers.
- Solid waste disposal sites.

- Hazardous waste disposal sites.
- Plants producing, storing, or using hazardous substances.
- Airports and landing strips.
- Seaports, jetties and harbors.
- Refineries.
- Industrial parks.
- Major dams and reservoirs.
- Major roads.

A summary of the other issues addressed in the remaining clauses of this article is presented in table 3.

*Table 3: Clauses of article 12 on environment protection in appendix 3 of Washington Convention 1995*

<b>Clause no.</b>	<b>Issue addressed</b>
9	Prevention of water and soil pollution resulting from use of gas and petroleum products
10	Agreed procedure to deal with the disposal of chemical and radioactive wastes
11	Prevention of noise, dust and other nuisances resulting from quarries
12	Monitoring and control of insect- transmitted diseases
13	Issues of global concern such as protection of the ozone layer
14	Protection of endangered species and of wild fauna and flora
15	The operation of an emergency warning system to respond to environmental pollution events
16	Cooperation to improving the situation of the environment in the West Bank
17	Public awareness on environmental issues
18	Combat of desertification
19	Control and monitoring of pesticides and restricted chemicals
20	Mutual reimbursement for environmental services granted in joint programs
21	Environmental studies and plans
22	Establishment of a joint Environmental Experts Committee for environmental cooperation

As it will be revealed later, all the issues that were addressed in article 12 stating the obligation of the two parties (the Israelis and Palestinians) to handle them in a manner that ensures compliance with international norms and standards were incorporated into the clauses of the Palestinian law that is binding to all both ordinary and influential persons under the Palestinian jurisdiction.

- **Emergency Natural Resource Protection Plan (West Bank Governorates, 1998)**

The plan was prepared by MOPIC in cooperation with other PA ministries and was aimed at forming a first step towards putting a comprehensive plan for the sustainable use of natural resources. The plan consists of two parts where part one is focused on defining the land use zones, where as part two formulates the set of regulations associated with the zones defined in the plan.

The approach followed by the plan was basically a consideration of the environmental capability of each of the addressed parameters through conducting a baseline survey and the assessment of these parameters in view of the prevailing condition as was revealed by the surveyed data and a set of criteria pertaining to rareness, sensitivity to disruption and economic importance and value that were established distinctly for each parameter.

The main environmental parameters under the plan included water resources, agricultural land, ecological sensitive areas, cultural heritage and landscape. For each of the previous parameters, areas of critical environmental parameters were identified, and were further more classified into grades of sensitivity and value. The compilation of the final land use zones by the plan resulted from the superimposition and overlay of the

developed zones as per of the different environmental parameters. This resulted in the identification of three primary zones as presented in table 4. The spatial allocation of these zones is shown in map 1 in *appendix 3*.

Table 4: West Bank Land use zones

<b>Land Zone</b>	<b>Characteristics</b>	<b>Management policy and instruments</b>
Zone I (Protection)	<ul style="list-style-type: none"> <li>• Exceptional highly sensitive landscape</li> <li>• Highly sensitive ecological areas</li> <li>• Selected cultural landscapes</li> <li>• Existence of natural reserves</li> </ul>	<ul style="list-style-type: none"> <li>• No land use change is allowed</li> <li>• Protection and preservation to be implemented</li> </ul>
Zone II (Limited development)	<ul style="list-style-type: none"> <li>• Highly valuable agricultural land</li> <li>• High and moderate value landscapes</li> <li>• Highly sensitive and sensitive recharge areas of aquifers</li> <li>• Moderately sensitive ecological areas</li> </ul>	<ul style="list-style-type: none"> <li>• Develop as last site alternative when no site successfully secured in zone III</li> <li>• Strict development controls</li> <li>• EIA is required</li> </ul>
Zone III – (Controlled development)	<ul style="list-style-type: none"> <li>• Least valuable and least sensitive lands: no critical concerns or interest in relation to agriculture, aquifer recharge, biodiversity and landscape</li> <li>• Considered the main area of development</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental review is needed to decide on the need for EIA</li> <li>• Regular planning controls must be satisfied</li> </ul>

The regulations associated with the identified land use zones were to have the status of a legally binding document through the authority of the Palestinian Higher Planning Council and its mandate to formulate and implement regional plans and would continue to be valid till a more elaborated and comprehensive land use plan is prepared,



endorsed by the higher planning council and approved by the legislative council which partially took place in the adaptation of the Palestinian EIA Policy of the year 2000.

The regulations under the plan mainly pertain to obtaining environmental approvals for development projects. A set of projects are not allowed to be implemented in Zone I, while if they are to be implemented in Zone II, they would require conducting an EIA so as to obtain an environmental approval to proceed, and if located in Zone III an environmental review would be needed either to grant environmental approval or to decide on the need for an EIA that would be the basis for the decision of granting the approval or denying it. The major categories of these projects are (Complete list of projects is found in *appendix 4*):

- Major agricultural projects including restructuring, of lands in excess of 20 dunums in addition to large scale water management, domestic animal rearing, and fish breeding projects.
- Extractive industry of minerals, coal, petroleum and gas, and their associated installations.
- Energy industry covering production installations for electricity, steam and hot water in addition to their storage and transmission means and facilities.
- Processing of metals including steel, non-ferrous metals to produce various types of castings and sheets.
- Glass and rubber industries
- Chemicals industry covering pesticides, pharmaceuticals, paints...etc
- Food industry

- Textile, leather, paper, wood and marble industries.
- Major infrastructure projects (industrials estates, urban developments, dams, airfields...etc) and other construction projects.

The plan provided guidelines and elaborated on the procedure for applying for environmental approvals in addition to the associated environmental reviews, assessment studies and documentation and reporting. It also addressed the rights and obligations of the various stakeholders, competent authorities and focused on the proponent especially in matters relating to monitoring compliance, inspection and dealing with violations through penalties, law suits and other litigation rights.

- **Palestinian Environment Law (1999)**

As explained earlier, this legislation is the first Palestinian Law addressing the environment and its protection. It comes in 5 distinctive parts.

Part one is the introductory part for the law and elaborates on general issues and mandates. The law aims at protecting the public health and social welfare, biodiversity and the sensitive environmental areas. It also aims at incorporating the concerns of environment protection into the economic and social development plans, encouraging sustainable development, and increasing the public awareness of environmental matters.

Of the principles emphasized in part one is the right of the public to prosecute any person or entity who causes damage to the environment, in addition to their right to obtain official and reliable data on any development or activity to perceive its impact on the environment.

Part two tackles aspects of environmental protection covering earth environment (solid waste handling, excavation surplus and residual materials, hazardous substances,

pesticides and fertilizers, desertification and soil erosion), air environment (air pollution, noise pollution, and radioactive emissions), aquatic environment (potable water, waste water and storm water collection, treatment and reuse), marine environment, and archeological and historical areas; where the core issue emphasized is the mandate of the EQA (in coordination with the other inline relevant ministries) to set quality and implementation standards, formulate management plans, and monitor implementation and compliance.

Part three of the law is devoted for EIA and associated issues. It states the mandate of the EQA in coordination with relevant authorities to set the standards for the identification and listing of projects and activities for which EIA is a prerequisite, in addition to outlining the methods and procedure for conducting the EIA. It also emphasizes the responsibility of relevant authorities to prevent environmental harm by encouraging projects that are environment friendly. The EQA in coordination with the relevant authorities should specify the projects that must not be licensed unless environmental approval by the EQA is issued following an EIA study.

The law addresses the follow up on the implementation of the environmental law by monitoring installations, projects, and activities to assure their adherence to the set standards and regulations. The right of inspectors (from EQA) to visit and check installations, to acquire samples, and carry out inspections to verify adherence with the conditions of pollution prevention is presented as one of the monitoring tools. In addition, relevant authorities are granted the right to suspend the work of any project or installation that are violating the law and causing harm to the environment, where resuming work is

not to be authorized unless violation is stopped, adverse effects are remedied, and all is subjected to the inspection and approval of the relevant authorities.

Part four of the law establishes penalties of contravening the standards and instructions relating to the protection of environment as per the clauses of the environment law.

The final part addresses Palestine's relationship with other countries regarding regional and international agreements and treaties on environment. (A more elaborated summary for the Palestinian Environment Law is presented in appendix 5).

- **Palestinian Environment Assessment Policy (2000)**

The policy was granted approval from the Palestinian cabinet on 23<sup>rd</sup> of April 2000 under decree no. 27-23/4/2000 as the first detailed legislation on EIA.

The policy lies in two parts, where the first part consolidated a set of goals and principles. The main principles emphasized in the policy were:

- The transparent, equitable and effective implementation that contributes to sustainability and environmental soundness of development and does not hinder or constrain it.
- Initiation of the EIA process when decided on as a pre-requisite for granting environmental approval and permitting at the early stages of planning for the project and utilizing the expertise of qualified experts to prepare the study and its relevant reports while relying on internationally approved standards when equivalent Palestinian standards doesn't exist and emphasizing the role of stakeholder consultation and public access to information and results of studies in the whole process.

- The requisite that EA identifies mitigation measures of any adverse impacts on the environment with the associated monitoring and management programs through the life cycle of the project.

The second part of the policy which is presented in the form of annexes to it provides more details about operation modalities and contents of assessment studies.

### **1.5.3 Plans and Strategies**

A number of plans and studies have been prepared during the past years by Palestinian Authority line ministries to draw guidelines for development in the environmental sector and outline what needs to be done so as to contribute to sustainable development through environmental protection.

Some of these plans are considered milestones in regard of caring for the Palestinian environment, although the overall atmosphere prevailing in the West Bank and Gaza since the formulation of these plans did not allow for the ultimate implementation of their identified activities and thus the achievement of their goals, but still considerable progress is considered to have been achieved.

- **Palestinian National Environmental Strategy (PES)**

This was a ten-year environmental strategy developed in the year 1999 and planned to be updated every five years, for 2000–2010. The strategy identified and analyzed reasons behind the prevailing environmental problems, formulated objectives and defined tools and measures for achieving them.

The strategy identified nine priority themes that need urgent attention. The prioritization of these themes slightly differs in the West Bank from Gaza. For Gaza, the urgent issues in order are: depletion of water resources, deterioration of water quality,

shoreline and marine pollution, depletion of natural resources, land degradation, deterioration of nature and biodiversity, air and noise pollution, landscape degradation, and threats to cultural heritage. For the West Bank, the urgent issues in order are: depletion of water resources, deterioration of water quality, land degradation, depletion of natural resources, air and noise pollution, deterioration of nature and biodiversity, landscape degradation, and threats to cultural heritage.

To deal with these priority themes, a number of strategy elements were proposed and included:

1. Wastewater management
2. Management of water resources
3. Solid waste management
4. Agriculture and irrigation management
5. Industrial pollution control
6. Planning of land use
7. Raising the public awareness regarding the significance of environment
8. Monitoring the environment through information and data base management
9. Developing the appropriate environmental standards
10. A series of thematic focused strategic elements including:
  - Reforestation and rehabilitation of wasted and eroded lands
  - Sand mining (Gaza) and stone quarrying (West Bank) management
  - Development of environmental emergency response system
  - Development of Biodiversity, landscape, and cultural heritage protection plans

- Air pollution control
- Shoreline and marine protection

11. International environmental issues that requires regional cooperation for achieving their goals in relation with environmental protection. (MEnA, 1999).

- **Palestinian National Environmental Action Plan (NEAP)**

This plan was developed to elaborate the general themes and strategy elements set in the environmental national strategy into a set of prioritized projects and actions for the years 2000, 2001, and 2002 (where subsequent updates for the following years was also planned) in order to deal with the environmental problems in Palestine. It was developed through a consultative process involving many Palestinian ministries and institutions with implied mandates in relation to the environment.

The set of identified projects and actions were classified under fifteen main headings that included wastewater management, water resource management, solid waste management, agriculture and irrigation management, industrial pollution control, planning of land use, raising the environmental awareness, environmental monitoring and data base management, developing environmental standards and criteria, soil erosion and pollution, control of noise and air pollution, protection of nature and biodiversity, protection of landscape and cultural heritage, protection of natural resources, and control of marine pollution.

As seen from this group of headings, it is a reflection for the environmental set of strategic elements identified in the PES, and thus the NEAP can be considered as an important complementary part for the strategy. Also, an outstanding aspect of the NEAP is that it emphasized the importance of the involvement of different community

stakeholders ranging from ministries, non governmental organizations, universities and research institutes, and private sector (MEnA, 2000).

## **1.6 Literature Review**

A common set of overall visions that are inevitably found in all recent development plans, which also become the focus of the enabling accompanying regulatory laws and policies, would include, where in this regard Palestine is no exception to the case:

- Creating economic growth in the society, increasing levels of income, and satisfying human needs.
- Safeguarding the environment and the natural resources in order to maintain sustainable development patterns.
- Emphasizing the concept of sustainability, and achieving a balanced allocation of development and economic growth in relation to both the spatial distribution and that over time (MOPIC, 1998).

But one should bear in mind that all human development activities –towards achieving those visions- imply modifications to existing natural systems. In order to account for natural systems sustainability, two principles should be in mind; one is that existing natural systems are not without their own capabilities to serve human growth and development, the other; developments differ in their impacts on existing natural systems depending on their carrying capacities, sensitivities, and regenerative and restorative capabilities (Catanese and Snyder, 1979).

With such insight and with the increasing concern of people towards environmental matters, a set of environmental management tools have been adopted by



governments and development bodies all around the world. Those include but not limited to:

- Planning and controlling development based on environmental imperatives.
- Implementing conservation reserves and programs
- Implementing environmental education and awareness programs
- Enforcing vegetation and plant cover requirements
- Utilizing registers of heritage sites and contaminated areas
- Environmental assessment of development projects (McDonald and Brown, 1995).

Out of these management tools, an enduring and efficient in principle tool, although considered relatively recent, is the Environmental Impact Assessment (EIA) or the so called “Environmental Assessment of Development Projects”.

### **1.6.1 Definition and Goals of EIA**

Leitmann (1999) defined the Environmental Impact Assessment as a process in which the environmental effects of development projects are studied so as to integrate the interest of the environment in the decision making process.

The United Nations Environmental Program (1987) defined the EIA as “an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development”.

A more indicative definition is provided by the Inter-Organizational Committee on Guidelines and Principles (1994), where EIA is defined as “a process of identifying, predicting, evaluating, and mitigating the biophysical, social, and other relevant effects of

proposed projects and physical activities prior to major decisions and commitments being made”.

Thus, the assessment itself is a methodical process that comprises chronological steps: screening, scoping, drafting the environmental impact statement (EIS), reviewing, decision making, and monitoring (Ruiter and Sanders, 1998).

In this regard, the distinction must be made between EIA and other closely related disciplines which are included under the impact assessment broad set of tools, and contribute in an integral way to the planning and decision making process and the concern of considering the environment interests in that process. That set of tools includes:

- Environmental Assessment (EA): a systematic process of evaluating and documenting information on the potentials, capacities, and functions of natural systems and resources in order to facilitate sustainable development planning and decision making in general, and to anticipate and manage the adverse effects and consequences of proposed undertakings in particular.
- Strategic Environmental Assessment (SEA) is a process of prior examination and appraisal of policies, plans, and programs and other higher level or pre-project initiatives.
- Social Impact Assessment (SIA) is a process of estimating the social consequences that are likely to follow from specific policy and government proposals, particularly in the context of national EA requirements. (Inter-organizational Committee on Guidelines and Principles, 1994)

As those definitions indicate, EA is a general process concerned with information gathering that results in building a comprehensive data base for natural systems capacities and functions that facilitates the utilization of other impact assessment tools towards achieving sustainable development, while EIA is a project specific form of EA. Also while EIA tackles biophysical and some social impacts of specific projects, SIA is fully concerned with those social impacts. While the EIA deals with projects' impacts, SEA is deals with policies, plans and programs.

The purpose behind the EIA can be subdivided into two types:

- An immediate one that aims at the explicit consideration of environmental related issues in the decision making process concerning specific development projects: in this context EIA also helps in:
  - i. Improving coordination and consultation among all stakeholders involved in the process
  - ii. Improving development projects plans and designs in terms of cost, effectiveness, and environmental consideration
  - iii. Building capacities and increasing environmental awareness of local communities through the public participation in the process.
- A long term one that involves support and augmentation of environmental protection and sustainable development concepts and practices, where some of the pursued goals include:
  - i. Protection of natural systems, human health, community well being and avoiding irreversible and unacceptable adverse effects
  - ii. Adapting development to natural systems carrying capacities.

- iii. Achieving an optimum allocation and use of natural resources.

### **1.6.2 Historic Development of EIA**

The consideration of the Environment as an independent entity has only become consolidated in the 1970s. Before that progress had been achieved on two tracks; one in areas of public health and elementary pollution control; the other in implementing conservation measures in natural areas and the creation of parks and reserves in developed countries. In the 1960s, the two tracks have merged and resulted in the creation of the general subject of Environment Protection. In this context, and that of proceeding progresses many sciences have matured and entered under the umbrella of this subject, including: environmental economics, risk assessment, and EIA. This atmosphere enabled the United Nations to hold its first conference on Environmental protection in Stockholm in 1972, after which many conferences followed including the UN second conference in Nairobi (1982), and that in Rio de Janeiro in 1992 (Gilpin, 1995).

The first formal introduction of the EIA was in the year 1969 in the United States of America, when the National Environmental Policy Act “NEPA” was passed, thus giving the EIA its first legal status (Canter, 1977).

Following this, many countries mainly in the developed world have embodied the American experience by establishing their own EIA systems through specific and separate legislation. Pioneers in the EIA systems establishment include Canada, which introduced its EIA system in the year 1973, Australia (1974), France (1976) and many others in the following years (Wathern, 1988).

Some countries, which had well established land use planning procedures, adapted these procedures and the enabling environmental relevant legislations to put greater emphasis on the environmental assessment of development projects, and thus did not establish separate EIA systems or enact new separate legislations. Countries which had undertaken such measures include Britain, Germany, and most of the Nordic countries (Gilpin 1995).

One outstanding event that helped the widespread introduction of EIA systems and legislations in Europe was the adoption of the European Directive on EIA in the year 1985. This obliged many countries who were members of the European Union (EU) or those seeking membership to create specific EIA acts and regulations to meet the directive requirements. Britain, Germany, and Denmark were among the countries obliged to meet the directive (Saddler, 1996).

Considerable international efforts were devoted towards the development and adoption of the EIA of development projects, and its introduction into the planning and decision making procedures around the world countries. These efforts were either in the form of binding international treaties and protocols, nonbinding resolutions and declarations by international organizations, or guidelines for development assessment and overseas projects.

The first international document to incorporate EIA into environmental policies was the Organization for Economic Cooperation and Development (OECD) “Declaration on environmental Policies” (1974), which indicated the criticality of assessing environmental impacts of significant development activities prior to implementation. Following that, many recommendations were drawn such as the OECD “Council

Recommendation on Assessment of Projects which may have Significant Effects on the Environment” in the year 1979 (OECC, 2000).

The United Nations Environmental Program (UNEP), which began its work in the year 1982, adopted in the year 1987 the “Goals and Principles of Environmental Impact Assessment”. The stipulated thirteen principles aimed at the promotion of EIA systems in member countries, while emphasizing the case of trans-boundary impacts of development projects (UNEP, 1987).

The introduction of EIA into foreign aid programs, also played a major role in the adaptation of EIA systems in many countries around the world, especially in the less fortunate and developing countries since many international development banks and organizations have enacted their own guidelines and procedures for conducting EIA(s) of development projects before approving grant or loan proposals for development projects. In this context falls the introduction of the EIA system into assistant programs in which the United States Agency for International Development (USAID) had been involved since the year 1976 (Gilpin, 1995), the previously mentioned declarations and recommendations of the OECD, the requirements for the implementation of the EU Directive on EIA in assistant programs implemented by the European Commission (EC), and the formulation and adoption of the EIA Operational Directive of the World Bank since the year 1989, which has been reviewed and upgraded many times to be more elaborated and end with three types of operational directives relating to EIA (OACC, 2000).

### **1.6.3 The EIA Process**

Despite the fact that the EIA process phases and components varies among the world countries according to the implementation legal frameworks adopted in these countries, a general pattern can still be identified that in all cases leads from the EIA process initiation to implementation and monitoring. Sadler (1996) emphasizes this by stressing on the common issue in varying EIA processes, which he describes as “the structured, logical approach that is followed to fact finding, gaining public input analysis, and testing of information and organization of findings in a report format to assist decision making”. Figure 2 presents a schematic of the EIA process phases that are most common all over the world.

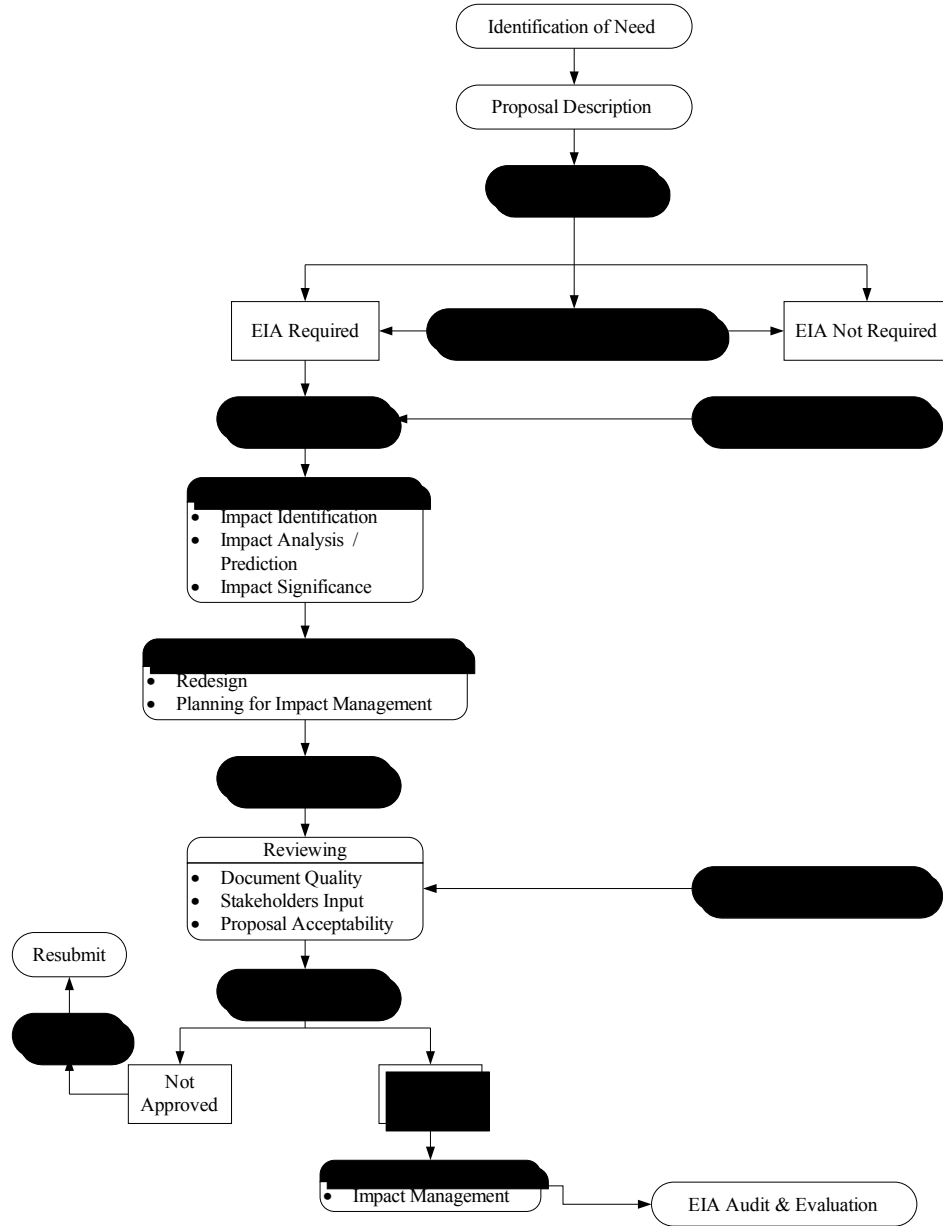


Figure 2: EIA Process Schematic (UNEP, 2002)

In view of the steps involved in the EIA process, three major stages can be identified into which the specific steps can be categorized. Those include the following:

1. *Preliminary assessment stage*: it involves the determination of whether EIA is necessary for the development proposal in question and the extent of such assessment, and is achieved through two steps:



- a. Screening that can follow one of two approaches, where best results are achieved by a hybrid of the two:
  - i. Discretionary approach: in this approach the decision is based on basic criteria that pertain to either the size of the project or the sensitivity of the location. Also in this approach a very preliminary EIA can be utilized to draw the conclusion on whether to go for a detailed one or not.
  - ii. Categorical Approach: this approach utilizes policy statements and guidelines adopted in the jurisdiction area of the project in case such policies and guidelines have been prepared previously.
- b. Scoping: if the screening showed that a detailed EAI should be sought, then scoping is conducted. It aims at defining the following:
  - i. Key environmental impacts to be addressed.
  - ii. Project alternatives to be considered including site, route, implementation methods...etc.
  - iii. Methods to be used in analyzing and predicting impacts and evaluating their significance
  - iv. The content of the environmental impacts statement (EIS) or so called the Terms of Reference of the EIA.

The importance of scoping is stemmed from its proven benefits reflected on the efficient conduction of the process since it enhances relevance and scientific quality of the EIS, increases public acceptance through their involvement in this step, and saves time and money for both the proposal

proponent and competent authority (Ruiter and Sanders, 1998). Several techniques can be used for scoping which are very well known to both environmentalists and physical planners such as checklists, matrices, and overlays.

2. *Detailed Assessment stage*: it builds on the results of the scoping from the previous stage. Steps included in this stage are:

a. Impact Assessment: it covers the identification, analysis, prediction and evaluation of significance of the environmental impacts. An important activity in this step is doing the baseline study, which is a documentation of the original status of the environment in the project area before any of the proposed development project components starts. This will form the reference against which changes would be spotted, predicted and analyzed. Another activity is the quantification of environmental impacts or the so called “Impact Evaluation”, which involves assigning values to them. This is considered the most difficult step in the evaluation since not every impact can be quantified such as those pertaining to social and natural systems impacts. This issue is very crucial since it will form the basis for the comparative evaluation between the various developed project alternatives towards reaching the most nature friendly alternative.

b. Mitigation: it involves deciding on the measures to be taken in order to prevent or reduce the magnitude and/or intensity of adverse environmental impacts. The implementation of these measures inevitably involves some

associated costs. In this regard, two extents define the range in which the environmentalist can build his impact management plan:

- i. Having a high cost and low pollution program
  - ii. Having a low cost and high pollution program
- c. Assessment of alternative measures: in previous steps, all versions of the projects have been identified covering the set of impacts, their levels of significance and the associated mitigation measures. Now it is possible to utilize several available evaluation methods to draw conclusions in terms of economic losses and gains. Some of the methods that could be utilized here, and which try to quantify all aspects to be evaluated, includes:

- i. Cost Benefit Analysis (CBA)
- ii. Cost Effectiveness Analysis (CEA)
- iii. Opportunity Cost Analysis

Of course, seeking the most economical and environmental sound version of the development project would involve some compromises between mitigation measures costs, which contribute to the total cost of the project, and the level of adverse impacts for each set of the project alternatives, making compensations for environmental losses unavoidable in certain cases.

- d. Drafting the EIS: this involves the preparation of the document that reports what has been done in the EIA process stage by stage and step by step, and outlines the drawn results and formulated recommendations that should be considered by the decision maker. This would be in the form of a technical detailed document called the “Reference Document”, which would be used by

technical personnel involved in the project, or those engaged in the assessment of another development project in the same area, or the preparation of similar project in another area. One important and vital issue that should be accounted for is that both what have been conducted during the course of the EIA and the results and recommendations reached should be accessible for non technical people, as well as technical people, of whom the decision maker might be. So a non technical summary should be prepared and called the “Working Document”, in which no jargons are used, and simply summarizes the findings of the EIA process. It is stressed that this working document is written in the country’s native language in case the reference document has been written in another due to the procurement of a foreign consultant. Some times this non technical summary is included as a distinguished section or chapter in the reference document. In general, the most common items to be included in the EIS includes:

- i. A non technical summary (in case it is not intended to be a separate document).
- ii. Definition of initials and acronyms
- iii. Table of contents
- iv. The authors of the document and the EIA team
- v. A brief history of the development project
- vi. A full description of the proposed development project components.

- vii. Information about the durations of construction, operation, and decommissioning phases.
- viii. A description for the interaction of the project with the transport system, its implications for public infrastructure and natural systems.
- ix. A full description of the existing conditions of the environment (documentation of the baseline study)
- x. A full description of the considered alternatives and development project versions.
- xi. The justification of the development project in terms of economical, social, and environmental interests and benefits to the community, region and country whatever is relevant.
- xii. Description of the context of development planning in the area covering laws, regulations, zoning, and environmental objectives.
- xiii. A full description of the identified and analyzed environmental impacts (documentation of the impact assessment studies and results).
- xiv. A full description of the mitigation and environmental protection measures decided on.
- xv. Information about any trans-boundary effects and cumulative effects of the project.
- xvi. Description of proposed arrangements for regular and frequent reporting and consultation with the competent authorities and interested stakeholders during the project phases, and documentation of what has took place during the EIA process.

- xvii. Information about any distinguished roles of the proposed development project on regional or national scales, and its contribution to the implementation and promotion of sustainable development trends.
- e. Review of the EIS: this involves checking the correctness and relevance of the drafted EIS, and assuring the involvement and consideration of all stakeholders' interests. It might be carried out by the competent authority only although it is preferred to have an independent EIA commission who involves other competent government administrative bodies and allows for public participation and involvement. The terms of reference issued by the competent authority at early stages of the EIA process would form a guideline for reviewing the EIS. The review might find out that the prepared EIS can form a basis for informed decision, but can also conclude that more information and elaboration is needed and request that from the proponent before proceeding on. If the earlier was concluded, then a review report is prepared to be submitted for the decision maker. In general, the most common items to be included in the environmental review report includes:
  - i. Letter of submittal for the decision maker initiated by the head of the review committee.
  - ii. Recommendations and conclusions, which might include specific conditions on the proposed development project.
  - iii. Principal findings
  - iv. Back ground on the development project.

- v. The development project proposal and the EIS
- vi. The environmental, economic, and social aspects of the development proposal.
- vii. The mitigation measures.
- viii. The planning context in all relevant scales (local, regional, and national whatever is relevant)
- ix. Appendices to include tables, lists and other illustrations.

f. Decision making: the previous step was concerned with having an approved EIS to be utilized as an input to the decision making process to decide on whether to accept or reject the proposed project. Now, since such approved EIS is available, the decision maker has to make a decision, which is usually one of three:

- i. Approve one of the project alternatives
- ii. Turn back the EIA and request more information and studies for specific aspects of the project
- iii. Reject the project with the whole set of alternatives

3. Follow Up Stage: this stage is reached incase the project was approved, and the actual implementation of the project starts. It consists of several steps:

- a. Monitoring: It aims at verifying whether the predicted impacts do really occur, whether they were under or over estimated, and to ensure that recommended courses of mitigation measures and actions are being implemented.

b. Management: it aims at acting emergently against any overlooked or unexpected adverse impacts that are faced during the actual implementation of the project.

c. Audit and Evaluation: this step declares the end the EIA process but extends its benefits to the future and other cases besides the one that was in question.

The later stage of the EIA process which takes place during the implementation and operational phases of the project is called “Post Project Analysis (PPA)” and is considered very essential for providing feed back relating to the proper management in the implementation phase, and that for the development of the EIA process in the future. It is important to start planning for the PPA at early stages of the EIA process, and have a fully developed plan at the time the decision is made to approve one of the project’s alternatives. Figure 3 presents a schematic for the PPA framework and its integration with the EIA process:



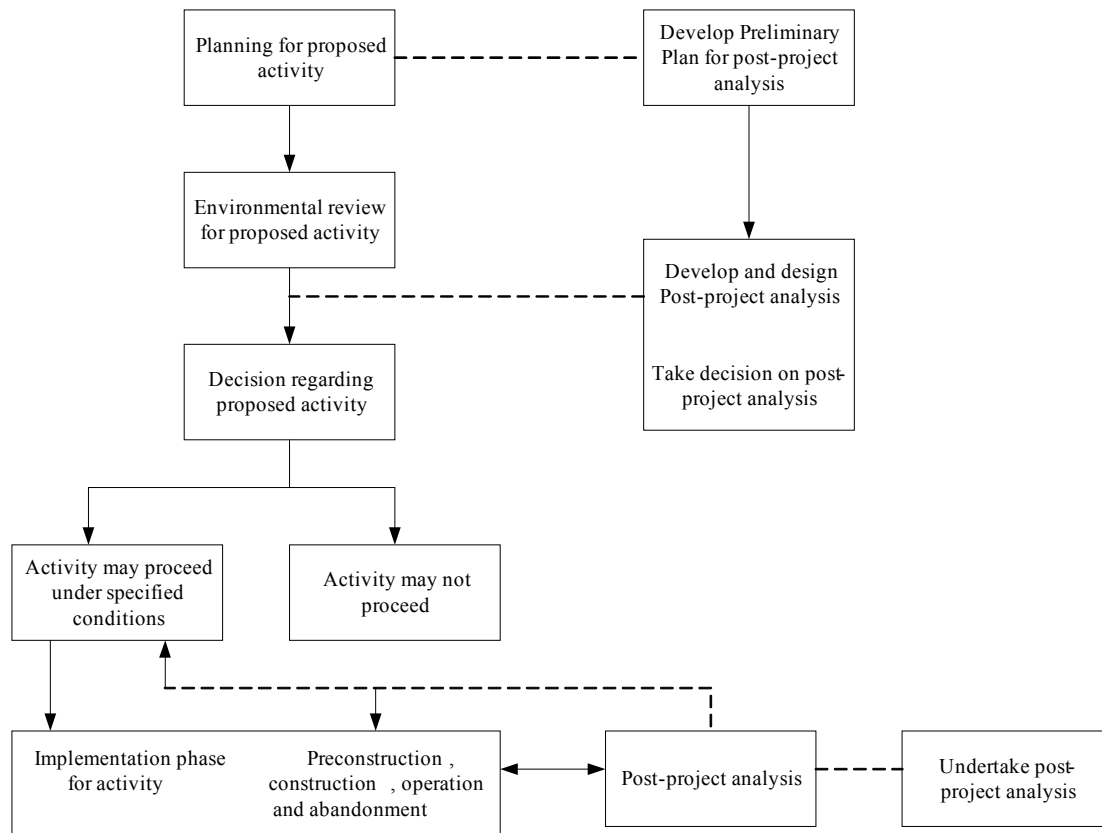


Figure 3: PPA framework linked to the EIA Process (UNECE, 1990)

### 1.6.4 The Role of EIA in Planning

Planning is practiced on different levels, where at each level of practice a different set of tools are utilized for the integration of the environmental concerns and interests.

Table 5 lists some of these tools and activities that are employed.

Table 5: Tools used at the different planning scales for Environmental considerations (Modified ADB, 1997)

Planning Level	Aim of Planning	Tools and methods used for the Integration of Environmental Concerns
National	Setting broad economic, environmental and social goals for the whole country	Inclusion of environmental policies in national plans which should cover: <ol style="list-style-type: none"> <li>Having updated environmental and natural resource profiles</li> </ol>

		2. Formulating strategies for management and conservation of natural resources
<b>Regional</b>	Setting broad land use allocations for geographic regions within the country	Achieving an integration of economic and environmental planning through: <ol style="list-style-type: none"> <li>1. Land use planning</li> <li>2. Environmental master planning</li> </ol>
<b>Sectoral</b>	Defining development plans for different sectors such as water, transport, health,...etc	Utilization of sector environmental guidelines, while keeping in mind interactions between the different sectors to avoid conflicts, and also the inclusion of environmental protection measures in sectoral master plans.
<b>Project</b>	Planning for the design and implementation of specific projects such as dams, highways, residential blocks,...etc	EIA: Environmental review of the project components and activities and utilization of environmental guidelines.

The issue of integrating the EIA into the project planning has been stressed many times in this review. This is because EIA has something to contribute to the success of each stage. The most influential stages for this integration is during the project pre-feasibility and feasibility stages where the consideration of environmental mitigation measures against adverse impacts is cost effectively possible, whereas incorporating changes proposed by the EIA becomes increasingly difficult and costly towards the implementation stage. The role played by the EIA in each step of the project cycle is illustrated in figure 4.

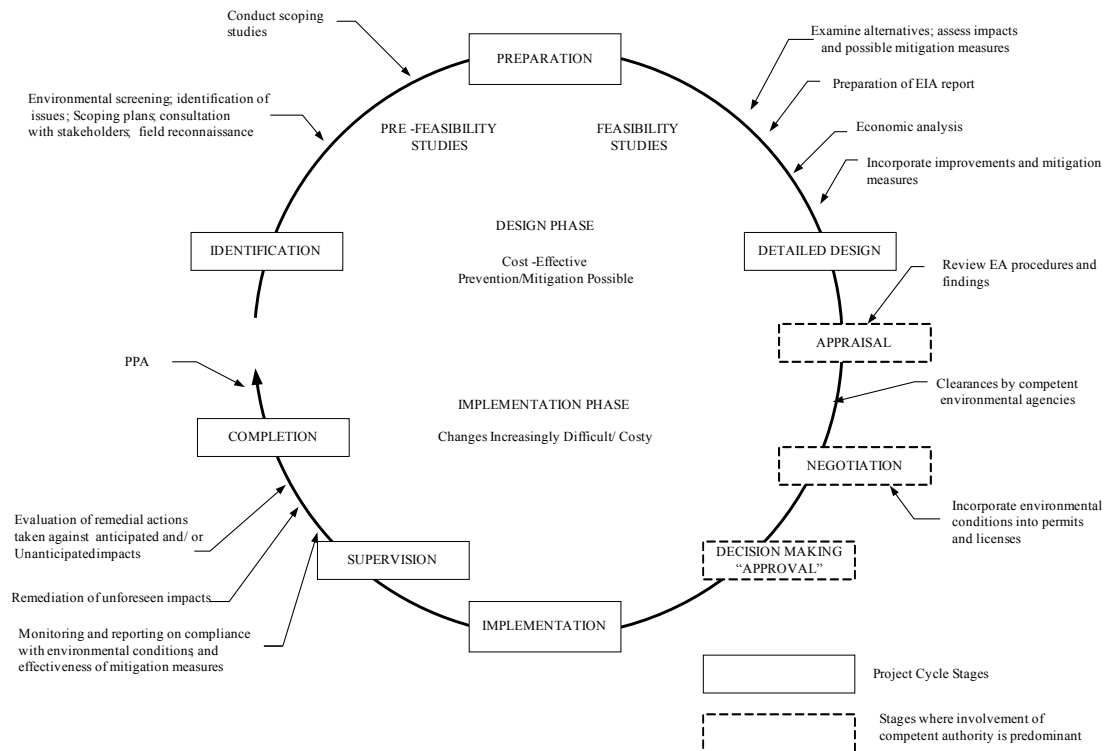


Figure 4: Integration of EIA with the Project Cycle (Modified OECC, 2003)

At the beginning of the project cycle (the pre-feasibility stage), the EIA involves screening, initial assessment, and scoping studies. In the feasibility study stage, EIA involves a detailed assessment of significant impacts, conducting baseline studies, the prediction and quantification of impacts. After that, mitigation measures are identified, and operating conditions are determined. At the end, the monitoring parameters are identified, measuring indicators are set, and the environmental monitoring program and management plan are drafted and finalized. Towards the decision making and implementation stages of the project, the results and outputs of the EIA process are put in use. Three distinct outputs can be identified throughout the process despite the fact that they can be presented in the same document, which is the EIS. Those include:

1. The environmental analysis results, which form the basis for the informed decision the decision maker is to make regarding the approval / disapproval of

the project with all the involved tradeoffs between the adverse environmental impacts and economic benefits to the society.

2. The environmental management plan which covers the project from pre-construction preparations to decommissioning phase and focuses on the environmental protection measures to be undertaken. It should define:

- a. A work program which identifies tasks, manpower and physical resources for the plan implementation.
- b. Costs incurred by the plan.
- c. Operation details covering schedules and charts of staffing and inputs from the various project's stakeholders (ADB, 1997).

3. The environmental monitoring program plan which provides the necessary feedback to ensure the environmental sound implementation of the project by exploring the actual impacts of the projects, the compliance with the relevant standards, and the effectiveness of the mitigation measures implementation.

This plan should identify the following:

- a. The objects and specific targets of the plan
- b. The set of data to be systematically collected and its collection schedule and frequency.
- c. Program management issues covering tasks and responsibilities, needed resources, and expected inputs and involvements of stakeholders.

Thus, EIA is much more than an analytical procedure or method for producing technical reports and surely not a science by itself. It is a multi-disciplinary process that

applies many sciences and approaches in an integrated way as appropriate to the case and problem in question towards the general goal of improving the environmental quality of life. In addition EIA is not intended to involve making decisions but help decision makers make informed ones by considering the EIA findings and recommendations. And finally, EIA is an integral part of the project planning and design and have interaction with almost all the project cycle stages, and thus should not be perceived as an add on to it.

### **1.6.5 Effectiveness of the EIA Process**

In recent years, the issue of EIA effectiveness has been raising more and more attention in our region stemmed from the increasing trend towards the strengthening of sustainable development. The countries of the developed world have started tackling this issue from the early nineties and many studies and researches have been completed in this regard which aimed at improving the performance and efficiency of the EIA process and enhancing the results and influence of such process on the decision making concerning development projects.

Reviewing the EIA process effectiveness aims at drawing conclusions about whether the process works as intended and meets the purposes it is designed for.

Specifically, answers for three types of inquiries are sought in the effectiveness context:

1. Procedural aspects: if the process does comply with set principles and guidelines.
2. Substantive aspects: if the process does achieve its objectives.
3. Trans-active aspects: if the process does deliver its results efficiently in terms of cost and time. (Saddler, 1996)

Several studies have been conducted in this regard and different sets of evaluation criteria and performance indicators were formulated. Hirji and Ortolano (1991) expressed the EIA effectiveness in terms of five parameters. Those were:

1. Compliance with approved procedures
2. Completeness of documents
3. Adequacy and suitability of methods used for impact assessment
4. Influence on decision making process
5. Weight given to environmental factors in the assessment process

Wood (1999) proposed and used a set of 14 evaluation criteria that were based on aims and stages of the EIA process to evaluate the effectiveness of EIA systems in eight countries. Fuller (1999) classified criteria used in evaluating effectiveness of EIA into two main categories; systematic and foundation measures. Systematic measures are concerned with quality assurance in practice and administration of EIA. Such measures are related to legislative and administrative attributes of EIA in addition to procedural aspects such as screening, scoping, impact assessment... etc. Foundation measures are concerned with issues that promote and augment the best practice of EIA. They are mostly related to development of implementation guidelines, and meeting training needs. Ahmad and Wood (2002) used the systematic and foundations measures criteria to evaluate the EIA effectiveness in three countries; namely Egypt, Turkey, and Tunisia.

The following set of criteria was used:

- Systemic measures
  1. EIA legislation
    - a. Legal provisions for EIA

- b. Provisions for appeal by the developer or the public against decisions
  - c. Legal or procedural specification of time limits
  - d. Formal provisions for SEA
2. EIA administration
- a. Competent authority for EIA and determination of environmental acceptability
  - b. Review body for EIA
  - c. Specification of sectoral authorities' responsibilities in the EIA process
  - d. Level of coordination with other planning and pollution control bodies
3. EIA process
- a. Specified screening categories
  - b. Systematic screening approach
  - c. Systematic scoping approach
  - d. Requirement to consider alternatives
  - e. Specified EIA report content
  - f. Systematic EIA report review approach
  - g. Public participation in EIA process
  - h. Systematic decision-making approach
  - i. Requirement for environmental management plans
  - j. Requirement for mitigation of impacts

- k. Requirement for impact monitoring
- l. Experience of SEA
- Foundation measures
  - 1. Existence of general and/or specific guidelines including any sectoral authority procedures
  - 2. EIA system implementation monitoring
  - 3. Expertise in conducting EIA (national universities, institutes, consultancies with EIA technical expertise)
  - 4. Training and capacity-building

Leu et al (1996) developed a framework he called the fundamental components of an effective EIA system. Those components were:

- 1. Environmental laws, policies, regulations and guidelines
- 2. Environmental administrative framework
- 3. EIA procedures
- 4. Roles played by the different process stakeholders and actors
- 5. Status of EIA reports
- 6. EIA compliance with requirements, monitoring of impacts, and enforcement of measures
- 7. Implementation of EIA in practice
- 8. Adoption and implementation of SEA
- 9. Interaction and involvement of international bodies in the process.

The fundamental components can be classified into two categories; domestic and international factors which are interrelated and collectively affect the development and



implementation of EIA systems. Further, all the factors falling under the domestic and international categories could be grouped into seven categories. Those constitute the model illustrated in figure 5 which is used for evaluating EIA effectiveness through the use of a questionnaire that structures the collection of data related to the components and factors of the model.

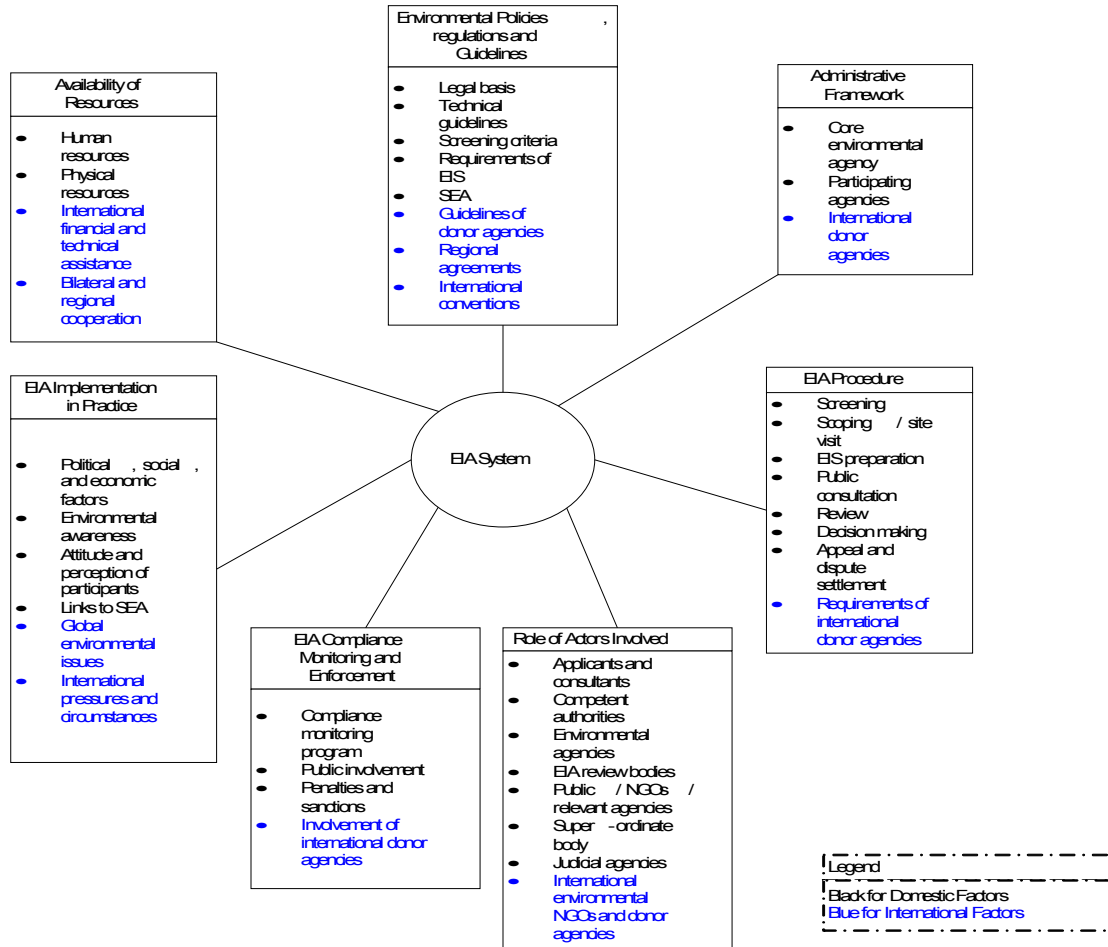


Figure 5: The seven categories of the EIA Evaluation Model (Leu et al, 1996)

In some cases, where this is mostly likely true in developing countries, the international factors are the main driving force behind the introduction of EIA systems in countries through international and foreign aid development assistance programs.

The influence of such international factors could be well studied, if the evolution of the EIA system in a given country is tracked from its initiation till its current status. Guidance could be sought from the model developed by Gipson (2002), who originally modeled the evolution of EIA system in Canada into four stages:

1. Reactive pollution control stage
2. Proactive impact identification and mitigation stage
3. Integration of broader environmental considerations in project planning and selection stage
4. Integrated planning and decision making for sustainability stage

It is seen that most of the aspects addressing the effectiveness of EIA that have received the focus of researches done in this subject in different parts of the world concentrate on “Procedural Criteria”. Still, the identified dimension of effectiveness relating to the “Substantive Criteria” can not be overlooked in any system evaluation since it investigates whether EIA achieves its purposes and deals more with its effect on decision making and its contribution to sustainability (Cashmore, 2004).

## **Chapter 2: Methodology**

### **2.1 Approach and Methodology**

Judging the efficiency and effectiveness of the EIA process as an environmental management tool is not a straight forward exercise. Several approaches have been developed and practiced internationally especially in the developed countries and the decision to select and utilize one has to consider the specific context of the process in the country where it is enacted.

The research started by intensive literature review pertaining to the EIA process itself to identify what forms the best practice in the adoption and implementation of this environmental management tool and its role in development planning.

In addition, a study of the developed EIA process evaluation approaches was undertaken parallel to the review of country cases where such approaches have been utilized.

At that stage, a careful reading of the Palestinian environmental relevant context was necessary to decide on the implementability of such approaches and suitability of qualitative measurement dimensions that are to form the aspects of the intended analytical review of the effectiveness of the EIA system in Palestine.

The effectiveness of the EIA system in Palestine will be looked at from procedural, substantive and trans-active aspects. Addressing these aspects in the effectiveness context demand the utilization of different research methods to be able to assess their current standing and draw conclusions on shortfalls and improvement potentials. The utilized research methods covered:

- Review of secondary sources: this included the review of laws, policies, plans and guidelines relevant to the environmental impact assessment to assess the breadth of their coverage and the binding status they have.
- Data collection and analysis: this included key informant interviews and research questionnaires.

## **2.2 Data Collection**

Two data collection methods were utilized, namely: key informant interviews including those carried out during site visits to industrial establishments and questionnaires. The data collection phase began in June 2006 and ended in late December 2006.

The interviews were held with staff from the EQA, consulting firms and establishment owners where aspects covered in the designed questionnaires were utilized to drive the interviews in a semi-structured manner –especially in the case of interviewing establishment managers and owners - to obtain comprehensive feed back that could be cross-checked with data collected by distributed questionnaires.

For questionnaires, two of them were utilized. The first questionnaire (Appendix 1) was addressing staff of sectoral authorities with environmental relevance, university professors, researchers and other experts with professional expertise relevant to EIA, pollution prevention and environmental protection, in addition to technical staff working at industrial establishments, to get their feed back and perceptions of the EIA process as a whole especially as pertaining to the undocumented aspects of the process.

The composition (by working institution) of the first questionnaire covering 30 experts –environmental experts' survey- is shown in the figure 6:

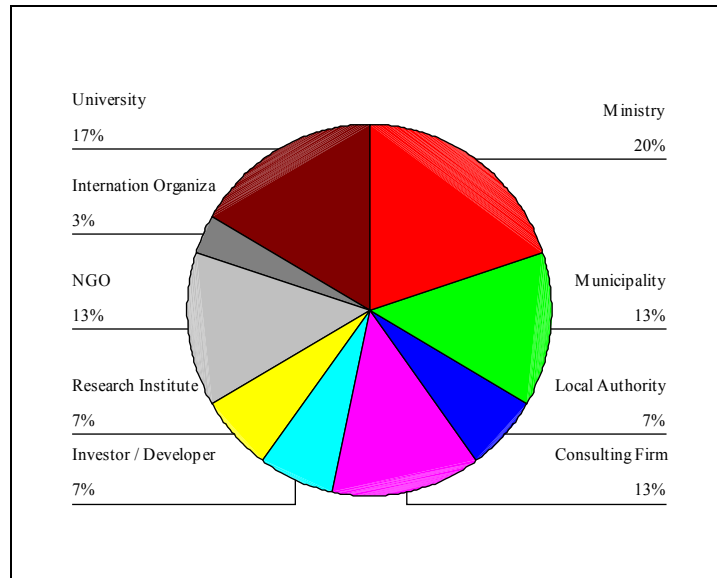


Figure 6: Composition of research survey sample #1 by institution type

The second questionnaire (Appendix 2) was addressing owners and managers of projects and establishments to get their feedback based on their experience within the specific establishment or project they deal with.

The composition (by establishment type) of the second questionnaire covering 26 establishments – developers' survey- is shown in the figure 7:

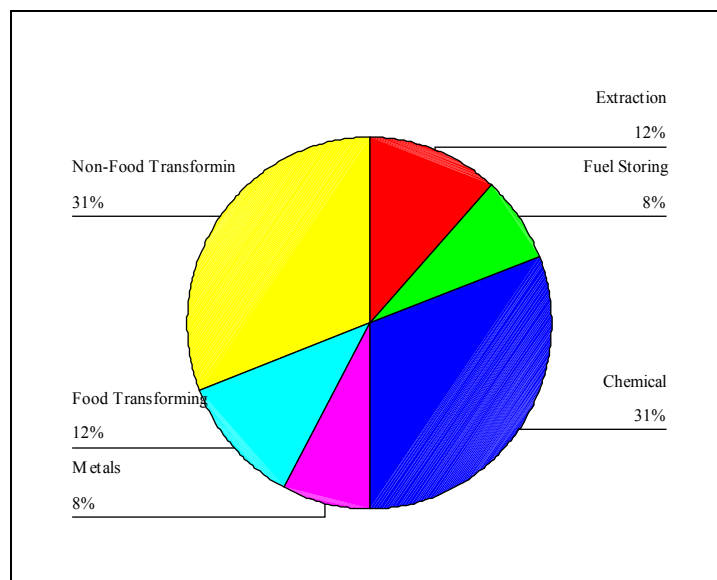


Figure 7: Composition of research survey sample #2 by type of industrial establishment

The questionnaires formulation went through the following process:

- Design of questionnaires
- Sampling/identifying the target recipients of the questionnaire (an issue that has already been taken into consideration in the questionnaire design from the beginning.
- Testing/adjustments of questionnaires: this was done through consultation with the supervisor and running a test of the data collection with limited number of planned recipients. This will assure that questionnaires content is coherent, clear, and comprehensive.
- Distribution and collection of questionnaires: this was done by email, fax and direct handing over. Extensive follow up was employed to secure a satisfactory rate of response. For the second questionnaire, it was more used as an outline of a semi-structured interview.

It is worth mentioning that during the data collection phase, many obstacles were faced which included:

- There were limited number of respondents and interviewees who has shown familiarity with the research subject and were able to provide reliable data and feed back. For instance, the environmental experts research questionnaire has been distributed among more than 70 recipients who were potential sources for feed back on Palestinian EIA practice due to their work positions and envisioned professional responsibilities especially those working in relevant government institutions. Only 30 valid and reliable responses were screened and utilized in the research

analysis phase. In the case of developers questionnaires, a similar situation was faced, where many establishment owners and managers were not familiar with the research core subject (EIA) or its relevancy to their establishment operations although its covered by the law according to the Palestinian EIA policy.

- For establishment managers and owners who were familiar with EIA, the subject, according to their understanding, was mainly linked with environmental approvals and permits granted for their businesses. This caused many of them to be hesitant to react openly and provide sought feed back and information although they were assured that gathered data are to be used for the sole purpose of academic research and that their business names will not be even mentioned in the body of the research.
- Discretionary and limited access to certain documents at relevant governmental institutions especially as is the case for public projects documents, appraisal and EIA reports.
- General restrictions on mobility between the different Palestinian cities within the West Bank which made utilizing more site visits for data collection difficult.

### **2.3 Analysis**

Following the completion of questionnaires collection, screening was done to verify completeness, consistency and reliability of collected data. This is of special importance since drawing conclusions from data analysis serving analytical reviews is a judgment. It is therefore essential for that judgment to be as valid and objective as

possible, and to reveal this validity and objectivity. To achieve this, the evidence (data collected) was inherently being cross-checked by two methods:

- By research method: using several methods such as: secondary data review, surveys, individual meetings and observation from personal course of work.
- By respondent or source of information: deriving information from different kinds of sources such as governmental staff, consultants, researchers, proponents...etc).

Questionnaires' questions and multiple choice answers were coded so as to build a database that can be used statistical analysis packages to do statistical operations and provide summaries. Statistical Package for Social Sciences (SPSS) software was utilized to build the database and enter the questionnaires collected data.

Descriptive statistics (frequencies and percents) were concluded using SPSS software to provide summaries and present the consensus among the sample on the provided feed backs, concerns and comments as pertaining to actual practice and adoption of EIA in Palestine.

It is worth mentioning in this regard that the aim was not at conducting an analysis from the inferential statistics perspective of quantitative research methods serving hypothesis testing and correlation relationships between dependent parameters but, as explained earlier, organizing and summarizing the collected data in a manner that contributes to a more of qualitative analysis that builds on bench marking current status and identifying cons and pros by a comparative approach holding the requirements stipulated by laws and regulations and the best practice norms as identified in the



literature review as the reference basis to pinpoint the shortfalls and recommend rectification and performance up scaling measures.

## **Chapter 3: Results and Discussion**

### **3.1 Introduction**

Compared to many countries in the developing world, Palestine (enacted EIA in 1999) and other neighboring countries in region; such as Egypt (enacted EIA in 1994) and Jordan (enacted EIA in 1995), have been relatively late in introducing their EIA systems.

In this review for the EIA system in Palestine, the approach followed will be that utilizing the different evaluation and review models stemmed from the literature review and used to have a critical review of EIA systems in different countries both among the developed and developing world.

### **3.2 Systemic measures performance**

As have been explained earlier, systematic measures deal with quality assurance in practice and administration of the EIA process such that the criteria is mainly a reflection of the milestones of a given EIA process. The Palestinian EIA process is summarized in figure 8.

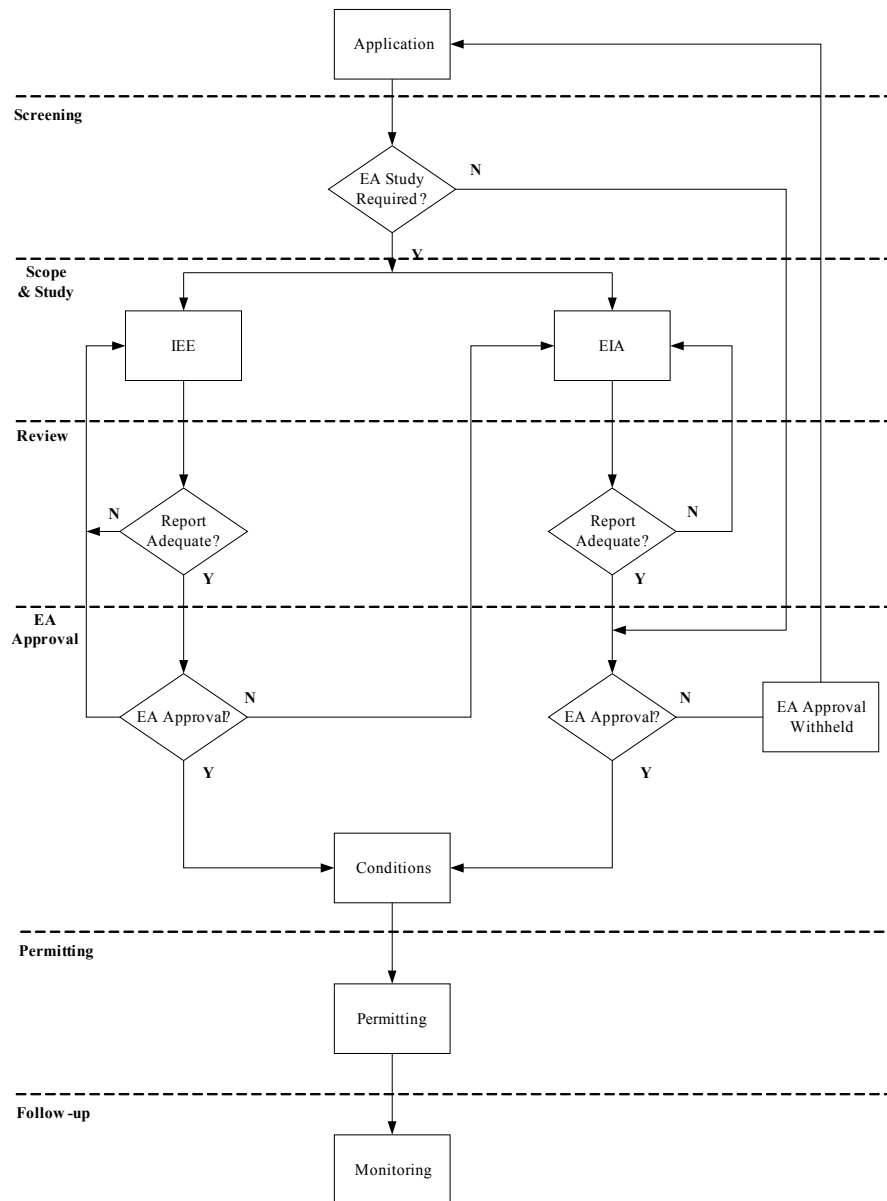


Figure 8: Palestinian EIA Process Flowchart (MEnA, 2000)

### 3.2.1 EIA legislation

As seen from the review provided in section 1.5.2, the development of the legal basis of the EIA system in Palestine has been a gradual process as EIA was initially adopted through a peace treaty resulting commitment on the Palestinian side in the year 1995 as per the clauses addressing the use of the EIA as an environmental

management tool, then the introduction of the guidance provided by the Emergency Natural Resource Protection Plan in the year 1998 particularly in the defined land zoning and associated policy and management tools for development activities, and finally by the formal introduction of the Palestinian Environmental Law of the year 1999 and Palestinian EIA Policy of the year 2000.

By considering the results of the experts' research survey conducted among the environmental community and the comments and feed backs that accompanied the responses, certain aspects in this regard draw the attention as per the consideration of the above laws for these aspects and the perceptions developed while dealing with these regulations in real life:

- General perception of the laws: considering the gradual introduction and breadth of coverage of these laws and regulations, the EIA process is perceived to have a secure legal basis where EIA regulations – especially the detailed law which is the EIA policy- cover most of the elements of the EIA process. This was reflected in the feed back of the environmental experts as shown in figure 9.

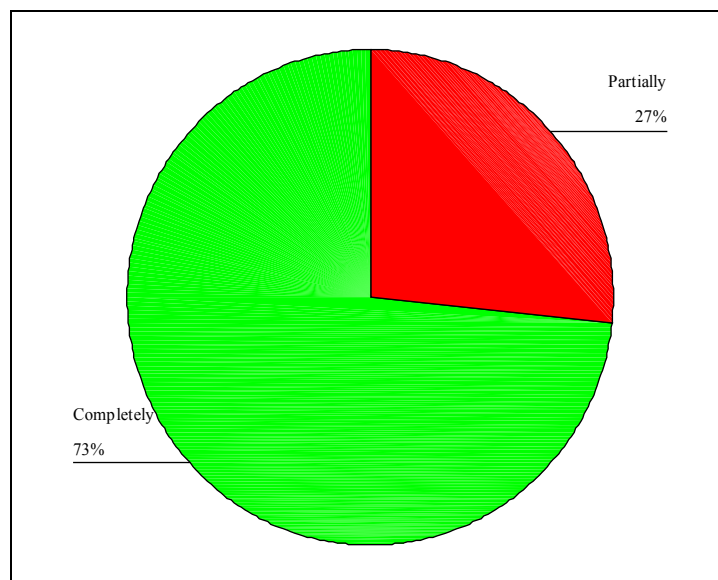
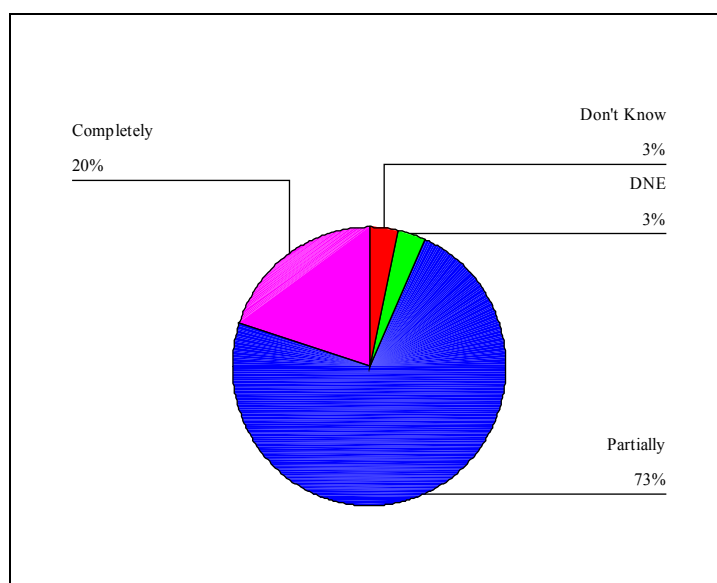


Figure 9: Experts' answers on a question "Is EIA Implemented through primary legislation?"

(Percentage)

The legal provisions are also reflected in administrative arrangements embodied by the environmental units within the governmental authorities that are to process the permitting applications submitted by the proponent that are linked to the environmental approval obtained through the EIA process. This was reflected in the feed back of the environmental experts as shown in figure 10.

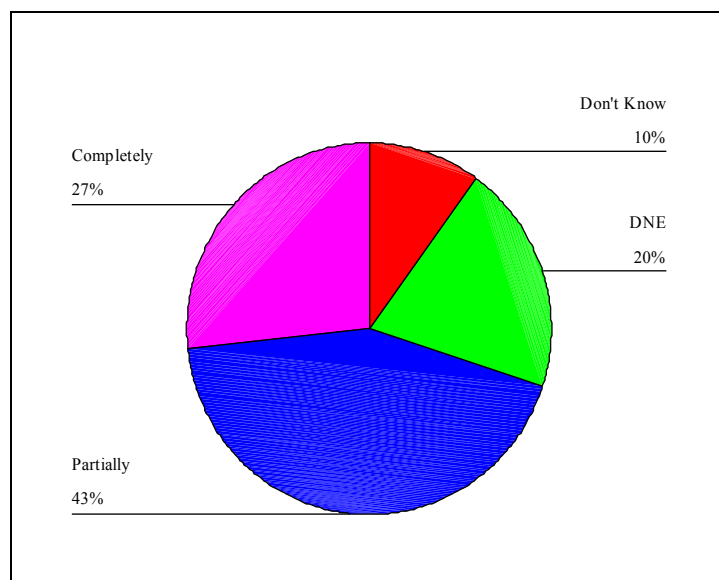


*Figure 10: Experts' answers on a question "Is EIA Implemented through administrative arrangements?" (Percentage)*

In this regard, each development project is looked at from two sides for the permitting procedure:

1. Project establishment: permit has to be obtained from the local governance competent authority (local council, municipality or ministry dependent on the location of the project and the vertical inline jurisdiction)
2. Project activity: permit has to be obtained from the relevant authority according to the type of the activity. For instance, industrial activities are under the authority of the Ministry of National Economy, whereas agricultural projects are under the authority of the Ministry of Agriculture.

The regulations provide a solid legal ground for compliance monitoring and enforcement (as shown in figure 11 below) especially in chapter 3 of part 3 of the Law, and stipulate the right of the proponent to appeal against decisions in the context of the EIA.



*Figure 11: Experts' answers on a question "Is there a secure legal basis for compliance monitoring and enforcement?" (Percentage)*

The policy specifies the list of activities that are subject to its provisions and applies to new projects as well as to the expansion of existing projects. The policy also specifies time limits within which the competent authority – EQA - must process the different submittal received by the proponents and take the decision to proceed to the next stage ending with the final decision regarding the environmental approval.

- Retrospective implementation of EIA: the EIA policy provides the legal basis for the environmental auditing of existing projects as per annex 5 of the same policy. However, the level of emphasis and detail on this aspect is very limited. The experts' research survey showed that 50% of the surveyed sample indicated that this legal basis does not exist, while 23% did not know that it is in place. The

feed back of the environmental experts on this EIA legislative aspect is shown in figure 12.

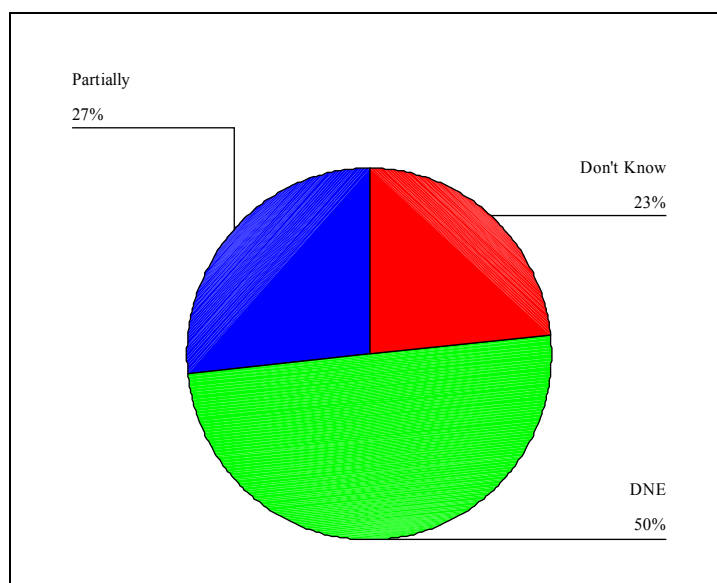


Figure 12: Experts' answers on a question "Is EIA Implemented retrospectively?" (Percentage)

- Appeal and dispute settlement mechanisms in the context of the laws: the appeal process is limited to the proponent - competent authority relation as it takes place in the bilateral interaction during the process with no involvement of other legal or higher reference bodies when disputes arise. Also, the procedural guidance to the public appeal to EIA decisions is not elaborated or specified although this right is emphasized in the laws and regulations (especially in the general principles of the Environment law of the year 1999). This was considered as a symptom of partial adoption for this legal aspect of the EIA as indicated by the environmental experts response as per figure 13.

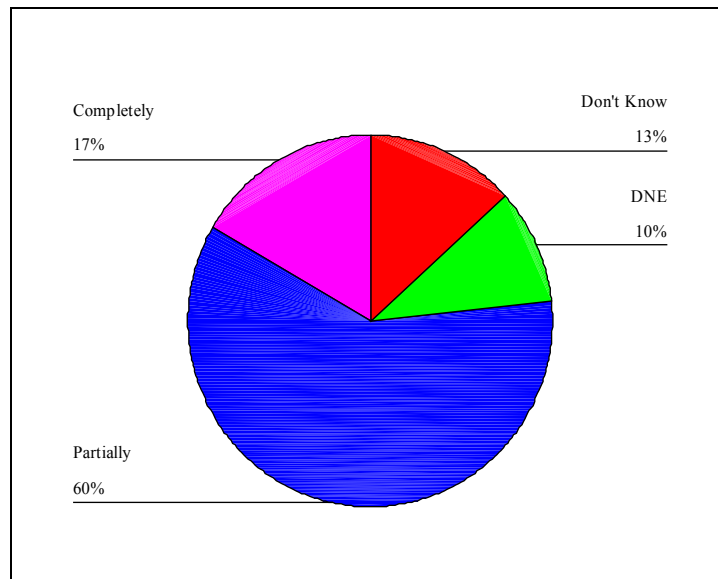
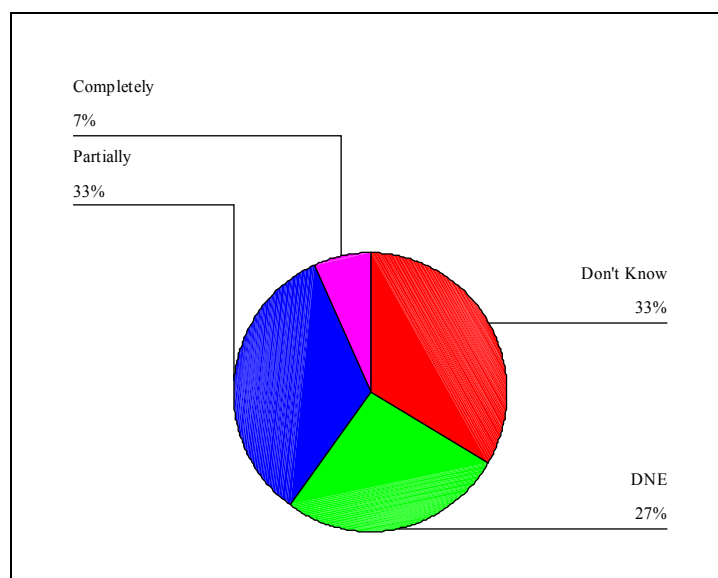


Figure 13: Experts' answers on a question "Is there a legal basis for appeal and dispute settlement?"

(Percentage)

- Strategic environmental assessment: the EIA policy provides the legal basis for SEA as per annex 4 of the same policy. However, the level of emphasis and detail on this aspect is very much limited. The experts' research survey showed that 27% of the surveyed sample indicated that this legal basis does not exist, while 33% did not know that it is in place. The feed back of the environmental experts on this EIA legislative aspect is shown in figure 14.





*Figure 14: Experts' answers on a question "Is there a legal basis for Strategic Environmental Assessment ?" (Percentage)*

### **3.2.2. EIA administration**

The Palestinian EIA policy sets the Palestinian EQA (previously MEnA) as the competent authority as well as indicating the relevancy of an inter-agency committee to be formed from different ministries and PA bodies (Ministries of industry, local government, transport, agriculture, health, tourism and antiques, planning, and both water and energy authorities) which is in harmony with the fact that many governmental bodies do have within their mandate issues that are directly related to the environment and its protection through their permitting powers. The provision for expanding the committee to include more members is also stated according to the complexity and nature of the subject development.

The set roles of the EQA towards meeting its responsibility as a competent core agency for EIA includes:

1. Taking all necessary measures to achieve the EIA goals during the course of implementation by establishing and managing appropriate procedures.
2. Playing an advisory role for proponents and stakeholders involved in the EIA process and furnishing guidelines and best management practices towards achieving compliance with the requirements of EIA.
3. Monitoring the compliance of developments with the conditions of granted environmental approvals, and maintaining a database for all developments with their associated status (subject to IEE, subject to EIA, environmental approval granted with conditions... etc)

4. Holding reviews and evaluations for the EIA system and its performance to identify inefficiencies and come up with recommendations and suggestions for adaptation to improve the system.

In addition to the identification of the roles of the environment core agency, those of the other government agencies represented in the EIA committee are also defined, which include:

1. Conducting scoping for EI studies and issuing proper terms of reference.
2. Reviewing environmental assessment reports and recommending decisions on environmental approval.
3. Assisting in follow up and compliance monitoring of the granted environmental approvals for development activities.

However, the perception of these administrative arrangements among the environmental community spots the light on many aspects as relating to the efficiency and completeness of these arrangements in implementation. The definitions of the roles and responsibilities of the involved parties did not conclude into a cutting edge understanding of the administrative framework of the EIA process among the environmental community.

This is seen in the experts' research survey (table 6 below shows the respondents feed back) as the surveyed environmental community did not conclude to a dominant theme of that framework although the presence of the EQA as a core agency in the EIA administrative arrangement was very well perceived as shown in figure 15.

Table6: Experts' answers on a question "What best describes the administrative framework of EIA system?"

Question: What best describes the administrative framework of EIA system?		
Answers	Frequency	Percent (%)
One central agency (EQA)	8	27
Several central agencies (EQA and other ministries)	6	20
One central agency and several local authorities (EQA and municipalities and/or local councils)	12	40
Several central agencies and several local authorities	4	13

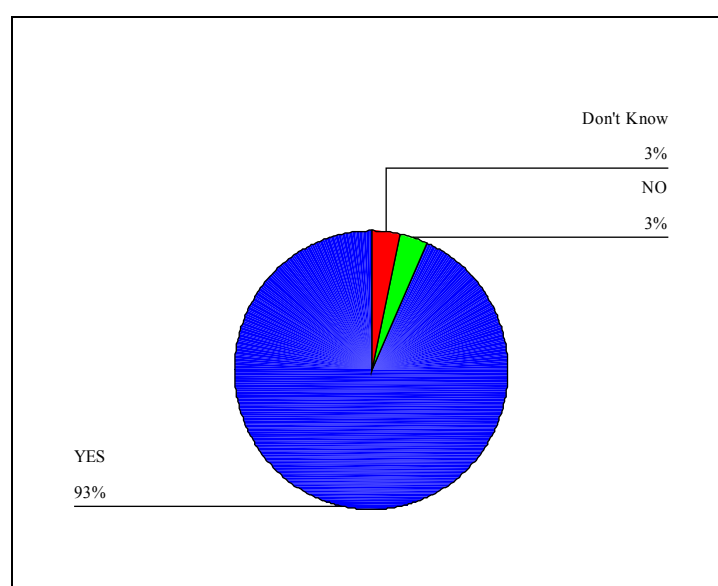


Figure 15: Experts' answers on a question "Is there a core environmental agency responsible for the development and management of the EIA system?" (Percentage)

Although, there is not necessarily a best practice model for this framework, as difficulties can arise from both a centralized and decentralized approach, it is the extent of interagency coordination that is critical in this respect. In this regard, it is clear that the Palestinian EIA administrative framework in place is centralized in principle, having the EQA as the core of it, but still decentralized in implementation with the formal mechanisms for interagency coordination put in place on a limited and reactive basis. This was indicated by the environmental experts responses in the experts' research survey as shown in table 7.

Table 7: Experts' answers on a question "To what extent are interagency coordination mechanisms for EIA implementation in place?"

<b>Question: To what extent are interagency coordination mechanisms for EIA implementation in place?</b>		
<b>▪ Formal mechanisms established</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly Agree	1	3
Agree	17	57
Disagree	11	37
Strongly Disagree	1	3
<b>▪ Management units set up in sectoral authorities</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly Agree	5	17
Agree	19	63
Do not know	3	10
Disagree	2	7
Strongly Disagree	1	3
<b>▪ EQA support for integration of interagency participation</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly Agree	2	7
Agree	16	53
Do not know	2	7
Disagree	9	30
Strongly Disagree	1	3

Either an EIA specific active process initiates this coordination through the formed committee or a pollution event that triggers formal involvement for remedy and enforcement of environmental protection and not a coordination committee that holds meeting on regular basis with general defined agenda for follow up of general environmental issues knowing that for instance many of the ministries that are member of the EIA committee have established environmental units within their structures. Another example on the limitation of the coordination taking place is that the Governor Office in each district has an established environmental unit and is not a member of the EIA committee or formally introduced as a player in the EIA process where it receives complains from the public regarding pollution events and

environmental violations. More on this lack of coordination was raised up by many of the EQA staff regarding wastewater treatment plants as pertaining to the roles and responsibilities of the EQA and PWA in the corresponding EIA studies.

The power vested in the EQA by the laws and regulations is perceived to be strong giving emphasis to enforcement of decisions made by the issuance of the environmental approval or after that during the follow up on pollution control monitoring and other compliance conditions. For instance, the EA committee headed by the EQA has veto on permitting of projects not complying with environmental specified standard as per the process of the EIA by declining the grant of the environmental approval which is a prerequisite for other permits and licenses. These powers are well perceived by the environmental community experts as shown in figure 16.

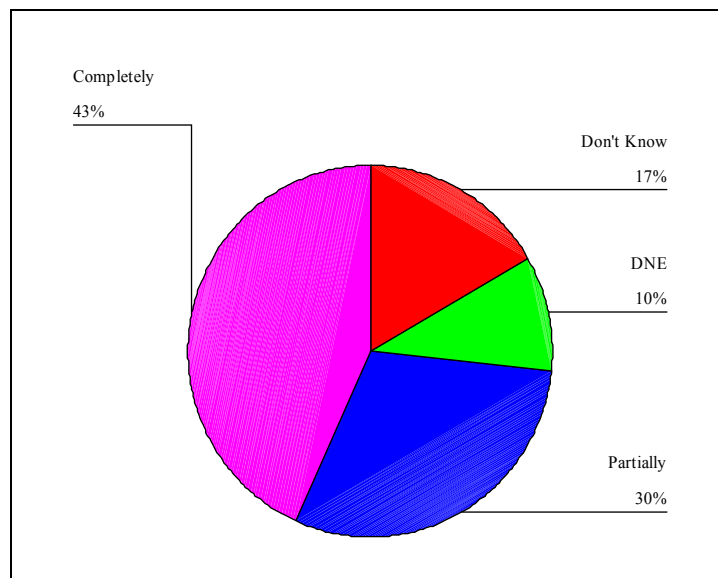


Figure 16: Experts' answers on a question " Do the EA review bodies have a veto power over the decision-making?" (Percentage)

Still, the enactment of these powers –especially in follow up- is hindered by other factors to be discussed later in this chapter.

### 3.2.3 EIA Procedure

Since the EIA is focused on the environmental approval issue as its main interface with development project, plans and programs. It calls for two types of assessment for proposed or extensions to existing developments that are:

- Initial Environmental Evaluation (IEE), which refers to a general reconnaissance level study of environmental impacts requested when significant impacts are not certain.
- Environmental Impact Assessment (EIA), which hereby refers to the detailed study.

In the course of conducting either of these assessments, a set of performance systemic measures must be available.

- **Screening**

Screening is well established in the Palestinian EIA procedure as shown in figure 17.

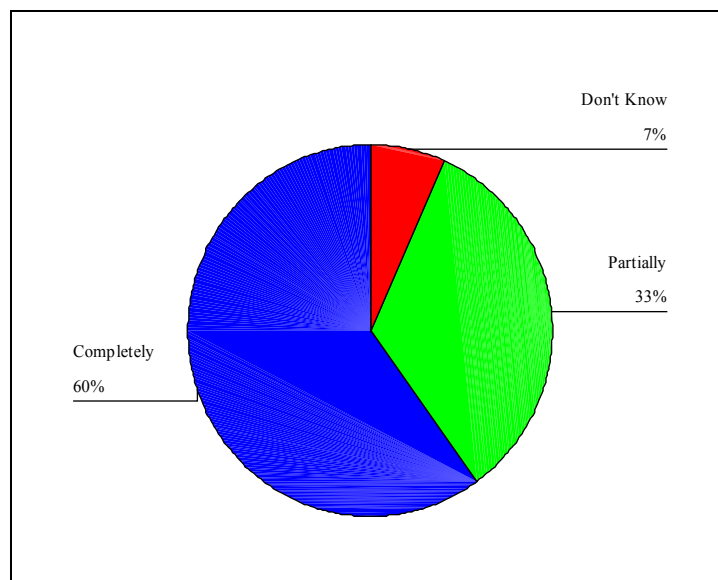


Figure 17: Experts' answers on a question "Is screening formally included in the EIA procedure?"

(Percentage)

The adopted approach to screening involves the use of lists. According to the Palestinian EIA policy, the following projects require EIA as a pre-requisite for obtaining environmental approval leading to the final permitting of the development:

1. Power plants (including gas turbines, substations and super tension lines)
2. Quarries and mines
3. Waste water treatment plants including main sewers
4. Cement plants
5. Solid waste disposal sites
6. Hazardous waste disposal sites
7. Plants producing, storing or using hazardous substances
8. Airports and landing strips
9. Seaports, jetties and harbors
10. Refineries
11. Industrial estates
12. Major dams and reservoirs
13. Major roads
14. Steel mills

When the project is one from the list above, the proponent applies and obtains a preliminary approval from relevant ministry or local authority like a municipality or a local council. Upon obtaining that approval, he applies for environmental approval from the EQA, where the EQA informs the relevant ministry or local planning authority of the initiation of the process so that no permit is granted till the environmental approval is issued.

Projects that are not listed in the mandatory EIA projects group and extensions to existing projects of the types requiring a mandatory EIA shall be screened to decide whether an IEE or EIA would be needed before granting environmental approval.

Such screening considers the requirements of the land use plans in the development area in addition to the special characteristics of the subject project pertaining to:

- "Use a natural resource in a way that preempts other uses of that resource,
- Displace people or communities,
- Be located in or near environmentally sensitive areas such as natural reserves, wetlands, or registered archeological and cultural sites,
- Generate unacceptable levels of environmental impact,
- Create a state of public concern, or
- Require further, related development activities which may cause significant environmental impacts." (MEnA, 2000)

For these projects (not having EIA as a mandatory obligation), the proponent encloses the environmental approval application in his preliminary approval application submitted to the relevant ministry or local authority like a municipality or a local council, which in their turn refers the application to the EQA for screening purposes.

The screening is done by the EA committee headed by the EQA, where additional information might be asked for to be provided by the proponent. The results of the screening would be one of three:

1. To decide on the need for an IEE or
2. To decide on the need for EIA or

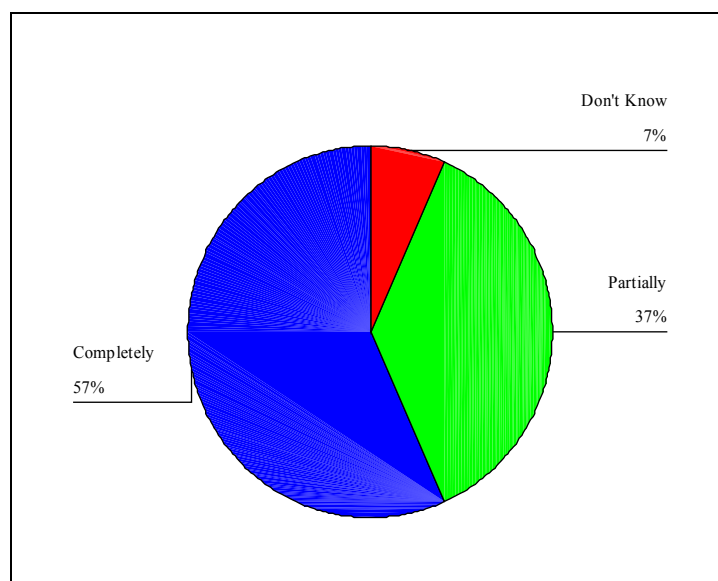


### 3. To grant environmental approval (conditional or unconditional)

Considering the nature of the development activities taking place in Palestine especially in the industrial sector which tends to be mostly in the light industry category and is predominated by small to medium sized activities, and other major infrastructure development projects that are also limited in number, the screening approach seems satisfactory. However, if this approach is looked at from a broader aspect for future developments when a Palestinian state comes to existence and while looking at the current operational conditions in existing developments, certain aspects that can receive improvements are identified. Among those is the limitation of the use of the lists approach to only one list of activities that are subjected to mandatory EIA. Also the criteria used for screening of projects not on the EIA mandatory list is general and does not have thresholds that can give guidance to the developer himself on the environmental requirements of his activity.

#### ▪ Scoping

Scoping in principle is well established in the Palestinian EIA procedure as shown in figure 18.



*Figure 18: Experts' answers on a question "Is scoping formally included in the EIA procedure?"*

*(Percentage)*

The main aim is supposedly to enable the EQA to issue specific terms of reference (TOR) for different types of activity. This would allow simple TORs to be issued for routine projects, with more comprehensive TORs being produced for larger or more unusual projects.

However, the case in the Palestinian EIA process is the use of two generic forms of TORs, one is for all projects subjected to IEE and the other is for all projects subjected to detailed EIA, but not considering the extent, complexity and distinction between different projects subjected to either of the assessments. Although this is not a major shortfall considering the prevailing type of activities and the fact that the preparation of the TOR by the EQA does not relieve the proponent from the full responsibility for the EIA study since it is explicitly stipulating that the TOR only sets the minimum requirements needed to be fulfilled, but would contribute to the efficiency of the process knowing that the TOR is later used as a check list in the review stage.

So, although it was somehow understandable that some establishment managers indicated that no scoping studies took place in their cases, it was more of a compliant when their feed back indicated that they didn't receive terms of reference for the EIA study they were about to carry out as shown in table 8.

*Table 8: Developers' answers on two questions "Have you conducted scoping studies?" and "Have you received ToR from the competent authority?"*

<b>Question: Have you conducted scoping studies?</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Yes	5	42
No	7	58
<b>Question: Have you received a ToR?</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>

<b>Question: Have you conducted scoping studies?</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Yes	6	50
No	6	50

- **Study content**

Either it is an IEE or EIA study, a report has to be prepared documenting the relevant information about the development project, the surveys and field assessments that took place, the analysis and planning methods utilized, the stakeholders meet, and the mitigation measures that are proposed in addition to follow up and compliance assurance measures.

What distinguishes between the IEE and EIA reports is the level of detail, depth of analysis and comprehensiveness especially that an IEE might have as a decision to go and conduct an EIA study. In IEE, dependency is heavily on existing information whereas in EIA sufficient surveys and field assessments would be required. Whereas IEE studies are to contain proposals for the monitoring and management of environmental impacts, EIA studies are to provide an environmental monitoring and management plan.

The formal requirements of the two studies require:

- ✓ Following a specific structure and providing a minimum required content as per the issued TOR.
- ✓ Assessing different alternatives
- ✓ Tackling economic, social and cultural issues
- ✓ Analyzing the severity and significance of impacts
- ✓ Proposing mitigation measures
- ✓ Addressing the environmental management and monitoring of the project.

One shortfall in the requirements of the content of these reports is not asking for the inclusion of a non-technical summary of the study that would enhance access to the conclusions and findings of these studies by the regular public lacking the environmental professional background. The perception of those requirements as reflected by the feed back of the environmental experts is shown in table 9.

Table 9: Experts' answers on a question "What is formally included in the requirements of the EIS?"

<b>Question: What is formally included in the requirements of the EIS</b>		
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>	
	<b>Yes</b>	<b>No</b>
Specific Structure and content	30 (100%)	0 (0%)
Assessment of alternatives	29 (97%)	1 (3%)
Addressing Socio-Economic issues	30 (100%)	0 (0%)
Mitigation measures	30 (100%)	0 (0%)
EMPs	27 (90%)	3 (10%)
Non-technical Summary <sup>1</sup>	8 (27%)	16 (53%)

- **Review of environmental impacts studies**

This stage in the EIA process is considered a critical one since its results are aimed at reaching an informed and justified decision making regarding the environmental approval of the subject project and thus concluding the results of the whole process. Because of that, the efficiency of the EIA process depends enormously on the performance in this stage and that is why Fuller (1999) sees the review stage as the most important quality control feature of EIA.

According to Wood (1995), review can utilize one or more of various methods for ensuring objectivity; including: "the accreditation of EIA report review consultants, the setting up of an independent review body, the publication of the results of the review and the involvement of consultees and the public."

As indicated earlier, the review begins in the form of an initial one for the submitted draft IEE or EIA report to determine whether the minimum requirements

<sup>1</sup> 20% of the responses (frequency = 6) on this aspects was "Do not know"

set in the TOR were met or not. In this case, the TOR forms a check list for assessing the preliminary responsiveness of the undertaken study.

If the EQA decides that the report meets the minimum requirements, it asks the proponent to finalize it and informs him of its intention to accept the finalized report to be subjected for the detailed review.

The detailed review is carried out by the technical staff of the EQA with assistance from the EA formed committee. The EQA also if needed conducts its own stakeholder consultation in addition to that carried out by the proponent to cross check the findings and obtain more insight and clarifications on critical aspects of the study. In the case of complex or large projects, the EQA can retain an external specialized consultant to help in conducting the review.

So, either the initial review or the detailed review is considered, none of those objectivity assurance measures are explicitly or formally adopted by the Palestinian EIA system since no third party independent review, accreditation of review consultees or direct involvement of consultees and public are adopted. The feed back from the surveyed experts community on this issue is shown in figure 19.

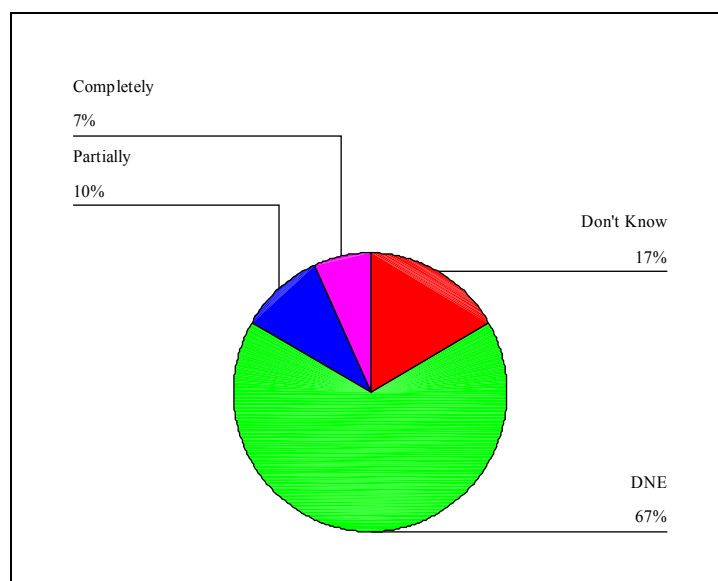


Figure 19: Experts' answers on a question "Is there an established mechanism for the involvement of independent parties for review purposes?" (Percentage)

Still, review bodies (members of the EA committee) are seen as completely independent from project proponents or initiators as shown in figure 20.

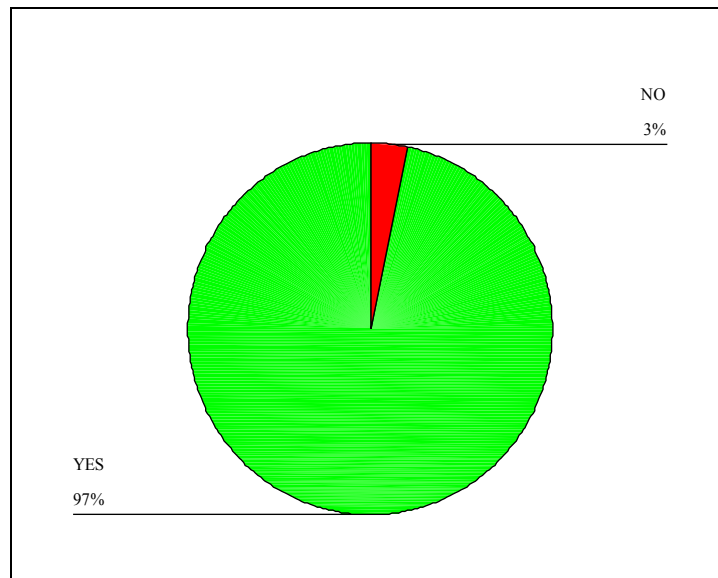
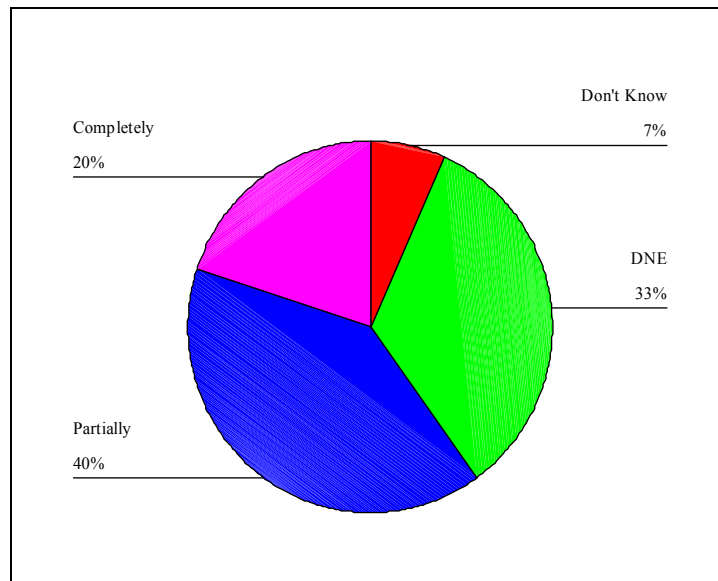


Figure 20: Experts' answers on a question "are review bodies independent from the project proponent?" (Percentage)

Even if projects are not that complex and merely a comparison against the TOR would prove satisfactory from pure technical views, the case is not that the technical capacity is in question but the overall efficiency and transparency of the process that are enhanced by the inclusion of those objectivity measures into the system.

Still, as was indicated by some of EQA staff met during the study, some indirect forms of public involvement are thought to be achieved for special types of projects that are traditionally known to attract the attention of the public more than other projects like wastewater treatment plants and landfills. This was also reflected in the experts research survey as shown in figure 21.



*Figure 21: Experts' answers on a question " Is the publicity of the EIA decisions and results formally adapted?" (Percentage)*

This indirect involvement which more takes the form of information dissemination is done as the completed EIA or IEE report is being sent to the EA formed committee, it is also sent to the municipality or local council where the project is located for review (this party could also be part of the review committee). Still, no concrete follow up is assured to be done by the local governance body to get the public involved in reviewing the study and receiving objection. Still, there are cases reported where project proponents provided explanations and replied to raised queries as shown in figure 22.

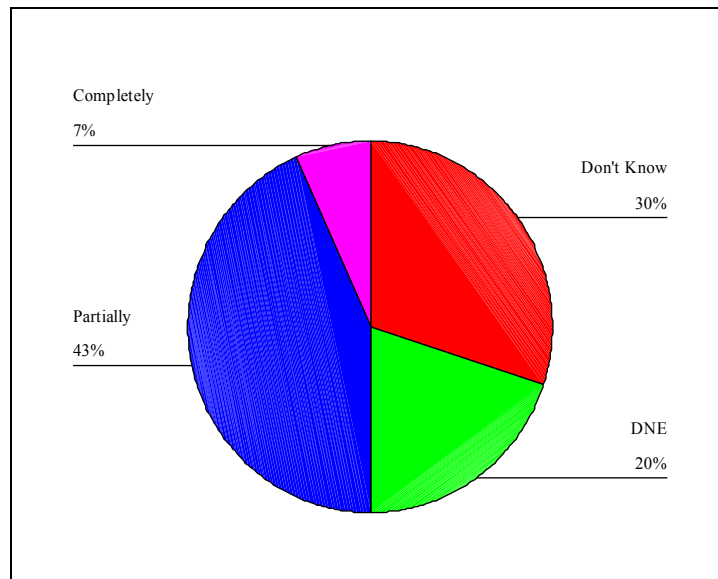


Figure 22: Experts' answers on a question " Is the proponent formally obliged to provide explanations and reply on public queries?" (Percentage)

After completing the review, the EQA request the proponent to attend a meeting in which the submitted report is discussed, and may request the proponent to make revisions or elaborate more on certain issues before final recommendations are drawn. This aspect is well perceived as have been shown by the experts feed back as per figure 23.

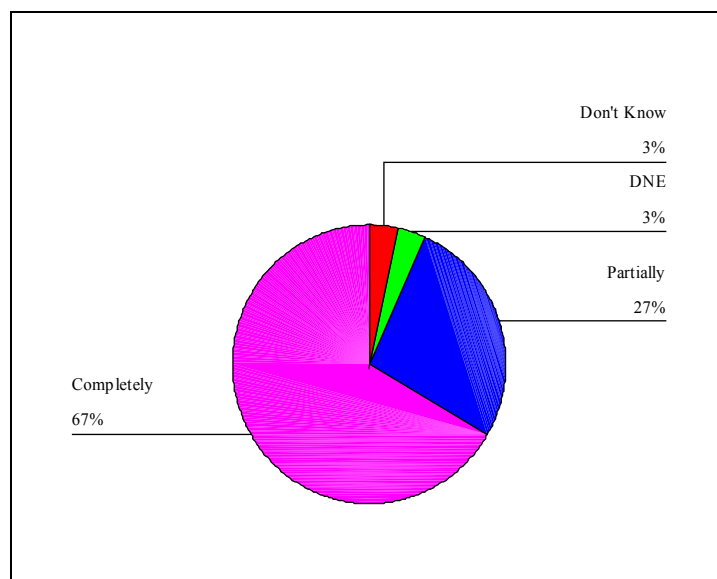


Figure 23: Experts' answers on a question " Is the proponent formally required to revise the EIA report based on the EQA comments?"(Percentage)



- **Decision making**

The most important decision made during the EIA process is whether to approve the project or to reject it. This decision can happen in either of three stages in the Palestinian EIA process:

1. Screening: upon finishing screening, the decision is made to whether conduct either an IEE or EIA or grant the environmental approval.
2. Completion of IEE: following the final review of the IEE i.e. after the modifications and clarifications requested in the meeting between the EQA and the proponent have been incorporated into the study, the EQA decision comes as one of the following:
  - Granting environmental approval for the project with associated conditions.
  - Requiring a detailed EIA study for the development activity for considering environmental approval.
3. Completion of EIA: following the final review of the EIA i.e. after the modifications and clarifications requested in the meeting between the EQA and the proponent have been incorporated into the study, the EQA decision comes as one of the following:
  - Granting environmental approval for the project with associated conditions.
  - Reject the project.

Although the evaluation of the effect of EIA on decision making in many jurisdictions internationally shows that projects subject to EIA are not often rejected or withdrawn prior to approval (Wood, 1995; Sadler and Verheem, 1997), procedures for dealing with cases of rejection in any system is a determinant factor (besides public participation in decision making that is also missing in the Palestinian case) in its transparency which are called the appeal system either to be utilized by the public or the proponent himself.

The presence of a well established appeal system from the developer side (proponent) is essential because the EQA has to decide on the environmental acceptability of the project before the sectoral authority concerned takes the final decision on whether to allow the project to proceed i.e. grant the permit or decline granting it and in cases of dispute a transparent independent system is seen as the guarantee of fairness and intrinsic motive for compliance with made decisions in the next phases. Its presence from the public side is not of less importance for the same reasons in cases of appeal against made decisions especially when public participations is not properly enacted along the process.

Looking into the Palestinian EIA system, no real appeal system can be considered in place since there is no involvement of a supreme independent authority to resolve appeals regarding decisions on EIA cases or involvement of judicial agencies to resolve appeals regarding the legal and/or administrative process of EIA since the EQA itself is similar to a governmental ministry and such higher authorities are needed. This was apparent in the feed back of the environmental experts shown in table 10 and figure 24.

Table 10: Experts' answers on a question " Have roles been defined and proper actors assigned for carrying them out?"

<b>Question: Have roles been defined and proper actors assigned for carrying them out?</b>		
<b>▪ Involvement of independent parties for review</b>		
Answers	Frequency	Percent (%)
Completely	0	0
Partially	7	23
Does not exist	23	77
Do not know	0	0
<b>▪ Involvement of a supreme independent authority to resolve appeals regarding decisions on EIA</b>		
Answers	Frequency	Percent (%)
Completely	6	20
Partially	10	33
Does not exist	11	37
Do not know	3	10
<b>▪ Involvement of judicial agencies to resolve appeals regarding the legal and/or administrative process of EIA</b>		
Answers	Frequency	Percent (%)
Completely	3	10
Partially	3	10
Does not exist	19	63
Do not know	5	17

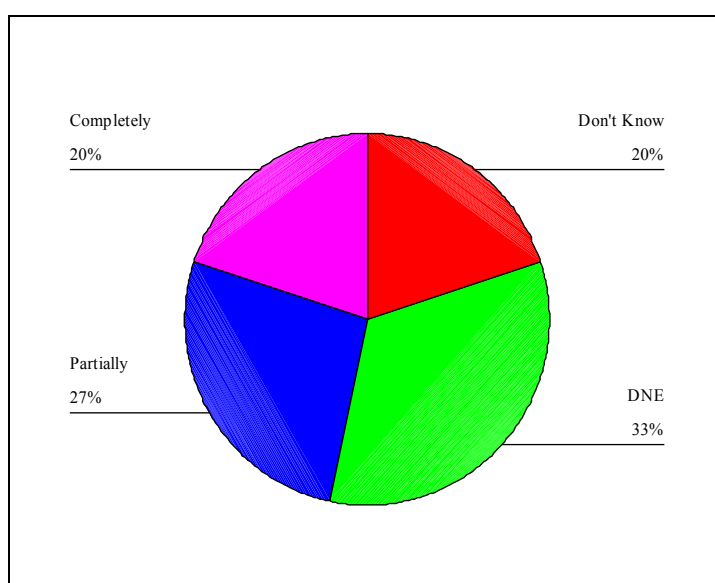


Figure 24: Experts' answers on a question " Is there an established mechanism for appeal and dispute settlement?" (Percentage)

So, as a result of absence of those higher parties, and within the relation, in cases of disputes pertaining to the EIA, between the EQA and the proponent, the Head of the EQA is seen as a higher body where stuck and problematic things are referred to him to have the final say but still he could not be considered as an independent party. According to feed back from the EQA staff, most of the activities pertaining to EIA studies activities within the authority including approvals are lead by the director of the EIA department in the EQA. The Head of the EQA is only involved in cases of disputes or projects of strategic aspects. Still, "the proponent has the right to consider the reasons of for withholding the environmental approval, to redesign the project accordingly, and to submit a revised application". (MEnA, 2000)

- **Environmental management plans and monitoring of impacts**

The legal requirement for environmental management plans (EMPs) is set in the Palestinian EIA policy where it should be incorporated into the body of the report for projects requiring full EIA study, whereas proposals for such plans are to be included in IEE reports. However, there is no clear specification of the contents of such a plan in either the Palestinian environmental law or the EIA policy to establish a more solid legal basis for their minimum requirements.

Besides the focus on assuring that mitigation measures are a core inherited part of both EIA and IEE studies dealing with all identified adverse impact or those potentially forecasted, having an EMPs is essential to the prolonged environmental acceptability of a given development project through having appropriate follow up and monitoring of adverse impacts and taking necessary remedy actions.

So, upon concluding the final recommendations of the review stage, and when the decision is made by the EQA with assistance from the EA committee to permit the development project, the decision is expressed in the form of an environmental

approval. The environmental approval draws on the findings of the IEE or EIA report and puts emphasis on core aspects covering:

- Mitigation measures for the adverse impacts on the environment associated with a compliance schedule to define the time frame for the implementation of these measures and the achievement of their goals.
- Compliance measures (operational) required for meeting environmental standards relevant to the development activity.
- The proponent responsibilities in relation to reporting for the project monitoring and follow up.

As implied by the environmental approval and in principle, follow-up monitoring of impacts once the project is in operation is a mandatory requirement and it is the EQA that is responsible for follow up and the supervision of activities for which approval is granted in coordination with other concerned sectoral authorities.

Also, developers are required by law to keep written records of the environmental impact of their establishment's activities and it is again the EQA who is responsible for checking the compliance of the results with relevant environmental standards. The EQA is required to coordinate dealing with violations with sectoral competent authorities and initiate the necessary procedures which might end up with shutting down the establishment by suspending the environmental approval. The regulations and laws have given the EQA enough powers to undertake these responsibilities.

Still, the implementation of these mandates and general responsibilities when questioned in practice, quite a weak operational modality is encountered.

No consolidated mechanisms and procedures are actually there like monitoring guidelines, schedules of regular inspection of facilities and projects, and the other supporting logistical and information technology methods<sup>2</sup>. In practice, monitoring takes place mostly in response to problems and/or complaints from a negatively effected party who is generally from the public. When the EQA receives the complaint, it informs the most relevant government authority which depends on the type of the project or establishment that is reported to be in a violation condition. As guidance, the sectoral permit granted for that establishment is considered as per the following examples:

- Petrol or gas filling station: Palestinian Energy Authority
- Farm : Ministry of Agriculture
- WWTP: Palestinian Water Authority
- Factory: Ministry of National Economy
- Other small businesses (family business): Municipality or local council where the project or establishment is located.

In their turn, those relevant government agencies might receive the complaint directly from the effected party, and then they coordinate their actions with the EQA.

No third party independent involvement such as NGOs is formally adopted in the monitoring process, and the requirement of the frequent reporting by the proponent regarding the environmental conditions of his establishment or project is not met in practice. The follow up and monitoring results, when takes place, are not structured in a report format that is intended for access of other parties or for public release. This was reflected in the feed back obtained from the environmental experts as shown in table 11.

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<sup>2</sup> Constrains and limitations pertaining to lack of resources (both financial and manpower) contributes to the shortfalls in establishing regular follow up and inspection programs as would be discussed later in this chapter.

Table 11: Experts' answers on a question " Are there formal EIA compliance monitoring programs in place?"

<b>Question: Are there formal EIA compliance monitoring programs in place?</b>				
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>			
	<b>Completely</b>	<b>Partially</b>	<b>DNE</b>	<b>Don't Know</b>
Carried out by EQA	2 (7%)	14 (47%)	10 (33%)	4 (13%)
Carried out by sectoral authorities	1 (3%)	13 (43%)	11 (37%)	5 (13%)
Involvement of independent bodies	0 (0%)	4 (13%)	20 (67%)	6 (20%)
Frequent reporting by proponent	0 (0%)	6 (20%)	20 (37%)	4 (13%)
Mechanism for review of monitoring results	2 (6%)	5 (17%)	18 (60%)	5 (17%)
Local authorities take part in monitoring	1 (3%)	15 (50%)	10 (34%)	4 (13%)
Public access to monitoring results	1 (3%)	4 (13%)	23 (77%)	2 (7%)

Of course, in most cases, it is one from the public who reports a violation or pollution situation and thus some follow up is inevitable by the one who reported since he is directly negatively affected by that situation despite that no formal secure channel is well know to the public to do that. So the public find their way to report violations where the relevant authorities they address in their reporting are not based on formal established channels but on common sense. The most outstanding example on that is the environment unit in the governor office which receives complaints regarding environmental violations but is not a member of the EIA committee although pollution control is officially under the EIA and other ministerial licenses and is to be coordinated by the EIA committee.

The whole law reinforcement atmosphere in Palestine is suffering from drastic set backs due to the prevailing political and economical situation in view of the Palestinian Israeli conflict. The Environment is not an exception to this situation. As a result, it is unusual for the relevant sectoral authorities including the EQA to act on

the basis of unsatisfactory results where monitoring is undertaken. This was reflected in the feed back obtained from the environmental experts as shown in table 12.

Table 12: Experts' answers on a question "Are EIA decisions effectively enforced?"

<b>Question: Are EIA decisions effectively enforced?</b>				
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>			
	<b>Completely</b>	<b>Partially</b>	<b>DNE</b>	<b>Don't Know</b>
Penalties for violators	2 (7%)	2 (7%)	25 (83%)	1 (3%)
Formal channels for public to report violations	3 (10%)	15 (50%)	8 (27%)	4 (13%)
Participation of legal bodies in enforcement	1 (3%)	5 (17%)	23 (77%)	1 (3%)

For instance, many industrial establishments do not follow proper methods for disposal of their processes wastes and create some environmental health risks, and yet they continue to be operational. In addition, no active and effective involvement of judicial agencies in EIA enforcement is taking place.

### **3.2.4 Public participation**

In the Palestinian EIA process, public participation comes under a broader concept that is stakeholders consultation, where the stakeholders in the EIA process includes any person in his natural or legal capacity with an interest in, or affected by, a development activity.

A solid legal basis in the process exists for stakeholders' consultation. On one hand, the policy establishes the stakeholders' consultation as a mandatory requirement in conducting EIA studies. On the other hand, such consultations are set as an optional requirement for IEE studies. So, in EIA studies, the question is about the extent of such consultations whereas in IEE studies, it comes to whether they are needed or not.

For both EIA and IEE, consultations may also be required during the scoping and TOR preparation, where the EQA in coordination with the EA committee sets the



minimum requirement for it. Also, depending on the complexity of the project and the significance of its impacts, the EQA can carry out its own consultations.

All stakeholders consultations, covering parties consulted, methods used, and results concluded, are to be included in the IEE or EIA studies reports, and such reports must be made available for the stakeholders for review and commenting.

Still, as shown by the experts' research survey, and despite all these legal requirements and emphasis put on stakeholders' consultation process covering the public among them, EIA is still regarded as a technical exercise solely involving government agencies and professional experts and thus the public being a stakeholder in the process is not given the proper attention.

Stipulations of generalities pertaining to public participation –as part of the consultation process- in laws do not contribute to the effective and value adding enactment of it especially when such participation is considered as both a quality assurance and transparency determinant of the whole process when it takes place in the critical stages such as studies review.

The general adopted theme of this participation is in the form of informing the public about the development activity in question and getting their very preliminary feed back, perceptions and concerns either during the preparatory stages of the study (scoping) or later during the study which is less likely since the activities tends to become pure technical analysis and preparation of proposals for remediation and mitigation of negative impacts on the environment with proceedings between the proponent represented by his technical consultant and the EQA. EIA consultants met during the study indicated that, since consultations are not mandatory for IEE, it is often ignored and is being undertaken only for certain donor-funded projects.

In brief, the generalities in the laws and regulations, and guidance provided by EQA guidelines have not been translated into either procedural roles or established practice manners to secure the following aspects of public participation into the EIA process (see the results of the experts' research survey below in table 13):

- Formal mechanisms for public notification and inspection
- Full access to the EIA reports
- Holding public hearings for EIA cases
- Active involvement in EIA review
- Active involvement in decision-making

*Table 13: Experts' answers on a question "Do the public have formal channels to participate in the EIA procedure?"*

<b>Question: Do the public have formal channels to participate in the EIA procedure?</b>			
<b>Aspect</b>	<b>Answers (Frequency and Percentage)</b>		
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Participation in EIA preparation stage	19 (63%)	9 (30%)	2 (7%)
Participation during study	9 (30%)	19 (63%)	2 (7%)
Participation after study completion (publicity of results)	6 (20%)	21 (70%)	3 (10%)
Access to EIA reports	6 (20%)	19 (63%)	5 (17%)
Organizing public hearings	11 (37%)	15 (50%)	4 (13%)
Participation in reviewing results	5 (17%)	21 (70%)	4 (13%)
Participation in decision making	3 (10%)	24 (80%)	3 (10%)

However, either occasional or indirect adoption of some of these public participation aspects takes place. In certain developments, as mentioned before that attracts the attention of the public being public projects in nature; like construction of landfills and wastewater treatment plants, EQA informs the municipality or local council where the project is located that the study report has been submitted and sends them a copy, concurrently with the study being given to the EA committee members for review towards the decision session, aiming at enabling the community public to

review the study and provide objections. Still, no concrete follow up is done by the local governance body to achieve that unless an initiative of holding a public hearing is adopted which is more likely to take place when NGOs, who act mostly as implementing agencies in donor funded projects, are involved and the methodology of rapid participatory approach is invoked in the planning and public awareness activities especially when it is known that there are certain pre-set ideas forming cultural obstacles in the way of the project implementation.

### 3.2.5 Other procedural determinants

Other systemic measures performance that is taken into consideration in EIA process includes:

- EIA process time limits: in the Palestinian EIA process, such limits do exist as shown in figure 25.

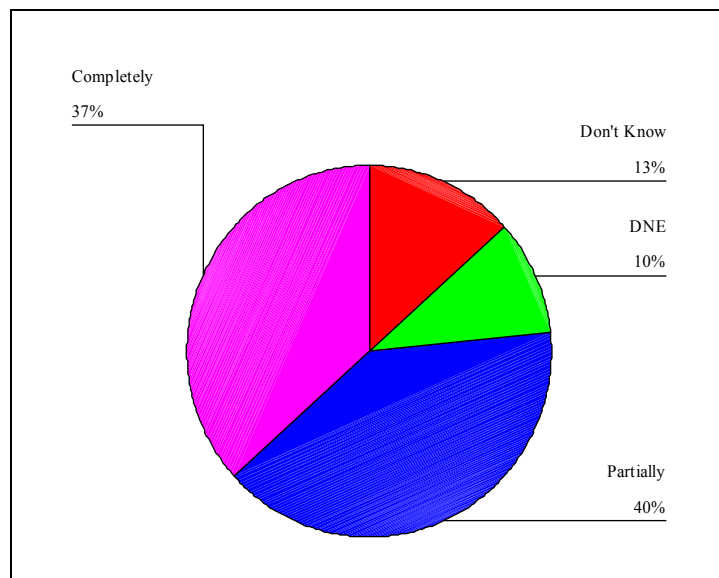


Figure 25: Experts' answers on a question " Is there time limits for each step of the EIA procedure?"

(Percentage)

They mainly address the time that would be taken by the EQA staff to process the various submittals of the proponent along the whole process.

Table 14 presents those time limits.

Table 14: Time limits within the Palestinian EIA process (MENA, 2000)

Stage	Activity	Time (days)	Due from
Application for environmental approval	Screening	14	Considering application as complete by the EQA
	Clarification on the status of application	7	The deadline is not met and a written compliant by the proponent is submitted to the head of the EQA
IEE	First Review	21	IEE report is accepted by EQA for review
	Between subsequent reviews	14	Following each addition or modification to the report and its submittal to the EQA
	Clarification on the status of report review	7	The above deadlines are not met and a written compliant by the proponent is submitted to the head of the EQA
EIA	First Review	28	EIA report is accepted by EQA for review
	Between subsequent reviews	21	Following each addition or modification to the report and its submittal to the EQA
	Clarification on the status of report review	7	The above deadlines are not met and a written compliant by the proponent is submitted to the head of the EQA
	More stakeholder meetings	42	EQA gives notice to all parties of the need for direct consultations

As seen from those stipulated time limits, issues that are not firmly consolidated into the process are not tackled such as formal time periods for public review and appeal by the proponent or public. Also, periods pertaining to the activities that are the responsibility of the proponent are not limited in time in view of the fact that he is the beneficiary of the whole process ending as early as possible to get the permit for his project.

- Use of consultants by the proponent to conduct the study: The proponent inevitable needs to use the services of a qualified environmental specialist to properly conduct either the IEE or the EIA. Use of the services of qualified specialists is also a requirement explicitly stipulated by the EIA policy. Although filing the initial

application for EA does not need in principle the assistance of a dedicated consultant, some developers indicated in their feed back that they did procure consulting services for that stage as shown in figure 26.

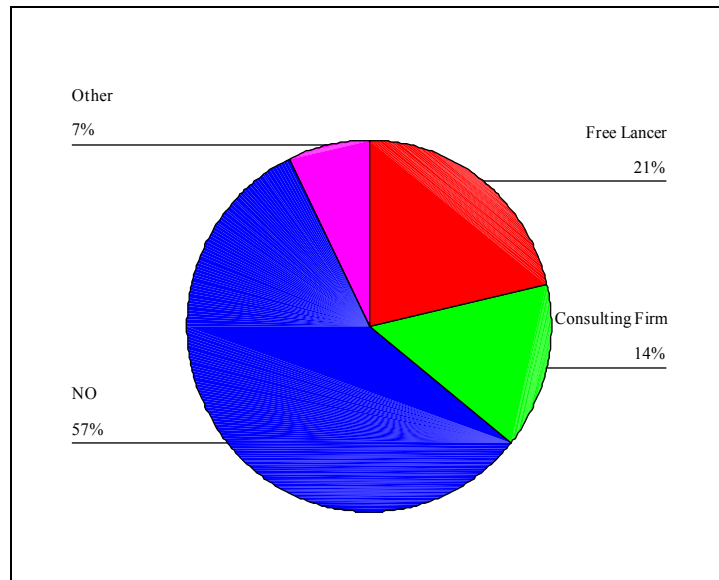


Figure 26: Developers' answers on a question " Have you used the services of consultants at the application stage?" (Percentage)

For the study stage, the consultants whose services were utilized ranged from consulting firms, university professors, and free lancers who had experience in such issues from previous works (some worked in the Arabian Gulf) as shown in figure 27.

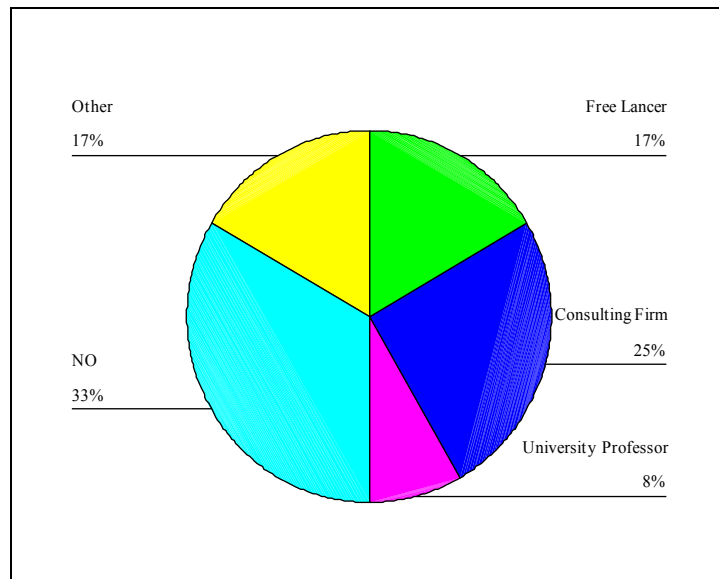


Figure 27: Developers' answers on a question " Have you used the services of consultants at the study preparation stage?" (Percentage)

However, the critic for this aspect falls under two folds:

1. Consensus on what is meant by a "Qualified Consultant". In Palestine, there is no concrete accreditation system for specialists in the environment and specifically in EIA. So, what is followed is the classification of the Palestinian Engineers Syndicate that does not have solid grounds for specialization under the general engineering disciplines that are predominant in country (Civil, Electrical, Mechanical, and Architectural).
2. The extent of this utilization that is not completely regulated as shown earlier in the developers' feed back and the experts' feed back in figure 28.

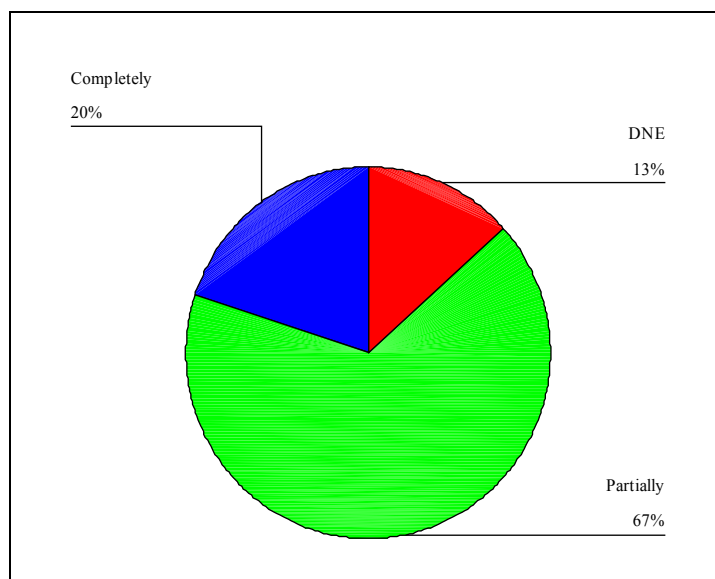


Figure 28: Experts' answers on a question "Is the use of consultants a mandatory requirement in the EIA procedure?" (Percentage)

### 3.3 Foundation measures performance

As have been explained earlier, foundation measures deal with issues that promote and augment the best practice of EIA so indirectly this would lead to the available resources that contribute to the efficient implementation of EIA.

#### 3.3.1 Existence of EIA guidelines

The use of EIA guidelines is widely advocated and many international examples exist (Donnelly et al., 1998). In Palestine, general and sectoral guidelines have been developed. The EIA policy itself is a guideline addressing the general EIA procedure. EQA have more guidelines on:

- EA submissions and main elements of EA reports.
- Guidelines for consultation of the public.
- Environmental management plans.

Also, some specific technical guidelines have been developed addressing several environmental issues but not in the specific context of the EIA including:

- Environmental regulations for stone quarries, extraction sites and crushers
- Environmental regulations for solid waste management
- Palestinian Standard for treated sludge
- Palestinian Standard for ambient air quality
- Palestinian standard for outdoor noise
- Palestinian standards for treated wastewater
- Palestinian Standard for air pollution emissions from stationary sources
- Palestinian Standard for industrial wastewater discharge to sewerage system

Yet, other development specific guidelines can be introduced to facilitate the future preparation of EIA studies especially for urban development projects that are expected to extensively take place when the Palestinian State comes into existence.

In addition, guidelines should be sought in areas pertaining to EIA stages and activities where there is little detail such as appeal, compliance monitoring and enforcement, and strategic environmental assessment. The perceptions of the current status of available EIA guidelines among the surveyed experts are shown in table 15.

*Table 15: Experts' answers on a question "Have relevant EIA guidelines been developed locally?"*

<b>Question: Have relevant EIA guidelines been developed locally?</b>				
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>			
	<b>Completely</b>	<b>Partially</b>	<b>DNE</b>	<b>Don't Know</b>
Sectoral Development Guidelines	5 (17%)	20 (66%)	5 (17%)	0 (0%)
EIA procedure guidelines	19 (63%)	11 (37%)	0 (0%)	0 (0%)
EIA report preparation guidelines	16 (53%)	14 (47%)	0 (0%)	0 (0%)
EIS review guidelines	6 (20%)	10 (33%)	9 (30%)	5 (17%)
Appeal guidelines	3 (10%)	12 (40%)	10 (33%)	5 (17%)
Follow up and monitoring guidelines	3 (10%)	7 (23%)	15 (50%)	5 (17%)
SEA guidelines	1 (3%)	7 (23%)	16 (54%)	6 (20%)



Still, the existence of guidelines does not necessarily mean that they are implemented in practice (Fuller, 1999). Also, the practical effectiveness of guidelines depends not only on the quality of their content but on other measures that accompany their implementation. Such measures include monitoring the quality of EIA practice and providing agency and staff training in their use (Brew and Lee, 1996).

Also, the experts' research survey and interviews showed that although the guidelines which have been prepared at the Palestinian level are regarded by environmental specialists as useful aids in the EIA context, preference is still towards the use of international standards and guidelines that are perceived to be more comprehensive and with broader coverage for environmental issues since local standards are in one way or another stemmed from them. In addition, those existing local guidelines need to be more disseminated among interested professionals and environmental experts to encourage their use and adherence to them.

Lessons learnt from other EIA systems should be considered in the formulation and use of guidelines by distinguishing between what are to be considered as minimum requirements that need to be fulfilled and shall be given a legal binding status and those offering advice towards improving the ultimate output of the process and systemizing the informed conclusions upon which decisions will be made by competent authorities. (Waldeck, 2003)

### **3.3.2 EIA system monitoring**

The Palestinian EIA system requires EIA system monitoring in legislation. This is stipulated explicitly in the responsibilities of EQA in the policy. However, no detailed procedures have been put in place to systemize improving the over all system by incorporating feed back from experience. Other symptoms for the shortfalls in this

respect confirmed by the experts' research survey, as per figures 29 and 30 below, include:

- No regular audits of EIA reports
- No regular audits of whole EIA system either utilizing quantitative (statistical reviews of studies) or qualitative approaches

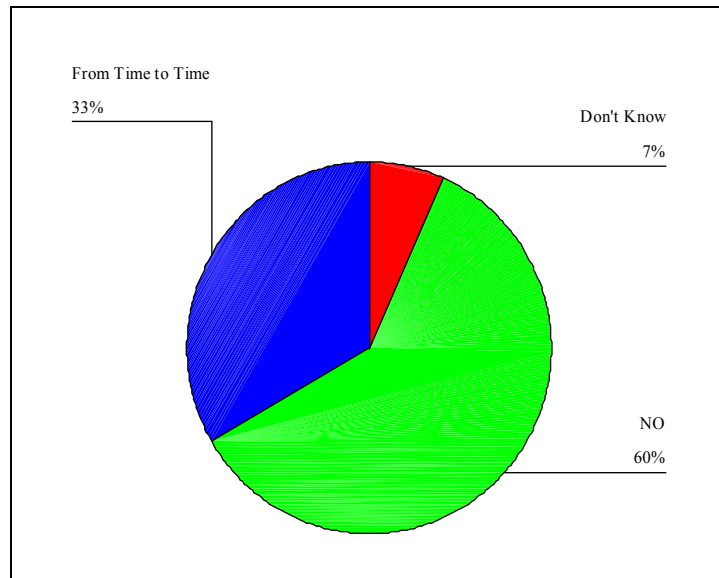


Figure 29: Experts' answers on a question "Are EIA reports subjected to auditing?" (Percentage)

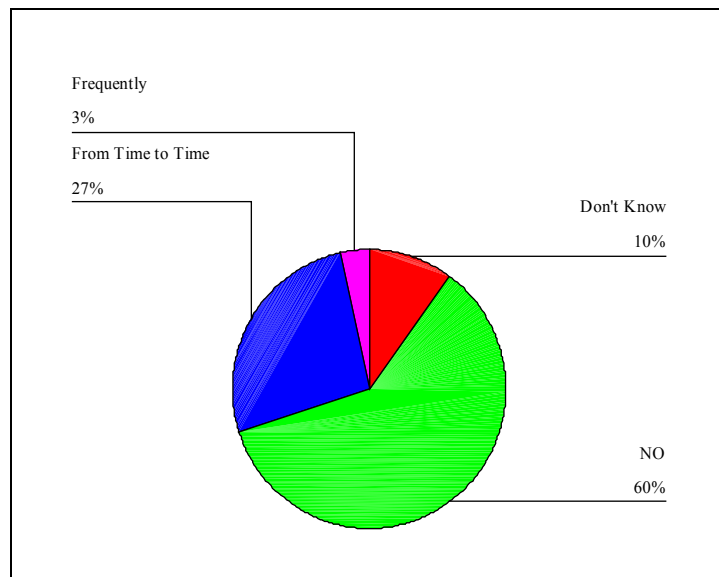


Figure 30: Experts' answers on a question "Is the EIA system as a whole subjected to auditing?" (Percentage)

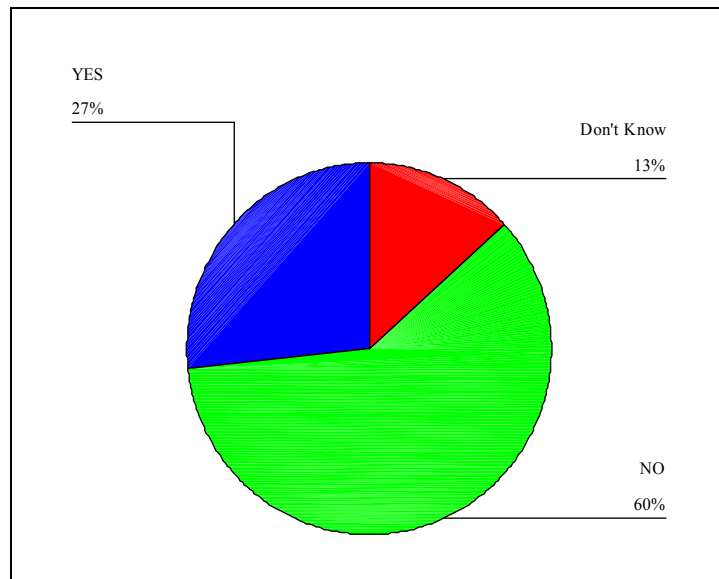
Researches have shown that EIA would have limited value unless follow up is adopted on the different scales pertaining to EIA among which is the macro scale i.e. evaluation and follow up on the EIA system as a whole. This aspect if overlooked would let aside all benefits of learning from experience (Marshall, 2005), which is the case to some degree in the Palestinian EIA system

However, considering the additions, such as the sectoral technical guidelines and other partial improvements that have been taking place into the EIA system, it is apparent that some segmented efforts were devoted to identify needs and improvement potentials but were not very much comprehensive leading to an overall audit process.

### **3.3.3 EIA expertise and availability of resources**

Palestine possesses some EIA expertise in universities (such as Al Najah National University, Birzeit University, Islamic University), research institutes (such as Applied Research Institute, Land Research Center –closed by the Israelis in 2002), government institutions, NGOs (such as Palestinian Hydrology Group, Palestinian Wastewater Engineers Group) and consultancies (such as Center for Engineering and Planning, Universal Group for Engineering & Consulting) –those of whom the experts' research survey sample consists-, but the experts' research survey showed that this is an aspect that needs to be supplemented.

No accreditation system of EIA consultants is adopted, and no legal requirement is indicating that as concurred by the survey results shown in figure 31.



*Figure 31: Experts' answers on a question "Is there an accreditation system for EIA consultants?"*

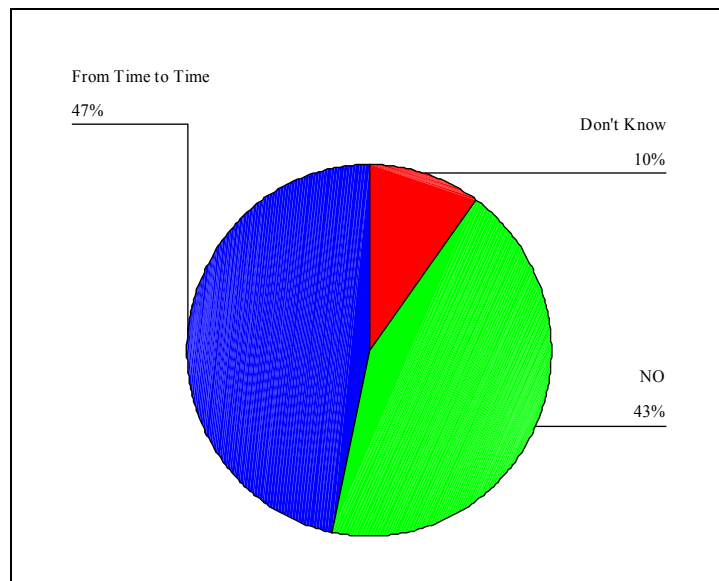
*(Percentage)*

This is because expertise among the specialists is not focused on EIA but on environmental engineering and planning in general which even makes the establishment of such system a long term goal. The closest relevant certification system is the engineers' registration in the Palestinian Engineers Syndicate. It mainly considers the main streams of engineering that are dominant in Palestine (electrical, mechanical, architectural, civil, industrial, chemical ...etc). The basis for this registration is the first university degree identifying the main engineer specialization and number of years that passed since the graduation date. Neither postgraduate studies nor the actual gained experience receives much attention, as for instance when consulting firms apply for certification in any of the various sub-disciplines under civil engineering like roads, drainage, structure...etc, the only requirement is an engineer with more than eleven years of experience to take the position of section head and any other civil engineer (could be fresh graduate) to fill the assistant engineer position under that specialization. Thus, the basis has to be revised and improved before extending it to the environmental specialties.

Training of EIA project managers, technical specialists and others involved in the EIA process is critical to the effectiveness of EIA and to increasing the standard of practice even in mature EIA systems (Wood, 1999). On a very non frequent basis, training sessions are organized by either the EQA or other non government institutions such as the Palestinian Industrial Federation (PIF) and Water Studies Institute in Birzeit University, targeting all interested staff working in the government, non government, and private sector companies involved in environmental planning and protection. No training was identified to have the EIA as its major theme. In addition, environmental training organized by different parties is done on an ad hoc basis with very little coordination between the various training programs since no comprehensive planned capacity building strategy is formulated yet. This was also concurred in the experts' research survey as shown in table 16 and figure 32.

*Table16: Experts' answers on a question "Are necessary measures put in place for capacity building in the nongovernmental sector?"*

<b>Question: Are necessary measures put in place for capacity building in the nongovernmental sector?</b>				
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>			
	<b>Frequently</b>	<b>From time to time</b>	<b>NO</b>	<b>Don't Know</b>
Training organized by EQA	0 (0%)	13 (43%)	13 (43%)	4 (14%)
Training organized by nongovernmental institutions	0(0%)	13 (43%)	12 (40%)	5 (17%)



*Figure 32: Experts' answers on a question "Are necessary measures put in place for capacity building in the governmental sector?" (Percentage)*

In addition to that identified need for enforcing technical capacity among environmental human resource, other shortfalls are spotted in the available supporting decision making and follow up tools including:

- Absence of an established database of subject experts and consultants for reference and consultation: no such database exists except for an incomplete list of experts at the EQA containing the names of some of the experts with whom the EQA has had past experience as shown in figure 33.

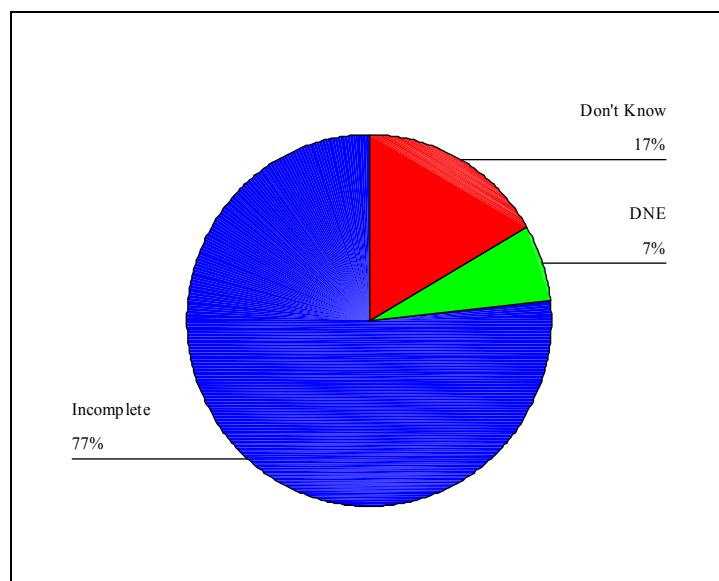


Figure 33: Experts' answers on a question "Is there any list at the EQA containing subject experts that can be called on for consultation?" (Percentage)

No current efforts are devoted for updating the list or upgrading it into a database.

- Absence of an established EIA tracking system
- Absence of an established database for EIA reports.
- Absence of an established environmental central database: No integrated central environmental database exists. Some data inventory exists for some environmental themes such as landfills at the EQA.

Also, other thematic data collection and organization has taken place under the several planning studies that have been conducted by MoP (former MoPIC) and many were put into geographic information data base. In addition, some environmental statistics do exist at the Palestinian Central Bureau of Statistics (PCBS). Other data in different form do exist at the Palestinian geographic information center, PWA and other research institutes and NGOs like ARIJ, PHG, and Water

studies institute at Birzeit University. Still, no integrated database of any form has been sought or concluded.

- Use of Geographic Information Systems (GIS) in EIA studies: Use of GIS in planning and engineering work is limited in Palestine and still at its beginning. No outstanding adoption of this powerful tool is perceived in EIA since this has to be based on a more general adoption of this technique in environmental and land use planning.

Those shortfall are identified as per the feed back of the environmental experts shown in table 17.

*Table 17: Experts' answers on a question "Are there adequate physical resources for EIA implementation?"*

<b>Question: Are there adequate physical resources for EIA implementation?</b>			
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>		
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
Database for subject experts and EIA consultants	8 (27%)	18 (60%)	4 (13%)
EIA tracking system	2 (7%)	26 (86%)	2 (7%)
Database for EIA reports	3 (10%)	24 (80%)	3 (10%)
Central environmental database	2 (7%)	26 (86%)	2 (7%)
Use of GIS	5 (16%)	23 (77%)	2 (7%)

In addition, accessibility by public, stakeholders or interested parties to presently existing tools and information at the relevant authorities is more discretionary and selective as shown in figure 34.



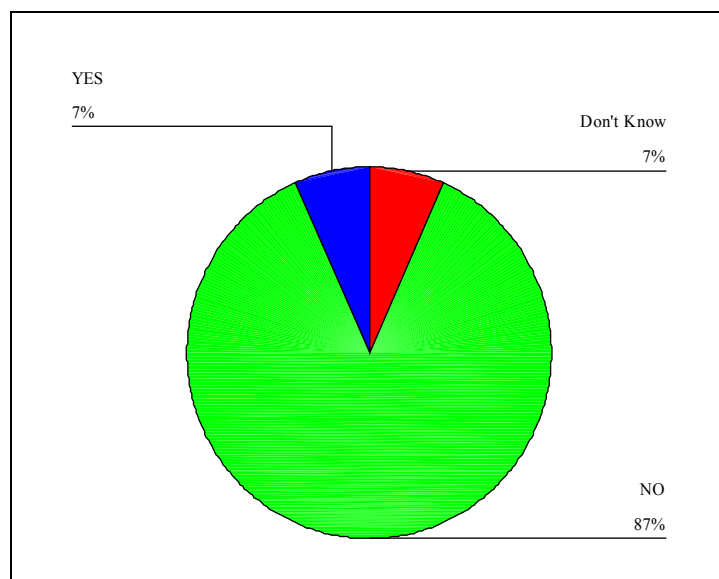


Figure 34: Experts' answers on a question "Are information and tools fully accessible by the public and interested stakeholders?" (Percentage)

### 3.4 Practical implementation issues

No matter how much developed are legislations, guidelines and other facilitation tools, unless commitment towards environmental protection through the implementation of all available management tools is adopted throughout all country levels, goals will be incompletely achieved. With respect to EIA, feed back from different parties have shown that governmental staff on both the central and local level (ministries and municipalities) has real commitment towards the implementation of EIA studies as shown in the feed back of table 18.

Table 18: Experts' answers on a question "Is there real commitment of governmental staff to implement EIA?"

<b>Question: Is there real commitment of governmental staff to implement EIA?</b>				
<b>Aspect</b>	<b>Answers (Frequency and percentage)</b>			
	<b>Completely</b>	<b>Partially</b>	<b>DNE</b>	<b>Don't Know</b>
At the central level (ministries)	5 (17%)	18 (60%)	3 (10%)	4 (13%)
At the local level (local governance authorities)	0 (16%)	24 (80%)	3 (10%)	3 (10%)

This spots the light more on the shortfalls pertaining to the availability of resources and enabling environment than those with attitudes and even technical beliefs as have been discussed earlier. Still, to maintain such commitment and reinforce it, more efforts should be devoted on capacity building, training, and also public awareness.

One effective feature of the system, especially in EIA cases of public sector developments, is the linkage with licenses systems under the various sectoral ministries that forces the environmental assessment to be initiated at the feasibility stage of the project and thus at least secure the best timing if it is decided to utilize the planning framework it provides. However, this linkage negatively influenced by the other mentioned shortfalls, has, in one way or another, misled the overall perception of the process goal. According to the experts' research survey (Respondents answers on question 7.1.2), 57% of the surveyed sample indicated that EIA is used to justify project decisions that have already been made, whereas 20% disagreed with this perception, and 23% were neutral. This showed that EIA is looked at more as a requirement for getting the environmental approval in the process of permitting the project or development activity in cases where private developments are in question. Also, in public projects (like infrastructure development projects); it is perceived as a complementary activity for meeting regulatory requirements especially those present in donor funded projects. This is also reflected in figure 35.

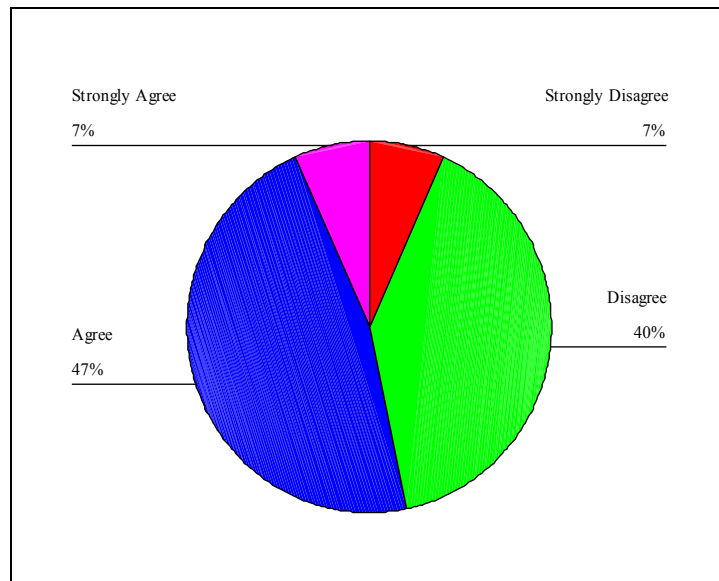


Figure 35: Experts' answers on a question "Are decisions highly affected by EIA results?"

(Percentage)

Hence, EIA is not utilized in the best way as an environmental planning and management tool but at the ultimate practice it is used to structure pre-decided proposals for dealing with environmental preservation and pollution prevention as relating to development projects; a situation that is faced in other EIA systems but at a smaller scale where defined alternatives are seen to reflect narrow project objectives and predilection towards a proposed action. (Steinmann, 2001)

Of course, that is quite different from considering it the main planning framework for benchmarking environmental conditions, doing assessments of several alternatives and concluding the optimum solution through technical objective analysis and also consensus through wide stakeholder participation despite the general perception that project proposals are adapted to EIA findings as shown in figure 36.

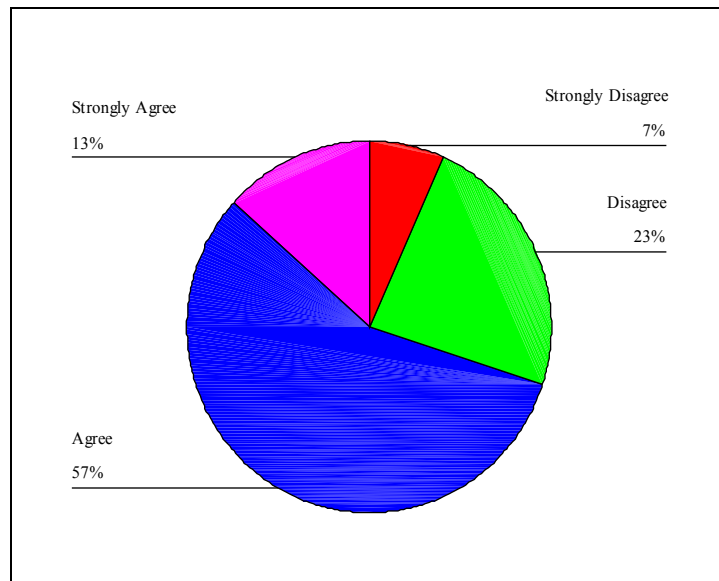


Figure 36: Experts' answers on a question "Are project proposals adapted to EIA findings?"

(Percentage)

This shortfall is more apparent in the private sector developments. The application itself and thus any resulting requested study are delayed to stages ranging from preliminary engineering design up to construction phases. As shown by the developers' questionnaire (Respondents answers on question 12), where for the establishments who did apply for environmental approval (14 establishments representing 54% of the surveyed sample), 22% applied during feasibility, 14% applied during preliminary design, 14% applied during detailed design, 7% after completion of final design, whereas 43% applied during construction where most of them conducted IEE (represents 71% of the sample). This was also reflected in the experts' feedback as shown in figure 37.

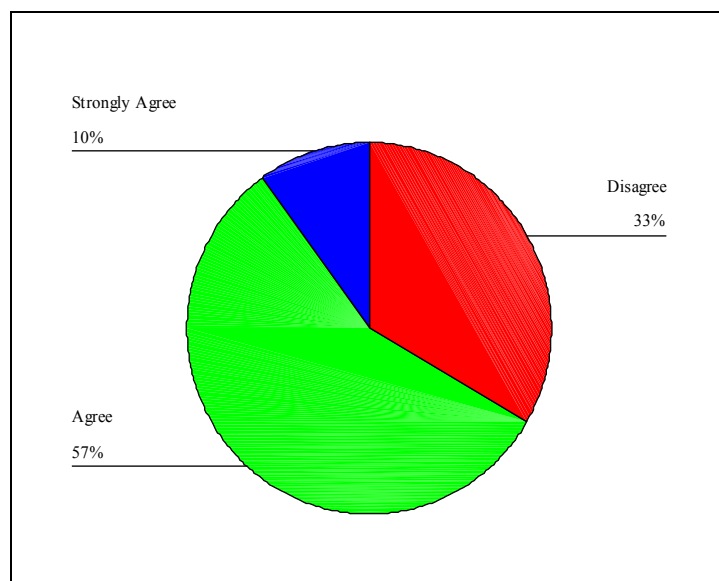


Figure 37: Experts' answers on a question "Are EIAs started at project feasibility stage?"

(Percentage)

One aspect that also reflects this weakness is the overlooking of the environmental auditing of existing projects, especially of the private sector, up to present although it has its legal basis in the Palestinian EIA policy and environmental law. As shown by the developers' questionnaire (Respondents answers on question 33), where for the establishments surveyed, who did not apply for environmental approval (forms 46% of the surveyed sample); only 33% were subjected to environmental auditing solely for special conditions in their permit renewal. Still, and in general, the developers themselves see that the linkage of EIA with the permitting procedures enhances the potentials of pollution prevention as shown in their feed back in figure 38 but emended that other factors should be also considered to effect this benefit that relate to the overall enabling environment.

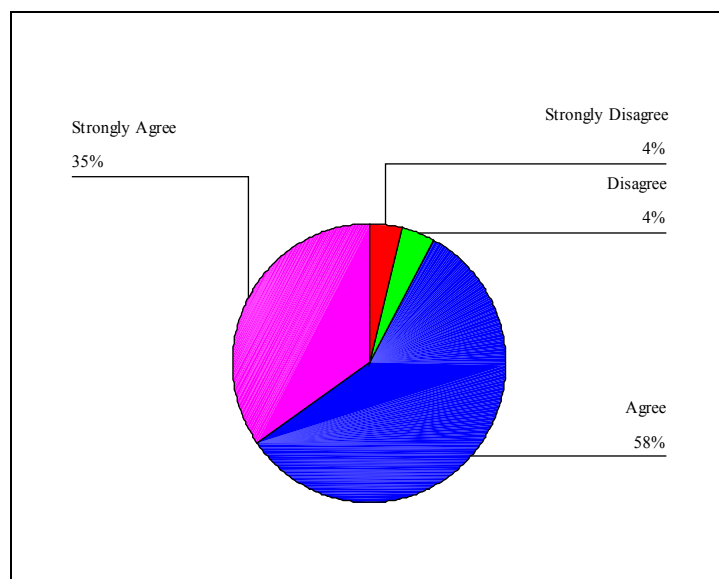


Figure 38: Developers' answers on a question "Do you think that linking the EA with permitting procedure contributes to pollution control?" (Percentage)

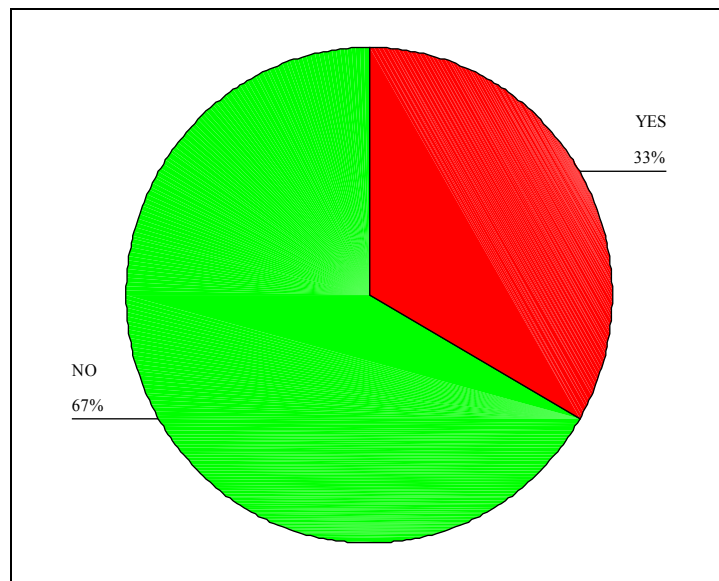
Looking more into the role of environmental assessment in private developments brings up more concerns on the efficacy of implementation. The developers' questionnaire accompanied by visits to other industrial establishments who did not fill the questionnaire<sup>3</sup> spotted the light on numerous implementation shortfalls pertaining to pollution control and environmental compliance that can be grouped into two main categories:

- Environmental assessment process related issues:
  - The following aspects of the EA are considered to be very weak:
    - Evaluation of alternatives within the study: For the establishments who did apply for environmental approval and carried an assessment study (12 establishments), only 33% of the sample did consider alternate options that relate to location (2

<sup>3</sup> Providing information on industrial establishments permitting status and environmental acceptability is considered a sensitive issue. Not all establishments are willing to provide such information in an informative way either by filling questionnaires on their specific case or allowing site inspection for research purposes. However, visits themselves allowed for quick observations and conclusions.

establishments) and pollution control methods (3 establishments).

Results are shown in figure 39 below.



*Figure 39: Developers' answers on a question "Have alternate options been studied in the conducted assessment?" (Percentage)*

- Public participation: For the establishments who did apply for environmental approval and carried an assessment study, only 33% of the sample did involve the public in the process. Results are shown in figure 40 below.

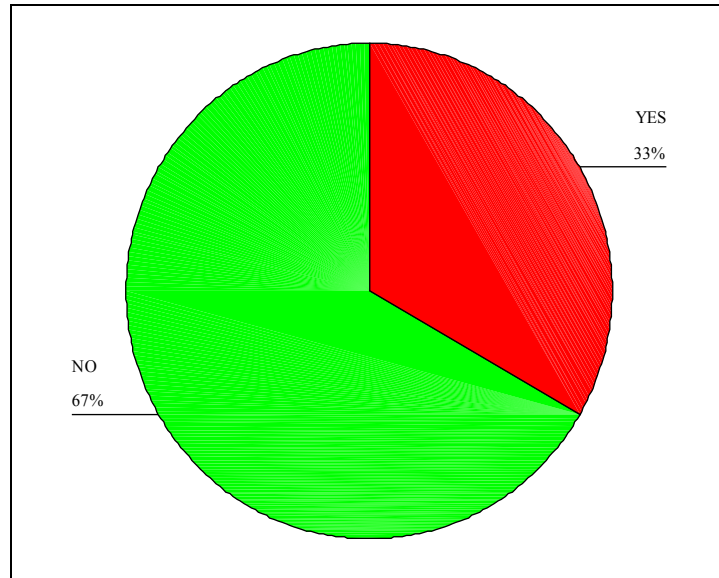


Figure 40: Developers' answers on a question "Has the public been involved in the study?"

(Percentage)

The results of the coverage, extent and aims of the reported achieved public participation are shown in figures 41, 42, and 43 respectively which reflects conformity with the issues discussed previously in section 3.2.4.

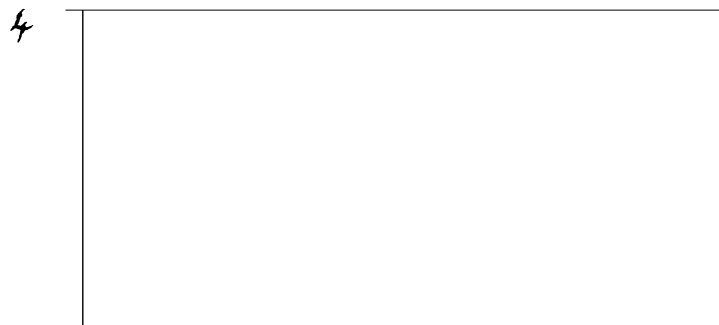


Figure 41: Developers' answers on a question "Whom of the public were involved in the Study?"





Figure 42: Developers' answers on a question "When were the public involved in the Study?"

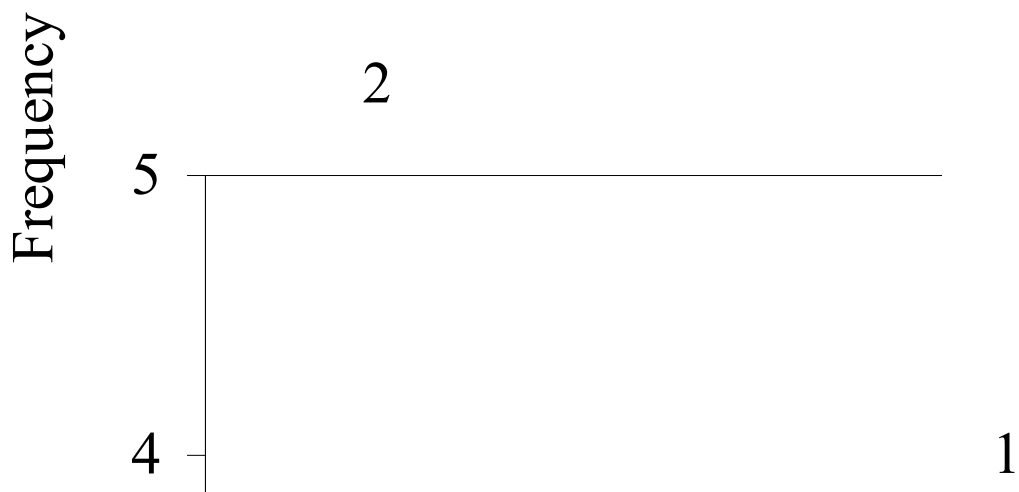


Figure 43: Developers' answers on a question "What were the aims of involving the public?"

- The following aspects of the EA are considered to be in need for improvement:

Frequency

- Breadth of aspects addressed in the environmental assessment done for the establishment (as documented in the study report) so that they reflect the specific case of each establishment apart from the common information shared by a certain type of development. Figure 44 shows the frequency of report requirements met among the reports prepared by the surveyed establishments who did carry environmental assessments.



Figure 44: Developers' answers on a question "What aspects were covered in your EIA study?"

Frequency

- Content and breadth of environmental approvals with the obligations on the developer side.
- Monitoring and follow up done by relevant authorities on establishments in addition to coordination between them that is felt to be weak by developers as shown in figures 45 and 46 respectively.

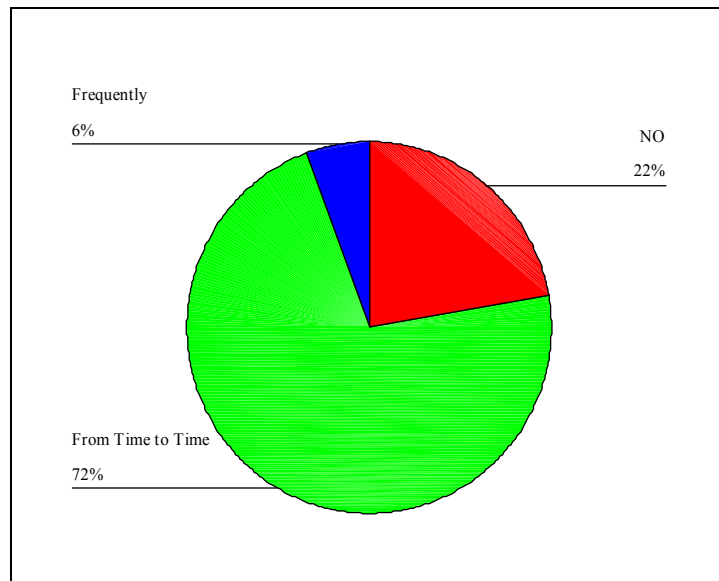


Figure 45: Developers' answers on a question "Is the establishment being subjected to environmental inspection?" (Percentage)

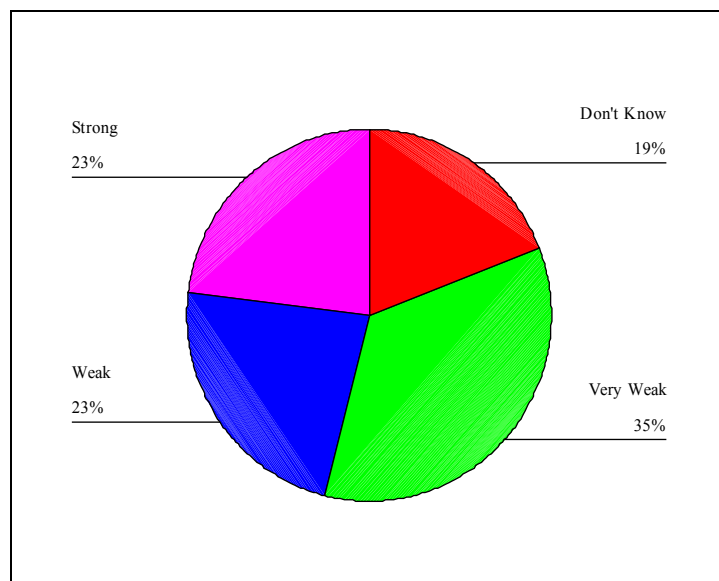


Figure 46: Developers' answers on a question "How do you assess the level of coordination between relevant authorities?" (Percentage)

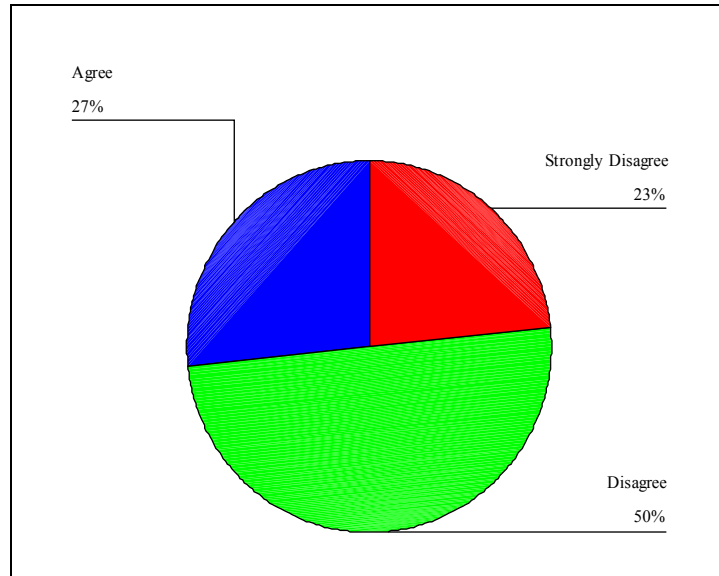
- General environmental compliance issues: the main issues of concern are the wastes and pollutants generated by the different establishments. The following examples explain the faced situation:
  - None of the visited industrial establishments have on-site treatment facilities. In addition, many of the owners and managers of industrial

establishment visited have no idea about the wastewater characteristics produced from their industry. So the generated wastewater is neither being treated nor there is readiness for compliance with adopted standards for industrial wastewater in case of connection to a network discharging to a wastewater treatment plan.

- Primary treatment, which is mainly settling, of solids takes place in visited stone cutting factories. The stone washing water and cutter cooling water are diverted to the settling basin. Such water is reused for cooling after being settled in the basin. The sludge slurry from the settling basin is usually emptied using suction trucks to the nearby Wadies. None of the owners knew who authorized the use of these locations for dumping.
- In visited non-food transforming establishments, several forms of noise and air pollution are noticed that not necessarily cause pollution to air ingredients but affect environmental health of the surround including the staff and workers within the establishment.

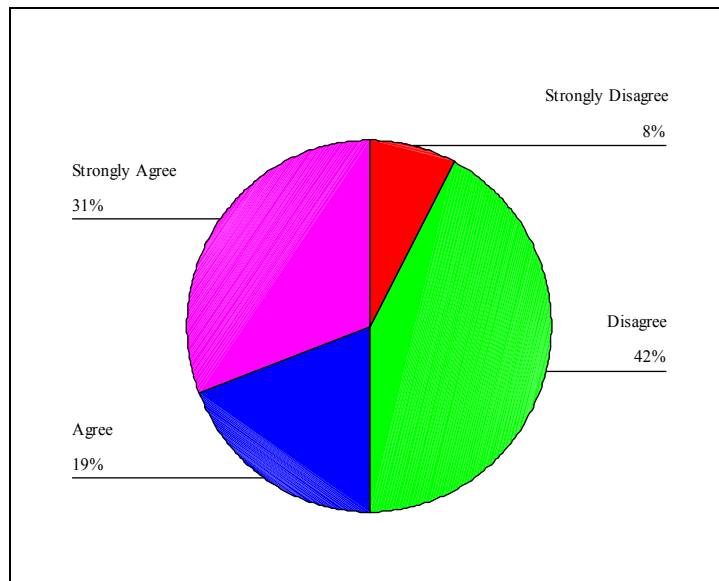
All this indicates that there is just much room and potential for increasing the efficiency of the EIA system by proper implementation of such environmental tool so that outputs are more effective in achieving the ultimate goals of protecting the environment besides the need for extensive investment in providing adequate public infrastructure such as wastewater collection and treatment facilities, landfills, and dissemination of information and requirements on environmental protection and pollution prevention so that the enabling environment is also secured to have developers committed to this goal.

Concerning the prioritizing of the various aspects of planning a development project, optimizing the economical benefits is the aspect perceived by the experts to be given the first priority as shown in figure 47.



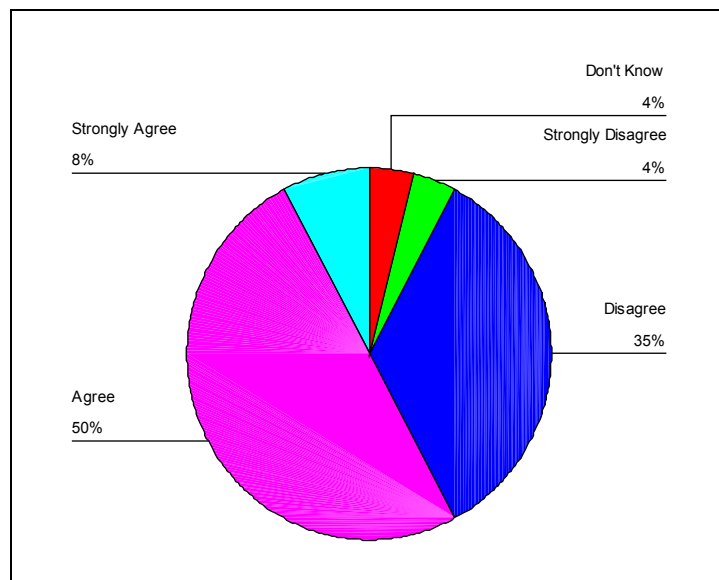
*Figure 47: Experts' answers on a question "Is environmental protection given priority over economic development activities?" (Number and percentage)*

Still, since no plan could totally overlook a certain planning aspect and the final configuration of a given development project will be some form of a compromise between the various needs and concerns, if any bias is inevitable in project planning, it will not be in favor of the environment although some of the developers think the opposite as shown in figure 48.

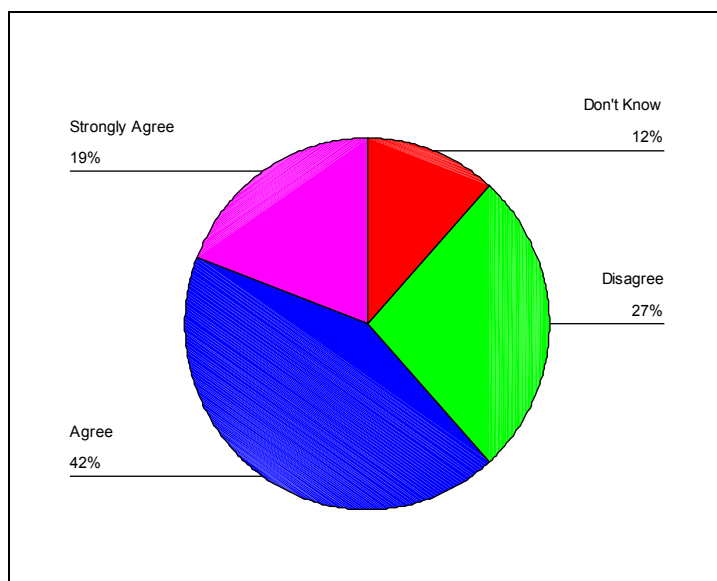


*Figure 48: Developers' answers on a question "Is environmental protection given priority over economic development activities?" (Percentage)*

The developers see the environmental assessment in its current form as an additional financial burden on them which also causes delay to permitting their developments as seen in figures 49 and 50 respectively.



*Figure 49: Developers' answers on a question "Do you think that linking the EA with permitting procedure forms a heavy financial burden on developers?" (Percentage)*

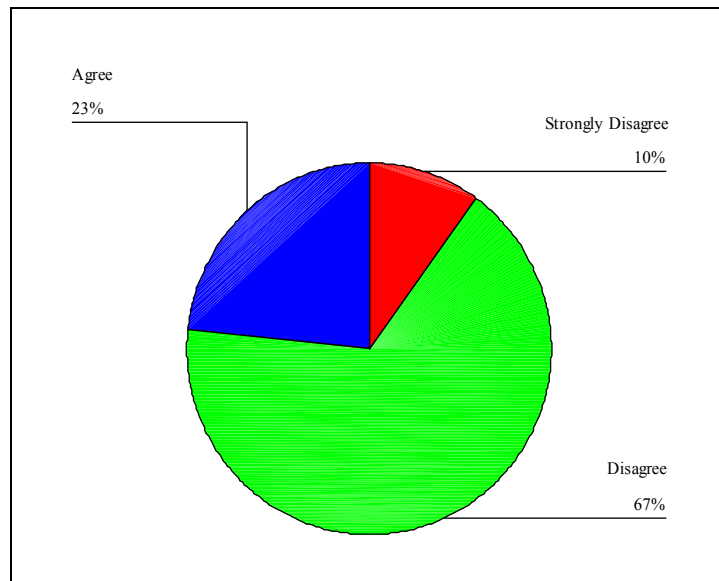


*Figure 50: Developers' answers on a question "Do you think that linking the EA with permitting procedure causes delays to the permitting process?" (Percentage)*

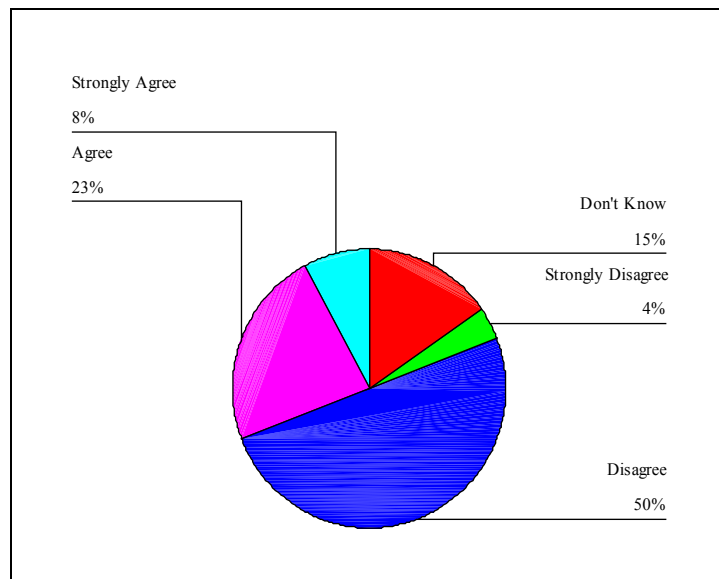
In addition, the overall political situation prevailing in Palestine does not contribute to an enabling environment for environmental protection. The impacts of such a situation are highly sensed in two forms:

1. Absence of law enforcement atmosphere among which the decisions of EIAs will not receive the proper attention in implementation.
2. Lack of financial resources to support the implementation and follow up on the EIA decisions in addition to the companion of lack of technical capacity and availability of enough qualified manpower.

The awareness and ability of the public to participate in the EIA process is perceived to be low. This has been expressed by the sampled environmental community experts and also developers as shown by figures 51 and 52 respectively.



*Figure 51: Experts' answers on a question "Do you think that there is public awareness and readiness to take part in the EIA process?" (Percentage)*



*Figure 52: Developers' answers on a question "Do you think that there is public awareness and readiness to take part in the EIA process?" (Percentage)*

Public awareness of the importance of environmental protection itself is not at the required level. As a result, EIA process which is part of that broader system is not a well know process to the public and even many developers in terms of its specific aims and outputs where supportive measures as those shown in table 19 in this regard are not well adopted.



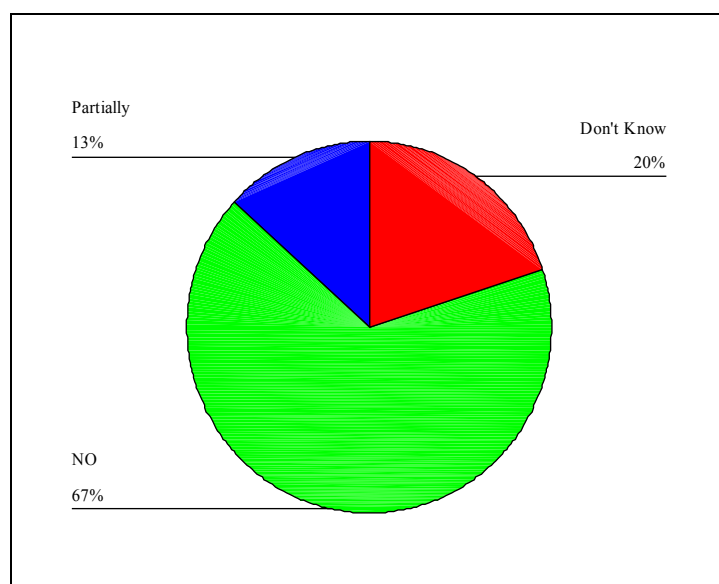
*Table 19: Experts' answers on questions "Are educational and environmental awareness bulletins being regularly issued?" and "Are there incentives for proponents and their consultants for best EIA studies prepared?"*

<b>Question: Are educational and environmental awareness bulletins being regularly issued?</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Frequently	0	0
From time to time	9	30
No	19	63
Don't Know	2	7
<b>Question: Are there incentives for proponents and their consultants for best EIA studies prepared?</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Yes	0	0
No	29	97
Don't Know	1	3

In addition, and during the course of the study, several questionnaires – targeting the environmental experts' community- were distributed among personnel working in governmental institutions that have to deal with the environmental aspects of projects. The questions that tackle the basic stages and requirements of EIA were answered by "Don't Know" and the questionnaires were discarded from the analysis. The same situation was faced in the establishments site visits and developers research survey where many were not familiar with the environmental impacts relevancy with their businesses. Extensive public awareness campaigns and capacity building and training programs in environmental planning and protection should be implemented that should emphasize the role and importance of such established environmental management system and help create a productive interaction between all the stakeholders of the EIA process. Participatory planning approaches and collaborative themes can be utilized for securing active involvement of the general public in the process.

It is worth mentioning that the current implementation of EIA especially as relating to the private sector industrial activity projects is an extension of a similar implementation that was practiced by the Ministry of Industry as per the Jordanian laws that were adopted in the West Bank after the establishment of the PNA. In addition, similar practices linked to permitting were adopted by the Ministry of Local Governance and Ministry of Health who all have mandates relating to the environment.

Also, strategic environmental impact assessment is not yet formally implemented in Palestine as per the feed back obtained from officials in the EQA and confirmed by the feed back of the experts as shown in figure 53.



*Figure 53: Expert' answers on a question "Do you think that there is public awareness and readiness to take part in the EIA process?" (Percentage)*

This shortfall in adopting the implementation of SEA officially coincides of similar shortfalls in other countries' systems and thus raises the concern that considerable stages of the decision making process – at the plans, programs and policies formulation stages – has took place without consideration of environmental effects resulting in overlooking some strategic alternatives that are environmentally

sound and may turn feasible but are not being considered at the project specific EIA level (Pardo, 1997) especially in public development projects.

### 3.5 Effect of international factors

Up to this point, all aspects that have been discussed in the EIA system review are those of the domestic type despite the fact that whenever the availability of financial resources are tackled, international factors are implicitly playing a role due to the special condition of Palestine that resulted from both the commitment of the international community towards the signed peace treaty with Israel and the continued security escalations since the beginning of the second Intifada with the companion economic recession and loss of development enabling environment. This latter aspect is the one in which the high influence of political factors on EIA was sensed as shown in table 20 for both the feed back of experts and developers which make this effect more of a resultant of international factors rather than the internal dynamics of politics within the country.

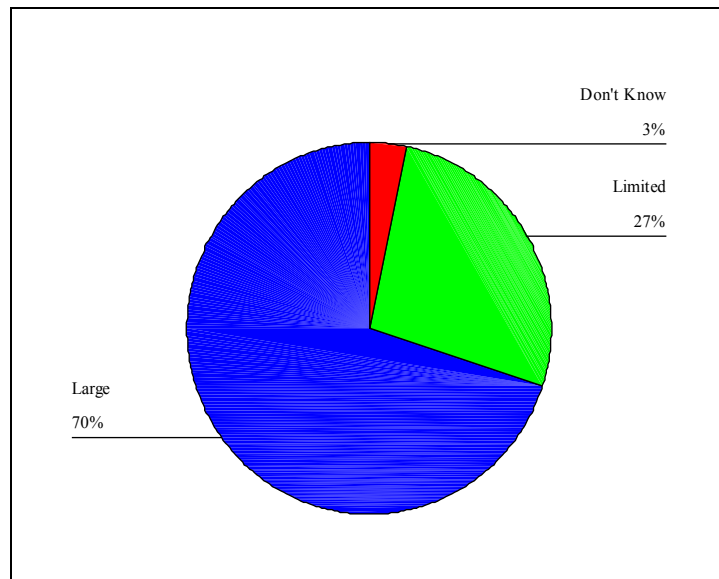
*Table 20: Experts' and developers' answers on questions "Do political factors have effect on the EIA system?"*

<b>Question: Do political factors have effect on the EIA system?</b>		
<b>▪ Experts' feed back</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	7	24
Agree	18	60
Disagree	4	13
Strongly disagree	1	3
Don't Know	0	0
<b>▪ Developers' feed back</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	10	38
Agree	10	38
Disagree	3	12
Strongly disagree	1	4
Don't Know	2	8

International factors influences crosscut with many aspects of the EIA process ranging from the introduction of laws and guidelines to the follow up on EIA decisions in implementation stages. This is highly noticed in developing countries due to the role played by the donors in the development process apart from the usual international interaction and cooperation in environmental matters.

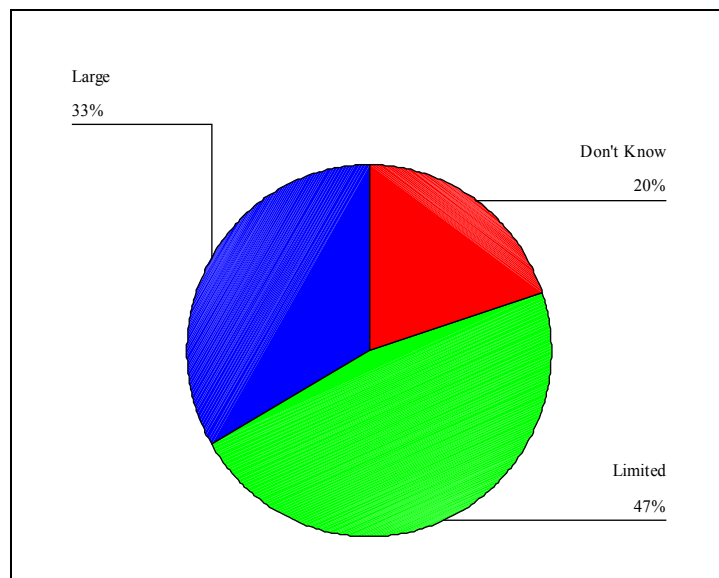
In the Palestinian case, the Palestinian National Authority (PNA) came into existence with inherited commitment towards the environment due to both the faced bad environmental situation in Palestinian Territories and the stipulations of the signed peace agreement pertaining to the environment.

As it was shown earlier in the literature review, the development of the Palestinian national EIA regulations have been highly influenced by the Oslo agreement. The clauses defining the obligations of the Palestinian party in the signed agreement pertaining to the environment were incorporated into the enacted Palestinian law of environment especially on the use of EIA for the assessment of projects' and development activities' impacts on the environment. In addition, and according to the agreements, permitting of major infrastructure facilities that have trans-boundary effects has to get clearance from the Israeli side through the joint working committees. The most outstanding example is the permitting of wastewater treatment plants where the treated sewage effluent of such plans will be discharged into the nature in one way or another even by reuse and will find its way to the ground water aquifers that are commonly used by both sides at present. All that has been perceived as a substantial influence of regional treaties on the EIA laws as shown in figure 54.



*Figure 54: Experts' answers on a question "Has the development of the EIA regulations been influenced by regional agreements?" (Percentage)*

The influence of international conventions on EIA practice is believed to be very limited bearing in mind that Palestine is not yet an independent state as shown in figure 55.



*Figure 55: Experts' answers on a question "Has the EIA practice been influenced by international conventions?" (Percentage)*

However, the Palestinian regulations and through the EIA policy sets the year 1991 principles of the United Nations "Convention on Environmental Impact

Assessment in a Trans-boundary Context", the so called Espoo Convention, as the basis for any mutual agreements or arrangements to control the impacts of development projects that extend over political boundaries of countries around Palestine (MEnA, 2000).

Donor agency environmental guidelines have had indirect but substantial influence on the practice of EIA in Palestine as shown in figure 56.

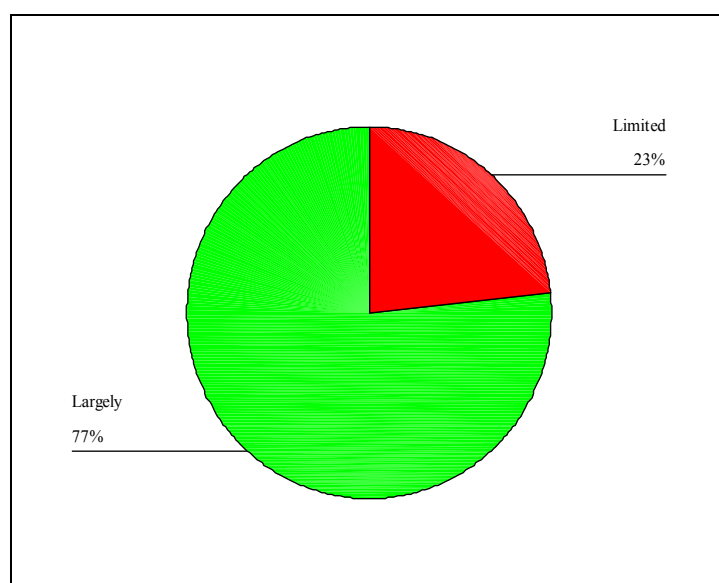
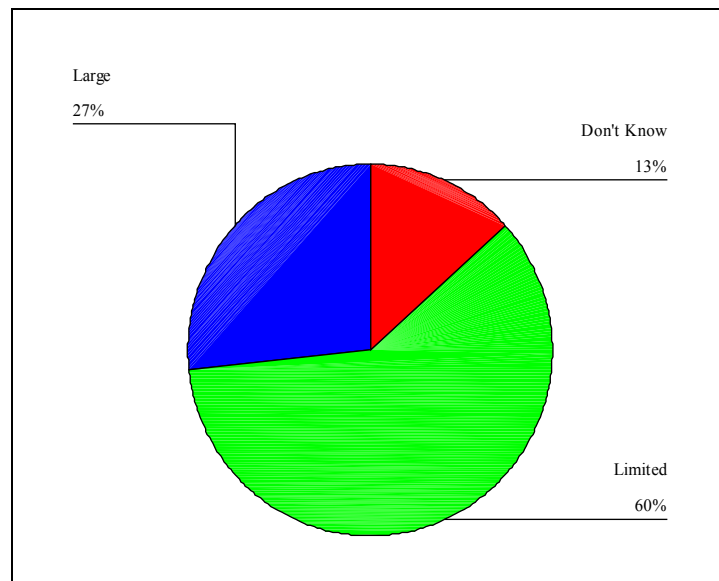


Figure 56: Experts' answers on a question "Has the EIA practice been affected by the requirements of donor agencies?" (Percentage)

Many of the donor implemented projects needs an EIA study when dealing with infrastructure development projects. In this case, the study has to follow the specific requirements and guidelines of the donor agency but still meet any local requirements. National experts involved in the study by being staff of a local consulting firm which is a member of a consortium or hired alone to carry out the engineering studies and design get familiar with those requirements and procedures and might tend to adopt them in other projects where less guidance is provided or no specific requirements are stipulated for the case in question. However, their influence,

apart from financial and technical support on certain projects, on the development of the Palestinian EIA guidelines is limited as seen in figure 57.



*Figure 57: Experts' answers on a question "Have the EIA guidelines of donor agencies affected the development of the Palestinian EIA regulations?" (Percentage)*

It is sensed through the exposure and practice of donor EIA guidelines by national experts that help identifying potentials of improvement especially with respect to the technical methods, tools and standards adopted in EIA local studies.

Donor agencies have no effect on EIA cases for local projects where they have no involvement as seen in figure 58.

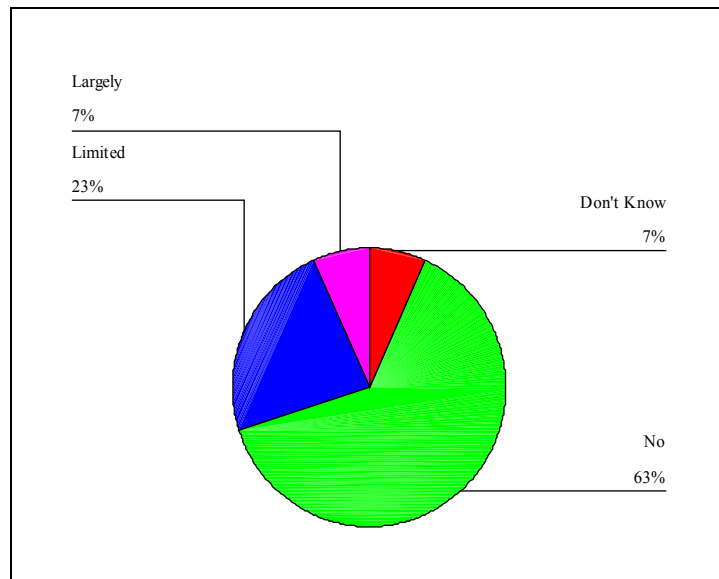


Figure 58: Experts' answers on a question "Is there involvement of donor agencies in local EIA cases?" (Percentage)

Their contribution to the monitoring and follow up on projects is limited even in projects funded by them as shown in figure 59.

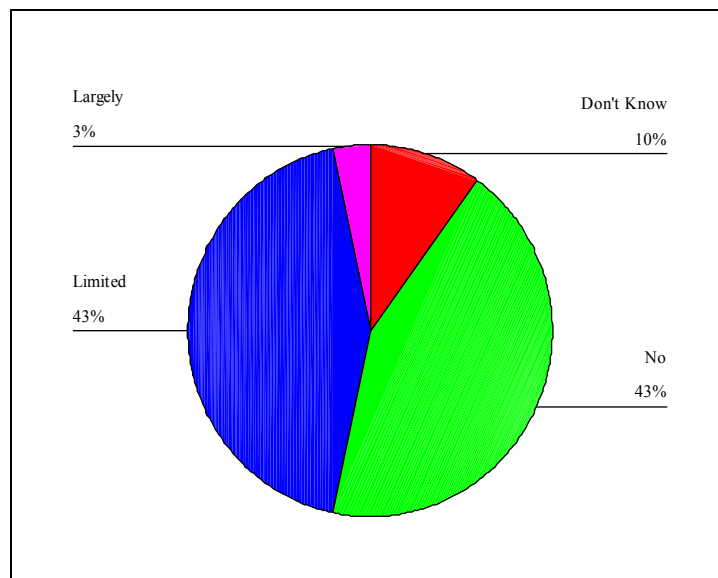


Figure 59: Experts' answers on a question "Are international donor agencies involved in EIA compliance monitoring/enforcement?" (Percentage)

Follow up is continued only in the very early times of post construction i.e. in the commissioning of the project and early start up. After that the project becomes the responsibility of the relevant authority in the beneficiary country (Palestine). This



spots the light on issues pertaining to sustainability of inter-related projects with environmental aspects especially for water supply and wastewater disposal. The case is simply apparent when a certain community receives a project for securing a reliable water supply system whereas no reliable wastewater disposal system exists at that time and no further efforts are devoted for furnishing the disposal system after the construction of the water supply system which in many cases increases the generation of pollutants that can reach the groundwater.

In many cases, international NGOs such as CARE International, CHF International, American Near East Refugee Aid (ANERA), Mercy Corps, ...etc, act as implementing agencies on behalf of the donors in development projects. In these cases, the above mentioned roles of donor agencies are enacted by those NGOs and thus the involvement and effect of them is limited to projects where they are directly involved. This is also the case for projects involving EIA studies as shown in figure 60.

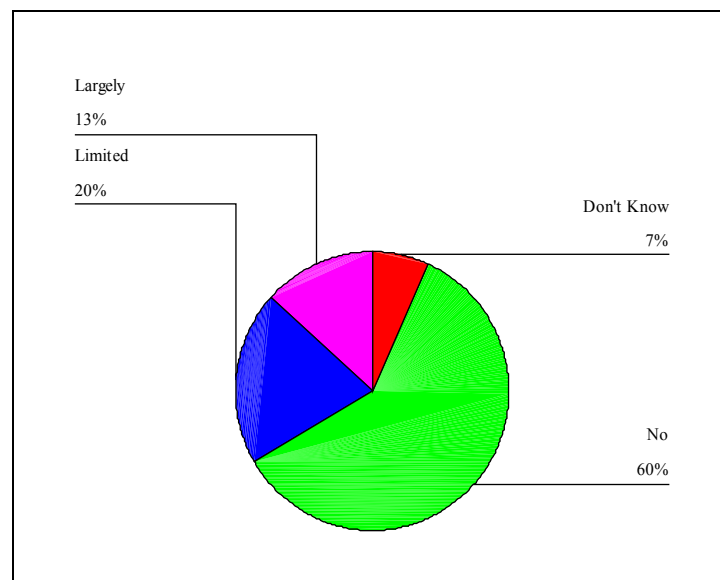


Figure 60: Experts' answers on a question "Is there any effect for international NGOs on local EIAs?" (Percentage)

In addition, the effect of local NGOs is seen to be limited on the EIA process as the culture of environmental pressure groups or independent third party contributors to the process (as discussed earlier) is not well established or actively enacted in the Palestinian EIA process. This is despite the fact that a number of Palestinian NGOs possess EIA focused expertise but limits the use of such expertise to certain activities under research programs or monitoring campaigns they implement within a specific context. Examples on this is ARIJ's concluded studies on the environmental impacts of Abu Ghneem Mountain Settlement in Jerusalem and Philadelphia Axes on the Palestinian-Egyptian borders at Gaza. This perception has been reflected in both the experts' and developers' feedback as shown in table 21.

*Table 21: Experts' and developers' answers on questions "Do local NGOs have effect on the EIA studies?"*

<b>Question: Do local NGOs have effect on the EIA studies?</b>		
<b>▪ Experts' feed back</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	2	7
Agree	10	33
Disagree	10	33
Strongly disagree	2	7
Don't Know	6	20
<b>▪ Developers' feed back</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	1	4
Agree	11	42
Disagree	4	15
Strongly disagree	2	8
Don't Know	8	31

Concerning the international support, since the establishment of the PNA, the consequent Palestinian environment competent authorities -mainly MOPIC (currently MOP) and MEnA (currently EQA) - have benefited from international experience and assistance in environmental matters in general with the limitation on giving special

emphasis for the EIA system that will still benefit from improvements in other related environmental fronts as shown in the feed back of the experts in figure 61 and table 22.

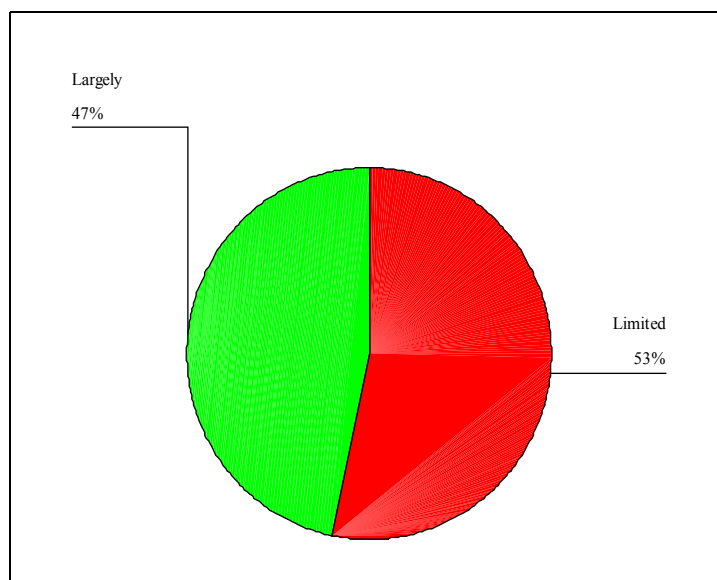


Figure 61: Experts' answers on a question "Has the relevant authorities benefited from international assistance?" (Percentage)

Table 22: Experts' answers on a question concerning the availability of technical and international support for EIA

<b>Question: Are technical and financial support available for the EIA system?</b>		
<b>▪ Technical</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Completely	0	0
Partially	24	80
DNE	2	7
Don't Know	4	13
<b>▪ Financial</b>		
<b>Answers</b>	<b>Frequency</b>	<b>Percent (%)</b>
Completely	0	0
Partially	22	73
DNE	3	10
Don't Know	5	17

However, the level of this assistance has decreased since the beginning of the second Intifada due to the loss of an enabling environment for cooperation and

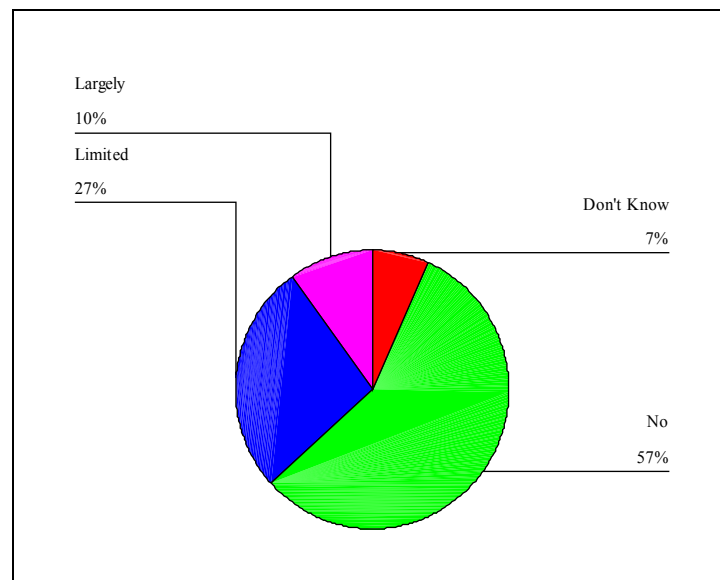
support. This was achieved through the participation of Palestinian governmental staff in international and regional cooperation activities in the form of training sessions, workshops and seminars. For instance, and despite that loss of enabling atmosphere, following the completion of the United Nations Environmental Program study on the environment in Palestine called "Desk Study on the Environment in the Occupied Palestinian Territories", and adoption of its recommendations by the UNEP in 2003, several capacity building activities were organized by the UNEP with support from other international community countries (like Germany, Finland, Tunis,...etc) in which the EQA was the beneficiary. The activities included:

- Seminars on communications and the environment in December 2003, in Amman, Jordan.
- Seminars on environmental quality standards on wastewater and air pollution, in August 2004, in Cairo, Egypt
- Seminars on environmental policy making and environmental laboratory analysis, in October 2004, in Geneva and Spiez, Switzerland.
- Workshop on environmental impact assessment in September 2004, in Tunis, Tunis.
- Workshops on: public awareness for senior Palestinian decision makers; solid waste for municipalities; and environmental education and awareness raising for schoolteachers, in January 2005, in Ramallah, Palestine.
- Several other regional capacity building activities organized by the UNEP's Regional Office for West Asia. (UNEP, 2005).

It is also worth mentioning that the Environmental Assessment policy was developed by the EQA with assistance from Environment Canada.

In addition, many of the environment projects implemented in Palestine were financed by donors providing not only financial support but also bringing in international consultants to work with the government staff and local consultants. A recent example on this was “Strengthening the Palestinian Environmental Action Program (SPEAP)”, a project financed by the European Commission, through LIFE Third Countries program where DHV Water BV from the Netherlands has been engaged as a consultant to EQA in this project.

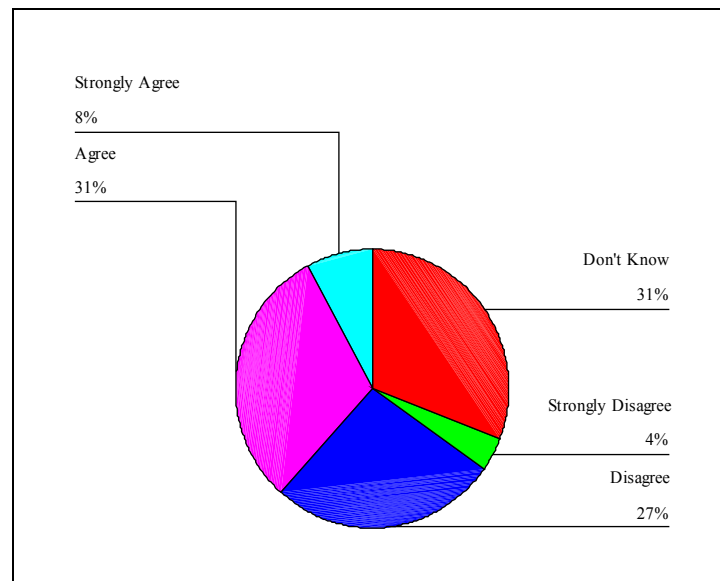
The support provided by the international community in the environmental sector for Palestine is accompanied by awareness of the prevailing situations in the country. Due to this, no major critics or pressures have been made on the Palestinian side concerning the EIA system as reflected in figure 62.



*Figure 62: Experts' answers on a question "Has the EIA practice been influenced by international pressures?" (Percentage)*

It is notable that donors effects on EIA are less perceived by the developers (as shown in figure 63) as the interfacing that is taking place deals more with public

projects and is more focused on governmental performance strengthening when it takes the form of technical assistance programs.



*Figure 63: Developers' answers on a question "Has the EIA practice been affected by the donor agencies?" (Percentage)*

### **3.6 Ranking of EIA improvement aspects**

As per the feed back of the environmental professional community through the experts' research questionnaire shown in figure 64, a prioritized ranking of the above discussed main aspects has been concluded.



Figure 64: Ranking of EIA system aspects in need for improvement according to experts' feedback

The ranking according to most aspect in need for reinforcements and improvement is:

- |              |    |   |             |
|--------------|----|---|-------------|
|              | 1. | Implementation monitoring and enforcement                   |             |
| <b>Score</b> | 2. | Public participation  | <b>6.29</b> |
|              | 3. | Capacity building and training                              | <b>5.56</b> |
|              | 4. | Appeal procedures and dispute settlement                    |             |
|              | 5. | Review of environmental assessment studies and applications |             |
|              | 6. | Coordination between relevant governmental authorities      |             |
|              | 7. | Guidelines and manuals                                      |             |
|              | 8. | Scoping and screening                                       |             |

The environmental experts ranking, when compared to the results and conclusions of the process review, reflects conformity with the identified level of development of the process aspects and envisioned improvement potentials.

The prioritizing of these aspects from the developers' perspective concluded a different ranking that reflects their concerns and also current perceptions of the process as shown in figure 65.

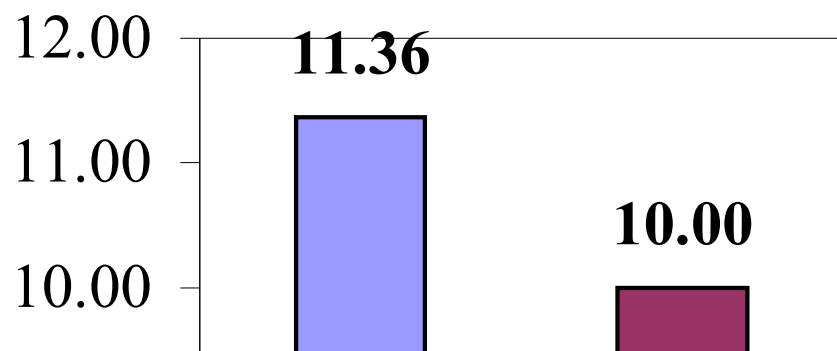


Figure 65: Ranking of EIA system aspects in need for improvement according to the developers' feedback

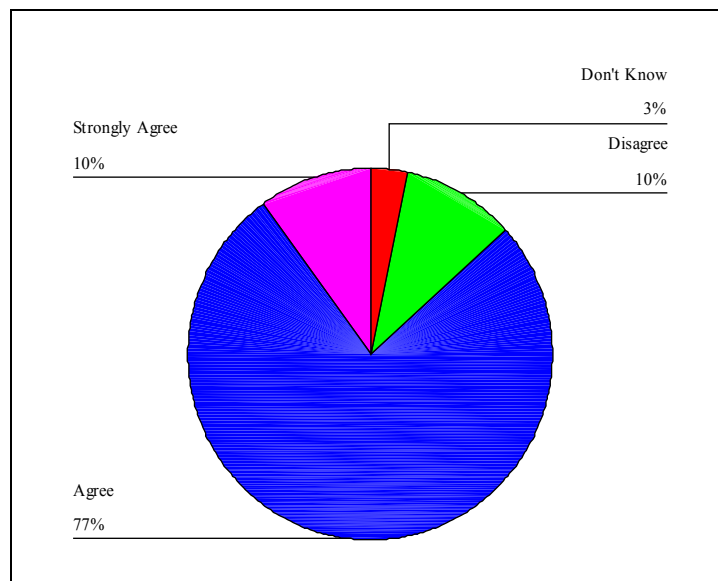
The first priorities were given to enhancing the very preliminary initial stages of the process that relates to the developers demand for having a single window for the developer to get all needed approvals for his project. The second addressed capacity and environmental knowledge aspects. It was of interest that the appeal system received the least importance from the developers respective. However, the reason is understood since the monitoring and follow up system (which is the one with the likelihood to identify incompliance cases) is not functioning in a proper way to result in decisions that require the developer to appeal against. The ranking is as follows according to most aspect in need for reinforcements and improvement:

1. Application and preparatory stages
2. Coordination between relevant governmental authorities



3. Implementation monitoring and enforcement
4. Guidelines and manuals
5. Capacity building and training
6. Review of environmental assessment studies and applications
7. Public participation
8. Appeal procedures and dispute settlement

From a comparative perspective, if the Palestinian EIA policy and regulations are cross checked against similar regulations adopted by International Institutions who are operational in Palestine, no major deviations are identified the can jeopardize the aims of the process. However, their adoption will imply operational improvements as indicated by the experts' feed back as shown in figure 66.



*Figure 66: Experts' answers on a question "Do you think that achieving compliance between the Palestinian EIA system and international adopted EIA systems would augment its efficiency?"*

*(Percentage)*

For instance, if the World Bank Procedures (OP 4.01) and its annexes are consulted, one would notice that certain aspects, which are already adopted in principle in the Palestinian EIA process, need to be given a more obligatory effect by

their inclusion into the Palestinian EIA policy and not just guidelines and ToRs. Such things include:

- Content of EIA report, with the specification for a need for a non technical summary
- Consideration of alternatives (with the zero-alternative included)
- Contents of EMPs

Other aspects are not yet included and need introduction such as:

- Public access to EIA reports
- Consideration of global impacts

## **Chapter 4: Conclusions**

### **4.1 Introduction**

Improving an established system would have to start by benchmarking the current standing of that system, analyzing and assessing its components that would lead to conclusions on shortfalls and weaknesses and also improvement potentials.

In the previous chapters of the study, the context of the Palestinian EIA system was studied and its components subjected to analytical review. The following sections consolidate the results of this review.

### **4.2 Systemic measures shortfalls and improvement**

The overall legal basis for the EIA system in Palestine is fully secure.

Important aspects are covered and given their legal status especially as pertaining to:

- Compliance monitoring and enforcement
- Strategic Environmental Impact Assessment
- Retrospective implementation of EIA (environmental auditing of existing projects)

Unfortunately those specific aspects which are secured by laws and regulations are suffering from the major shortfalls in implementation since neither SEA nor environmental auditing is formally implemented. In addition, the monitoring and follow up system suffers from real weakness and tends to be purely reactive in implementation.

One aspect that is directly related to follow up and monitoring that also suffers from the same shortfall is the inter-agency coordination between the main ministries that are inherently relevant to the system which are the ministry of local governance (as represented by the municipalities and local councils on the decentralized level), and the ministry of industry.

The EIA procedure itself mostly does not have major shortfalls as pertaining to the adopted process stages and requirements and can satisfactorily cover the current pace of economic growth and development which is at severe recession due to the prevailing political situation. However, for future effectiveness of the EIA as a major environmental management tool, several improvement potentials are identified. Those include:

- ***Screening and scoping:*** the use of lists approach can be elaborated in order to provide more guidance for developers, consultants and government responsible bodies. In stead of one list that is for projects subject to mandatory EIA studies, there could be three lists. The additional two would address projects that require IEE and those that are exempted from the provisions of EA. The use of thresholds for the definition of projects on these lists would be beneficial. In addition, the inclusion of reference for regional land use zoning schemes would add more value and guidance. In addition to the added guidance, this would systemize the process of screening and eventually accelerate it. The scoping can build on this improvement by the development of a set of generic terms of reference for different types of projects envisioned under the two main categories of assessment; IEE, and EIA. An important aspect that should not be overlooked is the dissemination of such information to developers, consultants and also the public as part of increasing environmental awareness and readiness to participate in the EIA process by the public. However, it should be noticed that one important aspect in scoping should not be sacrificed by these improvements which is that

the developer or project initiator bears the full responsibility for the extent and scope of his project's environmental impacts and addressing them in the study he will prepare.

- ***EIA studies reviews:*** apart from the technical aspects of these studies and corresponding technical competency and capacity of governmental staff who take part in the evaluation from the different ministerial bodies who are members in the EA committee, international known dimensions of objectivity in review has to be introduced (such as the publication of the results of the review and the involvement of consultees and the public) into the system at this very critical stage. This would improve the transparency of the system and process especially that it is focused on permitting of development projects and would raise public belief in fairness and shift their interest more to issues pertaining to pollution control and environmental protection.
- ***Appeal and dispute settlement system:*** the EIA process (concerning the preparation of studies) is limited in the bilateral proceeding between the developer and EQA heading the EA committee. In cases of disagreement either on the resulting decision of the process or the procedural and administrative going of the process, no third party is referred to (either supreme authority or judicial bodies). Such provision is to be considered and a potential legal clarification might be needed.
- ***Environmental approvals and Environmental Management Plans:*** considering the faced bad operational modalities of industrial activity projects even at the medium size light industrial projects, more

emphasis has to be put on conditions stated in environmental approvals as pertaining to mitigation and management measures not only for construction phases but also for the operation phase. The utilization of EMPs can contribute much to the improvement of this aspect. Similar to the case of the environmental assessment itself that vary according to the extent and envisioned impacts of the project, EMPs can be set for use on a broader scope than just projects that require detailed EIAs with varying scope and extent of coverage. Require EMPs to be part of IEE other than requesting the inclusion proposals for them would increase the likelihood of utilizing them following approval. In addition, emphasizing the responsibility of the proponent to periodically report on the status of his industrial establishment can reinforce the principle of self monitoring and at the same time assist the sectoral authorities and the EQA in follow up and monitoring. It is worth to ensure that none of these actions would give intended results unless followed by frequent monitoring and inspection activities by relevant authorities that is planned in a proactive way and not just responding to pollution and public complaints.

- ***Public participation:*** the participatory approaches of planning are not yet widely used in Palestine. Such activities are thought to be pure technical and ought to be carried out by professionals.

Unfortunately, the EIA is not an exception to this prevailing paradigm. Public participation is an implicit component of the stakeholders' consultations. In addition, the intentions of the EQA for the consultation of the public is for obtaining their feed back and taking

their concerns into consideration in the environmental assessment of the project. It is envisioned that achieving the goal of having active and value adding public participation would have to start by a shift in the perceptions and set targets for having such involvement. This will need both the formal definition of involvement milestones along the whole process within the EIA system and not limiting it to study preparations and initial stages of data collection and early consultations with better access to environmental assessment proceedings and findings, and keen efforts for raising public awareness, readiness and willingness to participate. Such awareness efforts can be coordinated with local NGOs, CBOs, and other community based activities and are likely to attract donor support for them.

However, the implementation of the process procedures needs to be reinforced and also supported by working on the enabling environment which is composed of the foundation measures.

### **4.3 Foundation measures shortfalls and improvement**

The remedy and improvement of most of the foundation aspects of the EIA process is more dependent on availability of resources (mostly financial) since it concentrates more on the deployment of decision and follow up support systems whether they are in the form of information technology solutions or the implementation of capacity building programs.

For capacity building that serves EIA reinforcement, a strategy has to be put in place that builds on available expertise and aims at filling gaps identified following a thoughtful needs assessment and prioritizing effort. Some of issues to be taken into consideration are:

- ***EIA integrated training plan:*** Developing a long term training plan that involves multidisciplinary and multi-component training programs with defined goals and clear targets. The plan has to carefully specify targeted trainees, the extent and coverage of each training program, and the respective roles and contributions of organizations and institutions taking part in achieving the goals of such a plan. This will insure integration between training and capacity building initiatives implemented by different parties (government institutions, continuing education centers in universities, NGOs, unions, federations, syndicates and donors) and avoid segmented and overlapping scopes and duplication of efforts.
- ***Training of EIA managers:*** this issue should be emphasized in capacity building related to EIA. A wide spectrum of professionals possesses environmental knowledge and expertise ranging from civil engineers to biologists. It is the framework of utilizing such expertise in environmental assessment that needs emphasis as EIA is multidisciplinary in essence and draws on a number of subject experts that need to be familiar with the overall approach where their expertise is being utilized.
- ***Dissemination of information:*** attention should be given to achieving a wide dissemination of developed relevant guidelines and manuals between local professionals and establishing a mechanism for transferring the "know how" knowledge gained by Palestinian participants in regional and international capacity building activities to the other local professionals and practitioners.



Follow up support systems can add many systemizing and facilitation values when deployed at the EQA with remote access for other relevant sectoral bodies. Such systems can draw on many of the available IT solutions including but not limited to:

- ***EIA tracking and reports database system:*** the system would include a register of all environmental applications submitted to the EQA or referred to it by sectoral authorities with attribute information on the development activity, its main characteristics, envisioned significant impacts and the progress status of the corresponding EIA process and the decisions made and conditions incorporated into the approval for further follow up.
- ***Qualified consultants database system:*** such a system would include a register of subject experts who can assist the EQA in detailed EIA cases in addition to a register for consultants who can represent proponents in carrying out the assessments and preparing the relevant documents. Since, the issue of a qualified EIA consultant has not been settled yet; criteria for registration can be the start of establishing a system of consultant accreditation.
- ***A general purpose central environmental data base system with GIS integration:*** such database can achieve integration between the aggregated information and mapping done for different environmental themes by different sectoral authorities and would enhance planning practice in general especially at the regional level.

Also, it is of importance to integrate quality control and assurance procedures into the system for periodically identifying needs and weakness points and taking necessary measures for acting on them in a timely and efficient manner. A system

audit can contribute to achieving such goals in a comprehensive manner instead of segmented and occasional improvements here and there from time to time. An approach like the one adopted in this study can be benefited from accompanied by holding comparative reviews with systems in countries that have accumulated expertise and learned lessons from encountered EIA cases.

#### **4.4 Implementation modality**

The environmental approval is just one of the requirements of several others needed for the permitting of a given development project. This case necessitates a defined operational modality that would not just ensure coordination between authorities but look for and define best implementation approaches that should be flexible to adapt to changes in the development pace and extent of economic growth with their accompanying circumstances.

Considering the current conditions and those forecasted for the near future, light small to medium sized industrial activities are and will be dominant in the Palestinian economy. This type of industry when requested to conduct an environmental assessment, they end up doing an IEE. If that is the case or not, still they are to satisfy the requirements of permitting as specified by the relevant sectoral authorities who are in most cases the Ministry of Local Governance (or the municipalities and local councils at the local level) and the ministry of Industry. Thus coordination is essential between those three governmental bodies and usually is done satisfactory through the EA committee. The attention is paid for the follow up and monitoring following the granting of the environmental approval, where both the Ministry of industry and local governance body are with more relevancy and in better position to implementing inspections and verify compliance. In this operational modality, the EQA would concentrate on means of enabling and facilitation for the

roles enacted by the other two authorities in a manner that assures integrative implementation in addition to an over all but less frequent checks on the process as a whole.

For the limited number, and less frequent cases of detailed EIA, the operational modality would differ. The EQA would be more focused on all the stages from the preparation stages up to the monitoring and enforcement stages leading the coordination with relevant authorities.

#### **4.5 International Support**

There is an increased awareness among the international community of the threat that advances in environmental protection and enhancement achieved through the use of EIA in developed nations will prove inadequate on a global scale unless a similar level of attention is given to the application of EIA in developing countries.

Palestine being a developing country should benefit from this increased awareness by attracting more support in away that neutralizes the relation between this support and the progress and/or commitments within the already stopped peace process. This would require more formal publicity work on the bad environmental conditions prevailing and also more outreach to the world.

Currently, there are a lot of project appraisals regarding some of the critically needed infrastructure; mainly the wastewater and solid waste. The German federal government and through the Kreditanstalt fuer Wiederaufbau (KfW) are supporting the Palestinians in their planning and design efforts for some of the regional wastewater treatment plants such as that of Tulkarem and Ramallah. In addition, the Japanese government and through the Japanese International Cooperation Agency (JICA) are supporting the Palestinians in planning, design and construction of solid waste landfills. Pilot projects are currently started in Jordan Rift Valley area.

Securing the physical infrastructure would solve many of the problems the Palestinians have concerning the basic services and at the same time will create an enabling environment for the proper implementation of environmental protection and pollution control. Also, continued cooperation in other environmental aspects would contribute to this especially when the recommendations of joint studies are adopted by the donor community and continue to have their support for the implementation phases.

**Appendix 1: Research questionnaire # 1**

برنامج هندسة التخطيط العمراني  
كلية الدراسات العليا  
جامعة بيرزيت – فلسطين

استبيان

**نظام تقييم الأثر البيئي في فلسطين**

هذا الاستبيان هو جزء من بحث نيل درجة الماجستير في هندسة التخطيط

الباحث: م. أحمد حسن أبو القرن  
بكالوريوس هندسة مدنية

المشرف: د. عصام الخطيب، جامعة بيرزيت

حزيران، 2006

**مقدمة:**

خلال السني السابقة تم اعتماد تقييم الأثر البيئي لمشاريع التطوير كآلية فاعلة للتخطيط والإدارة البيئية والحد من التلوث الناتج عن مختلف المشاريع بما يسهم في تحقيق الأهداف التي تسعى لها التنمية المستدامة.

إن فاعلية تقييم الأثر البيئي في تحقيق الأهداف المرجوة منه تعتمد على كفاءة نظام تقييم الأثر البيئي ككل بما يشمل ذلك من قوانين ومؤسسات وموارد.

**هدف الاستبيان:**

هذا الاستبيان هو جزء من دراسة بحثية في برنامج ماجستير هندسة التخطيط العمراني في جامعة بيرزيت و تهدف إلى تقديم مراجعة تحليلية لنظام تقييم الأثر البيئي في فلسطين وتسلط الضوء على فاعلية هذا النظام.

جميع المعلومات التي يتم الادلاء بها هي لغرض البحث العلمي فقط و فيما يتعلق بالمعلومات الشخصية فسيتم التعامل معها بسرية تامة ولن يتم تسريب أي منها لأية جهة كانت.

**الفئة المستهدفة:**

هذا الاستبيان موجه الى العاملين في الدوائر المعنية في جهات تعتبر لاعبا رئيسا في عملية تقييم الأثر البيئي وتشمل الوزارات الحكومية المعنية، البلديات ومجالس التخطيط المحلية، المعاهد البحثية والجامعات، المنظمات غير الحكومية والشركات الهندسية الاستشارية العاملة في مجال البيئة، و أطراف أخرى مهتمة في قضايا الحفاظ البيئي.

**أجزاء الاستبيان:**

- أولاً: المعلومات الشخصية
- ثانياً: القوانين والسياسات والارشادات البيئية
- ثالثاً: النظام والهيكلية الادارية
- رابعاً: مراحل عملية تقييم الأثر البيئي
- خامساً: أدوار الأطراف ذات العلاقة بتقييم الأثر البيئي
- سادساً: متابعة تنفيذ توصيات دراسات تقييم الأثر البيئي وتأكيد الالتزام به
- سابعاً: الممارسة العملية لتقييم الأثر البيئي
- ثامناً: توفر الموارد
- تاسعاً: تحسين أداء نظام تقييم الأثر البيئي

**تعليمات ملء الاستبيان:**

1. للاعادة بالفاكس: الرجاء طباعة الاستبيان وتعبئة المعلومات الشخصية في المكان المخصص ووضع اشارة X داخل المربع عند اختيارك

2. للاعادة الالكترونية: الرجاء تعبئة المعلومات الشخصية في المكان المخصص ( ) والنقر على المربع  ليصبح  وذلك لاجابة الاسئلة في الأجزاء الأخرى للاستبيان، و من ثم حفظ الاستبيان واعادته عل البريد الالكتروني.

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**1. المعلومات الشخصية**

- 1.1 الاسم (اختياري):  
1.2 المهنة:  
1.3 تليفون/جوال (اختياري):  
1.4 فاكس:  
1.5 البريد الالكتروني:  
1.6 المحافظة/المدينة/القرية:  
1.7 اسم المؤسسة التي تعمل/ي فيها:  
1.8 القسم الذي تعمل/ي فيه:

- 1.9 نوع المؤسسة التي تعمل فيها:  
 وزارة  
 مطور/مستثمر  
 جامعة  
 بلدية  
 مؤسسة بحثية  
 سلطة محلية  
 منظمة غير حكومية  
 شركة استشارية  
 منظمة دولية

**ثانياً: القوانين والسياسات والارشادات البيئية****2.1 هل تقييم الأثر البيئي مستند إلى أساس قانوني راسخ؟**

لا أعرف	غير موجود	بشكل جزئي	بشكل كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.1.1 مطبق من خلال قانون أساسي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.1.2 مطبق من خلال ترتيبات إدارية في الجهات
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.1.3 مطبق بأثر رجعي (Retrospective)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.1.4 وجود مرجعية قانونية تتيح للأطراف المتأثرة استئناف القرارات وتنظيم حل النزاعات البيئية (Dispute Settlement)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.1.5 وجود مرجعية قانونية لمراقبة تطبيق التوصيات البيئية وتأكيد الالتزام بها (Monitoring and Enforcement)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.1.6 وجود مرجعية قانونية لتطبيق التقييم البيئي الاستراتيجي (للسياسات والبرامج) (SEA)

**2.2 هل تتضمن المتطلبات الرسمية لوثيقة دراسة تقييم الأثر البيئي الأمور التالية؟**

لا أعرف	لا	نعم	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.2.1 هيكلية ومحتوى محدد
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.2.2 دراسة وتقييم عدد من البدائل تشمل ابقاء الوضع على ما هو كواحد منها
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.2.3 التطرق إلى الجوانب الثقافية والاجتماعية والاقتصادية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.2.4 الاجراءات الوقائية والتصحيحية للأثار السلبية (Mitigation)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.2.5 خطط الادارة والرقابة البيئية (EMPs)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.2.6 ملخص غير تقني

**2.3 هل تتوفر مجموعة من الأدلة والمعايير الارشادية؟**

لا أعرف	غير موجود	بشكل جزئي	بشكل كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.1 وجود أدلة تقنية تتعلق بمختلف النشاطات التطويرية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.2 وجود أدلة إرشادية تتعلق بمراحل سير عملية تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.3 وجود أدلة إرشادية لتحضير تقرير دراسة تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.4 وجود أدلة إرشادية لمراجعة دراسة تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.5 وجود أدلة إرشادية لآلية استئناف القرارات
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.6 وجود أدلة إرشادية تتعلق بمراقبة تطبيق التوصيات والتحقق من الالتزام بها
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.3.7 وجود أدلة إرشادية تتعلق بتطبيق التقييم البيئي الاستراتيجي

**2.4 هل المعايير والاجراءات الارشادية المتبعة من قبل الجهات المانحة تؤثر على صياغة وتطوير القوانين البيئية الوطنية؟**

بشكل كبير	بشكل محدود	لا تؤثر	لا أعرف
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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2.5 هل تأثرت ممارسة تقييم الأثر البيئي على الصعيد الوطني بالمواثيق والأعراف الدولية؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
بشكل كبير	بشكل محدود	لا تؤثر	لا أعرف		

2.6 هل تأثرت القوانين البيئية الوطنية باتفاقيات اقليمية ودولية؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
بشكل كبير	بشكل محدود	لا تؤثر	لا أعرف		

ثالثا: النظام والهيكلية الادارية

3.1 هل يوجد جهة مركزية رسمية مناط بها تطوير وإدارة نظام تقييم الأثر البيئي؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
نعم	لا	لا أعرف			

3.2 ما هو الطابع الغالب على الناحية الإدارية لنظام تقييم الأثر البيئي من حيث المركزية واللامركزية؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
هيئة بيئية مركزية واحدة	عدد من الهيئات المركزية	هيئة مركزية واحدة وعدد من السلطات المحلية	عدد من الهيئات المركزية وعدد من السلطات المحلية		

3.3 إلى أي درجة تم تبني وتطبيق آليات التنسيق بين المؤسسات والجهات ذات العلاقة بتقييم الأثر البيئي؟

لا	لا	لا	اوا	اوا	
اوافق بشدة	اوافق	اغير ف	اوافق	اوافق بشدة	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.3.1 هناك آليات رسمية راسخة ومطبقة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.3.2 هناك وحدات إدارية بيئية موجودة في الهيئات ذات العلاقة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.3.3 تقوم الهيئة البيئية المركزية بدعم تكاملية المشاركة و التنسيق ما بين الهيئات المختلفة

3.4 هل الجهات والسلطات المسؤولة عن مراجعة دراسات التقييم البيئي مستقلة عن الجهة المقدمة للمشروع؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
نعم	لا	لا أعرف			

3.5 هل استفادت المؤسسات والجهات ذات العلاقة بتقييم الأثر البيئي من الخبرات الدولية في تطوير نظمها

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
بشكل كبير	بشكل محدود	لم تستفد	لا أعرف		

رابعا: مراحل عملية تقييم الأثر البيئي

4.1 هل المراحل التالية مدرجة رسميا ضمن عملية التقييم؟

لا	غير	بشكل	بشكل	
لأعرف	موجود	جزئي	كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.1 الاستعراض الأولي (Screening)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.2 تحديد إطار التقييم وعمل الزيارات الميدانية (Scoping)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.3 آلية رسمية للمراجعة والتدقيق المستقل (طرف ثالث)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.4 قيام مقدم المشروع بالرد على استفسارات و آراء الأطراف المتأثرة وجعل رده معلنة للعموم
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.5 قيام مقدم المشروع بمراجعة وتعديل تقرير تقييم الأثر البيئي بناء على الملاحظات الواردة لإصدار التقرير النهائي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.6 إعلان قرارات ونتائج دراسة تقييم الأثر البيئي للعموم
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.7 منح الجهات التي تتولى مراجعة تقرير دراسة تقييم الأثر البيئي حق النقد على قرار تمرير أو رفض المشروع موضوع الدراسة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.8 تطبيق آليات رسمية للاستئناف و حل النزاعات
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.1.9 تحديد فترة زمنية لاتمام كل مرحلة من مراحل تقييم الأثر البيئي

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#### 4.2 هل يمتلك المواطنون والعامه قنوات رسمية للمشاركة فى عملية تقييم الأثر البيئى؟

لا أعرف	لا	نعم	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.1 فى المراحل التحضيرية للدراسة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.2 أثناء الدراسة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.3 بعد اتمام الدراسة (وجود آلية لاعلام المواطنين بانتهاء الدراسة وبدء مرحلة المراجعة والتدقيق)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.4 قدرة على الاطلاع على تقارير دراسات تقييم الأثر البيئى
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.5 جلسات نقاش ومداولة عامة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.6 المشاركة فى مراجعة النتائج و التوصيات فى دراسة تقييم الأثر البيئى
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.2.7 المشاركة فى اتخاذ القرار

#### 4.3 هل تتأثر إجراءات تقييم الأثر البيئى الوطنية بالمتطلبات الخاصة بالجهات المانحة؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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#### خامسا: أدوار الأطراف ذات العلاقة بتقييم الأثر البيئى

#### 5.1 هل تم تعريف وحصر المهام و الأدوار وتحديد الأطراف المناسبة التى ستقوم بانجاز تلك المهام؟

لا أعرف	غير موجود	بشكل جزئى	بشكل كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1.1 أطراف مستقلة للقيام بمراجعة دراسة تقييم الأثر البيئى بالتنسيق مع الجهة المسؤولة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1.2 متطلب الزامى لاستخدام مكاتب استشارية مؤهلة ومتخصصة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1.3 وجود جهة عليا يتم اللجوء إليها فى حال نشوب خلاف حول نتائج وقرارات دراسة تقييم الأثر البيئى
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1.4 وجود جهات قضائية لحل الخلافات المتعلقة بالأمور الاجرائية والادارية المتعلقة بدراسة تقييم الأثر البيئى

#### 5.2 هل يوجد تدخل من قبل المنظمات و الوكالات الدولية المانحة فى دراسات تقييم الأثر البيئى المحلية (مشاريع غير ممولة من قبلها)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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#### سادسا: متابعة تنفيذ توصيات دراسات تقييم الأثر البيئى وتأكيد الالتزام به

#### 6.1 هل هناك برامج متابعة وتدقيق يتم اتباعها للتأكد من الالتزام بنتائج وتوصيات دراسات تقييم الأثر البيئى؟

لا أعرف	غير موجود	بشكل جزئى	بشكل كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.1 يتم تنفيذها من قبل هيئة بيئية مركزية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.2 يتم تنفيذها من قبل جهات رسمية متعددة مخولة بذلك
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.3 مشاركة أطراف مستقلة فى برامج المتابعة والرقابة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.4 رفع تقارير رقابة دورية من قبل أصحاب المشاريع للجهات الرسمية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.5 وجود آلية رسمية لمراجعة نتائج المتابعة ومراقبة الالتزام
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.6 مشاركة الهيئات والسلطات المحلية فى برنامج المتابعة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.1.7 إمكانية اطلاع عامة المواطنين من المعنيين على نتائج برنامج المتابعة والرقابة

#### 6.2 هل يؤخذ بقرارات دراسات تقييم الأثر البيئى بشكل رسمى ملزم

لا أعرف	غير موجود	بشكل جزئى	بشكل كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1 اتخاذ عقوبات وفرض غرامات على غير الملتزمين
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.2 قنوات رسمية لاحتجاج المواطنين على عدم التزام أي طرف بقرارات تقييم الأثر البيئى
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.3 مشاركة جهات قضائية فى تنفيذ مقررات دراسة تقييم الأثر البيئى
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.4 وجود ربط مع أنظمة منح الرخص و إجازات تنفيذ المشاريع

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### 6.3 هل هناك مشاركة للوكالات الدولية المانحة في برامج المتابعة والرقابة على تنفيذ قرارات دراسات تقييم الأثر البيئي

<input type="checkbox"/>	بشكل موسع	<input type="checkbox"/>	بشكل محدود	<input type="checkbox"/>	لا موجود	<input type="checkbox"/>	لا أعرف
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#### سابعاً: الممارسة العملية لتقييم الأثر البيئي

#### 7.1 إلى أي درجة أثرت دراسات تقييم الأثر البيئي في دورة تخطيط المشروع؟

لا بشدة وافاق	لا فق	لا اخر ف	اوا فق	اوا ق بشدة	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.1.1 يتم الشروع بها بالتزامن مع دراسة الجدوى
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.1.2 تستخدم لتبرير قرارات تتعلق بالمشروع المطروح تم اتخاذها سابقا
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.1.3 اتخاذ القرار يتأثر بشكل أساسي بنتائج تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.1.4 يتم تعديل مقترحات المشاريع حسب دراسات تقييم الأثر البيئي

#### 7.2 إلى أي مدى تتأثر دراسات تقييم الأثر البيئي بالعوامل السياسية والاجتماعية والاقتصادية

لا بشدة وافاق	لا فق	لا اخر ف	اوا فق	اوا ق بشدة	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.2.1 إعطاء أولوية لحماية البيئة والحفاظ عليها على مشاريع التطوير الاقتصادية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.2.2 العوامل السياسية تؤثر باستمرار على قرارات تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.2.3 وجود وعي جماهيري وأهلية للمشاركة في عملية تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.2.4 وجود تأثير للمنظمات الغير حكومية على دراسات تقييم الأثر البيئي

#### 7.3 هل تقوم الهيئة/الجهات البيئية المسؤولة بعمل تدقيق لتقارير دراسات تقييم الأثر البيئي؟

<input type="checkbox"/>	بشكل دوري	<input type="checkbox"/>	بين الحين والآخر	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف
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#### 7.4 هل تقوم الهيئة/الجهات البيئية المسؤولة بعمل تدقيق لنظام تقييم الأثر البيئي ككل؟

<input type="checkbox"/>	بشكل دوري	<input type="checkbox"/>	بين الحين والآخر	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف
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#### 7.5 هل تم تطبيق التقييم البيئي الاستراتيجي بشكل رسمي؟

<input type="checkbox"/>	بشكل كامل	<input type="checkbox"/>	بشكل جزئي	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف
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#### 7.6 هل أثرت المؤسسات اللاحكومية الدولية على قرارات تقييم الأثر البيئي المحلي؟

<input type="checkbox"/>	بشكل كبير	<input type="checkbox"/>	بشكل محدود	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف
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#### 7.7 هل تأثرت ممارسة تقييم الأثر البيئي الوطني بالضغط والانتقادات الدولية؟

<input type="checkbox"/>	بشكل كبير	<input type="checkbox"/>	بشكل محدود	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف
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#### ثامناً: توفر الموارد

#### 8.1 هل هناك التزام جاد من قبل الطواقم الحكومية ذات العلاقة بتطبيق دراسات تقييم الأثر البيئي؟

لا لأعرف	غير موجود	بشكل جزئي	بشكل كامل	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.1.1 على المستوى المركزي

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8.1.2	على المستوى المحلي؟	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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8.1.3	تنظيم دورات تدريبية دورية من قبل الجهة البيئية المركزية للأشخاص المسؤولين وذوي العلاقة من داخل القطاع الحكومي	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	بشكل دوري	<input type="checkbox"/>	<input type="checkbox"/>	بين الحين والآخر	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>

8.1.4	وجود قائمة بأسماء و عناوين الأشخاص الاختصاصيين المؤهلين ذوي الخبرات لاستشارتهم عند الحاجة	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	قائمة شاملة	<input type="checkbox"/>	<input type="checkbox"/>	قائمة غير مكتملة	<input type="checkbox"/>	لا يوجد	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>

## 8.2 هل هناك اجراءات كافية متخذة للنهوض بالطاقات والقدرات البشرية في المجال البيئي خارج القطاع الحكومي؟

8.2.1	تنظيم دورات تدريبية دورية من قبل الجهة البيئية المركزية للاستشاريين من خارج القطاع الحكومي والمنظمات الغير حكومية العاملة في مجال البيئة، وللمستثمرين مقدمي المشاريع	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	بشكل دوري	<input type="checkbox"/>	<input type="checkbox"/>	بين الحين والآخر	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>

8.2.2	تنظيم دورات تدريبية دورية من قبل مؤسسات ومعاهد غير حكومية للاستشاريين والمنظمات الغير حكومية العاملة في مجال البيئة، وللمستثمرين مقدمي المشاريع	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	بشكل دوري	<input type="checkbox"/>	<input type="checkbox"/>	بين الحين والآخر	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>

8.2.3	نظام لتسجيل الاستشاريين البيئيين المؤهلين	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2.4	قاعدة بيانات للاستشاريين المؤهلين وذوي الخبرة للرجوع إليها عند الحاجة	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2.5	جوائز / حوافز دورية / سنوية لأفضل دراسات تقييم الأثر البيئي تمنح لمقترحي المشاريع واستشاريهم	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 8.3 هل هناك موارد مادية كافية لتطبيق دراسات تقييم الأثر البيئي

8.3.1	قاعدة بيانات بيئية مركزية	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3.2	نظام تتبع لدراسات تقييم الأثر البيئي وتقديمها	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3.3	قاعدة بيانات مركزية لتقارير دراسات تقييم الأثر البيئي	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3.4	استخدام نظم المعلومات الجغرافية في التخطيط البيئي وتقييم الأثر البيئي لمشروعات التطوير	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3.5	امكانية استخدام الوسائل السابقة الذكر من قبل المواطنين المعنيين والمؤسسات اللاحكومية	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.3.6	صدور نشرات إعلامية وتثقيفية حول تقييم الأثر البيئي من قبل الجهات البيئية المعنية	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	بشكل دوري	<input type="checkbox"/>	<input type="checkbox"/>	بين الحين والآخر	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>

## 8.4 توفر دعم دولي تقني لتطوير نظام تقييم الأثر البيئي

	بشكل كامل	<input type="checkbox"/>	<input type="checkbox"/>	بشكل جزئي	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>
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## 8.5 توفر دعم دولي مالي لتطوير نظام تقييم الأثر البيئي

	بشكل كامل	<input type="checkbox"/>	<input type="checkbox"/>	بشكل جزئي	<input type="checkbox"/>	لا	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>
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## تاسعا: تحسين أداء نظام تقييم الأثر البيئي

9.1 "إن تحقيق التوافق ما بين نظام تقييم الأثر البيئي الفلسطيني والأنظمة الدولية كنظام البنك الدولي لتقييم الأثر البيئي يسهم بشكل فاعل في رفع فاعلية وكفاءة النظام الفلسطيني"

<input type="checkbox"/>	أوافق بشدة	<input type="checkbox"/>	أوافق	<input type="checkbox"/>	لا أعرف	<input type="checkbox"/>	لا أوافق بشدة
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## 9.2 الرجاء ترتيب الأوجه التالية من جوانب نظام تقييم الأثر البيئي حسب أكثرها حاجة الى التطوير:

( ) (المراحل التحضيرية للدراسة (Screening, Scoping))

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- ( ) (الأدلة الإرشادية) (Guidelines)
- ( ) (المشاركة المجتمعية) (Public Participation)
- ( ) (آلية مراجعة تقارير تقييم الأثر البيئي)
- ( ) (آليات الاستئناف وحل النزاعات) (Appeal Procedure)
- ( ) (مراقبة تطبيق شروط الموافقة البيئية) (Implementation Monitoring)
- ( ) (التنسيق بين الجهات المعنية وخاصة الوزارات)
- ( ) (تنمية القدرات التقنية والتدريب)

9.3 أية أمور أخرى تحب أن تضيفه فيما يتعلق با:  
 ✓ نقاط الضعف في نظام تقييم الأثر البيئي الفلسطيني

✓ خطوات من شأنها زيادة فاعلية النظام

**Appendix 2: Research questionnaire # 2**

برنامج هندسة التخطيط العمراني  
كلية الدراسات العليا  
جامعة بيرزيت – فلسطين

استبيان

**نظام تقييم الأثر البيئي في فلسطين**

هذا الاستبيان هو جزء من بحث نيل درجة الماجستير في هندسة التخطيط

الباحث: م. أحمد حسن أبو القرن  
بكالوريوس هندسة مدنية

المشرف: د. عصام الخطيب، جامعة بيرزيت

تشرين أول، 2006

**مقدمة:**

خلال السني السابقة تم اعتماد تقييم الأثر البيئي لمشاريع التطوير كآلية فاعلة للتخطيط والإدارة البيئية والحد من التلوث الناتج عن مختلف المشاريع بما يسهم في تحقيق الأهداف التي تسعى لها التنمية المستدامة.

إن فاعلية تقييم الأثر البيئي في تحقيق الأهداف المرجوة منه تعتمد على كفاءة نظام تقييم الأثر البيئي ككل بما يشمل ذلك من قوانين ومؤسسات وموارد.

**هدف الاستبيان:**

هذا الاستبيان هو جزء من دراسة بحثية في برنامج ماجستير هندسة التخطيط العمراني في جامعة بيرزيت و تهدف إلى تقديم مراجعة تحليلية لنظام تقييم الأثر البيئي في فلسطين وتسلط الضوء على فاعلية هذا النظام.

جميع المعلومات التي يتم الادلاء بها هي لغرض البحث العلمي فقط و فيما يتعلق بالمعلومات الشخصية فسيتم التعامل معها بسرية تامة ولن يتم تسريب أي منها لأية جهة كانت.

**الفئة المستهدفة:**

هذا الاستبيان موجه الى أصحاب ومدراء المشاريع والمؤسسات الصناعية القائمة والمشمولة بقانون تقييم الأثر البيئي في فلسطين لاستطلاع آرائهم حول جوانب نظام تقييم الأثر البيئي في فلسطين.

**تعليمات ملء الاستبيان:**

1. للاعادة بالفاكس: الرجاء طباعة الاستبيان وتعبئة المعلومات الشخصية في المكان المخصص ووضع اشارة X داخل المربع عند اختيارك

2. للاعادة الالكترونية: الرجاء تعبئة المعلومات الشخصية في المكان المخصص ( ) والنقر على المربع  ليصبح  وذلك لاجابة الاسئلة في الأجزاء الأخرى للاستبيان، و من ثم حفظ الاستبيان واعادته على البريد الالكتروني.

عنوان اعادة الاستبيان:

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- 1 الاسم (اختياري):  
2 المهنة:  
3 تليفون/جوال (اختياري):  
4 فاكس:  
5 البريد الالكتروني:  
6 المحافظة/المدينة/القرية:  
7 اسم المنشأة / المصنع الذي تعمل فيه:

8 ما هو مجال عمل المنشأة

<input type="checkbox"/> صناعات استخراجية (مقالع الحجر والرغام، كسارة... الخ)	<input type="checkbox"/> تخزين الوقود (محطة بنزين، محطة تعبئة غاز... الخ)	<input type="checkbox"/> صناعات كيميائية (مستحضرات طبية، مبيدات حشرية وسماد، دهانات... الخ)
<input type="checkbox"/> معالجة المعادن (سحب وطرق المعادن، الجلفنة، صناعة الصهاريج والخزانات،... الخ)	<input type="checkbox"/> صناعات غذائية تحويلية (زيوت، تعليب وتعبئة، منتجات الألبان، سكاكر وحلويات)	<input type="checkbox"/> صناعات تحويلية غير غذائية (منسوجات، جلود، أخشاب)
<input type="checkbox"/> غير ذلك، حدد:		

9 ما هي سنة تأسيس المنشأة

<input type="checkbox"/> قبل 1996	<input type="checkbox"/> 1996-2000	<input type="checkbox"/> 2000-2006
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10 ما هي الجهات الرسمية التي توجهت لها للحصول على ترخيص المنشأة (اختر كل ما ينطبق)

<input type="checkbox"/> سلطة جودة البيئة	<input type="checkbox"/> وزارة الاقتصاد الوطني (سابقا الصناعة والتجارة)	<input type="checkbox"/> وزارة الصحة
<input type="checkbox"/> وزارة السياحة والآثار	<input type="checkbox"/> وزارة التخطيط	<input type="checkbox"/> وزارة الزراعة
<input type="checkbox"/> سلطة المياه	<input type="checkbox"/> البلدية أو المجلس المحلي في المنطقة	<input type="checkbox"/> وزارة الحكم المحلي
<input type="checkbox"/> سلطة الطاقة	<input type="checkbox"/> غير ذلك، حدد:	

11 هل تقدمت بطلب للحصول على موافقة بيئية عند ترخيص المنشأة أو طلب منك ذلك؟

<input type="checkbox"/> نعم	<input type="checkbox"/> لا
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إذا كانت الإجابة "لا" انتقل الى السؤال رقم (33)

12 متى كان ذلك؟

<input type="checkbox"/> متزامن مع التخطيط الأولي للمشروع (دراسة الجدوى)	<input type="checkbox"/> متزامن مع بدء اعداد التصاميم الهندسية الأولية	<input type="checkbox"/> متزامن مع بدء اعداد التصاميم الهندسية التفصيلية
<input type="checkbox"/> بعد اكتمال التصميم النهائي		<input type="checkbox"/> أثناء عملية الانشاء

13 هل استعنت بخبير بيئي لاعداد طلب الحصول على الموافقة البيئية؟

<input type="checkbox"/> خبير بيئي مستقل	<input type="checkbox"/> من شركة هندسية استشارية	<input type="checkbox"/> من احدى الجامعات
<input type="checkbox"/> من غير ذلك، حدد:		<input type="checkbox"/> لا

14 متى حصلت على الموافقة البيئية؟

<input type="checkbox"/> مباشرة بعد دراسة الطلب المقدم من قبلي	<input type="checkbox"/> بعد استكمال متطلبات اخرى
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إذا كانت الإجابة " مباشرة بعد دراسة الطلب المقدم من قبلي" انتقل الى السؤال رقم (29)

15 ما هي المتطلبات الأخرى التي تم استيفؤها؟

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<input type="checkbox"/>	<input type="checkbox"/>	معلومات اضافية عامة عن المشروع	<input type="checkbox"/>	<input type="checkbox"/>	دراسة تقييم أثر بيئي
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إذا كانت الإجابة "معلومات اضافية عامة عن المشروع" انتقل الى السؤال رقم (28)

16 ما هي دراسة الأثر البيئي التي قمت بعملها؟

<input type="checkbox"/>	<input type="checkbox"/>	تقييم بيئي أولي	<input type="checkbox"/>	<input type="checkbox"/>	دراسة تقييم أثر بيئي تفصيلية
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17 هل استعنت بخبير بيئي لعمل الدراسة؟

<input type="checkbox"/>	<input type="checkbox"/>	خبير بيئي مستقل	<input type="checkbox"/>	<input type="checkbox"/>	من شركة هندسية استشارية
<input type="checkbox"/>	<input type="checkbox"/>	من غير ذلك، حدد:	<input type="checkbox"/>	<input type="checkbox"/>	من إحدى الجامعات
<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	لا

18 هل تم عمل دراسة تمهيدية لتحديد اطار دراسة تقييم الأثر البيئي

<input type="checkbox"/>	<input type="checkbox"/>	نعم	<input type="checkbox"/>	<input type="checkbox"/>	لا
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19 هل تم تزويدكم بالمتطلبات الأساسية لعمل دراسة الأثر البيئي (شروط مرجعية لعمل الدراسة) من قبل الجهات الرسمية

<input type="checkbox"/>	<input type="checkbox"/>	نعم	<input type="checkbox"/>	<input type="checkbox"/>	لا
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20 هل تم دراسة عدد من البدائل المتعلقة بالمشروع (المنشأة) أثناء دراسة تقييم الأثر البيئي

<input type="checkbox"/>	<input type="checkbox"/>	نعم	<input type="checkbox"/>	<input type="checkbox"/>	لا
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21 إذا كانت الإجابة نعم، فالبدايل التي تم دراستها تتعلق ب: (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	الموقع	<input type="checkbox"/>	<input type="checkbox"/>	آليات معالجة التلوث (مائي، بصري، ازعاج صوتي،...الخ)
<input type="checkbox"/>	<input type="checkbox"/>	غير ذلك، حدد:	<input type="checkbox"/>	<input type="checkbox"/>	

22 هل تم اشراك المجتمع المحلي خلال اعداد الدراسة

<input type="checkbox"/>	<input type="checkbox"/>	نعم	<input type="checkbox"/>	<input type="checkbox"/>	لا
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إذا كانت الإجابة "لا" انتقل الى السؤال رقم (25)

23 أي من الجهات المجتمعية تم اشراكها (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ممثلين عن السكان المجاورين
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	منظمات أهلية (CBOs)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	منظمات لا حكومية (NGOs)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	لموقع المنشأة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	جهات أخرى، حدد:

24 ما هي المراحل التي شاركت فيها الجهات المجتمعية (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1- في المراحل التحضيرية للدراسة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2- أثناء الدراسة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3- بعد اتمام الدراسة (اعلام المواطنين بانتهاء الدراسة وبدء مرحلة المراجعة والتدقيق)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4- الاطلاع على تقارير دراسات تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5- جلسات نقاش ومدولة عامة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6- مراجعة النتائج و التوصيات في دراسة تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7- اتخاذ القرار
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8- مرحلة متابعة تطبيق توصيات دراسة تقييم الأثر البيئي

25 ما هي الأهداف التي سعى الى تحقيقها اشراك المجتمع المحلي (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1- اطلاع الأطراف المتأثرة على طبيعة المشروع / المنشأة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2- الحصول على آراء المجتمع المحلي لأخذها بعين الاعتبار خلال التصميم
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3- كسب تأييد المجتمع المحلي للمشروع
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4- جميع ما ذكر أعلاه
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5- لاستيفاء المتطلبات الرسمية لدراسة تقييم الأثر البيئي فقط

26 أي الأمور التالية تضمنتها دراسة تقييم الأثر البيئي للمنشأة (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1- ملخص غير تقني
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2- وصف مفصل للوضع القائم في الموقع المقترح للمنشأة خاصة فيما يتعلق بعناصر البيئة

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<input type="checkbox"/>	<input type="checkbox"/>	3- وصف مفصل لنظام المنشأة وآلية عملها
<input type="checkbox"/>	<input type="checkbox"/>	4- التطرق إلى الجوانب الثقافية والاجتماعية والاقتصادية المتعلقة بإنشاء وتشغيل المنشأة
<input type="checkbox"/>	<input type="checkbox"/>	5- الإجراءات الوقائية والتصحيحية للأثار السلبية (Mitigation)
<input type="checkbox"/>	<input type="checkbox"/>	6- خطط الادارة والرقابة البيئية (EMPs)

27 أي الأمور التالية حصل بعد تقديمك تقرير دراسة تقييم الأثر البيئي للجهة الرسمية (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	1- ورود استفسارات وآراء من الأطراف المتأثرة و تحضير ردود عليها
<input type="checkbox"/>	<input type="checkbox"/>	2- مراجعة وتعديل تقرير تقييم الأثر البيئي بناء على الملاحظات الواردة من الجهة الرسمية لاصدار التقرير النهائي
<input type="checkbox"/>	<input type="checkbox"/>	3- حدوث خلاف مع الجهة الرسمية حول الأمور الادارية والاجرائية المتعلقة بالدراسة أو توصياتها باجازة المشروع

28 في حال كانت الاجابة على " حدوث خلاف مع الجهة الرسمية" بالاجاب فهل؟ (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	1- تم اللجوء الى جهة قضائية لحل الخلاف حول الأمور الاجرائية والادارية المتعلقة بدراسة تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	2- تم اللجوء الى جهة عليا لحل الخلاف حول نتائج وقرارات دراسة تقييم الأثر البيئي حدد تلك الجهة:
<input type="checkbox"/>	<input type="checkbox"/>	3- تم حل الخلاف من خلال النقاش مع الجهة الرسمية وتوضيح الأمور وتعديل الدراسة
<input type="checkbox"/>	<input type="checkbox"/>	4- اعتبر قرار وترتيبات الجهة الرسمية نهائيا غير قابل للاستئناف أو التعديل

29 ماذا تصنف الموافقة البيئية التي حصلت عليها المنشأة

<input type="checkbox"/>	<input type="checkbox"/>	مشروطة
<input type="checkbox"/>	<input type="checkbox"/>	غير مشروطة

30 أي الأمور التالية تضمنتها الموافقة البيئية؟ (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	1- الاجراءات التصحيحية للأثار السلبية التي يمكن أن تنتج عن تشييد وتشغيل المنشأة
<input type="checkbox"/>	<input type="checkbox"/>	2- الاجراءات التشغيلية اللازمة للالتزام بالمعايير والمقاييس المقررة ذات العلاقة
<input type="checkbox"/>	<input type="checkbox"/>	3- اجراءات ومسؤوليات الرقابة و تقديم التقارير للجهة المسؤولة
<input type="checkbox"/>	<input type="checkbox"/>	4- كل ماذكر، اضافة الى:
<input type="checkbox"/>	<input type="checkbox"/>	5- غير ذلك، حدد:

31 هل تخضع المنشأة أثناء عملها للرقابة والتفتيش لضمان تنفيذ بنود الموافقة البيئية الممنوحة؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	بشكل دوري منتظم، حدد الفترة:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	بين الحين والآخر (عرضيا)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	لا

32 من يقوم بعملية الرقابة والتفتيش؟ (اختر كل ما ينطبق)

<input type="checkbox"/>	<input type="checkbox"/>	1- سلطة جودة البيئة
<input type="checkbox"/>	<input type="checkbox"/>	2- الوزارات الرسمية الأخرى صاحبة الاختصاص، حددها:
<input type="checkbox"/>	<input type="checkbox"/>	3- الهيئات والسلطات المحلية
<input type="checkbox"/>	<input type="checkbox"/>	4- أطراف مستقلة أخرى، حددها:
<input type="checkbox"/>	<input type="checkbox"/>	5- يتم رفع التقارير الدورية من قبل خبير فني يعمل ضمن طاقم عمل المنشأة

33 هل خضعت المنشأة لعملية تدقيق لمنحها موافقة بيئية؟ (في حال لم يتم استيفاء هذا المتطلب عند ترخيص المنشأة)

<input type="checkbox"/>	<input type="checkbox"/>	نعم
<input type="checkbox"/>	<input type="checkbox"/>	لا

إذا كانت الاجابة " نعم" الرجاء الاجابة على الأسئلة من رقم (29) حتى رقم (32)

34 كيف تقيم درجة التنسيق بين المؤسسات والجهات الرسمية ذات العلاقة بتقييم الأثر البيئي؟

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	قوي جدا	قوي	لا اعرف	ضعيف	ضعيف جدا
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35 ما رأيك بالآتي؟

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لا اوافق بشدة	لا اوافق	لا اعرف	اوافق	اوافق بشدة	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1- إعطاء أولوية لحماية البيئة والحفاظ عليها والحد من التلوث على مشاريع التطوير الاقتصادية
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2- العوامل السياسية تؤثر باستمرار على قرارات تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3- وجود وعي جماهيري وأهلية للمشاركة في عملية تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4- وجود تأثير للجهات الدولية المانحة على دراسات تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5- وجود تأثير للمنظمات الغير حكومية على دراسات تقييم الأثر البيئي
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6- عملية تقييم الأثر البيئي تشكل عبئا ماليا على المطورين وأصحاب المشاريع
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7- عملية تقييم الأثر البيئي تتسبب بتأخر المطورين وأصحاب المشاريع في الحصول على التراخيص المطلوبة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8- ربط الحصول على الموافقة البيئية مع اجراءات ترخيص المنشأة يسهم في الحد من الآثار البيئية السلبية ويحد من التلوث

36 الرجاء ترتيب الأوجه التالية من جوانب نظام تقييم الأثر البيئي حسب أكثرها حاجة الى التطوير:

- ( ) تقديم طلب الترخيص (الموافقة البيئية) والمراحل التحضيرية للدراسة
- ( ) الأدلة الارشادية المتعلقة بمتطلبات عمل الدراسة
- ( ) المشاركة المجتمعية
- ( ) آلية مراجعة تقارير تقييم الأثر البيئي
- ( ) آليات الاستئناف وحل النزاعات البيئية في حال حصولها
- ( ) مراقبة تطبيق شروط الموافقة البيئية ورفع التقارير للجهات المسؤولة
- ( ) التنسيق بين الجهات المعنية وخاصة الوزارات
- ( ) تنمية القدرات التقنية والتدريب

37 أية أمور أخرى تحب أن تضيفه فيما يتعلق با:

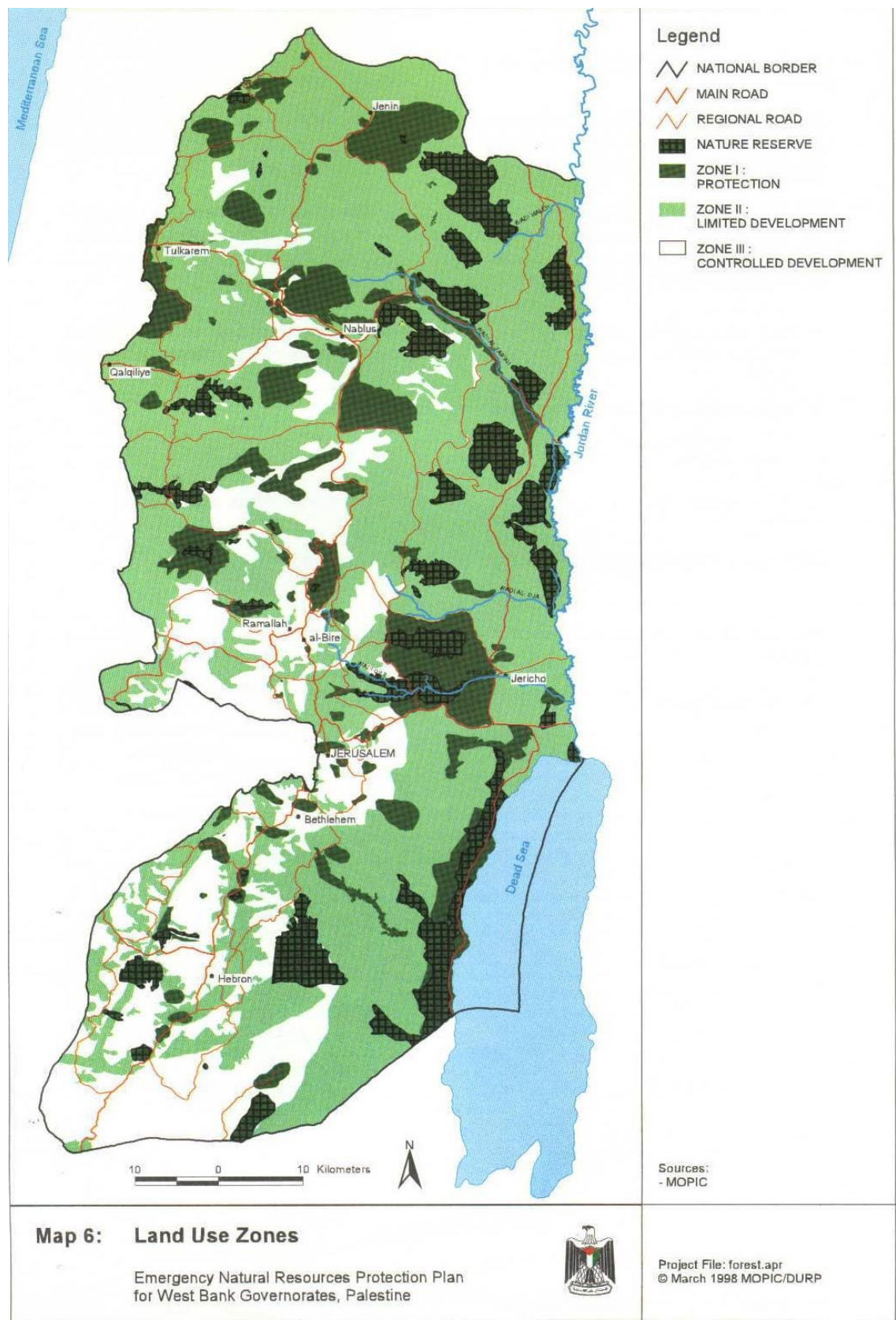
✓ نقاط الضعف في نظام تقييم الأثر البيئي الفلسطيني

✓ خطوات من شأنها زيادة فاعلية النظام

عنوان اعادة الاستبيان:

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### Appendix 3: Land Use Zones according to the Palestinian Emergency Natural Resource Protection Plan (ENRPP) of the West Bank



**Appendix 4: List of projects subjected to EIA or Environmental Review  
(ER) according to the Emergency Natural Resource Protection Plan (ENRPP) of  
the West Bank**

The following types of development/projects require Environmental Impact Studies in Zone II and in Zone III require Environmental Reviews and are forbidden in Zone I.

**(1) Agriculture:**

- a) Projects for the restructuring of rural land holdings in excess of 20 dunums;
- b) Projects for the use of uncultivated land and semi-natural areas for intensive agricultural purposes;
- c) Water-management projects for agriculture;
- d) Initial afforestation where this may lead to adverse ecological changes and land reclamation for the purposes of conversion to another type of land use in excess of 20 dunums;
- e) Installations for rearing of domestic animals;
- f) Commercial fish breeding.

**(2) Extractive Industry:**

- a) Deep drilling with the exception of drilling for investigating the stability of the soil and in particular:
  - Geothermal drilling;
  - Drilling for the storage of nuclear waste material;
  - Drilling for water supplies.
- b) Extraction of minerals such as marble, sand, gravel shale, limestone, phosphates and potash;

- c) Extraction of coal and lignite by underground or open-cast mining;
- d) Extraction of ores, petroleum and natural gas;
- e) Surface industrial installations related to extraction;
- f) Coke ovens (dry coal installations);
- g) Installations for the manufacture of cement.

**(3) Energy Industry:**

- a) Industrial installations for the production of electricity, steam and hot water;
- b) Industrial installations for carrying gas, steam or hot water;
- c) Installations for transmission of electrical energy by overhead cables;
- d) Underground storage of combustible gases;
- e) Surface storage of fossil fuels;
- f) Industrial briquetting of coal and lignite;
- g) Installations for the production or enrichment of nuclear fuels;
- h) Installations for the re-processing of irradiated nuclear fuels;
- i) Installations for the collection and processing of radioactive waste.

**(4) Processing of Metals:**

- a) Iron and steelworks, including foundries, forging drawing plants and rolling mills;
- b) Installations for the production, including smelting, refining, drawing and rolling, of non-ferrous metals;
- c) Pressing, drawing and stamping of castings;

- d) Surface treatment and coating of metals;
- e) Boiler-making, manufacture of reservoirs, tanks and other sheet-metal containers;
- f) Manufacture and assembly of motor vehicles and manufacture of motor vehicle engines or parts of engines;
- g) Manufacture of railway equipment;
- h) Swaging by explosives;
- i) Installations for the roasting and sintering of metallic ores.

**(5) Manufacture of Glass.**

**(6) Chemical Industry:**

- a) Treatment of intermediate products and production of chemicals;
- b) Production of pesticides, herbicides and pharmaceuticals products, paint and varnishes, elastomers and peroxides;
- c) Storage facilities for petroleum, petrochemical and chemical products.

**(7) Food Industry:**

- a) Manufacture of vegetable and animal oils and fats;
- b) Packing and canning of animal and vegetable products;
- c) Manufacture of dairy products;
- d) Brewing and malting;
- e) Confectionery and syrup manufacture;
- f) Installations for the large-scale slaughter of animals;
- g) Industrial starch manufacturing installations;
- h) Fish-meal and fish-oil factories;

- i) Sugar factories.

**(8) Textile, Leather, Wood, Marble and Paper Industries:**

Installations for manufacture, treatment assembly, carving or packing of textile, leather, wood, marble and paper

**(9) Rubber Industry:**

Manufacture and treatment of elastomer-based products

**(10) Infrastructure Projects:**

- a) Industrial estate development projects;
- b) Urban development projects including residential areas and developments larger than ten (10) homes or separate apartments;
- c) Cable cars;
- d) Constructions of roads;
- e) Construction of airfields;
- f) Dams and other installations designed to hold water or store in on along-term basis;
- g) Construction of tramways, light rail and railways;
- h) Oil and gas pipeline installations;
- i) Installation of aqueducts;
- j) Road services areas, petrol stations, car work shops.

**(11) Other Projects:**

- a) Hotels, motels and holiday villages;
- b) Permanent racing and test tracks for cars and motor cycles;
- c) Installations for the disposal of industrial and domestic waste;
- d) Waste-disposal installations for the incineration, chemical treatment or land fill of waste;

- e) Waste water treatment plants;
- f) Sludge-deposition sites;
- g) Storage of scrap iron;
- h) Test benches for engines, turbines or reactors;
- i) Manufacture of artificial mineral fibers;
- j) Manufacture, packing, loading or placing in cartridges of  
gunpowder and explosives;
- k) Knackers yard;
- l) Desalination plants.



## **Appendix 5: Summary of the Palestinian Environment Law #7**

The law was issued in the year 1999 and consists of five parts.

### **Part one**

This part is titled "Definitions and General Principles" and contains two chapters. The first chapter "Definitions" includes two articles (1& 2).

In article (1), definitions are given to the following terms: environment, air, soil, land razing, water, environment pollution, air pollution, water pollution, pollutant substances, hazardous substances, hazardous wastes, solid wastes, wastewater, groundwater, installations, installation owners, environmental damage, authorization and permits, environmental impact, pollution prevention, pollution control and reduction, environment protection, discharge of pollutants, ships, marine installations, public places, standards, waste management, environmental disasters, compensation, noise pollution, environment monitoring, environment forecasting, deterioration of environment, ministry -current competent authority is the EQA-, minister (currently head of EQA), environment awareness, public buildings, natural reserves, drainage, economic areas, environmental statement, and environmental impact assessment.

In article (2), the aims of environment law are stated, which includes:

1. Protecting the environment from all forms of pollution
2. Protecting public health and social welfare
3. Incorporating the concerns of environment protection into the economic and social development plans, and encouraging sustainable development

4. Protection of the biodiversity and the sensitive environmental areas as well as rehabilitating and upgrading environmentally damaged areas
5. Encouraging the collection and dissemination of environmental data and increasing the public awareness of environmental matters

The Second Chapter titled "General Principles" includes three articles. These articles (3, 4, and 5) discuss the right of the public to prosecute any person or entity who causes damage to the environment, in addition to their right to obtain official and reliable data on any industrial, agricultural, or construction activity to perceive its impact on the environment. They also state that the EQA in cooperation and coordination with the relevant authorities should disseminate the concepts and objectives of environmental education through schools, universities, and other community organizations to encourage initiatives for environmental protection voluntary work.

The law also guarantees the right of the public to live in a sound environment and good hygiene. It also emphasizes the necessity of protecting the natural wealth, economic resources, and historical heritage of Palestine.

## **Part two**

This part is titled "Protection of Environment" and contains five chapters. The first chapter "Earth's Environment" includes twelve articles (6-18).

Article (6) states that relevant authorities should cooperate with the EQA to prepare the general policy for land uses while considering reaching an optimum use of lands, protection of natural resources and areas of environmental sensitivity.

Articles (7 through 9) address solid wastes handling stating the mandate to prepare a comprehensive national plan for the management of solid waste, while

encouraging the reduction of solid wastes production and emphasizing the provision of waste recycling. They also address the mandate of the EQA in coordination with relevant authorities to determine the specifications of landfills for solid waste disposal.

Article (10) addresses the requirement of considering sound measures for the disposal of excavation, mining and construction surplus and residual materials in a way that does not harm the environment.

In articles (11 through 13) hazardous substances and wastes are addressed, stating that such substances and wastes must be specifically listed, where specific procedures and regulations should be set by the EQA and relevant authorities in relation to manufacturing, storing, distributing, using, processing, or disposing them and must be followed. In addition, it is clearly stated that import of hazardous substances to Palestine, or allowing their passage through Palestinian jurisdictional areas are prohibited and requires prior special authorization from relevant authorities .

In articles (14 and 15) pesticides and fertilizers are addressed, stating that environmental conditions and regulations set by the EQA and relevant authorities in relation to manufacturing or import, storing, distributing, using or disposing them must be followed.

In article (16) mining and exploration activities are addressed, stating that environmental conditions and regulations must be set by the EQA and relevant authorities for these activities to ensure environmental protection and conservation of natural resources.

In articles (17 and 18) desertification and soil erosion are addressed. They state that the EQA should coordinate with the Ministry of Agriculture and the other relevant authorities in order encourage reclamation of infertile and bare lands, while it

is clearly stated that razing of agricultural lands or transfer of its soil for use in nonagricultural lands is prohibited.

The second chapter titled "Air Environment" includes nine articles (19-27). In articles (19 & 24), air pollution is addressed, where these articles state the mandate of the EQA in coordination with relevant authorities to determine the standards for controlling the proportion of air pollutants (and thus limiting the deterioration of the Ozone Layer) in addition to monitoring the adherence of the various installations to these standards including safety measures against any gaseous emissions. In addition to that, smoking in closed public places and public transportation, use of vehicles non-complying to gas emissions standards and processing of garbage and solid waste by incineration in non intended sites are all prohibited by law.

In articles (25 & 26), noise pollution is addressed, where these articles state the mandate of the EQA in coordination with relevant authorities to determine the standards for controlling the noise in addition to monitoring the adherence of the various installations to these standards.

Article (27) addresses the prevention of any increase in radioactive emissions, and radioactive substances concentration resulting from installations, or any other activities above certain standards to be set by the EQA and other relevant authorities.

The third chapter titled "Aquatic Environment" includes three articles (28-30). These articles address the mandate of the EQA in coordination with relevant authorities to set the standards for the quality of potable water, collection, treatment and reuse of wastewater and rainwater. The articles also prohibit discharging any solid or liquid substance and indicate the need to meet the conditions and standards set by relevant authorities.

The fourth chapter titled "Marine Environment" includes nine articles (31-39). These articles discuss the protection of marine environment by setting the standards for sea water quality, in addition to taking measures to control marine pollutants and prohibiting any activities that might cause environmental damage.

The fifth chapter titled "Protection of Nature and Conservation of Archeological and Historical Areas" includes five articles (40-44). These articles state the mandate of the EQA in coordination with relevant authorities, to set standards and regulations for the identification of natural reserves and parks, monitoring and conserving them and maintaining biodiversity. Also, these articles prohibit hunting or killing of endangered species.

### **Part three**

This part is titled "Assessment of Environmental Impact and Licensing" and contains three chapters. The first chapter titled "Environmental Impact Assessment" lies in one article (45) stating the mandate of the EQA in coordination with relevant authorities to set the standards for the identification and listing of projects and activities for which EIA is a prerequisite, in addition to outlining the methods and procedure for conducting the EIA.

The second chapter titled "Licenses" includes three articles (46-48). The articles state the responsibility of relevant authorities to prevent environmental harm by encouraging projects that are environment friendly. The EQA in coordination with the relevant authorities should specify the projects the must not be licensed unless environmental approval by the EQA is issued following an EIA study.

The third chapter titled "Inspections and Administrative Procedures" includes nine articles (49-57). The articles address the follow up on the implementation of the environmental law that will be achieved through close coordination between the EQA

and other relevant authorities in monitoring installations, projects, and activities to assure their adherence to the set standards and regulations. Also, the articles establish the right of inspectors (from EQA) to visit and check installations, to acquire samples, and carry out inspections to verify adherence with the conditions of pollution prevention. In addition, these articles grant relevant authorities the right to suspend the work of any project or installation that are violating the law and causing harm to the environment, where resuming work is not to be authorized unless violation is stopped, adverse effects are remedied, and all is subjected to the inspection and approval of the relevant authorities.

#### **Part four**

This part is titled "Penalties" and comes in one chapter that includes seventeen articles: (58-74). The articles establish penalties of contravening the standards and instructions relating to the protection of environment as per the clauses of this law.

#### **Part five**

This part is titled "Final and Transitional Provisions" and comes in one chapter that includes eight articles (75-82). These articles address Palestine's relationship with other countries regarding regional and international agreements and treaties on environment. In addition, they state the need to prepare emergency plans for environmental disasters and to implement a continuous environmental forecasting and monitoring campaign to collect information on the environment to be readily available for all relevant authorities upon need.

## LIST OF ACRONYMS

ADB	Asian Development Bank
ANERA	American Near East Refugee Aid
ARIJ	Applied Research Institute-Jerusalem
CBA	Cost Benefit Analysis
CBO	Community Based Organization
CEA	Cost Effectiveness Analysis
EA	Environmental Assessment
EC	European Commission
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPD	Environmental Planning Directorate
EQA	Environmental Quality Authority
EU	European Union
GIS	Geographic Information System
IEE	Initial Environmental Evaluation
IT	Information Technology
JICA	Japanese International Cooperation Agency
KfW	Kreditanstalt fuer Wiederaufbau
MEnA	Ministry of Environmental Affairs
MOP	Ministry of Planning
MOPIC	Ministry of Planning and International Cooperation
NEAP	Palestinian National Environmental Action Program
NEPA	National Environmental Policy Act
NGO	Non Governmental Organization
OECC	Overseas Environmental Cooperation Center, Japan
OECD	Organization for Economic Cooperation and Development
OP	Operational Procedure
PA	Palestinian Authority
PCBS	Palestinian Central Bureau of Statistics
PEnA	Palestinian Environmental Authority
PES	Palestinian National Environmental Strategy
PHG	Palestinian Hydrological Group
PIF	Palestinian Industrial Federation
PLC	Palestinian Legislative Council
PLO	Palestine Liberation Organization
PNA	Palestinian National Authority
PPA	Post Project Analysis

**LIST OF ACRONYMS (CONTINUED)**

PWA	Palestinian Water Authority
SEA	Strategic Environmental Assessment
SIA	Social Impact Assessment
SPEAP	Strengthening the Palestinian Environmental Action Program
SPSS	Statistical Package for Social Sciences
TOR	Terms of Reference
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Program
UNRWA	United Nations Relief and Works Agency
USAID	United States Agency for International Development
WWTP	Wastewater Treatment Plant



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