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DESIGNING A MANAGEMENT FRAMEWORK FOR STRATEGIC ENVIRONMENTAL ASSESSMENT IN THE EGYPTIAN CONTEXT

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Abstract

Like most developing countries, Egypt has been undergoing rapid urbanisation and industrialisation. This has been followed by a rapid shift of population from rural to urban areas as the economy moves from an agricultural to an industrial economic structure. Recently, Egypt is progressing in many planning sectors; nevertheless, it is argued that there have been many undesired effects on the environment resulted from these development processes. In fact, it could be said that development processes, as a result of national policy over the past three decades, have been associated with the extensive exploitation of natural resources for urban growth.

After 25 Jan 2011 Revolution, it is evident that there is a strong need for more development processes, aiming to absorb population growth in the desert, with increasing recognition that uncontrollable urbanization may well give rise to various issues such as overexploitation of natural resources, ecosystem destruction, environmental pollution and large-scale climate change. Since sustainable development or sustainability has been highlighted as an essential principle in development planning, it is deemed necessary to modify the existing planning systems so as to cope with the challenges various developments are being confronted with and realize the purpose

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of sustainability. One approach to this could be the adoption of a system for integrating SEA into planning processes as part of an integrated approach to sustainable development. Thus, this paper advocates that SEA is the right way towards achieving more sustainable patterns of development. In this context, the paper investigates the Egyptian environmental context in order to design an SEA framework that may constitute the backbone of the future Egyptian SEA system.

Keywords

Egypt; Strategic environmental assessment; sustainable development; environmental context.

1. Introduction

Environmental policy formulation in Egypt has been an evolving process that has changed with time, modified with major unexpected environmental actions ((Gomaa, 1997). The real movement towards environmental protection and growing recognition of the importance of the environment started in the 1990s. This witnessed the beginning of strategic thinking in environmental policy making, calling for integrated regulations for the environment, and the establishment of hierarchical institutional structure (Gomaa, 1997). In 1994, Law No. 4 on environmental protection was enacted as the first environmental law to deal with all the media of the environment, and it also introduced for the first time the notion of sustainable development (METAP, 2000). Law No. 4/1994 structured the Egyptian Environmental Affairs Agency (EEAA) as a central authority responsible for environmental issues with broad power for implementing and enforcing its provisions. Furthermore, EIA was formally introduced in Law No. 4/1994 as a management tool for achieving sustainability within Egyptian development.

Recently, the government of Egypt enacted Law No. 9/2009 setting out amendments of some provisions of Law No. 4/1994, including some articles related to EIA; these amendments strengthened EIA legal provisions. The new law sets out the main principles underlying environmental management and protection initiatives. It seeks to achieve environmental protection through improvement of institutional, legislative and technical frameworks at local, regional and national levels. The Law of Environmental Protection defines the institutions responsible for environmental issues starting at national level with the Ministry of State for
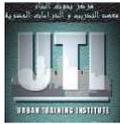
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Environment and its executive arm, EEAA, extending through regional branches under EEAA to environmental management units in governorates as local authorities.

Notwithstanding this considerable progress in environmental management for promoting sustainability in strategic actions, there are many challenges associated with development processes that still face the environment. These inherent challenges have led to consideration of the case for introducing strategic environmental assessment within the Egyptian planning context to be the tool for achieving sustainable development in the planning process and practice. It is argued that SEA is needed in order to promote a stronger representation of strategic environmental thinking in PPP making.

The aim of this paper, therefore, is to investigate the Egyptian environmental context, and explore the potential of SEA to be adopted in Egypt. This paper concludes that SEA should be introduced to overcome challenges facing the environment and to promote more sustainable development in development process in Egypt. It may therefore be stated that the potential for future take-up of SEA in Egypt is high, its format and scope need to be adapted to country's needs.

2. Evaluation methodology

Since the main aim of this study is to develop an SEA framework to be adopted within the Egyptian context, as one of the approaches towards achieving sustainable development, it is essential to identify the elements from which an SEA system may be composed. SEA can take different forms, while certain key elements will be reflected in every SEA system.

The criteria used in this study provide a comprehensive framework against which an SEA system for the Egyptian context can be adopted. The criteria developed for the purpose of this study are mostly descriptive and are based on formal requirements for SEA as well as on elements of its practice (Chaker et. al, 2006; Jones et. al, 2005). These criteria can be divided into three main attributes (Table 1), namely legislative framework of SEA, administrative framework of SEA system, and procedures of SEA process.

The study relies on fieldwork conducted in Egypt in 2009. Information obtained through interviews conducted with professional staff in government at EEAA and its regional branch offices, specialist agencies responsible for environment, EIA practitioners, members of academic

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universities and institutes. Each interview began with a non-structured discussion that sought to explore what and how they think about SEA. In order to effectively and comprehensively explore the complex idea of adopting SEA from the selected interviewees and to provide flexibility for contingency questions, the interview moves onto a semi-structured approach to probe any unclear responses. The criteria presented in Table 1 formed a set of structured questions in order to provide some basic baseline quantitative data.

Table 1: SEA framework and evaluation criteria

Component	Elements	Evaluation criteria	
SEA legislation	**Legal basis**	1)	What may be the legal basis for SEA?
	Administrative level	2)	What may be the administrative levels which SEA is applied for?
	Tiering specification	3)	What may be the decision making levels which SEA is applied for?
	Integration with planning process	4)	What may be the integration mode which is implemented?
SEA administration	**SEA initiator**	5)	Who may be responsible for initiating SEA?
	SEA conductor	6)	Who may be responsible for conducting SEA?
	SEA reviewer	7)	Who may be responsible for reviewing SEA?
	SEA inspector	8)	Who may be responsible for inspecting SEA?
SEA process	**Screening**	9)	How may be screening set up?
	Scoping	10)	How may be scoping determined?
	Impacts assessment	11)	How may be impacts assessed?
	Mitigation	12)	How may be mitigation measures mitigated?
	SEA report	13)	How may be the SEA report prepared and submitted?
	Review	14)	How may be the SEA report reviewed?
	Consultation & Public participation	15)	How may be consultation and public participation carried out?
	Monitoring	16)	How may be the SEA process monitored?

Source: Compiled by the author

3. The proposed Egyptian SEA system

Based on discussions and interpretations of the survey results and findings, this section explores planners' attitudes to SEA and identifies expected SEA mechanisms and the possible
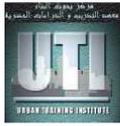
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impediments. The proposed SEA system, the subject of this research, will assist in constituting the future SEA framework. However, this proposal consists of three components, namely, SEA legislation and administration, and finally the SEA process, as developed below.

However, all interviewees recommended introducing SEA for environmental assessment of high-level strategies. They were aware that there is a need for strategic level policy assessment. Two-third of the planners felt that the rationale for applying SEA is connected with current shortcomings of policy, plan and program making. They considered that SEA is the way to improve environmental thinking in PPP making and to provide more effective reasoning in decision-making.

3.1 SEA Legislation

This component explores elements that identify the potential legal context of the proposed SEA framework, such as the potential legal basis through which SEA could be adopted, administrative levels that require implementing SEA, strategic action levels that SEA should be applied for, and finally, the extent to which SEA is integrated with the planning process.

3.1.1   Legal basis

Sheate et al. (2001) argued that successful SEA generally occurs where there is a legal obligation to require it. According to the Egyptian context, all planners interviewed did not believe that SEA would be widely applied in the short term. They felt that it was necessary to understand what can effectively make or encourage SEA to happen. Critically there was a general belief that mandatory SEA regulation would be the most powerful driving force for SEA application. 86% of interviewees believed that there will be no SEA, at least no wide application of it, if there are no mandatory SEA provisions. Basically, they believe that mandatory SEA legislation is the most applicable and suitable for the Egyptian context. In Egypt, EIA provisions have already been introduced in the Environmental Protection Law No. 4 of 1994, which are strengthened in Law No, 9 of 2009. 86% of the interviewees argued that the general requirement for SEA application potentially provided with EIA provisions under the Framework Law for Environmental Protection Law.

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### 3.1.2   Administration level

In theory, it has been suggested that SEA can be categorised according to the administrative level in the planning process at which it is applied (Fischer et al., 2002). Since the Egyptian environmental planning system is distinguished by three administrative levels, namely, national, regional and local levels, 86 % of interviewees emphasised that to achieve sustainable development beginning from national level through regional to local levels, SEA is required to be implemented for strategic actions at all levels of planning.

3.1.3   SEA tiering

Theoretically, 'strategic actions' subject to SEA include: "acts, policies, plans and programs" (Therivel, 2004). But generally speaking, the most recommended actions that SEA should deal with are **policies, plans and programs (PPPs)** (Partidario and Clark, 2000). In Egypt, 75% of interviewees argued that since a hierarchical tier exists, there can therefore be tiering of their associated assessment.

However, 11 interviewees gave a negative response to the suggestion that high policy level is not suitable for the conducting of SEA because it does not have physical actions and is not area-specific. On the other hand, 17 interviewees advocated that if SEA is conducted at the highest strategic level, the associated plans and programs will not need SEA if they fulfil the environmental principles and objectives set by the corresponding policy. It could be suggested that they might be wrong about this idea, because they ignored the fact that strategic planning is a dynamic process and should be connected to decision making at different stages. However, they may be right about the result.

Hence, it is suggested to carry out an environmental assessment for policies, plans and programs, which may result in important environmental effects, either positive or negative, when submitting for approval. If this is the case, there will be a clear vertical hierarchical tiering of the SEA application in which policies (if included), plans and programs are subject to SEA. A tiered system with guidance from higher level of SEA to low level EIA really brings benefits (Fischer, 2002). Nooteboom (2000) further argues this arrangement can positively re-orientate decision making towards sustainability.
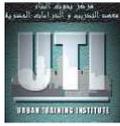
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3.1.4   Integration with planning process

By integrating environmental considerations into planning and decision making on a par with social and economic considerations, SEA makes the strategic action planning and decision-making assessment mechanism nearly complete from the perspective of sustainable development. However, the extent of the integration of contents (integrating environmental considerations into strategic planning and decision making) actually highly depends on the integrated process (integrating SEA into planning and decision-making process) (Therivel and Partidario, 1996).

In Egypt, sustainable development has already been adopted as one of the major principles to guide its development (e.g. the EIA system and strengthening environmental protection). In the National Environmental Action Plan of 2002–2017, it is argued that the strategic objective of environmental policy in Egypt is to integrate environmental concerns into all policies, plans, programs and projects (WB, 2005). Furthermore, the Egyptian Constitution stipulates that environment protection is a national duty and the law regulates the necessary measures for maintaining a good environment (article 59/2007). In addition, the Minister of Environment has confirmed that environmental dimensions should be integrated into development and a strategic planning process. All these requirements indicate that the Egyptian central government has committed to integrating environmental considerations into strategic planning and decision making.

As this study suggests that SEA could be used as a tool to integrate environmental concerns into the planning process, how to integrate SEA into the current planning system should be carefully considered before the actual SEA application begins. However, there is a consensus among interviewees that the separate SEA system does not bring the benefits that SEA is supposed to deliver. 86% of interviewees argued that many of the benefits of SEA may be lost if it is carried out as a completely separate process.

Integrated planning receives the highest support, but the interviewees thought that it would be workable only if the SEA system could be established and excellent institutional coordination achieved. There were significant differences among interviewees in their support for this idea, and in general, national planners were more supportive than other planners. All the national

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environmental planners supported integrated planning SEA, but there was low support from the local planners who think that integrated planning is an idealistic vision.

Considering that Egyptian governments from the central to the local do not have experience of fully integrating environmental considerations into strategic planning, and fully integrating SEA into strategic planning would need significant changes to the current administrative structure, this change will not happen in the short term. Alternatively, 68 % of interviewees felt that a more secure and feasible way at present would be to partially integrate SEA into strategic action preparation and decision making.

3.2 SEA Administration

In theory, it is argued that an appropriate administrative framework that incorporates quality control procedures is one of the enabling conditions for sound SEA practice (Partidario, 2000). This section identifies the proposed institutional and organisational structures, and arrangements that should be in place to facilitate the implementation of SEA in Egypt. Four main groups are identified to be responsible for SEA: the initiator, conductor, reviewer and inspector.

3.2.1   SEA initiator

86 % of interviewees considered that the action-leading agent should be responsible for promoting sustainable development through setting the environmental objectives and targets of its PPPs, and these objectives should include requirements to achieve environmentally sustainable strategies. Then this will be done when the proponent agency considers environmental concerns as early as possible when drafting its strategies.

3.2.2   SEA Conductor

The proponent agency received the highest support rate amongst the interviewees as the most suitable body for conducting SEA. 89 % of interviewees indicated that each proponent agency is technically the correct body to conduct SEA. They felt that SEA is not a separate planning tool, but a new planning scheme suitable for every agency.

The integration of SEA within the planning process means that the SEA conductor, as argued 18 interviewees, should be a team of responsible specialist personnel who are included within the planning team itself. The implementation of the SEA process has to be managed by an SEA team, in which the 'environment' and 'economic planning' will both be represented. The team should
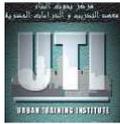
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have a small number of members. The composition of the SEA team may vary, but generally, the team may have representatives from government agencies related to the strategic proposal and consultants from the private sector, depending on the availability of qualified personnel required for the assessment of the expected significant impacts. These could be from any of the disciplines associated with physical, economic, social and cultural environments.

9 interviewees raised the point that poor institutional coordination and non-integrated planning systems will impede SEA implementation. They argued that poor institutional coordination seems to be at the root of application barriers. Hence, 86% interviewees emphasised the fair coordination between EEAA and the other agencies responsible for planning during conducting the SEA process. An integrated planning system results in integrated objectives, alternatives, methodologies and lastly, integrated outcomes.

3.2.3   SEA Reviewer

82% of interviewees considered that the environmental agency (EEAA) should be responsible for reviewing SEA reports. They felt that EEAA may have the capacity to do an environmental analysis and is more familiar with reviewing methods and techniques. The strategic proposal should be assessed before submitting for an approval decision. It is proposed that this SEA Review Panel, the responsible department within EEAA, or an expert body appointed by EEAA, is formed at an early stage of the planning process. According to the institutional structure responsible for environmental issues in Egypt, EEAA is proposed to be responsible for SEA reviewing of PPPs at national and regional levels, whilst SEA for local plans and programs should be reviewed by EEAA's regional branch offices.

The role of the SEA Review Panel is to give independent recommendation on the extent to which SEA for the strategic proposal is implemented effectively, as well as the degree to which the proposal has integrated the social, economic and environmental components of the environment to achieve more sustainable development. 20 interviewees argued that the Review Panel should be familiar with all planning principles and issues that become the basis for the particular plan. Its members should, from the early stage of the planning process, be exposed to all aspects of planning, so that there is a common understanding of the opportunity and constraints that could be present. In the proposed SEA framework, it is proposed that the SEA

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Review Panel should comprise members with a good representation from each field of the physical environmental studies, as well as from the socio-economic field. A respectable proportion of 'experts' from the public should be maintained in the Panel, to supplement the public input that would be obtained through the formal public participation activities.

3.2.4   SEA inspector

In Egypt, the failure of many laws relating to planning and the environment resulted from a lack of commitment to the implementation of the outcome (WB, 2005). This is why it was felt to be important to ensure effective compliance with the results of SEA. After the decision is taken on how (or whether) a proposal should proceed (with or without conditions), there should be an independent inspector responsible for checking the compliance with SEA findings not only when making the decision but also after implementing the strategic proposal. 93% of interviewees believed that the proponent agency is not the right agency for such oversight because it is possible that the agency may overlook SEA outcomes in order to push its development strategies into implementation.

It was argued by 89 % of interviewees that the inspection department of EEAA is the most appreciated body to be in charge of this task at national level. It should be responsible for checking on the compliance with SEA outcomes and ensuring comments given in the report are adhered to in amending the plan and strategy. For inspection on strategic proposals implemented at regional level, the inspection department within the EEAA's regional branch offices is proposed to undertake this task, while the environmental management unit in each governorate is expected to proceed with the task of inspection of irregularities in the implementation of the SEA results for strategic proposals at local level.

3.3 SEA process

The purpose of this area of investigation was to determine what mechanisms might be used in SEA and how the SEA process could be operated. This part identifies the different approaches by which the SEA process could be adopted within the Egyptian context. In other words, it attempts to identify how the SEA process could be introduced in Egypt. Most of the interviewees believed that a well-operated system cannot be established in a short time. Presently, the practice
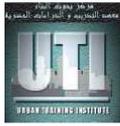
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of EIA can help the database and methodologies. The proposed SEA process can be broken down into distinct steps as discusses below.

3.3.1   Screening

Screening is the starting point in most of SEA systems (Chaker et al., 2006), and is conducted to decide whether SEA is needed. 82% of interviewees advocated that strategic decision proposals subject to an assessment prior to decision making should be identified according to set exclusion or inclusion criteria within SEA legislative requirements. They argued that if the SEA is to be applied effectively, the law should develop certain criteria for qualifying policies and plans that are likely to have significant impacts on the environment. The screening list option was believed to be more suitable by 57 % of interviewees for programs as in the case of the EIA system that involves the use of exclusive lists of projects based on different categories (Badr, 2009). They argued that there are various programs and projects related to specific policies or plans, therefore it is possible to identify categories of those that are likely to have considerable effects on the environment, while in the case of policies and plans it is impossible to categorise policies or plans.

3.3.2   Scoping

Scoping is case-specific and is often guided by generic guidelines in most SEA systems (Chaker et al., 2006). Scoping is important step for setting the foundations for subsequent analyses and discussions. It also serves in preventing idle work and unnecessary delays that might result during decision-making due to the lack or inaccuracy of necessary information. The scoping stage determines the likely extent and level of detail of the assessment, the information to be included in the SEA and the environmental report. The scoping also identifies the methods to be used, the organisations and/or individuals to be consulted during the assessment, and the timing and length of the consultation period.

71% of interviewees agreed that the guidance form is considered as an appropriate way to show how to perform the scoping stage. The interviewees noted that strategic actions vary depending on the nature and the scale, and consequently the scoping will differ from action to action. However, they believed that a guidance form is suitable to cover various natures and scales of policies, plans and programs that could not be covered in the law. 13 interviewees

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claimed that consultation with third party is very important during scoping stage, and is a factor to ensure the efficiency of the result of this stage. Hence, it is critical to involve concerned stakeholders at an early stage particularly during scoping.

3.3.3   Impact assessment

Since SEA is considered as a systematic process for evaluating the environmental consequences of a proposed policy, plan and program (Therivel, 2004), impact assessment is considered as a core step of SEA system, and is carried out to ensure that the environmental consequence are appropriately address at the earliest appropriate stage of decision making. 75% of interviewees supported that strategic actions should be tested against environmental objectives, to see whether they are likely to contribute to, or work against, the achievement of those objectives. They felt that the vague nature of higher strategy and non-quantitative attributes makes impact prediction difficult. Hence, the current methodologies used by the project EIA which are designed for those physical and site-specific projects with clear quantitative information can not be fully transplanted into an SEA system

3.3.4   Mitigation

The proposing of mitigation is seen as good practice as it increases the chances of improvement being made to the environmental performance of the proposed strategy during the political decision-making process (Therivel, 2004). With respect to Egypt, 82 % of interviewees suggested that a sequence for properly selecting mitigation measures should be considered. Firstly, adverse environmental effects should be prevented; if this is not possible, then efforts to reduce their magnitude and significance should be proposed; and finally, if neither of the first two is possible, measures that can offset effects should be set out.

3.3.5   SEA report

The preparation of a report and a clear and concise summary are core elements of SEA (Brown and Therivel, 2000). The SEA report documents the findings relating to the proposed strategic action's predicted impacts on the environment. It provides the basis for stakeholder consultation and eventual evaluation of SEA efficiency in influencing strategic decision making (Therivel, 2004). According to the results of interviews, an integrated report was considered by 79 % of interviewees to be the most suitable approach for the SEA report. They argued that SEA
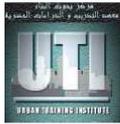
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is a process of incorporating environmental concerns into planning procedures. Therefore, the SEA report should be integral in PPP documents and that its contents need to be linked with planning procedures and decision-making processes. Many of the planners interviewed felt that the SEA report, from the early stage of planning process, should be integral to all aspects of the planning process. Moreover, 8 interviewees advocated that the proponent agency should prepare a brief statement, as a separate document, that presents a brief of the strategic action with a concise résumé of the SEA process findings. This statement will give the public opportunities to give comments on the proposal before the final decision.

3.3.6   SEA review

The review step is a means for controlling the quality of the presented information, which will constitute eventually the basis for decision-making, and predetermine thereby the suitability, practical feasibility and sustainability of the resulting strategic action (Andre et al., 2004). However, a transparent review with publicly available findings is evident and clear in most SEA systems (Chaker et al., 2006; Jones et al., 2005).With respect to Egypt, 89 % of interviewees agreed that an external review by an independent body is necessary in order to reduce bias. They argued that the SEA reports should be reviewed by a party other than the internal review by the proponent agency to be sure that the report will be assessed fairly. They were concerned that in case of the internal review or self-assessment, the proponent authority could ignore SEA outcomes to promote its PPPs.

3.3.7   Consultation and public participation

Consultation and public participation can help to generate a sense of ownership of the development among stakeholders; can improve decision makers' understanding of issues including planning procedures and environmental impacts; and can increase the transparency of the strategy preparation process (Heiland, 2005). A range of approaches is evident, including:

- Information: this includes public relations without any possibility for the public to give statements or to take influence on the decision-making process.
- Involvement: this offers the opportunity to the public to express its opinions in an active manner.

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- Cooperation: this refers to a decision-making process between equal partners and includes the possibility for jointly developed solutions.

All respondents agreed that the current public consultation methods that are applied in the EIA process are unreliable. It is hard to obtain the true public opinion, because the respondents considered that the public normally cares only about immediate interests, and that it will not give too much attention to strategic planning PPPs. However, after probing for more detail all interviewees indicated that all listed public consultation methods could be effective, except the information approach. They argued that in the information approach, there is no possibility for the public to give statements or influence the decision-making process directly. The cooperation approach had the highest rate of support from 82% of interviewees, which seems to conflict with their criticism about genuine public opinion. They indicated that the cooperation approach refers to decision-making processes between equal partners and includes the possibility for jointly developed solutions. Nevertheless, they believed that it is not possible to apply this approach in Egypt because this needs a change in values for decision makers; accordingly, they felt that cooperation is an idealistic method. 20 interviewees believed that the involvement approach is a quick way to effectively obtain representative public opinion. They considered that this approach offers the opportunity for the public to express its opinions in an active manner. They argued that opinions from key persons or advisory groups sometimes are closer to genuine public opinion.

3.3.8   Monitoring

Monitoring the implementation of the policy, plan or program is envisaged as a key stage in the SEA process. The information gathered as a result of monitoring enables the responsible authority to track the environmental effects of the PPP and manage any uncertainty encountered in the assessment process (Therivel, 2004). Although few details are provided on the approach or objective of monitoring, Therivel and Partidario (1996) identified that there are different approaches to monitoring including:

- Identifying new adverse impacts and their management (track unpredicted effects and manage them);
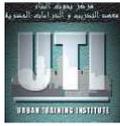
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- Achievement of PPPs objectives (to ensure that the objectives of the proposed action will be obtained);

- Verification of predicted impacts and success of mitigation measures (to certify whether negative impacts are being addressed and being reduced).

With respect to Egypt, the debate on all approaches was opened with interviewees. 71% of the interviewees felt that the main task of monitoring is to oversee impacts – not only those predicted but also new unpredicted impacts. They believed that unforeseen adverse effects that emerge during and after PPP implementation may be very harmful on the environment and need to be monitored in order to undertake appropriate remedial action This is important in SEA due to the high level of uncertainty in making predictions at the policy and plan levels. On the other hand, 15 interviewees supported the approach of verification of achieving PPPs objectives. They have argued that it is also necessary to measure the success that may be achieved . It is obvious that the achievement of objectives may only be related to the corresponding planning and environmental objectives.

4. Conclusion

The idea of integrating SEA into various PPP formulations at different strategic levels is well accepted by planners in Egypt. There is a positive attitude about SEA, and they are willing to support SEA. However, the high support of SEA application implies that the Egyptian environmental authority could be more ambitious in broadening SEA applications.

Law No. 4 of 1994 and its amendment in Law No. 9/2009 are an appropriate legal basis for the proposed SEA system, which set the general framework for environmental protection in the country and formalises preventive and precautionary approaches in environmental management. It stipulates environmental assessment as a guiding principle for environmental protection and resource management. This opens a window of opportunity for the national application and integration of SEA/EIA at different planning levels.

Egyptian Environmental Agency Affairs (EEAA) is the governmental body that is responsible for the environment. Most interviewees indicated that EEAA is the technically and politically appropriate body to be responsible for SEA and to monitor its results' implementation.

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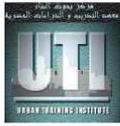**Cairo and El-Gouna, Egypt**

It is recommended that EEAA should identify the better way to incorporate SEA provisions within the existing law; in addition, EEAA should promote the application of SEA within all different administrative levels. As the environmental institutional hierarchy is considered a potential support for an effective application of SEA, it is argued that there is a poor coordination between different levels. This needs sufficient negation channels to set between the central agency and other agencies in different levels to ensure a better implementation of SEA.

With respect to SEA process, the opinions are based on the knowledge of the project-EIA experience; this unclear image leads to wrong expectations and misunderstandings. However, the law need to be comprehensive and cover more aspects of SEA principles and procedures in more detail. Moreover, in order to be truly successful in practice SEA guidelines should be clear to assist in a better understanding of needs, objectives, values, process and methods. Emphasis in needed on improving capacity building through continuous in-house training and on increasing the number of skilled staff.

In conclusion, this study concludes that SEA should be introduced to overcome challenges facing the environment and to promote more sustainable development in development process in Egypt. It may therefore be stated that the potential for future take-up of SEA in Egypt is high, its format and scope need to be adapted to country's needs. Finally, SEA should have the same high-level objectives wherever it is operated, even though the mechanisms through which it is delivered varies greatly.

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