

**TOWARDS EXCELLENCE IN ENVIRONMENTAL IMPACT  
ASSESSMENT  
FOR THE MIDDLE EAST**

**Report of the Environmental Impact Assessment Mission  
of the Working Group on the Environment  
Multilateral Peace Process**

**Prepared for the International Development Research Centre  
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## **EXECUTIVE SUMMARY**

The purpose of this Mission was to determine the environmental impact assessment capabilities and needs in Jordan, the Occupied Palestinian Territories (the West Bank and Gaza), Israel and Egypt, and to identify needs that could be filled by Canada and the international community as well as by government or non-government, private or public institutions in the four regional parties.

An effective environmental impact assessment (EIA) process must be in place in each of the four jurisdictions examined in order for the benefits of good environmental impact assessment to be realised. This is currently the case in Israel and the enabling legislation for such a process exists in Egypt, where the process is currently under development. In Jordan and in the Occupied Palestinian Territories, there are clear plans for such a process, an environmental law that would enable an EIA process in Jordan and the potential for the Palestinian Environmental Protection Authority to create an EIA process for the area within the jurisdiction of the Palestinian Authority. The most important need, probably best achieved through bilateral assistance to the individual parties, is to realise those plans for implementing EIA processes. In what follows, we assume that these plans will indeed be realised, that is, that all four participating regional parties will have EIA processes in place. The next question is how to make the processes effective, even excellent.

The following conclusions have been reviewed and approved by the regional parties.

1. Promotion and fostering of information sharing on environmental impact assessment among the regional parties is needed.
2. There is a need for the regional parties to consider and address transboundary issues of EIA.
3. Regional parties would benefit from the experience and expertise of the international EIA community.
4. Greater public involvement in EIA and public awareness about EIA are needed in the region.
5. There exists a need to further develop and refine the EIA processes in the region, and to ensure smooth effective implementation. Attention should be paid to establishing strong links among the processes for environmental impact assessment, project planning and decision making.



6. While the necessary scientific and technical expertise of the sort that would be required for EIA practitioners exists, in parts of the Region there is a need for better understanding of EIA, for more EIA experience and for greater interdisciplinary knowledge and skills.

7. Institutional capacity to do good EIA needs to be enhanced and strengthened. To make this part of the environmental impact assessment system work well, one needs not only good people, but also good EIA training and good communication. The focus here is on getting the best dedicated people to do the work, on motivating and rewarding them, and on being sure they have the knowledge and skills to do the job given to them.

8. In order to enable the Palestinians to benefit and to contribute actively to EIA, special attention should be given to their urgent need to enhance and strengthen their EIA capacity within the framework of economic, social and environmental aspects.

The Working Group on the Environment should support the creation of a "Middle East Environmental Impact Assessment Forum".

The Working Group on the Environment should support the regional parties through the Middle East EIA Forum to develop a means of dealing with transboundary issues in environmental impact assessment.

The Working Group on the Environment should support the delivery of EIA training courses for EIA practitioners focused initially on water resource development, other infrastructure projects and waste disposal projects. This should be used in combination with the use of practitioners from the region paired with experienced excellent EIA practitioners as a means of developing regional EIA expertise.

The Working Group on the Environment should focus its training efforts on developing the EIA training expertise in the regions, i.e., on training the trainers.

The Working Group on the Environment should strongly encourage the regional parties to seek means, such as those mentioned in the report, to achieve excellence in the human resources used for EIA administration. More, importantly, the regional parties themselves should seek to achieve this excellence.

We also recommend: support for public environmental awareness education; that EIA administrators explore creatively for means of public involvement in environmental impact assessment processes that are culturally appropriate and productive; and preparation and dissemination of information about EIA. Environmental non-government organisations are a valuable resource to use in EIA.

## ACKNOWLEDGEMENTS

We are indebted to many people who have worked to achieve the success of this Mission: people from the International Development Research Centre, the Canadian International Development Agency, the Department of Foreign Affairs and International Trade, our home institutions and, most important, the many people in the Middle East from whom we obtained much useful information, both those contacted during the Mission and those who participated in the subsequent workshop in Canada.

The International Development Research Centre (IDRC), the Canadian International Development Agency (CIDA) and the Department of Foreign Affairs and International Trade (DFAIT) made the Mission possible. Specifically we wish to thank Dr. David Brooks, Jill Tansley and Eileen Alma of IDRC, Jean Couturier and Claire Miquet of CIDA, and David Viveash and Chantal Chastenay of DFAIT for their very considerable assistance to the Mission.

Contributions of our colleagues at our home institutions, the Faculty of Environmental Design at The University of Calgary and the Federal Environmental Assessment Review Office, must also be recognised. They allowed us to get away from our offices in order to undertake the Mission and deserve our thanks.

Last, but most important, are the many expert contacts in Jordan, Gaza, the West Bank, Israel and Egypt who provided the very useful information upon which this report is based. Many of these people are identified in Appendices 2 and 3. Their contributions were essential to whatever success this Mission may have enjoyed.

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## **INTRODUCTION**

### **Background**

At the third meeting of the Middle East Peace Negotiations' Multilateral Working Group on the Environment, which took place in Tokyo, May 24-25, 1993, Canada proposed to send a Mission to the region to review needs and capability in the area of environmental impact assessment (EIA). The Israeli-PLO Agreement makes this Mission not only possible, but of crucial importance. In both the short and long term, this Agreement is expected to lead to significant economic development and enhanced prospects for investment. EIA is designed to provide a systematic means to identify and evaluate possible adverse environmental impacts of such economic development and investment at a sufficiently early planning stage to permit adaptation, redesign and, in extreme cases, cancellation of the project. The geographic area for the Canadian Mission is Israel, the Occupied Palestinian Territories, Jordan and Egypt.

The primary objective of the Canadian Mission is to compare: (a) the extent of environmental impact assessment capabilities currently available in the region and (b) the likely need for environmental impact assessments over the next five years. It did this first by gathering and examining information on existing individual and institutional capabilities in both the analytical aspects and the management of EIA processes. The Mission also gathered information and made a preliminary judgement of the number and kinds of assessments (i.e., type of problem, scale of EIA, etc.) that may be needed over the next five years, as a result of development projects that may be anticipated. Finally, the Mission compared the two in order to identify gaps in either analytical or management capabilities and suggested options for filling the gaps.

The Mission was not charged with determining the political will to create and support environment assessment procedures in any part of the region, nor with evaluating how likely EIAs are actually to occur. That is, the Mission operated with the working assumptions that EIAs are a positive factor in rational planning and that Governments throughout the region will take appropriate steps to establish EIA procedures.

Most modern EIA processes implicitly or explicitly include social impact assessment (SIA) and health impact assessment, with particular emphasis on socio-cultural changes that may be imposed by particular types, scales or timing of

development. The Mission gave secondary attention to capabilities for SIA in the region. Internationally accepted practice, sanctioned by the Earth Summit, also calls for some degree of public involvement in the environmental assessment process (sometimes defined as environmental "review" rather than assessment). As with SIA, the Mission accorded some importance to the potential awareness and likely design of environmental review procedures in each part of the region. The secondary emphasis on SIA and environmental review was not intended to suggest that they are less significant than environmental impact assessment, narrowly construed, but to provide reasonable limits for a relatively short Mission.

#### Terms of Reference

The terms of reference for the Mission are as follows:

##### A) Information Gathering:

- a) to identify structures and institutions available to undertake EIAs, as perceived by the parties concerned;
- b) to describe the currently applicable environmental regimes i.e., relevant laws, regulations, policies and programs in each part of the region as defined in the background;
- c) to identify the current role of non-government bodies in terms of public participation in the review process;
- d) to gather general information about anticipated population and economic growth in key natural-resource- intensive sectors of the economy, i.e., those sectors, including urban development, that depend on particular natural resources for location or as inputs, and those that impose a heavy load on natural resources with waste disposal;
- e) to collect appropriate information with respect to existing environmental conditions in the region and, more particularly, to the environmental impact of projects that have been undertaken in the recent past;
- f) to obtain direct sources of information on capabilities or training in EIA to be provided within the region, including information on potential EIA trainers and training institutions and determining gaps in their training capabilities;

##### B) Evaluation

- g) to evaluate existing and anticipated capabilities for environmental impact assessment in the region through the analysis of direct sources of information on existing and proposed institutional structures for environmental assessment and management in governments, universities, private corporations or nongovernmental organizations;
- h) to suggest the types and numbers of major EIAs that are likely to be required over the next five years based on the analysis of the information obtained; and



- i) to identify any gaps that could be filled by Canada and the international community as well as by government or non-government, private or public institutions in Israel, the Occupied Palestinian Territories, Jordan and Egypt. Emphasis would be placed on the need for: (a) EIA practitioners in the region who could perform the assessments; (b) EIA process administrators, presumably within the relevant government agencies; (c) improved understanding of the role and use of EIAs by those who must either direct that they be conducted or use the results in programming and policy decisions; (d) enhancing EIA analytical capacity among those who may participate in environmental reviews; and (e) the training of academics, environmentalists and others who may be involved in EIA directly, who may be adapting the process for unique regional characteristics, or who may be involved in EIA training and education. Some aspects of EIA expertise to be examined in the Mission are outlined in Appendix 1.

Put simply, the purpose of the Mission was to determine the environmental impact assessment capabilities and needs in Jordan, the Occupied Palestinian Territories (the West Bank and Gaza), Israel and Egypt, the four regional parties included in the Mission. The approach taken was to prepare and circulate to members of the participating regional parties for comment, preliminary terms of reference for the Mission. Comments were received on the draft terms of reference at an informal session on EIA during the April, 1994 meeting of the Working Group on the Environment in the Hague, Netherlands. The terms of reference were amended and meetings were arranged with expert contacts from the four participating regional parties. These expert contacts were selected for their ability to provide the information sought about EIA capabilities and needs; they were to be drawn from agencies involved with EIA, from universities, from the private sector and from environmental non-government organisations (ENGOS).

Having obtained the information about the capabilities and needs for environmental impact assessment, an analysis was made of the gaps that should be filled in order to make EIA capabilities of the regional parties effective. Recommendations are directed primarily to the Working Group on the Environment. However, some of our recommendations are more effectively addressed to the regional parties. The recommendations are intended to facilitate excellence in EIA in the Middle East. The major focus is on the region as a whole, respecting the multilateral interests of the Working Group on the Environment, although, as noted, some recommendations also deal with individual regional parties.

The Mission was carried out from April 24 to May 9, 1994. This two week period was long enough to assemble the necessary information from the region, but too short to meet with all of the appropriate persons in the regions. For this reason, the contacts made were illustrative of those who would be suitable, but certainly not exhaustive. A list of those contacted formally in the region is provided in Appendix 2. In addition, information was obtained from other sources encountered on an informal basis in the

regions. A draft report was prepared following the Mission and was circulated to the four regional parties for comment and advice.

It was recognised that the findings of the Mission are especially important for the regional parties. Accordingly, a follow up workshop was arranged for June, 1994 in Canada. The workshop took place in Toronto June 20-22, following the annual conference of the International Association for Impact Assessment, held in Quebec City. At this workshop, the four regional parties were asked to comment on both the findings and on the recommendations contained in the draft report. Members who participated in the workshop are identified in Appendix 3. Adjustments were made to the draft report to ensure that the conclusions were correct and that the recommendations ultimately adopted by the Working Group on the Environment will be useful for the regional parties. This report contains the findings of the Mission as revised at the June workshop.

The remainder of this report consists of a section dealing with the purpose, principles and practice of environmental impact assessment, a section on the findings and conclusions of the Mission, a section containing the recommendations made as a result, and a brief concluding comment.

## **PURPOSE, PRINCIPLES AND PRACTICE OF ENVIRONMENTAL IMPACT ASSESSMENT**

In order to put the following findings and recommendations in context, it is helpful first to identify the purpose, principles and practice of environmental impact assessment. Two definitions of EIA are first offered: one from the United Nations Environment Program (UNEP) and one from the Canadian Environmental Assessment Research Council (CEARC).

The UNEP definition follows:

EIA means an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development. (UNEP, "Goals and Principles of Environmental Impact Assessment", Decision 14/25 of the Governing Council of the United Nations Environment Program, 1987.)

The Canadian definition is:

EIA is a process that attempts to identify and predict the impacts of legislative proposals, policies, programs, projects and operational procedures on the biogeophysical environment and on human health and well being. It also interprets and communicates information about those impacts and investigates and proposes means for their management. (CEARC, "Evaluating Environmental Impact Assessment: An Action Prospectus", 1988)

## **PURPOSES OF ENVIRONMENTAL IMPACT ASSESSMENT**

There are two distinct purposes for EIA. The first is simply a pragmatic one. For too many development projects in the past, the environmental consequences have proven to be unsatisfactory and the social, financial and health costs of cleaning up after the projects has been excessive. For future projects, we can no longer afford to accept the projects and react to the environmental consequences. EIA represents a process of anticipating and preventing unacceptable environmental impacts. It is essential because an "Anticipate and Prevent" strategy is superior to the "React and Cure" strategy not only environmentally but also socially and financially.

The second reason for EIA is the achieving of sustainable development. To achieve "sustainable development", one must understand the consequences of development choices - the very essence of EIA. It must be noted that EIA, while necessary for achieving sustainable development, it is not sufficient for doing so; other policies and practices are also necessary.

## **PRINCIPLES OF ENVIRONMENTAL IMPACT ASSESSMENT**

The following principles are adapted from the UNEP "Goals and Principles of Environmental Impact Assessment" and from the Principles adopted at the United Nations Conference on Environment and Development (UNCED, Rio de Janeiro, 1992) documents. See Appendix 4 for details.

1. Do not undertake or authorize activities until environmental effects are examined.
2. Define clearly criteria for significance of impacts. This allows EIA practitioners to identify impacts of real importance.
3. Identify significant issues to study early. Focus attention on them. This "scoping" or issue identification principle means that, for a given project under review, one should not study everything, but must focus only on the issues that will influence the project decision.
4. EIA content: project description; environment description; alternatives; assessment of environmental impacts; mitigation measures; identification of knowledge gaps; transboundary concerns; summary.
5. Concentrate effort on important issues. This principle involves screening to select only projects that are likely to have significant impacts. The basic idea is that one should allocate environmental impact assessment resources to study projects in accordance with the likelihood of the projects having significant adverse impacts. Projects with major environmental impacts are studied in detail; those with modest impacts are studied modestly or not at all.
6. EIA information should be independently reviewed. Decision makers must be confident in the assessments on which they base their decisions; this independent review is very important in providing that assurance.
7. Public involvement is necessary prior to the decision about the activity.
8. Allow time to consider input made during the review. The purpose of the environmental review is to influence the project decision.

9. Decision regarding the activity should be made in writing and should be public. It should identify necessary mitigation measures.
10. Monitoring, evaluation and management should be applied during the implementation phase as needed. This is to ensure that the benefits of EIA are properly and effectively incorporated into projects.
11. For activities with transboundary effects, provide for the other nations: notification, exchange of information, and consultation regarding environmental effects.
12. Implement EIA procedures.
13. EIA must be undertaken by interdisciplinary teams. This allows the broad attention to many different impacts in a manner that is fully integrated. (not from UNEP or UNCED)

### **PRACTICE AND COST EFFECTIVENESS OF EIA**

The basic four components of environmental impact assessment processes are: (1) screening; (2) scoping (identification of issues and alternatives for projects selected for major attention); (3) impact prediction, assessment and mitigation; and (4) follow up studies during implementation for projects that are realised.

The screening is undertaken for all projects in order to determine the degree of effort that ought to be devoted to assessing their environmental impacts. For most projects, the effort will be small or none. For many projects, the effort will be modest. For a few projects, the effort will be very considerable. This screening component of the EIA process is necessary to allocate scarce resources efficiently. Screening is often undertaken by comparing the project under review to lists of projects for which no review is needed (exclusion lists) and lists for which a major review is necessary (inclusion lists). Projects on neither list will need to be screened on an ad hoc basis to determine whether their impacts are likely to be significant.

For projects requiring an environmental impact assessment, it is necessary to determine what issues and alternatives should be addressed. This scoping process is needed to be sure that the issues and alternatives studied will in fact influence the decision about the project. If they will not influence the decision, they should not be studied as that would be a waste of resources. The more important the issue or alternative for decision makers, the more critical it is that the issue or alternative be studied in the environmental impact assessment. Issue identification can be carried out generically or on a project specific basis. The project specific issue identification requires more effort but, especially for major environmental reviews, produces a more focused EIA and a better project decision.

Impact prediction, assessment and mitigation must be carried out whenever an environmental impact assessment is conducted. The impacts are predicted and an assessment of them is made, determining their significance. For significant adverse impacts, efforts to mitigate them should be examined carefully. In this way, the projects can be made much more satisfactory; the residual impacts after mitigation may be reduced to insignificance. Those that remain are identified and the decision maker can determine whether they are acceptable.

Should the project proceed, it is important to monitor the major impacts, to evaluate the results, for example, to determine if mitigation measures are working, and to manage the project in such a way that major adverse environmental impacts are not being realised. This monitoring, evaluation and management is used to ensure that the benefits anticipated during the environmental review of the project are in fact realised during implementation and the project is indeed sustainable.

Excellence in EIA requires the integration of EIA into project decisions and the effective use of EIA results to make better (more sustainable) project decisions. When this integration of EIA into project design is achieved, better (often more cost effective) projects result and project proponents will understand the real benefits of EIA. Good EIA practitioners will come to look for ways of minimising costs of projects. This is often possible since minimising environmental impacts often means minimising the costs associated with project construction and reducing impacts on the environment means reducing the impacts (and their related costs) of the environment on the project operations.

## **FINDINGS AND CONCLUSIONS**

This section is divided into: (1) a subsection on detailed conclusions, the findings and conclusions for each of the participating regional parties; and (2) a subsection presenting the summary of conclusions for the Middle East as a whole.

### **DETAILED CONCLUSIONS**

Detailed conclusions are provided for each of the four regional parties. These conclusions are subdivided into subsections dealing with the EIA process in the area, EIA capabilities, projects and impacts subject to EIA, and other matters raised.

#### **1. JORDAN**

##### **EIA Process**

At this time, there is no formal legal requirement for environmental impact assessment in Jordan. A few environmental impact assessments have been undertaken on an ad hoc basis, primarily for projects funded by development agencies that themselves had EIA requirements. These have been done in combination with feasibility studies, but they do not appear to have been effectively used in Jordan's project decision making process.

There are, however, some very clear signs that environmental impact assessment will become a reality in Jordanian decision making in the near future. First, the Ministry of Planning, which is responsible for reviewing all major projects, especially those funded from outside Jordan, has recently created an Environment Department for the purpose of conducting environmental screening of projects the Ministry reviews.

Second, there is now before Parliament an act that would create a new environmental law. This law would enable the creation of an environmental impact assessment process with the current Department of Environment being the focal point for EIA. Those we talked to believed the law would be passed within a few months.

It is important to observe, however, that considerable work will be required before an EIA process will be effective in Jordan. The new Environment Department of the Ministry of Planning has not yet developed a process for undertaking the screening. It plans to use a checklist of impacts (not yet available) and to classify the projects into those not needing any further environmental study, those needing some further study and those needing a major environmental impact assessment. For the last two classes of project, the proponent would be required to undertake the necessary environmental studies. The process clearly requires further development.

The new environment law, even if passed, would require the development of bylaws and regulations before an environmental impact assessment process could be put in place. The details of how that would be done are simply unknown, although there are several people within government and elsewhere who have ideas about how to develop such a process. Their understanding is that the environmental impact assessment would be undertaken in coordination with project feasibility studies; without such environmental studies, no government permission would be forthcoming. The decision making body would likely be a high level management board of the General Environment Corporation (to be created by the Environment Law) consisting of representatives of all important ministries.

Substantial institution building would be needed in the General Environment Corporation to achieve a credible EIA capability. But an effective EIA process would require more than a strong General Environment Corporation; it would require EIA expertise within several government departments. One example mentioned earlier is the Ministry of Planning. There is a very real need for cooperation and communication among ministries concerning EIA; without such cooperation and communication, the process will not be effective.

This lack of an existing process creates a difficulty for EIA but it also creates an opening to develop a process with excellence as its objective. The need to develop an EIA process within Jordan also provides opportunities for the provision of assistance to Jordan, probably through bilateral aid.

It must be noted that, both for present practice and in the act for the new environmental law, there is no explicit provision for public participation in the EIA process. While this might be changed through bylaws or regulations, this lack is of considerable concern to the ENGOs and the EIA specialists in government with whom we talked.

### EIA Capabilities

There is in Jordan quite a bit of technical expertise that could be productively applied to doing EIA, but there is virtually no EIA experience within the country. This is primarily because there is no EIA process in effect. We were shown a copy of a USAID study on environmental assessment capabilities in Jordan for tourism projects.

The study concluded that Jordan "has professionals with expertise in every discipline required to conduct an environmental assessment but they have no experience in preparing assessments". We believe that conclusion is largely valid for environmental assessment generally.

There is a limited capability to create an effective EIA process within the Department of Environment of the Ministry of Municipalities, Rural Affairs and Environment. This department, however, is not well developed and would need assistance should it be transformed into a more influential General Environment Corporation, as is envisaged under the new environment law. This assistance would be needed both broadly for the General Environment Corporation and specifically in association with development of an effective EIA process.

One of the aspects of EIA for which the existing Department of the Environment has experience and capabilities is compliance monitoring. Existing staff are used to determine compliance with environmental standards by industrial projects.

Interestingly enough, the EIA expertise (and environmental expertise generally) of some environmental non-government organisations (ENGOS) is quite considerable. Some of the best discussions of potential EIA processes took place with representatives of the Jordan Environmental Society and the Royal Society for the Conservation of Nature. These ENGOS were significantly larger, probably more influential with government decision makers and better equipped than was the present Department of Environment. Even so, the organisations requested more assistance to help pressure the government to implement a good EIA process. The ENGOS were also very active in promoting environmental awareness, a strength that could have future benefits for the effectiveness of EIA, but only if the EIA process has real opportunities for public involvement.

The private sector consultants with whom we met had access to relevant technical expertise but lacked any EIA experience and would benefit from a better understanding of EIA principles. Universities appear to be focused on technical aspects of environment and not on interdisciplinary knowledge and skills nor on the professional practice of EIA. Thus, for universities to play a role either in EIA practice or in EIA training, EIA upgrading would be a necessary precondition.

It was noted that the environmental consultants in Jordan have a real opportunity to develop the needed EIA skills in cooperation with experienced outside professionals when development aid projects required environmental impact assessments. The argument was made that these development projects had the unique opportunity to provide the much needed human resource development needed for EIA practitioners.

#### Projects and Impacts Subject to EIA

The major projects likely to require an environmental assessment were identified as being primarily in the area of water development projects, tourism and some industrial projects. Examination of Jordan's five year plan confirms that these are indeed the dominant type of investment programme projects. Water pumping, salt water projects, wastewater and sewage treatment facilities as well as several dam projects are found in the plan. Even for projects not directly related to water, the dominant impacts

identified were associated with wastewater treatment or sewage requirements; water quality issues tended to dominate.

One other potential type of project identified related to the many refugee camps in Jordan. These were described as in serious need of improvement for the sake of the refugees living there. Urban development and relocation projects for the purpose of providing better living conditions for the refugees, possibly coupled with reclamation of existing camps, would require environmental impact assessments. These too would require water, sewage and wastewater treatment facilities. The environmental impacts (both biophysical and socioeconomic) related to any plans for refugees is clearly a substantial concern in Jordan.

### Other Matters Raised

Transboundary concerns and their implication for EIA were mentioned frequently. This is clearly a concern not only for the Jordanian borders with Israel and the West Bank but also for the borders with other countries such as Syria. The need for discussions with other regional parties on this and other EIA issues is clear.

One private sector expert contact with whom we met suggested that the private sector would be quite prepared to comply with any anticipated EIA process but that the more difficult task would be to get government agencies to comply meaningfully.

## **2. THE OCCUPIED PALESTINIAN TERRITORIES**

### EIA Process

The critical observation here is that some EIA capacity must be developed and implemented within the Palestinian Authority. At this time it is not possible to specify the detailed mechanism for EIA. What can be said with greater certainty is that all those with whom we met agreed on the need for EIA.

The EIA capacity to be developed must be capable of undertaking the variety of EIA tasks: screening; scoping; predicting and assessing impacts, and determining suitable mitigation measures; and monitoring, evaluation and management. Most importantly, it must be capable of using the results of these EIA tasks effectively in making better development project decisions; that is, the results must be incorporated into such permitting, licensing and approvals as may result for projects undergoing environmental reviews. Such approvals are very likely to be provided largely by local (municipal level) governments, especially in Gaza. Whatever assistance is needed to achieve this goal of developing an EIA process must be provided.

The current status is that a Palestinian Environmental Protection Authority (PEPA) has been created with a board of directors consisting of nine persons, many of them having served as expert contacts for this study. Staff positions for PEPA, however, have not been filled nor were there identified candidates for such positions. Indeed, the exact nature of the EIA organisation was under discussion during the time we undertook this Mission. Until the decision making authority of the Palestinian Authority is more fully developed and until the PEPA staff responsible for EIA are appointed, it will be difficult to have a fully effective EIA process in place.



This lack of an existing process creates a difficulty for EIA but, as in Jordan, it creates an opportunity to develop a process and to select EIA staff with excellence as its objective. PEPA board members are involved with several development aid organisations discussing environmental concerns within the West Bank and Gaza; these discussions include matters related to EIA process development. This need to develop an EIA process within the Occupied Palestinian Territories will be the focus of bilateral assistance to help ensure EIA development is effective. Several development agencies are already involved in discussing the provision of environmental assistance; EIA process development is an important key to any such assistance.

### EIA Capabilities

As in Jordan, there is in the Occupied Palestinian Territories quite a bit of technical expertise that could be productively applied to doing EIA, but there is virtually no EIA experience. This is partly because there is no EIA process in effect and partly because of the nature of the governing process that has been present in Gaza and the West Bank.

We met with many organisations (both ENGOs and institutions affiliated with universities) that are developing capabilities for environmental research; these organisations, with EIA training and practical experience could become credible EIA practitioners.

The explicit inclusion of health concerns as a major focus of environmental impacts was a special strength of EIA capability in the Occupied Palestinian Territories. These same organisations were often involved in environmental, or environmental health education programs for their local communities.

### Projects and Impacts Subject to EIA

The major projects likely to require an environmental assessment were identified as being primarily in the area of water development, infrastructure and tourism projects. The treatment of refugee camps was also raised as requiring significant attention, especially in Gaza, where approximately half of the population lives in refugee camps. Major infrastructure components of planned World Bank emergency assistance for the Occupied Palestinian Territories are water and waste water, power, and housing.

Infrastructure development was very important given the relative underdevelopment of Gaza especially. With it would come construction projects, a cement industry to provide the needed raw materials and local employment. Specific projects proposed with outside development aid were identified: a cement plant, a port on the Mediterranean, an airport, urban redevelopment and an electric power plant. Housing programs, health centres and factories (related to construction needs) were, it was claimed, being planned without regard for environmental concerns. There is a real need to avoid development projects that would make worse the very severe environmental problems present in the region, especially in Gaza.

The most serious environmental problems identified were related to water issues, primarily to water quality. In Gaza, sewage was almost universally directed untreated to the Mediterranean Sea and concerns with industrial wastewater were routinely expressed.



The impacts on human health of poor water quality were the most significant. Poor agricultural practices (e.g., the use of pesticides banned elsewhere for health and environmental reasons) in addition to sewage and industrial wastewater seeping into groundwater or going to the Sea were the greatest contributions to unacceptable environmental impacts. The universal hope was that EIA could anticipate and avoid such problems from future projects.

#### Other Matters Raised

Support for regional cooperation in EIA was strongly indicated. While developed countries could play an initial role developing EIA expertise in the Occupied Palestinian Territories, it was felt to be more important in the long run to develop good working relations within the region. This also involved transboundary issues, but was not restricted to those matters.

The importance of environmental education for the purpose of having greater public understanding of the environmental impacts of projects was also mentioned.

### **3. EGYPT**

#### EIA Process

The environmental impact assessment process in Egypt is quite new, having been created through a new environmental law passed earlier this year. Regulations pursuant to the legislation were being prepared during the Mission; thus the details of the EIA process are not yet in place. The legislation specifies that the Egyptian Environmental Affairs Agency, which had been originally created in 1982 but which is strengthened in the 1994 legislation, has the responsibility for determining the principles and procedures of the environmental impact assessment process.

The legislation further specifies that the government licensing authority, prior to granting a license, shall undertake an environmental impact assessment for projects to be specified in regulations. This assessment is likely to be undertaken by the proponent (either private sector or public sector) and would be reviewed by the licensing authority and by the Egyptian Environmental Affairs Agency, with the latter providing its opinion on the assessment and on the project to the licensing authority. The expectation is that the opinion provided by the Egyptian Environmental Affairs Agency will be treated very seriously and that conditions on the license will reflect that opinion. The Egyptian Environmental Affairs Agency has explicit authority for follow-up monitoring, evaluation and management under the law.

Details of the process, such as the list of projects to which it will apply, the detailed content of the environmental assessment documents and the mechanisms for reviewing the documents are still in preparation at the time of writing, but these details are expected to be public shortly. It is expected that the reviews of environmental impact assessment documents by the Egyptian Environmental Affairs Agency will be administered by the Agency, but will be actually undertaken by individuals chosen from a large group of well qualified individuals from universities, research institutes, consultant companies and the like. Formal mechanisms for public involvement are not anticipated.

The only mechanism was an indirect one: inclusion on the Board of Directors of the Egyptian Environmental Affairs Agency of ENGOs.

### EIA Capabilities

In Egypt, as in Jordan and the Occupied Palestinian Territories, there was considerable scientific and technical expertise of the sort that would be required for EIA practitioners. These people, however, lack extensive EIA experience. Interdisciplinary and administrative skills are present in the private, university and ENGO sectors but are not widespread. There are four universities that offer EIA training: the Institute of Environmental Studies and Research of Ain Shams University; Environmental Engineering at Cairo University; the Environmental Research Institute of Assiut University; and the American University of Cairo.

With respect to government capabilities, it is our judgement, and the judgement of others interviewed, that the senior people in the Egyptian Environmental Affairs Agency were very capable and could implement a credible EIA process. In addition, we were advised that the Technical and Technological Consulting and Research Fund of the Ministry of Scientific Research has developed considerable experience in conducting environmental assessments of projects. This agency is now involved with the Egyptian Environmental Affairs Agency in developing the EIA process details. (It is preparing guidelines for EIA.) Beyond those people, however, while there may be a basic environmental awareness within the government, interdisciplinary, administrative and organizational skills are lacking.

It is for this reason that the first EIA priority of the Egyptian Environmental Affairs Agency is to develop the institutional EIA capability. As the director of the Egyptian Environmental Affairs Agency noted, the first responsibility is to prepare the people. Using external donor funding from Denmark and Great Britain, EIA training is being undertaken both for government staff (Egyptian Environmental Affairs Agency as well as the other licensing authorities) and for private sector EIA practitioners. Priorities for such training are first EIA reviewers, second EIA practitioners, and third EIA administrators. The approach to capacity building for EIA practitioners is through both EIA training and the development of hands on skills using pilot environmental impact assessments.

### Projects and Impacts Subject to EIA

The major projects identified as likely candidates for EIA included: electric power plants with cooling water from the Nile; sewage treatment plants; desert reclamation projects involving the transfer of water for irrigation, industrial or human use; water supplies for urban centres and the related need for wastewater or sewage treatment; tourism developments especially in coastal areas such as the Gulf of Aqaba. About 50 environmental reviews annually were anticipated in coastal areas alone.

### Other Matters Raised

The need for good information about the environment was mentioned. Work on obtaining this as baseline data valuable for environmental assessment is being

undertaken both by Egyptian agencies and by international donors. Transboundary EIA issues were also a concern as was the associated need for harmonisation of environmental impact assessment procedures. Related to this was the optimistic view that the EIA skills being developed in Egypt could be applied elsewhere, such as in Gaza. The importance of paying attention to local values in doing EIA was also mentioned; based on this, it was important to develop local expertise so that training of local EIA trainers may be more important than training itself.

It was claimed that there is a serious lack of understanding of EIA in Egypt. The public, government personnel and project proponents perceive it to be more of a bureaucratic requirement to get project approval than a design tool and, accordingly, EIA cannot reach its potential until it is better understood. For this reason, it was argued, better public environmental awareness was needed, specifically about EIA.

#### 4. ISRAEL

##### EIA Process

Land use development activities in Israel are regulated by a hierarchical planning system. All such projects require a permit, which in turn cannot be issued unless the development complies with all applicable plans. EIA in Israel is used to determine the impacts of projects prior to the approval of the applicable plans. In this manner, the consequences of EIA are automatically incorporated into the project decision making process. We were assured that this critical aspect of EIA, incorporating the results of the analysis into government decisions, was both a basic principle of the EIA system design and a success of the Israeli system.

The environmental impact assessment regulations were first created in 1982 and the process has been revised several times since then to reflect the need to make the process more effective. It would be fair to state that the EIA process in Israel is a sophisticated state of the art process. A major flaw is that EIA does not cover all major projects with significant impacts because it is restricted to development activities within the Planning and Building laws. Another flaw is the virtual absence of public involvement in the process. That flaw is partly compensated for by public involvement in the regional and local planning processes that make use of the EIA results.

According to the EIA regulations, all power plants, airports, sea ports and toxic waste disposal sites require assessment as do many activities considered by planning councils to have environmental impacts exceeding the local limits. In addition, a minister's representative on a planning council or the planning council itself may require an environmental impact assessment of any proposed plan whose implementation may have an adverse impact on environmental quality; this authority has rarely been used to compel assessments, although there is no objection to requiring assessments in this manner.

When an environmental impact assessment is required, guidelines for that particular assessment are prepared. The environmental impact statement is prepared by the project proponent and is reviewed by the Ministry of Environment. The results of the assessment and the Ministry of Environment reviews are submitted to the planning

authority and are usually incorporated into the appropriate plan regulations. Experience shows, we were assured, that the review and the recommendations are an important part of the EIA process, ensuring its credibility and its integration into decision making.

### EIA Capabilities

Reflecting the long history of undertaking EIAs (over 200 have been prepared to date), there is a significant capability to prepare such assessments. We were told that several dozen good consulting firms were practising in the country and were shown some environmental impact statements that we judged to be of high quality.

Those senior people within government we talked with were knowledgeable and experienced with EIA. There are university programs suitable as an educational background for planning and environmental science positions related to environmental impact assessment. As usual, those teaching most programs were more academically than professionally oriented. An exception was the Policy, Planning and Management Master's degree specialisation within the Department of Geography at the Hebrew University, which showed a real interest in the professional practice of environmental impact assessment.

### Projects and Impacts Subject to EIA

The number of environmental impact assessments undertaken in Israel over the past twelve years has risen from a few per year in the first years to about 50 in 1993. Over the next five years, the average number will likely be at least as great as the 1993 level. The mix of projects reviewed annually is roughly as follows: road and rail projects 10 (2-3 major, 7-8 minor); electric power stations 1; electric transmission and distribution facilities 5; water and sewer facilities 10; residential developments near airports 10 (minor); and industries 10. The sewer facilities were identified as being a neglected aspect of infrastructure development that would need major attention.

The major environmental issues identified were air pollution, noise, and the protection of landscape and nature.

### Other Matters Raised

The Truman Institute, affiliated with Hebrew University in Jerusalem, is an institute that works jointly with both Israelis and Palestinians on matters of joint interest. One recent seminar on environmental issues proved to be very successful and EIA was identified as a fruitful topic for future seminars. The Mediterranean Action Plan was also identified as another model of getting all countries around the Mediterranean together on a matter involving considerable environmental concerns.

A formal 1993 review of Israel's EIA process has just been completed; revisions to the process are now being contemplated based on the findings. One finding of this review was that some form of class assessment process might be needed to deal with the increase in the number of environmental impact statements being required by the planning authorities.

## SUMMARY OF CONCLUSIONS

An effective EIA process must be in place in each of the four jurisdictions examined in order for the benefits of good environmental impact assessment to be realised. This is currently the case in Israel and the enabling legislation for such a process exists in Egypt, where development of the process is nearing completion at the time of writing. In Jordan there are clear plans for an environmental law that would enable an EIA process. In the Occupied Palestinian Territories, there is clear intention to create an EIA process within the competence of the Palestinian Authority. The most important need, probably best achieved through bilateral assistance to the individual parties, is to enhance the EIA capacity so that processes can be developed and implemented. In what follows, we assume that these plans will indeed be realised, that is, that all four participating regional parties will have EIA processes in place. The next question is how to make the processes effective, even excellent.

The following conclusions have been reviewed and approved by the regional parties.

1. Promotion and fostering of information sharing on environmental impact assessment among the regional parties is needed.
2. There is a need for the regional parties to consider and address transboundary issues of EIA.
3. Regional parties would benefit from the experience and expertise of the international EIA community.
4. Greater public involvement in EIA and public awareness about EIA are needed in the region.
5. There exists a need to further develop and refine the EIA processes in the region, and to ensure smooth effective implementation. Attention should be paid to establishing strong links among the processes for environmental impact assessment, project planning and decision making.
6. While the necessary scientific and technical expertise of the sort that would be required for EIA practitioners exists, in parts of the Region there is a need for better understanding of EIA, for more EIA experience and for greater interdisciplinary knowledge and skills.
7. Institutional capacity to do good EIA needs to be enhanced and strengthened. To make this part of the environmental impact assessment system work well, one needs not only good people, but also good EIA training and good communication. The focus here is on getting the best dedicated people to do the work, on motivating and rewarding them, and on being sure they have the knowledge and skills to do the job given to them.
8. In order to enable the Palestinians to benefit and to contribute actively to EIA, special attention should be given to their urgent need to enhance and strengthen their EIA capacity within the framework of economic, social and environmental aspects.

## RECOMMENDATIONS

The following recommendations are intended to achieve the objective of promoting excellence in environmental impact assessment in the Middle East, specifically among the regional parties. Excellence in environmental impact assessment requires that there be: excellence in preparing environmental impact assessments and in linking such assessments into project design; institutional excellence in such a way that there is a strong link between the environmental assessments undertaken and decision making and implementation of projects; and sound and effective public involvement in environmental impact assessment.

There are five conceptually distinct concerns that follow from this Mission. These deal with: information sharing; transboundary concerns; environmental impact assessment training; enhancing institutional capacity; and public involvement.

As the single most important means of dealing with these concerns, the formation of an EIA forum is recommended for the regional parties. This "Middle East Environmental Impact Assessment Forum" should be created for the purpose of exchanging information and ideas concerning all aspects of EIA among those responsible for EIA for the respective regional parties. The likely members would be the Planning Department of the Ministry of Environment of Israel, the Palestinian Environmental Protection Authority for the Occupied Palestinian Territories, the Egyptian Environmental Affairs Agency and Technical and Technological Consulting and Research Fund of the Ministry of Scientific Research for Egypt, and the soon to be created General Environment Corporation of Jordan.

With this formal mechanism for the exchange of information and ideas, the regional parties will have increased opportunities to discuss and resolve shared issues and to pool resources on selected initiatives. The mandate of this group should be quite simple. It should include matters of importance such as: sharing of information about EIA, coordination of EIA programs of regional importance, and such harmonisation of processes, methods or initiatives as might be deemed appropriate by the regional parties. The Forum should deal with transboundary concerns related to EIA and, for example, might deal with training programs, regional EIA conferences, etc. It should meet at least once per year, and perhaps two or three times per year at the beginning during the active development of EIA processes. Cairo is the most likely site for a permanent office, although the location of meetings could rotate. The operation of this Forum will need support and, initially, independent external leadership in order to make it truly effective. Another important feature of such an EIA Forum is that it would raise the prestige of the role of administering the EIA process and thus make such positions more attractive to qualified persons.

### INFORMATION SHARING

With respect to the creation or improvement of EIA processes, there are many common interests of the regional parties. These would be well served by continuing exchanges of information among the parties, especially among those responsible for the processes. The Middle East Environmental Impact Assessment Forum would be an



appropriate means of providing a continuing multilateral mechanism of exchanging information concerning EIA in the Middle East.

#### **RECOMMENDATION 1**

The Working Group on the Environment should support the creation of a "Middle East Environmental Impact Assessment Forum".

### **TRANSBOUNDARY ISSUES IN ENVIRONMENTAL IMPACT ASSESSMENT**

One of the important multilateral issues raised by all four regional parties was transboundary issues in environmental impact assessment. These arise when a proposed project in one jurisdiction has the potential for creating impacts in another jurisdiction. Given the relatively small geographic size of the countries in the Middle East, transboundary concerns are very real.

Accordingly, there ought to be a mechanism by which regional parties can discuss and deal with transboundary impacts. Fortunately, there are international precedents for this. The United Nations Economic Commission for Europe has developed a "Convention on Environmental Impact Assessment in a Transboundary Context". The Convention, reported on in Appendix 5 ensures that affected parties are notified, given the opportunity to be heard and, via the environmental impact assessment process, have an opportunity to influence the project in such a way as to prevent adverse transboundary environmental impacts.

It appears clear that a long term mechanism for dealing with such transboundary issues suitable for the regional parties would be valuable. In the short term, however, it is more important for the regional parties to discuss transboundary EIA issues for the purposes of dealing with such issues as they arise. The Middle East EIA Forum, composed of those responsible for the EIA processes, would be a particularly useful means of carrying out such discussions.

#### **RECOMMENDATION 2**

The Working Group on the Environment should support the regional parties through the Middle East EIA Forum to develop a means of dealing with transboundary issues in environmental impact assessment.

### **ENVIRONMENTAL IMPACT ASSESSMENT TRAINING**

#### **Training for Practitioners**

For all the regional parties, there exist many well educated individuals with expertise in the technical areas required to undertake environmental impact assessments. What is needed in Jordan, Egypt and the Occupied Palestinian Territories is better EIA process understanding, interdisciplinary teamwork ability and EIA experience.

These gaps can be addressed through two mechanisms: traditional EIA training courses and "learning by doing". The latter can best be achieved by encouraging the developing EIA practitioners to work closely with more experienced practitioners in the preparation of environmental impact assessments.

EIA training courses for the practitioners need to address the basic principles, purposes and professional practice aspects of EIA and should also deal with the EIA

process applicable where the work is to be undertaken. Except in Israel, specific EIA processes are not fully developed; however, an outline of the relevant existing or developing processes in the region could be included. Knowledge and skills needed to function effectively in interdisciplinary problem solving teams should also be addressed in the training courses.

Training courses might also address specific types of projects; water resource development and other infrastructure projects and tourism projects were the most commonly anticipated in the region with refugee camp improvements (in Jordan and the Occupied Palestinian Territories) also being potentially important. Because water resource development, other infrastructure projects (roads, railways, energy facilities, ports, airports, sewage treatment and disposal) and waste disposal were identified as being most important in all parts of the region, we recommend that such courses be delivered first. These courses should be organised in coordination with those to be offered by the Working Group on Water Resources, which has committed to offering a regional training program that includes a course on environmental impact assessment. Building on the experiences with such offerings, training courses focusing on other types of projects should be developed and delivered subsequently.

### RECOMMENDATION 3

The Working Group on the Environment should support the delivery of EIA training courses for EIA practitioners focused initially on water resource development, other infrastructure projects and waste disposal projects. This should be used in combination with the use of practitioners from the region paired with experienced excellent EIA practitioners as a means of developing regional EIA expertise.

The "learning by doing" aspect of EIA practitioner training can be linked to development aid projects in the region. Virtually all international donors (e.g., Canada, Denmark, Germany, Great Britain, the Netherlands or the World Bank) require an appropriate form of environmental impact assessment prior to funding approval. It is strongly recommended that, even given the urgency of development in the Middle East, this requirement be rigorously maintained for the purpose of promoting sustainable development. This having been said, however, the environmental impact assessment should be conducted efficiently and effectively so that undue bureaucratic delays do not hamper the timely delivery to the Occupied Palestinian Territories of urgently needed development.

In addition, the environmental impact assessment team should be composed of experienced professionals paired with developing professionals from the areas receiving the aid. The purpose of this is two fold. First, the developing professionals will gain the very experience they lack and will have greater capability to undertake future environmental impact assessment work in their home region. This is especially true if the experienced EIA professionals are chosen in part for their ability to train their developing colleagues. Second, the use of local practitioners can help to ensure that local values are explicitly considered in the environmental impact assessment.

### Training for Institutional Decision Makers

Both for efficiency and to promote development of regional EIA expertise, training for institutional decision makers is best accomplished by "training the trainers". It is recommended that local expertise be developed and local EIA trainers trained for this purpose. Especially for training institutional EIA specialists, it is important that the training and the ability to deliver training be developed within the applicable EIA process.

#### **RECOMMENDATION 4**

The Working Group on the Environment should focus its training efforts on developing the EIA training expertise in the regions, i.e., on training the trainers.

These efforts should be applied in close contact with the Middle East Environmental Impact Assessment Forum in order to be sure that the trainers, who would be working under the direction of the member agencies of the Forum, are being trained effectively.

One other observation should be made about training course offerings generally. As noted earlier, training course offerings are now being implemented in Egypt (for practitioners and for government decision makers). Those designing future EIA training courses should consult with the creators of those courses in order to take advantage of insights gained. This is true for international EIA training courses generally, but the Egyptian offerings are specific to the Middle East.

### **ENHANCING INSTITUTIONAL CAPABILITY**

There are many different aspects of human resources development that need to be addressed in order to make EIA not only effective but also excellent. The recommendations regarding training are important aspects of human resources development. But the aspect dealt with here relates specifically to the institutional portion of EIA processes: the EIA administrators and those in other agencies who use EIA.

It was noted by several people with whom we spoke that low salaries paid to public servants made it difficult to attract and keep the best people, those necessary to develop a strong EIA system. It is, we believe, essential to provide motivation and reward to those involved. This may be done in a variety of ways. Rewards can be provided to individuals dedicated to good environmental management by ensuring that their work is leading to good environmental management. To achieve this, one needs to develop a practical process, one that is effective at making good decisions. One must also employ environmentally dedicated staff. Other means of providing rewards can be through encouraging staff to improve themselves through consultations with other environmental impact assessment professionals. Mechanisms for doing this through the Middle East EIA Forum were suggested earlier in this report. EIA units could also be "twinning" with suitable units (government or even academic organisations) elsewhere in the world.

Another means of promoting excellence in institutional EIA is to make use of the very best expertise available, within government or elsewhere. Thus, for example, the task of reviewing environmental impact assessment reports should be undertaken,

wherever possible, by the very best advisors available from such institutions as: the institution responsible for the review, other agencies, universities, ENGOs, consulting firms or other suitable institutions. Such approaches are being very seriously considered by several of the regional parties; in the implementation of EIA processes, the regional parties should be guided by the criterion of excellence.

#### **RECOMMENDATION 5**

The Working Group on the Environment should strongly encourage the regional parties to seek means, such as those mentioned here, to achieve excellence in the human resources used for EIA administration. More, importantly, the regional parties themselves should seek to achieve this excellence.

#### **PUBLIC INVOLVEMENT**

Public involvement and public environmental awareness was mentioned as being important by all regional parties. The specific context usually involved the need for better environmental awareness in order to have more informed participation in environmental impact assessment. Public involvement, it must be noted, is a principle of environmental impact assessment. As some expert contacts stated explicitly, this does not mean public hearings must be a part of environmental impact assessment processes. (Public hearings are used in Canada, but that is because they have proven to be effective, not because public hearings are universally the best way of involving the public.)

There are three distinct aspects as well as consideration of the role of ENGOs that warrant recommendations. First, we recommend support for public environmental awareness education. This is because such education will lead to a public better able to contribute to environmental impact assessment reviews. Second, we recommend that EIA administrators explore creatively for means of public involvement in environmental impact assessment processes that are culturally appropriate and productive.

The third recommendation is very specific to EIA and responds to the need for more information about EIA itself. One of the ways of developing good EIA capability (for practitioners) and understanding (for project proponents, government bureaucrats and the public) is the production and dissemination of good documentation concerning various aspects of EIA. In order to respond to the need for better understanding of EIA, of EIA processes and of how the public can (or ought to be able to) use EIA to achieve better project decisions, we recommend preparation and dissemination of information about EIA. Such information should be made available in the local languages even though this would create a need for translation into English for purposes of regional exchange. Preparation and dissemination could be coordinated regionally, for example through the Middle East EIA Forum, but ultimately, the material disseminated must be EIA process specific. The purpose of such materials is to make EIA more effective.

ENGOs can play a valuable role in each of these aspects. The ENGOs in all areas visited need strengthening but, at the same time, there appear to be strong and capable ENGOs in all areas. We recommend both to the Working Group on the Environment and to the regional parties that ENGOs are a valuable resource to use in a

variety of ways. These ways include: EIA process development; involvement in EIA reviews either in a professional capacity or as representatives of the public interest; reviewers of EIA materials; or as a means of disseminating EIA or public awareness information.

### **CONCLUDING COMMENTS**

In undertaking this Mission, we have determined, as best we could, the environmental impact assessment capabilities and needs in Jordan, the West Bank and Gaza, Israel, and Egypt. In doing so, we have attempted to act in the best interests not only of the four regional parties, but also of other societies, which also benefit from sustainable and more environmentally sound development. It is our belief that implementation of the recommendations contained in this report and supported by the four regional parties will achieve the goals that led the Working Group on the Environment to initiate the Mission in the first place.

## **APPENDIX 1**

### **ASPECTS OF EIA EXPERTISE EXAMINED IN CANADIAN MISSION TO ISRAEL, THE OCCUPIED PALESTINIAN TERRITORIES, JORDAN AND EGYPT**

1. **EIA Process Development Capability.** Comprehension of principles of EIA and of working models of EIA processes. Integration of EIA process into the process for approving development projects.
2. **Comprehension of Project-Impact Linkages.** What kind of impacts are associated with what kinds of projects?
3. **Screening.** One of the basic principles of EIA is that the assessment effort should be justified by the likely environmental impacts of the project being assessed. Ability to screen projects and apply an appropriate assessment effort is essential in order to avoid becoming bogged down with projects having only modest environmental consequences. Screening is usually done by some combination of inclusion lists, exclusion lists or project-by-project screening.
4. **Generic Environmental Impact Statement Guidelines.** The ability to develop and use constructively generic environmental impact statement guidelines for a variety of classes of project is a good indicator of a productive EIA process.
5. **Project Specific Scoping.** The ability to identify issues worthy of study for a specific project (those issues that will influence the decision about the project) and to eliminate those issues not worth study is essential to the good practice of EIA.
6. **Impact Prediction Ability.** These tools are important for EIA. Many EIA methods fall in this area of expertise.
7. **Impact Assessment - Determination of Significance.** The ability to assess impacts, that is the ability to determine the significance of impacts, and hence the ability to identify the need to mitigate an impact, is crucial to EIA.
8. **Mitigation.** An understanding of effective mitigation measures for development projects is essential for a productive EIA process.
9. **EIA in the Implementation Phase.** The monitoring, evaluation and management of development projects that proceed to implementation is essential to good environmental management of projects. It is imperative for effective EIA that the good plans developed during the environmental review get implemented effectively.
10. **Transboundary Aspects of EIA.** The principles of notification, the provision of information and consideration of the views of neighbouring states potentially affected by development projects are important for EIA.

## **APPENDIX 2**

### **EXPERT CONTACTS INTERVIEWED DURING THE MISSION**

#### **JORDAN**

1994-04-26 and 28  
Ramzi Al-Bataineh  
Department of Environment

1994-04-27  
Anis Mouasher  
Royal Society for the Conservation of Nature

1994-04-28  
Suleiman E. Hanbali  
Executive Director  
Jordan Environmental Society  
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Sager Al-Salem  
Secretary, Board of Directors  
Jordan Environmental Society

Ziad Jabr Alawneh  
Jordan Environmental Society

Dr. Muwaffaq M. Saqqar  
Jordan Environmental Society

Dr. Iyad A. Abumoghli  
Vice President and Director of Research  
Environmental Resources Management Consultants

Dr. Hassan K. Saket  
Director Environment Department  
Ministry of Planning

Tejinder S. Minhas  
Senior Advisor  
Ministry of Planning  
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## **THE OCCUPIED PALESTINIAN TERRITORIES**

**Gaza**

**1994-05-02**

**Dr. Jamal Safi**

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Dr. Rajai Baraca  
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Noman Deeb  
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Yousef M. Najem  
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Reedy Radi  
Gaza Chamber of Commerce

Dr. Yousef Abu-Safieh  
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Gaza Environment Program

Dr. Maged Abu-Ramadan  
Consultant Ophthalmic Surgeon  
Gaza Environment Program

Akeel Matter  
Arab Syndicate of Engineers  
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Mustafa Natshe  
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Dr. Magid  
Hebron University

Dr. Majed Subhi Abu-Sharekh  
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Jad Issac  
Director  
Applied Research Institute of Jerusalem

Abdullah Elram  
Applied Research Institute of Jerusalem

Steve Gasteyer  
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## **EGYPT**

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Carel D. L. Brands  
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Royal Netherlands Embassy

Dr. Khaled Fahmy  
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Friedrich Ebert Stiftung

Dr. Hany Shalaby  
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## **ISRAEL**

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Valerie Brachya  
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**APPENDIX 3**  
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APPENDIX 4  
UNEP PRINCIPLES OF ENVIRONMENTAL IMPACT ASSESSMENT  
and  
UNCED PRINCIPLES RELATED TO ENVIRONMENTAL IMPACT ASSESSMENT

UNEP PRINCIPLES OF ENVIRONMENTAL IMPACT ASSESSMENT

These principles are taken from the 1987 UNEP document, "Goals and Principles of Environmental Impact Assessment".

Principle 1: States (including their competent authorities) should not undertake or authorize activities without prior consideration, at an early stage, of their environmental effects. Where the extent, nature or location of a proposed activity is such that it is likely to significantly affect the environment, a comprehensive environmental impact assessment should be undertaken in accordance with the following principles.

Principle 2: The criteria and procedures for determining whether an activity is likely to significantly affect the environment and is therefore subject to an EIA, should be defined clearly by legislation, regulation, or other means, so that subject activities can be quickly and surely identified, and EIA can be applied as the activity is being planned.<sup>1</sup>

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<sup>1</sup> For instance, this principle may be implemented through a variety of mechanisms, including:

- (a) Lists of categories of activities that by their nature are, or are not, likely to have significant effects;
- (b) Lists of areas that are of special importance or sensitivity (such as national parks or wetland areas), so that any activity affecting such areas is likely to have significant effects;
- (c) Lists of categories of resources (such as water, tropical rain forests, etc.), or environmental problems (such as increased soil erosion, desertification, deforestation) which are of special concern, so that any diminution of such resources or exacerbation of such problems is likely to be "significant";
- (d) An "initial environmental evaluation", a quick and informal assessment of the proposed activity to determine whether its effects are likely to be significant;
- (e) Criteria to guide determinations whether the effects of a proposed activity are likely to be significant.

If a listing system is used, it is recommended that States reserve the discretion to require the preparation of an EIA on an ad hoc basis, to ensure that they have the flexibility needed to respond to



Principle 3: In the EIA process the relevant significant environmental issues should be identified and studied. Where appropriate, all efforts should be made to identify these issues at an early stage in process.

Principle 4: An EIA should include, at a minimum:

- (a) A description of the proposed activity;
- (b) A description of the potentially affected environment, including specific information necessary for identifying and assessing the environmental affected of the proposed activity;
- (c) A description of practical alternatives, as appropriate;
- (d) An assessment of the likely or potential environmental impacts of the proposed activity and alternatives, including the direct, indirect, cumulative, short-term and long-term effects;
- (e) An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and alternatives, and an assessment of those measures;
- (f) An indication of gaps in knowledge and uncertainties which may be encountered in compiling the required information;
- (g) An indication of whether the environment of any other State or areas beyond national jurisdiction is likely to be affected by the proposed activity or alternatives;
- (h) A brief, non-technical summary of the information provided under the above headings.

Principle 5: The environmental effects in an EIA should be assessed with a degree of detail commensurate with their likely environmental significance.

Principle 6: The information provided as part of EIA should be examined impartially prior to the decision.

Principle 7: Before a decision is made on an activity, government agencies, members of the public, experts in relevant disciplines and interested groups should be allowed appropriate opportunity to comment on the EIA.

Principle 8: A decision as to whether a proposed activity should be authorized or undertaken should not be taken until an appropriate period has elapsed to consider comments pursuant to principles 7 and 12.

Principle 9: The decision on any proposed activity subject to an EIA should be in writing, state the reasons therefore, and include the provisions, if any, to prevent, reduce or mitigate damage to the environment. This decision should be made available to interested persons or groups.

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unanticipated cases.

Principle 10: Where it is justified, following a decision on an activity which has been subject to an EIA, the activity and its effects on the environment or the provisions (pursuant to Principle 9) of the decision on this activity should be subject to appropriate supervision.

Principle 11: States should endeavour to conclude bilateral, regional or multilateral arrangements, as appropriate, so as to provide, on basis of reciprocity, notification, exchange of information, and agreed-upon consultation on the potential environmental effects of activities under their control or jurisdiction which are likely to significantly affect other States or areas beyond national jurisdiction.

Principle 12: When information provided as part of an EIA indicates that the environment within another State is likely to be significantly affected by a proposed activity, the State in which the activity is being planned should, to the extent possible:

- (a) notify the potentially affected State of the proposed activity;
- (b) transmit to the potentially affected State any relevant information from the EIA, the transmission of which is not prohibited by national law or regulations; and
- (c) when it is agreed between the States concerned, enter into timely consultations.

Principle 13: Appropriate measures should be established to ensure implementation of EIA procedures.

## UNCED PRINCIPLES RELATED TO ENVIRONMENTAL IMPACT ASSESSMENT

The following principles related to environmental impact assessment are drawn from those adopted at the 1992 United Nations Conference on Environment and Development (UNCED) at Rio de Janeiro, 1992.

Principle 4. In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 10. Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 17. Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

Principle 19. States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.

**APPENDIX 5**  
**UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE**  
**CONVENTION ON**  
**ENVIRONMENTAL IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT**

This convention imposes the following requirements on parties:<sup>2</sup>

1. Parties shall take all effective measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities.
2. Each party shall establish an environmental impact assessment procedure that permits public participation and preparation of environmental impact assessment documentation.
3. The party of origin shall ensure that an environmental impact assessment is undertaken prior to approving any project likely to cause significant adverse transboundary environmental impact.
4. The party of origin shall ensure notification of affected parties of any proposed activities likely to cause a significant adverse transboundary impact.
5. The public in the areas likely to be affected shall be provided an opportunity to participate in relevant environmental impact assessment procedures in a manner equivalent to that provided to the public in the party of origin.

This combination of requirements ensures that affected parties are notified, given the opportunity to be heard and, via the environmental impact assessment process, have an opportunity to influence the project in such a way as to prevent adverse transboundary environmental impacts.

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<sup>2</sup> Note that these requirements are simplified. Those wishing details should consult the actual treaty.