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**Strengthening of national capacity and grassroots in situ conservation of
or
sustainable Biodiversity in Lebanon**

LEB/95/G31/ IIG/99

Report of the External Evaluation Mission

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Presented by

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ABBREVIATIONS AND ACRONYMS

ASC	Al Shouf Cedar Society
AUB	American University of Beirut
CBO	Community Based Organisation
EIC	Environment Information Centre
EPC	Environmental Protection Committee
FOHE	Friends of Horsh Ehden
FON	Friends of Nature
GAC	Government Appointed Committee
GEF	Global Environmental Facility
GIS	Geographic Information System
GOL-	Government-of Lebanon
IUCN	The World Conservation Union
LB	Lebanese University
MOE	Ministry of Environment
NPC	National Project Coordinator

NCSR	National Council for Scientific Research
NR	Nature Reserve
PA	Protected Area
PAMB	Protected Area Management Board
PPC	Project Coordinating Committee
SI	Scientific Institutions
SPNL	Society for Protection of Nature in Lebanon
UNDP	United Nations Development Programme

EXECUTIVE

SUMMARY

INTRODUCTION

The project officially titled "Strengthening of national capacity and grassroots insitu conservation for sustainable development" and abbreviated to "Protected Areas Project" (PAP), was designed to firmly establish biodiversity conservation on the national agenda for sustainable development. The project's overall development objective was thus defined to conserve endemic and endangered wildlife and their habitats, incorporate wildlife conservation as an integral part of sustainable human development, strengthen the institutional capacity of governmental agencies and NGOs, and promote national reconciliation (UNDP/GEF, 1996).

At a time when appropriately managed protected areas had not yet been established in Lebanon, the PAP was meant to initiate the creation of a national system of protected areas. Three demonstration sites were selected according to a set of agreed criteria and proposed as Managed Nature Reserves / Wildlife Sanctuaries (IUCN Category IV). These include the Al Shouf Cedar Nature Reserve, the largest PA in the country (about 200 km²), the Horsh.-Ehden Nature Reserve, covering an area of about 10 km² and Palm Islands Nature Reserve, centred on the three islands of Palm, Sanani and Ramkine, and covering a total area of about 4.15 km².

The central strategy of the project is based on a multidisciplinary approach to the management of protected areas which will involve government agencies, NGOs and scientific institutions, leading to increased local participation through sensitisation, dialogue and the preparation of appropriate management plans.

The project was designed to have a 5 year duration and a budget of \$ 2.5 million from GEF and inputs of LL 267 million in kind and LL 750 million in cash from the GOL. The PAP was approved for funding by the GEF council in 1995 and signed for implementation by the Government of Lebanon in February 1996. Implementation started in November 1996. The function of the MOE, acting as UNDP's counterpart, is to provide overall coordination and oversight for project activities involved with establishing and managing the protected areas programme in Lebanon. A project-coordinating unit, led by the national project coordinator (NPC), assumed executive functions within the MOE, including responsibility for the establishment and regular meetings of the project coordinating committee (PCC), composed of all major stakeholders in the project. The IUCN has assumed the role of cooperating agency providing scientific and technical backstopping to the MOE and to participating NGOs as well as facilitating the implementation of all main subcontracts.

The project document specifies the need for tripartite reviews every 12 months. To date three such reviews have been carried out in February 1998, May 1999 and May 2000. A mid-term review was stipulated in the third year of the project. The present evaluation meets this requirement although its timing, halfway through the fifth year, would limit its scope unless the proposed one-year extension is granted.

FINDINGS AND

ASSESSMENT

Effectiveness

The project document lists 36 specific activities spread over 12 stated outputs to be carried out within the 5-year time frame. In general, measurable indicators of implementation and impact of outputs were not provided in the project document. Hence, in many cases, the attempt to measure performance had to be limited to the qualitative or informal assessment of achievements. The evaluation has documented an

impressive quantity and quality of work, with many activities having been implemented completely or to a very considerable extent. Based on the findings of this evaluation, an overall assessment of project effectiveness in achieving the twelve outputs foreseen in the original project document may be summarised as follows:

- Three outputs have been successfully achieved (1.2 park management teams; 2.2 training workshops; 3.4 production of films). Some follow-up activities are desirable.
Four outputs ; are underway to being achieved (1.4 baseline studies; 1.5 monitoring program; 3.2 and 3.3 awareness and education). Based on the current assessment, these outputs should be completed by the end of the project in November 2001.
- Three outputs have been partially achieved (1.3 management plans; 2.1 strengthening the MOE; 3.5 fund-raising). These outputs may potentially, be largely completed if the one-year extension of the project is approved.
- Two outputs are unlikely to be achieved (1.1 official boundary delineation; 3.1 micro-credit facilities). For output 1.1 some significant results were nevertheless obtained, whereas output 3.1 was cancelled.

Efficiency

The overall efficiency of the project has been high, due to the innovative model of outsourcing key project activities to NGOs with relatively low overheads, flexible institutional arrangements, and the ability to mobilise significant human and financial resources outside the project. The system of training workshops adopted by the PAP has ensured a cost-effective way of providing considerable technical assistance on a wide range of fields related to the establishment and management of protected areas.

Impact

The impact on biodiversity has clearly been positive. The firm establishment of the three protected areas and the declaration of another four to which the project has contributed, constitutes a milestone achievement in the conservation of biodiversity in Lebanon.

In socio-economic terms the initial impact of the project has been negative. The imposition of restrictions on the access to biodiversity resources stemming from

the establishment of protected areas inevitably led to a degree of tension between the PAP and the local communities. Despite the initial negative dynamics, there is wide recognition among municipal representatives from the three sites, that the trend has been reversed.

Capacity building was a major part in the project's strategy. The responsibility for implementing key project activities has provided important capacity building opportunities, which have been fully capitalised upon by the NGOs. Playing a key role in the implementation of the PAP has also had a positive impact on the MOE. However, the severe shortage of staff, which has so far resulted in the failure to establish an effective protected area management unit within the ministry, has meant that potential opportunities for the further strengthening of the institution have been lost.

Ownership

The sense of ownership for the PAP initiative appears to be strong among all key players including the MOE, the three NGOs responsible for the management of *the protected areas, and the municipalities consulted. However, in the case of Palm Islands and to a lesser degree of Hgrsh Ehdn, the strong sense of ownership on all sides seems to have been detrimental to a more open partnership between these key stakeholders.*

Sustainability

At this stage in the project cycle it seems likely that if the project terminates in six months time, as foreseen by the official deadline, several achievements will rapidly erode due to the loss of core management staff, once external financial support ends. On the other hand, if the proposed one-year extension of the project is approved, some key outputs contributing towards the overall sustainability of the PAP could potentially be delivered. These include tackling the overarching issue of financial sustainability (output 3.5) and resolving the complex questions linked to the strengthening of the institutional framework (output 2.1).

Replicability

The replicability and overall sustainability of the PAP initiative seems to depend on the successful development of a new vision, which effectively conjugates the twin concepts of financial and institutional sustainability.

The emergence of a stable institutional mechanism such as a Protected Area Management Board (PAMB), could provide an umbrella for all key stakeholders, oversee protected area management functions, while ensuring the crucial prerequisites for the establishment of a permanent fund supporting the long-term and sustainable management of each protected area.

CONCLUSIONS

The PAP is making a significant contribution towards initiating the process of sustainable nature conservation and management in Lebanon. The design of the project was relevant to the national context and its implementation timely. The innovative institutional model being tested has yielded remarkable dividends, as demonstrated by the overall effectiveness, efficiency and positive impact of the project. However, the emergence of a stable protected area system is not an objective, which can be completely achieved within a timeframe of five years and the overall sustainability if the initiative has yet to be ensured.

The key partners to the project are executing their tasks diligently, but special attention deserves to be drawn to the excellent work conducted by the Al Shouf management team, which is setting a concrete example of inspired and forwardthinking protected area management.

Based on the findings of this evaluation, an overall assessment of project effectiveness in achieving the objectives set out in the original project document may be summarised as follows:

- **Immediate Objective 1.** *The establishment of three functional protected areas, according to internationally recognised best practices for the sustainable conservation and management of biodiversity.* This objective has been partially achieved. The management plans developed by the project need to be made more operational and further steps should be undertaken to promote the participation of local communities in the management of the protected areas (see Section 2: outputs 1.3 and 3.1)
- **Immediate Objective 2.** *An enhanced capacity of all key stakeholders in the sustainable management of protected areas in Lebanon.* This objective has been partially achieved. The key issues still to be addressed include: (i) the sub-optimal institutional framework at the level of the MOE and of the individual sites, and (ii) the achievement of

a sustainable system of funding for the management of the protected areas (see Section 2: outputs 2.1 and 3.5 and Sections 3.4 and 3.5).

- **Immediate Objective 3.** *A site-specific and multi-targeted Information, Education and Communication campaign promoting biodiversity conservation in Lebanon.* This objective is underway to being achieved. The full and timely implementation of the current contract between the PAP and EIC is crucial for completing the achievement of this objective (see Section 2, outputs 3.2-3.3).
- **Overall development objective.** *To conserve endemic and endangered wildlife and their habitats, incorporate wildlife conservation as an integral part of sustainable human development, strengthen the institutional capacity of governmental agencies and NGOs, and promote national reconciliation.* The objective is underway to being achieved through the overall progress in meeting the three immediate objectives (see above). In general terms, in order to attain the overall development objective, the PAP should focus its future efforts on three key areas: (i) emphasising collaborative management and sustainable livelihood initiatives in the management of the protected areas, (ii) resolving the complex questions linked to the strengthening of the institutional framework and (iii) addressing the overarching issue of financial sustainability.

RECOMMENDATIONS

General recommendation. There is evidence that by lengthening the duration of the project by one year, some key outputs contributing towards the overall sustainability of the initiative could potentially be delivered. An appropriate exit strategy for the PAP would consist therefore in approving a 12 months extension and focussing the efforts of all decision-makers and stakeholders on tackling the issues related to the long-term financial and institutional sustainability of the initiative. Based on existing funds, the official deadline for project termination should be moved from November 2001 to November 2002.

Specific recommendations. Given the timing of the present evaluation, halfway through the final year of the project, most of the recommendations that follow would have limited scope unless the proposed one-year extension is actually granted.

Planning and management. Enhance the technical backstopping of the management teams by IUCN, particularly for Horsh Ehdan and Palm. Islands- in order to: (i) operationalise existing management; (ii)

initiate a wider process of bio-regional planning; (iii) effectively; establish a Technical Advisory Panel*

- Monitoring. Through the combined efforts of key partners in the project, 'review' and operate a shift in the design of the monitoring system being developed by Green Line. The revised M&E system should be site-specific and management-driven, supporting the core business of protected area planning and management, and streamlined according to the specialised staff and other resources, which can practically be mobilised at site level.
- Community-based initiatives. Facilitate the formulation and funding of smallscale, biodiversity-related, community projects for all three sites, through a formal process of stakeholder analysis and participatory planning.
- Institutional and financial sustainability. The MOE should take the lead in activating the Government Appointed Committees (GAC), which are mandated to oversee the management of each protected area. The IUCN should provide technical assistance to establish a more stable and sustainable institutional framework. The management teams and supporting NGOs should actively pursue their respective fund-raising strategies, in order to initiate the endowment of duly established Conservation Funds.

1. INTRODUCTION

1.1 Context of the project

The project officially titled "Strengthening of national capacity and grassroots insitu conservation for sustainable development" and abbreviated to "Protected Areas Project" (PAP), was conceived in the aftermath of the long period of instability and violent conflict which marked the recent history of Lebanon until 1990. In the ensuing years of rapid reconstruction, the Government of Lebanon (GOL) prioritised the rebuilding of physical infrastructure and maximal economic growth, largely overlooking the threats of overexploitation of the country's natural resources due to indiscriminate hunting, deforestation and overgrazing.

The PAP was designed to firmly establish biodiversity conservation on the

national agenda for sustainable development. The importance of conserving biodiversity was viewed as a vital component of a wider strategy to redress the deteriorating environmental balance of the country while sustaining its potential for the development of tourism. The project's overall development objective was thus defined to conserve endemic and endangered wildlife and their habitats,, incorporate wildlife conservation as an integral part of sustainable human development, strengthen the institutional capacity of governmental agencies and NGOs, and promote national reconciliation (UNDP/GEF, 1996).

At a time when appropriately managed protected areas had not yet been established in Lebanon, the PAP project was meant to initiate the creation of a national system of protected areas. Three demonstration sites were selected according to criteria based on legal status, representativeness in terms of biodiversity, prior support from local NGOs and political leaders and their accessibility to visitors from urban areas. The three areas identified were proposed as Managed Nature Reserves / Wildlife Sanctuaries (IUCN Category IV)

- Al Shouf Cedar Nature Reserve, the largest PA in the country (about 200 km²), formerly known as Jabal Barouk, covers a mountainous ecosystem of the central Mount Lebanon chain at an altitude between 1200 and 1900 metres. The area encompasses the southernmost stands of the native cedar of Lebanon, *Cedrus libani*, and constitutes one of the remaining habitats for large mammals formerly distributed in the region, such as wolf, hyena and possibly gazelle.
- Horsh Eden Nature Reserve, covers an area of about 10 km² in the northern Mount Lebanon chain at an altitude of 1300-1950 metres. It contains one of the largest remaining stands of the cedar of Lebanon as well as over 500 hundred species of flowering plants. The PA also constitutes an important sanctuary for resident and migratory birds.
- Palm Islands Nature Reserve, located in the eastern Mediterranean marineisland ecosystem, is centred on the three islands of Palm, Sanani and Ramkine, covering a total area of about 4.15 km². Birdlife International classifies the protected area as an Important Bird Area (IBA) due to its importance for migratory birds. An application has recently been put forward to

inscribe Palm Islands as a wetland site under the Ramsar Convention. The sand beaches of the islands provide egg laying sites for two species of sea turtles , Loggerhead (*Caretta caretta*) and Green Turtle (

Chelonia mydas).

1.2 Project design and implementation

The project was formulated through the initiative of the Society for Protection of Nature in Lebanon (SPNL), the Ministry of Environment (MOE), IUCN and UNDP, based on extensive interactions with a wide range of national and local NGOs and institutions. The project was designed to have a 5 year duration and a budget of \$2.5 million from GEF and inputs of LL 267 million in kind and LL 750 million in cash from the GOL. The PAP was approved for funding by the GEF council in 1995 and signed by the Government of Lebanon in February 1996. The target beneficiaries identified at the outset of the project are the MOE, national and local NGOs, scientific and academic institutions, researchers, neighbouring Mediterranean countries and the international community.

The stated central strategy of the project is based on a multidisciplinary approach to the management of protected areas which will involve government agencies, NGOs and scientific institutions (SI), leading, to increased local participation through sensitisation, dialogue and the preparation of appropriate management plans. Through the establishment of well-managed demonstration areas the project should provide sound models to extend the initiative to other areas in the future. The key components of the strategy include the establishment of a project coordinating committee and park management teams, the realisation of field studies, scientific assessments and environmental education programs as well as public awareness campaigns emphasising the need for biodiversity conservation and contributing to national reconciliation.

The function of the MOE, acting as UNDP's counterpart, is to provide overall coordination and oversight for project activities involved with establishing and managing the protected areas programme in Lebanon. A project-coordinating unit, led by the national project coordinator (NPC), assumed executive functions within the MOE, including responsibility for the establishment and regular meetings of the project coordinating committee (PCC), composed of all major stakeholders in the project. The primary objective of the PCC is to coordinate the activities of the different agencies and organisations involved in the implementation of the project and ensure that tasks are undertaken according to agreed procedures and time schedules.

The IUCN has assumed the role of cooperating agency providing scientific and technical backstopping to the MOE and to participating NGOs as well

as facilitating the implementation of the training component and of all main subcontracts.

The start of the PAP was announced on 15 November 1996. The first six months were largely devoted to start/up procedures including the recruitment of staff, the procurement of basic equipment and the passing of key sub-contracts. By March 1997 the first PCC meeting was held and, as part of the inception report dated 20 March 1997, the original project document was slightly amended, and a revised document produced as a basis for implementation (PAP, 1997a). The park

management team of Al-Shouf Nature Reserve was officially appointed in March 1998, to be followed by those of Horsh Ehden and Palm Islands Nature Reserves.

Based on remaining funds, the possibility is currently being considered to extend the project by one year. This would move the official deadline for project termination from November 2001 to November 2002 (i.e. about 18 months from the date of the present evaluation).

1.3 Project review and evaluation

The project document specifies the need for tripartite reviews every 12 months. To date three such reviews have been carried out in February 1998, May 1999 and May 2000. A mid-term review was stipulated during the third year of the project. The present evaluation meets this requirement although its timing, halfway through the fifth year, would limit its scope unless the proposed one-year extension is granted.

The stated purpose of the evaluation is indicated in the terms of reference of the mission (Annex 1), which was carried out over a period two weeks according to the schedule given in Annex 2. The list of persons interviewed or met is given in Annex 3 while the list of documents reviewed is presented in Annex 4.

In developing findings, conclusions and recommendations, the evaluation focused on the outputs and activities as foreseen in the original project document and amended in the inception report approved during the first tripartite review. However, the project document did not include effective indicators of either project outputs or impacts in verifiable or quantifiable terms. Certain project activities suggest themselves as indicators, for example Activity 3.4.1 specifies the filming and editing of 3 documentaries.

Most of the rest are insufficiently precise in terms of quantity, quality and timeliness to constitute indicators against which project progress and success can be measured. The absence of verifiable indicators in the project document is compounded by the lack of standardised and regular reporting, resulting in further difficulties in tracking project progress as part of a formal evaluation.

2. FINDINGS

The project document lists 36 specific activities spread over 12 stated outputs to be carried out within the 5-year time frame. A brief analysis of the degree to which they have been achieved to date is provided below. In certain cases the wording of the outputs and activities have been slightly modified and summarised. In general, measurable indicators of implementation and impact of outputs were not provided in the project document (see above). Hence, in many cases, the measurement project performance had to be limited to the qualitative or informal assessment of achievements.

Output 1.1 Official boundary delineation

Stated output: A detailed delineation of the final status and size of the demonstration parks of Al Shouf, Horsh Eden and Palm Islands.

This output has not been achieved and its delivery seems unlikely during the lifetime of the project. However, the two activities foreseen under the output have yielded some significant results.

Activity 1.1.1 Review all laws, decrees and enabling legislation to clarify procedures between government agencies concerning the management of the three protected areas. This activity was initiated with the analysis of Law 216/1993 and Law 667/1997, dealing respectively with the founding and structuring of the MOE; Law N.121/1992 establishing the Palm Islands and Horsh Ehden NRs and Law 532/1996 establishing the Al-Shouf NR. With the assistance of an external legal consultant the project was able to contribute to the drafting of a new Framework Law for Protected Areas in Lebanon. This law, currently submitted for approval to the Council of Ministers, will allow a more effective structuring of the MOE and address a key gap in previous legislation whereby at present visitor fees cannot presently be levied in Protected Areas and other forms of income-generating activities are restricted. The MOE expects the

Framework Law to be ratified by the Lebanese Parliament later this year. The legal work carried out under the aegis of the PAP has also contributed to the gazetting of a further five protected areas (four based on laws and one on a ministerial decree). This has brought the total number of legally gazetted PAs in Lebanon to eight, thereby greatly advancing the establishment of a national system of protected areas.

Activity 1.1.2 Survey and officially delineate boundaries of the protected areas preparing detailed maps duly signed and approved. The project's APR and TPR reports reiterate the urgent need for the implementation of this activity. The lengthy preparation procedures included the creation of an inter-ministerial committee to oversee the drafting of terms of reference and the preparation of tender documents to initiate the bidding procedure. In the TPR (2000) the finalisation of the tender documents had been foreseen by June 2000 and the final demarcation of boundaries by the end of 2001. However, the technical and financial resources to be mobilised have been greatly underestimated in the original project document. Although the budgetary allocation for this activity was increased from \$20,000 to \$70,000 (TPR, 1998), according to recent estimates the amount falls well short of the several hundred thousand dollars required. Furthermore the MOE, which has

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taken the lead in to tackling this issue, has not yet been able to secure the full collaboration of the Ministry of Finance, a key player in all cadastral matters. Official deeds are currently held only for about 13 % of the land of Lebanon and it has become increasingly clear that the official demarcation of protected area boundaries opens complex national land tenure issues involving multiple institutions in largely uncharted legal territory. The fact that the meagre financial resources of \$70,000 earmarked for this activity are to be reallocated in the forthcoming budget revision spell-out, in no uncertain terms, that this output will remain undelivered.

The official delineation and demarcation of boundaries remains a key requirement to ensure the effective long-term management of the protected areas. This is particularly important in the case of Al Shouf that, unlike the other two reserves, contains significant tracts of privately owned land. On the other hand, for most practical purposes the boundaries of the protected areas have been largely identified on the ground and except for some minor disputes they appear to be fairly recognised in all three PAs.

Concerning the final status and size of the protected areas, estimates

are available for all three NRs based on the GIS established by the project (see output "1.5). However; for Al - Shouf there seems to be a major discrepancy between the size estimated through the GIS (about 156 km²) and the official figure: of 550 km², which appears in the project literature (both figures are quoted in the Al-Shouf management plan). Apart from the evident marketing value of promoting the reserve as 5% of the Lebanese territory, during the final stages of the project cycle, technical considerations should prevail in order to obtain an unbiased and credible estimate of the actual size of the protected area.

Output 1.2 Park management teams

Stated output: Park management teams, one for each park, where every team has one manager, one guide and security rangers who are employed by local NGOs and trained by the project.

This output has been successfully achieved. Management teams were established at the outset of the project, through sub-contracts between IUCN and three national NGOs: the Al-Shouf Cedar Society (ACS), the Friends of Horsh Eden (FOHE) and the Environment Protection Committee (EPC) for Palm Islands. Personnel were selected from the local communities according to the criteria set out in the project document such as relevant academic background and familiarity with the protected areas and their surroundings. To date the management teams include 13 staff for Al-Shouf, the largest of the protected areas, 8 staff for Horsh Ehden and 5 staff for Palm Islands.

The project made good use of available human resources and all staff have benefited from regular and extensive training sessions, detailed under output 2.2. Staff were hired for five years and the salary scale is about 20% higher than the equivalent ministerial jobs. On termination of the project, many would apparently be prepared to accept a slight drop in salary and stay on as part of the management teams, if improved job-security were ensured through longer-term contracts. Very few members of staff have so far resigned and only one has been

reported to leave the PAP for a better-paid job abroad. Serious management problems have been recorded in Horsh Ehden between FOHE and selected members of the management teams. External local consultants were brought in by the project and outstanding conflicts ironed out. At present relations appear to be largely satisfactory and no overt,

major differences, between NGOs and management teams were apparent during the evaluation.

The highly motivated and competent management teams that have been established in the three protected areas constitute a major asset for the future. The project has been instrumental in strengthening the parent NGOs but despite this, their overall capacity to mobilise the financial resources required to maintain the full complement of staff hired during the project remains weak. A fact that inevitably raises the crucial issue of sustainability beyond the lifetime of the project (see output 3.5 and Section 3.5).

The procurement of equipment has been conducted according to procedures stipulated in the project document and largely on schedule apart from a few notable exceptions such as the long delays recorded in obtaining the GPS units,

GIS stations and some audio-visual equipment.; All items procured appear to have been, appropriately - utilised and !.appropriately maintained. The financial management of the project,, duly audited according to. UNDP procedures;-has reportedly been excellent (PAP, 2000b).

Output 1.3 Management plans

Stated output: Detailed management plans for Al Shouf, Horsh Eden and Palm Islands.

This output has been partially achieved. The English versions of the first draft management plans were produced and distributed to all PCC members in March 1999. These plans were the result of the collective effort of the management teams assisted by IUCN international consultants and based on the principles developed in the training workshops of 1998 and 1999 (see output 2.2). The draft plans were reviewed and upgraded based on the recommendations of the TPR (1999) by integrating cartographic data from the GIS, the results of biodiversity baseline surveys and elements from the business plans and fund raising strategy (TPR, 2000). The Minister of Environment has approved the final management plans for implementation for the period 2000 - 2005. As specified in the project document the plans should be published along with a brief executive summary produced for the general public, decision makers and potential funding sources.

The plans embody sound principles and objectives according to internationally recognised best practice guidelines. However, they tend to emphasise policy statements and appear relatively weak on operational

details. The latter are likely to be addressed in the thematic plans that according to the management plans are to be further developed (such as cultural heritage conservation plans, community relations plans, environmental education plans, visitor management plans, development control plans, etc.) However, most of these subsidiary plans still need to be drafted. Crucially, the approved management plans lack budgets, measurable indicators and a structured program to monitor progress in implementation. These gaps need to be addressed in order to complete the

achievement of this output. The need to operationalise the management plans including the formulation of annual work plans and a standardised system of reporting was identified in the project document and reiterated in the TPR (2000).

Output 1.4 Baseline studies

Stated output: A series of field studies and activities to gather data and analyse results.

This output is underway to being achieved. The studies were commissioned by the project to the National Council for Scientific Research (NCSR). The first contract was signed in November 1998 and field work started in 1999 in the three protected areas and in the more recently gazetted protected areas of Tyre and Ammik.

Following the guidelines set out in the project document, the work conducted so far has consisted essentially of baseline biodiversity surveys of plants and the main animal taxa. The results have been presented as species lists, classified according to several criteria including status (threatened, rare and/or endemic), distribution, economic value etc. Bio-indicators; have been identified, and the information fed into the biodiversity monitoring program being implemented" by Green Line (see output 1.5). Provisional results including a review of published literature have been published as reports and key findings incorporated in the management plans for the three protected areas.

In the case of Horsh Ehden, some disagreement exists over the results of the plant inventories. Over 1000 plant species had been identified in a previous inventory conducted by Haber, whereas 532 species have so far been classified by the NCSR. However, the work has yet to be completed

and a more conservative approach is considered more prudent in producing and validating species lists. The discrepancy is likely to be solved as a result of the additional field-work to be carried out by NCSR as part of a forthcoming second contract with the project. This should also allow certain activities to be pursued in order to complete the achievement of this output as outlined in the project document - particularly the identification of further areas for *in situ* and *ex-situ* conservation activities, assessing needs and setting priorities beyond the termination of the project (activities 1.4.4 and 1.4.5, UNDP/GEF, 1996).

Output 1.5 Monitoring program

Stated output: A monitoring program to measure progress based on the GIS and GPS.

This output is underway to being achieved. The design of the monitoring programme was outsourced to Green Line, which has also been responsible for its implementation in collaboration with the MOE, the management teams and other partners of the project.

Biodiversity baseline data generated by the NCSR studies for each site were incorporated in the monitoring program (see output 1.4). Training of PAP staff was effectively ensured through thematic workshops and extensive on-the-job training

conducted during the ongoing collection of monitoring data in the field. Two practical monitoring manuals (flora and fauna) have been produced and distributed to the management teams and other interested parties (Sattout *et al.*, 1998, 1999; Jaradi *et al.*, 2000).

Hardware procured for the GIS includes two central workstations operating at Green Line equipped with plotter, digitiser, A3 printer, CD writer and licensed ArcInfo software in addition to three lighter PC platforms with licensed ArcView software for the protected areas. GPS units (Trimble Explorer 3) have been procured for the management teams and a base station with differential correction capability set up at Green Line headquarters in Beirut. A first generation of thematic maps has been produced and incorporated in the management plans, while a second generation of maps, based on high resolution satellite images and aerial photos are currently being processed. The analysis of biodiversity monitoring data is also underway and the first set of results is expected by

the month of November.

Overall, it appears that the output will be effectively and efficiently delivered.: However, there are indications that at the level of the management teams, the sense of ownership for this instrument is weak. The significant resources required for its long-term implementation may be difficult to mobilise after termination of the project, due to constraints in the availability of human resources and differing management priorities. Similarly, the transfer of the central hub of the system from Green Line to the MOE may suffer from a shortage of qualified human resources and technical know-how. The present design of the monitoring system may indeed be insufficiently management-driven and too complex for it to be sustainable in the absence of external support from a specialised organisation such as Green Line.

Output 2.1 Strengthening of the MOE

Stated output: A Protected Areas Department in the MOE to oversee the implementation of management plans for the protected areas and a PCC that will bring government agencies, NGOs and scientific institutions together.

This output has been partially achieved. A Project Coordinating Committee (PCC) was established at the outset of the project including members from MOE, UNDP, and the various NGOs participating in the implementation of the project. The first PCC meeting was held in March 1997 and since then the MOE has chaired regular meetings almost every month. According to the minutes of the meetings, the PCC appears to have achieved its primary objective of coordinating the activities of the different agencies and organisations involved in the project while ensuring that tasks are undertaken according to agreed procedures and time schedules. The forestry department of the Ministry of Agriculture, which had been invited to play a supporting role due to its jurisdiction over many forest areas in Lebanon, has in fact displayed limited involvement with the project as also reflected in its failure to attend the TRP meetings of 1999 and 2000.

The Ministry of Environment (MOE) underwent a complete review of its mandate by the GOL resulting in the passage of Law N.667/1997, which has amended the previous Law N.216/1993 establishing the MOE. The new law foresees the creation of an Office of Protected Areas under the department of Studies and

Standards. This was considered more in line with the advisory role of the MOE and its limited responsibilities in the establishment and management of protected areas. The Protected Area Office should fulfil the functions of the Protected Areas Department originally envisioned in the project document. At present the Protected Area Section under the Service of Urban Environmental Protection carries out the duties of the future Office, although it has been indicated that the section will eventually be transferred under the Service for the Protection of Nature. It had also been anticipated that the MOE would appoint a director with park-management qualifications to head the proposed new department. To date only one member of the MOE staff is officially appointed to work on the implementation of the project while overseeing the management of the emerging national system of protected areas and fulfilling several other ministerial tasks - albeit with strong support from the office of Director General and some assistance from the MOE focal point for the national biodiversity strategy.

Despite the evident lack of staff, a fact that has been highlighted in most project reports and all tripartite reviews, the MOE has actively participated in the decisionmaking process and the implementation of project activities while its sense of guardianship has consistently-been remarked as strong (APR, 1998; TPR, 1999). This is reflected in the almost seamless transition when project-, management functions were transferred from IUCN to the MOE- after 3.5 years from-the start of the project. Since July 1998, managers meetings have been convened-by the MOE every two weeks in order to effectively coordinate activities in the three protected areas. Several workshops have been organised (and others are being planned) to disseminate and capitalise on project results as part of the wider MOEdriven initiative to establish a national system of protected areas. The MOE has also raised the profile and promoted the protected area initiative in government circles and among donors and other institutions, in some cases successfully leveraging additional funds for biodiversity conservation. These include the French FFEM contribution to the establishment of the Tyre and Ammik protected areas, a series of workshops backed by the Hanns Seidel Foundation and PDF-A projects supported respectively by UNEP and the World Bank.

In addition to the difficulties in mobilising required staff, the full achievement of this output is limited by slow progress on two further issues set out in the project document and the inception report. First, the MOE should take the lead in clarifying the role of the Government Appointed Committees (GAC) which, according to current legislation, are

mandated to oversee the protection and the management of each protected area through representatives from the local municipality and other qualified individuals. Lengthy negotiations have been conducted, but the GACs have not yet been fully activated and in some cases outstanding conflicts still need to be resolved between the NGOs and the concerned municipalities (TPR, 1998; see Section 3.4). Second, a financial contribution of LL 750 million (about \$ 500.000) had been committed by the GOL over the five years duration of the project in order to build visitor centres in each protected area. Although in 1999 the NGOs managing the reserves received a financial contribution of \$ 97.000 from the MOE, the funds earmarked for the visitor centres have not so far been released, apparently due to financial restrictions posed by the Ministry of Finance.

Output 2.2 Training workshops

Stated output: A series of training workshops for park management teams, researchers and government officials that upgrade their basic skills and allow them to perform their duties at internationally acceptable standards.

This output has been effectively achieved. Four workshops had been foreseen in the project document. To date, nine training workshops have already been conducted: five workshops held by IUCN on management planning, visitor management, fund raising and collaborative management; three workshops held by Green Line on biodiversity monitoring (fauna, flora) and the use of GPS and GIS; one workshop held by the MOE/ Hanns Seidel Foundation on protected areas management. All workshops were well attended and formal evaluations conducted at the end of selected sessions indicate that participants were in many cases highly satisfied (e.g. PAP, 1997c PAP, 2000d). The only discordant note concerns the collaborative management workshop, which was discontinued and no report has yet been submitted by the IUCN facilitator (PAP, 2000c). Over ten further training courses, workshops, and conferences, organised in Lebanon and abroad by national and international organisations on a wide range of biodiversity related subjects, were also attended by several members of the PAP staff (PAP, 2000b).¹

The overall outcome of this output is that management teams, and other stakeholders from governmental and non governmental organisations and scientific institutions, have acquired effective, hands-on knowledge of biodiversity conservation best practices, and now possess the technical skills for the management of protected areas according to recognised international standards. A compendium of information on protected area management has been elaborated by IUCN as a comprehensive manual for the future training of protected area managers in Lebanon (PAP, 2001).

Output 3.1 Micro-credit facilities

Stated output: Establishment of three revolving funds for the benefit of communities in the vicinity of the three protected areas.

This output has not been achieved. Based on an assessment of target beneficiaries in the vicinity of each protected area, three separate credit facilities should have been established by the project to support sustainable livelihood initiatives (UNDP/GEF, 1996). Based on the recommendations of the first tripartite review (TPR, 1998), the budget of \$50,000 foreseen for this output was reallocated to fund the recruitment of an additional guide/ranger for Al-Shouf (\$24,000) and the realisation of feasibility studies for the creation of visitor centres (\$26,000). This decision substantially modified the initial project work plan and by effectively cancelling all funding for this output has had serious implications on the overall strategy of the project. The establishment of revolving funds was perhaps too ambitious or indeed not viable at the early stages of the PAP. The full participation of all the stakeholders in the development of a strategic work plan for the project, would have probably revealed the gap, and allowed for appropriate re-

planning. The failure to undertake the necessary steps to redesign the output and related activities has prevented the identification of alternative mechanisms for involving beneficiaries and significantly limited the ability of the PAP in addressing the fundamental issue of community participation.

Later on in the project, the need for more community-oriented activities in the peripheries of the protected areas was recognised (TPR, 1999). In this respect, the independent initiative of the Al-Shouf management team, which has secured additional funds of \$20,000 from Canadian sources for small-scale community related biodiversity initiatives, can be viewed as a

belated attempt to revive the essence if not the letter of this planned output. Starting in 1999, selected members of the local communities have been involved in the identification, preparation and marketing of a wide range of biodiversity products. This pilot eco-labelling project has so far targeted 55 families and based on current results, financial break-even is expected in about two years. In Al-Shouf, this initiative has gone some way in redressing the gap, which resulted from the disengagement of the PAP from this planned output. By demonstrating the importance of community-oriented activities, it has also inaugurated a management strategy, which in the future will need to further emphasise collaborative management and sustainable livelihood initiatives.

Outputs 3.2 - 3.3 Awareness and education

Stated outputs: (3.2) Sensitisation and awareness campaigns in the environs of the three protected areas through effective outreach activities. (3.3) An educational component comprising development of materials for use in the local schools, teacher training and issuance of guidebooks.

The PAP has effectively unified these two related outputs into a single output, which is underway to being achieved.

Initial activities were outsourced to the Friends of Nature (FON). The foreseen educational materials for schools were not realised because by the time the PAP started implementation, the Ministry of Education had already integrated environmental education as part of the national school curriculum. The first generation of educational tools and awareness activities realised for each of the five protected areas (the three PAs + Tyre and Ammik) included the following: education kits based on professional sets of high quality colour slides of the biodiversity of each site; the assembly and delivery of mobile information exhibits in Arabic; a series of local teacher training seminars held in the five reserves. Although this was a good start, there is a clear need for a more systematic and concerted effort to integrate the local communities within the conservation initiative, through more effective outreach activities to be carried out at level of the individual sites. At present, the only site to have established a visitor's centre is AlShouf, where in the absence of MOE funding, a disused gas station has been ingeniously adapted for this purpose, based on a shoestring budget and the goodwill of the former owner.

By the end of year 2000, after some delay due to lengthy administrative procedures, the responsibility for an integrated follow-up package of Information, Education and Communication tools and activities, has been conferred to the Environment Information Centre (EIC). A comprehensive

and well-articulated

strategy has been developed and is currently being implemented (EIC-SPNL, 2001 a,b). Preparations are underway for a series of site-specific awareness and training events targeting a large cross-section of the local communities. These will include events such as protected area festivals, theatre performances and school competitions, training seminars for local NGOs and CBOs, and exchange visits between protected areas for selected stakeholders. EIC will also facilitate the establishment of environmental clubs in the municipalities surrounding the protected areas, produce educational brochures and a pilot educational manual, and oversee the realisation of a documentary supporting the awareness campaign.

Output 3.4 Production of films

Stated output: Three documentaries, one for each of the three demonstration parks, and fifteen 30-second television spots on the positive results of conserving nature.

This, output slightly revised in the inception report to include three documentaries, three video presentations and nine television spots, has ' been successfully

achieved. The films were' produced . thprugh 'a' contract' with the ' ' Societ)('for

Protection of Nature in Lebanon (SPNL). The first version of the -docùn entaries concentrated almost entirely on the biodiversity of the protected areas, butsubsequent re-editing introduced the human element and some footage on the management of the protected areas, which had crucially been omitted in the first edition. On the other hand, the distribution of the films and spots appears to have been sub-optimal, with few TV airings and only 200 VHS copies made, largely for distribution among members of parliament. At site level the films appear to have been used for presentations and special events on an ad hoc basis. A much more systematic effort to capitalise on these essentially good-quality film products is expected through the ongoing implementation of the awareness campaign by EIC (see output 3.2 - 3.3).

Output 3.5 Fund raising

Stated output: A series of fund-raising activities to sustain the

demonstration areas beyond the five-year duration of the project.

This output has been partially achieved. In Al Shouf where fund-raising has been taken seriously right from the outset of the project, remarkable results have been obtained. Through the concerted efforts of the management team and ACS an estimated \$545,000 has been raised through voluntary entrance fees, merchandising, services and donations (\$115,000 in 1997-1998; \$225,000 in 1998-1999; \$85,000 in 1999-2000; \$120,000 in 2001). On the other hand very little has so far been achieved in the other two sites, except for the limited mobilisation of in kind contributions. A comprehensive fund-raising strategy for the three protected areas has been developed by IUCN, based on revised business plans prepared by Darwish *et al.* (2000). Al-Shouf has taken the lead in attempting its implementation whereas in Horsh Ehdien and Palm Islands there is still little evidence of the will and capacity to implement the funding programmes, although there is growing realization of the necessity to do so (Sandwith, 2000a,b).

3.

ASSESSMENT

3.1

Effectiveness

Overall project performance has been high. The evaluation has documented an impressive quantity and quality of work, with many activities having been implemented completely or to a very considerable extent. The levels of implementation of project outputs alongside an indication of the key requirements to achieve completion are outlined in Table 1. The majority of activities had no verifiable indicators, which could be formally measured (see Section 1.3). However, based on the findings of this evaluation, an overall assessment of project effectiveness in achieving the twelve outputs foreseen in the original project document may be summarised as follows:

- Three outputs have been successfully achieved (1.2 park management teams; 2.2 training workshops; 3.4 production of films). Some follow-up activities are desirable.
- Four outputs are underway to being achieved (1.4 baseline studies; 1.5

monitoring program- .3_2 , and 3.3 awareness and education). Based on the. current assessment, these outputs should be completed by the end of the project in November 2001.

EI Three outputs have been partially achieved (1.3 management plans; 2.1 strengthening the MOE; 3.5 fund-raising). These outputs may potentially be largely completed if the one-year extension of the project is approved.

- Two outputs are unlikely to be achieved (1.1 official boundary delineation; 3.1 micro-credit facilities). For output 1.1 some significant results were nevertheless obtained, whereas output 3.1 was cancelled.

In comparing the effectiveness of the project across the three sites it is clear that some outputs have been more effectively achieved in Al-Shouf Nature Reserve than in Palm Islands or Horsh Ehden, a fact that has been systematically highlighted in project reports (TPR, 1998; 1999; 2000) . In the case of the many outputs, which are either centrally executed or rely on external human and financial resources, results are largely satisfactory and relatively homogenous across the three project sites (e.g. management plans, baseline studies, monitoring program, training, production of films, etc.). On the other hand, for those outputs where external support was not foreseen or has not been forthcoming, the Al-Shouf management team has risen above the rest. Though its excellent performance it has effectively achieved results in three key areas where the other two sites have so far been largely unsuccessful. These include: (i) initiating the effective involvement of local communities in the management of the protected area through the Canadian supported eco-labelling initiative (output 3.1); (ii) the effective establishment of an operational visitors centre even in the absence of MOE funding (output 3. 2); (iii) the ongoing and highly successful fundraising activities which significantly contribute to the long-term goal of attaining financial sustainability for the reserve (output 3.5).

Table 1. Degree of achievement and current requirements for completion of project outputs.

Output	Degree of achievement	Requirements for completion
1.1 Official boundary delineation	Not achieved.	Delivery of the output seems unlikely, but some significant results were obtained.

1.2 Management teams	Successfully achieved.	Improvement in job security desirable.
1.3 Management plans	Partially achieved.	Management plans need to be made more operational.
1.4 Baseline studies	Underway to.. being achieved.	Collection and analysis of data to be completed."
1.5 Monitoring program	Underway to being achieved.	Design of monitoring system to be adapted and implementation transferred to management teams.
2.1 Strengthening the MOE	Partially achieved.	Mobilisation of further MOE staff, activation of GACs, delivery of financial resources committed by GOL.
2.2 Training workshops	Successfully achieved.	Follow-up on fund raising workshop desirable.
3.1 Micro-credit facilities	Not achieved.	Output cancelled. Funds reallocated to other outputs (TPR, 1998).
3.2-3.3 Awareness and education	Underway to being achieved.	Full and timely implementation of current contract with EIC crucial for completing achievement.
3.4 Production of films	Successfully achieved.	Wider distribution of films desirable.
3.5 Fund-raising	Partially achieved.	Sustained effort required to initiate fund raising activities in Palm Islands and Horsh Ehdén.

It has to be stressed, however, that fundamental achievements have also been obtained in Palm Islands and Horsh Ehdén. The protected areas have been successfully established and the basic process of sound

planning and management has been set into motion. Without diminishing the evident merits of the Al Shouf management team, it should also be noted that the direct comparison of achievements across sites should not be overemphasised, due to the specificities of the three sites and the marked differences in the level of local political backing for the three protected areas.

3.2 Efficiency

The overall efficiency of the project has been high, given the wide range of achievements based on the available budget of \$2.5 million, of which about \$1,7 million has so far been spent. This is partly due to the innovative model of outsourcing key project activities to NGOs with relatively low overheads, flexible institutional arrangements, and the ability to mobilise significant human and financial resources outside the project. The very high- levels of involvement and commitment of national staff and the NGOs involved in the PAP, coupled to low staff turnover within the management teams, and the relative stability of other contributing institutions, were also critical to the project's achievements..."

Another factor, which contributed significantly to the degree of efficiency of the project, has been the system of training workshops adopted by the PAP. This system has ensured a cost-effective way of providing considerable technical assistance on a wide range of fields related to the establishment and management of protected areas. The suitability and quality of consultants from IUCN and other specialised NGOs, has resulted with few exceptions in an effective transfer of knowledge to their immediate counterparts, the national staff and other stakeholders. On the other hand, more effective follow-up of the training workshops, particularly through site-specific backstopping at protected area level, would have served in operationalising key management principles, further enhancing the overall efficiency of the technical assistance provided by IUCN.

No major inefficiencies have been documented in the PAP although slow feedback from MOE, UNDP and IUCN and time consuming reporting has at times been raised as an issue (e.g. TPR 1999). However, this should be considered almost inevitable when agile structures such as NGOs deal with large national and international organisations and their associated bureaucracies.

3.3 Impact

The impact on biodiversity has clearly been positive. The firm establishment of the three protected areas and the declaration of another four to which the project has contributed, constitutes a milestone achievement in the conservation of biodiversity in Lebanon. Within the three PAP sites the exploitation of natural resources through overgrazing, deforestation, and illegal hunting and fishing, has been severely reduced. There are clear indications that the vegetative cover in all the reserves has increased, including the regeneration of the flagship species *Cedrus libani* in the Horsh Ehden and Al-Shouf Nature Reserves (Elsa Sattout,

pers. comm.). Although the analysis of quantitative data is still underway, the breeding populations of wolf, boar and several other mammal species are also on the increase (Mounir Abi Said, pers. comm.). In the Al Shouf Nature Reserve Mountain gazelle has apparently been resighted and the reintroduction of the locally extinct ibex is being planned, through a Saudi funded \$1.3 million reintroduction program (Assad Serhal, pers. comm.). In Palm Islands marine turtle breeding sites have increased from 6 to 36, greater numbers of birds and a wider range of species have been recorded, and unconfirmed reports from local fishermen indicate there has been an increase in the local fish-catch (Ghassan Jaroudi, pers. comm.).

In socio-economic terms the initial impact of the project has been negative. According to municipal sources from all three sites, the imposition of restrictions on the access to biodiversity resources stemming from the establishment of protected areas inevitably led to a degree of tension between the PAP and the local communities. This was probably exacerbated by the limited efforts of the PAP, with the notable exception of the Al Shouf eco-labelling initiative, to address the primary concerns of the people and provide them with alternative income generating activities (output 3.1). -Despite the initial negative dynamics, there is wide recognition among municipal representatives from the three sites, that the negative trend has been reversed. Although this is partly due to the effects of the PAP education and awareness campaign, the most crucial factor appears to be the perceived potential of the three protected areas for the development of nature-based tourism. This is an emerging sector of the local economies, with visitor numbers steadily rising in all three sites and professional tour operators increasingly involved in developing new ecotourism services. In the medium term this may indeed become a

thriving and lucrative economic activity benefiting the local communities and may come to represent a key positive outcome of the PAP project.

Capacity building was a major part in the project's strategy, and the NGOs responsible for the management of the protected were in considerable need of strengthening (UNDP/GEF, 1996). The responsibility for implementing key project activities has provided important capacity building opportunities, which have been fully capitalised upon by ACS and to a lesser extent by EPC and FOHE. The former is now able to almost single-handedly run a complex operation such as the management of the Al-Shouf Cedar Nature Reserve while maintaining independent and solid links with civil society, national and local government, the private sector and the donor community. Similarly, by attributing key project outputs to several other national NGOs such as FON, SPNL-EIC and Green Line, the PAP has contributed significantly in improving their capacity. Some of them have graduated from being little more than loose associations of young professionals with few members and limited technical and financial resources, to structured and specialised organisations, increasingly able to compete successfully for projects on the open market.

Playing a key role in the implementation of the PAP has also had a positive impact on the MOE, a fact that is reflected in its increasing capacity to negotiate funds for protected areas from central government (Berj Hatjian, pers. comm.). However, the severe shortage of staff, which has so far resulted in the failure to establish an effective protected area management unit within the ministry (output 2.1), has

meant that potential opportunities for the further strengthening of the institution have been lost.

3.4 Ownership

The sense of ownership for the PAP initiative appears to be strong among all key players including the MOE, the three NGOs responsible for the management of the protected areas, and the municipalities consulted.

In the case of Al-Shouf Nature Reserve, a strong unity of purpose and an almost perfect convergence of interests seem to animate the relationship between the management team, the representatives of ACS, and those of the municipalities of Barouk, Niha, Maser and Ain Zhalta, interviewed during the evaluation. It should be noted, however, that it was not possible to meet representatives from the remaining five municipalities surrounding

the protected area.

The situation appears to be quite different in the two other protected areas. In interviews conducted during the evaluation, representatives from the municipalities of Tripoli and el Mina (Palm Islands) and to a lesser degree those from Al Zharta (Horsh Ehden), complained of having been 'side-lined' in the decision-making process by EPC and FOHE respectively. This was largely confirmed ;in the meetings with the executive committees of the two NGOs, which seem to fear pursuing closer relationships with the municipalities, because they would ultimately loose control over the management of the protected areas. Paradoxically, the strong sense of ownership on all sides seems to have been detrimental to a more open partnership between these key stakeholders.

The need to enlarge the membership base of the contracted NGOs to include as many specialised members as possible who are active in the municipal, economic and social sectors, was recognised as a crucial step in anticipating new sources of funding in the TPR (1999). In this context, there seems to be a strong case for a more active involvement of the MOE in encouraging both EPC and FOHE towards a policy of constructive engagement with their respective municipalities. This would allow the PAP to capitalise on the strong sense of ownership displayed by the municipalities while calling upon them to honour, at least in part, their financial commitments, as stipulated in the Law N.121/1992 establishing the two protected areas.

3.5 Sustainability

The question of sustainability of project achievements is one of concern to all partners in the PAP. At this stage in the project cycle it seems likely that if the project terminates in six months time, as foreseen by the official deadline, several achievements will rapidly erode due to the loss of core management staff, once external financial support ends. On the other hand, if the proposed one-year extension of the project is approved, some key outputs contributing towards the overall sustainability of the PAP could potentially be delivered. These include addressing the overarching issue of financial sustainability (output 3.5) and resolving the complex questions linked to the strengthening of the institutional framework (output 2.1).

Regarding financial sustainability there seems to be light at the end of the tunnel. The analysis of costs and income carried out for each PA during the workshops to develop a fund raising strategy, indicates that

the Al-Shouf Cedar Nature Reserve has a relatively small deficit of about \$23,000. The shortfall could be addressed by reducing some of the fixed costs, especially staff and vehicles, and capitalising further on the many opportunities to increase revenue through the development of facilities and services for visitors. In the case of Horsh Ehdén the estimated shortfall is \$13,000 and a sustainable financial status could be reached only if effective fund-raising is initiated and some fixed costs reduced. In Palm Islands the annual deficit is over \$18,000. Here expenditure would need to be limited to essential items and management efforts should focus on building an effective revenue base as well as fund-raising. More detailed prescriptions to be implemented in the short and medium term are proposed in Sandwith (2000a,b).

The innovative institutional model being tested in Lebanon, which hinges on the government delegating nature conservation functions to NGOs, has certainly yielded remarkable dividends, as demonstrated by the overall effectiveness, efficiency and impact of the PAP (sections 3.1-3.3). However, it raises questions of long-term institutional sustainability. The MOE has performed effectively within the prevailing circumstances, but in the absence of external support, the severe lack of staff and its limited ability to deliver committed financial inputs, may prejudice its future role as regulator of an expanding system of protected areas. To put it bluntly, if one or two key MOE staff so far involved with the project, were to leave the organisation for any reason, very limited institutional memory of the PAP initiative would remain behind. This perceived fragility within the central ministry is compounded by a sub-optimal institutional framework at the level of the individual sites. Particularly in the case of Horsh Ehdén and Palm Islands, the precise roles and responsibilities of the NGOs, the management teams and the municipalities have yet to be adequately defined and agreed upon (see section 3.4).

3.6 Replicability

The replicability and overall sustainability of the PAP initiative seems to depend on the successful development of a new vision, which effectively conjugates the twin concepts of financial and institutional sustainability. By focussing on individual sites, an MOE-driven effort to revive the GAC should eventually spearhead the emergence of a stable institutional mechanism such as a Protected Area Management Board (PAMB). The latter would provide an umbrella for all key stakeholders while upholding and formalising the fundamental principles of community involvement and social sustainability. The PAMB would

oversee protected area management functions and either become the employer of core management staff or sub-contract for this purpose the existing NGOs. This board would also ensure the necessary conditions of pluralism, credibility and transparency, which are crucial prerequisites for the establishment and endowment of a permanent fund supporting the long-term and sustainable management of each protected area.

4. CONCLUSIONS

The PAP is making a significant contribution towards initiating the process of sustainable nature conservation and management in Lebanon. The design of the project was relevant to the national context and its implementation timely. The innovative institutional model being tested, which hinges on the government delegating nature conservation functions to NGOs, has certainly yielded remarkable dividends, as demonstrated by the overall effectiveness, efficiency and positive impact of the project. However, the emergence of a stable protected area system is not an objective which can be completely achieved within a timeframe of five years and the overall sustainability of the initiative still depends on the successful development of a new vision, which will effectively conjugate the twin concepts of financial and institutional sustainability.

The key partners to the project are executing their tasks diligently. The efforts of all NGOs should be appreciated, but special attention deserves to be drawn to the excellent work conducted by the Al Shouf management team, which is setting a concrete example of inspired and forward-thinking protected area management:

National reconciliation, one of the ultimate goals of the PAP, is being furthered by fostering real and long-term collaboration among institutions and individuals from wide ranging backgrounds, origins and religious affiliations, united in the name of an ideal, founded on the concept of peace and the preservation of a common natural and cultural heritage.

Based on the findings of this evaluation, an overall assessment of project effectiveness in achieving the objectives set out in the original project document may be summarised as follows (see Table 2):

EI Immediate Objective 1. The establishment of three functional protected areas, according to internationally recognised best practices for the sustainable conservation and management of biodiversity. This

objective has been partially achieved. The management plans developed by the project need to be made more operational and further steps should be undertaken to promote the participation of local communities in the management of the protected areas (see Section 2: outputs 1.3 and 3.1).

u Immediate Objective 2. An enhanced capacity of all key stakeholders in the sustainable management of protected areas in Lebanon. This objective has been partially achieved. The key issues still to be addressed include: (i) the sub-optimal institutional framework at the level of the MOE and of the individual sites, and (ii) the achievement of a sustainable system of funding for the management of the protected areas (see Section 2: outputs 2.1 and 3.5 and Sections 3.4 and 3.5).

u Immediate Objective 3. A site-specific and multi-targeted Information, Education and Communication campaign promoting biodiversity conservation in Lebanon. This objective is underway to being achieved. The full and timely implementation of the current contract between the PAP and EIC is crucial for completing the achievement of this objective (see Section 2, outputs 3.2-3.3).

u Overall development objective. To conserve endemic and endangered wildlife and their habitats, incorporate wildlife conservation as an integral part of sustainable human development, strengthen the institutional capacity of governmental agencies and NGOs, and promote national reconciliation. The objective is underway to being achieved through the overall progress in meeting the three immediate objectives (see above). In general terms, in order to attain the overall development objective, the PAP should focus its future efforts on three key areas: (i) emphasising collaborative management and sustainable livelihood initiatives in the management of the protected areas, (ii) resolving the complex questions linked to the strengthening of the institutional framework and (iii) addressing the overarching issue of financial sustainability.

Table 2. Objectives of the Protected Areas Project, as stated in the original project document (UNDP/GEF, 1996).

Immediate =objective 1 ,	Three functional protected areas managed by local management teams according to management plans prepared with the assistance of, international conservation organisations and in country- scientific institutions and organisations that will conduct field studies , gather basic ecological data, analyse and publish results and monitor the progress of the protected area. Based on scientific assessments an overall strategy of conservation will be
Immediate objective 2	An enhanced capability of government agencies, Sis and NGOs to define and plans prepared for the future sustainability of the project beyond the present intervention oversee, study and manage protected areas in an effective and sustainable manner by means of institutional support for the MOE and training workshops for all project participants to upgrade their skills.
Immediate objective 3	A sensitisation and education campaign targeting a number of population groups within the vicinity of the protected areas as well as at the national level, in order to assure large-scale sustainability of biodiversity and conservation efforts. This will include outreach to the local communities living in the vicinity of protected areas, preparation of educational materials for use in local skills as well as recommendations for national-level environmental education
Overall development objective	The project's overall development objective is to conserve components. A reflective series of documentaries and television spots to sensitise the public and supply the visual materials for wildlife conservation as an integral part of sustainable human development, strengthen the institutional capacity of government awareness campaign to alert government officials to the need for

biodiversity conservation and establishment of a protected areas network will also be made.

5. RECOMMENDATIONS

General recommendation. It is currently widely recognised that a 5 years timeframe is too short for biodiversity conservation initiatives such as the PAP and in order to ensure a real return on the investment made to date, further investment is needed. There is evidence that by lengthening the duration of the project by one year, some key outputs contributing towards

the overall sustainability of the initiative could potentially be delivered. An appropriate exit strategy for the PAP would consist therefore in approving a 12 months extension and focussing the efforts of all decision-makers and stakeholders on tackling the issues related to the long-term financial and institutional sustainability of the initiative. Based on existing funds, the official deadline for project termination should be moved from November 2001 to November 2002.

Specific recommendations. Given the timing of the present evaluation, halfway through the final year of the project, most of the recommendations that follow would have limited scope unless the proposed one-year extension is actually granted.

Planning and management. Enhance the technical backstopping of the management teams by IUCN, particularly for Horsh Ehdén and Palm-Islands in order to: (i) operationalise existing management plans by drawing up annual work plans for year 2002; (ii) initiate the process of bio-regional planning, by formally involving the municipalities and other key local stakeholders - in the case of Horsh Ehdén by linking up with the current planning exercise conducted by Al Zharta municipality in collaboration with the university of Gembloux, Belgium; (iii) effectively establish a Technical Advisory Panel in order to respond in a timely fashion to emergent management needs, as already recommended in the TPRs (1998; 1999).

- o Monitoring. Through the combined efforts of key partners in the project, review and operate a shift in the design of the monitoring system being developed by Green Line. The revised M&E system should be site-specific and management-driven, supporting the core business of protected area planning and management, and streamlined according to the specialised staff and other resources, which can practically be mobilised at site level. It should be based on a limited number of input, performance and impact indicators tracking biodiversity resources, the utilisation of biodiversity, and management activities. More complex remote sensing and GIS-based tools should be integrated in the M&E system through the systematic involvement of academic research establishments and by outsourcing selected components to specialised organisations such as Green Line.
- o Community-based initiatives. By drawing on the resources of UNDP and IUCN, enhance the collaboration between the three management teams and, based on the experience of the Al-Shouf eco-labelling initiative, facilitate the formulation and funding of small-scale, biodiversity-related, community projects for all three sites, through a

formal process of stakeholder analysis and participatory planning.

a Institutional and financial sustainability. The MOE should take the lead in encouraging a policy of constructive engagement by the NGOs towards the municipalities and the private sector in order to revive the essence if not the letter of current laws, which stipulate that a Government Appointed Committee (GAC) should oversee the management of each protected area (see Section 3.4). Drawing on international experiences, the IUCN should provide technical assistance to transform the PAP from the present, largely NGO-driven management of protected areas, towards a more stable and sustainable institutional framework. A possible model, based on the establishment of a Protected Area Management Board and associated Conservation Fund, has been outlined in section 3.6. The management teams and supporting NGOs should actively pursue their respective fund-raising strategies, in order to initiate the endowment of the duly established Conservation Funds. If required, the external assistance of professional fund-raisers should be mobilised, ideally to be sub-contracted on the basis of a commission calculated as a proportion of the funds actually raised.